

CHINA'S BUDGET ISSUES AND THE ROLE OF THE PLA IN THE ECONOMY

FRIDAY, DECEMBER 7, 2001

The Commission met at 8:14 a.m., in Room SD-124, Dirksen Senate Office Building, First and Constitution Avenue, N.E., Washington, D.C. 20510.

Commissioners present: C. Richard D'Amato, Chairman, George Becker, Stephen D. Bryen, June Teufel Dreyer, Kenneth Lewis, Patrick A. Mulloy, William A. Reinsch, Arthur Waldron, Michael R. Wessel, and Larry M. Wortzel.

[Mr. Larry M. Wortzel was administered the Oath of Office by Ms. Cassandra Browner, General Services Administration.]

Ms. BROWNER. First, let me say good morning to you. It is an honor for me to be here again to be swearing in a new Member of the U.S.-China Commission.

Please raise your right hand and repeat the oath after me.

Commissioner WORTZEL. I, Larry Mark Wortzel, do solemnly swear that I will support and defend the Constitution of the United States against all enemies, foreign and domestic; that I take this obligation freely, without any mental reservation or purpose of evasion; and that I will well and faithfully discharge the duties of the office on which I am about to enter, so help me God.

[Applause.]

[The swearing in was followed by a photo session with Commissioners and a closed briefing which was off the record.]

[The morning session convened at 9:35 a.m.]

OPENING REMARKS OF CHAIRMAN C. RICHARD D'AMATO

Chairman D'AMATO. The Commission will come to order.

Mr. Wolf, the Commission is all here, 10 of 12 members; Commissioner Robinson and Vice Chairman Ledeen were unable to come today, but the other 10 commissioners are with us this morning.

Good morning, ladies and gentlemen. I would like to welcome the participants in today's hearing on the "The Chinese Budget and the Role of the PLA in the Economy." We are fortunate to have a most distinguished group of expert witnesses here today to present their perspectives on this very important subject which is part of the central mandate that this Commission was asked to look into by the Congress about a year ago.

My co-chair today, Professor June Dreyer, is a leading expert in the field. I and other members of this Commission are very grateful for her guidance in putting this hearing together.

The purpose of today's hearing is to focus on the Chinese national budget with a particular emphasis on the military budget. Since budgets show priorities and intentions, what are the security implications for the United States of both the PRC's stated and actual budget priorities?

Experts agree that China's official published budget does not provide a true picture of the Chinese economy, its budget, or its national priorities. There is a constant refrain that the Chinese budget and its process is opaque, that it is not transparent, and there is a call for more and more transparency. There are more and more efforts at transparency. Getting to the bottom of the Chinese military budget is sort of like finding a needle in a haystack on a dark night. Consequently, it is extremely difficult to ascertain how much China actually spends for defense, and it is difficult to understand its priorities not knowing what the macro picture is.

Critical to our understanding is an understanding of the scope of PLA influence over the budget process, the PLA's involvement in the budget and China's economy, both in China and in the United States, and how the Chinese budget is allocated between economic development and defense priorities. We also want to be informed as to how and whether U.S. investment, trade, and technology transfers in U.S. equities markets—we had a hearing on that yesterday—contribute to a strengthening of the PLA and if so, to what extent.

We have a very full day today with three very interesting panels. Our first group of panelists will discuss PRC budget issues with respect to how the budget is developed and various components within the budget.

Panel 2 will focus more closely on the unique role of the PLA in the Chinese economy, including the PLA's involvement in a broad spectrum of business ventures.

Panelists on the third panel have been asked to describe the PRC arms acquisition process and where they expect China to be in five to ten years with respect to military modernization.

I want to especially thank all of today's witnesses for giving their valuable time to be with us and for providing some unusually excellent papers on the subject. In my opinion, it will be only a matter of time and effort and we will get to the bottom of this complicated quest. That is my positive and optimistic projection. I think it can be done. It will take a great deal of effort, but I know there are people out there who are engaged in this, and we have some of them here today before us.

So I welcome our first panel: Professor Richard Cooper, Professor of Economics at Harvard University; Mr. Barry Anderson, well-known to our Commission as Deputy Director of the Congressional Budget Office; Mr. Cheng Xiaonong, lecturer, Departments of Political Science and History at Princeton University; and, last but not least, someone who is well-known to everyone in this field, Dr. Charles Wolf, Senior Economic Advisor and Corporate Chair, International Economics, at the Rand Corporation, who comes to us with a "first" today and it looks successful now—our videoconference. And we know it is very early in California, Dr. Wolf, and thank you very much for getting up so early to meet with us and talk with us.

What I would like to do is start off by asking Dr. Wolf to begin and give his presentation, and then we'll go down the line with Professor Cooper, Mr. Anderson, and Mr. Cheng, for about 10 minutes each, and then we would like to open it up to the Commission for questions back and forth.

Dr. Wolf, please go ahead.

PANEL I: PRC BUDGET ISSUES: PROCESS/STRUCTURE

**STATEMENT OF CHARLES WOLF, JR., SENIOR ECONOMIC ADVISOR
AND CORPORATE CHAIR, INTERNATIONAL ECONOMICS, RAND
(VIDEOCONFERENCE)**

Mr. WOLF. Thank you, Mr. Chairman, and lady and gentlemen commissioners. It is a pleasure for me to be with you there, but from here, and I want to express my appreciation for these arrangements which I think can be classified as, or what we would call this in the analytical business is "pure dominance." It saves my time and your budget. So I really appreciate those arrangements.

I also want to express a disclaimer at the outset. The views and points that I am going to express are my own. They are not necessarily those of Rand or of its various clients.

There are three points that I want to touch on, and I think you have a list of those points and some supporting data related to the first of the three. Two of the three, I think, are directly germane to the Commission's purpose and charter, and one is a little bit tangential to those purposes.

The first relates to forecasts or estimates that we made in a publication last year on China's gross domestic product, its per capita GDP, its military spending and its military investment. There are two aspects to this which should be highlighted.

One is that it makes a big difference in the dollar conversion what conversion rates are used, and the other is it makes a big difference what the growth trajectory scenario one assumes for China's growth.

On the first of those two differences, whether one uses nominal exchange rates—that is the 8.2 renminbi per dollar, or the purchasing power parity rate (about 1.7 RMB per dollar) for converting local currency, to dollars makes a big difference. It makes a difference of fivefold for the macro estimate GDP and GDP per capita, and it makes a difference of 3 to 3.5 for the estimates of military investment.

The reason for that discrepancy is that in estimating military investment and its accumulation over time—that is, annual military investment less depreciation of the previous year's accumulated military capital stock—we have used the purchasing power parity for investment goods, that is, for heavy equipment, machine-building and earth-moving equipment—not for consumer goods.

The data that you have are summarized in the two tables that relate to Scenario A, a sustained growth scenario with an annualized average growth of about 5 percent per year, or a disrupted growth scenario which is about 2 to 3 percent annual growth, over the next 15 years.

This, I should emphasize, is a controversial set of issues. Both the conversion rate and the scenarios are subjects of a lot of study and a lot of controversy.

The question of which conversion rate is the right one or best one to use depends on the purposes for which one wants to use the estimates. If one is concerned with consumption, with levels of living of the populace in China, apart from major discrepancies between the center and Western provinces and the coastal provinces, probably the preferable exchange rate to use is the purchasing power parity rate.

If one is concerned with evaluating China's imports of equipment and other products, clearly, the correct rate to use is the nominal exchange rate.

If one is concerned with estimating military investment, that is, procurement and R and D—

[Video connection temporarily lost.]

Chairman D'AMATO. We're back. We can hear you. Please continue. We're all set.

Mr. WOLF. As I was saying, this is a controversial matter. The question I was addressing was the conversion rate, and with respect to military procurement, I think it's fair to say that the prevailing view, which I dissent from, is that the preferable rate to use is the nominal exchange rate.

The reason I dissent from that—I should say that although I feel rather strongly about it, this is a minority view—is that the PLA and the other cognizant ministries whose budgets are charged with expenditures for military end-items purchase advanced equipment from state-owned enterprises that produce SU-27s, SU-30s, surface-to-surface missiles, DF-15s and DF-11s, from the defense industries in China at prices that we don't know precisely. This is one of the opacities that the chairman referred to in his opening remarks.

It is probably the case that the purchasing power for investment goods, which is what we use in the estimate shown as "PI" if you look at the table; is a better approximation of the prices at which these procurements occur than would be the nominal exchange rates, which are shown as XR on the tables.

So that is shown in the lowest of the four tiers of each of the tables, Table 7 and Table 8. These Tables which show the accumulation of military capital converted at "XR"—that is nominal exchange rate—or at purchasing power for investment goods, which is the "PI" designated row of the tables.

And as I said secondly, although the conversion rate that one uses makes a big difference, it is a matter of controversy. My view is a minority view. I think there are strong reasons for that position which we can talk about later in the Q and A.

The second factor that makes a difference is which of the two scenarios—A and B, the high growth and the disrupted growth scenarios, respectively—one posits for China's trajectory over the next 15 years.

The second of the three points relates to trade surpluses, current account surpluses, and their relationship to China's military spending. China's bilateral surpluses with the U.S. are devoted to either of two purposes—either to defray deficits that China has with other trading partners, the European Union, Japan, and Taiwan in particular; or to add to China's foreign exchange reserves, or a combination of both of these.

China's accumulation of the second-largest global holdings of foreign exchange reserves second to Japan is due to its persistent current account surpluses, that is, excesses, of its foreign exchange earnings over its foreign exchange payments for imports and other services.

In fact the surpluses do not add to resources that are immediately available. They reduce those resources. The view that trade surpluses and current account surpluses provide more resources is mistaken. In fact, if you just think of it in terms of exporting to the rest of the world goods and services versus importing goods and services in a specified accounting period, the more that is exported, the less is available at home. So, in terms of resource availabilities, current account surpluses reduce rather than add to resources available for the military.

But I think the bottom line of this point is that it is really unlikely that trade surpluses or current account surpluses affect military allocations, total military spending, or military investment, procurement and R and D, appreciably if at all, because the priority that is afforded to those allocations is sufficiently high that it is not perturbed by current account surpluses or deficits.

The third point, which is the one I referred to in my opening comment about being somewhat tangential to the Commission's central concerns, relates to U.S.-China military-to-military contacts.

It is my understanding that the administration's assessment of recent years' experience with military-to-military contacts has been that those contacts have been distinctly one-sided and that the benefits have accrued to the PRC rather than to the U.S. This is because of the plethora of briefings and visits to U.S. defense installations and defense industries that the Chinese military, have received from us, in comparison with the corresponding briefings and visits to defense installations provided by our Chinese hosts in China.

So the result, in my understanding, is that the administration's position is to scrutinize on a case-by-case basis whether military-to-military contacts are a good thing or a bad thing in order to avoid this one-sided bias that has been characteristic of the exchanges in the past 8 or 10 years.

I think this is an important matter to reconsider so that instead of discouraging those contacts, they should be strongly encouraged, subject to one strict condition. That condition is that military-to-military exchanges should be conducted on the basis of a strict *quid pro quo* arrangement so that for every briefing that an American military person provides to a Chinese counterpart, there should be an equivalent one provided by the Chinese to us; for every visit to a defense installation or defense industry, there should be an equivalent one by the Chinese.

I think this would be beneficial in terms of its indication of respect by us for what the Chinese have or potentially have to provide to us, and would also be beneficial in terms of the more equitable parity between what we give and what we get.

I would cite briefly, but would be glad to go into this in more detail, experience that we have had at Rand over the past four years in conducting annual meetings on—

[Video connection temporarily lost.]

Chairman D'AMATO. I think he was almost finished. If we can't get him back, we'll move right on, but I think he was on his last bullet.

Why don't we move on, because he had just read the last bullet, and we understand what he was saying on exchanges.

[The statement follows:]

PREPARED STATEMENT OF DR. CHARLES WOLF, JR.

First: China's GDP, military spending, military investment, military capital, (Table 7, Table 8, Figure 9, Figure 10, Figure 11, Figure 12, from "Asian Economic Trends and Their Security Implications," Rand, MR-1143, 2000)

- estimating method, results, and dollar conversions are controversial
- use of nominal exchange rates (XR), or purchasing power parities (PPP and PI), makes large difference in estimates (5-fold for military spending, 3-fold for military capital)
- what does each conversion rate mean?
- which is preferable?
- alternative growth rates (Scenarios A and B) also make big difference

Table 7—China Trends, 1995–2015: Stable–Growth Scenario (A)

| | 1995 | 2000 | 2005 | 2010 | 2015 |
|---|-------|---------|---------|---------|---------|
| GDP (billions of 98\$) | | | | | |
| XR | 910 | 1,206 | 1,532 | 1,937 | 2,508 |
| PPP | 4,513 | 5,983 | 7,599 | 9,607 | 12,437 |
| Average annual growth rate (%) | 5.8 | 4.9 | 4.8 | 5.3 | |
| Per-capita GDP (thousands of 98\$) | | | | | |
| XR | 0.7 | 0.9 | 1.1 | 1.4 | 1.7 |
| PPP | 3.7 | 4.6 | 5.7 | 6.9 | 8.7 |
| Military spending (billions of 98\$) | | | | | |
| XR | 18 | 24–39 | 31–46 | 39–59 | 51–75 |
| PPP | 90 | 120–180 | 152–228 | 192–288 | 249–373 |
| Military capital (billions of 98\$) | | | | | |
| XR | 63 | 69–78 | 84–106 | 106–138 | 135–182 |
| PI | 217 | 241–276 | 295–374 | 372–485 | 478–634 |

NOTES: See Appendix B; parameters: $\tau = 1-1.5\%/yr$, $\alpha = 0.6$, $\gamma = 2-3\%$, $\pi = 25-32\%$, $\delta = 8-10\%/yr$, $L\dot{L} = 1-1.2\%/yr$, $K\dot{K} = 8-9\%/yr$.

Table 8—China Trends, 1995–2015: Disrupted–Growth Scenario (B)

| | 1995 | 2000 | 2005 | 2010 | 2015 |
|---|-------|-------|-------|-------|-------|
| GDP (billions of 98\$) | | | | | |
| XR | 910 | 1,156 | 1,373 | 1,553 | 1,723 |
| PPP | 4,513 | 5,732 | 6,808 | 7,763 | 8,547 |
| Average annual growth rate (%) | | 4.9 | 3.5 | 2.5 | 2.1 |
| Per-capita GDP (thousands of 98\$) | | | | | |
| XR | 0.7 | 0.9 | 1 | 1.2 | 1.3 |
| PPP | 3.7 | 4.4 | 5.1 | 5.5 | 6 |
| Military spending (billions of 98\$) | | | | | |
| XR | 18 | 23 | 27 | 31 | 35 |
| PPP | 90 | 115 | 136 | 155 | 171 |
| Military capital (billions of 98\$) | | | | | |
| XR | 63 | 69 | 82 | 97 | 113 |
| PI | 217 | 238 | 281 | 333 | 386 |

NOTES: See Appendix B; parameters: $\tau = 0-1\%$, $\alpha = 0.6$, $\gamma = 2\%$, $\pi = 25-32\%$, $\delta = 8-10\%/yr$, $LdotL = 0.8-1.1\%/yr$, $KdotK = 4-8\%/yr$.

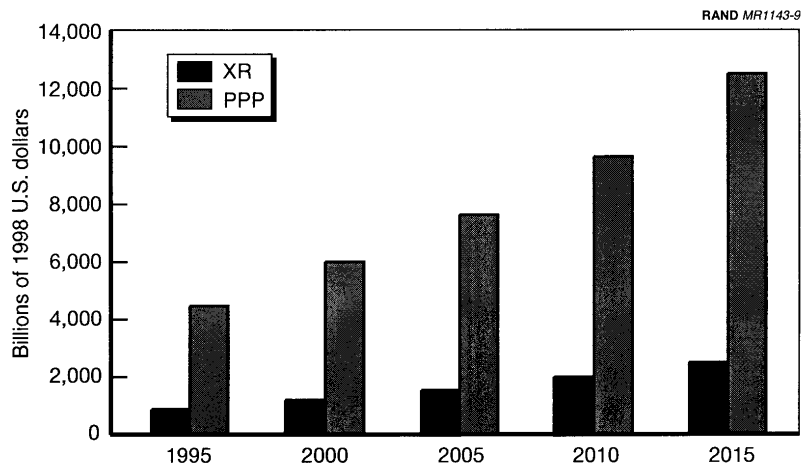
Figure 9—China Trends, 1995–2015: GDP (Scenario A)

Figure 10—China Trends, 1995–2015: GDP Per Capita (Scenario A)

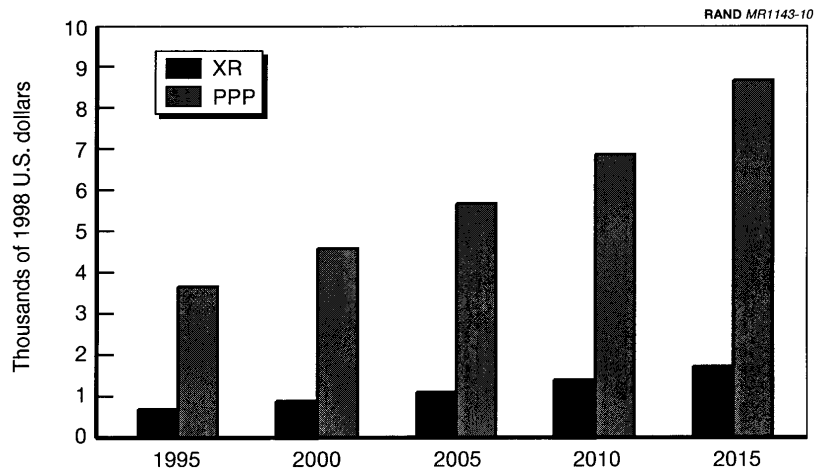
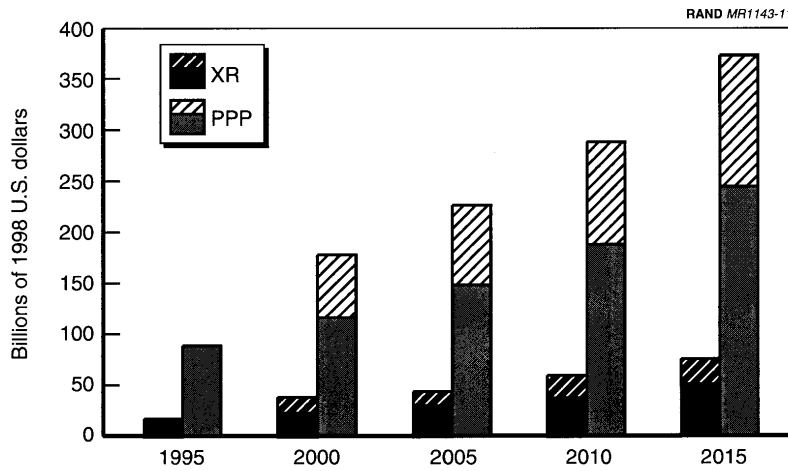
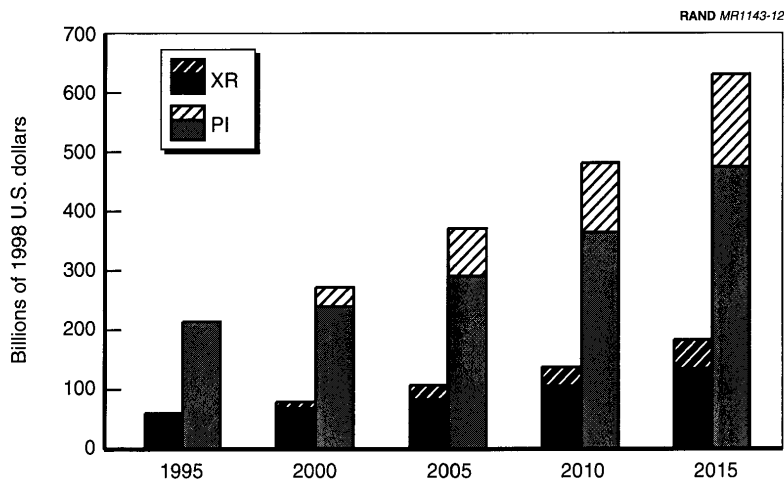


Figure 11—China Trends, 1995–2015: Military Spending (Scenario A)



NOTE: The cross-hatching reflects an assumed range of annual military spending varying between 2 percent and 3 percent of GDP.

Figure 12—China Trends, 1995–2015: Military Capital (Scenario A)



NOTE: The cross-hatching indicates the effects on military investment and military capital of varying the GDP share of military spending between 2 percent and 3 percent annually.

Second: Trade surpluses, current account surpluses, and China's military spending

—China's bilateral surpluses with U.S. either (a) defray deficits with other trading partners, or (b) add to China's holdings of foreign assets/reserves (mainly U.S. Treasuries), or (c) both

—cumulative current account surpluses have built up China's reserves to 2nd largest in world (nearly \$200 billion)

—contrary to conventional view, trade and CA surpluses reduce rather than add to resources available for domestic allocation to defense or other uses

—bottom line: unlikely that trade/CA surpluses affect military allocations either up or down, because of ample priority accorded to them.

Third: U.S.-Chinese military-to-military contacts

—assessment of recent years' contacts and exchanges is that benefits have been one-sided: U.S. has given much more than has received (e.g. briefings, visits to defense industries and military installations, etc.)

—result is case-by-case scrutiny, general inclination to discourage M-to-M contacts and exchanges

—suggest reconsideration of this stance and its replacement by: (a) encouragement of contacts, subject to (b) strict application of "quid-pro-quo" principle in conduct of exchanges and contacts

—RAND's experience in 4-years of annual conferences/exchanges with China Reform Forum, alternating between Beijing and Santa Monica, with PLA/CICIR participation, as well as CIA and U.S. military analysts.

Chairman D'AMATO. So why don't we go ahead, Professor Cooper, with your statement?

STATEMENT OF RICHARD N. COOPER, MAURITIS C. BOAS PROFESSOR OF ECONOMICS, HARVARD UNIVERSITY

Mr. COOPER. Thank you very much, Mr. Chairman and commissioners.

I have been asked to talk about the Chinese economy and the Chinese budget in a time horizon of roughly a decade. I know little about the military budget, so I am not going to address that issue.

As Charlie Wolf underlined, there is still a lot of controversy among specialists over the measurement of both the level and the rates of growth of the output of the Chinese economy and how to convert it into internationally comparable units.

For my purposes, to create a baseline, I am simply going to assume that the currently measured Chinese GDP is about as accurate as GDP measurements are in most countries at China's stage of development and that these days it is as likely to be an overestimate as it is to be an underestimate. Some years ago, it was clearly an underestimate of Chinese GDP. But there are many serious people in China working on questions of economic measurement, under guidance from the IMF and the World Bank and other UN statistical agencies. So I assume not that current official measures are absolutely accurate—they are not even accurate for this country—but that they are a pretty good estimate.

Secondly, on the question of scenarios, I am going to assume that China grows over the next decade at 7 percent a year. That is the official aspiration of the Chinese Government. It is not, in my view, a best guess, and indeed, it is rather higher than most of the other analysts have forecast GDP at—Charlie Wolf's stable scenario uses 4.9 percent, for example.

However, if the Chinese authorities do not stumble in the coming decade—and there are many reasons why they might in fact stumble—but assuming they do not stumble, 7 percent is achievable, although a stretch, and as I say, probably a little higher than a current best guess would be.

If it is to grow at 7 percent a year, Chinese real GDP will double in the next decade and will be twice as big in 2010 as it was in 2000, which is the latest data we have for most purposes.

Chinese GDP is measured in yuan, and that is not a conventional unit of measurement for most of us. To put it in terms that we understand, we like to convert it into dollars, and there a second set of controversies emerge which, again, Charlie Wolf referred to. I am in what he called the majority view, which suggests for China these days—I'm not talking about 20 or 40 years ago, but for China these days—the best measurement to use for converting yuan into dollars is the official foreign exchange rate, which is also the prevailing market rate.

I will not go into technical details. I have added an appendix to my written statement which suggests first that the official exchange rate is actually conceptually the superior rate for most—not for all—but for most purposes for conversion; and second, even if one were inclined to a purchasing power parity (PPP), the PPP data that we have for China can only be described as flaky. That is to say, even if one preferred a PPP measure, we have a terrible time measuring an accurate PPP, and it is subject to all kinds of judgments by the analysts, not least the weights that one attaches to different components of output. If you use Chinese weights, you get a measure very much closer to using the official exchange rate than if you use U.S. weights, but the U.S. economy is very different from the Chinese economy.

So for purposes of this Commission, I am unambiguously on the side of using official exchange rates, mainly because China is largely a market economy now, it is rapidly moving toward a market

economy, and every use of Chinese resources has what economists call an “opportunity cost” which can be measured at world prices. Therefore, world prices are mediated through the prevailing market exchange rate is actually the relevant number to use.

I agree strongly with Charlie Wolf’s second point, and it is a variant of the same theme, which is that their large current account surplus is actually a drain on Chinese resources, not a contribution to Chinese resources. My written statement discusses what the exchange rate it is likely to be 10 years from now; There are conflicting considerations but I basically straight-line it. At that exchange rate, Chinese GDP in 2010 will be about one-sixth of US GDP. The U.S., of course, will also grow during this period, I assume a rate of 3 percent for the United States, which is actually a bit lower than the current conventional wisdom for growth in U.S. capacity.

GDP provides the overall level of resources that is in principle accessible to the Chinese government. Let me then turn to the question of the budget, and there, I have three main points.

First, China is a big and complex country, and as in the United States, it has public expenditures at several levels of government, not just at the central government level. Indeed, over two-thirds of budgetary expenditures in China are at what we could call the state and local level, not at the central government level.

Second, while the budgeted expenditures have been growing rapidly in recent years, they are by international standards actually at a low level for China’s level of development. In revenue terms—this is budgeted revenue—China collects about 15 percent of GDP at all levels of government. That is on the low side. Other countries at China’s level of development typically collect in the low 20s, 20 percent of GDP or more. The U.S. collects 33 percent of GDP, and most European countries collect over 40 percent of GDP in taxes—of course, these are rich countries. I would expect China to be someplace in the low 20s.

As has been mentioned, there is a certain degree of murkiness about Chinese budgeting, including not least to the Chinese themselves. Because of a deal struck between the central government and the provinces seven years ago, the provinces actually a set of incentives to levy all kinds of charges which are called anything but taxes. Chinese statisticians have estimated what they call “extra-budgetary” expenditures. These are, to my understanding, overwhelmingly at the provincial and local level, but nonetheless they are substantial. The Chinese statisticians’ estimate is nearly one-third of budgeted expenditures. Indeed, if you add those extra-budgetary revenues in, that does bring China up into the low 20s in terms of collections, which is where one would expect it to be by international comparison.

Most of that action is at the state and local level, however, and the central government is strapped for funds, that is the only way to describe it. On international comparisons—here, I’m using World Bank data—the Central Government of China does not get—this was 1998—even 6 percent of GDP in revenues. They are third from the bottom of the 70-odd countries that are listed in data compiled by the World Bank. So at the central government level, which I think is the level of principal interest to this Commission, although

revenues have been growing rapidly, nonetheless they are still at a low level by international standards.

By comparison, for example, the U.S. Federal Government collects 22 percent of GDP, compared with the Chinese Central Government, 6 percent of GDP.

My third point is that if one thinks about the challenges that the Chinese Government faces—and here, I am focusing principally on the central government—during the next decade, particularly if they are to achieve a growth rate of 7 percent a year—they can only be described as formidable.

One of the ongoing problems which has been at the top of the agenda for several years in economic reform is to either close down state-owned enterprises or, preferably, put them on a profitable basis, but in any case to reduce the social drag of loss-making state-owned enterprises. The losses are not financed by the central government, by the way; they have been financed by the banking system, and that is problem number two.

Part of the solution, I believe, and Chinese reformers believe, is to relieve the state-owned enterprises of the pension burdens which they have accumulated in the past—that is to say, socialize the pensions which are now on the state-owned enterprises.

In addition, there will have to be substantial layoffs from some enterprises, and they need a social safety net of some kind—in American terms, something like unemployment compensation—just to ease the transition between the loss of a job and finding a new job.

These two items have major fiscal consequences, largely for the central government.

A second challenge will be to fix up the banking system. Official estimates of nonperforming loans are about 27 percent; unofficial estimates roughly double that. The Chinese Government has already done one round of recapitalization of the banks, but I believe it has to do at least another round, maybe two, of cleaning up and recapitalizing the banking system, and it could run as high as 25 percent of GDP.

This would not be call on the real resources of the country, but it is a call on the budgetary resources of the central government, and that is of interest to the Commission.

Those two issues are under the heading of what you might call clean-up, improving the institutional set-up of the financial sector and the enterprise sector, in a way that can carry China forward.

In addition, there are all of the usual things that are required if a country is growing at 7 percent a year and expect to continue to grow at 7 percent a year; tremendous infrastructure requirements for power, for transport, for communications. Not all of these investments need fall on the central government; some of them can fall on the provincial and local governments, some even private enterprise, such as toll roads. But part of the concern of the Chinese Government is wide regional disparities. China has a program for developing what they call “the West,” which is actually anyplace west of the East Coast, and that is going to involve, again, the central government budget in redistributing from the well-to-do eastern provinces to the central and western provinces. So this is another call on central government resources.

Chinese education, which the Chinese recognize is essential to the development that they aspire to, is woefully under funded. A recent World Bank study suggests they need to double educational expenditures as a share of GDP, so there is an additional 2.5 percent of GDP, assuming they follow through on that.

Finally, there is agriculture. In the news recently has been the decision to go forward with moving water from the Yangtze River Valley to the Yellow River Valley. This is a massive infrastructure project. It is probably not commercially viable. It is being done for social and strategic reasons, and while the government can finance it through bonds and does not have to finance it out of current tax revenues, it will have to service the bonds. So once again, this will be a charge on the central government.

So it is in this context that PLA modernization has to be viewed, and in my judgment, the major battles that the PLA will be fighting during the next 10 years will be in Beijing over what it considers its rightful share of the budget. It will not be an easy battle to win.

Chairman D'AMATO. Thank you very much, Professor Cooper.
[The statement follows:]

PREPARED STATEMENT OF RICHARD N. COOPER
CHINESE ECONOMIC AND BUDGETARY PROSPECTS

I have been asked to address the economic and budgetary outlook of China for the next decade.

The Economy

Three economic features of China stand out. First, it is a very populous country, 1,265 million people by the census of 2000 (excluding Hong Kong, Macao, and Taiwan). Second, it has grown exceptionally rapidly over the past two decades, real GDP having risen by 10.4 percent a year over the period 1990–2000, on official statistics. Third, despite its rapid growth it remains a poor country, with 48 percent of its labor force in agriculture and a per capita income of only \$780 in 1999 (\$3,291 on a purchasing power basis, on which more below), only 2.5 percent of the \$30,600 per capita income in the United States in 1999. But it is much less poor than it was 20 years ago, and is less poor now than many other countries (it ranks #128 out of about 200 countries).

Measuring the total output of a large, complex, and rapidly changing economy, in ways that are comparable over time and permit comparisons with other countries, is a technically challenging and expensive task. It is widely agreed among specialists that China's official reported growth rates are too high, perhaps by more than two percentage points, in part because China understated its level of output 20 and 10 years ago, in part because it has under-reported rates of inflation (Maddison (1998, tables C.3, C.8, C.10) reckons Chinese GDP was about 10 percent higher than official figures in 1987; see also Yeh (2001, pp.70–72)).

For a variety reasons, China's growth in the next ten years is likely to be significantly lower than it was recorded to be in the 1990s—partly because measurements have improved, partly because of a genuine slowdown. A reasonable projection on official figures is that the annual average growth of China 2000–2010 will be seven percent, the current official aspiration. The World Bank's China 2020, written before the Asian financial crisis of 1997–98, projects a growth rate of 6.9 percent. Maddison (1998, p.97) assumes 5.5 percent over the period 1995–2015. Wolf et al. (2000, p.36) assume 4.9 percent. The eight percent assumed by Hu (2001, p.108–110) would be possible, although it would be a stretch. (Japan grew by more than 8 percent a year over the period 1960–1975, and South Korea's annual growth exceeded 8 percent over 1970–1985.)

With growth of seven percent a year, China's GDP would be 17.5 trillion yuan in 2010, in prices of 2000, up from 8.9 trillion in 2000. To compare these figures with the United States, we need to convert them into U.S. dollars. Controversy surrounds the rate of exchange that should be used, the main contestants being the market exchange rate or some average of recent market exchange rates and the so-called purchasing power parity (ppp) exchange rate, which for our purposes means

re-pricing Chinese output at U.S. prices. Some variant of a ppp rate is clearly necessary for international comparisons of the standard of living of the average citizen. But for geopolitical or geo-economic purposes, the market exchange rate is far more relevant. (An appendix addresses both the conceptual reasons for preferring the market exchange rate and the practical problems in calculating a satisfactory ppp rate.)

We do not of course know what China's exchange rate will be in 2010. While it has been essentially unchanged at 8.28 yuan/dollar since 1994, WTO membership will require substantial liberalization of China's imports by 2007, and accommodation to that may require some depreciation of the yuan over the next decade. Increased foreign investment in China, however, would push in the other direction. And over the long term low income countries generally experience some real appreciation of their currency as their incomes rise, that is, the dollar value of GDP grows more rapidly than the real value in local currency. These conflicting considerations suggest that a neutral assumption would be that the relevant exchange rate in ten years will not be radically different from what it is today. On this assumption, at seven percent growth China's GDP will be \$2.11 trillion in 2010 (at prices of 2000), 15.9 percent of U.S. GDP of \$13.3 trillion in 2010 if the United States grows at a plausible average rate of three percent a year over the decade. (If China were to grow at 8 percent a year, its GDP would reach \$2.31 trillion, 17.4 percent of U.S. GDP in 2010; but current estimates place plausible U.S. growth higher than three percent annually, thereby reducing the ratio.)

It is not correct, as is sometimes claimed, that the Chinese economy will overtake the U.S. economy in any meaningful sense by 2015 or 2020; at best it will barely reach one quarter the U.S. GDP by 2020.

To grow at eight or even seven percent a year China must overcome many obstacles. The relatively easy tasks have already been done: liberalizing (most) prices, decentralizing agricultural production, allowing scope for private and village entrepreneurship, permitting foreign direct investment. The more difficult tasks are in process and have made less progress: rationalizing state-owned enterprises to make them profitable; creating an urban social safety net to help the transitionally unemployed and to relieve SOEs from social obligations; rebuilding the financial system, especially the banks, so it can finance efficiently a rapidly growing economy.

In addition, rapid growth will require much additional infrastructure: power, transport for both people and goods, communications, and of course the educational system to develop talent and to produce skilled workers. Growing demand for motive fuel and for higher protein food will require major investments in oil distribution and in agricultural production.

These are all major challenges. Chinese leaders are aware of them. The question is whether they can bring about the required changes without seriously stumbling, or without pulling back out of concern for "instability," a traditional fear of all Chinese regimes.

The Budget

This brings me to the Chinese budget. Table I reports Chinese GDP, government expenditures, revenues, and budget deficit since 1994—the year in which the tax system and the foreign exchange regime were reformed. Several points are noteworthy. First, as already noted, real economic growth has been rapid (inflation has been low since 1996). Second, government expenditure and revenue have grown even more rapidly than GDP over this period, with the ratio of revenue to GDP rising from 10.9 percent in 1995 to 15.1 percent in 2000. Third, expenditures have risen even more rapidly than revenue, following the fiscal stimulus of 1998, as the government has increased receipts through sale of government bonds to the public, reflected in a budget deficit that reached 2.1 percent of GDP in 1999 and 2.8 percent in 2000. Chinese officials apparently are overcoming their fear of debt.

TABLE 1.—CHINA'S GDP, REVENUE, AND EXPENDITURES

| | GDP (\$ bn) | billion yuan | | | |
|------------|-------------|--------------|---------|--------------|---------|
| | | GDP | Revenue | Expenditures | Balance |
| 1994 | 542 | 4,669 | 522 | 579 | – 57 |
| 1995 | 701 | 5,851 | 624 | 682 | – 58 |
| 1996 | 822 | 6,833 | 741 | 794 | – 53 |
| 1997 | 903 | 7,490 | 865 | 923 | – 58 |
| 1998 | 964 | 7,985 | 988 | 1,080 | – 92 |
| 1999 | 991 | 8,205 | 1,144 | 1,319 | – 174 |

TABLE 1.—CHINA'S GDP, REVENUE, AND EXPENDITURES—Continued

| | GDP (\$ bn) | billion yuan | | | |
|------------|-------------|--------------|---------|--------------|---------|
| | | GDP | Revenue | Expenditures | Balance |
| 2000 | 1073e | 8,940 | 1,338 | 1,588 | -250 |

Source: IMF, International Finance Statistics, May 2001, and author's estimate.

Fourth, not evident in Table 1, Chinese revenues and expenditures are low by international standards. All but the very poorest countries often raise 20 of GDP in revenue, rich European countries over 40 percent, compared with China's 15 percent.

China is a complex, multi-layered society, with requirements for public expenditure at every level, from village to central government. Recorded budgetary statistics purport to cover all levels of government, but in fact they undoubtedly miss much local, and even some provincial, expenditure that is financed by local sources of revenue not reported to the central authorities. Local and provincial authorities have found "extra-budgetary" sources of revenue, partly to avoid the complex revenue sharing agreements made with the central government in 1994. Thus official Chinese budgetary expenditures and revenues represent an under-statement, but the reporting shortfalls are primarily at the local and provincial levels. (China's Statistical Yearbook 2000 reports 308 billion yuan of "extra-budgetary" revenue in 1998, 31 percent of total budgetary revenue. Most such revenue is fees and charges of various kinds raised by "administrative units and institutions" at the local level.)

Most government expenditures (69 percent in 1999) in China are at local and provincial levels. According to the World Bank (2001, p.300) China's central government in 1998 took in as current revenue only 5.9 percent of GDP (only Georgia and Myanmar among 79 reporting countries had lower shares). The U.S. Federal government, by contrast, had revenues amounting to 22 percent of GDP in 1998. If the budget deficit is attributed wholly to the central government, and the 1998 GDP share of the central government obtained in 2000, deficit financing accounted for nearly one-third of central government spending in the latter year. Such debt financing of course generates interest obligations in future years.

The general point is that China's central government is strapped for funds, and is likely to continue to be strapped for funds for some years to come, even if total revenues continue to rise rapidly. Provincial and local governments will be major claimants to additional revenues.

As suggested above, China will require major public expenditures if it wishes to continue to grow rapidly. Dahlman and Aubert (2001) suggest that education expenditures alone need to rise from the current 2.3 to 4.9 percent of GDP. Agriculture will require large expenditures for water control and irrigation (the recently announced decision to transfer water from the Yangtze to the Yellow River drainage basin will cost an estimated \$60 billion, nearly a year's central government revenue, spread over ten years), and for agricultural research and extension work. Extending the road, rail, pipeline, electrical, and communications networks will require large investments; as will seaports and airports. Rapidly growing urban centers must be provided with water, sewage treatment, and housing. The banking system must be further re-capitalized, at perhaps a quarter of GDP, to relieve banks of bad loans. Pensions must be provided to retired workers of many SOEs if they are to be made commercially viable, and temporary relief provided to those subject to severe import competition following entry into the WTO. The dispute settlement mechanism, including the courts, must be reformed and enlarged. And of course the military establishment demands and requires modernization.

Some of these many demands for public funds can and will be handled at the local and provincial levels, or even (e.g. pipelines, toll roads) by private firms. But many will inevitably fall on the central government, partly because of their nature (e.g. military modernization, recapitalizing national banks, inter-regional projects), partly to correct the inappropriate or inadequate incentives that influence local governments. For instance, to develop the West, as is now national policy, will require direct engagement by the central government.

Thus the major battles the People's Liberalization Army will face in the coming years will be in Beijing, struggling for a suitable share of a highly constrained budget.

APPENDIX: MEASURING CHINA'S GDP IN DOLLARS

There is some confusion about the level of China's GDP in relation to other countries, and about China's recent rate of growth. Gross Domestic Product (GDP) pur-

ports to measure the economic value of the total production of an economy, eliminating double counting and excluding strictly illegal activities. So the first problem is to measure total output as accurately as possible, a difficult task for any economy and especially for one that has only recently acknowledged the importance of some economic activities (especially services in all their manifestations) and developed its statistical services. Of course, China measures its output in Chinese currency, yuan, while the United States measure its output in U.S. dollars. Thus international comparisons require translation into a common unit, even when prices may be very different in the two economies.

There are two broad approaches to the issue of conversion. The first is to rely on some variant of recent market exchange rates between the two currencies. The second, more demanding and more complicated, re-prices output in each country in terms of prices in the other country, or in some set of standard international prices, and re-calculates GDP with the alternative prices. The result is referred to as GDP in terms of purchasing power parity (ppp).

Using the first technique, the market exchange rate, results in a GDP of \$991 billion for China in 1999 (calculated from IMF, May 2001), with a per capita GDP of \$790. On a purchasing power parity basis as calculated by the World Bank, China's per capita GDP was \$3291 in 1999 (World Bank, 2001, p.274), which when multiplied by population suggests a ppp-based GDP of \$4,130 billion, over four times as large. The main difference is that many local services, some locally produced goods, and housing are much cheaper in China than in the United States; repricing them at U.S. prices greatly increases the measured value of output.

For cross-country comparisons of material well-being, ppp-based comparisons are superior to exchange rate-based comparisons. But for relation to the world economy, exchange rate-based comparisons are more relevant—these determine the effective weight of the country in question on world trade and payments.

Calculating per capita output in China at ppp is itself problematic. In his widely-cited 1995 book Maddison chooses \$2,700 as the best among five estimates for 1990 (international dollars). By his 1998 book on China he had reduced the figure for 1990 to \$1,858, adapting work by Ren and Chen, who based their work on some 200 bilateral price comparisons between China and the United States. Their work shows a per capita output for China for 1986 of \$1,818 using U.S. expenditure weights, but only \$571 using Chinese expenditure weights, which give much greater weight to food, less to housing—more than a three-fold difference! Maddison adjusts these figures upward to make them comparable, in his judgement, to his figures for other countries. The World Bank's per capita output of \$3,291 for 1999 when adjusted back to 1990 in 1990 prices would yield \$1,238—only two-thirds of Maddison's (revised) figure of \$1,858. These are substantial differences for estimates that purport to measure the same thing. The fact is, calculating ppp is something of an art, with many judgments required, especially regarding the comparators and the weights, and involving a number of ad hoc adjustments to modify or discard figures that seem implausible. In contrast, we know the market exchange rate.

Two further points about ppp: First, we do not use ppp when calculating domestic GDP (where the issue of currency conversion does not arise): for example, in measuring China's GDP, apples in Sichuan are priced at Sichuan prices; apples at Shanghai are priced at Shanghai prices, the difference being (often substantial) transport costs (including losses in transit) and perhaps also differences in quality. Using ppp implicitly prices all Chinese apples, wherever they are, at the same price. To ignore transport costs and quality differences is a mistake.

Second, finding suitable comparators across countries is extremely difficult, particularly for countries that differ greatly in their state of development. With the integration of the Warsaw Pact countries into the world economy, we discovered that products produced in eastern Europe or Russia were not competitive with western products with the same name. We also discovered in the Gulf War that not all tanks are equal, even when they have similar weight and armament. This is a serious problem whenever the goods (or services) are not in direct competition with one another, where significant price differences usually reflect quality (or locational) differences.

These are technical issues; they bear even on international comparisons of standards of living. The pertinent question is: why exactly are we interested in comparing national GDPs (as opposed to per capita GDP)? Is it because we want to know a country's contribution to total world production? Or its contribution to world demand? Its capacity to buy goods or assets abroad? Its potential military capacity? If the last, for what kind of conflict? The motivating question is important for getting the right metric.

China trades at world prices, converted into yuan at the market exchange rate. Foreign investment, in and out, moves at the market exchange rate. China has pur-

chased modern military equipment from Russia, presumably with dollars or rubles purchased with dollars. China can build (equivalent quality?) military equipment at home, using Chinese equipment and “cheap” Chinese labor. But this equipment and labor have an mA which can be measured at world prices converted at the market exchange rate, not some notional ppp rate.

This is the key point: in any market-oriented economy, which China is rapidly becoming, any expenditure has an opportunity cost that should be measured with reference to the world economy at the prices actually prevailing, i.e. local prices converted into dollars at the market exchange rate.

Protection against imports will of course raise relative domestic prices of protected goods; foreign protection against exports—mainly apparel in the case of China—will lower the relative domestic prices of those goods, and these distortions can distort growth rates and international comparisons, making highly protected countries appear more productive than they are. (In comparing defense budgets, we may want to separate personnel from other expenditures; China’s soldiers should be imputed a wage matched to their skills. Since most Chinese enlisted men are from rural areas with low skills, however, their market wage may not greatly exceed their military pay, including pay in kind.)

Analytical work on the former Soviet Union in the 1970s could not use a market exchange rate, because the official \$1.4/ruble rate was only symbolic, not a market rate. Domestic prices were not linked to world prices, even for goods they traded. Thus analysts had to simulate a conversion rate, and much work was done on it, both at CIA and elsewhere. We now know the general results valued Soviet goods, both civilian and military, too highly, largely because of inadequate allowance for differences in quality.

This problem does not arise for China: we generally know the prices Chinese goods can command on the world market. If goods of the same name command lower prices at home, it is presumably because of lower quality or costly internal transport.

Market exchange rates can move around a lot, particularly but not only around currency crises. For this reason, they can properly be averaged over several years for international comparisons. However, the Chinese yuan has been fixed at roughly 8.3/dollar since 1994. In my view it is modestly undervalued, as evidenced by the steady growth of China’s foreign exchange reserves, the result of central bank market intervention to keep the yuan from appreciating. China has also had a significant trade surplus in recent years. However, it still maintains controls on outflows of domestic capital. And it is about to enter the WTO, following which under the access agreements China must reduce its import barriers much more than its trading partners do. Many Chinese are fearful of withering foreign competition. If these fears prove to be valid and widespread, the yuan might have to depreciate over the next five years, although my guess is the required depreciation will be modest, e.g. 10–15 percent. Moreover, WTO membership may result in more inbound foreign investment, thus mitigating the required depreciation or even eliminating it altogether.

The bottom line is this: the market exchange rate provides a much better basis for converting Chinese GDP into dollars than does some artificially constructed ppp rate. Following the pattern of Japan and Korea, the real exchange rate of the rmb might appreciate over time, as China develops, but that process will occur at a modest rate, over decades.

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Chairman D'AMATO. Welcome back, Dr. Wolf. You left us at your last point on reciprocity. If you would like to finish that up now, please go ahead, and then we'll move on to our next panelist, but you are on again.

Mr. WOLF. Thank you. I am sorry for the interruption.

The concluding point was that in the experience that we have had with the China Reform Forum, which is a think-tank creature of the Central Party Academy that is headed by Hu Jintao, a prospective successor to Jiang Zemin, which, as the fourth bullet in the last point indicates, the meetings have alternated between Beijing and Santa Monica. In fact, we concluded the fourth meeting on Friday of last week. And we have had at these meetings—we and they have had—both military and intelligence folks. On our side, we have had people from the CIA and the Pentagon community. And the exchanges, although sometimes, I wouldn't say "heated," but "warm," have been symmetric and reciprocal, and we have gotten at least as much out of them as the Chinese have gotten out of those contacts.

So I would suggest that that process and how it is conducted and the relevant gains on both sides might well be reassessed by the Commission, and my recommendation would be that those contacts, subject to that condition, should be strongly encouraged.

Thank you.

Chairman D'AMATO. Thank you very much, Dr. Wolf. I know that will be a subject of interest to many of us here.

We'll move on now to Mr. Barry Anderson from the Congressional Budget Office. Please go ahead.

STATEMENT OF BARRY B. ANDERSON, DEPUTY DIRECTOR, CONGRESSIONAL BUDGET OFFICE

Mr. ANDERSON. Thank you, Mr. Chairman, and I want to thank you and the members of the Commission for inviting me to testify today at this hearing on Chinese budget issues and the role of the PLA in the economy.

Although I have been to China a number of times over the past several years and spoken to various delegations of Chinese officials here in Washington several times, I do not pretend to have any expertise at all about the Chinese budget process.

My expertise, my entire career, is the U.S. budget and particularly the U.S. budget process. I went to China as part of a team from the Organization for Economic Cooperation and Development to discuss Western budget practices. Much was said during my visits about the budget process in the U.S. and a few other OECD countries, but virtually nothing was said in these meetings about the Chinese budget process itself. However, maybe I can be of some assistance to relate to you some of the questions that were asked to me and some of the responses to the answers I got.

First, let me tell you a little bit about why I went to China. I have worked for the Federal Government, almost all of that time in budgeting, for more than 30 years. Much of my career was at the Office of Management and Budget, where I rose to be the sen-

ior career civil servant. In that role, in the Organization for Economic Cooperation, which has a meeting of senior budget officials annually, I was regularly the U.S. delegate and participated for so long and so often that I actually chaired the meeting for a number of years.

China, by the way, although, of course, not a member of the OECD, has in recent years regularly attended the OECD in observer status, so they are active in this meeting of senior budget officials which is usually conducted annually in Paris.

I have also set up and been involved in a more limited meeting of senior budget officials, usually the budget directors, of G-7 countries. Because of my extensive experience at OMB and my dealing with OECD, OECD folks asked me to join them in a meeting that was set up a number of years ago to talk to the Chinese about Western budget practices.

I have also had experience with the General Accounting Office and was there for a number of years, and that came in handy in talking to the Chinese, talking about it not just from the budget but also from the audit point of view.

While in China, I spoke to members of the National People's Congress, including members of the Standing Committee, and officials and staff from both the Chinese Treasury and regional budget offices.

The level of understanding that they had about the U.S. budget process was very high, and the questions that I was asked were quite well-informed. In speaking to that group, I made several main points. One point that I made was the transparency of the U.S. budgeting process. I think we here in the U.S. take for granted the transparency that we have. Almost all countries around the world are somewhat amazed at how transparent our system is. The Chinese, of course, were no exception to this.

They were also interested in information about the detail which we have about spending requests, appropriations, and so forth.

The next point I made was how instrumental our separation of powers was in producing our budget. By "separation of powers," I mean much more than just the separation between the legislative, executive and judicial branches.

I also talked about the kinds of separation and conflicts we have between Democrats and Republicans, between the House and the Senate, between the budget committees and appropriators, even between OMB and CBO, for example. This fascinated them. In particular, they were extremely interested in the Congressional Budget Office and what it meant to the U.S.—I say "they"—I should concentrate on the members of the National People's Congress and the Standing Committee. To have a budget office such office such as that of CBO respond directly to the legislative branch is unique in the world, I would say. The interest in it by the Chinese, as many other places in the world, is growing constantly, and my experience at OMB as well as currently Deputy Director has meant that I have had many, many questions about CBO works.

Third, I emphasized the differences between the budget process in a system like ours and the process in a parliamentary type of system. Being there with other European countries, there was a lot on our ability to compare and contrast between us and Sweden and

Italy or Canada or Iceland and a few of the other countries that were present.

In general, the questions I was asked, however, by the Chinese concerned more what we call budget execution here, as opposed to budget formulation. For example, several questions were posed about what happens to funds after an appropriation bill is signed. I spent quite some time explaining our obligation-based system, including the details of how we warrant, apportion, obligate, and audit funds after the programs have been authorized and appropriated. In particular, the Office of Management and Budget's power to apportion generated more interest and more questions than any other issue that I raised.

Another area of interest that I received questions on was the operations of the International Revenue Service and to a lesser extent, Treasury's Financial Management Service. The fact that our Government's tax system largely rests on voluntary compliance of our citizens, despite the tremendous complexity of our Tax Code, was fascinating to the Chinese.

I recently went to Singapore with the OECD to chair a meeting of senior budget officials from Asian countries including China. At that meeting, there was much discussion about common issues that Asian budget officials face, many of which we face here in the United States. Those issues include such things as performance budgeting, cash versus accrual accounting, transparency, and the level of detail.

Also, there was a lot of discussion that the Chinese and others participated in in terms of the term of the budget. When I first started in budgeting, we were budgeting for about 18 months. That is, when the President would submit his budget in the early part of the year, it would do so for the budget that would start later in that year; so the forecasts that we were going ahead with at that time were only about a year or a year and a half out.

We slowly, over the last 20 years or so, went from 18 months to three years to five years. Now we are at a 10-year budget, and we at CBO regularly produce information for the next 75 years.

This caused much concern and questions on the part of the Asian budget officials as to why and how we could go about doing this. I mentioned to them the importance of the programs that we have that are basically intergenerational transfer programs—primary among these are, of course, Social Security and Medicare—and that to adequately assess the impact of changes to intergenerational transfer programs, one must look beyond the next couple of years and out through multiple generations.

China among others has, I believe, also some types of international programs, and they were fascinated with the information that we look out with not just 10 years but 75 years.

This is a quick summary of some of the issues that I have talked about and some of the questions that I got. I'm sorry I don't have more to contribute on the Chinese budget process itself, but I'll be happy to answer any questions that you may have on my interactions with Chinese officials.

Thank you.

Chairman D'AMATO. Thank you very much, Mr. Anderson. That was a unique perspective, and I'm sure there will be a lot of questions.

[The statement follows:]

PREPARED STATEMENT OF BARRY B. ANDERSON

Mr. Chairman and members of the U.S.-China Commission, thank you for inviting me to testify before you today at your hearing on Chinese budget issues and the role of the PLA in the economy. Although I have been to China four times over the past two years and spoken to various delegations of Chinese officials here in Washington several times, I do not have any expertise about the Chinese budget process. My focus is the budget process in the United States. I went to China as part of a team from the Organization for Economic Cooperation and Development (OECD) to discuss Western budgeting practices. Much was said during that meeting about the budget process in the United States and a few other OECD countries, but virtually nothing was said about the Chinese budget process.

While in China, I spoke to members of the National People's Congress, including members of the Standing Committee, and officials and staff from both the Chinese Treasury and regional budget offices. The level of understanding exhibited by the members about the U.S. budget process was very high. All were very well informed about our processes and practices, and they asked very good questions.

In speaking before that group, I focused on several main issues. One issue was the transparency of the United States' budgeting process. Unlike in many other countries, in the United States all information regarding spending requests, appropriations, debates, and so on is made available to the general public.

The separation of powers was another area I discussed. The legislative and executive branches sometimes having opposing agendas, and conflicts often arise between Democrats and Republicans, the House and the Senate, budget committees and appropriators. In spite of the conflicts, however, the Congress is still able to come together and pass the budget every year.

Third, I emphasized the differences between the budget process in a system like ours and the process in a parliamentary-style government. Although I covered both systems, most of the questions asked during the meeting concerned the United States' system. In general the questions I received from the Chinese, particularly from the staff, concerned budget execution as opposed to budget formulation. For example, several questions were posed about what happens to funds after an appropriation bill is signed. I spent quite some time explaining our obligation-based system, including details of how we warrant, apportion, obligate, and audit funds after programs have been authorized and appropriations provided. In particular, the Office of Management and Budget's power of apportionment generated much interest among the people I spoke to.

Another area of interest was the operations of the Internal Revenue Service and, to a lesser extent, the Treasury's Financial Management Service. The fact that our government's tax system largely rests on the voluntary compliance of our citizens, despite the complexity of our tax code, prompted much discussion with the Chinese I spoke to.

I recently went to Singapore with the Organization for Economic Cooperation and Development to chair a meeting of senior budget officials from Asian countries, including China. At that meeting there was much discussion about common problems that Asian budget officials face, many of which we face here in the United States, too. Those problems include performance budgeting, issues related to cash versus accrual accounting, and transparency and the level of detail contained in budget documents. It was a very positive experience, and I expect there to be future meetings of those senior budget officials.

I'm sorry I don't have more to contribute on the Chinese budget process, but I'll be happy to answer any questions you may have on my interactions with the Chinese officials.

Chairman D'AMATO. Mr. Cheng?

**STATEMENT OF CHENG XIAONONG, LECTURER, DEPARTMENTS OF
POLITICAL SCIENCE AND HISTORY, PRINCETON UNIVERSITY**

Mr. CHENG. Thank you very much, Mr. Chairman and Commissioners, for inviting me here.

In this presentation, I am going to give a very brief picture of the Chinese budget process and structure, especially about the transparency problem.

If one wants to select some tough topics in China studies, as a China scholar, I believe the fiscal budget issue is definitely on the list. Not only scholars in the West may think so, but experts in China believe this, too.

In the Ministry of Finance in China, people often say that the fiscal budget issue in China is a topic that laymen could never understand and that experts could never make clear. I guess the key problem is that not only is there a transparency problem for outside observers, there is a transparency problem for the central regime in the Chinese Government. In other words, the central Chinese Government doesn't know exactly how much the local governments expend and collect.

If we go back a little bit in the history of PRC, in the Mao era under a planned economy, the fiscal budget was part of national planning, and it was made very complicated as Mao often changed policies radically, and regular bureaucratic control over the budget was often interrupted by Mao's orders.

However, the first 10 years of economic reform since 1979 might be the best time for fiscal budget control in the history of Communist rule in China, although the control was often manipulated by changing central and local relationships.

But the past 10 years could be labeled as the worst period in the fiscal history of China, and no signal indicates possible improvement for the next decade. In the past decade, the share of regular tax revenue in GDP fell dramatically, but extralegal and illegal fees at every level of government and by almost every government office increased rapidly each year.

There has never been a normal bookkeeping system for collecting extra fees. Even the Ministry of Finance itself does not know exactly how much local governments collect and how that money was expended, and there was no audit system for that extra money.

Corruption of individual officials is not the only reason for such chaos. The political strategy that the regime has applied is responsible for the situation.

In the past decade, Chinese leadership adopted a strategy to gain political support and cooperation of its bureaucratic apparatus—in other words, an exchange relationship between the political regime or the leadership and the bureaucrats. In other words, the leadership allows bureaucrats to be involved in corruption with little worry of severe punishment, and the bureaucrats therefore guarantee political loyalty to the leadership.

The right to collect extralegal fees and the freedom to spend them without bookkeeping or audit is actually a bribe that the leadership offers to bureaucrats for maintaining the political exchange. That is why the Chinese regime never once prohibited illegal fee collection, although the masses and private entrepreneurs hate it most, especially in rural areas.

Currently, the existence of illegal fees out of the fiscal budget makes it easy to underestimate the scale of government budget in China. The official figure of China's annual budget includes only

tax revenues. It is about 1,180.6 billion RMB in the year 2000, and 1,275.4 billion RMB in 2001, about 13.4 percent of China's GDP.

However, the real annual budget of the Chinese Government at different levels is much larger than the official figure. Chinese Government offices from the provincial level to the township level all collect extra fees legally and illegal fees as well.

According to the estimates of research fellows of the General Bureau of Taxation of China—this research report was recently published in a journal in China—the legal and illegal fees are both about 10 percent of GDP in the past years. So if one takes all the tax revenues, legal fees, and illegal fees together and takes them into consideration, the best estimate of China's annual budget is about 33 percent of GDP, according to those Chinese experts. This is a percentage not really much lower than that of years before reform.

However, this high percentage of government budget by no means implies that the Chinese Central Government has large space to expand defense expenditures. Actually, it can only use a very small share for military purposes.

About two-thirds of the government budget is controlled in the hands of bureaucrats of local governments, from the provincial level to the township level. More or less directly or indirectly, the local bureaucrats use the money for their own personal interest and never report to the central regime how much and how they spend it.

In terms of the other one-third of the government budget, that is, the tax revenue income for central and local governments, the share for the central government is less than half. So it is about 6 percent of GDP in the year 2000.

With this share, the central regime has to balance all demands, from infrastructure investment, debt payment, to payment for bad loans in state banks.

In the year 2001, the official figure for defense expenditures is about 1.5 percent of GDP, about one-fourth of central government tax revenue. This figure, however, does not cover all hidden military expenditures in China. It includes only personnel and maintenance costs of PLA and excludes costs of maintaining one-fourth of the Chinese military forces, the force called the People's Armed Police, with about one million soldiers. Also, the official figure for current military expenditure does not include investments for military R and D and production. Many other funds or resources available for military forces are either hidden in fiscal categories for civilian use or not calculated for lack of information.

China's large defense industry contributes a lot for military expenditures. These corporation groups are civilian in the sense of making profit and are not fully dependent on the defense budget. About 80 percent of output of the defense industry in China is for civilian use, but they are partially military in the sense that they regularly follow instructions from the Commission on Science, Technology and Industry for National Defense, which is part of the Central Commission for National Defense.

The defense industries always maintain production lines for military orders in ready status. Also, the industries have their own R and D institutes and have put a lot of resources to develop military

products from weapons to satellites. Most investment for military R and D in defense industries does not come from the defense budget but from the civilian investment budget.

The PLA also makes money through business. Such businesses have extended to almost every economic sphere, from agribusiness to food processing to electronics to transportation, hotels, construction, real estate, tourist attractions, medical services, and even smuggling.

Estimated income of businesses varies widely, from three to eight times official defense budget. A large part of the profit of the businesses, however, goes to private pockets of military officials and their relatives, and only about one-third of it is going to be used for the military budget of the PLA.

In my presentation, I have given a very brief picture and would be glad to answer questions about the Chinese budget process.

Chairman D'AMATO. Thank you very much for your presentation and for your paper; it is very interesting.

[The statement follows:]

PREPARED STATEMENT OF CHENG XIAONONG

1. What is your best estimate of China's annual budget?

The official figure of China's annual budget includes only tax revenues. It is 1,180.6 billion RMB in year 2000 and 1,275.4 billion RMB in 2001, about 13.4 percent of China's GDP. However, the real annual budget of Chinese government at different levels is much larger than the official figure. Chinese government offices also collect extra fees legally and illegal fees as well. According to estimates of research fellows of General Bureau of Taxation of China, the legal and illegal fees are both about 10 percent of GDP in the past years. So if one takes all the tax revenues, legal fees and illegal fees into consideration, the best estimate of China's annual budget is about 33 percent of GDP, a percentage not really much lower than that of years before reform.

2. How is the budget divided between economic development and defense priorities?

Funds for defense priorities are managed and distributed by Finance Department of General Logistics Department of PLA, that only follows orders of Central Military Commission, while funds for economic development are managed by State Council and distributed by Ministry of Finance. As State Council has no rights or any way to know details of military budget, it has actually no authority in control of military budget. The key rule of thumb in dividing the two funds in Chinese government is to keep the share of military use in state budget stable or a slow increase. When funds are not sufficient for PLA, State Council may open doors for military units to run business for their own purpose.

3. How is the budget determined? Who Decides? What is the scope of the influence of the PLA over the budget process?

The determination of military budget is a process quite independent from State Council and Politburo. The Central Military Commission is in charge of determining the whole size of military budget and its distribution among Army, Air Force, Navy, Strategic Force and so on. Neither Army nor Air Force alone involves in negotiations with State Council or Ministry of Finance for their budget. PLA as a whole deals with State Council for budget issue.

At the first step of the process the Central Military Commission decides size of military budget, some politburo members who are also members of Central Military Commission join the discussion. The General Logistics Department is responsible to prepare a draft of the budget for the discussion. When Central Military Commission approves, the draft becomes an order from the Commission to Ministry of Finance, while the latter can't raise questions or ask for details. The final result of the discussion at the meetings of the Central Military Commission is not reported nor is admitted by politburo.

At the second step of military budget process technocrats of Division of Defense Budget in Ministry of Finance therefore work with officials of the General Logistics Department to arrange the time and flow of draw-down funds. The final step is an internal distribution of the funds within PLA. Senior commanders of Army, Air Force, Navy and Strategic Force will meet and negotiate each other for the distribu-

tion in internal meetings of the Central Military Commission. When priorities and policies are decided, officials from Finance Departments of Army, Air Force, Navy and Strategic Force will attend meetings held by the General Logistics Department to arrange fund allocation.

4. To what extent do China's export earnings enhance the military budget of the PRC?

Only export earnings of corporation groups in defense industries, such as Aviation Industries of China, China National Aero-Technology Impex (CATIC), China State Shipbuilding Co., China North Industries Group (NORINCO), China National Nuclear Corp., and China National Electronics Impex., might enhance the military budget in two ways. First, with export earnings the defense industries are able to increase funds for R&D of military equipment in their institutes. Second, and probably more important, the export earnings feed factories of the defense industries to maintain potential capabilities of military production, that otherwise may have to be shut down for lack of sufficient funds from civilian part of fiscal budget.

5. Could you provide an overview of China's defense budget structure and process to include both revenues and expenditures?

The official figure of defense budget is only part of sources for military expenditure. According to Statistics Bureau of China, the defense budget was 20.08 billion RMB in 1986, 29.03 billion in 1990, 63.1 billion in 1995, 106.9 billion in 1999, 119.8 in 2000 and is estimated as 141.0 billion in 2001. In recent three years the defense budget is about 7.9 percent of total fiscal expenditure and 1.4 percent of China's GDP.

This figure, however, is the smallest category of military expenditure in China. It covers only personnel and maintenance costs of PLA, and has excluded costs of maintaining one fourth of Chinese military force, the People's Armed Police with one million soldiers, and the investment for military R&D and production. Many other funds or resources available for military force are either hidden in fiscal categories for civilian use or not calculated for lack of information. Of course, the category does not accord with NATO standards.

According to available official source, from 1986 to 1992, about 40 percent of the official defense budget is used for food and clothing of PLA members, salaries of PLA officials and subsidies for soldiers. The rest of the budget covers expenses for operating the army, including purchase order for military goods from defense industries or abroad, maintenance costs of military equipment and operating costs of military industries.

In China the military industries are different from defense industries. PLA directly runs some factories that mainly produce military uniforms and goods for military daily use, and maintain military equipment. These factories belong to General Logistics Department of PLA and can be labeled as Military Industry. It is actually a quite small sector. Another much larger sector is called Defense Industry. Factories in defense industries are run by civilian ministries under State Council before and are now operated by corporation groups. These corporation groups are civilian in the sense of making profit and are not fully depending upon defense budget (80 percent of output of the industries is for civilian use). They are partially militarily in the sense that they follow regularly instructions from PLA Headquarters (usually from Commission on Science, Technology and Industry for National Defense) and from military representatives who are sent by PLA and reside in these factories. The priority of factories in defense industries is satisfying whatever demand PLA claims. The industries always maintain production lines for military orders in well status. Also the industries have their own R&D institutes and put a lot of resources to develop military products from weapons to satellites. Most investment for military R&D in defense industries does not come from defense budget but from civilian investment budget.

Another source of military expenditure available for PLA is profit earned through its businesses. PLA businesses have almost extended into every economic sphere: agribusiness, food processing, electronics, transportation, hotels, construction, real estate, tourist attractions, medical services, karaoke lounges, even smuggling. Estimated revenues of the businesses vary widely, from 3 to 8 times of official defense budget. Taking a conservative estimate, e.g., 4 times of the official defense budget, and an average profit rate of 15 percent in China, the businesses earn as much money as about 60 percent of the official defense budget. Greater part of the profit, however, goes to private pockets of military officials and their relatives, and only one third of it, estimated by some scholar, is to supplement military budget of PLA.

6. How does one dissect China's budget to determine the true allocation of national resources dedicated to defense?

It may need a lot of research work by collecting all available statistics and case information, most in Chinese, then through careful analysis, comparison and esti-

mate. It needs not only general knowledge about composition of PLA, but also that about defense industries. Reading Chinese newspapers, journals, even some PLA's literature journals, may help the researcher get sense about what is going on in terms of military related activities and expenditures. An experienced scholar may thus give a reasonable estimate about the true allocation of national resources dedicated to defense.

7. What proportion of the China's defense-related expenditures is financed by profits derived from PLA and/or Ministry-owned firms?

This might be the toughest work for such a research. While data of Ministry-owned firms is mixed up with military and civilian activities, PLA-owned businesses are eventually a "black box," even unclear to Chinese government or the General Logistics Department. Some experts, such as those in International Institute of Strategic Studies and Stockholm Institute of Peace Research, suggest that PLA's total spending is four or five times the official defense budget.

PANEL I DISCUSSION AND QUESTIONS AND ANSWERS

Chairman D'AMATO. I would like to lead off with one quick question for Dr. Wolf on the matter you finished up with, on the military-to-military exchanges and your recent experience. Of course, there is a debate right now being led from the Pentagon around the value of these things. CINCPAC is involved in it.

In your experience and your discussions with the Chinese who have visited you, do you believe that it is realistic to think that the Chinese will agree to some sort of architecture of quid pro quo and reciprocity in this area?

I think back to when Secretary Cohen was Secretary of Defense and wanted to visit the Chinese Pentagon and was told that there was no Chinese Pentagon. And it took quite a long time for the Chinese to admit they had a Pentagon—and then they said, yes, they did have a Pentagon, but it was too small to meet in.

So there is kind of a steep climb here, and I just wonder if your recent experience indicates that there would be a way to move into a more fruitful area of reciprocity in this exchange issue.

Mr. WOLF. My answer, Mr. Chairman, is an unequivocal yes. They don't have a Pentagon, because their military department doesn't have five sides! However, I met in some of the military offices, and the Chinese have had military folks, as I said, in our annual meetings. We had a colonel from the PLA here at our recent Rand conference on Thursday and Friday of last week, and at least one of the six-or seven-people in their delegation was from their intelligence community.

So, I think not only will they respond, but I think that is the respectful way to conduct relations with their military, respectful by us to them.

My impression of the prior legacy is that the push came from our side rather than from their side and paradoxically that we were responsible for the one-sided character.

Chairman D'AMATO. Thank you.

Commissioner Wessel?

Commissioner WESSEL. Thank you, Mr. Chairman, and I thank the panelists.

It is good to see you again, Mr. Anderson. I'll restrain myself from trying to find out how OMB and CBO work. I have always had questions as well as our Chinese colleagues have had.

Over the last months since our Commission started meeting, I have been increasingly aware of how much we don't know of what is going on in China, how inadequate the data is. I believe it was

Professor Cooper who indicated with regard to the PPP that the data is "somewhat flaky." And while this clearly has enormous repercussions for our analysis of their defense budget, it goes to all of the other issues that we have been looking at.

Yesterday, we met with a number of panels regarding disclosure issues, and Moody's told us that they had inadequate information to be able to judge some of their issues that the Chinese wanted to bring to market, so that our investors here are at a loss for understanding what risk they may be at.

We have looked into the issue of Laogai, and the Customs Service has indicated that they can't even get access, to try to understand what the repercussions are and what the impact may be on us. And as China has just entered into the WTO, I am increasingly concerned that we have no idea what in fact the benefits of that may be to us; that China may have overestimated the value of their market to us. Shortly after the agreement was signed, the Chinese Trade Minister indicated that we were overestimating what our agriculture sales would be there.

And as we go into the next phase, now that China has acceded to the WTO, how are we going to monitor and ensure compliance with their WTO concessions when we may not know what is happening with consumer purchasing, we may not know what is happening with government expenditures on projects, for example, related to the Yangtze River, and whether we are able to participate. All the way down the line, there is a data problem that has enormous repercussions for our security interests, whether military or economic.

I would like the panelists to comment on that, and I would also like the panelists to help us over the coming months develop what we need to know what data should we be gaining, because I think it is not only in the U.S. interest, but the WTO Secretariat has some power as it looks at the nullification and impairment of U.S. trading rights to go into a country and start collecting data to determine whether a country is complying, as our own Commerce Department does, and Secretary Mulloy was involved in that in the past. We need to develop some data. It is not just for our traditional defense interests but our economic interests, and we may be able to get other countries to participate with us as well.

I'd like to open that up.

Mr. COOPER. The first point that I think needs to be made is that after WTO membership, which will come when the Chinese People's Congress ratifies the agreement, China has five years to come into compliance. There is a transition period. So we should not expect China to be in compliance by June of next year; it won't be.

Secondly, it is true, as Mr. Wessel suggests, that the WTO has the authority, and indeed, it is the obligation of members to permit WTO to undertake what is called a "trade policy review." Their aspiration, I believe, is an 18-month cycle; in fact they are running behind that. It is worth keeping in mind that WTO is strapped for resources, and the United States is part of the problem in terms of keeping WTO on a very short leash, so they cannot accomplish their full charge because they don't have the manpower.

But I think our main source of intelligence, if I can call it that, on WTO compliance by China in five years' time is going to be

American businessmen. These are the people who are on the ground, who are trying to get into the market. Some of them will succeed, some of them will find resistance here and there which look wrong to them, and they will complain if they think that China is violating its undertakings. These complaints will come back to our USTR and Commerce Department. I don't think there is any other effective way to gather the information we need except through such a decentralized process, but we have set one in motion.

The other point I'd like to make is that we have a lot of Chinese on our side in this. As Mr. Cheng mentioned, one of the most frustrated groups of people in China is in the Ministry of Finance; they do not have their arms around their own responsibilities. So if we play our cards right, we have strong allies in China in improving the system of information. But it is going to be a long, long, and for the Chinese, expensive, process to do that.

Commissioner WESSEL. Does anyone else want to comment?

Mr. ANDERSON. I just want to highlight that last point in particular. Again, my focus is very much government.

One of the questions I had and spent quite some time on was concerning the U.S. Anti-Deficiency Act. That Act, in brief summary, basically precludes any government official from obligating the U.S. unless he has the moneys behind him first. In other words, an appropriation must be available—and this includes me; I am one of those officials—before I can buy a pen or a piece of paper or pay an employee or buy computer systems or contract for a building or anything else.

I described in detail the Anti-Deficiency Act and its sources and how it is enforced, and in particular, that government officials could in fact go to jail if they violate this. I was asked how many U.S. Government officials had been put in jail. I said I wasn't sure, but I thought the figure was very, very low, perhaps not quite zero but close to it. And they were amazed at that—again, the idea that, "Do you mean you are able to do this without taking dozens if not hundreds of officials and regularly incarcerating them for violating the law?" And I said, "Oh, yes." And then we went into the details of the Inspector General's Office and the GAO and how much review of officials occurs.

By the way, I also highlighted independent media, that the media is also watching government officials and what they are highlighting.

I say this because I want to echo Professor Cooper's point. The finance people were absolutely fascinated with this. They really, I believe, want to come to a situation where they have the ability to get this information and that they clearly are not there.

WTO may be a wonderful excuse for them to do things that they wanted to do all along, but now they can blame the fact that we need to do this, and we need to do this to be fully participants in the economic process in order to get the information.

Commissioner WESSEL. Let me if I can just quickly reiterate the request that if there is specific data that you think we should be seeking as part of our mandate, that would be helpful to hear from you. And also, Mr. Chairman, if we could at some point potentially

meet with the WTO staff, the secretariat, to find out what their review mechanism will be, that would be helpful.

Chairman D'AMATO. Yes—and their resources, as Mr. Cooper pointed out.

Commissioner WESSEL. Yes.

Chairman D'AMATO. And I would also mention your comment, Mr. Cooper, that businessmen are more likely to be proactive if they know they have a proactive government behind them, which has not always been the case, because they don't want to be out there alone and be vulnerable, and if they are being pushed, or at least they know they've got a strong partner on the part of the U.S. Government, they are more likely to get this kind of not complaint but commentary on what is going on.

Commissioner Lewis?

Commissioner LEWIS. I'd like to thank the panelists for giving us some very interesting information.

Dr. Wolf, I have a question for you. You said this was the fourth meeting that you had had with the group in China. Could you please tell us how that occurred, how the first one occurred, and what was the process used in starting the exchanges?

Mr. WOLF. Surely. The process began in 1997 when we had a visit from one of China's most productive economists, a professor Hu Angang, a professor at Qinghua University and a member of the Chinese Academy of Sciences. He gave a seminar at Rand, and I reciprocated and gave a seminar to the China Reform Forum about three or four months later in Beijing—

Commissioner LEWIS. Was his first meeting with you at his request or your request?

Mr. WOLF. Interesting—his first meeting with me and others at Rand was at his request through a Chinese graduate of the Rand Graduate School who received his Ph.D. from the Rand Graduate School about 15 years ago and has been a businessman brokering deals between Chinese and American investors and businesses in the intervening decade.

Commissioner LEWIS. Thank you.

I'd like to ask you one other question. You said that you don't think the current account surplus affects military allocations. Do you think that the Chinese access to capital markets in the United States affects their military allocations?

Mr. WOLF. I think their access to global capital markets—they have floated securities in Europe as well—expands the resources that are available in the economy, but usually—I think the foreign direct investment that flows to China now at the rate of about \$30 or \$40 billion a year is pretty well targeted on projects that—

Commissioner LEWIS. No, I don't mean foreign direct investment. I mean access to countries by Chinese companies and equity markets and bond markets.

Mr. WOLF. Portfolio investment does add to resources, but it goes into the companies and the securities that the investors are targeting—

Commissioner LEWIS. Some of which may have military applications.

Mr. WOLF. Yes. But, if there is a combination of technology and management along with the—that's more in the FDI domain than

in the portfolio domain, so I doubt that there is much spillover from portfolio investment by foreign capital. I think there is more spillover from FDI than there is from portfolio.

Commissioner LEWIS. Thank you very much.

Mr. Cheng, thank you very much for coming. I'd like to ask you a question. How recent is your information about the percentages in dollars? I know that you were a senior policy consultant with Zhao Ziyang. How recent are your numbers through your friends in China? Are they current, or are they five years old, or what?

Mr. CHENG. Do you mean—

Commissioner LEWIS. The numbers that you are using.

Mr. CHENG. That is just a research report; I cited from a report published about two months ago in Beijing.

Commissioner LEWIS. Thank you. The reason I ask that is I know that you were a senior consultant to a very important person in China, and Dr. Cooper, I thought I saw you shaking your head while he was making his presentation. I thought your presentation—

Mr. COOPER. Only on one point. I have never seen a figure as high as 33 percent.

Commissioner LEWIS. That's when I saw you shaking your head; right.

Mr. COOPER. Yes; 33 percent—it would actually astonish me if it were that high in the Chinese economy.

Commissioner LEWIS. I know you said in the 20s.

Chairman D'AMATO. That would be the level of the United States.

Commissioner LEWIS. In China; right.

I saw you shaking your head when he mentioned 33, and actually, I found your report really interesting. What I was wondering is if you could take Mr. Cheng's paper and have a chance to comment on it to us—obviously, not today but at some other time—because I think the two of you—I don't know if you had seen those numbers before, but I think the two of you have really very interesting information together.

Mr. COOPER. Well, most of his written comments are on the PLA, which I found fascinating, but I'm not knowledgeable about the details of PLA budgeting. Except for the 33 percent estimate, we were on the same wavelength in terms of the budgetary revenues augmented by what the Chinese call "extra-budgetary" and perhaps also some illegal revenues; secondly, those take place overwhelmingly at the state and local level and are not accessible to the central government, at least under current arrangements. On those points, we are in complete agreement.

Commissioner LEWIS. Thank you.

One final question for Mr. Anderson. Were you able to discern anything about the Chinese budgeting process from your visits?

Mr. ANDERSON. Let me tell you one question that I thought I was going to be asked and was not asked, and it concerns the comments of my panel members here. It has to do with state-owned enterprises.

The U.S. stands out worldwide by having virtually no state-owned enterprises—

Commissioner LEWIS. Yes, but were you able to discern anything about the Chinese budgeting process?

Mr. ANDERSON. Virtually nothing.

Commissioner LEWIS. Thank you.

Chairman D'AMATO. Commissioner Bryen?

Commissioner BRYEN. Thank you, Mr. Chairman.

I want to ask a bit about the budget issue in terms of the relationship between what we would call the civilian economy on the one side and the defense budget on the other side.

There has been a large increase in relative terms in the defense budget over the last five years in China, but there has also been a huge growth in the civilian economy. And some of that growth, some significant parts of that growth, have involved the acquisition of a lot of high technology capability. Between 1996 and 2000, China acquired close to 1,000 supercomputers, for example, all of which are going into institutes and various state-owned enterprises.

What I am trying to ask—and perhaps Professor Cheng can help me on this question—in Chinese budget planning, is money being allocated to institutes and organizations to acquire high-technology equipment to benefit, among other things, but specifically to benefit, military development?

Mr. CHENG. I think there are a few kinds of research institutes which are responsible for or involved in R and D which partially or completely serve for military purposes. One part is institutes that belong to or are controlled directly by military organizations. The other part is just ordinary institutes controlled by civilian ministries or even local governments or the so-called Chinese Academy of Sciences. They accept orders or instructions from the military part, and with the purpose that they can apply for funds to buy any equipment for their research purposes.

So it is very hard to estimate each year which institute has done something specifically and for what purpose, because it is going to be a long-term project for each institute. And they have the tradition to incorporate work from different institutions and put the final outcome together for military purposes.

Commissioner BRYEN. Are the various institutes tasked—as they are here, by the way, tasked—by the Ministry of Defense in China to conduct military research?

Mr. CHENG. As you know, there were seven so-called ministries about 10 years ago. They were eventually called defense industries, from number 1 to 7. They are called manufacturing ministry. All those are defense industries. They have their institutes well-equipped and with quite qualified researchers to conduct research on military equipment. But about 14 years ago, they began to convert those military defense industries into partially civilian, so those ministries have become kind of—now they are called “corporations” or “corporate groups.”

However, as I mentioned in the presentation, although they are civilian because 80 percent of their products now are for civilian use, however, their research institutes remain there, still taking orders from the military.

Commissioner BRYEN. So there could be a significant part of the budget that is going into military development that we don't see listed as a defense budget item.

Mr. CHENG. Right.

Commissioner BRYEN. Otherwise, it is very hard to explain these huge acquisitions, let's say of supercomputers, for civilian use, because no one could figure out what that civilian use is.

Mr. CHENG. I will say that the situation depends on different fields. For example, in the field of satellites and missile technology, those institutes, I guess, get funds eventually for military purposes and get subsidies from the export.

However, for the regular weapons industry or institutes affiliated with this field, those institutes now actually lack funds for that R and D, because the Chinese PLA does not order enough weapons from the manufacturers, and they lack funds for R and D.

Mr. WOLF. Commissioner Bryen, also relevant to the question, a point that is worth remembering is that the Chinese still are experiencing, indeed suffering from, Soviet budgeting practices. Consequently, it has been and is the case currently that the cognizant "civilian" ministries in aeronautics and astronautics, in transportation and in energy, in maritime affairs, engage in procurement and in R and D with their supporting institutes, and these procurements are directly associated with the armed forces of China. That was the case in the Soviet budgetary practice, as you well know, and was one of the puzzles and controversies that we had in dealing with the estimates of Soviet military spending. That still is the case in China.

Commissioner BRYEN. Yes. What I was trying to focus on a bit is the fact that our enthusiasm for improving China's economy is transferring significant amounts of resources, particularly analytical tools and scientific apparatus, computer capabilities, which is benefiting the Chinese military but is not accounted for in the military budget.

Thank you, Mr. Chairman.

Chairman D'AMATO. Thank you, Commissioner Bryen.

Commissioner Wortzel?

Commissioner WORTZEL. Thank you.

Professor Wolf, you seem to indicate that any money that might flow into Chinese defense industries might come from foreign direct investment, or would most likely come from foreign direct investment.

So the question I would pose is: If a company owned by, for instance, the Second Artillery, the strategic missile forces of the PLA, made money through investment and participation in U.S. capital markets, might any profits them go into future missile production to fund missile production?

Mr. WOLF. Yes, definitely, but I want to correct, I think, a misunderstanding. I didn't mean to say—I didn't say that FDI most likely goes into military production or expansion of military production capacity. What I meant to say was that FDI as a source of capital combined with management and technology is more likely to have spillover benefits for the military than portfolio investment.

Commissioner WORTZEL. Thank you.

And Mr. Cheng, I wonder if I could get educated on one point. It seems to me that the ministries of China, the civil government, are very stovepiped—one ministry gets a certain amount of money that it can allocate against. But I want to ask about the Communist Party and the Standing Committee members of the Politburo who have responsibility for the portfolios in a given area over all ministries—let's say all security and law enforcement and Ministry of State Security is one Politburo Standing Committee member—do those people ever see a whole view of all moneys or budgets for, for instance, Ministry of State Security, Public Security Bureau, State Security Bureau?

Mr. CHENG. I guess not, because according to the political tradition there, of course, the military budget is never discussed in the Standing Politburo meeting. It was a kind of confidential discussion within the military apparatus, and delivered to the Politburo, and the Politburo has to do it.

In terms of the civilian budget allocation, there are still some confidential parts for Politburo members—for example, the state security budget, it has never revealed to others.

Actually, there is a kind of formal Politburo meeting to discuss many things. However, in Chinese politics, there is an informal circle among the Politburo members, and some documents are not circulated to others; and some informal meetings only have several people to discuss things. For example, in terms of state security, there is a so-called "Leading Group of State Security Affairs." This group does not include every member of the Politburo. Only the members of this group discuss those things in terms of state security, and they know something about it.

Commissioner WORTZEL. Thank you.

Chairman D'AMATO. Thank you.

Commissioner Waldron?

Commissioner WALDRON. Thank you very much.

I have three questions. The first two are for Professor Wolf. You made the point that the current accounts situation—if anything, a current account surplus and a foreign exchange surplus would not have an effect on military procurement because it might reduce availability of assets within the country.

As I understand it, the former Soviet Union was very much constrained by its lack of foreign exchange, and it is often estimated that they had between \$40 and \$50 billion on which to run their whole foreign policy.

Surely, it is the case that to the extent that a foreign exchange surplus permits you to cover deficits incurred in foreign purchases, that would make it possible—that would greatly enhance your ability to important foreign military technology. Is that not correct?

Mr. WOLF. Yes.

Commissioner WALDRON. It is correct.

Mr. WOLF. Definitely.

Commissioner WALDRON. So in other words, the more money they have, the easier it is for them to buy things overseas.

Mr. WOLF. Yes, but then, the holdings of the nearly \$200 billion of foreign exchange assets that the government owns would be depleted by those purchases.

Commissioner WALDRON. Yes, of course, I understand that. But in your testimony, I think you unintentionally conveyed an impression that in some perverse way, a foreign accounts surplus and large foreign exchange holdings might actually diminish China's ability to strengthen its military; but given their tremendous dependence on foreign technology, imports from Israel, Russia and so forth, that isn't necessarily the case.

Mr. WOLF. When it has gone down, it isn't the case, but when it is built up—this is sort of a mercantilist—

Commissioner WALDRON. Yes, I understand, but I just don't want people to leave this hearing with the impression that somehow, the wealth that China is accumulating, far from increasing its potential military power, is somehow acting as a buffer against it. I think you have cleared that up.

The other question I wanted to ask you is in connection with your exchanges with China—and I would invite anyone else who wants to comment on it, too. Sunzi remarks memorably that, "All conflict is based on deception." I would like you to recount any instances of deception or deceptive practices that you have encountered in your dealings with the Chinese.

Chairman D'AMATO. Please be brief.

[Laughter.]

Mr. WOLF. Without going into specifics, which would breach the time constraints, they have subjected us to no more deception than we have subjected them to.

Commissioner WALDRON. So in other words you would say that the centrality of deception within the Chinese approach is the same as the centrality within the American approach?

Mr. WOLF. No—you were asking me a specific case, that is, my experience with exchanges with them, and I think that by and large, the information that has been imparted in both directions has been accurate and fair, and where there has been withholding or distortion, I think we have engaged in that—we at Rand and I in dealing with the Chinese—as much as they have with us.

Commissioner WALDRON. I won't ask you about Rand's deceptive practices, but I would comment on the famous remark that it is important to remember in terms of arms control verification that no weapon that the Soviet Union had successfully concealed had ever been discovered.

Anyway, I thank you.

Mr. WOLF. That's a tautology; right.

Mr. COOPER. That's also true of the United States.

Commissioner WALDRON. I agree from a logical point of view.

Now I want to ask Professor Cooper something rather different, a very specific question, and really, this is for guidance.

You brought up this business of changing the direction of the rivers and using the water supply in the South for the North, and I think you touched upon there one of the most important issues that China is going to face in the years ahead—the fact that they have limited water supply to begin with, that a city like Tianjin is drawing its water from the same river in which they dump not only sewage but chemical waste, radioactive waste, and who knows what. The City of Beijing has had a water deficit since Yuan times.

The first thing that the Yuen conquerors built was an aqueduct to bring water to the City of Beijing. The water tables are falling.

I have a very simple question and that is who in the world, or who in the United States—and perhaps you don't know, but if anybody in the room can inform me—who are the experts, would you say, on this issue of water supply in China, because I am very interested in learning more about it, and I just don't quite know whom to turn to.

Mr. COOPER. First, I don't think I said that the Chinese were going to reverse a river. They may, but I don't know about those plans.

Commissioner WALDRON. Divert water.

Mr. COOPER. But they are planning to divert water from the south and central part of the country where water is plentiful to the northern part of the country where, as you suggest, water has been scarce for centuries, and the situation is getting worse.

Commissioner WALDRON. Right.

Mr. COOPER. Specifically to your question, I do not know the answer, but the person I would turn to is Mike McIlroy, who is a professor of earth sciences at Harvard and who is in charge of the Harvard Environmental Program and has personally been engaged, among other places in the world, with China. He may not be the right person, but he would know who the right person is.

Commissioner WALDRON. Can you spell "McIlroy" for me?

Mr. COOPER. M-c-I-l-r-o-y, Michael.

Commissioner WALDRON. Thank you very much.

Chairman D'AMATO. We have a couple questions left before we go to our next panel.

Professor Dreyer?

Co-Chairman DREYER. Arthur, were you finished?

Commissioner WALDRON. Yes, I'm finished. Thank you very much.

Mr. WOLF. I can give you the name of Andrew Marshall in the Pentagon and Enders Wimbush at Science Applications Inc. in Washington, who conducted a workshop on water supplies and demands and shortfalls and so forth about three months ago.

Commissioner WALDRON. Thank you.

Chairman D'AMATO. Thank you.

Co-Chairman DREYER. And I could add Professor Vaclav Smelov from the University of Manitoba to that list.

Professor Cooper, you mentioned that you expected the Chinese GDP to grow by 7 percent a year over the next couple of years. Two years ago, Premier Zhu Rongji estimated that it would take a GDP growth of 8 percent a year simply to give jobs to the new people who are coming onto the job market every year. That would seem to be a drag on future—in other words, if you fail by one percent, it will have a drag effect on future ability, because somehow these people have to be supported and kept from storming government buildings and that sort of thing.

Would you consider that that would possibly be a deflator on your 7 percent estimate, or has that been taken into consideration?

Mr. COOPER. Well, I used 7 percent to create a baseline. I think 7 percent is feasible. But, as I said, a best guess these days would be somewhat lower than 7 percent.

I do not know where Zhu Rongji's 8 percent figure came from. I don't know the basis of the calculation. It is a kind of calculation that is common in the developing world—we, country X, need to grow at 6 percent a year in order to take up—I am actually skeptical—

Co-Chairman DREYER. Of Zhu's figures.

Mr. COOPER [continuing]. Of Zhu's figure. The Chinese labor force is not growing especially rapidly. It is growing more rapidly than the U.S. labor force is, but it is not growing much more rapidly. China is an untypical developing country in this regard. Remember they introduced the "one child" policy 20 years ago, and while they didn't entirely succeed, they have made a major impact on Chinese demographics, and the first children born under the "one child" policy have been entering the labor force for the last several years.

So the Chinese problem is not, as it is in many countries, to provide growth for a number of 18-year-olds that is growing at, say, 2.5 percent a year. The Chinese problem is a different one, which is to reemploy the excess labor—in the large, labor-intensive, state-owned enterprises. They are going to have to shed labor in order to get on an economic and profitable basis. Secondly, of course, the more successful China is, the more rapidly it will draw people out of agriculture and out of the countryside and into the non-agricultural employment. But that is an endogenous response to success—if growth is 5 percent, fewer people will come out of the countryside; if growth is 10 percent, more people will come out of the countryside.

So, I would put emphasize the character of the labor market more than on the rate of growth—the character of the labor market and the character of the financial market. The Chinese so far have not allocated a lot of their very extensive domestic savings to what we could call private or even TVE state and village enterprises (TVEs), that is to say, non-state enterprises. This is a transformation that the Chinese are going to have to make in their financial system if they want to sustain employment-creating growth.

Co-Chairman DREYER. I would, of course, caution you to be careful of the statistics from the "one child" policy. In other words, there are a lot of children who are simply not registered, but they are there, and if they are there, you need to find jobs for them. So again, I would be very cautious in how I used those figures.

Corruption—this is a question for all you—what kind of deflator would you imagine that this would put? GDP growth is—you know, there is good growth, better growth, and less good growth, and if you have resources being siphoned off—for example, Professor Cooper mentioned the water diversion project, and Commissioner Wessel mentioned the Three Gorges Project, and Hu Angang, whom Dr. Wolf mentioned, has actually come up with a percentage of GDP that is diverted to corruption—we don't know whether he is right, and he probably doesn't know if he is right either—but would you expect that to affect your prognoses?

Mr. COOPER. Corruption in terms of the national accounts actually represents a transfer payment and need not affect GDP as such. It is a transfer from Party A to Party B.

Corruption is complicated, and some corruption is growth-enhancing. If an economic system is highly rigid, corruption can be a way around the rigidities of the system. On the other hand, if corruption is just a tax on a system that is not rigid, that is fluid enough, then, like any tax, it creates an excess burden and can slow down growth.

I do not know China well enough to know where the balance of considerations lies. There are still many obstacles to doing business in China, as any one Chinese who has tried to do business there will tell you, and in those circumstances, the “facilitation payments” as they are politely called may actually be growth-enhancing, and they are transfers from the party who wants to do business to the officials who control the rubber stamps that he needs in order to do business.

So it is a complicated area. Here, the person I would turn to is Shang-jin Wei, who is at the Brookings Institution. Corruption in China, is not the worst in the world, but Wei would argue is a significant deterrent to foreign direct investment in China. Extensive though foreign investment is, it could nonetheless be even greater if it were not for the corrupt environment that foreigners have to contend with when they arrive in China. To the extent that foreign direct investment enhances Chinese growth, that would be, I think, the main negative impact of corruption on Chinese growth.

Co-Chairman DREYER. Spoken like an economist. But when the corruption involves dams that burst and bridges that cave in and highways that buckle after two weeks of use, I don't think you can count it toward enhancement.

Mr. Cheng?

Mr. CHENG. In terms of the relationship between corruption and GDP, I can hardly give a figure for the deflator, but by analyzing the composition of recent Chinese GDP in recent years, it is obvious that if not most, much of, growth came from third industry rather than first or second industry. In other words, if you analyze it, you will find that much growth came from consumption of government and from the service industries, like restaurant karaoke and some other things. Usually, this consumption used or consumed by corrupt officials—they personally don't pay for that.

So actually, then, one can get to the conclusion that corruption now contributes a lot to growth. In other words, if the corruption is cleaned up, the growth rate may wind down.

Chairman D'AMATO. Thank you. We'd like to move on.

Yes, Professor Wolf?

Mr. WOLF. Commissioner Dreyer, one observation. In referring to the “deflator,” I'm not one who believes that corruption is helping growth, but I think it is important to distinguish between the deflation of the level of the GDP and deflation of the rate of growth. For the latter, you want to look at the change in corruption, not the amount of corruption.

Hu Angang, whom I mentioned earlier, has a new survey of 77 business men and three provinces that gets at the question of the rate of change in corruption.

Co-Chairman DREYER. Yes. Perhaps I should have said the degradation in the quality of the economic growth.

Chairman D'AMATO. Commissioner Mulloy?

Commissioner MULLOY. Thank you.

I want to pursue a point that Professor Waldron mentioned. Professor Cooper and Dr. Wolf, you both made a point that it is counterintuitive to what most people in Washington are thinking in terms of the surplus of the United States and whether it contributes to the ability of the Chinese to put additional resources into military spending.

Dr. Wolf, you said that the surplus with the U.S. helps defray some of the deficits they are running with other countries. I do think you are wrong in saying that they are running a deficit with the EU; in fact, I think they are running a considerable surplus with the EU of about \$30 billion or more.

But taking your point, they are still running a worldwide surplus of \$25 or \$30 billion a year that accounts for their \$200 billion foreign exchange fund. Doesn't the ability to have that foreign exchange fund permit them to have military things that they would not otherwise have?

Professor Cooper, maybe I'll ask you, because I think Dr. Wolf, you admitted to Commissioner Waldron that that would be the case; correct?

Mr. WOLF. When they draw it down.

Mr. COOPER. There is an important resource accounting exercise that you have to keep in mind. Think of the total real resources that are available to the Chinese economy—the total resources from which any military expenditures have to be drawn. The point Dr. Wolf was making, which I agree with, is that to the extent the country runs a surplus, the total resources available to the country are less—not more—than they would otherwise, by \$20 billion, the size of the surplus.

If you turn the tables and think of the United States, we are spending on consumption, government and investment more than we are producing. What's the difference? Our current account deficit. We are drawing real resources from the rest of the world.

The point is nothing more complicated than that. China can build up a kitty, if you like, called their foreign exchange reserves with the proceeds of their surplus, and they can use the kitty in the future to buy foreign goods, so they need not face the hard money constraint which, for example, the Soviet Union from time to time faced. It gives them a degree of flexibility.

But if one is talking about this year, they have fewer resources available than they would otherwise have if they had balance in their international current. It is really a resource accounting point.

Commissioner MULLOY. But the fact that they are running these kinds of surpluses—and my understanding is that a lot of the foreign exchange earnings for China are foreign and direct invested companies which invest maybe to sell some in the Chinese market but also to make a lot of stuff to sell abroad, and I guess they are accounting for 40 or 50 percent of Chinese exports—that foreign and direct investment, which is helping to build an industrial base in China, which may be all well and good, but that contributes to their long-term military potential. So the surpluses do have some impact on all that kind of flow.

Mr. COOPER. Since resources are fungible, growth contributes to Chinese future military potential. If growth is 3 percent, GDP in-

creases less than if there is 7 percent growth; and if there is 7, there is less than 10—whatever the source of growth, that potential goes up.

If I can use this occasion to comment on capital markets, because it came up before, China has an extraordinarily high domestic savings rate. Partly for historical and partly doctrinal reasons, the Chinese Government has been fiscally very tight over the years. The Chinese have had trouble with the concept of interest, for doctrinal reasons. Marxism cannot deal easily with the concept of interest, which is Marxist terms in exploitations. The Chinese have gotten over that, and they have gotten used to the idea interest-bearing of public debt.

The potential for building a domestic capital market in China is very substantial, and that process has started. It is just beginning, but it is happening. The Chinese are now floating domestic bonds, and they are selling them not only to the banks but to domestic households. My understanding is that last year, about a quarter of the new bonds went directly to households.

Commissioner WALDRON. But I think there is some element of coercion involved there.

Mr. COOPER. No, so far as the households are concerned.

Commissioner WALDRON. Are you sure?

Mr. COOPER. Yes, because the household sector actually demanded more than they were allotted.

Co-Chairman DREYER. Many were complaining they were forced.

Mr. COOPER. To buy them?

Co-Chairman DREYER. Yes.

Mr. COOPER. I'm talking about the folks who wanted them and couldn't get them.

Commissioner WALDRON. The WIA, which consists of my extended family in China, reports deep resentment about being forced to buy certain types of domestic bonds.

Mr. COOPER. Households, you are talking about?

Commissioner WALDRON. Well, households—I mean, they were Chinese people living in houses—

Mr. COOPER. Yes, but the household sector as distinguished from financial institutions. Well, maybe there is a problem in generalizing from anecdotes; there may be stories on both sides. The main point is there is a very high savings rate in China. The Chinese—and it is a puzzle to me—by their behavior indicate continuing confidence in their financial system. They are still holding money, they are still making deposits in the banks—

Commissioner WALDRON. But they have no choice. I mean, the banks—

Mr. COOPER. Yes, of course they have a choice, just like people around the world have had a choice.

Commissioner WALDRON. They also indicate the Communist Party—

Mr. COOPER. They have the choice of buying commodities—watches, silver bracelets, etc.

Commissioner MULLOY. Mr. Chairman.

Chairman D'AMATO. We're going to move on with this, I think.

Commissioner MULLOY. May I just reclaim my time?

Mr. COOPER. Anyway, the point is the possibilities for central government spending are not limited by taxation, but also by their future borrowing power. The questions earlier focused on their external borrowing power, but keep your eye also on the domestic borrowing power. That's the point I wanted to make.

Chairman D'AMATO. Thank you very much.

Commissioner MULLOY. Thank you.

Chairman D'AMATO. We have one last question before we move to our next panel, because we are a bit late.

Commissioner BECKER?

Commissioner BECKER. Thank you, Mr. Chairman.

I'll make it as brief as I can, but I was intrigued, Dr. Wolf, by your comment about being concerned about the change in the rate of corruption, and my question concerns this same type of thing.

Setting aside—I am not an economist; I listen to the reports and I watch the figures, and I have read everything that all three of you presented and others—but when you set aside all the comparisons to the gross domestic product or surpluses, bilateral surpluses, or whatever might be available, would you care to share with us what your feeling is about the change in the funding for the Chinese military, what this is intended to achieve; what is taking place in China and has over the past few years and what you can anticipate from these figures. Is this a desire to maintain a static level as to what the military is now, or is it to achieve a moderate growth, minimal growth, or is this intended to produce or would it produce a surge or a rapid accelerated change or expansion in their military prowess?

Would you care to share your thoughts on that, and the rest of the panel also.

Mr. WOLF. My sense, which is more than feeling and less than certitude, is that the Chinese military budget in the large, including the parts that we have referred to that are embedded in civilian ministries and in the National Commission for Science and Technology for Industry and Defense, envisages a moderate rate of modernization; that China's military is being modernized and will continue to be modernized. I would not characterize it as a surge, but I think it is definitely more than flat.

Commissioner BECKER. Do other panelists wish to comment?

Mr. COOPER. I would agree entirely with that. Let me just elaborate again on an impression I have, not a certitude, which is that the current Chinese leadership is giving the military as little as they think they can get away with. Of the four modernizations, in their current priorities the military comes fourth. As resources become available to the central government, some of them go to the military—the military says they need this, that, and the other—but basically, the political leadership is giving as little as they think they can get away with to keep the PLA comfortably on board.

That is to say, it is low on the priority list in the current leadership. Economic development and all the things that are Required to bring it about are much higher on the list for the next decade or two.

One reason maybe to make them more powerful militarily after the next decade or two, but that's in the future. It is not their top priority at the present time.

Commissioner BECKER. Thank you.

Mr. Anderson?

Mr. ANDERSON. I'm afraid I have nothing to offer on that.

Commissioner BECKER. Mr. Cheng?

Mr. CHENG. I just want to add one point. It seems that Chinese military leaders, if they want more budget, need some excuses. So how China is going to face the international environment is very important for its military budget development. It depends upon the Taiwan Straits situation or the U.S.-China relationship. So that if everything is peaceful, the military budget will probably not go very fast.

Commissioner BECKER. Thank you.

Chairman D'AMATO. Thank you very much. We want to extend our appreciation to all four panelists for being here this morning.

Dr. Wolf, you have the luxury of having four more hours of morning ahead of you, since it is only 8:30 in the morning there.

We would like very much to be able to provide you with some additional questions for the record after the hearing if that will be okay with you and we have some additional questions. But we are late, and we would like to move on now to our next panel.

Thank you all very much.

[Pause.]

Chairman D'AMATO. We know that Mr. Mulvenon is under quite a time crunch, and we want to take advantage of his presence, so let's move ahead with Panel II.

We have quite an expert panel of witnesses here before us, and some terrific presentations have already been given to the Commission in the way of background papers which are so good, in my opinion, that we are already moving beyond the question of whether we can get to the bottom of the Chinese budget process and terrain—it's just a question of persistence in doing it and getting at it in an organized and effective way, and I think that some of the witnesses on this particular panel are going to be instrumental in moving this process very much forward.

We welcome Dr. David Shambaugh, a Senior Fellow at George Washington University; Dr. John Frankenstein, a Research Associate and Adjunct Faculty at East Asia Institute at Columbia University and at the Atlantic Council; Dr. James Mulvenon, from the Rand Corporation; Colonel John Corbett, who just retired from the Pentagon and is in private industry; and Dr. Andrew Marble, a Research Fellow who has come from Taiwan to visit with us today.

Actually, what I would like to do is depart from our normal procedure just a little bit at the beginning with the indulgence of the panel. Dr. Mulvenon has a commitment and has got to be out of here, and I would like to get his 10-minute testimony and some questions to him first, and then we would go to the rest of the panel if that is acceptable to everybody so we can take advantage of his presence here.

So without further ado, Dr. Mulvenon, would you like to give your statement, and then we'll go to questions to you, and then we'll move to the rest of the panel after that.

PANEL II: PRC MILITARY BUDGET ISSUES AND PLA'S ROLE IN THE
ECONOMY/PARTY/NATIONAL PRIORITIES

**STATEMENT OF JAMES MULVENON, DEPUTY RESEARCH DIRECTOR,
RAND CORPORATION, CENTER FOR ASIA-PACIFIC POLICY**

Mr. MULVENON. Thank you, Mr. Chairman.

I'm sorry that I have to take off. Unfortunately, there are about 15 stars' worth of generals waiting for me at one o'clock at the Pentagon that I have to go and talk to.

What I'd like to talk about briefly today—and I have structured my talk to talk about the divestiture of the Chinese military from its business empire. The written materials that I submitted to the Commission are, to be honest, Chapter 7 of my book, "Soldiers of Fortune," and with that cheap advertisement, I will move forward.

PLA Incorporated at its height in the late eighties—in the "go-go period," as I like to call it—was sometimes estimated as high as 20,000 enterprises. For the Commission, I would like to highlight one important dynamic that may have gotten lost in the previous panel, which is the dynamic that the Chinese are very careful about how they define military enterprises.

The military enterprises that I am talking about in Chinese are known as *jun ban qi ye*, or PLA-owned enterprises, things that are directly owned by the PLA.

The Chinese have a completely separate term for "defense industrial enterprises"—*jun gong qi ye*—and there is very little in terms of comparative finance analysis that we can do about mixing the two. I have written some reports for Rand on very carefully delineating the various structures and how money could possibly move across those two very stovepiped systems that I would be happy to send on to the Commission.

Chairman D'AMATO. We would like to have that.

Mr. MULVENON. How I would like to structure my talk this morning is to very quickly talk about what I call "the five myths" of PLA divestiture.

The first myth is that divestiture was a surprise. It was certainly presented as a surprise in *The Washington Post*, but in fact to people within the Chinese military, it was not a surprise at all. As early as 1990, Jiang Zemin had reportedly said to the military that he wished they would "eat imperial grain," as he put it. Unfortunately, as I'll talk about in a second, the Chinese military was in a bit of a *Catch-22* because of its budget situation which did not allow it to give up the income from these enterprises.

In 1997, one year before the divestiture, there had been an official announcement that the Chinese military would divest in three years. We saw the beginnings of that when we saw the tax reduction, the tax benefits that Chinese military enterprises enjoyed, reduced from 33 to 8 percent, that in fact they were getting ready to this.

But then, why did they accelerate the process? They accelerated the process because of the rampant, out-of-control military smuggling in the spring of 1998, some of which was bankrupting the two geographic oil monopolies in China, and the anger of the central leadership over what was happening largely drove them to accelerate the divestiture to July 1998.

The second major myth of divestiture is that the PLA opposed divestiture. In fact I would draw a distinction between the senior military leadership and combat leaders on the one hand versus the logistics officers. The logistics officers had the most to lose because they were the ones disproportionately running these enterprises. But the senior military leadership had made it quite clear that they were corruption-weary; they understood the Catch-22; they were opposed to the PLA “changing color,” as they put it, in terms of pursuing professionalism, and there was a great deal of concern within the PLA that in fact many of these enterprises had never been profit making and in fact had simply been vehicles for corruption.

The third myth is that divestiture ended on December 15, 1998, as the Chinese reported with great trumpeting and banging of drums and other ceremony. In fact, as in all things, this was just the beginning. The July to December period was the easy part. That’s where they got rid of all the low-hanging fruit in terms of divestiture process. And from then until now—divestiture is not over; maybe that’s another myth—they have engaged in a very brutal period of asset valuation.

I’ll tell you one short, amusing anecdote. They were getting together with the finance people to try to figure out how to value these assets and figure out what the compensation package was going to be for the lost income from these enterprises, and they were sitting down with a member of Zhu Rongji’s civilian economic staff, and they came into the meeting, and the PLA said, “Before we talk about the compensation level, we have to tell you quite honestly—and this won’t come as a surprise—that we have been drastically underreporting our earnings for years in order to avoid taxation.”

And apparently, the civilian SETC official, without even missing a beat, deadpanned back: “Well, once we have dealt with the issue of back taxes, then we can deal with the issue of compensation,” at which point the General Logistics Department people in the room reportedly blanched and then realized that he in fact was just joking, because that was just a Rubicon that no one could cross.

The fourth major myth is that the PLA is no longer involved in the economy. What they have done to this point has been fairly dramatic. I certainly don’t want to diminish what they have been able to achieve, because in large measure, they were able to transfer almost 3,000 enterprises, they were able to close almost 4,000 enterprises, 82 percent of which came out of the hide of the General Logistics Department, which explains why they alone among many military institutions oppose divestiture. But it is important to note that the Chinese military retained 8,000 to 10,000 enterprises.

But we have to draw a distinction here between what the Chinese call “production” and “commerce,” because they view the two different types of enterprises very differently. They wanted to divest themselves of commercial enterprises, enterprises that dealt with customers, enterprises involved in foreign trade, enterprises which on a regular basis were involved in the outside world, building international subsidiaries. But they never intended to get rid of production, which was the subsistence-level operations that em-

ployed the dependents of military personnel, were never designed to make a profit—here, I’m talking about farms and the pickle factories and bean curd factories that employ officers’ wives, and the wives that run the PX—in very rural, remote areas of China. In fact, that production infrastructure is still essential.

So I like to say that the PLA has come full-circle, in a sense, because they have restored what they call the “subsistence economy” within the military that they had prior to 1978.

So the PLA enterprise system that you see right now is exactly the same as the PLA enterprise system in 1978—no hotels, no karaoke bars, no import-export companies—but it is largely the farms and the other subsistence operations that are absolutely essential to the continuing standard of living of the rank-and-file of the Chinese military.

One of the important factors in the PLA’s opposition to divestiture, of course, was that the senior military leadership was all too willing to divest themselves of these enterprises provided they got the right deal—it all came down to the compensation package to get them out of that Catch-22 of being so dependent on the income. And that compensation package had two features. One was the compensation for the actual assets that they were going to lose, and the other was for the income.

Here, I would argue that for the most part, the PLA was hoist by its own petard, because that underreporting of income allowed Zhu Rongji and his people in the system to essentially cheat the PLA out of a lot of its revenue in terms of the compensation package, and there was in my mind a looming civil-military crisis over this financial issue in early March 1999, when the budget figures came out and the PLA didn’t even get as big an increase as they had gotten in the previous year, much less the astronomical numbers that Willy Lam and other people have been reporting in Hong Kong, but in fact they got even less than the China Daily had reported six months earlier as being their baseline income level.

So you had to ask yourself what was going on here, and in fact what I discovered from interviewing many people in the military-finance system was that the civilians had used those deflated official numbers in order to compensate.

What saved this potential civil-military crisis was the five JDAMs that we dropped on the Chinese Embassy in Belgrade, Yugoslavia, because just about the same time they were going through the planning for the next five-year plan, which was going to set the ceilings on the percentage increases in defense budgets for the next five years, was when the allied force conflict radically changed the civil-military dynamic, radically changed the beliefs about the civilian leadership and just how high they could go, and I think resulted in the 18 to 20 percent adjusted for inflation annual military budget increases that we saw for the rest of that five-year plan.

The fifth and final myth that I would highlight is that the divested enterprises, the commercial enterprises they got rid of, are no longer part of the PLA. The reality of the situation is that this was an extremely difficult political move on the part of the leadership and that in many cases, these enterprises are simply one step removed from the military.

All the military officers who ran these enterprises were given a choice—you can either go back on active duty, or you can defrock and run these enterprises—or, in many cases, these enterprises were divested to the relatives of officers.

So we have many, many cases that I follow on a regular basis of former PLA enterprises that don't seem that far removed. But again, I don't want to understate what has happened here. This is an extremely significant development.

Thank you very much.
[The statement follows:]

PREPARED STATEMENT OF JAMES MULVENON

ORAL TESTIMONY

Thank you, Mr. Chairman and members of the U.S.-China Commission, for inviting me to testify today. In my allotted time, I would like to discuss the current situation of the Chinese military's withdrawal from commercial operations, known generally as "divestiture." To structure my remarks, I have prepared a list of the top five myths of PLA divestiture.

THE TOP FIVE MYTHS OF PLA DIVESTITURE

1. Divestiture was a surprise or unexpected

While the divestiture announcement was immediately picked up by Western and Chinese media and portrayed as a dramatic reversal of policy, divestiture was not a sudden decision at all. Jiang Zemin reportedly first floated the idea of military "eating imperial grain" (chi huangliang, i.e. be funded solely by the government) in 1990, but it was judged to be impractical. In the absence of divestiture, the PLA underwent over six years of rectification and consolidation campaigns in the military enterprise system, and divestiture should in many ways be seen as the logical culmination of that effort. Moreover, the July 1998 meeting was not even the first divestiture announcement. A decision to divest had actually been made over a year earlier in May 1997, though the major transfers were not set to begin until three years later in May 2000. One important prefatory move, the withdrawal of the preferential tax rates enjoyed by PLA enterprises (local companies previously paid 33 percent while PLA enterprises paid only 9 percent), had been implemented in early 1998, and the PLA had reportedly drawn up a plan for divestiture at least six months in advance of the July 1998 announcement.

Thus, Jiang's order represented only an acceleration of the divestiture timetable. The complete reasons are not entirely known, but there are at least two competing stories. One rumor claims that divestiture was initiated by an angry Jiang Zemin upon receiving an account of the excessively corrupt activities of six PLA and People's Armed Police companies, the most egregious of which involved oil smuggling that was bankrupting the country's two geographical oil monopolies. Indeed, there were widespread reports of rampant smuggling by the military during the Asian economic turmoil in early 1998, allegedly depriving the government of hundreds of billions of renminbi of customs revenue and worsening deflation.

A second version of the story actually begins with Zhu Rongji. According to cited U.S. intelligence sources, Zhu Rongji angered the PLA at the 17 July 1998 meeting of the anti-smuggling work conference by accusing the General Political Department's Tiancheng Group of rampant corruption. In particular, he singled out a case in which the company had avoided paying RMB50 million in import and sales taxes after purchasing a shipment of partially processed iron ore from Australia. "Every time our customs officials tried to snare these bastards, some powerful military person appeared to speak on their behalf," Zhu allegedly charged at the closed-door meeting. As anger and resentment spread through the PLA leadership, Jiang Zemin allegedly appeared at the conference four days later to lend his support to Zhu, confirming that "some units and individuals" in the PLA were involved in smuggling. According to this account, Jiang thereupon announced the divestiture order.

2. The PLA opposed divestiture

Contrary to the conflictual civil-military scenario put forward by many observers in the Hong Kong media, the evidence instead suggests that the divestiture in principle was largely supported by a corruption-weary military leadership. They generally agreed with the political, military and economic rationales for divestiture. On the political front, divestiture was aimed at curtailing corruption within the ranks.

The civilian leadership argued that as long as the military operated in the commercial economy, it was subject to “negative influences.” Jiang Zemin reportedly spoke of the preventing the military from “changing color” and of keeping the military “pure.” At a military level, divestiture was designed to return the PLA to its primary professional mission: preparing for war. Finally, from an economic perspective, there was recognition that the military was terribly adept at running commercial operations.

A key condition for military acquiescence to divestiture, however, was an assurance from the civilians that the PLA would receive a sufficiently generous compensation package for handing over its businesses. Indeed, sources in Beijing indeed confirm that the faultlines in the divestiture process could be drawn between supporters, including the senior military leadership and the combat units, and those who have resisted the ban, especially members of the logistics and enterprise management structure, military region commands, and military district commands that stood to lose their primary source of legal and illegal income.

3. Divestiture ended on 15 December 1998

In fact, the official handover date was the beginning of the difficult phase of divestiture. In relative terms, the divestiture work from July–December 1998 was the easy part. After 15 December, military and civilian officials sat down to the protracted negotiations over asset valuation, which is still ongoing almost three years later.

4. The PLA is no longer involved in the economy

Reportedly, 2,937 firms belonging to the PLA and People’s Armed Police were transferred to local governments, and 3,928 enterprises were closed. The big loser was the General Logistics Department, which saw more than 82 percent of its enterprises transferred or closed. One-third of the companies and their subsidiaries were retained by divestiture offices at the central level, while the remaining two-third were transferred to divestiture offices at the local level.

The remaining 8,000–10,000 enterprises, most of which were the smaller, subsistence-oriented enterprises at the local unit level, remained in the military. The reforms were also “suspended” in some sectors, especially civil aviation, railway and posts and telecommunications, because of the “special nature” of these industries. For example, the Air Force’s China United Airlines was permitted to continue operating. Other notable exceptions included the fifty-six numbered factories previously under the control of the GLD’s Xinxing Group, which remained under the administrative control of the General Logistic Department’s pared-down Factory Management Department (formerly the larger Production Management Department), and Poly Group, which was divided between the General Equipment Department (arms trading elements like Poly-Technologies), and COSTIND.

In a sense, divestiture brings the PLA full circle. The pattern of the campaign, ranging from the transfers of its high-profile commercial enterprises to the retention of its lower-level farms and industrial units, suggests that the military has essentially returned to the pre-1978 “self-sustaining” economy. Thus, the widespread conclusion that the PLA has been “banned” from business is far too simplistic. The military will continue to operate a wide variety of small-scale enterprises and agricultural units, with the goal of supplementing the incomes and standards of living for active-duty personnel and their dependents at the unit level. Profit and international trade, however, will no longer be critical features of the system. Moreover, the military leadership hopes that the divestiture of profitable companies will greatly reduce the incidence of corruption and profiteering in the ranks, and thereby refocus the PLA on its important professionalization tasks.

5. The divested enterprises are out of PLA control

The political reality of divestiture is that the PLA still retains important ties to its former enterprises. Military officers who ran enterprises before divestiture were given a choice between returning to active duty or retiring from the military to run the companies as a civilian. Other enterprises were divested to the relatives of military officials and local commanders. In other words, many of the PLA’s former enterprises are merely one step removed from their previous status.

THE CURRENT SITUATION

Most likely, the next few years will witness repeated “mop-up” campaigns on the part of the central leadership and significant resistance and foot-dragging on the part of local military officials, repeating the pattern of earlier rectifications. An audit in early 1999 revealed that the military had kept back some 15 percent of its businesses, necessitating the extension of some deadlines until August 1999. As late

as May 2000, a top-level meeting on divestiture all but admitted that the military continues to shield some assets from the process, stating that the withdrawal of the military from business activities had only been “basically completed.”

WRITTEN TESTIMONY

The Saga of PLA Divestiture

On 22 July 1998, at an enlarged session of the Central Military Commission, CMC Chairman Jiang Zemin gave a speech in which he called for the dissolution of the military-business complex, asserting:

To make concerted efforts to properly develop the army in an all-around manner, the central authorities decided: The army and the armed police [wu jing] should earnestly screen and rectify [qingli] various commercial companies operated by their subordinate units, and shall not carry out any commercial activities in the future . . . Military and armed police units should resolutely implement the central authorities' resolution and fulfill as soon as possible the requirements that their subordinate units shall not carry out any commercial activities in the future.¹

Jiang then sought to consolidate the decree by publicly releasing the announcement through the party's extensive propaganda apparatus. That night, Jiang's speech at the meeting was broadcast on the CCTV Evening News, which has the highest rating in China and is closely watched by other Chinese media for cues about important stories. Observers took special note of the fact that the Chinese leader was shown flanked by the top brass of the PLA, implying at least tacit consent to the decision by the military. The next day, the Party's official newspaper, People's Daily, ran a banner headline, declaring “PLA Four General Departments Convened in Beijing to Carry Out the Decision of the Anti-Smuggling Meeting,” with the subtitle “Chairman Jiang Talked Seriously About Divestiture.”² The announcement was then publicly seconded in subsequent days by key members of the military and civilian leadership, including the de facto head of the PLA, General Zhang Wannian, Chief of the General Staff General Fu Quanyou (23 July),³ General Logistics Department Director Wang Ke (24 July),⁴ General Political Department Director General Yu Yongbo (25 July),⁵ and General Armament Department Director General Cao Gangchuan (26 July),⁶ as well as Politburo Standing Committee member Hu Jintao.⁷ From the media barrage, it appeared that the decision might actually have the political momentum to dislodge the Chinese military from its difficult Catch-22.

While the divestiture announcement was immediately picked up by Western and Chinese media and portrayed as a dramatic reversal of policy, the reality of the situation was much more complicated. Divestiture was not a sudden decision at all. Jiang Zemin reportedly first floated the idea of military “eating imperial grain” (chi huangliang, i.e. be funded solely by the government) in 1990, but it was judged to be impractical. In the absence of divestiture, the PLA underwent over six years of rectification and consolidation campaigns in the military enterprise system, and divestiture should in many ways be seen as the logical culmination of that effort. Moreover, the July 1998 meeting was not even the first divestiture announcement. A decision to divest had actually been made over a year earlier in May 1997, though the major transfers were not set to begin until three years later in May 2000. One important prefatory move, the withdrawal of the preferential tax rates enjoyed by PLA enterprises (local companies previously paid 33 percent while PLA enterprises paid only 9 percent), had been implemented in early 1998, and the PLA had reportedly drawn up a plan for divestiture at least six months in advance of the July 1998 announcement.⁸

Thus, Jiang's order represented only an acceleration of the divestiture timetable. The complete reasons are not entirely known, but there are at least two competing stories. One rumor claims that divestiture was initiated by an angry Jiang Zemin

¹“Jiang Orders PLA-Owned Firms to Close,” Xinhua Domestic Service, 22 July 1998, in FBIS–CHI–98–204, 23 July 1998.

²See People's Daily, 23 July 1998, p.1.

³“Fu Quanyou on Supporting Jiang's Anti-Smuggling Drive,” Xinhua Domestic Service, 23 July 1998, in FBIS–CHI–98–206, 25 July 1998.

⁴Cao Haili, “The Chinese Army Has Sailed Out of the Business Sea,” *Caijing*, January 1999, pp.1–16.

⁵“Yu Yongbo Calls on Army to Cease Business Operations,” Xinhua Domestic Service, 26 July 1998, in FBIS–CHI–98–208, 27 July 1998.

⁶“General Armament Department to Fight Smuggling,” Xinhua Domestic Service, 26 July 1998, in FBIS–CHI–98–209, 28 July 1998.

⁷Wu Hengquan, Liu Zhenying, and Wang Jinfu, “Hu Jintao Speaks on Banning PLA Businesses,” Xinhua Domestic Service, 28 July 1998, in FBIS–CHI–98–209, 28 July 1998.

⁸Cao Haili, p.3.

upon receiving an account of the excessively corrupt activities of six PLA and People's Armed Police companies, the most egregious of which involved oil smuggling that was bankrupting the country's two geographical oil monopolies.⁹ Indeed, there were widespread reports of rampant smuggling by the military during the Asian economic turmoil in early 1998, allegedly depriving the government of hundreds of billions of renminbi of customs revenue and worsening deflation.¹⁰

A second version of the story actually begins with Zhu Rongji.¹¹ According to cited U.S. intelligence sources, Zhu Rongji angered the PLA at the 17 July 1998 meeting of the anti-smuggling work conference by accusing the General Political Department's Tiancheng Group of rampant corruption.¹² In particular, he singled out a case in which the company had avoided paying RMB50 million in import and sales taxes after purchasing a shipment of partially processed iron ore from Australia. "Every time our customs officials tried to snare these bastards, some powerful military person appeared to speak on their behalf," Zhu allegedly charged at the closed-door meeting. As anger and resentment spread through the PLA leadership, Jiang Zemin allegedly appeared at the conference four days later to lend his support to Zhu, confirming that "some units and individuals" in the PLA were involved in smuggling. According to this account, Jiang thereupon announced the divestiture order.

These accounts of the decision to divest the PLA of its enterprises raise a fundamental analytical question: how did the PLA and the CCP work their way out of what could only be described as the fiscal and political Catch-22 of military commercialism? Contrary to the conflictual civil-military scenario put forward by many observers in the Hong Kong media, the evidence instead suggests that the divestiture in principle was largely supported by a corruption-weary military leadership. They generally agreed with the political, military and economic rationales for divestiture. On the political front, divestiture was aimed at curtailing corruption within the ranks. The civilian leadership argued that as long as the military operated in the commercial economy, it was subject to "negative influences." Jiang Zemin reportedly spoke of the preventing the military from "changing color" and of keeping the military "pure." At a military level, divestiture was designed to return the PLA to its primary professional mission: preparing for war. Finally, from an economic perspective, there was recognition that the military was terribly adept at running commercial operations.

A key condition for military acquiescence to divestiture, however, was an assurance from the civilians that the PLA would receive a sufficiently generous compensation package for handing over its businesses. Indeed, sources in Beijing indeed confirm that the faultlines in the divestiture process could be drawn between supporters, including the senior military leadership and the combat units, and those who have resisted the ban, especially members of the logistics and enterprise management structure, military region commands, and military district commands that stood to lose their primary source of legal and illegal income.¹³

The heart of the bargain between the PLA and the civilian leadership therefore centered on financial compensation—in this case two separate financial deals. The first was the one-time transfer of the PLA's divested enterprises. Reportedly, the financial burden for these enterprises, including their weighty social welfare costs and debts, was to be placed upon local and provincial governments rather than the central government, though no money was to change hands. This devolution of responsibility from the center to the localities was seen by many as yet another attempt by Zhu Rongji to restore some measure of macro-level economic authority in China by forcing the lower levels of the system to assume greater financial responsibility for the economic units in their area.

The second negotiation focused on the annual budget increases to make up for lost enterprise revenues, with the goal of consolidating Jiang's earlier decree to the military to "eat imperial grain" rather than rely on business for revenue. Before the divestiture was completed, Hong Kong sources reported that the PLA would receive between RMB15–30 billion per year, with the exact time frame subject to negotiation.¹⁴ Two months later, the same author reported that the PLA would receive

⁹ Personal communication with Tai Ming Cheung, 12 November 1998.

¹⁰ Cao Haili, p.2.

¹¹ This account is taken from Susan Lawrence's excellent article "Bitter Harvest," which can be found in the 29 April 1999 issue of *Far Eastern Economic Review*, pp.22–26.

¹² *Ibid.*

¹³ Personal communication with Tai Ming Cheung.

¹⁴ The RMB15 billion number comes from Kuang Tung-chou, "Premier Promises to Increase Military Funding to Make Up For 'Losses' After Armed Forces Close Down All Its Businesses," *Sing tao jih pao*, 24 July 1998, p.A5, in FBIS-CHI-98-205, 24 July 1998. For the RMB30 billion

RMB50 billion as compensation for its lost enterprises.¹⁵ The Wall Street Journal quoted U.S. diplomats as saying the government offered about \$1.2 billion but the military demanded \$24 billion. Sources at the GLD claimed in December 1998 that the PLA would receive between RMB4–5 billion in additional annual compensation, complementing continued double-digit budget increases.¹⁶

For local units, however, the prospects of a lucrative budget deal must have been bittersweet, since it required them to buy into what might be called “the trickle-down theory of PLA economics.” Whereas units previously had relatively direct control over enterprise finances, they now had to place their faith in the notion that the budget funds would trickle down through the system from Beijing to their level. Previous experience with the Chinese military bureaucracy did not inspire confidence that this would come to pass. To ameliorate these concerns, the military leadership took steps in the fall of 1998 to improve the standard of living for the rank and file. The principal measure was an increase in the salaries of servicemen by an average of an additional 10–25 percent, depending on rank and location.¹⁷ One lieutenant general in Beijing reportedly received a raise of RMB400 per month, while two senior colonels claimed increases of 20 percent from 1700RMB to 2040RMB.¹⁸ Overall, the average soldier in the PLA was reportedly expected to receive an additional RMB100 per month.¹⁹

Phase One: Organization and Strategy

Organization of the divestiture effort actually preceded Jiang’s 22 July speech. On 20 July 1998, Jiang chaired a meeting of the Politburo and reportedly asserted that “the military cannot run businesses any more or the tool of the proletariat dictatorship would be lost and the red color of the socialist land would change.” General Zhang Wannian, Vice-Chairman of the CMC, convened a meeting on 21 July to set up a military leadership small group, and in that meeting a set of two milestones were reportedly established: by the end of 1999, all businesses would sever their links with the military and starting from 1999, the military would rely entirely on the government budget.

Immediately after Jiang’s 22 July speech, the four General Departments convened a meeting to implement the decision, discussing the issue from 23–26 July.²⁰ The four directors and political commissar Li Jinai attended the meeting, which established a special task force to oversee divestiture. The four general departments eventually selected 30 cadres to staff the office of the military’s leading small group. The participants also drafted a preliminary plan, and began to lay out policies for dealing with issues such as displaced workers, debts and credits, and real estate.

At the same time, a top-level, civilian-led leading group was reportedly established, with Jiang Zemin’s chosen successor Hu Jintao as the head, and other party, government, and military leaders, including Zhang Wannian, and Luo Gan, as members.²¹ Hu’s appointment served an important prelude to his official appointment as vice-chairman of the Central Military Commission at end of October 1999.²² Despite Hong Kong media stories to the contrary, there does not appear to have been any major cleavages in the top civilian leadership over divestiture.²³ One well-informed observer relates that Jiang and Zhu were closely united on the issue, with Jiang providing the political clout and Zhu providing economic instructions to his subordinates at the State Economic and Trade Commission as to the specifics of the separation.²⁴ Over the next few weeks, corresponding leadership small groups at lower levels of the system, including military units and State Economic and Trade Commission branches, were also established.

During the summer, the divestiture process was delayed significantly by the massive flooding, in which the military played a heroic role. By 6–7 October, the situa-

figure, see Willy Wo-Lap Lam, “PLA Chief Accepts HK47 Billion Payout,” South China Morning Post, 9 October 1998.

¹⁵ Willy Lo-Lap Lam, “PLA to Get HK28 Billion for Businesses,” South China Morning Post, 3 August 1998.

¹⁶ The author would like to thank Dennis Blasko for this information.

¹⁷ “Military Reportedly Raises Pay to Avoid Discontent,” Ming pao, 23 January 1999, p.15, in FBIS–CHI–99–023, 23 January 1999.

¹⁸ Interviews in Beijing, February 1999.

¹⁹ Kuang Tung-chou, “Beijing To Comprehensively Raise Servicemen’s Remuneration,” Sing tao jih pao, 25 November 1998, p.B14, in FBIS–CHI–98–349, 15 December 1998.

²⁰ The account of this meeting can be found in Cao Haili, p.5.

²¹ “Military Meets Resistance in Enforcing Ban on Business,” Ming pao, 9 September 1998, p.A16, in FBIS–CHI–98–253, 10 September 1998.

²² “Hu Jintao Appointed CMC Vice-Chairman,” Xinhua, 31 October 1999.

²³ Willy Wo-Lap Lam, “Problems Between CCP, Army,” South China Morning Post, 20 October 1999, p.19. Personal communication with Tai Ming Cheung, 9 September 1999.

²⁴ Cao Haili, p.5.

tion had sufficiently stabilized for Central Committee, State Council and Central Military Commission to convene the “Divestiture of Military, People’s Armed Police, and Law Enforcement Organs Work Meeting,” aimed at producing a detailed plan for the separation of enterprises from units.²⁵ At that meeting, a new temporary organization was created, known as the “National Office for the Handover of Enterprises Under the Army, People’s Armed Police, and Law Enforcement Organs.”²⁶ The office of this leading group was staffed primarily by personnel from the State Economic and Trade Commission. The following eighteen organizations were also involved: the four General Departments, the People’s Armed Police Headquarters, officials from the Politics and Law Department of the State Development and Planning Commission, the Commission on Science, Technology and Industry for National Defense (COSTIND), the Ministry of Public Security, the Ministry of Inspection, the Ministry of Civil Affairs, the Ministry of the Treasury, the Ministry of Personnel, the Ministry of Labor and Social Security, the Ministry of Foreign Trade and Economics, the People’s Bank, the General Tax Bureau, the Industrial and Commercial Bureau, and the Ministry of State Security. The Handover Office was tasked with the promulgation of detailed regulations governing the handover and takeover of military enterprises, the organization and coordination of divestiture, and oversight over lower-level offices. The national office was also given responsibility for the divestiture of ministry-level enterprises.²⁷ Similar offices were also set up by the State Economic and Trade Commissions of provinces and autonomous regions to take charge of the takeover of enterprises based within their geographic purview.

On 9 October, after a series of work conferences, the four General Departments of the PLA again convened another meeting, entitled the “Divestiture of Military and People’s Armed Police Work Conference.”²⁸ Also in attendance were representatives of the CMC General Office, military region headquarters, and military district headquarters. At this meeting, detailed plans regarding the handover of military firms were prepared. The guiding principle of this effort, as defined by the Central Committee was: “turning over enterprises first, consolidating them later.”²⁹ Accordingly, the work teams were sent to the units to get a proper accounting of the units’ legal and illegal commercial activities. Information on illegal activities was used to prepare cases for the military’s discipline inspection commission, while data on the legal enterprises were used to give the military leadership a clear picture of the extent and financial viability of the military-business complex. Specifically, the work teams sought to assess the number of enterprises that required transfer, the number of enterprise employees involved in the process, and the asset/debt values of the enterprises. This first phase was completed by mid-October 1998. One official government assessment of the asset value of enterprises owned by the military was roughly RMB50 billion (US\$6.02 billion).³⁰

Phase Two: Formal Registration and Asset Valuation

The second phase of the divestiture, begun in late October 1998, involved the formal registration and assessment of assets of the enterprises, followed by the expected official transfer of these enterprises to Handover Offices at the state, provincial, autonomous district, and municipality level.³¹ The 16 character slogan for this phase was “comprehensive combing, good planning, discretionary treatment, and step-by-step implementation.”³² In general, stable enterprises were to be transferred to the governments, while profitable companies were to be placed underneath the SETC offices. In addition, a considerable number of banking, security, and trading companies that were poorly managed and operated, together with those industrial enterprises that have suffered serious losses were expected to be reorganized or closed down altogether.³³

More specifically, divestiture affected each of the six parts of the PLA’s business empire in different ways. The original divestiture order explicitly targeted commercial enterprises (jingying xing qiye), mandating that all of these businesses should

²⁵ Han Zhenjun, “Military Business Said ‘Disconnected’ By 15 December,” Xinhua Domestic Service, 28 December 1998, in FBIS—CHI—98—362, 28 December 1998.

²⁶ “Work of Disengaging Armed Forces and Armed Police From Their Enterprises to Be Completed in Mid-December—Over Ten High Officials Absconded With Money,” Ming pao, 7 December 1998, p.A12, in FBIS—CHI—98—353, 19 December 1998.

²⁷ Cao Haili, p.5.

²⁸ Yang Xinhe, “Hebei Takes Over Military Enterprises,” Xinhua Hong Kong Service, 12 December 1998, in FBIS—CHI—98—350, 16 December 1998.

²⁹ “Separation of Army From Business Done,” China Daily, 21 March 1999, p.1.

³⁰ Willy Wo-Lap Lam, “PLA Cashes In Its Assets,” South China Morning Post, 29 July 1998.

³¹ Cao Haili, p.5.

³² “Work of Disengaging Armed Forces,” p.A12.

³³ “Military Meets Resistance,” p.A16.

be either handed over to civilian authorities or closed down. For the other five parts of the system, the leading groups have been forced to adopt a series of gradual policies:

- Units meeting logistics needs (“baozhang xing qiye” providing “houqin fuwu”), including repair shops, munitions factories, and uniform factories, were partially divested, with some businesses handed over to civilian authorities and others retained by the military. The guiding rationale asserts that the military does not need to make all of these things itself, and should be able to outsource some of this production.
- Farms (nongchang), covering several million mu of land, have been completely retained.
- Fee-for-service businesses (youchang fuwu), such as hospitals and research facilities (keyan danwei), were retained because the facilities have excess capacity and highly advanced equipment not generally found in the civilian sector. In the case of hospitals, the military alone cannot provide enough patients to make efficient use of these resources. By serving the public, they can raise their level of expertise and earn a relatively insignificant amount of money for the military at the same time.
- Welfare businesses (fuli xing qiye), including factories set up to provide employment to military dependents (also known as jiasu gongchang), were partially divested, with some closed and others, particularly those in remote areas where relatives have no other options for employment, retained.
- Cover operations (yanhu qiye), including enterprises providing cover for intelligence gathering, national security, foreign affairs, and united front operations, were partially divested.

The top-level leading group decreed that all military enterprises should be dealt with in one of three ways. The first option was “handover” (yi jiao) to civilian authorities. This applied to commercial operations and hotels, though not to guest-houses (zhaodaisuo). Most enterprises were to be handed over to local authorities. Some were handed over to the central government, specifically to the State Economic and Trade Commission (Jingmaowei). Local authorities were not to provide any compensation, which was supposed to come from the central government in the form of a lump sum. Military employees of these enterprises could choose to return to the military or to stay with the enterprise. Not surprisingly, lower ranking military employees tended to stay with the enterprise, while higher ranking employees tended to return to the perquisites of the military. The second option was closure (chexiao) of the enterprise. There were many reasons for closure, including commercial non-viability, heavy debts, or the location of the enterprise within the perimeter of a military installation, which meant that the business could not be handed over to the civilian authorities without creating a security problem. The third and final option was retention (baoliu), which was generally applied to those enterprises meeting specific military needs (baozhang xing qiye).

Not surprisingly, the divestiture encountered some resistance among military units reluctant to part with their enterprises during this second phase. Some departments reportedly attempted to fold their enterprises under subordinate institutions that were not being screened by the central authorities.³⁴ Others tried to shield their profitable enterprises while willingly sacrificing their bankrupt enterprises. In cases where the enterprise was using the label of “military enterprise” (jundui qiye) as a convenient cover for tax reductions and privileged access to transport or raw materials, individuals or units tried to have the enterprises re-classified as non-military enterprises. A significant number of enterprises were reportedly transferred to the control of relatives of military officers or de-frocked military officers, meaning that these enterprises retained their unofficial links to their former units. Some of this backsliding was considered so serious that the office of the military leading small group in the first half of December 1998 was forced to dispatch four work groups of 30 members each to inspect the larger units.

Even some of the divestiture transfers themselves involved elements of illegality. One of the military’s highest profile enterprises, the five-star Palace Hotel in Beijing, attracted interest from numerous civilian companies.³⁵ Eventually, the General Staff Department sold their joint venture stake in the hotel to a state enterprise, China Everbright Group, Ltd., which was looking to expand its hotel assets. According to the PRC Joint Venture Law, however, the remaining co-owners, Hong Kong’s

³⁴Lam, “PLA Cashes In.”

³⁵This account is taken from Matt Forney, “A Chinese Puzzle: Unwinding Army Enterprises: Who Gets Them, And What to Pay?” Wall Street Journal, 15 December 1998; and Matt Forney, “Chinese Army’s Exit from Businesses Leaves Partners Guessing at Next Move,” Wall Street Journal, 21 May 1999, p.A9.

Peninsula Group (which managed the hotel) and Japanese construction company Kumagai Gumi, should have enjoyed the right of first refusal of the army's shares. Instead, Peninsula got to approve the transfer only after it was arranged. Ironically, therefore, a process designed to reduce the incidence of illegality among the armed forces was itself provoking illegal behavior. Moreover, the deal may even be detrimental to Peninsula Group. In 1997, China Everbright set up its own hotel management firm, and might take over from Peninsula when the latter's management contract comes up for re-extension in 2002.

The emerging details of the second phase also aroused resentment among the central, provincial, and municipal bureaucrats, who were being "forced" to take over the PLA's many large and bankrupt enterprises.³⁶ The transfer of these enterprises to government offices was seen by many as another component of Zhu Rongji's strategy to re-centralize macro-level decisionmaking authority and extract more resources from the provinces, many of which were perceived to have benefited disproportionately from reform at the expense of central coffers. For the local governments, however, these enterprises were simply another burden. The factories were particularly unattractive to the civilian governments, who would be saddled with the fiscal costs of free social services (education, housing, health care, etc) for thousands of unemployed or underemployed workers. Furthermore, local officials would assume responsibility for finding new jobs for these workers, adding to their already weighty burden in this area. Some of the problems were addressed at a critical "transfer work meeting" convened on 29 November. 15 December 1998: Official Handover.

By December 15, 1998, the government officially announced the end of the second phase. Reportedly, 2,937 firms belonging to the PLA and People's Armed Police were transferred to local governments, and 3,928 enterprises were closed.³⁷ The big loser was the GLD, which saw more than 82 percent of its enterprises transferred or closed. A partial list of the enterprises can be found in Table 1 below.

TABLE 1.—PARTIAL LIST OF DIVESTED PLA AND PAP ENTERPRISES

| Province | Units Divested | Workers | Output Value | Profits | Asset Values | Debt Values |
|-------------------------|----------------|---------|--------------|---------|--------------|-------------|
| Hebei ³⁸ | 122 | | | | 1.47b | 1.07b |
| Guangdong ³⁹ | 390 | 6,700 | | | 2.0b | |
| Jiangsu ⁴⁰ | 64 | | | | 1.4b | 830m |
| Beijing ⁴¹ | 68 | 2,300 | | | 1.4b | |
| Shenyang ⁴² | 47 | 762 | 534m | | | |
| Hainan ⁴³ | 29 | | | | | |
| Shanghai ⁴⁴ | 9 | 600 | | 30m | 300m | |
| Tianjin ⁴⁵ | 67 | | | | | |
| Jiangxi ⁴⁶ | 8 | 687 | | | 45.7m | |
| Lanzhou ⁴⁷ | 68 | | | | | |

³⁸Yang Xinhe, "Hebei Takes Over Military Enterprises," Xinhua Hong Kong Service, 12 December 1998, in FBIS—CHI—98—350, 16 December 1998.

³⁹"Guangdong Military Hands Over Enterprises," Zhongguo xinwen she, 30 November 1998, in FBIS—CHI—98—337, 3 December 1998. A different source relates that 368 of these firms, located in Guangzhou, Shenzhen, Zhuhai, Shantou, Huizhou, and Shaoguang, belonged to the Guangzhou Military Region, the South Sea Fleet, the Guangzhou MR Air Force, the Guangdong Military District, and the Guangzhou People's Armed Police Headquarters. The other 22 enterprises located in Guangdong were owned by the Beijing, Jinan, Lanzhou, and Chengdu Military Regions, as well as firms owned by the Navy's Guangzhou Maritime Academy. See Cao Haili, p.6.

⁴⁰Jiangsu units also dissolved 194 enterprises, with RMB 360 million in assets. Jin Weixin, "The Jiangsu Forces in the Nanjing Military Region Turn Over All Army-Run Enterprises, Stressing Politics, Considering the Overall Order, and Acting in Line With High Standards and Strict Requirements," Nanjing Xinhua Ribao, 10 February 1999, pp.1,3, in FBIS—CHI—1999—0222, 10 February 1999. See also "Jiangsu Troops Hand Over Enterprises to Localities," Xinhua Domestic Service, 27 November 1998, in FBIS—CHI—98—337, 3 December 1998.

⁴¹Cao Haili, p.13. 42. "Shenyang 'Theater of Operations' Transfers Enterprises," Beijing Central People's Radio Network, 25 November 1998, in FBIS—CHI—98—337, 3 December 1998.

⁴³Bu Yuntong, "Hainan Armed Forces Hand Over Enterprises," Xinhua Domestic Service, 29 November 1998, in FBIS—CHI—98—337, 3 December 1998.

⁴⁴This number refers only to the divestiture of Yunfeng Industries. See "PLA Garrison Turns Major Business Over to Shanghai," Xinhua, 21 November 98.

⁴⁵"Tianjin Hands Over All Military-Run Businesses," Xinhua, 8 December 1998, in FBIS—CHI—98—342, 8 December 1998.

⁴⁶Liu Yi, "Jiangxi Military Hands Over Commercial Firms," Xinhua Domestic Service, 26 November 1998, in FBIS—CHI—980337, 3 December 1998.

⁴⁷This number refers only to Lanzhou MR AF enterprises. See Lanzhou wanbao, 20 January 1999.

One-third of the companies and their subsidiaries were retained by divestiture offices at the central level, while the remaining two-third were transferred to divestiture offices at the local level. Profitable regional military conglomerates, such as the Jinling Pharmaceuticals Group in the Nanjing MR, were placed directly under the

³⁶"Military Meets Resistance," p.A16.

³⁷"March Out of Business Sea: PLA and Armed Police Carrying Out the Decision of Divestiture," Shidai chao, March 2000.

direction of the regional commission.⁴⁸ By contrast, the ten mid-sized firms and forty small-sized firms of the Strategic Rocket Forces, whose businesses had not been terribly profitable, were given to their local governments.⁴⁹

The commercial elements of China's most profitable military conglomerates, such as Xinxing, Songliao, and Sanjiu (1999), were not handed over to local governments for reorganization, but were instead placed directly under the control of the State Economic and Trade Commission in Beijing.⁵⁰ Eventually, it was thought that these large companies would be independent, state-owned conglomerates. As an example, the experiences of Xinxing in this process are representative of the fate of these big firms.⁵¹ Because Xinxing contained enterprises engaged in both military and non-production, its handover was very complicated. In the end, fifty-six numbered factories, which produced machines, logistics materials, clothes, and hats for the PLA, were kept under military control, but the trade group was transferred to the SETC. The ten specialized firms owned by Xinxing were reduced to seven after divestiture, with Xinxing Foundry retained by the military and two other firms transferred to chemical groups. At the same time, three new firms, including the General Logistics Construction Company that built the Military Museum, the new CMC Building, and the Beijing 301 Hospital, were added to Xinxing, restoring the number of firms to ten.

All of the large-size firms were subject to a broad set of rules. The central government would still control the nomination of the leadership of large-size firms, groups, and major enterprises of important industries. In terms of accounting and budget, the Ministry of Treasury would manage the financial affairs of those firms managed by the central government. All firms were required to participate in local social insurance schemes according to geographic divisions.

The remaining 8,000–10,000 enterprises, most of which were the smaller, subsistence-oriented enterprises at the local unit level, remained in the military.⁵² The reforms were also “suspended” in some sectors, especially civil aviation, railway and posts and telecommunications, because of the “special nature” of these industries.⁵³ For example, the Air Force's China United Airlines was permitted to continue operating.⁵⁴ Other notable exceptions included the fifty-six numbered factories previously under the control of the GLD's Xinxing Group, which remained under the administrative control of the General Logistic Department's pared-down Factory Management Department (formerly the larger Production Management Department), and Poly Group, which was divided between the General Equipment Department (arms trading elements like Poly-Technologies), and COSTIND.

Phase Three: The Real Bargaining Begins

A Handover Office Work Meeting was held 28 December 1998 at the Jingfeng Hotel in Beijing.⁵⁷ The meeting, chaired by Handover Office Director Sheng Huaren, was attended by the CEOs of the 148 large-size PLA and PAP enterprises handed over to the SETC Handover Office. According to Sheng, these 148 enterprises and groups included 903 factories and subsidiaries, all of which had also been relinquished to the national office, and other military enterprises, which had been given to local handover offices. While these moves were significant in their scale and scope, the Central Committee's guidance cited above also suggested that the opening two phases of the divestiture were only the beginning of a much longer, and more protracted process of allocating and restructuring thousands of troubled enterprises. According to Qin Chaozheng, the director of the Economic and Trade Commission of the Hebei Provincial Government:

It will be an arduous task to turn these enterprises over to proper units for their management and to standardize their operation. More than half of these enterprises are poor in management. It is necessary to further improve their management

⁴⁸ Jin Weixin, “The Jiangsu Forces in the Nanjing Military Region Turn Over All Army-Run Enterprises, Stressing Politics, Considering the Overall Order, and Acting in Line With High Standards and Strict Requirements,” Nanjing Xinhua Ribao, 10 February 1999, pp.1,3, in FBIS—CHI—1999—0222, 10 February 1999.

⁴⁹ Cao Haili, p.9.

⁵⁰ First rumors of Songliao's transfer began to appear in late July. See Christine Chan and Foo Choy Peng, “Jiang Demand Threatens PLA Business Empire,” South China Morning Post, 24 July 1998.

⁵¹ This account is taken from Cao Haili, p.9.

⁵² Personal communication with Tai Ming Cheung, 24 January 1999.

⁵³ “Separation of Army From Business Done,” p.1.

⁵⁴ China United Airlines survived divestiture because many remote towns protested that the shutdown on the airline would cut them off from the rest of the country.

⁵⁷ The account of this meeting is taken from Cao Haili, p.6.

mechanisms and turn them into legal and competitive entities that are suitable to the market economy and that are able to conduct management independently.⁵⁸

The first task for the third phase of the divestiture process involves going through the accounts of all PLA enterprises, which must be squared before these enterprises are allowed to become fully civilianized or merged with civilian firms. It is expected that this process will take at least 2–3 years, depending on the number of major corruption cases that are generated. The asset evaluation was to be performed by accounting agencies designated by the SETC.⁵⁹ Some initial results of the third phase have already been publicized. Among many examples, the PLA's 9791 Cement Factory was turned over to local authorities in Tongchuan City on 30 March 1999 and renamed the "Shaanxi Provincial Lishan Cement Plant."⁶⁰ In March 1999, it was also announced that 150 large enterprises formerly owned by the military and the armed police were being transformed into state-owned corporate groups.⁶¹ Xinxing, for example, remains as an independent, non-military entity, controlling one of the General Logistics Department's largest construction units. The top-level management of the large enterprises is being selected and appointed by the central government, especially the Ministry of Finance, which was placed in charge of supervising the assets of these enterprises. By contrast, nearly all of the smaller enterprises have been handed over to local authorities. Regardless of size, however, all enterprises are being required to transfer their credit liabilities, as well as participate in the medicare insurance programs on behalf of their employees. Those that failed to offset their debts would be overhauled, shut down or acquired by other, viable companies.

Exempted from Divestiture: PLA Telecoms

Military commercial telecommunications ventures were one sector singled out for special exemptions. Interviews in Beijing strongly suggest that PLA telecoms in general was given a "get-out-of-jail-free" card from the central leadership, because the resulting information technology acquisition was seen as an essential contributor to the C⁴I revolution currently underway of the PLA. To manage the post-divestiture operations, the PLA created two communications groups. Reportedly, the first is dedicated exclusively to internal military traffic at high levels of security. The second leases capacity of existing networks to civilian operators. In the latter case, the PLA was considered to be de-linked if they did not directly enroll individual subscribers (i.e., deal directly with "the public"), yet they could lease to operators who did enroll customers (i.e., cable companies). While radio paging was abandoned (e.g., CITIC/Pacific bought the Bayi radio paging business in Guangzhou) and many companies had to break their high-profile links with foreign companies, the China Electronic Systems Engineering Company (CESEC) in particular was not only allowed to stay in business but in some cases expand its operations.

One illustrative case of the new ambiguous status of PLA telecommunications, however, involves a fiber optic network previously managed by the Guangzhou Military Region. At the end of 1998, the network's managing unit, the Office of Telecom Support for Economic Construction (OTSEC), was nominally transferred over to the Guangdong provincial government as part of the divestiture process. By all accounts, the transfer appears to be a legal ruse to allow the PLA to continue to be engaged in commercial telecom activities. The office remains essentially military and it still oversees much of the military telecom network in the Guangzhou MR, as well as the optical fiber network. The OTSEC is still actively negotiating with a large number of Chinese and foreign companies to lease surplus PLA telecoms networks and to build an updated high speed data and voice transmission network. In February 2000, Hong Kong-based CITIC Pacific purchased the fiber network itself from the PLA to be the cornerstone of its new network rollout. It is said that CITIC spent over 2 billion RMB buying the unused fiber from the military. An \$80 million purchase of optical equipment from Lucent will expand the capacity of the existing 16,000km of fiber and extend it to over 30,000km nationwide. Perhaps the most salient example of the uncertain legal and regulatory status of continuing PLA telecommunications ventures involves the "Great Wall" CDMA cellular project owned by the General Staff Department Communications Department's commercial arm, CESEC. In accordance with divestiture, CESEC sold its 20 percent share in the Nanjing-based satellite joint venture holding company with KPN Royal Dutch Telecom, but retained initial control of the four trial CDMA networks in Beijing, Tianjin, Xi'an, and Shanghai.

⁵⁸ "Hebei Takes Over Military Enterprises," Xinhua, 12 December 1998.

⁵⁹ Cao Haili, p.6.

⁶⁰ Shaanxi Daily, 12 April 1999.

⁶¹ "Separation of Army From Business Done," p.1.

In 1999, CESEC's civilian partner in the deals, China Telecom, was ordered out of the projects, so that the networks could be prepared for handover to China Unicom, the weak number two telecom player which is betting on CDMA to help it gain a respectable market share against the larger GSM networks run by China Telecom. As quickly as this arrangement was offered, however, the central authorities reversed themselves, and announced that the PLA would be retaining ownership of the networks. There are many competing reasons why the transfer fell through. China Telecom did not want Unicom to get Great Wall's CDMA networks, since the combined CDMA assets of the two players posed a greater threat to the dominant market share enjoyed by China Telecom's GSM networks. Unicom did not want to be bothered with Great Wall's overhead, which included significant personnel, housing, pension, and other social welfare costs. Moreover, the Great Wall system is a narrow-band 2nd generation CDMA standard, and Unicom wanted to move to the broadband 3rd generation standard.

Before resuming its CDMA business, however, CESEC had to solve a big problem. Divestiture explicitly prohibited the PLA from dealing directly with customers, so they needed a new partner that could serve as an "interface." Eventually, CESEC appeared to partner with ChinaSat, the satellite communications company spun off from China Telecom. Since Great Wall was the name of the now defunct JV between CESEC and China Telecom, the Great Wall joint venture was formally superseded by a company called China Century Mobile Communications Company, whose investors reportedly include CESEC, ChinaSat, the Beijing Municipal Government, Datang Group, and Beijing Zhongguancun Technology Development Ltd. The latter company, which plans to invest US\$6 million in Century Mobile once it is approved by the central government, is itself owned in part by two of China's best known companies, Founder Group and Legend Group Holdings, the country's biggest computer maker. Additional technical support (and perhaps a small share of equity investment) will likely be provided by the Chinese Academy of Telecommunications Technology, a research institute under the Ministry of Information Industry. CESEC's role in Century Mobile is also multi-faceted, undercutting earlier reports that ChinaSat would be the de facto operator of the networks with CESEC as a passive investor. Instead, it appears that CESEC has retained its primary role as the designer, builder and integrator of communications networks. As stated by one official from Shenzhen Great Wall Communications Development Center, the PLA company overseeing the trial CDMA network in Beijing: "Other companies will invest in the network, and we will build it."⁵⁵

The first public hint of these new developments appeared in late December 1999, when Samsung and a company named Hebei Century Mobile Communications began construction of a new CDMA network serving 11 cities in Hebei province. In a press release only circulated in Korea, Samsung heralded the opening of the Hebei 133 CDMA mobile telephone network. The Korean company reportedly supplied US\$31 million of mobile systems equipment, including 11 mobile switching centers (capable of servicing 200,000 subscribers) and 165 base stations, and expected more than US\$200 million in follow-up orders. By February 2000, this network reportedly had attracted 15,000 subscribers.⁵⁶

The Great Wall/Century Mobile case is a striking illustration of the continuing role of the PLA in commercial telecoms operations, and certainly suggests that telecommunications was exempted from divestiture. At the very least, it suggests that the civilian leadership is willing to turn a blind eye to the activities, because of their side benefits for the military's own communications system. Divestiture, therefore, was not a blanket condemnation of the military's participation in business, but instead was a process capable of making logical exceptions, especially when it threatened to throw the baby out with the bathwater. At the same time, the PLA telecommunications networks continue to operate in a hazy, inchoate gray area, with neither central approval nor rebuke. At an 18 July 2000 cabinet meeting, for instance, State Council "Document No. 40" was reportedly issued, ordering the military once again to turn the Great Wall networks over to China Unicom as well as the 10MHz of frequency in the 800MHz band that the military was using for its CDMA systems. For more than a month, the military allegedly resisted the command, hoping to retain some or all of the networks and frequencies for its own secure communications. Given past reversals of similar policies, there is legitimate reason to question whether the transfer will ever take place.

⁵⁵Conversation with knowledgeable journalist in Beijing.

⁵⁶Matt Pottinger, "China's Military Building Mobile Phone Empire," Reuters, 15 February 2000.

Divestiture Problems: Resource Allocation and Discipline

As the divestiture entered 1999, however, some serious bureaucratic and political conflicts began to surface. Overall, they can be divided into two categories: resource allocation and discipline. Each of these disputes has important implications for our assessment of the final success or failure of the divestiture process.

In terms of resource allocation, recent trends suggest that the PLA's compensation, especially in the area of the official budget, is going to be far less than the military expected. In March 1999, the Minister of Finance Xiang Huaicheng announced the military budget for the new fiscal year in his annual work report:

In line with the CPC Central Committee request, central finances will provide appropriate subsidies to the army, armed police force, and political and law organs after their severance of ties with enterprises. In this connection, this year's defense expense will be 104.65 billion yuan, up 12.7 percent from the previous year because of the provision of subsidies to the army and of regular increases.⁶²

Outside observers immediately noticed the meagerness of the figure, both in relative and absolute terms. At a relative level, the 12.7 percent increase was not significantly higher than the 12 percent increase of the previous year, calling into question the notion that the fiscal priority of the PLA had been augmented. Even in absolute terms, the increase of RMB13.65 billion between 1998 and 1999 was not that much larger than the RMB10.43 billion increase between 1997 and 1998, and reportedly included only a RMB3 billion compensation for the loss of business income. Where was the additional RMB15–50 billion reported in the Hong Kong media? Why did the military receive only RMB3 billion extra when even the official China Daily newspaper pegged the estimated annual profits and taxes of the enterprises at RMB5 billion (US\$602 million)?⁶³

There are several plausible explanations for this budgeting outcome. The first, and most difficult to prove, is that that PLA was sufficiently compensated with off-budget funds that are not calculated into the official budget. Given the Byzantine nature of the Chinese budgeting process, we may never have a definite estimate of any off-budget compensation. The second explanation is that the PLA did not have as much as leverage in the divestiture process as it or outsiders thought, allowing the civilian leadership to get the military out of business "on the cheap." The third possibility, supported by a loud chorus of PLA grumbling and complaining, is that the military was "duped" by the civilian leadership, the latter of whom had implicitly promised a higher level of compensation. Indeed, there is some evidence to suggest that the RMB 3 billion of compensation is based on the conservative profit estimate of RMB3.5 billion (on total revenue of RMB150 billion) that the PLA gave to Zhu Rongji before the divestiture announcement in July. This low estimate was very much in line with previous PLA estimates by the General Logistics Department, which consistently undervalued the profit of the military enterprise system in order to lessen the central tax burden of the commercial units. If the above story is true, then the major source of the PLA's animus may be that it was hoisted by its own petard. At the time of writing, however, it is difficult to judge which of these three explanations is correct, but the fact remains that vocal elements within the PLA appear to be significantly dissatisfied with the compensation package, above and beyond the usual bureaucratic rapaciousness for ever greater resources.

Apart from budgets, additional resource allocation disputes have arisen over distribution of enterprise assets in the post-divestiture environment. According to one well-informed observer, there have been some serious differences over levels of asset compensation because of the escalating costs of debts and liabilities incurred by enterprises.⁶⁴ Many firms were poorly managed with incomplete accounting records and borrowed from multiple creditors. The firms' relationships with banks needed to be clarified, and licenses needed to be re-registered. Another problem involved personnel. When military officers and workers were transferred to the localities, their healthcare and insurance had to be transferred as well, created unwanted social welfare burdens for the new owners.

In other cases, there is intra-military bargaining over the fate of individual assets. One of the most public examples of this was the dispute between the Beijing Military Region and the General Armaments Department over the fate of the Huabei Hotel in central Beijing.⁶⁵ Under the rules of the handover, military units at the bureaucratic rank of military region, which also covers the new GAD, are allowed

⁶² PRC Finance Minister Xiang Huaicheng, "Report on the Execution of the Central and Local Budgets for 1998 and on the Draft Central and Local Budgets for 1999," Xinhua Domestic Service, 18 March 1999, in FBIS-CHI-1999-0320, 18 March 1999.

⁶³ "Separation of Army From Business Done," p.1.

⁶⁴ Personal communication with Tai Ming Cheung, 9 September 1999.

⁶⁵ Susan Lawrence, "Bitter Harvest," FEER, 29 April 1999, p.24.

to keep only one three-star hotel. Before divestiture, the Beijing Military Region controlled two three-star hotels, including the Huabei, which it agreed to hand over to the SETC Handover Office. Since the GAD is a new organization and therefore had no hotels, it reportedly coveted the Beijing command's extra hotel. Thus far, however, the military region headquarters has declined to transfer the hotel to the General Armaments Department, igniting an unresolved bureaucratic struggle within the top military and civilian leaderships.

The second major set of problems resulting from divestiture involved discipline issues, mainly corruption and profiteering. While the data in this area remains anecdotal, there is some evidence to suggest that the civilian leadership has aggressively pursued discipline investigations involving corruption in PLA enterprises, much to chagrin of PLA officers who feel that the effort is gratuitous and harmful to the public reputation of the military.⁶⁶ Susan Lawrence of the Far Eastern Economic Review reports from well-placed Chinese sources that the SETC Receiving Office has a list of 23 company executives at the rank of major-general or above who have fled the country since the divestiture was announced.⁶⁷ Seven of these officers are from the Guangzhou Military Region, which handed over more than 300 enterprises, and another five are from PLA headquarters. Among the latter is Lu Bin, former head of the General Political Department's Tiancheng Group, who was arrested overseas and extradited in January. Other arrestees include a senior colonel who was the head of one of the PLA's top hotels, the Huatian, which is located in Changsha. As the various receiving offices continue to process the assets and books of some of the shadier PLA enterprises, one can only expect the numbers of disciplinary investigations to increase.

CONCLUSION

In a sense, divestiture brings the PLA full circle. The pattern of the campaign, ranging from the transfers of its high-profile commercial enterprises to the retention of its lower-level farms and industrial units, suggests that the military has essentially returned to the pre-1978 "self-sustaining" economy. Thus, the widespread conclusion that the PLA has been "banned" from business is far too simplistic. The military will continue to operate a wide variety of small-scale enterprises and agricultural units, with the goal of supplementing the incomes and standards of living for active-duty personnel and their dependents at the unit level. Profit and international trade, however, will no longer be critical features of the system. Moreover, the military leadership hopes that the divestiture of profitable companies will greatly reduce the incidence of corruption and profiteering in the ranks, and thereby refocus the PLA on its important professionalization tasks.

At this point, of course, it is too soon to judge the long-term impact of this divestiture on the PLA. While participation in business had spawned endemic levels of corruption, an honest assessment would also admit that the military-business complex made positive contributions by subsidizing an underfunded military, improving the material life of the rank-and-file, and creating jobs for cadre relatives. Despite these benefits, however, the military and civilian leadership in the end decided that the disadvantages of commercialism outweighed the advantages, particularly with the prospect of professional tasks like the liberation of Taiwan and potential military conflict with the United States on the horizon.

What will the short- to medium term future hold for the divestiture process? Most likely, the next few years will witness repeated "mop-up" campaigns on the part of the central leadership and significant resistance and foot-dragging on the part of local military officials, repeating the pattern of earlier rectifications. An audit in early 1999 revealed that the military had kept back some 15 percent of its businesses, necessitating the extension of some deadlines until August 1999. As late as May 2000, a top-level meeting on divestiture all but admitted that the military continues to shield some assets from the process, stating that the withdrawal of the military from business activities had only been "basically completed" (emphasis added).⁶⁸ Nonetheless, it is critical not to downplay the importance of what has already occurred. There is significant evidence to suggest that the divestiture has ended the legal participation of the PLA in commercial activity, perhaps closing one of most unique and interesting chapters of the post-Mao revolution.

⁶⁶ Ibid.

⁶⁷ Ibid.

⁶⁸ Wang Yantian and Yin Hongzhu, "CPC Central Committee, State Council, Central Military Commission Hold TV, Telephone Meeting on Work of Withdrawing Military, Armed Police, and Political and Legal Organs from Business Activities," Xinhua Domestic Service, 25 May 2000.

PANEL II DISCUSSION AND QUESTIONS AND ANSWERS

Co-Chairman DREYER. Questions for Dr. Mulvenon, since he has to go.

Commissioner Lewis?

Commissioner LEWIS. You mentioned that 3,000 were transferred, 4,000 were closed, and 8,000 to 10,000 were retained, and then you said that of the ones that were retained, many are on subsistence-type operations. Of the 8,000 to 10,000, most of those are subsistence?

Mr. MULVENON. I would highlight there is a special category of enterprises that were retained for national security reasons.

Commissioner LEWIS. Like which ones?

Mr. MULVENON. In particular, I would highlight aviation. China United Airlines is run by the Chinese Air Force, and localities screamed bloody murder when it was possibly going to be divested, because China United Airlines is unique in that it services many of the most remote, poor areas in China, because that's where its border military facilities are, so they operate out of Chinese airfields.

Commissioner LEWIS. Of the 8,000 to 10,000 that were retained, how many would you say were subsistence, and how many were not?

Mr. MULVENON. The vast majority was subsistence. The other categories are some railway assets, a very small number of railway assets, and some key—and this is an area that I focus on a great deal—telecommunications assets that the Chinese military retained because they were seen as essential to the C4I revolution that we're seeing in the PLA.

Commissioner LEWIS. Thank you.

We were told that at one point in time, the PLA-run enterprises contributed about 10 percent to the total Chinese budget. If they are only in subsistence and these few other areas, they aren't contributing very much to the whole Chinese budget today, I would assume.

Mr. MULVENON. Right. In fact, I would say that 10 percent is high, because in many cases, they would juggle the books each year, and I have seen a number of these internal audits of the General Logistics Department. The goal of every enterprise was to make it look like they broke even rather than showing profit, because profit had to be remitted in taxes, so they would have two or three or four sets of books, and that was where the corruption came in—they would siphon off the profits so it always looked like they were breaking even, because any enterprise in the Chinese government system that shows a profit, they then increase your profit target the next year, and that's the last thing you want.

Commissioner LEWIS. So what percentage of the total Chinese intake would you say today comes from the PLA-run enterprises?

Mr. MULVENON. Into the Chinese budget?

Commissioner LEWIS. Yes.

Mr. MULVENON. I would say that in fact, whatever profits are remaining in the enterprises never make it to the central budget. They stay within the General Logistics Department budget.

What divestiture meant was they asked units that had previously run their own enterprises to buy into what I call the “trickle-down theory of PLA economics,” which is the fact that the central budget then would trickle down to the lower-level units. But those moneys stay within the military sphere; I don’t think they contribute to the civilian central government budget.

Commissioner LEWIS. Thank you very much.

Co-Chairman DREYER. Commissioner Wessel?

Commissioner WESSEL. A quick question. Is the PLA still operating businesses outside China?

Mr. MULVENON. For about six or seven years, I and Jeff Fiedler and Dave Welker and a bunch of other people have sort of made it our “closet hobby” tracking PLA enterprises in the United States and other places. I would say that after the major spate of scandals, I have not been able, despite getting lots of records and incorporation agreements and trawling Lexis-Nexis, and doing field visits in Los Angeles and other places, to find a Chinese military enterprise international subsidiary operating in the United States since about 1997.

The reason is very simple. It is because Chinese military enterprises and Chinese defense industrial enterprises had a very different strategy for having subsidiaries in the United States. The Chinese military enterprises brought over their own people on the L-1 visa loophole, which has now been closed. They didn’t know the market; in many cases, they did not speak English; they bled money, and they had to sell their properties.

The defense industrial corporations, by contrast, came over, hired American exporter to run their companies for them, and most of those companies are still very profitably operating in Orange County and other places, mainly in California, selling automobile parts and toys and ceramics and lighting fixtures, and other things.

Commissioner WESSEL. But in terms of those operations, therefore, and their activities, their profits, they could be enhancing their activities in China; correct?

Mr. MULVENON. Yes. With the caveat that the moneys from defense industrial subsidiaries go into the defense industrial system and help defense industrial ministries. The 17 hands that would be out between that and getting into the military coffers is a major deterrent in that kind of a stovepipe system.

Commissioner WESSEL. Thank you.

Co-Chairman DREYER. Commissioner Wortzel?

Commissioner WORTZEL. James, I want to focus on one part of your written testimony that talks about cover operations and pursue, let’s say, one PLA company—Carey Enterprises, which was the General Political Department, which had a real estate branch in Atlanta, Georgia.

You are saying to me that today, Carey Enterprises and its subsidiary real estate companies and property development companies in Atlanta, Georgia no longer exist; am I correct?

Mr. MULVENON. What I am saying is that the companies that we tracked known as Carey Enterprises Limited in the United States no longer exist. The PLA companies made some gross mistakes when they came over there. Their trade craft was terrible. They called themselves “Poly USA” and “Carey USA”. They don’t do that

any more, and as David and others would tell you, that's the difficulty we had—they went to ground in a major way.

Commissioner WORTZEL. Okay. Then, you talk about cover operations including enterprises providing cover for intelligence-gathering, national security, foreign affairs, United Front operations, and I would assume technology collection.

Mr. MULVENON. Yes.

Commissioner WORTZEL. Can you name any of those?

Mr. MULVENON. Can I name any PLA enterprises operating in the United States and engaged in technology—

Commissioner WORTZEL. No—that are cover enterprises, by name—

Mr. MULVENON. No. Listen, I spent a fair bit of time looking for them, and they are good at what they do. A lot of the enterprises that we tracked early on were in Hong Kong, because that was a gateway.

But in fact I would turn your question on its head, Larry. I would say by contrast the Chinese now have a very different and much more successful strategy for bumping up the technical capability of their military, particularly in the C4I realm, that are now globally competitive Chinese companies with deep military ties that are producing state of the art or near state of the art telecommunications equipment and other kinds of systems within China, and there is no need like there was in the 1980s to go out and steal it, because they are already on the cutting edge.

Commissioner WORTZEL. Thank you.

Co-Chairman DREYER. Commissioner D'Amato?

Chairman D'AMATO. Thank you.

We had a little commentary in the last panel—I think with Dr. Wolf—about the efficacy of resuming our military-to-military exchanges. There is a debate going on, as you know, about that. With your knowledge of the PLA leadership, I guess my question is do you think the PLA leadership is prepared to engage in a little bit more reciprocity in these exchange programs that would lead the U.S. Government to reengage them in a variety of exchange programs—whether they would give a little bit more on their side?

Mr. MULVENON. Well, I would say that I think we made a mistake in our policy when we tried to get one-for-one reciprocity—they went to an airfield, and we wanted to see an airfield.

There was someone within the system who I think put it well when he said we should be more interested in values-based reciprocity, which means we want to see something that we value versus something else.

Unfortunately, in these kinds of protocol situations, as Colonel Corbett could tell you, it often comes down to these one-to-one things because it is the easier thing to negotiate.

Chairman D'AMATO. How you define reciprocity?

Mr. MULVENON. Right; and we get into sort of a trap in that sense, because—you know, we want to see their Pentagon; well, their system is more diffuse in that sense. They have now built a very large, impressive building on Fu Xing Lu, but maybe it didn't have the same centrality that we were attaching to it.

Chairman D'AMATO. But you think there is an opening in terms of their willingness to at least provide some value, as we define it

or as we would like to see it, in terms of their willingness to engage in additional new exchange programs?

Mr. MULVENON. I think they are very interested in resuming the mil-mil, first of all, and I think they are very open to the kind of mil-mil arrangements that we are proposing on the front end, which is to say at the strategic level, sort of ministerial and sub-ministerial defense dialogues, which, frankly, both sides have said have been helpful in reducing those perceptions.

They can want to go to the functional exchange level, but the current administration is not going to go anywhere near that, I don't think.

Chairman D'AMATO. Thank you.

Co-Chairman DREYER. Jim, have you noticed—I have been very interested in PLA corruption for years, and one of the reasons given for divestiture was the tremendous incidence of corruption within the PLA, as you know—has it in fact been reduced concomitantly, or is it taking other forms and still exists?

Mr. MULVENON. I have seen some internal documents from the Auditing and Discipline Department which suggest that it has been reduced, but it has also taken other forms.

One of the interesting things about divestiture was that divestiture lifted the rock, so you could see what was underneath the rock, which is to say that if you are a general grade officer, and you no longer have an authority line over an enterprise, it is difficult to explain why you are in that Mercedes limousine. So in a sense, if you no longer run foreign trade import-export companies, it is a little hard to explain what's getting off that ship that just sailed away.

So corruption has taken different forms. But they have been extremely aggressive, and in fact the military has screamed bloody murder about how aggressive the State Economic and Trade Commission was. There are still 24 pending warrants for people at the major general level and above who fled China with various assets that they had squirreled away overseas. And the feeling among PLA people was, "Hey, it was tough enough for us to divest. You don't have to embarrass us in public." But I think it says something about the scale of the corruption that the civilian leadership felt they had to take those measures.

Co-Chairman DREYER. Well, I actually noticed something in the Hong Kong Press—which I realize is hardly 100 percent reliable—that there was such a resentment within the PLA about the prosecutions that in fact Hong Kong was the only place they could actually be prosecuted at this point. I can find that for you if you are interested.

Mr. MULVENON. Well, what happened to Jinan Securities and the people in Ketai, Jinan and the various PLA-affiliated places in Hong Kong was that in fact the central government authorities strongly encouraged the Hong Kong Government to go after them in a legal form that would have been more difficult on the mainland.

So given that some of the most outrageous corrupt activities were going on in Hong Kong made it sort of a nice fit.

Co-Chairman DREYER. So you would find that article plausible, then?

Mr. MULVENON. Yes, it's plausible.

Co-Chairman DREYER. One quick follow-up on that. I realize this is very hard to get a handle on, but in your opinion, was the major problem that China had with the Kosovo business—you mentioned it saved the PLA's budget in 1999—was that due to the initial violation of sovereignty which Yugoslavia-read-Kosovo, which obviously has repercussions for Taiwan, or was it the actual NATO dropping of the bomb?

Commissioner LEWIS. On the embassy.

Co-Chairman DREYER. Yes.

Mr. MULVENON. It is difficult to disaggregate. Clearly, it stoked a number of things. One, clearly, the government is riding this tiger of nationalism, and there was a feeling that the military as an embodiment of that nationalism, as a vanguard of that nationalism, needed to be plussed up.

There was frustration over their inability to defend their assets overseas, but no PLA person is going to say we need to have air defense superiority over Yugoslavia.

Co-Chairman DREYER. Right.

Mr. MULVENON. But in a sense, I think the larger issue is what it said about their view of the international security environment, and I echo very much what was said on the previous panel about how the Chinese view the international security environment as the first cue about how they feel about the rest of the world, and that trickles down to the military. And when you read the subsequent defense white papers and the tone they took about how the world was still governed by peace and development, but in fact, the clouds were darker on the horizon, I think it played very much into the decisions about the budgeting issues.

Co-Chairman DREYER. Other questions?

Commissioner WALDRON?

Commissioner WALDRON. Jim, you threw out a little tidbit saying, if I heard you correctly, that there were outstanding warrants for 24 officers with a major general rank and above who fled China, presumably with assets. And I couldn't help wondering where did they go, where are they now; can you tell me?

Mr. MULVENON. I am trying to remember. I believe the one who was caught was either in Peru or in Southeast Asia. I can't remember.

Commissioner WALDRON. Only one has been caught?

Mr. MULVENON. Only one has been caught. The problem with Chinese corruption reporting is what Stotz called "the corruption of corruption reporting," which is that the only people who get reported for corruption are the ones whose factions have eroded out from underneath them, and they are used as models and pilloried in public.

So many, many more PLA generals than 25 at the major general level and above had their hands in the till, and poor Xi Xiangdu took the fall for a number of other people in his hierarchy who are just as—you know, some of these guys were so crooked they had to screw their pants on every morning.

Commissioner WALDRON. So there are 23 of them at large?

Mr. MULVENON. Twenty-four.

Commissioner WALDRON. Twenty-four. I guess my question is very simple. Are any of them assisting us with our inquiries or insisting any of our friends with their inquiries? Do we know of anybody who is trying to track them down? It seems to me that these would be very interesting people to chat with.

Mr. MULVENON. I have no idea whether they made requests to Interpol or U.S.—I personally do not know whether that happened.

Commissioner WALDRON. It's just extraordinary.

Co-Chairman DREYER. Are there any other questions, or can we allow Dr. Mulvenon to make his appointment?

[No response.]

Co-Chairman DREYER. Thank you very much, Jim.

Chairman D'AMATO. If Commissioners do have additional questions based on your testimony and submission of paper and so on, we would like to be able to get back to you.

Mr. MULVENON. I'm happy to; I am here in town.

Thank you.

Co-Chairman DREYER. Thanks for coming.

Professor Shambaugh, would you like to start?

STATEMENT OF DAVID SHAMBAUGH, PROFESSOR, POLITICAL AND INTERNATIONAL AFFAIRS, GEORGE WASHINGTON UNIVERSITY

Mr. SHAMBAUGH. Yes. I understand we have 10 minutes for oral presentations.

Chairman D'AMATO. Yes.

Mr. SHAMBAUGH. Okay. Let me start by thanking the Commission for holding this hearing on this important subject and inviting me, along with my distinguished colleagues, to appear today.

Ten minutes is not a lot of time to go into even my own paper—

Co-Chairman DREYER. We have read it; you kindly submitted it beforehand.

Mr. SHAMBAUGH. Yes. I am about to say, June, that you have my 21-page, single-spaced testimony before you on the subject. I'm glad you've read it.

Chairman D'AMATO. We took the quiz.

Mr. SHAMBAUGH. As a professor, I will give you a test afterward.

But in addition, I think you have a number of really very thoughtful, well-researched, state-of-the-art assessments before you in written testimony today, with perhaps one or two other openly published scholarly works, particularly one by Bates Gill in a book that Jim Lilley and I edited that is mentioned in Colonel Corbett's written testimony. I think you have the totality of the universe of what is known outside the U.S. Government about the Chinese military budget in these collected written submissions.

These have been done by real specialists who have gotten their fingernails dirty doing real, hard research on a real, hard subject.

This is indeed a very difficult, very complex, and very opaque subject. The questions that the Commission put in their November 5 letter to witnesses are very good questions. I am impressed by whoever wrote them; I must admit they knew what they were asking. I'm not sure, however, that we can provide with the kind of clarity, precision, empiricism, and confidence, answers to those questions. But I must say that in reading the various written sub-

missions today, I am impressed as to how far we can go in answering those questions.

In my own testimony, which you have hopefully read, let me just emphasize three points that arise out of it in what is left of my 10 minutes.

First, "open source" Chinese language materials can do a great deal to illuminate this and other subjects on the Chinese military. National technical means—and you know what that means—can do nothing to illuminate the subject of Chinese military expenditure. You can take all the satellite photos you want, intercept all the communications you want, and it won't tell you a thing about Chinese military expenditure except, perhaps, the weapons and equipment that are being produced out of the defense industrial complex—which is, at the end of the day, the best illustration of Chinese military expenditure, at least on the equipment side.

But I would submit to you that open source materials, so-called "gray literature," particularly books—I repeat, books—can do much to illuminate our knowledge of this subject and indeed, the PLA in general. Indeed, if the U.S. intelligence community or Foreign Broadcast Information Service were simply to translate the two sources listed in Footnotes 17 and 18 of my written testimony, it would illuminate tremendously the Chinese military defense budget process; but they have not done so, and indeed, they don't even have those books.

Chairman D'AMATO. Then, it would be hard to translate them.

Mr. SHAMBAUGH. No.

Chairman D'AMATO. If they didn't have them.

Mr. SHAMBAUGH. Well, I can give it to them. That's another point.

My personal view is that, with the exception of DIA, which has a limited and effective translation program, the U.S. intelligence community is completely asleep at the switch on collecting, translating, analyzing, and disseminating open source literature on the Chinese military, particularly the largest of these organs, the Foreign Broadcast Information Service. I don't say this joyfully. There is a considerable amount of money being spent on these agencies, but not well-spent, in my view.

So my first point is that this Commission can make a tremendous contribution to intelligence analysis of China and the U.S. national security interest if it contains in its recommendations that a concerted effort be made to collect, translate, and publish this open source material.

But, like a lot of recommendations out of Congress, it won't have any effect unless there is fiscal and bureaucratic follow-through behind such a recommendation. You have got to do so. You have got to put money behind it, and you have to write into legislation the reporting requirements and certain benchmarks to make sure the Intel community and FBIS are doing this translation.

I can tell you—although we shouldn't go into this too much in open public session—that there is some recent interest in the intelligence community to more fully exploit this so-called "gray literature." So you will have, at least in certain parts of the intelligence community, a receptive partner if you wish to pick up this gauntlet, and I think it is extremely important.

These are openly available materials in China. There is nothing secret about these materials necessarily. They are not that hard to get, and they are certainly not that hard to translate. But we aren't doing it.

The second point—the official defense budget obviously is rising. The numbers are in my paper. It has been rising since 1988 at double-digit rates and since 1997 in real terms after inflation. That last point is important because prior to 1997, China had considerable inflation, but since then has had deflation; hence, the double-digit rates are in real terms.

Now, over time, these budget increases are having an effect on competence for the PLA—personnel, equipment, training, and readiness. So make no mistake—the pie is getting bigger, and it is producing qualitative results—increased expenditure plus downsizing of forces plus equipment retirements equals more efficiency. This is a better military force with every passing year, and part of that reason is increased expenditure. It is not the only reason, but if you get 15 percent real increases in real terms above inflation year on year over time, it's going to make a difference, and it is making a difference. But at the same time, in my view, it is not accurate to identify any kind of crash buildup of the Chinese military or excessive spending on defense disproportionate to other elements of the national economy.

Moreover, internal allocations appear to be spread evenly between personnel, operations and maintenance, and equipment.

So despite increased expenditure on equipment for the navy and the air force in recent years, which is clear from what they are buying from Russia, the lion's share of official military expenditure, perhaps 50 percent of all central allocations—I repeat, central—continues to go to the ground forces. Dennis Blasko, Bernard Cole, and others in the next panel are going to speak more specifically about service allocations.

But overall, China is spending 8.4 percent of central government expenditure and 1.4 percent of its GNP on defense. That is not a significant “defense burden”, and it does not in my mind constitute any kind of military buildup.

The third and last point—clearly, the official budget, though, is not all that the Chinese military is getting. In my written testimony, I elaborate the various categories and other sources of revenue that flow to the military—subsidized production; extra-budgetary research and development; commercial proceeds, which James Mulvenon was just speaking to; secret and special hidden budgets, particularly for foreign arms purchases from Russia and Israel; provincial and local cost-sharing; and very minor revenue accruing to the PLA from arms sales abroad.

These are all extra-budgetary—“yusuan wai” in Chinese—revenue sources that accrue to the military-industrial establishment, not necessarily to the military itself.

So, how much? Everybody seems to be interested in bottom-line assessments—how much does the PLA receive in total revenue when you add all these categories together? Although I would suggest that bottom-line figures are not the most illustrative or informative of what any military is actually doing; you have got to see where it's being spent and what it actually producing.

From my paper—well, if you read the range of publications here, including those of Mr. Wolf this morning, you will find estimates that range from two to 12 times the official budget. Wolf is on the highest end; nobody to my knowledge has gone beyond 12 times, but he is on record as saying that they get 12 times as much on a PPP basis, I think, as the official budget.

My own personal analytical best judgment after 10 years of working on this subject and reworking the subject, I must emphasize, is that the PLA received in 2000 two to two-and-a-half times the official budget—two to two-and-a-half times.

Now, those of you who have read my work in the past will say, “Oh, Shambaugh has come down. He used to say three to five times.” Well, I have come down because I have reexamined the data very carefully over the last year—and I can elaborate on that if you are interested, and it is elaborated in fact in the table on page 17 of my written testimony. Please note, however, there is a typo in the text on page 16 which gives the amount at \$38.9 billion. The correct amount, estimate—guesstimate—is in the table, and that is the equivalent of US\$31.6 billion.

Co-Chairman DREYER. Does the \$14.5 billion on the line above then change to \$11.1 billion as well?

Mr. SHAMBAUGH. I'm sorry, June.

Co-Chairman DREYER. Page 16 versus 17, the extra-budgetary—

Mr. SHAMBAUGH. The official budget—yes—the \$38.9 billion on page 16 should be \$31.6 billion.

Co-Chairman DREYER. Yes, but what about the \$11.1 billion right above the \$31.6 billion; does that affect the \$14.5 billion?

Mr. SHAMBAUGH. No.

Co-Chairman DREYER. No. Those are two different figures?

Mr. SHAMBAUGH. Yes. These are two different subcategories in the table. The table shows direct allocations, which total \$20.5 billion, and then indirect, which total \$11.1 billion. I don't know, frankly, how I got the 38.9—that was a typo; maybe I was trying to extrapolate 2001 data.

Commissioner LEWIS. The 14.5 is still correct?

Mr. SHAMBAUGH. For the official defense budget in 2000, yes, but not in 2001.

The reason I use 2000 figures is because of the commercial proceeds issue that James was talking about. I think they are substantially less after 2000, and I was interested in what he had to say on that subject.

Anyway, two to two-and-a-half times; we don't know, but that is my best judgment. Now, that would rank China third in the world in terms of military expenditure, on a par with Japan, the United Kingdom, and Germany, but with a significantly larger number of personnel—2.4 million in the PLA, 1.1–1.3 million in the People's Armed Police, and 1.2 million in the reserves, all of which must be considered part of the armed forces as distinct from the military. Dennis Blasko can elaborate that distinction for you later.

At any rate, I will conclude by saying that that's my bottom line numerically on total expenditure, but again, I don't myself see through this expenditure either total or allocated, or on a production basis—if you look at what is coming out of the factories or

what is being purchased abroad—and again, what has been purchased abroad has been on average about \$650 to \$700 million per annum over the last 10 years from Russia—that’s not a lot in my view, and it has filled some very niche needs. There has been a lot of media attention to certain of these systems—SU-27s, SU-30s, Sovremennys—but \$600 to \$700 million worth of purchases per annum is not a great deal.

In other words, I don’t see any kind of crash program, any kind of China threat, on an equipment allocation basis. Perception is another issue. The PLA’s perceptions of the United States are often hostile. But I do think that the PLA overall is making very steady incremental progress toward becoming a much more modern force—and at this level of expenditure year on year, it is going to get there.

With that, I will stop my presentation and be happy to answer any questions.

[The statement follows:]

PREPARED STATEMENT OF DAVID SHAMBAUGH

INTRODUCTORY REMARKS

[This written testimony is drawn largely from my forthcoming book *Modernizing China’s Military: Progress, Problems, and Prospects*. All rights pertaining to the content of this testimony is reserved solely by the author and University of California Press.]

It is a privilege and honor to have the opportunity to testify before the U.S.-China Commission at its hearing on “Chinese Budget Issues and the Role of the PLA in the Economy,” and I welcome this opportunity to explore this complex subject and to try and answer the questions of Commissioners.

There are few areas of Chinese military affairs more opaque and difficult to research than the revenue/expenditure and budget/finance domains—but perhaps none more important to understand. PLA doctrine, force structure, threat perception, and organization are all areas which are more transparent and researchable than PLA economic affairs. Yet, questions associated with the PLA’s fiscal base are crucial to understanding these other areas. The allocation of financial resources is indicative of strategic priorities and calculations. In the case of the PLA, it is important not only to know where the money is going, but also where it comes from—as the military has always had extra-budgetary sources of revenue (yusuanwai) and significant hidden categories of expenditure in other ministerial budgets or secret accounts. Clearly the official defense budget is only a fraction—approximately one-half in my best judgment—of the total revenue accruing to, and expended by, the PLA. It is therefore vital for analysts to think in terms of the total revenue base rather than simply allocated budget when assessing the PLA’s finances, i.e. the total pool of funds available to the PLA.

The Commission has, in its letter of November 5, asked me to address a number of key and important questions concerning China’s military budget and defense expenditure. I wish I could answer them all with clarity and accuracy. I will do my best, and believe that my lengthy and extensive research in this area permits me to probe more deeply and more accurately than most—but unfortunately many of the questions posed are ultimately unanswerable, at least with the degree of precision and empiricism one would want and expect. The lack of official transparency in Chinese military expenditure remains a serious impediment to research and understanding—yet, as is seen below, much can be ascertained from sources published in China.

Despite the opaqueness of China’s military expenditure and the consequent difficulties of doing research on the subject, I wish to draw to the Commission’s attention to the fact that there exists a wide variety of “open-source” information published in China in Chinese that is of considerable research and intelligence value. Unfortunately, in my personal view, the U.S. intelligence community has thoroughly failed to tap into, and exploit, these open-source materials. If nothing else, this Commission can make a major contribution to U.S. national security and American intelligence if it strongly recommends that a concerted effort is made to collect, translate, and publish these open-source materials about the Chinese military. This

recommendation applies in particular to the translation of books (or parts of books), as this is where the vast majority of valuable open-source material about the PLA is contained. Periodicals also contain valuable information (and, here, it seems that the intelligence community and Foreign Broadcast Information Service are doing a slightly better job).

With respect to Chinese military expenditure, there exists a surprisingly large number of materials published in China on defense economics (*guofang jingji*), military finance (*jundui caiwu*), military expenditure (*jundui feiyong* or *junfei*), defense expenditure (*guofang feiyong* or *junfei*), and logistics work (*houqin gongzuo*) on which to base research into this subject area. The field of defense economics has, in fact, emerged as a bona fide field of teaching, research, and study in China.¹ These sources contain numerous nuggets of information and a surprisingly systematic picture of the defense budget process and sources of revenue (although it is notably weak on precise figures). One must comb this literature widely—which is only published and available in China—in order to piece together a reasonably coherent picture of the PLA's multiple sources of revenue and areas of expenditure. No doubt, the PLA itself does not know the full extent of its earnings and expenditures, but if foreign analysts tap the primary sources insights can be gained. The “black box” of the budget process, the revenue base, and expenditure parameters can all be illuminated by a careful reading of these sources.² In addition, interviews with active and retired PLA personnel in China and abroad can supplement the documentary data.

THE IMPACT OF REFORM

Like other facets of the PLA, the financial arena is another undergoing comprehensive reform. There have been four principal areas of military fiscal reform process in recent years.

The first concerns the commercialization and subsequent divestiture of commercial assets by the PLA. In the mid-1980s the military was authorized to go into commercial business (*bing shang*) as a means to offset and compensate for low levels of state allocations to the PLA. The process of commercialization worked as intended—in fact much better than intended. Various PLA units set up a plethora of enterprises and commercial activities. This helped top-up paltry army coffers, but also had the very deleterious effect of soldiers spending time in unprofessional business activity (much of it illegal) instead of training, diverting military resources for commercial purposes, and creating a significant “second economy” in China. Thus, after the negative effects of military commercialization became apparent in the late-1990s, the government and Central Military Commission (CMC) issued several orders banning PLA business activities. None succeeded, and the problem worsened. Only after the joint State Council, Chinese Communist Party, and CMC order of July 1998, did the PLA's commercial involvement truly begin to be reduced.³ Following the 1998 order, the commercial divestiture process passed through several phases, which are detailed later in this chapter.

The second reform was the regularization (*zhengguihua*) of accounting and auditing procedures in the PLA, beginning in the early-1990s. This move also met with

¹The PLA runs a Military Economics Research Center in Wuhan (*Junshi Jingji Yanjiuyuan*), and there is a national Chinese Society for Defense Economics (with branches in various cities), and a number of periodicals devoted to the subject, e.g. *Jundui Caiwu* [Military Finance]; *Junshi Jingji Yanjiu* [Defense Economics Research]; and sometimes *Zhongguo Jungong Bao* [China Defense Industry News].

²See, for example, People's University Reprint Series, *Junshi* [Military Affairs]; Lin Yichang and Wu Xizhi, *Guofang jingjixue jichu* [Basic Defense Economics] (Beijing: Academy of Military Sciences Press, 1991); PLA Logistics College Technology Research Section (ed.), *Junshi houqin cidian* [Dictionary on Military Logistics] (Beijing: PLA Press, 1991); Chinese Military Encyclopedia Editing Group (eds.), *Jundui houqin fence* [Section on Military Logistics] (Beijing: Academy of Military Sciences Press, 1985); Zhang Zhenlong (ed.), *Junshi jingjixue* [Military Economics] (Shenyang: Liaoning People's Press, 1988); Jin Songde et al, *Guofang jingji lun* [National Defense Economic Theory] (Beijing: PLA Press, 1987); Jiang Baoqi (ed.), *Zhongguo guofang jingji fazhan zhanlue yanjiu* [Research on the Strategy of China's Military Industrial Development] (Beijing: National Defense University Press, 1990); Gao Dianzhi, *Zhongguo guofang jingji guanli yanjiu* [Research on the Management of China's National Defense Economy] (Beijing: Academy of Military Sciences Press, 1991); Sun Zhenyuan, *Zhongguo guofang jingji jianshi* [The Construction of China's National Defense Economy] (Beijing: Academy of Military Sciences Press, 1991); Qiao Guanglie (ed.), *Zhongguo renmin jiefangjun houqin jianshi* [History of PLA Logistics Building] (Beijing: National Defense University Press, 1989); Wang Dangying et al, *Guofang fazhan zhanlue yanjiu* [Research on National Defense Strategy] (Beijing: National Defense University Press, 1988).

³The order was titled “Removal of the Military, People's Armed Police, and Political-Legal Units From Commercial Activities.”

resistance, particularly as military units sought to hide their assets and profits derived from their commercial activities. But, gradually, a regular auditing system was introduced from top to bottom of the system.

The third principal reform has been the marketization and rationalization of the defense industrial procurement system. A major institutional reform was inaugurated in 1998 with the creation of the General Armaments Department (Zong Zhuangbei Bu), or GAD, and reorganization of the Commission on Science, Technology, and Industry for National Defense (COSTIND). The goal of this reform was to make the entire defense industrial and scientific/technological sectors more efficient and cost-effective. This had certain implications for the military budget process, as a more market-based procurement bidding system was introduced. Also, following the 1999 Yugoslav War, the military was given a substantial boost in its allocations for weapons and other equipment—coming on top of double-digit real post-inflation increases that the PLA had enjoyed since 1989.

The fourth area of reform was introduced in 2001, and concerned the very process of PLA budgeting. In a radical initiative Zero-Based Budgeting (ZBB) was introduced. Since 1997–98 ZBB was introduced to many ministries and entities under the State Council, on the order of Premier Zhu Rongji. This initiative was part of a package of phased fiscal and accounting reforms intended to make the government's entire fiscal system more efficient and accountable. China's socialist economy was filled with accounting and budgeting irregularities that allowed for double-counting, hidden assets, and a variety of off-budget revenue and expenditure. The PLA's fiscal management was no different, and probably worse. Under ZBB, all units were required to draw up their anticipated expenditure for the next fiscal year from zero, rather than from the previous system of taking last year's expenditure and adding to it by a certain percentage for next year. With this reform, "Units no longer are supposed to arrange their budgets on the basis of their base figures of the previous year They begin to calculate and examine their annual budgets and itemized budgets from 'zero,' with the arrangement of their budget [requests] in order of priority."⁴ One important item apparently left out of ZBB initiative are personnel costs.⁵

The remainder of my written testimony is divided into four principal sections. The first section offers some summary comments on the official defense budget in recent years. The second section looks more carefully at the defense budget process and system. The third section attempts to account for areas of expenditure under the official defense budget and the PLA's off-budget revenue and expenditure. It attempts to estimate total PLA revenue and expenditure. The final section examines aggregate trends.

THE OFFICIAL DEFENSE BUDGET

There is no doubt that official Chinese defense expenditure is rising, and rising at double-digit rates since 1989 and in real terms since 1997. Since 1989 China's official military spending has risen from 21.8 billion RMB in 1988 to 141 billion RMB in 2001. The 2001 figure is approximately equivalent to \$17 billion US dollars. Table 1 below reveals the official military budget during this period, the percentage of increase year-on-year, and the percentage of the military budget as a percentage of total Central Government Expenditure (CGE).

TABLE 1.—OFFICIAL CHINESE MILITARY EXPENDITURE, 1988–2001

| Year | Official Defense Expenditure (billions RMB) | Percent of Total CGE | Percent Increase |
|------|---|----------------------|------------------|
| 1988 | 21.8 | 8.1 | 4.0 |
| 1989 | 25.2 | 8.4 | 15.0 |
| 1990 | 29.0 | 8.7 | 16.0 |
| 1991 | 32.5 | 9.0 | 14.0 |
| 1992 | 37.0 | 9.1 | 15.0 |
| 1993 | 43.2 | 9.2 | 13.0 |
| 1994 | 52.0 | 10.0 | 29.0 |
| 1995 | 63.7 | 9.3 | 16.0 |
| 1996 | 72.0 | 9.1 | 15.0 |

⁴For an explanation of this system in the PLA see Xiong Tingbin and Zhang Dongbo, "Central Military Commission Relays Plan for Reforming Compilation of Budgets for Armed Forces," Xinhua Domestic Service, March 22, 2001, in FBIS–CHI, March 22, 2001.

⁵My thanks to Christine Wong for making this point.

TABLE 1.—OFFICIAL CHINESE MILITARY EXPENDITURE, 1988–2001—Continued

| Year | Official Defense Expenditure (billions RMB) | Percent of Total CGE | Percent Increase |
|------------|---|----------------------|------------------|
| 1997 | 81.3 | 8.8 | 12.0 |
| 1998 | 93.5 | 8.7 | 12.0 |
| 1999 | 107.7 | 8.2 | 12.6 |
| 2000 | 121.3 | 8.3 | 14.6 |
| 2001 | 141.0 | 8.4 | 17.7 |

Not adjusted for inflation; figures rounded.

As a percentage of central government expenditure, China has shouldered a significant “defense budget burden” over time. While China expended a relatively high level of its central government budget on the military over time, an average of 16.7 percent from 1950 to 2001,⁶ this percentage “burden” has fallen to approximately half that amount (8.5 percent) during the period since 1988. As a percentage of GNP, however, China’s defense burden has been more modest. From 1950 to 1980, China’s official national defense expenditure constituted approximately 6.35 percent of national income on average, but it dropped dramatically to approximately 2.3 percent for the 1980s, and fell even further to an average of 1.4 percent during the 1990s.⁷

Ultimately, of course, it is a question of what the money is being spent on and what the relative allocations indicate about intentions. This is discussed at greater length below, but suffice it to note here that personnel costs have always absorbed a large percentage of Chinese defense expenditure. From 1950 to 1970 personnel expenditures accounted for 40 percent of official defense expenditure, dropping to 30 percent during the 1970s, and rising again to approximately 40 percent during the 1980s.⁸ During the 1990s approximately 35 percent of the defense budget was devoted to personnel costs (salaries, housing, medical care, dependent’s support, etc.).

It is also interesting to note the fluctuations in annual defense expenditure. In most cases China’s defense budget reflected external tensions, but in others it reflected domestic considerations. Over the first forty years of the People’s Republic we see a close correlation between China’s external threat environment and defense spending. In a couple of cases (the Great Leap and Cultural Revolution) austere domestic conditions produced a shift in defense expenditure, but, on the whole, defense expenditure paralleled China’s security environment and posture.

In the decade since 1989 a demonstrable break from the previous pattern has been witnessed. During a period when China’s national security environment has arguably never been better and there is no pressing external threat, its defense spending is rising sharply. Some in the United States point to these twin trends as indicating China’s hostile intent and pursuit of a crash military modernization program that threatens the interests of the United States and its allies in the Asia-Pacific region. I believe this view is not warranted by either the aggregate level of expenditure or the amount devoted to equipment allocations. The PLA is undertaking a complex and long-needed process of modernization—a process which is not tantamount to a buildup of military forces.

DECIPHERING CHINESE MILITARY EXPENDITURE

Accurately estimating PLA expenditures is a notoriously difficult process, fraught with frustration owing to the lack of transparency on China’s part.⁹ Although the PLA adamantly maintains that its announced official defense budget constitutes its total military expenditure, it is widely accepted by foreign analysts that the official defense budget figure constitutes only a fraction of the total revenue available to the People’s Liberation Army and falls far short of actual expenditure. Western esti-

⁶ Author’s calculation.

⁷ Contemporary China Series Editing Group (ed.), *Dangdai Zhongguo Houqin Gongzuo* [Military Logistical Work in Contemporary China] (Beijing: Zhongguo shehui kexueyuan chubanshe, 1990), pp. 306–307, and author’s calculations.

⁸ National Defense University Development Institute (ed.), *Zhongguo guofang jingji fazhan zhanlue yanjiu* [Research on China’s National Defense Economy Development Strategy] (Beijing: NDU Press, 1990), p. 243.

⁹ For an analysis of the problems associated with calculating Chinese defense expenditure, see “China’s Defense Expenditure,” in IISS, *The Military Balance 1995/96* (Oxford: Oxford University Press, 1996), pp. 270–75. Also see Bates Gill, “Chinese Defense Procurement Spending: Determining Intentions and Capabilities,” in James Lilley and David Shambaugh (eds.), *China’s Military Faces the Future* (Armonk, NY: M.E. Sharpe, 1999), pp. 195–227.

mates range from two to twelve times the announced official budget. The data and analysis presented below concurs with this foreign skepticism, but my estimates fall at the lower end of this range—approximately one-half of total Chinese military expenditure. That is, I estimate that total PLA expenditure is 2–2½ times larger than the official budget. Because funds are often unspent and rolled over into the next fiscal expenditure cycle, funds for the PLA are buried in other budgets, and the military enjoys extra-budgetary commercial revenues, the total available amount of revenue available to the Chinese military is unknown—probably even to the PLA itself.

CATEGORIZING CHINESE DEFENSE EXPENDITURE

Any attempt to calculate Chinese military expenditure must begin with consideration of the categories of inclusion and exclusion in the Chinese defense budget. This is important because China does not apply the same categories that are standard in the international community—as used by NATO, the United Nations, the ASEAN Regional Forum, the World Bank, or leading international institutes such as the International Institute of Strategic Studies or Stockholm International Peace Research Institute. To be sure, these organizations are not themselves in complete agreement on appropriate categories—although they are all considerably more detailed than China’s official budget breakdown, and there is broad agreement on most categories.¹⁰ Some organizations, such as the International Monetary Fund and the U.S. State Department’s Arms Control and Disarmament Agency, employ a purchasing power parity (PPP) model, although their categorization is similar to the standard model employed by NATO’s.

Officially, China’s 1998 and 2000 Defense White Papers only distinguish three broad categories of expenditure: personnel, maintenance, and equipment. This elementary breakdown was only offered first in 1998, in response to considerable pressure from abroad for increased budget transparency; prior to this time only a single lump sum figure was provided. This source defines these three categories as follows:¹¹

- Personnel expenses: “mainly including pay, food and clothing of military and non-military personnel”;
- Maintenance expenses: “mainly including military training, construction and maintenance of facilities and running expenses”;
- Equipment expenses: “costs for equipment, including research and experimentation, procurement, maintenance, transportation, and storage.”

The 1998 White Paper goes on to say that, “In terms of the scope of logistic support, these expenditures cover not only active service personnel, but also militia and reserve requirements. In addition a large amount of spending is used to fund activities associated with social welfare, mainly pensions for retired officers, schools and kindergartens for children of military personnel, training personnel competent for both military and civilian services, supporting national economic construction, and participating in emergency rescue and disaster relief efforts.”¹²

China’s 1998 Defense White Paper claimed that, in 1997, 36 percent of official military expenditure was spent on personnel-related costs, while 33 percent was spent on operations and maintenance (O&M), and an additional 31 percent on equipment.¹³ The 2000 Defense White Paper revealed important adjustments in these relative allocations, as depicted below in Table 2.¹⁴

TABLE 2.—ALLOCATION OF CHINESE MILITARY EXPENDITURE 1998–2000

| Category | 1998 | 1999 | 2000 |
|-----------------|------|------|------|
| Personnel | 32.3 | 34.9 | 40.6 |
| Percent | 35 | 32 | 33 |
| O&M | 29.8 | 38.0 | 41.8 |
| Percent | 31 | 35 | 35 |

¹⁰ For an excellent summary of the similarities and differences used by these different organizations see Somnath Sen, “Military Expenditure Data for Developing Countries: Methods and Measurement,” in Geoffrey Lamb and Valeriana Kallab, *Military Expenditure and Economic Development: A Symposium of Research Issues* (Washington, D.C.: World Bank Discussion Papers No. 185, 1992), pp. 1–18.

¹¹ Information Office of the State Council, *China’s National Defense*, (Beijing: The State Council, 1998).

¹² *Ibid.*, p. 82–83.

¹³ *Ibid.*, pp. 84–85.

¹⁴ Information Office of the State Council, *China’s National Defense in 2000*, Xinhua, October 16, 2000.

TABLE 2.—ALLOCATION OF CHINESE MILITARY EXPENDITURE 1998–2000—Continued

| Category | 1998 | 1999 | 2000 |
|-----------------|------|------|------|
| Equipment | 31.4 | 34.8 | 38.9 |
| Percent | 34 | 33 | 32 |

Figures in billion of RMB, rounded. Annual percentages in parentheses.

Source: Information Office of the State Council, *China's National Defense in 2000* (Beijing: The State Council, 1998), pp. 84–85.

From these aggregate figures it is, of course, difficult to ascertain the percentage of expenditure on different branches and services of the PLA, but one authoritative source revealed that for the period 1950–1980, the PLA Air Force garnered an average of 31.37 percent of the defense budget, while the Navy got a meager 18.4 percent, leaving the ground forces to absorb the lion's share of 50 percent of the budget.¹⁵ Of the spending on equipment for the ground forces, this source revealed the following breakdown: 17.22 percent for vehicles; 7.42 percent for tanks; 9.22 percent for communications equipment; 8.88 percent for ordnance and munitions; 7.5 percent for “other equipment,” 30 percent on personnel, and 20 percent on operations and maintenance.¹⁶ Of course, monies allocated for weapons development are buried in other budgets, but nonetheless these figures are illustrative of how the PLA spends its money. It is important to note that the PLA spends much more on people than arms.

Other Chinese sources go much further in defining and delimiting expenditure on and by the PLA. The most detailed and definitive is the *Practical Encyclopedia of Chinese Military Finance*,¹⁷ which lists fifteen separate categories and extensive subsidiary descriptions. Given the internal PLA classification of this source and the extensiveness of the volume (over 800 pages) this breakout of the official defense budget should be considered quite definitive. It also roughly corresponds to another key source: the 700-page *Management of China's Military Expenditure*.¹⁸ From these definitive sources, intended for internal PLA usage, it is evident that the official PLA budget is quite comprehensive.

However, two key facts need to be borne in mind when evaluating these data: first, this constitutes only the centrally-apportioned percentage of defense expenditure and, second, several complete categories of funding fall entirely outside this budget framework. As noted above, the PLA has fiscally operated on a cost-sharing basis with sub-national governments, and units throughout the armed forces generate their own revenue from a variety of extra-military endeavors. It is unknown precisely how much of maintenance costs—particularly housing and food subsidies—or personnel overhead costs are met by non-central allocations, as these are not generally reported in provincial statistical yearbooks.¹⁹ Nor is it known, prior to the 1998 divestiture, how the estimated \$600 million to \$10 billion (low to high estimates) in commercial profits were distributed. But the important point here is that, while seemingly comprehensive in scope, the aforementioned categories cover only the central portion of military expenditures. However, they do illustrate the totality of expenditure categories covered by the official budget—thus revealing extra-budgetary categories and funds passed through other state budgets—and this in itself is an important discovery.

By international standards, the Chinese categorization includes some elements of expenditure not common, for example, to NATO, SIPRI, the IMF or World Bank.²⁰ Civil defense expenditure is normally excluded by these organizations, as are military pensions to veterans or demobilized servicemen (as they are considered transfer payments). Conversely, military aid, funds for paramilitary organizations, reserves and National Guard, all military-related R,D,T&E input costs, military space activities, and revenues from arms sales accruing to the military or its affiliated companies are all normally included in counting military expenditure—while none of these

¹⁵ Dangdai Houqin Gongzuo, op cit, p. 307.

¹⁶ Ibid.

¹⁷ China Military Finance Encyclopedia Editing Group, *Zhongguo junshi caiwu daquan* [Encyclopedia on China's Military Finance] (Beijing: Jiefangjun chubanshe, 1993), part 3 (pp. 221–403).

¹⁸ Lu Zhuhao (ed.), *Zhongguo junshi jingfei guanli* (Beijing: PLA Publishers, 1995), esp. pp. 351–550.

¹⁹ If taken literally, the “three-thirds” policy would suggest a tripling of the official central defense budget figure, but Chinese sources insist that that this phrase indicates more a division of labor than division of actual running costs.

²⁰ See Somnath Sen, “Military Expenditure Data for Developing Countries,” op cit.

are included in Chinese categories.²¹ SIPRI specifically excludes some categories that have been regular components of the PRC military budget and PLA expenditure over time, such as veteran's benefits and demobilization costs, funds for defense conversion and weapons destruction.

WHAT DOESN'T THE CHINESE DEFENSE BUDGET COVER?

From the above categorization it is clear that a fairly large range of defense expenditure costs are covered by the official central budget. These allocations are supplemented by allocations and revenue streams from sub-central governments, industries and factories, and commercial endeavors. By the late-1990s, individual units were thought to generate approximately half (in some cases more) of daily O&M costs through their commercial activities. This included, importantly, food production. The PLA also continues to manufacture a variety of its daily use equipment (which are, in fact, a form of "in-kind" payment). Salaries and a variety of daily maintenance costs are also topped up through proceeds from units' extracurricular activities. In addition, a variety of costs are paid for through other budgets or from off-budget revenue.

It appears that the official defense budget does not include all funds for: (1) indigenously made weapons and equipment production (as distinct from procurement); (2) some research, development, testing, and evaluation (RDT&E) costs; (3) the paramilitary People's Armed Police (Wu Jing), and reserves; (4) funds for special large weapons purchases from abroad; (5) funds directly allocated to military factories under the control of the GAD, and funds for defense industry conversion; and (6) military aid. How are these six categories of costs paid for? In addition, the PLA benefits from arms sales revenue and post-divestiture commercial revenue.

First it must be recognized that the PLA does not buy everything that defense factories produce. Some of these factories have converted to produce goods for civilian consumption. More to the point, however, in many of these factories production remains driven by socialist-style quotas or supply-side factors (e.g. maintenance of full employment) that are not responsive to consumer demand—including the PLA as principal consumer. For years the PLA has complained that it does not want to buy much produced by its own defense industrial system, but is forced to do so either for lack of alternative suppliers or because it is ordered to do so by the state. The defense industries share many of the burdens of other state-owned enterprises (SOEs).

When the ground, air, or naval forces seek to procure a given weapon system, these procurement (i.e. purchase) costs are apparently borne by the given service arm, as allocated through their annual appropriation as part of the defense budget. The revenue available for procurement, however, is fixed in the defense budget and calculated during the annual budget bidding process overseen jointly by the General Armaments Department and the Finance Bureau of the PLA General Logistics Department. When a service seeks to procure a given system, it contracts with the relevant ministry, which sub-contracts to the factories concerned. Before the 1998 reorganization of the defense industries (when competitive bidding was introduced) and creation of the General Armaments Department, the price paid for the hardware was fixed by COSTIND at an arbitrarily low level. Once prices were set and contracts signed, payment was made, apparently for finished items upon delivery. Thus procurement prices did not meet production costs, which must be borne by the defense industries concerned. Therefore, under the pre-1998 system the defense industries were largely responsible for their production costs while sharing R&D costs with COSTIND—the deficit was compensated/offset through direct subsidies to defense industries. It is too early to say how this has changed under the new system, which is still being worked out. While difficult to estimate, redundant and subsidized production in the defense industrial sector may easily amount to \$1 billion annually.

The second area of defense expenditure not fully covered in the official budget is research and development (R&D). Estimating the channels and amounts of funding for this sector is a real conundrum. They appear to be derived from four sources—the General Armaments Department, COSTIND, the Ministry of State Science and Technology, and the defense industries themselves—although the division of labor and investment between each is unclear. Of the three, COSTIND has clearly been the principal source of R&D funds, although this is apparently changing with the

²¹ See "Sources and Methods for calculating Military Expenditure," SIPRI Yearbook 1999 (Oxford: Oxford University Press, 1999), p. 328.

creation of the GAD.²² However, a certain amount of expenditure is also paid through the separate line-item defense industry budgets (see below), although presumably this pertains to upgrading production technology (applied research) rather than basic research on systems design and performance. The latter is undertaken in a sprawling number of (numbered) military research institutes and factories. In some cases these institutes are affiliated with the ministerial defense industries and in others they are independent entities.

Following the 1998 reforms, COSTIND's budget now derives entirely from a specific line-item allocation from the State Council. A third source of R&D funds are allocated through the Ministry of State Science and Technology budget (MOST), although the percentage is unclear. Taken together, it would not be surprising if these extra sources added \$1 billion to the military R&D expenditure every year.

The third area of defense expenditure not included in China's official military budget pertains to the paramilitary forces and reserves. It is surprising not to find a line item in the detailed categories above for reserve forces, now estimated at 1.3 million and growing.²³ The costs of supporting these forces must be borne entirely by contributions of provincial and local governments. In this regard, it is odd to find costs for maintaining the militia included in the official budget (although, to be certain, a considerable portion of this expense is met locally). However, the omission of the 1.3 million-strong People's Armed Police (Wu Jing) is striking.²⁴ The Practical Encyclopedia of Chinese Military Finance explicitly states that the PAP is primarily funded directly from the Ministry of Finance and also through the Ministry of Public Security budget, although some sources indicate that it is partially paid for out of Ministry of State Security funds.²⁵ The PAP was formed in 1982 by combining units from the Ministry of Public Security's Internal Security Armed Police, and the PLA's Border Defense Corps, Gold Protection Corps, and Fire Corps. The Wu Jing is comprised both from recruits and from soldiers demobilized from the PLA. It is the state's first line of defense against internal civil unrest. In 1989 the Wu Jing proved totally incapable of handling the Tiananmen demonstrations, but has subsequently been retrained and rearmed. Thereafter they coped better with unrest by farmers, urban workers, and minorities. This is a high priority for China's leaders, and funding has followed. A related high priority is building up Special Police (Te Jing), which are being trained for rapid deployment, counter-terrorism, and other contingencies.²⁶ It is unclear how they are paid for, although probably through allocations to the PAP and the PLA ground forces (both of which maintain special forces). Wang Shaoguang's research, based on the Ministry of Finance's Public Finance Yearbook, reveals an allocation of 12.8 billion yuan for 1998, with an additional contribution of 0.334 billion yuan from local sources. This is, of course, unbelievable as it would result in average expenditure of roughly 1,100 yuan for every PAP soldier per annum, to say nothing of operations, maintenance, and equipment costs. Annual expenditures for the PAP on the order of \$2–\$3 billion would be a reasonable estimate.

An important fourth category of spending outside the official defense budget is specially-earmarked for foreign weapons purchases. During the 1990s China bought an estimated \$6.75 billion worth of weapons and equipment from Russia, on average \$750 million per year. The cash portions of these purchases were paid for from a separate category of funds earmarked for foreign procurement by the Central Military Commission. Some of these early purchases, such as the first batch of Su-27 fighters, were paid for with one-third foreign exchange (\$400 million) and two-thirds barter in consumer durables and agricultural goods, but after 1993–94 Moscow began to demand total payment to be made in foreign currency. Sukhoi-27 fighters cost about \$32 million each "off the shelf" (and approximately 50 percent more for the kit assembly of 200 at Shenyang),²⁷ the Su-30 fighters were sold for approximately \$47 million each, the Sovremenny destroyers cost approximately \$1 billion each, Kilo submarines \$350 million each, and the S-300 surface-to-air missile systems were sold for \$500 million in 1995.

A fifth area of extra-budgetary allocations that have benefited the PLA are central allocations made directly to defense industries—although, strictly speaking, these

²² See Harlan Jencks, "COSTIND Is Dead! Long Live COSTIND!" in James Mulvenon and Richard H. Yang (eds.), *The People's Liberation Army in the Information Age*, op cit, pp. 59–75.

²³ IISS, *The Military Balance 1998/99* (Oxford: Oxford University Press, 1999), p. 178.

²⁴ *Ibid.*, p. 181.

²⁵ *Zhongguo junshi caiwu shiyong daquan*, op cit, p. 424.

²⁶ For further discussion of Special Forces see chapter 4. These forces are known as Te Jing, but are not to be confused with the Special Police, which are SWAT teams subordinate to the Ministry of Public Security.

²⁷ I am indebted to Ken Allen for this information.

factories and companies are not owned by the PLA. These large subsidies are paid directly by the State Council to defense industries or those factories that produce partially for the military (e.g. electronics), but are administratively under one of the ten State Council corporations. Many weapons production costs are thus defrayed by the State Council through its subsidies to the relevant defense industry/corporation, rather than being carried in the defense budget. These corporate (ministerial) budgets are not made public in the Finance Minister's annual budget speech, nor are they available in the *Tongji Nianjian* (Statistical Yearbook). These direct line-item allocations to the defense industries could easily amount on average to \$500 million per defense corporation (some more, some less) or \$5 billion collectively for the ten major defense corporations that exist today—not to mention the extra-curricular earnings by the corporations themselves.

An important subset of this category of extra-budgetary subsidies are funds allocated for defense industry conversion and earnings by these industries.²⁸ Nearly 70 percent of the output value of military factories is now accounted for by production of civilian goods, and during the Seventh Five-Year Plan (1991–95) the State Council earmarked 6 billion yuan (\$1.14 billion) for facilitating conversion. That amount has declined during the latter half of the 1990s, and probably only amounts to approximately \$500 million in the Ninth Five-Year Plan (2000–2005). To be sure, most of China's estimated 50,000 defense industrial factories—which employ up to 2.5 million employees—have not converted successfully. Hence they require substantial state subsidies. One report noted that 50 percent of defense industry production capacity remains idle, and described such factories as “an unbearable burden on the national economy.”²⁹ Wang Shaoguang estimates that these subsidies to loss-making military enterprises and for conversion amounted to four billion yuan in 1998.³⁰ Thus one can assume that conversion subsidies, while considerably down from the early-1990s, still amount to approximately \$500 million per annum.

Finally, China still provides military aid to a handful of Asian and African states.³¹ Much of this goes to Pakistan, Burma, and Bangladesh and comes in the form of training of officers at the PLA National Defense University and military academies (“tuition” is usually paid for in entirety by China), and technical assistance accompanying arms transfers (see below).

While these seem to be the principal areas of military-related expenditure falling outside the scope of official defense budget categories, the importance of cost-sharing through other state budgets and local government allocations cannot be overemphasized. The PLA still apparently adheres to the “three-thirds” policy whereby many personnel and maintenance costs are proportionately split among central, provincial, and local governments.

Pensions and demobilization of servicemen and women are a prime example. From 1987 to 1997 the PLA demobilized approximately 1.2 million troops.³² In 2000 it concluded another round, demobilizing an additional 500,000 service personnel. It is estimated that approximately 10 percent of these demobilizations have been officers. The costs of demobilization have been substantial—particularly for the high-ranking officers who require/demand large pensions and perquisites. They are permitted to maintain their salaries, plus retirement bonuses and pension, housing, travel funds, free health and hospital care, and often a car and driver. Lower-ranking officers and enlisted personnel receive a one-time demobilization payment. These costs are covered partially in the official defense budget, but are also paid for through the Ministry of Civil Affairs budget, which is responsible for civilian cadre retirements as well. County, municipal, and local governments also underwrite, directly and indirectly, a large amount of the associated costs. Central Military Commission Chairman and Communist Party General Secretary Jiang Zemin, as well as senior military officials, have frequently commented on the need to give “high

²⁸ See Paul Humes Folta, *From Swords to Plowshares? Defense Industry Reform in the PRC* (Boulder: Westview, 1992); Mel Gurtov, “Swords into Market Shares: China's Conversion of Military Industry to Civilian Production,” *The China Quarterly* (June 1993), pp. 213–41; and Arthur Ding, “China's Defense Finance,” *op cit*.

²⁹ Jiang Baoji et al, “Lun wo guo guofang jingji tizhi mianlin de wenti ji gaige shexiang” [A Discussion of Problems Facing Our Nation's National Defense Economic System and Considerations for Reform], *Junshi jingji yanjiu* [Research on Military Economics], No. 12 (December 1990), p. 14.

³⁰ Wang Shaoguang, “The Military Expenditure of China, 1989–98,” *SIPRI Yearbook 1999* (Oxford: Oxford University Press, 1999).

³¹ According to SIPRI, military aid should be counted as an element of military expenditure. Since it is not formally listed as a component of the official defense budget, it is categorized here as extra-budgetary expenditure. See *SIPRI Yearbook 1999*, *op cit*, p. 328.

³² See Yitzhak Shichor, “Demobilization: The Dialectics of PLA Troop Reduction,” in Shambaugh and Yang (eds.), *China's Military in Transition*, *op cit*, pp. 72–95.

priority” to these demobilizations. Wang Shaoguang estimates, based on a survey of public finance and provincial statistical yearbooks, that annual non-central allocations to demobilized personnel amounted to 3.6 billion yuan in 1998,³³ but many of the subsidies are disguised. Since pensions and demobilization costs are not usually included as defense expenditures, I do not include demobilization and pension expenditures in the off-budget spending of the PLA.³⁴ The “three-thirds” policy also applies to housing and related garrisoning costs, as well as local contributions to energy expenditure (fuels) for some units. If one accepts that the figure provided in the 1998 Defense White Paper that 38 percent of official military expenditure is spent on personnel costs, and that this amount constitutes the central government’s allocation, under the “three-thirds” policy provincial and local governments would then spend \$8.99 billion (at official exchange rates) in “matching funds” in the 2000 fiscal cycle. This amount should then be added as a category of extra-budgetary expenditure.

Two other sources of revenue deserve mention: proceeds from commercial activities and arms sales.

In the 1990s, PLA Inc. (as it became known abroad), cashed in on its comparative commercial advantages.³⁵ These came not only from converted defense industries, but also from a wide range of investment and production schemes. The PLA owned some of China’s prime real estate, and has leased it out at high rents. Many local airlines were owned and managed by PLA front companies. Numerous hotels and guest houses were opened. The PLA Construction Corps charged localities hefty fees for heavy construction work previously undertaken for free as a symbol of the Army’s selfless devotion to the people. The military capitalized on mines under their control by selling metals and minerals at market and above-market prices. The PLA’s once-elite hospitals began to admit those who could afford the price of admission.³⁶ Virtually every military unit set up one form or another of cottage industry, and many were involved in joint ventures with foreign entities. PLA ships, planes and other modes of transport were put to commercial use (and became involved in smuggling rings). “PLA Inc.,” reached its prime in the mid-1990s, when somewhere between 15,000–20,000 companies were known to exist. Their assets ballooned and profits were plentiful. One Chinese source claims that total PLA assets totaled RMB 180 billion (\$20.2 billion).³⁷ Foreign estimates of annual profit ranged from \$1–\$3 billion, although the General Logistics Department claimed in 1998 that it was on the order of \$600–\$700 million per annum.³⁸ While the 1998 order to the PLA to divest its commercial investments has proceeded remarkably well, it has certainly not been complete. It is estimated that as many as 20 percent of the units involved in extracurricular commerce have carried on their activities—which would yield approximately \$2 billion per year in revenue.

The vast majority of the earnings of PLA enterprises remained with the unit that generated them, and did not make their way into the General Logistics Department’s budget stream. They helped to defray local operating costs and compensate for the inadequate allocations from the Center. The commercialization of the PLA saved many military units from destitution at the very time that their central allocations were being drastically cut back, but the PLA’s rapidly growing involvement in the market economy was having a deleterious effect on military professionalism.³⁹ Morale was low and recruitment difficult as soldiers earn considerably less than merchants or peasants.⁴⁰ Concomitantly, the ranks are filled with soldiers anxious for demobilization in order to take advantage of business opportunities. Commercial priorities ran at cross-purposes with the corporate ethos that the PLA

³³ Wang Shaoguang, “The Military Expenditure of China, 1989–98,” *op cit.*

³⁴ See SIPRI Yearbook 1999 (Oxford: Oxford University Press, 1999), p. 328.

³⁵ The best studies of the PLA in business are James Mulvenon, *Soldiers of Fortune: The Rise and Fall of the Chinese Military-Business Complex, 1978–1998* (Armonk, NY: M.E. Sharpe, 2001); Solomon Karmel, *China and the People’s Liberation Army* (New York: St. Martin’s, 2000); and Tai Ming Cheung, *Entrepreneurial Soldiers: The Chinese Army’s Quest for Profits, 1985–1999* (Oxford: Clarendon Press, 2001). Also see Tai Ming Cheung, “China’s Entrepreneurial Army: The Structure, Activities and Economic Returns of the Military Business Complex,” in C. Dennison Lane et al (eds.), *Chinese Military Modernization* (London and Washington, D.C.: Kegan Paul International and AEI Press, 1996), pp. 168–197.

³⁶ Interview with military doctor in the PLA’s famous 301 Hospital, April 1994.

³⁷ Lu Zhuhao (ed.), *Zhongguo Junshi Jingfei Guanli* [China’s Military Budget Management] (Beijing: Jiefangjun chubanshe, 1995), p. 155.

³⁸ Interview, GLD, December 8, 1998.

³⁹ For an interesting exposition of the financial problems arising, and how the General Logistics Department is attempting to cope, see the symposium on military logistical work in *Guofang Daxue Xuebao* (February 1993), pp. 64–71.

⁴⁰ See Ellis Joffe, “The PLA and the Chinese Economy: The Effect of Involvement,” *Survival*, Vol. 37, No. 2 (Summer 1993), pp. 24–43.

High Command was trying to instill. Incidents of corruption, speculation, profiteering, smuggling, illicit sales and purchases, and other “unhealthy tendencies” became widespread.

The final category of PLA revenue is sales of weapons abroad. Proceeds from arms sales are not normally a category counted on international defense budget ledgers, as such funds normally accrue to private sector defense contractors who build and sell a given weapon system abroad, but in market economies and most countries defense industries are not government-controlled. Not so in China. Some of China’s principal arms export companies are attached to one or more General Departments of the PLA, while others are State Council entities.⁴¹ Normally, proceeds from arms sales are paid directly by the foreigner purchaser to the export company concerned—once production, storage, and transport costs are recovered, the company concerned is supposed to remit one-third of the profits made to its parent General Department, one-third to the CMC, while keeping one-third for itself.⁴² In practice, China’s arms export companies tend to keep whatever profits they can and probably obfuscate accounting books to conceal money made.

Arms sales provided China’s defense industries with an important source of extra revenue during the 1980s, but declined precipitously during the 1990s. At their height during the Iran-Iraq War, when China was selling to both sides, its arms export companies earned an average of \$1.5 billion per annum in gross proceeds,⁴³ and garnered approximately \$12 billion between 1985 and 1992.⁴⁴ According to ACDA figures, China’s exports topped out at \$3.75 billion in 1988 but dropped to \$0.58 billion by 1996.⁴⁵ China officially admits to selling \$2 billion worth of weapons in 1987, acknowledges a drop to \$900 million in 1991, and claims that the “volume of contracted business” did not exceed \$1 billion in subsequent years through 1997.⁴⁶ Since 1998 revenue from arms sales has plummeted to approximately \$600 million per year—with China’s major customers being the destitute nations of Pakistan, Bangladesh, and Burma. While these levels are not high, certainly when compared to other major arms exporting nations, they do represent an additional source of revenue flowing into the coffers of China’s Military-industrial complex. It is important to note that these earnings do not directly go to the PLA, although indirectly they benefit the PLA. Another way of stating this is that these monies benefit China’s armed forces and defense establishment, although not the PLA directly.

WHAT DOES IT ALL ADD UP TO?

If these estimates of extra-budgetary sources of revenue are added to the 2000 official defense budget of \$14.5 billion, one arrives at a total military revenue base of approximately \$31.6 billion. These are depicted below in Table 3. This total would rank China third in the world in total military expenditure behind the United States and Russia, and just ahead of France, Japan, the United Kingdom, and Germany.⁴⁷

TABLE 3.—*Estimated PLA/Military Establishment Expenditures (2000)*

(US \$billion approximate)

| <i>Item</i> | <i>Expenditure</i> |
|--|--------------------|
| Funds Going Directly to the PLA: | |
| Official Defense Budget | \$14.5 bn |
| Foreign Arms & Technology Purchases | 1 bn |
| Provincial/Local Cost-Sharing | 5 bn |
| TOTAL DIRECT ALLOCATIONS | 20.5 bn |
| Funds Indirectly Going to Armed Forces and Military-Industrial Establishment: | |
| Redundant Production & Subsidized Cost Overruns | 1 bn |

⁴¹ Also see John W. Lewis et al, “Beijing’s Defense Establishment: Solving the Arms Export Enigma,” *International Security* (Spring 1991).

⁴² Interviews with NORINCO and General Logistics Department personnel, November 1993.

⁴³ Arms Control & Disarmament Agency, *World Military Expenditures and Arms Transfers, 1991–1992* (Washington, D.C.: ACDA, 1993), p. 100.

⁴⁴ Richard Grimmett, *Conventional Arms Transfers to the Third World, 1985–1992* (Washington, D.C.: Congressional Research Service, 1993), p. 60.

⁴⁵ ACDA, *World Military Expenditures and Arms Transfers, 1997* (Washington, D.C.: ACDA, 1998), p. 265.

⁴⁶ China’s National Defense, op cit, p. 128.

⁴⁷ International Institute of Strategic Studies, *The Military Balance 1999/2000* (Oxford: Oxford University Press, 1999), pp. 300–302.

| <i>Item</i> | <i>Expenditure</i> |
|---|--------------------|
| Extra-Budgetary Defense R&D | 1 bn |
| People's Armed Police | 3 bn |
| Direct Subsidies to Defense Industries & Defense Conversion | 5 bn + \$500 mn |
| Arms Sales Revenue | 600 mn |
| TOTAL INDIRECT ALLOCATIONS | 11.1 bn |
| TOTAL ESTIMATED EXPENDITURE | 31.6 bn |

There are surely some who will question and challenge these estimates as excessively high, while others will no doubt find them low. They are simply the most realistic—yet admittedly approximate—estimates I can offer based on knowledge of the extra categories of revenue available to the PLA and the likely amounts in each category. Some categories are fairly well known and accurate (foreign arms purchases, arms sales, military aid), while others are far less precise (subsidies, research and development, cost-sharing, commercial revenue). But the bottom line is that the PLA's official budget presents only a part of the story.

THE DEFENSE BUDGET SYSTEM AND PROCESS

As would be expected, the Chinese defense budget process has evolved over time. Perhaps it is more appropriate to say that it has devolved. Like much of the rest of the Chinese economy, central management and planning have been reduced since the 1980s, with responsibility for revenue generation falling increasingly with individual units at all tiers of the system. Like the civilian sector of the Chinese economy, the defense finance (*guofang caiwu*) system is in a half-way house between plan and market.

Chinese sources reveal three different processes for the assembling and promulgation of the defense budget: the centralized, decentralized, and combined systems (*tongguan*, *fenguan*, and *jiguan*).⁴⁸ It seems that during the 1990s all three systems operated simultaneously. The centralized system predominated, but was supplemented by the other two. Historically, the defense budgeting, allocation, and finance system has oscillated back and forth between a centralized Soviet-style distributive system and a more decentralized system. Key policies to decentralize funding sources and spending/auditing requirements came with the Great Leap Forward in 1958, the Cultural Revolution in 1966, and the Zhao Ziyang reforms in 1985, while efforts to centralize the system were made in 1952, 1954–55, 1965, 1978, and 1991.⁴⁹ The reforms of 2001 to institute Zero-Based Budgeting were intended, simultaneously, to decentralize the system again so as to increase unit accountability, while, also streamlining the method of allocation to give total discretion to higher-level authorities and preventing units from accruing off-budget sources of income. But the 2001 reforms do not change the structural aspects of the defense budget bidding process.

The centralized defense budget system is the one where central allocations are made to central, military and district levels. The process adopts a “down-up-down” system (*zishang erxia*) whereby the central-level GLD first works in conjunction with the Central Military Commission and Ministry of Finance to establish total expenditure targets, and then initiates a bidding system from military region/district levels, after which final expenditure figures and the central defense budget are set. The centralized military budget system cycle apparently works on an April to April fiscal year, and in an interactive vertical process between central, regional, and district levels. In March of every year, at the National People's Congress, the annual national and defense budgets are announced by the Minister of Finance. This figure (for defense) should be viewed as both the culmination and initiation of the centralized defense budget process. That is, the total figure announced is both the outcome of a year-long bidding and negotiating process, as well as being the catalyst for the next budget cycle. The aggregate figure announced is, in effect, the total allocated pool of funds released by the State Council that military units can bid for to receive central allocations.

After the NPC, between April and June of every year, the GLD financial bureaus (GLD/FB) down to the division (and now brigade) level assess their needs and put

⁴⁸ Wang Qincheng and Li Zuguo (eds.), *Caiwu Daquan* (Urumqi: Xinjiang renmin chubanshe, 1993), pp. 501–506. The following description of the three budget systems is drawn primarily from this source.

⁴⁹ See the discussion in Long Youcai and Wang Zong (eds.), *Jundui caiwu jianshe* (Beijing: PLA Publishers, 1996), pp. 122–125.

together budget submissions for the coming year. This pertains to all ground force, air force, and naval units, but not the four general Departments (GAD, GSD, GLD, GPD), the Second Artillery, the Academy of Military Sciences, or the National Defense University—all of which are under direct control of the Central Military Commission. These estimates are passed up to military districts (still in the GLD/FB *xitong*) in July, where they are assembled and forwarded to the respective military region in August-September. In the early autumn the GLD/FB in Beijing begins the process of coalescing and assessing budget requests. When this process is completed, an annual “All Army Logistics Conference” is convened in Beijing, usually in November but sometimes December. Following the conference, final accounts are prepared by the GLD/FB for the past year’s expenditures as well as the coming year’s bids. These are forwarded to the Central Military Commission for consideration at year’s end. At this stage seven central-level PLA institutions are required to submit their bids directly to the CMC (bypassing the GLD system): the General Staff Department; the General Political Department; the General Logistics Department itself; the General Armaments Department; the Ministry of Defense; the Commission on Science, Technology, the Second Artillery (nuclear forces); and military staff colleges directly under the control of the CMC (the AMS and NDU). Prior to placing COSTIND solely under control of the State Council in 1998, it too entered the budget process at this stage.

Thus, there is really a two-tier budget system for forces in the field and this group of central departments. To be sure, not all of these late budget bids by key central departments are built into the annual announced official budget figure. For example, as is seen below, a large amount of research and development costs are buried in other state budgets and/or are borne by individual factories in the defense industrial system. The Central Military Commission also has a large discretionary fund set aside specifically for purchase of foreign weapons systems, while People’s Armed Police, reserve, and militia costs are passed through other central and local budgets.

Usually after the annual November/December GLD conference, the Central Military Commission then collates total budget bids and determines what to allocate to each. These recommendations are then forwarded to the Ministry of Finance (Caizheng Bu) under the State Council, no later than the Chinese New Year (typically early February). The Ministry of Finance—in consultation with State Councilors, the Premier’s Office, and certain Leadership Small Groups under the Party Politburo—then prepares final accounts for the previous year and comes to a final determination for military expenditure in the coming year. These figures are subsequently announced by the Minister of Finance in his annual speech to the National People’s Congress in March. These figures form the basis of the centralized system, which then begins all over again.

In contrast to the centralized management system, the decentralized system (*fengguan zhidu*) is one where personnel and operating costs for military units are shared between general department, military region, and district levels. This system is informally referred to as the “three-thirds” system (*san fenzhi san zhidu*). In this system, military units at all three levels receive allocations outside the defense budget (*yusuanwai*) from provincial, municipal, county, and local governments. These contributions are themselves a kind of subsidy made by governments below the national level. For central-level units in Beijing and those at the military region level, provincial governments contribute funds, while the centrally-administered municipalities of Shanghai, Tianjin, and Chongqing contribute to locally-garrisoned forces. Beneath these, county, city, and township governments do the same at the military district and individual unit levels.

In reality, the “three-thirds” defense finance system (the combined centralized/decentralized one) has characterized the PLA budget process since the late-1980s. It is not yet clear, however, what the effect of the zero-based-budgeting system introduced in 2001 will be on the “three-thirds” system. Since the overall intention of the central government since the 1998 divestiture order has been to create a military budget system solely reliant on central government allocations, based on a rational budget submission process, it is quite likely that the contributions of non-central governments to locally-garrisoned PLA units will cease.

In all three systems, the General Logistics Department has traditionally been the key player in the defense budget process, particularly the GLD’s Finance Bureau (*Houqinbu Caiwu Chu*). While the GLD/FB plays a central role in the budget process, it is a coordinating role without any real decision-making power. It assembles the budget in consultation with the General Staff Department, service arms, and military regions, and forwards it to the CMC—which, in turn, negotiates the final

annual budget package with the Ministry of Finance and State Council.⁵⁰ After the final budget is negotiated and set, the extensive nationwide GLD banking system (euphemistically known as the “logistics service bureaus” or *houqin fuwu ju*) allocates funds.

Needless to say, this entire defense budget process is fraught with intense lobbying. This usually takes place behind the scenes, but at the 1994 National People’s Congress an unusual display of public lobbying took place. The PLA delegation introduced ten motions to the Congress aimed at increasing the defense budget. One of them proposed linking annual military outlays to growth in the economy and inflation by indexing. They argued for indexed increases of at least the inflation rate, and a year-on-year increase of 3.5 percent of Gross National Product (GNP).⁵¹ The PLA deputies who signed the petition (104 out of the 260-strong PLA delegation), pointed out that Chinese defense spending was only 1.7 percent of GNP—well below the needs of the PLA.

The idea of fixing the rate of annual increase in the defense budget, or indexing it to GNP growth or inflation, is an idea that began to surface in PLA circles in 1992–93 and continued throughout the decade. Frustrated that defense spending was barely holding even with inflation or actually declining in nominal terms, senior generals sought some way to insure adequate (i.e. indexed) annual increases. It seems that the idea of indexing arose out of frustration in the PLA High Command over a range of issues. There was much grumbling among officers that their pay had not risen to keep pace with inflation, and that, firstly, they deserved higher salaries. Because wages in the armed forces were so low, recruitment into the rank and file was becoming ever more difficult. Housing and other costs of billeting troops were woefully inadequate. There were reports of inadequate fuel and spare parts for training exercises. And new weapons systems were not receiving adequate investment.

AGGREGATE TRENDS

These estimates reveal revenue available to, and total military spending of, a little more than twice the official budget for the 2000 fiscal year. As noted above, this would place China third globally in aggregate defense spending, and very comparable to other medium-size powers like France, Britain, Japan, and Germany. But, while these other nation’s military budgets have been declining in the post-Cold War period (the “peace dividend”), China’s military spending has been steadily rising. While China’s military expenditure was closely correlated to its external threat environment for the first forty years of the PRC, during the last ten years, when there has arguably been no pressing external threat, Beijing’s military spending has soared. It has doubled in real terms in a decade. The official budget has risen at double-digit rates for twelve consecutive years since 1989—with an average annual increase of 15.5 percent. To be sure, during 1993–1997 China suffered inflation at approximately the same level (thus nullifying the increases), but for the periods 1989–92 and 1997–2000 China’s economy suffered deflation—thus, for much of this period, the increases have been real and substantial. While China continues to spend a high proportion of net government funds available in the annual budget (an average of 17 percent over the last fifty years and 8.6 percent from 1989–2000) relative to other countries, its “defense burden” remain modest in terms of the percentage of GDP spent on defense (approximately 1.4 percent of the official budget). Even if this is tripled to allow for the extra-budgetary revenue available to the PLA, this would only put China in the league of the United States (in percentage terms) and far below the Cold War levels of the former Soviet Union (which spent nearly 20 percent of GDP on defense). While increasing at a rather substantial rate over the post-1989 period, it is also not accurate to identify any kind of “crash” buildup of the military. China is simply not spending excessive amounts of available funds on the military, nor is there any evidence of heavy investment into particular programs (except perhaps short-range ballistic missiles since 1996 and cruise missiles since 1998).

The extra monies for the military are also going much further due to the significant reduction in personnel. This has permitted an increase in personnel expenditure and improvements in salaries, housing, and troop maintenance—thus permitting the military to recruit and retain better-educated soldiers and officers. Most of these reductions have come out of the ground forces—thus permitting an increase

⁵⁰This judgment is based on several published Chinese sources, interviews, as well as a CIA analysis—see James Harris et al. “Interpreting Trends in Chinese Defense Spending,” in Joint Economic Committee of the Congress of the United States, *China’s Economic Dilemmas in the 1990s* (Armonk, NY: M.E. Sharpe, 1992), pp. 676–84.

⁵¹Jiefangjun Bao, 17 March 1994.

in recruitment in to the Air Force and PLA Navy. Mothballing of antiquated equipment in recent years (particularly aircraft and armored vehicles) has also saved considerable money, spare parts, and personnel. In other words, as the PLA has downsized it has become more rationalized and cost-efficient. In addition to freeing up funds for personnel, it has also increased monies available for procurement at home and abroad. The purchases of advanced equipment from Russia and Israel are indicative of this new liquidity, but it will become particularly apparent when new indigenous systems begin to come on stream around 2004–2007 (fighters, surface combatants, and submarines). But if the PLA still spends nearly 40 percent of its budget on personnel, this does not leave a great deal to invest in procurement and R&D. Of course, this is where extra-budgetary funding comes in. We noted above the variety of funds generated by units and firms that are ploughed back into the defense industrial system. These amounts have been reduced as the PLA has proceeded to largely divest itself of its commercial business empire.

Finally, it should be noted that the revenue from China's arms sales has plummeted over the past 15 years. Simply put, Chinese weapons are a last resort for most developing nations, and Beijing's failure to compete at all in the international arms market is testimony to the pathetic state of China defense industries (see Chapter 6). China's military aid also plummeted over the same period of time.

In sum, the PLA has more money available than ever before, is spending it in a much more rational manner, but there still is scant financial evidence of a significant military build-up that constitutes a "China threat."

Co-Chairman DREYER. Thank you.
Dr. Frankenstein?

**STATEMENT OF JOHN FRANKENSTEIN, RESEARCH ASSOCIATE AND
ADJUNCT FACULTY, EAST ASIA INSTITUTE, COLUMBIA UNIVER-
SITY; SENIOR NONRESIDENT FELLOW, ATLANTIC COUNCIL OF
THE UNITED STATES**

Mr. FRANKENSTEIN. Mr. Chairman, members of the Commission, thank you for inviting me.

When I got the invitation and looked at the questions, I sort of wondered what I was supposed to talk about, because I am not a specialist in the Chinese military budget, but I do know a little bit about Chinese defense industries, and so, since that has come up, I will speak to that.

It strikes me that there is a great deal of misunderstanding about the Chinese defense industries, and perhaps we can get a little clarification.

I would begin that the testimony you have heard earlier and will hear later exemplifies what I like to call "Frankenstein's Law", which is that everything you hear about China is true but none of it is reliable.

In my own work, I have run across so many different estimates and authoritative statements and things that there comes a point where the skeptic in me says, "Let's just take them all and see what we can do," because there is simply a vast amount of information we don't know, and the sources that we use, both private and public, are very much at-odds with each other sometimes.

I would simply begin by pointing out that the Chinese defense industrial complex, or the Chinese defense industry, by which I refer to what are now called the ten major Chinese defense industrial groups, can be looked at in three ways.

In one respect, they are a remarkable achievement. In another respect, they are a worst-case example of the state-owned enterprise system. And in a final respect, they are a strategic failure.

Overall, I would suggest that they are a burden on Chinese military modernization. What are we talking about here—because you

can't be three things at once—but you can if you are in China, and I think that is important.

It is a remarkable accomplishment. You have got to remember that in 1949, after 100 years of war, some of it quite disastrous, the Chinese economy was a catastrophe, there was virtually no Chinese military production at all, and within 30 years, the Chinese were making satellites, jet planes, destroyers, nuclear missiles, and so on. So in that respect, it is a remarkable accomplishment, and they devoted a lot of resources to it, particularly in the fifties and sixties, and some of the data such as we have is in the paper.

But these industries were also part of the state-owned enterprise system, and the state-owned enterprise system as a whole is not working out very well. And the defense industries in particular have been criticized I would say vitriolically by Chinese observers as being overstaffed, burdened with obsolete technology, producing obsolescent weapons, being a closed society isolated from the dynamic civilian economy, very poorly located as a result of their "Third Front" approach, plagued with overcapacity, duplications, poor management, lousy R and D, poor linkages to R and D, and declining customer and product bases as the PLA has reduced its procurement. They are indebted. They are unable to attract the human resources that they need. They are poorly managed, and probably worst of all, they don't make any money—they lose money. And in the current system, if you lose money, that's bad.

So in the sense that it is a burden here—not only is it inefficient and so forth, but it is also highly subsidized. And here, how much they are subsidized is a matter of conjecture. Wang Shouguang, who has looked at this, says about \$482 million; the OECD about five years ago looked at \$18 billion; Brommelhorster and Ng, two overseas analysts looking at subsidies of about \$93 billion, which pretty much matches the range of defense spending—

Co-Chairman DREYER. Annual subsidies?

Mr. FRANKENSTEIN. Annual subsidies, yes.

This doesn't come anywhere out of the defense budget.

Commissioner WALDRON. If you're saying what is the defense budget, then you have to add the subsidy.

Mr. FRANKENSTEIN. Well, yes, kind of, except—

Commissioner WALDRON. Not "kind of"—

Mr. FRANKENSTEIN. It comes out of the larger pot—but then, of course, you are getting into the theological issue of what is a defense budget—something we haven't really discussed here.

Commissioner WALDRON. There's a difference between "budget" and "expenditure."

Mr. FRANKENSTEIN. Yes. What a defense budget is sometimes a theological argument.

Lastly, I would put it as a strategic failure in the sense that the defense industry has not been able to produce what the PLA says it needs, and thus these overseas and foreign acquisitions.

They have tried many attempts to reform it. There has been a virtually constant reorganization of the Chinese defense industrial complex starting from 1978, which is in the table that was sent, and they are continuing to revise that.

They attempted defense conversion, which in my view was a good try in that they were producing lots of stuff for the civilian economy but they weren't making very much money at it, and since conversion has to be looked at as a business proposition, I would say that it is an excellent example of where strategic intent and actual production or actual outcome does not match. And the macroeconomic analysis that appeared in a book I edited estimated that conversion contributed less than 2 percent of total civilian production in China. But again, whether it is 80 percent or 2 percent depends on how you count it—and the 80 percent, incidentally, refers to the output value, which is a peculiar Marxist-Soviet-Chinese way of double-and sometimes triple-counting what comes out of the factory door at the end.

Lastly, we have overseas exports. Exports have declined, and I frankly don't think they did very much to help the defense industry at all. I think most of the money ended up in the marketing organizations.

So what? It strikes me that the reforms attempted by the CDIC have had mixed results. What we see actually in the CDIC is a shift toward simply moving away from trying to do military production at all. If you are a factory manager, and you have an option between making stuff for the civilian market and thus increasing your cash flow, which means you can pay your employees, or going on fixed cost-plus budgets for very limited production runs and maybe not getting paid for it by the army, it's not a very difficult decision to make.

So I think the issue is that this really poses some serious problems for the Chinese system, and I think the various burdens that they produce will continue.

There is one last burden that I would like to bring out, which is that because the Chinese military, to fully modernize in their normal modernization process, has to go outside, what this means is that if the PLA has to depend on foreign technology, then the PLA faces a future of small-scale acquisitions and slower modernization.

The pressure is on the CDIC to reform and upgrade, but I really have severe doubts as to whether they will be able to meet PLA demands any time within the short-term future.

Institutional change comes hard, and while there are some bright spots, shall we say, particularly in electronics and in areas where these industries can leverage off the civilian industry, by and large, my sense is that the CDIC is not going to be the most dynamic or really contribute that much to Chinese military growth.

Thank you.

Chairman D'AMATO. Thank you, Dr. Frankenstein.

[The statement follows:]

PREPARED STATEMENT OF JOHN FRANKENSTEIN

To the Commission: I am honored to be asked to address the Commission. The tasks before the Commission are important not only for U.S. national security, but also for the future trajectory of U.S.-China relations.

As agreed with Commission staff, I will restrict my focus to the questions about the Chinese defense industry and the production of conventional weapons. Others appearing before the Commission will deal with the additional number of issues raised by the invitation to appear here. At the same time, I will by necessity have to touch on some matters others will speak to. The Commission should not be sur-

prised should our various testimonies differ—we are dealing with opaque subjects, and different assumptions and analytical approaches produce different answers.

Three views

There are three ways to look at the Chinese defense industry. The Chinese defense industrial complex (CDIC) is at once: A remarkable accomplishment; a worst-case example of Chinese state-owned enterprises; and a strategic failure.

In order to understand the CDIC and the budgetary implications of these perspectives, we should keep in mind that the CDIC occupies a relatively small corner of the Chinese economy—Wang Shougang (Wang 1999) suggests that CDIC assets account for about 4 percent of the Chinese state's industrial assets; CDIC employment of about 3 million is less than 10 percent of China's declining industrial workforce¹. As a whole, the CDIC is a drag not only on the economy, but also on PLA modernization.

But first we need to consider briefly some preliminary issues, including the imperatives that drive Chinese political behavior, the current and projected state of the Chinese economy and the needs of the CDIC's most important (and often only) customer, the Chinese People's Liberation Army (PLA).

Political imperatives

It is useful to ask what drives Chinese political behavior; it behooves us to try to understand the Chinese point of view. As the Chinese saying goes, "Understand yourself, understand your adversary; 100 battles, 100 victories".

Chinese elites over the past 150 years or so have been grappling with four basic problems: (1) How to rule a large country with a large population from a single place. (2) How to make China great again. (3) How to transform Chinese society so as to assure China's greatness. (4) How to deal with the outside world.

This hearing is not the place for a history lesson, but we should remind ourselves that the Opium War of the 1830s ushered in more than a century of continuous and disastrous conflict in China, it culminated in the struggle against Japan and the subsequent Chinese civil war. Chinese elites were and are socialized in this aura of conflict. The first generations of Chinese communist leaders were active participants in the wars of the 20th century. Vicious political campaigns, often centering on these issues and sometimes verging on civil war, followed the Communist triumph of 1949. The point I want to make here is that these four problems are not safe, academic issues: millions of people have fought and died in China's various attempts to resolve them, and, I would submit, the debate continues.

In these debates, however, there is one constant: regardless of how various factions of the Chinese leadership struggle over questions of rule, transformation and foreign policy, they all agree that Chinese must be strong. The slogan "Fu guo, qiang bing"—"Rich country, strong army"—remains as current today as it was when it was coined in the 19th century.

Thus, in large part, the Chinese drive to modernize its economy. We all know, if only from headlines, the main points: GDP at US\$1 trillion, exceptionally high growth rates, major sectoral shifts to industry and hi-tech, monetary stability, massive and growing foreign investment (China is the #2 destination of direct foreign investment, surpassed only by the United States), great improvements in urban standards of living, and an openness to international trade and steady progress towards marketization. All of these have led to a breathtaking transformation of the Chinese economy.

Indeed, China has become a workshop to the world. It's hard not to buy something made in China these days, from cheap clothing to Cuisinarts. And don't ask where the motherboard in your laptop came from. In the political economy of Asia-Pacific, China is no longer a technology laggard but perhaps in the same position as 1960s Japan or 1970s South Korea². China's membership in WTO will not only open up

¹Like many official Chinese numbers, this figure is open to dispute. The 3 million employed is cited by at least two Chinese sources (Chen 1993; Zhu 2000), but defense industry officials say that attempts at conversion "stabilized" the situation for 12 million people (Ng, 1997). Overall Chinese industrial employment has fallen drastically over the past several years—in 1995 the total industrial work force was about 54.4 million; by 1999/2000, it had fallen to 34.4 million (State Statistical Bureau, 2000) No doubt the CDIC has been affected as much as any other sector.

²Some political economists suggest that Asia-Pacific economic development has followed a "flying geese" model. Just as migrating geese fly in a V, following a leader, so too Asia-Pacific economies have followed the United States (or Japan), with technologies cascading down through the ladder of development as they go through their product-life cycle in the various economies of the region. Thus automobile, steel, shipbuilding and consumer electronics technologies cascaded from the United States to Japan to Korea and Taiwan and now to China; VCRs first made in Japan are now made in Korea and Taiwan; shoes from Taiwan to China,

its market but also will provide new opportunities for exports, a sector which in many ways is the most dynamic portion of the Chinese economy.

To be sure, there are many problems: corruption, a “scissors crisis” that has led to wide distributional disparities between city and countryside, a very shaky banking system, a weak tax system, labor issues, including the real lack of a social safety net, and difficulties in transforming a stagnant state-owned industrial sector. China’s participation in the WTO regime will no doubt accelerate all of these trends, both positive and negative. How China, which guards its sovereignty jealously, will deal with the transparency demands and international scrutiny of internal practices that will come with participation in the border-eroding WTO will occupy many of us for some time. Indeed the resolution of these tensions, including those between a nascent civil society engendered by economic transformation and a rigid Leninist political system, will be one of the key political and economic dramas of the coming century.

Where does the CDIC fit into this picture? Poorly. Defense industries worldwide do not fit models of civilian economies very well. They tend to be highly concentrated, monopsonistic and protected. International trade regimes, such as the WTO or the single market protocols of the European Union, usually exempt national security industrial sectors.

The CDIC as a substantial accomplishment

Still, in one sense, the CDIC, broadly defined, represents a substantial accomplishment. In 1949 the Chinese industrial economy was an ash heap. Within 20 years, the CDIC was able to roll out jet fighters in serial production, start down the road toward sophisticated missiles, develop naval combatants, including submarines, and achieve nuclear capabilities. To be sure, China’s first steps were greatly aided by the Soviet Union: of the 156 “key projects” of Soviet assistance, 41 were in defense. China’s nuclear forces, including its attempts at developing nuclear-power submarines, were developed as special projects that required extraordinary political protection. At the high point of the CDIC growth and expansion in the 1960s, it has been estimated that the CDIC consumed 50 percent of China’s industrial investment for the construction of the so-called “Third Front”, an uneconomic distribution of 55 percent of China’s defense plants in the remote interior (a legacy that still plagues the CDIC). Thus there is no doubt that given the political will, China can divert substantial resources to the CDIC. (Frankenstein 1999, Naughton 1988)

Actual domestic production rates of China’s conventional weapons can only be estimated by admittedly inexact methods based on inexact (and usually unsourced) numbers. For instance, the generally accepted production rate for China’s IRBM/SRBMs is around 50 per year, an open-source number of the number of missiles added to those already in place opposite Taiwan. If we simply compare data for some major weapons systems from IISS’s Military Balance for the 1990s, we see:

Chart Listing Weapons Systems

The Institute for Defense & Disarmament Studies database suggests that T-85 production in the 1990s ranged between 100–150 tanks per year; that J-8 inventory went from 60 in 1992 to 180 in 1999 (plus an additional 24 J-8 III variants). While the numbers don’t quite match, the trend lines are similar and are consonant with what we might term the “normal modernization” of a backward military establishment; as these newer weapons systems enter the force, obsolete systems are retired.

At the same time, new systems are entering the force in small numbers: the T-98 tank, the Luhai DDG, and the J-10 jet fighters (the power plants for the destroyers and jets, however, come from abroad). The Western defense industry press regularly reports on new weapons systems available from the ordnance industry—e.g. new “Red Arrow” anti-tank missiles, a new multiple-launch rocket system, a “fast attack” jeep-type vehicle with mounted machine guns, new types of cruise and anti-ship missiles. Many of these appear to be demonstration models designed as much for export as for PLA deployment. (Janes Online).

Still, there are signs that the Chinese leadership is dissatisfied with the CDIC’s performance. Since the 1980s there has been a constant chorus of commentary urging PLA modernization and the acquisition of modern weapons systems. One can

etc. In other words, as a “first generation” technology is supplanted in the leaders by even more advanced technology, it migrates downward. But the important point here is not so much that technologies migrate, as it is that the model describes continuous forward technological advance. China used to be at the tail end of the V—it is there no longer, and is raising economic anxieties among its Asian neighbors—see, for instance, Andrew Ward, “China’s economic might strikes fear in Seoul”, *Financial Times*, 20 Nov 2001; James Brooke, “Tokyo Fears China May Put an End to ‘Made in Japan’”, *New York Times*, 20 Nov 2001.

only assume that the need has not been met. In its more extreme forms, this commentary calls for the development of weapons that can deliver sudden knock-out blows to a technologically superior enemy—commentary that recalls the desperation of 19th century mandarins who, faced by overwhelming Western forces, called for “superb and magic weapons”.

However, the CDIC’s weapons system production capabilities should not be written off. Furthermore, there may be substantial unused capacity in the CDIC.³ But being able to make weapons systems is only part of the story.

CDIC as State-Owned Enterprise (SOE)

Just as the PLA requires modernizing, so does the CDIC. Despite the CDIC’s continuing production, Chinese commentaries describe the CDIC as a worse-case example of the state-owned enterprise system: over-staffed, burdened with obsolete technology producing obsolescent weapons, a “closed society” isolated from the dynamic civilian economy, poorly located (“the Third Front”), plagued with over-capacity and duplication and with poor linkages to R&D, declining customer and product bases, in debt, unable to attract the human resources it needs, poorly managed, and worst of all, unprofitable.

To be sure, there are have been some advances: missiles, leveraging dual-use communications technologies (which, however, are embedded in the civilian sector). But we would note that those “pockets of excellence” are limited. We would also observe that the two generals who have overseen the CDIC since the 1980s—Ding Henggao and Cao Gangchuan—are both graduates of Soviet missile academies, so it is no accident that China has made advances there.

In the early 1990s Zhu Rongji was reported as saying that the majority of SOEs in trouble were from the defense sector. In the mid-1990s People’s Daily noted that the number of loss-making defense plants was increasing as PLA procurement declined. In 1996 the State Planning Commission official in charge of defense called the situation facing the CDIC “grim”, with weapons production employing only about one-third of the sector’s capacity. After more than a decade, the CDIC’s problems have yet to be resolved—a January 2001 Xinhua article titled “China’s Military Industry Last Year Decreased Losses by a Large Margin” notes that in 2000 eight of the ten major CDIC enterprises achieved “reductions in losses”; we can assume that the other two (unidentified) did not. “Many difficulties and issues that severely constrain development have yet to be basically resolved . . . the overall efficiency of military industries is fairly poor . . . reform measures are relatively stagnant.” (Frankenstein 1999, Xinhua 2001)

The best the CDIC can hope for, Xinhua concluded, is to “strive in 2002 to cast off the hat of all-industry losses.” In the meantime, the CDIC will continue to receive subsidies for military production. Wang Shougang estimates the new weapons production was subsidized to the tune of about RMB 4 billion in the late 1990s (approximately US\$482 million). But given the size of the CDIC’s problems, including conversion, total subsidies probably were much higher: Brömmelhörster and Ng’s estimate total 1997 subsidies to run about RMB 93 billion (US\$11.2 billion). Certainly weapons production subsidies should be factored into estimates of defense expenditures; whether subsidies for conversion—that is, subsidies to remove plants from military production—should be counted is open to discussion.⁴

CDIC as strategic failure

But perhaps the biggest problem the CDIC faces is that it has been unable to design and produce the advanced weapons the PLA needs for its future. Thus China has been forced to buy systems from outside suppliers—primarily Russia. China has purchased Su-27 and Su-30 fighters, Sovremenny DDGs and Kilo submarines, plus assorted missiles and surveillance technologies. In addition, China has entered into licensed production of Su-27s. It is for others to assess the military implications of these developments, but I would caution that there is a long road between acquisi-

³The issue of unused capacity is complex. The combination of conversion and declining procurement resulted in the CDIC retaining about one-third of its production capacity for military goods by 1990; Brömmelhörster & Ng estimate that only 15 percent of total CDIC capacity is required for current defense needs. But it is an open question whether idle plants could economically shift back to defense work since many, if not most, have been shuttered and not maintained. Converted plants, still active, might more easily shift back to defense work. That at least would seem to be the Chinese view, for whom “conversion” swings both ways. See Wang Li, 1993.

⁴An OCED study of Chinese defense conversion reports that conversion subsidies between 1978–1995 were about RMB 20 billion, of which 9 billion came from provincial sources. This, however, represented only about 2 percent of what China spent for upgrading the entire state sector. See Frankenstein, 1997, and OECD 1995.

tion and capability. Advanced weapons require advanced maintenance and logistics; when we consider that China has to return Su-27 engines to Russia for maintenance and repair we can get a sense of where China stands in that regard.

But there is a greater issue here for China: self-reliance. If we look back over the development of China, we see a psychological tension between borrowing from the outside world and creating from within China. Over at least the past twenty years Chinese leaders have been exhorting the CDIC to create and adopt modern technologies. That this is a constant thread of commentary suggests that the goals are not being met. Thus there is a contradiction here between dependency on the outside world and the imperative of self-reliance. China once relied heavily on the USSR—and China remembers what happened in 1960 when the Soviets packed their bags. In the aftermath of 9/11 and the strategic realignments that seem to be taking place as the Central Asian republics and Russia, all members of China's "Shanghai Cooperation Organization", jump on Washington's anti-terrorism bandwagon, might not China be abandoned again?

Reforming the CDIC

But we should not assume that China is totally passive about the problems facing the CDIC. Several solutions have been attempted: reorganization, "conversion" and exports. As Figure I shows, the CDIC has been undergoing almost constant reorganization ever since the late 1970s when the Deng Xiaoping economic reforms were kicked off. Equally important, as Figures II and III show, the internal lines of control have changed considerably following the 1998 9th National People's Congress, when the Commission on Science, Technology and Industry for National Defense was "civilianized", the defense industrial ministries were abolished (as indeed, all other industrial ministries in the civilian economy were abolished) and the various defense producers were organized into ten separate enterprise groups. Figure IV, drawn from a Chinese defense industrial website, gives an indication of the size of these industrial groups.

The logic of this last reorganization is to make these defense enterprise groups subject to market forces (thus the introduction of contracts and similar practices) and, hopefully, competitive. The proliferation of firms under each enterprise group is in part a result of the diversification that arose from China's "defense conversion" effort and in part from China's taking the Korean chaebol as a model for industrial organization. But the reorganization goes against the worldwide trend of consolidation and rationalization. One suspects that the preservation of jobs and bureaucratic fiefdoms played a major role in the outcome. In any event, how the money flows in these organizations is unknown to this writer, and while no doubt these firms can generate revenues, whether they actually produce profits is a question perhaps best left to the more creative in the accounting profession. "Conversion" the answer? "Defense conversion" is another strategy adopted by the CDIC in its attempts to reform itself. The original strategy proposed to manufacture civilian goods using defense industrial assets so as to generate funds to upgrade the CDIC. Deng Xiaoping's famous and somewhat Delphic "16-Character Slogan"—"Combine the military and the civil, combine peace and war, give priority to military products, let the civil support the military"—was the mantra. The outcome, however, was both less and more than the strategy envisaged.

There is no doubt that the "converted" CDIC can produce goods for the civilian market. (Some 80 percent of the CDIC's "output value"—a command economy account term, not a measure of physical output—is in civilian goods. Wang Shougang notes that about 40 percent of the CDIC has entirely converted to civilian production, with an additional 40 percent split between civilian and military production, and only 10 percent producing solely for the PLA.) But whether "conversion" could be accomplished at a profit remains a question, but an important one, since the process has to be looked at as a business proposition.

In fact, defense plant managers found their market savvy and their production technologies inadequate to serve the civilian market. The upshot was the creation of separate production lines, if not entire factories, to serve the cash-generating civilian market—an arrangement termed by some "One factory, Two Systems". Who could blame the managers when the choice was between small, irregular defense orders at fixed prices or the potential of large production runs for the market? Whether profits were made became secondary to the generation of cash flow—since cash flow could go to payroll.

Thus "defense conversion" in the Chinese case really was diversification. And, with the aim of maintaining China's precious "social stability", "conversion" is credited with saving many jobs. Still, a macro-economic analysis of the effort suggests that the economic results were modest—conversion is estimated to contribute less than 2 percent of total production (Fu & Cheng, 1997). Ironically, defense needs be-

came further separated from civilian production. In the Chinese case, “conversion” is a good case demonstration of how strategic intent and practical outcome often do not match.

The CDIC and Globalization: Foreign Cooperation and Exports

Although foreign investment in the CDIC’s military production is not allowed, parts of the CDIC have become enmeshed in global chains of civilian production through cooperative production, licensing and joint ventures. AVIC provides civilian aircraft assemblies for Boeing and BAE. Harbin Helicopters has licensed “Dauphine” helicopter production from Aerospatiale. Parts of NORINCO have been involved with motorcycle and automobile production with licenses from Japan and investment from Thai entrepreneurs. While no doubt the money so earned has been good, the real benefit has come in exposure to modern management and manufacturing technologies. It is thought that most of the funds earned from these deals is retained by the plant doing the work, though no doubt a substantial portion is remitted to provincial and central authorities.

Exports, however, have been problematic. During the 1980s China outfitted both sides of the Iran-Iraq war, and since then has continued to sell to both countries. Missile sales to Iran and Pakistan (not to forget transfer of nuclear technology to Pakistan) have raised more questions about proliferation and China’s international citizenship than they have about cash flow.

In any event, in the 1990s the value of China’s arms exports dropped from its high points in the 1980s when Iraq alone bought US\$5 billion worth of Chinese arms. During the 1990s, according to the Congressional Research Service, China’s contracted arms sales to the developing world—virtually its only market—fell to less than US\$1 billion per year, although it hit \$2.7 billion in 1999. The following year, however, China’s arms sales agreements dropped to US\$400 million. The fall-off may be attributed to poor quality but more likely many former customers are buying Russia’s much more capable (if expensive) arms offerings. Still, China continues to have some loyal customers: in Africa, North Korea, Myanmar, Thailand and, most of all, Pakistan. Islamabad has reached agreements to produce the K-8 jet trainer, T-69 tanks and some anti-tank and anti-aircraft missiles. Precisely where the funds from these agreements go is not clear. As a source of support for the industry, however exports probably do not provide much cover for general industry shortfalls.

So what?

The reforms attempted by the CDIC had mixed results. The proliferation of separate firms under the “Big Ten” enterprise groups is a logical outcome at attempts to “convert” and to introduce market forces into the system. We would not deny some successes in reform—shipbuilding, electronics, parts of the aviation industry. Indeed, defense managers anticipate the competition China’s entry to the WTO regime. In a series of press interviews published in Liberation Army Daily in the spring of 2000, they said that while increased competition will impact their “pillar products” such as automobiles and motorcycles (in the case of the ordnance industries), they are confident about meeting the challenge. Some defense managers have suggested that WTO membership will be an overall plus, providing opportunities for increased access to foreign technology, perhaps even allowing ways around technology-export restrictions.

Our open-source understanding of CDIC finance does not allow us to say much more than the CDIC’s inefficient defense production will continue to be subsidized. Over the past twenty years CDIC financial results have been announced in vague terms, usually in obfuscating terms announcing fewer loss-markers with declining losses. This burden will continue.

Yet there is another more important source of burden: the requirement for the Chinese state to acquire foreign technologies and weapons systems. Most analysts would agree that the funds for these acquisitions are “off-budget”. But perhaps there is a more important aspect of this requirement to go abroad—if the PLA has to depend on foreign technologies, then the PLA faces a future of small-scale acquisitions and slower modernization. The pressure is on the CDIC to upgrade, and the quick-fix paths open to the CDIC—reverse engineering, licensed production—are not only expensive paths, but ones with no guarantee of success.

A modernizing PLA, no longer content with its status as a “junkyard army”, is forcing the CDIC to consider its own modernization. Chinese procurement spending is increasing at a slightly higher than over all defense spending: An analysis of Chinese defense budget numbers provided in China’s Defense White Papers reveals that while overall announced defense spending grew nominally by about 50 percent 1997–2000, the equipment budget was up 52 percent. The successes of China’s dynamic IT industry in both civilian and defense areas may bring new models and im-

petus for change in the traditional CDIC⁵. But institutional change will come hard. The problems and burdens of the past and present weigh heavily on the CDIC. Despite China's desires, we would anticipate these issues, outlined and discussed above, will continue to impede CDIC development well past 2002.

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Chairman D'AMATO. Colonel Corbett?

STATEMENT OF COLONEL JOHN CORBETT (RETIRED), SENIOR ANALYST, CENTRA TECHNOLOGY, INC.

Colonel CORBETT. Thank you very much, Dr. Dreyer, Mr. Chairman, and members of the Commission. I appreciate the opportunity to be here today to talk about this important subject, and I think you have assembled some of the very best experts we have in academia here on this subject. The written presentations that they have given you are a good indication of the state of knowledge that we have in this area.

In prior discussion with Commission staff, I am not going to explain the system, but I am going to talk more about the motivations for Chinese military modernization and provide several proposals for future study and investigation that I think would be useful to the Commission. And my contribution to these hearings,

⁵My thanks to Dick Bitzinger and James Mulvenon for sharing these insights with me.

which differs from the academic experts that you have here, comes from being a practitioner, if you will, in the area of working in China for 29 years as an Army officer, a China Foreign Area Officer. I have either been studying or working with the PLA as a defense attaché, an intelligence analyst, or a policy action officer in the Office of the Secretary of Defense working for military-to-military relations. If you want to talk about that later, it is an area that I very much enjoy engaging in.

As Dr. Shambaugh pointed out, the questions raised for this panel are very good and right on the point as to the things that we need to be focusing on.

I would be a little more blunt than Dr. Shambaugh was—you not only need to read his written testimony, you need to read the book that he has put together which this testimony was extracted from; it is one of the most comprehensive looks at the PLA that is out there in existence right now, and it would be very useful.

He, as the other members of this panel, has pointed out what we know about the budget and what we do not know, both in terms of the sources of the funds and how they are expended. So you have the budget, commercial involvement, arms sales, technology transfers, and proliferations, well-covered.

Dr. Frankenstein has just finished with his review on the state of the Chinese defense industrial complex, also a subject near and dear to my heart for the last 15 to 20 years. He has pointed out that 20 years of reform efforts aimed at creating state-owned enterprises capable of providing technological support to Chinese military modernization have only met with limited success, notably in the very important sector of missile technology. On the whole—and I agree with him—this situation is one of “strategic failure.”

Having said that, however, China continues its attempts at reform of its defense industrial complex, and we should not be complacent at all in how we track and follow these developments.

Dr. Mulvenon explored the implications of the PLA’s withdrawal from commercial operations—the divestiture process. Again, he mentioned, I think rather humbly, his book “Soldier of Fortune.” It is a definitive piece on what has happened in the commercialization of the PLA over the last 20 years.

The PLA did in fact gain some benefits by its commercial activities, but in the long run, the costs seemed to outweigh the gains, leading to a 10-year process of trying to reign in and then ultimately disengage from business. Getting out of business, however, is going to be just as difficult for the PLA as it was getting in and running the businesses effectively.

Dr. Marble is going to explore further in his presentation the commercialization of the PLA. What I took from Dr. Marble’s testimony was it reminded me that while the PLA may not be going out of business and not operating in the United States—and I agree with what Dr. Mulvenon said—the defense industrial complex, however, is alive and well in the United States. We need to pay much more attention to the presence and scope of its activities in the U.S., particularly with an eye on the Chinese industrial complex as a vehicle for acquisition and transfer of sensitive technology.

Closely linked to this process, the U.S. must do a better job of identifying the critical technologies that the government needs to protect, and in doing so, we should also distinguish those critical technologies from the core competencies that U.S. business needs to protect and maintain its competitive edge.

The government cannot do it alone, and it should not be the one trying to protect everything. The government must, however, prioritize what needs to be protected and then do the job well in protecting those technologies. I think that is where your Commission comes in making that type of recommendation.

As Dr. Shambaugh pointed out, absent from this panel today is Dr. Bates Gill. The chapter that he contributed to Ambassador Lilley and Dr. Shambaugh's volume, "China Defense Procurement and Spending," complements very well the written testimony that you have received from this panel here. Woven throughout Dr. Gill's analysis of the Chinese defense budget system is a reminder that the value as well as the objective of such a study is to gain, and I quote, "greater insight into Chinese military capabilities and intentions."

Dr. Gill thus points out that one of the primary motivations for our interest in the Chinese defense budget is to better understand China's military modernization in the context of its capabilities and intentions. China in its official writings staunchly proclaim that its military is defensive in nature, and as such, military modernization is both a national responsibility and a natural process.

Be that as it may, we must not lose track of the motivations for Chinese military modernization and how those motivations affect our national interests. The primary reason today for Chinese military modernization is to prepare for a contingency involving Taiwan. Closely linked is China's recognition that the most viable strategic threat to China comes from the United States. China's modernization considerations include calculations pertaining to U.S. support for Taiwan, U.S. regional presence, and a long-term concern that the United States is the only country with a comprehensive capability to threaten the Chinese regime. These are realistic assessments the Chinese make, and they should not surprise us.

Beyond the motivations of Taiwan and the United States, China is modernizing to meet its general defense requirement to protect its borders, territory, and adjacent water. Ever present, the PLA remains the backbone of Chinese Communist Party rule and is a force of last resort to maintain internal security. And even if an actual military contingency does not occur, China will seek to modernize to reinforce its claim to major power status.

So, in addition to our interest in the Chinese defense budget, there are other factors contributing to Chinese military modernization that we should not lose sight of—the overall economic development of China; the impact of the rising education level of the general population in China; the increased spread of professionalism in the Chinese military; scientific and technological progress; and the acquisition of foreign technology.

So, where do we go from here in our examination of the Chinese defense budget? In my view, there are several steps that the Com-

mission could influence to further our knowledge and understanding of these issues.

The first—and this repeats somewhat what Dr. Shambaugh has said—is that we must take advantage of the increasing number of Chinese language open source publications available to scholars and analysts. Unlike years ago, books, newspapers, journals, and internet websites are now available.

As the scholars on this panel have demonstrated through their research, we are probably only scratching the surface of Chinese language publications and military writings available which address the military budget issue as well as a whole range of other military issues. Development of a centralized system for acquisition, assessment, storage, and translation of Chinese military publications could help improve our understanding of the defense budget process as well as other areas of interest in the Chinese military system.

Second, we should work to establish greater access to elements of the Chinese Government as well as the military and better convey the idea of the budget transparency which contributes to the overall confidence and stability of the region. As a corollary, we should convey the view that a defense budget that has many hidden components does not contribute to Chinese security; so rather than hiding weaknesses or strengths, whichever their motivation is, to deceive potential enemies, China actually provides justification for other countries to assume the worst about their intentions. This contributes to a waste of resources by all concerned and an increase in the potential for instability and conflict.

Third, there is some credibility to the view that the Chinese do not really know the extent of their defense expenditures. I would imagine that there are times that they would like to have the luxury to have this type of panel, to have people come and try to explain what is going on there.

Chairman D'AMATO. We could invite them.

Colonel CORBETT. My next point—such a situation breeds fraud, waste, abuse, and corruption. As Dr. Shambaugh's written testimony points out, the zero-based budgeting reforms instituted by the State Council under Premier Zhu Rongji—under his orders, these reforms are being applied to the PLA. This is an area, budget reform, where Western experience could be shared with the PLA as well as the rest of the Chinese Government as a broad confidence-building measure. There are several U.S. nongovernmental organizations with expertise to offer to the Chinese that could be encouraged to do so, and I think for the broad general benefit of everybody.

My fourth and last suggestion is that one of the best ways to learn about how the PLA operates and conducts business is to ask them. Much of what we know now is derived from direct contact with the members of the PLA who have had a role in the budget process. While the subject of military-to-military relations is not on the agenda for these hearings, U.S.-PRC cooperation in defense budget management is an area worth exploring.

First, though, there are several questions that we should ask. For example, would U.S. national security benefit more from a better hands-on understanding of the Chinese defense budget process?

Given the high degree of transparency in the U.S. budget, would there be a risk to our U.S. national security by cooperating in this area? I tend to see benefits to cooperating, but I accept that we ought to examine very carefully the risk and the cost before we do so.

There are other questions, but these are just some of the questions that need to be addressed before moving ahead on military-to-military cooperation in the area.

To conclude my remarks, the analysis and understanding of the Chinese defense budget system, the sources of support for the Chinese military, and the allocation of resources to military modernization, the changing involvement in commercial activities, the evolution of the research, development, and production capabilities, and a myriad of related subjects are all critically important areas that we need to better understand. We need to do so that we can more accurately judge China's military capabilities and ultimately, its intentions. In turn, this will affect our threat assessments, our military planning, and our allocation of limited critical resources.

Again, I thank the Commission for inviting me and providing me the opportunity to present my views.

[The statement follows:]

PREPARED STATEMENT OF JOHN F. CORBETT, JR.

The views expressed in this paper are those of the author and do not reflect the official policy or position of the Department of Defense, the U.S. Government, or CENTRA Technology, Inc.

Thank you, Mr. Chairman, Dr. Dreyer, and members of the U.S.-China Commission for the invitation to take part in the hearings today on the topic of "Chinese Budget Issues and the PLA's Role in the Economy/Party/National Priorities." It is a privilege to appear here today, and I hope my presentation helps address your questions regarding the Chinese defense budget and military expenditures.

You have assembled today and heard from the leading U.S. experts on the Chinese People's Liberation Army (PLA), its budget process and its role in the Chinese economy. These specialists have devoted years of dedicated research in the effort to better understand the Chinese military system. The testimony they presented today reflects the findings of that research.

By agreement with the U.S.-China Commission staff, I will not repeat the testimony they have presented. Rather, I will summarize the state of our understanding of the budget issue, review the motivations for Chinese military modernization, and provide several proposals for future study and investigation.

My contribution to the hearings today is from the perspective of a practitioner. I have spent the better part of my 29 year career as a U.S. Army Foreign Area Officer specializing in China. I have been either studying the PLA or working directly with the PLA as a defense attaché, an intelligence analyst, and policy action officer responsible for military-to-military relations with China.

The Commission invited participants in this panel to address any or all of nine questions relating to the Chinese defense budget. The scholars on this panel have done a commendable job.

Dr. David Shambaugh provided the Commission with a comprehensive introduction to the Chinese defense budget process, content, and players. Drawing from the research that will be published in his forthcoming book *Modernizing China's Military: Progress, Problems, and Prospects*, he highlights the challenges of understanding the defense budget, then walks us through the transparency issues, the research methodology, the details of the budget, the budget process, the PLA financial reforms underway, and provides his assessment that the real defense budget is two to three times the official budget. He, as do the other members of this panel, points out what we know of the budget and what we do not know, in terms of both sources of funds and how they are expended. Issues of commercial involvement, arms sales, technology transfers, and proliferation are also well covered. His written testimony merits careful study.

Dr. Shambaugh's work represents the product of extensive research, using Chinese as well as Western sources, coupled with a rigorous peer review process involv-

ing leading specialists on the Chinese military. Given the continuing Chinese penchant for secrecy, his work is as close as we are going to get to a definitive analysis of the PLA's budget process and contents.

Dr. John Frankenstein has summarized several decades of research with his review of the evolution and state of the Chinese Defense Industrial Complex (CDIC). He accurately points out that the ills of the CDIC reflect the larger problems faced by China's state-owned enterprise (SOE) sector. Twenty years of reform efforts aimed at creating SOE's capable of providing technological support to China's military modernization have met with only limited success, notably in the sector of missile technology. On the whole the situation is one of "strategic failure". Nonetheless, China continues its attempts to reform this sector and we should not be complacent in tracking progress in the CDIC.

Dr. James Mulvenon explores the implications of the PLA's withdrawal from commercial operations, a process known as "divestiture". His testimony summarizes the findings contained in his excellent book *Soldier's of Fortune: The Rise and Fall of the Chinese Military-Business Complex, 1978-1998*. This book is required reading if one is intent upon separating the myth from the reality of the PLA's involvement in commercial activities—in China as well as abroad. The PLA did, in fact, gain some benefits via its commercial activities. But in the long run, the costs seemed to outweigh the gains, leading to the ten-year process of trying to reign in, then ultimately disengaging from business. Getting out of business will be as difficult for the PLA as was getting in and trying to effectively manage its businesses.

Dr. Andrew Marble further explores the commercialization of the PLA looking at the impact on the PLA and on the defense industrial complex. In particular, he points out the role of PLA commercialization as a vehicle for the acquisition of dual-use technologies and raises concerns about proliferation.

From Dr. Marble's testimony, we are reminded that while the PLA may be going out of business and not operating in the United States, the CDIC is alive and well here. We need to pay much more attention to the presence and scope of CDIC activities in the United States, particularly with an eye on the CDIC as a vehicle for the acquisition and transfer of sensitive technologies. Closely linked to this process, the United States must do a better job of identifying the critical technologies the government needs to protect. And in doing so, we should distinguish those critical technologies from core competencies that U.S. business needs to protect to maintain its competitive edge. The government cannot and should not try to protect everything; it must prioritize what needs to be protected and then do the job well.

Absent from the hearings today, however, is another well-respected student of the subject of Chinese defense spending, Dr. Bates Gill. His chapter on "Chinese Defense Procurement Spending: Determining Intentions and Capabilities" in a 1999 book edited by Ambassador James Lilley and Dr. David Shambaugh complements well the testimony given here today. Woven throughout his analysis of the Chinese defense budget system is the reminder that the value as well as the objective of such study is to gain "greater insight into Chinese military capabilities and intentions."

Dr. Gill, thus, points out that one of the primary motivations for our interest in the Chinese defense budget is to better understand China's military modernization in the context of its capabilities and intentions. China, in its official writings, staunchly proclaims that its military is defensive in nature and, as such, military modernization is both a national responsibility and a natural process. The October 2000 National Defense White Paper described the tasks of the Chinese military as being to "consolidate national defense, resist aggression, defend the motherland, safeguard the people's peaceful labor, participate in national construction and serve the people wholeheartedly".

Be that as it may, we must not lose track of the motivations for Chinese military modernization and how those motivations affect our national interests. The primary reason for Chinese military modernization is to prepare for a contingency involving Taiwan. Closely linked is China's recognition that the most viable strategic threat to China comes from the U.S. China's modernization considerations include calculations pertaining to U.S. support for Taiwan, U.S. regional presence, and the long-term concern that the United States is the only country with the comprehensive capability to threaten the Chinese regime. These are realistic assessments the Chinese make, and they should not surprise us.

Beyond Taiwan and the United States, China is modernizing to meet the general defense requirement to protect its borders, territory and adjacent waters. Ever present, the military remains the backbone of the Chinese Communist Party rule and is the force of last resort to maintain internal security. And, even if an actual military contingency does not occur, China seeks to modernize to reinforce its claim to major power status.

So, in addition to our interest in the Chinese defense budget, there are other factors contributing to China's military modernization that we should not lose sight of, such as: the overall economic development, the impact of the rising education level, the increased spread of professionalism in the military, scientific and technological progress, and the acquisition of foreign technology.

So where do we go from here in our examination of the Chinese defense budget? In my view, there are several steps the Commission could influence to further our knowledge and understanding of this issue.

We must take advantage of the increasing number of Chinese language open source publications available to scholars and analysts. Unlike years ago, books, newspapers, journals, and Internet web sites are available. As the scholars on this panel have demonstrated through their research, we probably are only scratching the surface of Chinese language publications and military writings available which address the military budget issue. While secrecy does surround the budget process, the opaqueness we attribute to the Chinese budget system may be due, in part, to lack of a systematic way for scholars to get access to Chinese language materials and translations. Development of a centralized system for acquisition, assessment, storage, and translations of Chinese military publications could help improve our understanding of the defense budget process as well as other areas of interest in the Chinese military system.

Second, we should work to establish greater access to elements of the Chinese government, as well as the military, and better convey the idea that budget transparency would contribute to overall confidence and stability in the region. As a corollary, we should convey the view that a defense budget that has many hidden components does not contribute to Chinese security. Foreign assessments of the Chinese threat assume the worse and likely portray more capability than exists. The increased threat, in turn, provides justification for military expenditures to compensate for the Chinese capability. So rather than hiding either weakness or strength to deceive potential enemies, China provides justification for other countries to assume the worst. This contributes to a waste of resources by all concerned, and an increase in the potential for instability and conflict.

Third, there is some credibility to the view that the Chinese do not really know the extent of their defense expenditures. Such a situation breeds fraud, waste, abuse and corruption. As Dr. Shambaugh points out, the Zero-Based Budgeting reforms introduced by the State Council under Premier Zhu Rongji's orders are being applied to the PLA. This is an area where Western experience could be shared with the PLA—as well as the rest of the Chinese government as a confidence building measure. There are several U.S. non-government organizations with expertise to offer that should be encouraged to do so.

Fourth, one of the best ways to learn about how the PLA operates and conducts business is to ask them. Much of what we know now is derived from direct contact with members of the PLA who have had a role in the budget process. While the subject of military-to-military relations is not on the agenda for these hearings, U.S.-PRC cooperation in defense budget management is an area worth exploring. There are several questions we should ask. For example, would U.S. national security benefit more from a better, hands-on understanding of the Chinese defense budget process? Given the high degree of transparency in the U.S. defense budget, would there be risk to U.S. national security by cooperating with the PLA in this area? And then, of course, we must ask if it is really in our interest for the PLA to effectively manage its budget and improve its capabilities? Would this contribute to PLA modernization in a way that creates a greater risk than is caused by our not knowing the extent of the PLA defense spending? These are some of the questions that need to be addressed before moving ahead with military-to-military cooperation in this area.

The analysis and understanding of the Chinese defense budget system, the sources of support for the Chinese military, the allocation of resources to military modernization, the changing involvement in commercial activities, the evolution of the research, development, and production capabilities, and a myriad of related subjects, are all critically important areas that we need to better understand. We need to do so, so that we can more accurately judge China's military capabilities and, ultimately, its intentions. In turn, this will affect our threat assessments, our military planning, and our allocation of limited, critical resources.

Again, I thank the Commission for inviting me and providing me the opportunity to discuss my views on this important subject.

Co-Chairman DREYER. Thank you very much, Colonel Corbett. I would just like to note that you ended exactly as the little clock went to 00:00:00, so that was perfect timing.

Colonel CORBETT. Is that a surprise?

Chairman D'AMATO. Twenty-nine years in the Army.

[Laughter.]

Co-Chairman DREYER. Another person who couldn't be with us today is Wendy Frieman of Science Applications International. She has submitted a very, very interesting chapter which she asked me to summarize for you, and that is "The Understated Revolution in Science and Technology: Implications for the PLA in the 21st Century."

In this chapter, Wendy argues that you cannot stop the PLA's scientific and technological progress, but she urges efforts to leverage it in the proper peaceful direction rather than otherwise.

Without further ado, let me now turn to Dr. Andrew Marble, who has come the farthest, all the way from Taiwan, with a sore back, to present to us the results of his research on the PLA and the military industry.

**STATEMENT OF ANDREW D. MARBLE, VISITING RESEARCH FELLOW,
INSTITUTE OF INTERNATIONAL RELATIONS, TAIWAN**

Mr. MARBLE. Thank you.

I'd like to thank the Commission for inviting me to testify today. My comments will address how almost two decades of PLA commercialization has affected Chinese military resources, drawing implications for PLA capabilities. My remarks will not cover commercialization of the defense industries, a separate grouping of ministries, corporations and enterprises that are under the State Council.

PLA commercialization has affected Chinese military resources via three main avenues. The first is the PLA budget; second is PLA nonbudgetary resources; and third is defense industrial production. I will argue that this third and last category has received the greatest boost from commercialization. I will, moreover, also recommend continued U.S. vigilance in a fourth and related area—Chinese weapons and technology proliferation.

Beginning with the first area of concern, the PLA budget, note that the question of commercialization's impact on the budget involves two questions. First, how profitable has PLA Incorporated been, and second, to what ends are these profits spent?

Unfortunately, problems with data availability and reliability make answering these questions difficult. The available guesstimates of PLA profitability by both Chinese and foreign sources vary widely. Conservative estimates hold that yearly profits from PLA commercialization are the equivalent of around 7.5 percent of the official defense budget; middle-range estimates hold the figure to be close to 35 percent; while the most generous estimates of commercialization profits run as high as 100 percent of the yearly official defense budget.

Corruption is rampant throughout the PLA commercialization empire, however, meaning that not all profits are put to productive use. Nonetheless, not all financial malfeasance is inherently wasteful. Some of these unrecorded moneys are simply creative accounting by the lower levels looking to meet pressing logistical and other costs in the face of years of spartan funding from the center. I estimate that subtracting unproductive corruption from the estimates

just mentioned yields conservative, middle-ground, and high estimates of PLA profit levels at around 6, 28, and 75 percent of the yearly defense budget, respectively. There is no way to determine which estimate is correct, but note that in a comparative sense, each estimate is somewhat inflated given the China's official defense budget does not include many defense budget expenditure categories included under the U.S. defense budget.

We can assume with a high degree of confidence, however, that whatever the profit amount of PLA Incorporated, the bulk of these funds do not go to purchasing advanced military equipment from abroad. This is because profits are divided between many different levels of the military, including the enterprise itself, the overseeing unit, the regional and provincial military authorities, and the General Logistics Department.

Based on a breakdown of profit distribution offered by Tai Ming Cheung, a knowledgeable expert based in Hong Kong, I would argue that no more than 10 to 15 percent of total yearly commercialization profits may be available to the GLD to use for foreign arms purchases. This range may have been slightly higher from the mid- to late-1990s, however, given the GLD's attempts to centralize control over PLA enterprises through the creation of national-level conglomerates.

There is one important exception to this generalization. Profits from Chinese arms sales, which are not included in the profit estimates that I gave earlier, have provided large amounts of hard currency, a scarce resource in China, yet something quite necessary to fund the PRC's own purchase of weapons from abroad. Indeed, sales of Chinese weapons were a startling equivalent of 44 to 55 percent of the official defense budget in the mid- to late-eighties. The PRC could have relied on such earnings to fund their own arms purchases. Note, however, that Chinese arms sales have dropped off markedly ever since that time.

From a wider perspective, moreover, PLA commercialization has had important indirect effects on the military budget. First, commercialization was an incentive allowed by the central government to entice the PLA to accept budget and other cuts through the eighties and part of the nineties. Second, commercialization also helped fund these cuts. Note that by providing skills to soldiers and jobs to demobilized troops, commercialization has saved the military and/or state substantial resettlement costs.

Note also that commercialization has also helped fund the privatization of military ports, bases, warehouses and other resources to the state sector. These cuts, moreover, have aided modernization by helping to reduce the bloatedness of the PLA.

The second main avenue by which PLA commercialization has affected Chinese military resources is in terms of nonbudgetary impacts on the PLA. Here, I would argue that commercialization has had a strong and negative impact. In terms of effects on PLA "hardware"—meaning infrastructure, logistics equipment, and natural resources that are indigenous to the PLA—I argue that transportation and other service-related infrastructural and logistics resources have been quite seriously affected.

The first reason is that commercializing these resources requires very little in terms of additional equipment, funding, or expertise.

Transporting consumer goods by military rail, boat, or airplane, for example, is no more complicated than moving military goods by the same methods.

Understandable is thus why such service-industry sectors have proven to be the most profitable of all PLA enterprise types.

Second, this type of infrastructure is pervasive across the entire military, resulting in organizational units at all levels making active use of such resources. The end result has been that a good deal of such PLA infrastructure has been monopolized by commercial use.

Military “software” refers to the quality and quantity of the troop base required to operate this hardware. The most serious problems involve such software issues as troop morale, intra-PLA unity, and civil-military relations. The biggest problem in this area has been due to corruption, which has been both rampant and insuppressible throughout the PLA, affecting individuals, units, and departments at all levels and in all services, including the very individuals and institutions charged with combating PLA corruption in the first place. Such widespread and continuous economic malfeasance has weakened troop morale and led to civil-military tension. Note that the 1998 divestiture order came about in part because of the fact that a general crackdown on smuggling had revealed PLA participation in two very serious cases. Smuggling by the armed forces was costing the central government a fortune in terms of lost taxes, for instance, and this competitive advantage enjoyed by PLA smugglers was harming domestic companies, including almost bankrupting China’s two state-run oil monopolies.

Note, however, that one popular misconception is that PLA enterprises employ a vast number of soldier laborers. Except for PLA construction activities, however, this is not true. The main labor base for PLA Incorporated is comprised of civilians, demobilized soldiers, and family members of service men and women. PLA officers do serve in management positions, however, with perhaps as much as half of all units running commercial enterprises. I must note, however, that PLA elite or “fist” units stayed away from commercialization pursuits.

As PLA commercialization has been substantially reduced, although not completely eliminated, by the 1998 divestiture order, the above impacts will eventually disappear. There is, however, a third and final avenue by which PLA commercialization has affected Chinese military resources that will not entirely stop, and that is the impact on defense industrial production. This in my view is the main channel by which commercialization may provide a serious boost to PLA capabilities.

First, PLA Incorporated lasted almost two decades, providing the PLA with a large window of opportunity to gain dual-use technology. Moreover, while PLA enterprises have now been mostly divested, the defense industries under the State Council are still very much engaged in foreign trade and thus can provide an avenue for technology acquisition. Despite divestiture, moreover, the PLA can easily employ front companies or place agents in legitimate enterprises in order to seek dual-use technology.

Note, however, that the question of the degree to which commercialization-related technology transfers may affect PLA capabilities

cannot be adequately addressed without an understanding of the types of defense technologies that are needed by China and what ability the defense industries have to master these acquired technologies and integrate them into weapons platforms.

A final note is necessary before I close. A clearly pressing issue for the United States concerns how commercialization affects Chinese sales of weapons and related technology, especially to such hot spots as South Asia and the Mideast. The PRC has in the past blamed the existence and continuation of such sales on the institutional fragmentation created in part by PLA commercialization. Under the divestiture program, however, the PLA has reportedly moved the arms sale department previously under the Poly Group to the control of the new GAD or General Armaments Department.

The PRC has also passed various export control regulation on military goods and technologies. Whether or not such reforms can stop the sale of arms and technology to regions of concern to the U.S. remains to be seen, however, and is an area requiring continued U.S. vigilance.

Thank you.

Co-Chairman DREYER. Thank you very much, Dr. Marble.

[The statement follows:]

PREPARED STATEMENT OF ANDREW D. MARBLE, PH.D.

The commercialization of the Chinese military is comprised of two distinct phenomena. One is the commercialization of the People's Liberation Army (PLA), a policy articulated in 1984 allowing the Chinese armed forces to use their resources in money-making ventures. The other is the commercialization of the defense industries, whereby the companies/ministries under the State Council that have traditionally been focused solely on providing weapons to the armed forces have been allowed, since the early 1980s, to produce consumer goods. My presentation today will analyze how the former—the commercialization of the PLA—has affected Chinese military resources and capabilities.

The three main areas of effect to be examined include (1) PLA budgetary influences, (2) PLA non-budgetary influences, and (3) impact on defense industry production. I will close with comments on the influence that PLA commercialization has had on China's sales of arms and related technology to key global hot spots, an issue that, while unrelated to Chinese military capabilities, still poses important significance to the United States.

PLA BUDGETARY INFLUENCES

Commercialization Profits

Given severe problems with data availability and reliability, we cannot confidently estimate how profitable PLA Inc. has actually been. Observers have offered numerous and sharply differing estimates of commercialization profit levels. Conservative estimates hold that yearly profits from PLA commercialization are equivalent to around 7.5 percent of the official defense budget; middle-ground estimates hold the figure to be close to 35 percent; and the most generous estimates are as high as 100 percent. (Note: profits from arms sales are not included in these estimates. See below.)

The existence of widespread corruption in PLA Inc. means, however, that not all profit goes to boosting PLA resources. Perhaps 25–50 percent of commercialization profits are never entered into the official books. Nevertheless, not all of this corruption is wasted—perhaps as much as one-half of these unrecorded monies are simply creative accounting by lower levels looking to meet pressing logistical and other costs in face of years of Spartan funding from the center. Taking these factors into account, the conservative, medium, and high estimates of yearly PLA commercialization profits stated above fall to around 6, 28, and 75 percent of the budget, respectively, if one is attempting to measure the real impact that PLA commercialization has had on the defense budget.

How Profits Are Spent

Looking beyond the guesstimated numbers, we can make a safe generalization that PLA Inc. has likely not funded the purchase any large-scale purchases of advanced military equipment from abroad. This is because commercialization profits have been divided up by many different levels within the military system—the enterprise, the overseeing unit, the regional and provincial military authorities, the General Logistics Department (GLD), and perhaps even the central coffers—all of which have faced a variety of pressing needs. Tai Ming Cheung, a knowledgeable Hong Kong-based PLA-watcher, holds that commercialization profits have likely been divvied up according to the following breakdown:

| | <i>Percent</i> |
|--|----------------|
| Enterprises | 20–40 |
| Units that own the Enterprises | 10–20 |
| Regional and Provincial Military Authorities | 10–20 |
| GLD | 40–60 |

The above breakdown allows the following analysis: First, enterprise-reinvestment clearly does not boost PLA fighting capabilities. Second, individual units and even regional and provincial military authorities face many pressing logistical needs, have very likely also used some of their profits to begin new commercialization ventures, and are not likely able to afford or even be allowed to use their earnings to import cutting-edge weapons from abroad. The GLD, in turn, also is charged with providing a wide-range of logistics—including barracks construction, food, uniforms, and the like—to all levels of the PLA despite years of budget austerity. Thus perhaps as much as 75 percent of the GLD's intake is likely fed back into fulfilling such logistical needs. Thus, we can confidently assume that a major percentage of commercialization profits are not used to fund China's large-scale arms-purchases from abroad.

One must note, however, that from the early 1990s on, the PLA was increasingly successful in its attempts to close down or limit the commercial activities at the lower levels via the creation of (or forcing companies to join) conglomerates at the level of Group Army or equivalent; these efforts likely lead to an increase in profit flows to the GLD, thereby somewhat increasing the percentage of commercial profits that could theoretically have been spent on cutting-edge modernization efforts during the commercialization period.

A possible exception is monies derived from China's own arms sales abroad. These profits are not included in the above profit estimates because it is difficult to discern which arms sales are conducted by the PLA and which by the defense industries. Regardless, the existence of a small number of arms sales agents located relatively high in the chain of command in both the PLA and the defense enterprises indicates a higher probability that monies could be turned over to the GLD and/or state. Also important is that China's arms sales provide hard currency, a necessity for China's own purchases from abroad (note that a good portion of PLA commercialization profits are earned domestically and thus contributed mostly only to renminbi holdings). Many observers hold, however, that while PRC arms sales provided a startling additional 45 percent–55 percent to the official defense budget in the mid- to late 80's, earnings decreased sharply thereafter, thus precluding this avenue as a major method of funding China's own arms purchases ever since.

Indirect Budget Effects

Important is to note, however, that PLA commercialization has worked to pad the defense budget in less-obvious ways. PLA enterprises have provided, for instance, jobs for demobilized servicemen and have also taught valuable skills to enlisted soldiers, making them more competitive in the civilian job market upon demobilization. This is important because Chinese sources have complained of the high costs associated with resettling demobilized servicemen—many of whom were sheltered by the PLA for decades and found themselves extremely uncompetitive under Deng's reforms. Commercialization has provided both skills and jobs for demobilized servicemen, thus reducing settlement-related costs for the military and/or state. Interesting is to note that the 1998 divestiture order (see below) resulted in many military personnel opting to stay with the company rather than return to their old duties—a form of voluntary, cost-free demobilization from the PLA point of view.

From a longer-term budgetary perspective one can also argue that PLA commercialization has provided the necessary funding to allow the PLA to downsize, a key precondition for military modernization. First, without the central government's okay for the PLA to raise its own funds via commercialization, unlikely is that the Chinese military would have agreed to the unprecedented scope and pace of the downsizing/streamlining efforts that have occurred since the 1980s—including de-

mobilization and the reduction of military bases, equipment, and other resources. Second, commercialization helped fund the actual process of moving these military resources back into the state sector; this occurred not only by providing the dual-use training and jobs for demobilized soldiers as mentioned above but also by helping to fund the privatization of military ports, bases, warehouses, and transportation and communications infrastructure. Thus, by helping reduce the bloatedness of the PLA, commercialization has helped provide the proper environment for force modernization.

PLA NON-BUDGETARY IMPACTS

There are also a number of important issues regarding how commercialization has affected PLA resources that are not directly related to budgetary concerns. I argue that, in this area, PLA commercialization has actually had a drastically negative impact on many PLA resources, which I divide below into the categories of “hardware” and “software.”

Hardware

“Hardware” refers to transportation infrastructure, logistics equipment, and natural resources that are indigenous to the PLA. Of these, I argue that transportation and related resources have been hardest hit for two reasons. First is that commercializing these resources requires very little in terms of additional equipment, funding, or expertise: transporting consumer goods by military rail/boat/airplane is no more complicated than moving military goods by the same methods. Understandable is thus why such service-industry sectors have proven to be the most profitable of all PLA enterprise-types. Second, this type of infrastructure is pervasive across the entire military, resulting in organizational units at all levels making active use of such resources. The end result has been that a good deal of PLA infrastructure was being monopolized for commercial purposes. Note that out of concern for this over-exploitation of resources, the PLA had been forced to post regulations limiting such behavior, with some units even demanding that proper monetary compensation be paid for such commercial use of their resources.

Software

Military “software” refers to the quality and quantity of the troop base required to operate the hardware. The picture here is somewhat mixed. One popular misconception is that PLA enterprises employ vast numbers of soldier-laborers. Except for PLA construction activities, this is not true: the main labor base for PLA Inc. is comprised of civilians, demobilized soldiers, and family members of servicemen and servicewomen. PLA officers do serve in management positions, however, with perhaps as much as half of all units running commercial enterprises. Determining the actual rate of soldier participation in commercialization is difficult: the PLA has warned as early as 1978 that no more than ten percent of army troops should become involved in commercial activities, and in 1992 also banned all servicemen at the division-level and below from such pursuits. The fact that such prohibitions are repeatedly announced means, however, that these limits were probably being widely ignored. One important exception though is the PLA’s elite or “fist” units have stayed away from commercial pursuits.

The most serious problems involve other software issues such as troop morale, intra-PLA unity, and civil-military relations. One such negative effect is due to the fact that commercialization is inherently unprofessional. Another is that the competition inherent in capitalism was working to pit PLA enterprise against PLA enterprise. The biggest problem, however, has been due to corruption. Commercialization-related corruption in the PLA, for a variety of reasons, has been both rampant and insuppressible, affecting individuals, units, and departments at all levels and in all services—including the very individuals and institutions charged with combating PLA corruption in the first place. Such widespread and continuous economic malfeasance has weakened troop morale and led to civil-military tension. Note that the 1998 divestiture order came about in part because a general crackdown on smuggling had revealed PLA participation in two very serious cases. Smuggling by the armed forces was costing the central government a fortune in terms of lost taxes and this competitive advantage enjoyed by PLA smugglers was harming domestic companies, including almost bankrupting China’s two state-run oil monopolies.

The Impact of Divestiture

Most of these non-budgetary effects should disappear, however, given the recent divestiture program. A note on divestiture is thus needed. The original order to disassemble PLA Inc. was extremely thorough, with a few initial exceptions (including 56 subsidiaries of Xinxing Co. that produced goods for the PLA, a three-star hotel

for each major department, and agricultural ventures for lower levels). There have been, of course, many efforts from within the PLA to hold on to their enterprises, and the center has shown increased willingness to allow a wider range of activities—including construction and some services—due to resistance from the military. The main body of PLA Inc. has collapsed, however, with only a much-reduced shell remaining. The vast majority of the commercial activities that still continue are unsanctioned and thus more limited in both breadth and depth and therefore will not result in the handover of any substantial amount of cash to the GLD that could be used for cutting-edge modernization efforts.

IMPACT ON DEFENSE-INDUSTRIAL PRODUCTION

Despite PLA divestiture, however, there exist two very important issues related to commercialization that are worthy of attention. The first concerns dual-use technology transfers that could help modernize defense industrial production. This is perhaps the main channel through which Chinese military commercialization may impact Chinese military capabilities. First, PLA Inc. lasted almost two decades, providing the PLA with a large window of opportunity to gain dual use technology. Moreover, while PLA enterprises have now been mostly divested, the defense industries under the State Council are still very much engaged in foreign trade and thus can provide an avenue for technology acquisition. Despite divestiture, moreover, the PLA can just as easily still employ front companies or place agents in legitimate companies in order to seek dual-use technology.

The question of the degree to which commercialization-related technology transfers may affect PLA capabilities cannot be adequately addressed, however, without an understanding of the overall development of the Chinese defense industry—including an understanding of the types of defense technologies that are needed by China and what ability the defense industries have to master these technologies and integrate them into weapons platforms.

PROLIFERATION ISSUES

A second and clearly pressing issue for the United States concerns how commercialization affects Chinese sales of weapons and related technology around the globe, especially to such hot spots as South Asia and the mid-East. Note that the PRC has in the past blamed the existence and continuation of such sales on the institutional fragmentation created in part by PLA commercialization. Under the divestiture program the PLA has reportedly moved the arms-sale department previously under the Poly Group (which had been staffed by children of high-ranking military officials) to the control of the new General Armaments Department. The PRC has also passed various export control regulations on military goods and technologies, including the 1994 Foreign Trade Law, the 1997 Regulations on Export Control of Military Items, and the 1998 Export Control Law on Dual-Use Nuclear Goods and Related Technologies. Whether or not such reforms can stop the profit-inspired sale of arms and technology to regions of concern to the United States remains to be seen, and is an area requiring continued U.S. vigilance.

APPENDIX: PLA ENTERPRISES BY AFFILIATED ORGANIZATION AND BUSINESS TYPE ¹

Level One:

GLD:

GLD Trading Corp.
 Huijiang [GLD sales promotion office in Hong Kong]
 San Ding Trading
 Sanjiu² (999) Enterprise Group (Pharmaceuticals, Securities and Investment, Real Estate, Electronics, Contact Lenses, and Motorcycles)

¹Enterprise break-down as existed before the 1999 divestiture order.

Appendix drawn from Andrew D. Marble, "The Impact of Defense Conversion on PLA Resources: Implications for Chinese Military Capabilities" (Department of Political Science Ph.D. Dissertation, Brown University 2002) and derived in part from "Military and Organizational Structure of the PLA and Their Primary Companies," additional written testimony submitted by Jeffrey Fielder of the Food & Allied Service Trades Dept./AFL-CIO to the Senate Foreign Relations Committee Hearing, "Commercial Activities of China's People's Liberation Army (PLA)," 6 November 1997, US Government Printing Office 1998, 25-32; esp. Chapter 4; and Zehnxing Liu "Zhonggong zhongyang jinzhi jundui jingshang zhi pouxi (An analysis of the PRC central leadership's prohibition of PLA commercialization)" *Gongdang wenti yanjiu* (Studies in Communism) 25, no. 2 (1999), 33.

²Mulvenon notes that while reporting to the GLD, Sanjiu is officially independent of any PLA organizations.

Southern (Nanfang) Pharmaceutical Group/Corp.
 Sunwin (Sun Win) Ltd.
 Wuhuan Enterprise Management Group (Military supplies)
 Xinxing Corp. (Food, Clothing, Construction Materials, Fuels, Vehicles, and Boats)
 Zonghe Technology Corp. (strategic missiles, military satellites communication)

GPD:

Ark Holdings Ltd.
 Carrie/Kaili Corp. (Communications Equipment, Power Production, Leather, Paper, Publications, Contractual International Engineering Projects, and Tourism)
 China Tiancheng Corp/Group (Coal Mining and Real Estate)
 HMM China Investment Ltd.
 HMM Gold Mining
 Hongkong Macau International Holdings Ltd.

GSD:

Bureau of Military Equipment and Technology Corp. (BOMETEC)
 China Electronics System Engineering Company (Co). (CESEC) (Communications and Electronics Technology and Equipment)
 China Polytechnologies Inc./China Poly Group Corp. (Armaments, Real Estate/Construction, Tourism, Restaurants, Entertainment, Advertising, Futures Trading, Transportation, and Photo Studios)
 China Telecom Great Wall Mobile Telecom (J.V. with China Telecom) (Communications)
 China Huitong Corp. (Telecommunications, Hotels, Tourism, and Industrial Production)
 China Fuli International
 China Zhihua Corp. (Communications Equipment, Computers, Image Processing Equipment, and Navigation Equipment)
 Continental Mariner Ltd. (Owned in part by China Poly Group)
 Ping He Electronics Co./Ping He Import/Export Co. (Military Technology)
 Yuhe Machinery Plant (?)

Shanghai Garrison Command:

Yunfeng Industries Co. (Real Estate, Automobile Repair, Transport, Storage, Pharmaceuticals, Chemicals, Hardware, Electrical Equipment, and Building Materials)

Level Two:

PLAAF:

China Anda Aviation
 China United Airlines (Cargo and Passenger Flights, Ground Transportation, Hotels, Catering, and Souvenir Outlets)
 Lantian Industrial Corp.
 Tianma Enterprises

PLAN:

China Ocean Shipping Company (Shipping)
 China Songhai Industrial and Commercial Corp./China Songhai (Industries) Corp./Group (Industrial Production, Foreign Trade, and Shipping)
 Xinghai Corp.

Second Artillery:

Changrong
 China Tianlong Industrial and Commercial Corp. (Not Confirmed)
 Shanhaidan Corp. (Pharmaceuticals)

Level Four: (7 Military Regions)

Beijing MR:

Huabei Enterprise Corp. (Industrial, Agricultural, Mining, and other Commercial Operations)

Shenyang MR:

Northeast Jincheng Industrial and Commercial Corp.
 Songliao Enterprise Group/Songliao Vehicle Group (Vehicle Production and Repair)

Nanjing MR:

Huadong Industrial/Enterprise Corp.

Chengdu MR:

Southwest Great Wall Economic Development Corp.

Lanzhou MR:

Northwest Industrial and Trading Group (Industrial goods and farm products)

Jinan MR:

Shandong Dongyue Corp.

Shandong Feiyang International Economics and Technology Enterprise

Guangzhou MR:

Cuicum Enterprise United Group (Industrial and Agricultural Products)

Guangzhou Science and Technology Development Corp.

J&A Securities (Hong Kong-based Joint venture with the Ministry of State Security)

Jiahe United Development Company (Hotels, Electronic Components, Vehicle Parts, Building Materials, and Agricultural Products)

Nanfeng Hainan Industrial and Commercial Corp.

Southern Industrial and Trading Corp. (Joint Venture between Jiahe and British Standard Charter Bank)—(Exports of Textiles, Pharmaceuticals, Chemicals, Petrochemicals, Farm Produce, and Light Industrial Products)

(24 Group Armies:)

Changcheng Group (42nd GA)

Changcheng Huihua Industrial Corporation (42nd GA)

Luyan Enterprise Group (28th or 63rd GA) (Factories and Coal Mines)

Taihang Enterprises Group

People's Armed Police:

Beijing Sources Development Co. Ltd.

China Anhua Development Corp. (Holding Company for PAP enterprises—Foreign Trade)

Jingan Import/Export Corp. (Small Arms and Riot Control, Security, and Fire-fighting Equipment)

Wankun (Wan Kun) Development Ltd.

(Military Districts:)

Sichuan MD: Sichuan Bashu Enterprise Group

Xinjiang MD: Xiyu Company (Tourism, Import and Export)

Co-Chairman DREYER. Questions?

Commissioner Mulloy?

Commissioner MULLOY. I'll pass for now.

Co-Chairman DREYER. Commissioner Lewis?

PANEL II DISCUSSION AND QUESTIONS AND ANSWERS (CONTINUED)

Commissioner LEWIS. I have a question for Colonel Corbett, and it is really your own question, which I thought was a wonderful question.

Is it in our interest if the PLA effectively manages its budget and gains greater efficiencies? Would this contribute to PLA modernization in a way that creates a greater risk than is caused by our not knowing the extent of their defense spending? What is your view on that? It's a question we discussed earlier this morning, actually.

Colonel CORBETT. To be absolutely candid, I'm not sure if I have a conclusion yet. It is still something that we need to think through.

I generally approach the world somewhat as an optimist, and looking outward, I think the degree to which the PLA budget becomes transparent and subject to oversight and review within the Chinese system as they modernize and reform, adapt more and more the guidelines or the rules of law that apply to our concepts of international business and trade, then I think it makes them

less of a risk, because we do understand clearly where they are, what they are, and what they are doing.

At this point, I think that the——

Commissioner LEWIS. It would be the same theory, I suppose, that Dr. Wolf before was saying, that we should have military contacts between the two nations—for better understanding.

Colonel CORBETT. I support military contacts between the two nations. I think they need to be carefully managed and monitored, and that we look at what we are doing, and we do it with clear eyes.

Commissioner LEWIS. Right, but this is the same theory that you are mentioning on this.

Colonel CORBETT. Yes.

Commissioner LEWIS. Thank you.

I'd like to ask the other people on the panel the same question. We are being asked to help the Chinese with their budgetary process. Is it in our interest to do so? Colonel Corbett phrased the question in his paper, and I'd like to ask the three other people on the panel—should I reread the question?

Mr. SHAMBAUGH. Please.

Commissioner LEWIS. Given the high degree of transparency in the U.S. defense budget, would there be a risk to U.S. national security by cooperating with the PLA in this area? We must ask if it is actually in our interest that the PLA effectively manage its budget and gain greater efficiencies. Would this contribute to PLA modernization in a way that creates a greater risk than is caused by our not knowing the extent of PLA defense spending?

The theory is would U.S. national security benefit more from a better hands-on understanding of the Chinese defense budget. Knowing the defense budget would know that they would know it better than they do now, also, which would be helping them in the process. That's the issue that you were raising.

I would really appreciate it if the other people on the panel could answer or give us your views on that question.

Mr. SHAMBAUGH. I would offer a thought or two. To the extent that budgets are illustrative of intentions, which I think they are—military budgets in particular—then it is certainly in our and other countries' interests for the PLA to be much more transparent and much more specific about its military expenditure for a variety of reasons. But the question: is should the United States help in this effort? I would answer your question, sir, by multilateralizing the question.

In other words, I think China should simply try to conform to broader international standards of military budget transparency. If you look at the institutions that set those standards, they are not all in agreement. I have some discussion in my own paper about that. There are NATO categories, there are OECD categories, there are World Bank/IMF categories, and there are categories by the IISS in London and SIPRI in Stockholm, and ACDA in our own Government, which happens to be the furthest off the reservation, I would say.

But the ASEAN Regional Forum, which is the principal non-governmental—no, I'm sorry—it's a governmental regional security forum in East Asia—three years ago adopted a template paper on

transparency of military expenditure for all Asia Pacific nations. China is a member of the ASEAN Regional Forum, yet China has not, unlike other members, done anything to try to meet the requirements of the ARF in this regard.

So my answer to you is that it is not just the United States. I would answer yes, it is in the United States' interest to help the Chinese military become more transparent and adopt better auditing procedures, et cetera, et cetera—

Commissioner LEWIS. And budget process.

Colonel CORBETT [continuing]. And budget process—very much in our national interest, but it is a broader global issue because it reveals a lot about Chinese intentions. Other countries want to know, too.

Commissioner LEWIS. Thank you very much.

Mr. FRANKENSTEIN. As I listened to John's question, sir, and your restating of it, I sort of felt that actually, the person who could best answer this question would be Umberto ECD rather than myself. It's a kind of postmodernist question and very self-reflective.

But seriously, folks, I would concur with what David said—and I would put this in a slightly different context than a larger context as David did—which is to say the degree to which China can meet international standards or international norms, be it with transparency, government budgets, military budgets, trade practices, et cetera, et cetera, is the degree to which I think everybody benefits.

Commissioner LEWIS. So everybody has more confidence, and there are no surprises.

Mr. FRANKENSTEIN. Yes, right. And I think there is another element to it as well, which is to say that—an argument that you can spend the rest of the year on—the degree to which China is more confident in itself might be the degree to which it is perhaps less of a “threat,” in quotes, to other people.

Commissioner LEWIS. Thank you very much.

Dr. Marble?

Mr. MARBLE. I think I'd pass on that question, but I would like to say that when I was in Hong Kong, Taiwan, and Beijing, I collected such a vast quantity of Chinese language materials as well, a lot of Chinese language materials that I will never, ever be able to read them all. I think we could gain a much better understanding of the PLA's defense budget process if we could dedicate more resources to collecting and translating such materials.

Commissioner LEWIS. I appreciate that view very much. We have had that view expressed by others, and your reinforcing it really helps, because apparently, there is not very much, not sufficiently done on this subject.

Colonel Corbett, I'd like to thank you for that question. It was your question, and it is obviously a very significant one, so thank you.

Co-Chairman DREYER. Commissioner Mulloy?

Commissioner MULLOY. The point that Professor Shambaugh and others have made is that the military budget is going up in real terms. And Colonel Corbett makes the point in his testimony that the primary near-term driver of this Chinese military moderniza-

tion and perhaps increase is to prepare for a contingency involving Taiwan and that the international atmosphere affects it as well.

The question I have—and you are experts—we were just in China, in Shanghai, and we visited some of the Taiwanese investment flowing into that area, and it is good, high-tech investment, and supposedly, there are 400,000 Taiwanese living in the Shanghai area now. My understanding is that the Taiwanese Government used to try to control some of this investment from Taiwan but they have taken some of the restrictions off.

Do you think that the closer economic integration between China and Taiwan will be a significant factor in reducing the political tension between the two that could drive some of the military spending? I'd like to go from Shambaugh right across the table—quickly.

Mr. SHAMBAUGH. I can be very brief—yes.

Commissioner MULLOY. You think it will, despite the election results.

Mr. SHAMBAUGH. Well, I shouldn't be flippant about it. I believe the mainland has a four-pronged strategy toward Taiwan, the first of which is economic integration, the second of which is political United Front tactics, the third of which is international strangulation of Taiwan in international fora, and the fourth is the coercive military element—and they are proceeding on all four tracks simultaneously, but the economic one is, to my mind, the most important of the four. As that proceeds, it doesn't mean that they are going to lessen emphasis on the others, including the coercive one. So I guess the answer is not a direct correlation “yes,” but the need for a coercive stick is going to decrease as the carrot increases, to my mind.

Commissioner MULLOY. And you think that carrot will increase further by them both being in the WTO?

Mr. SHAMBAUGH. Very much so, yes.

Commissioner MULLOY. Dr. Frankenstein?

Mr. FRANKENSTEIN. I don't want to sound like I am always totally in agreement with David, but on this one I am, with a slight caveat, which is to say that I think we should not, as some of the other people have mentioned here, underestimate the political salience of the Taiwan question to regime survival, the issue of Chinese nationalism, and this sort of thing.

My own view is that in the Chinese system, politics will always trump economics unless economics are truly an overwhelming force.

I think the issue, though, is that in China, there are also a lot of varying views on this subject, as there are in Taiwan, and as one of the panelists earlier this morning said, you know, there are a lot of people in China on our side. I have met quite a few of them. They tend to be younger, they tend to be foreign-educated. They are good Chinese patriots, and we should not deny that, but as they come into their political maturity—which is to say that now they are 40 years old, so that's in another 30 to 40 years or so—that there will be changes assuming no catastrophes.

I think the other issue is that everybody in China including the PLA recognizes that if there should be an ultimate step, the coercive step, that it would be a catastrophe for everybody—but that is a catastrophe that the system would be willing to pay, the unin-

tended consequences of which would be vast and cannot be estimated—or, I would not want to estimate at this time.

Commissioner MULLOY. Colonel?

Colonel CORBETT. I also am in agreement with what Dr. Shambaugh and Dr. Frankenstein have said. I would just add one factor. As the economic integration continues, I think one of the impacts that that has on the coercive factor is that it works as a brake against the need or the requirement for the Chinese military to modernize at a breakneck speed, so that while we have this economic integration taking place and some degree of political interaction, modernization will continue at a gradual, steady, deliberate pace in the military, with the military getting a proportionate allocation of resources from the national budget, as opposed to a panic or a breakneck or a rapid modernization process.

Commissioner MULLOY. Dr. Marble, if you could respond quickly.

Mr. MARBLE. I would just say that PLA modernization is going to continue regardless of whether there is a Taiwan question or not. In terms of your question, it would also depend on the strength of Taiwan's economy. If you have a strong Taiwan economy and close cross-strait links, there can still easily be tension, but if the Taiwan economy continues to deteriorate yet the PRC feels like the links are continuing and the two sides are getting integrated, that is a different story. China would be less motivated to rock the boat, but Taiwan has more incentive.

Mr. FRANKENSTEIN. Could I make just a two-fingered intervention here?

Co-Chairman DREYER. We've got another two-fingered intervention. Do you want to yield your time temporarily, or—

Commissioner WALDRON. No. I just want to get to my question.

Co-Chairman DREYER. Okay.

Mr. FRANKENSTEIN. What I want to say is that I have been looking at China for about 35 years, and if I have learned one thing, it is that Western expectations about Chinese behavior are almost always wrong. So I think that as we look at this Taiwanese question, we should just keep in mind that it is entirely possible that the two sides will come to some solution of the Chinese question that we can't possibly imagine. I would simply put that out as a sky-hook to keep our considerations about the cross-straits relations.

Commissioner MULLOY. Thank you.

Mr. SHAMBAUGH. Very briefly, I want to amend something that was said earlier about Taiwan being the driver for Chinese military expenditure. I would say it is "a" driver but not "the" driver.

There is another driver, and that is the broad systematic modernization of the Chinese military, full stop. So if you have these two drivers—kind of a systematic, comprehensive modernization, and Taiwan—then, as the Taiwan problem decreases, as economic integration proceeds and the coercive needs decrease, money can flow elsewhere. After all, budget allocations are all about choices. Do you buy a Sovremenny destroyer, 100 SU-30s, to meet the Taiwan needs, or do you invest in personnel or a variety of other things?

So there is a very important relationship between the issues you have raised here. In some ways, if Taiwan is a driver, it is dis-

torting the overall modernization process of the PLA, whereas if the Taiwan situation were to somewhat recede from the Chinese mainland's perspective, they could spend that money on a broader basis.

Commissioner MULLOY. Thank you very much.

Co-Chairman DREYER. Commissioner Bryen?

Commissioner BRYEN. I have a kind of general thought, and I want to get your reaction. It seems to me that the defense budget increases in China and modernization, and the growth of certain parts of the infrastructure to support that, especially electronics and microelectronics, is a very important part of military modernization. It really gathers a lot of momentum starting in about 1996—we can argue about the exact point—but it has been going on steadily since then. At the same time, the U.S. has been on a relatively steady decline until the recent events in its defense spending. We have been tied up in places like Yugoslavia, and now we are tied up with terrorism problems, and we may soon be tied up with Iraq.

Aren't we entering a moment, a strategic moment, in the next three to five years—let's say that's the window—of great danger that Chinese planners may say, "This is our window of opportunity if we want to strike"—I heard you before, but let's just look at the military—"If we want to take advantage of the buildup that we have put in place, however channeled and limited it might be, while the U.S. is preoccupied elsewhere, this is the one window—otherwise, we won't get that shot." Isn't there a huge risk of a miscalculation in this period? Isn't this a dangerous time?

Mr. SHAMBAUGH. Goodness, that's a very interesting question that you have posed. I think it is always a dangerous time with China. I guess my first reaction to your question is that they don't have the capability to do much about Taiwan and aren't going to for at least ten years.

My second reaction is that the gap between their military technological capabilities and those of the West and Japan and other Chinese neighbors including India is increasing, not decreasing. The window, as it were, is widening. That is to say, Chinese inferiority is increasing in my view, not decreasing. They are narrowing the window in certain very minor areas. But I don't see the Chinese military as a risk-prone organization; I see them as a risk-averse organization, and I do not see them as seeking to resolve the Taiwan problem forcefully.

Mr. FRANKENSTEIN. Sir, I assume your response was "taking a shot" meaning taking a shot at Taiwan, not taking a shot at Los Angeles.

Commissioner BRYEN. Roger.

Mr. FRANKENSTEIN. Okay, thank you, because I'm a San Franciscan.

To spin out that scenario, I think you need to add some major elements—a major crisis within China over political authority; the survival of the regime—we either have to do it now or we'll never do it—and there are other factors involved, so we have to act.

So yes, you can always put that off in your 10 percent or 20 percent for capacity, which is what I always reserve for situations like this. But I would also second David's comment—

Commissioner BRYEN. I have to stop you for a second. I was in Taiwan in 1996 when the missile exercise and the other exercises took place, and it was a rather frightening point, because no one was sure where the simulation ended and the real stuff began, and I don't think they were so sure. And what I'm worried about is approaching that again with the U.S. heavily preoccupied, as we are likely to be, that the next time they plan an exercise, it could slip into a real attack, or someone could misinterpret the exercise.

I don't want to predict how it starts, but it seems to me that they are building up to getting themselves into a lot of trouble or creating a lot of trouble.

Mr. FRANKENSTEIN. Oh, I would agree with you on that, and I think this is what would lead to a great catastrophe, because in any military operation, you always have to have follow-on. As we have seen in Afghanistan, ultimately, you have to put people on the ground. It is going to be hard—they might be able to cause an enormous amount of damage with missile attacks. It certainly is very unnerving. As a former military person, I have been shot at, but I have never had missiles, so I don't know what that would be like.

But the issue is let's assume they do have this attack—what comes next? And I think that's what I call the unintended consequences. That's going to be a problem.

Let me make a comment about microelectronics. I am a former military communications crypto officer. I would have died, I would have killed, to have the technology that is embedded in my cell phone. This encrypts, finds frequencies automatically, regulates the power, sets up an automatic network. So in that respect, dual-use technology is out of the box, and of course, it has military capabilities just as it has civilian ones.

Colonel CORBETT. You have asked a very complex question and a very serious question. For a variety of reasons in terms of the perspective that I have had, I do not particularly see the next three to five years as a window of vulnerability where the Chinese would try to use that as a time to catch the United States off guard.

One, I don't think at this point in time that the United States is ignoring China, so we are watching China and we are concerned with China. We are watching what's going on—we are still watching them, and we still have the ability to move against them. The Chinese ability to turn around and take a significant military action that could have the impact of resolving the Taiwan situation on very short notice is a capability that in my personal assessment is nonexistent right now.

But having said that, it is very much in our interest to make sure that we can do everything within our capability and our power to influence Chinese thinking, to make sure that they clearly understand what they would be getting themselves into, to not fall into a trap of having misperceptions guide their strategic thinking. And I think one of the important ways to do that is by maintaining open channels of communication and senior-level dialogue with the Chinese leadership across the board in the government as well as in the military.

Again, just in sum, though, it is something that I have watched and that I am confident the United States Government continues

to watch very carefully, but I don't see a high degree of likelihood that the Chinese would take the next three to five years as a window to catch us off guard to resolve the Taiwan situation, and that doesn't even address all the political and economic aspects that Dr. Shambaugh and Dr. Frankenstein talked about.

Mr. MARBLE. Just quickly, in the 1996 missile crisis that you were talking about, China got very upset, lobbed a lot of missiles, and made statements about who the Taiwan electorate should elect and not elect, yet the Taiwanese went ahead and reelected Lee Teng-hui, anyway. So the PRC probably learned a lesson from that.

In the last December year-end elections, the PRC was very, very quiet. But the result was that the DPP has become the major political party now in the legislature, so I don't know what lesson the PRC might draw from this. "If we throw missiles, there is an effect opposite of our intentions; if we don't say anything, we are still unhappy with the result." I don't know whether this catch-22 is making the PRC nervous or not, but Beijing should draw some comfort from the fact that TPP has been very quiet since getting into power and hasn't been provocative in any way.

Commissioner BRYEN. Thank you.

Co-Chairman DREYER. Commissioner Waldron?

Commissioner WALDRON. Thank you.

I have three questions, each one for a different panelist. I'd like to ask Colonel Corbett first of all who decides how much money the Chinese military gets; who in China makes that decision? Does the military make that decision itself? Is there a clearly-recognized body that makes that decision? How is that decided?

Colonel CORBETT. I don't have a definitive answer. I think one is that the military does not make that decision by itself. I think ultimately, the final decision is made at the Standing Committee of the Politburo, balancing in a broad range of inputs—it's still somewhat of a "black box"—I don't know the answer.

Commissioner WALDRON. And it presumably includes the need that the current leadership has for the military and the problems they would have if the military became disaffected; correct?

Colonel CORBETT. I would say yes, those are factors that come into it, yes.

Commissioner WALDRON. All right. Next, I'd like to ask Dr. Marble—you talked about proliferation and particularly arms sales. And one of the things that is striking about the current Chinese regime that distinguishes it from any other previous Chinese regime is its degree of international activity—that is, that you have arms sales companies operating in places like Syria, Iraq, North Korea, Pakistan, Libya, and even Cuba which, with the possible exception of Pakistan, have never been areas of any sort of Chinese concern.

I'd like to know first who was in charge of that. Is that a foreign ministry, or is that a military decision that they are going to send these businesses to those places?

Mr. MARBLE. That's the main reason I didn't touch on this in my dissertation. It's very difficult to find what is a commercially inspired arms sale and what is foreign policy.

Commissioner WALDRON. Do you think that some of them are foreign policy decisions. In other words, for instance, I would feel

that a country as impoverished as Cuba or North Korea would be unlikely to be commercially attractive.

Mr. MARBLE. Yes. Like I said, I didn't get involved in this when I did my research, because it is very—

Commissioner WALDRON. But are you willing to draw any conclusions about Chinese military intentions from the fact that they have a degree of foreign involvement that is completely unparalleled in Chinese history?

Mr. MARBLE. Well, they would argue that it's just a bunch of sons and daughters of high-ranking Chinese officials who are trying to make some bucks off of their fathers' name and protection.

Commissioner WALDRON. So you're saying it's probably money, that it's not politics.

Mr. MARBLE. Yes.

Commissioner WALDRON. Okay.

Now, Professor Shambaugh, you made a very interesting comment. You said that after you went through the doubling and redoubling of the Chinese defense budget, "This did not in my mind constitute any sort of military buildup." Those were your exact words—"not in my mind constitute any sort of military buildup."

My question is what in your mind would constitute a military buildup.

Mr. SHAMBAUGH. Actually, in my notes, I had "does not constitute a military buildup with the exception of ballistic missiles," and I was rushing in my testimony at that point to get under the ten-minute wire, and as soon as I got under the ten-minute wire, I thought, "David, you should have said, 'with the exception of ballistic missiles'" because it is an important distinction.

Commissioner WALDRON. So can we then read your remarks as amended to read that "with the exception of ballistic missiles, it does not constitute a military buildup," but that if you include ballistic missiles, there is a military buildup underway?

Mr. SHAMBAUGH. Short-range ballistic missiles, yes; all other categories, no.

Commissioner WALDRON. You are excluding long-range ballistic missiles; you don't expect that there is going to be any buildup in their long-range ballistic missile capacity?

Mr. SHAMBAUGH. I would say there is a modernization of their intercontinental and intermediate-range forces that has to do with the launch vehicles, the fueling of them, and the warheads on them, but not the numerical number of them.

Commissioner WALDRON. In other words, they have what number now that can hit the United States?

Mr. SHAMBAUGH. Sixteen to 20.

Commissioner WALDRON. And how many do you think they will have, say, in five years?

Mr. SHAMBAUGH. Twenty-five, unless we proceed with NMD.

Commissioner WALDRON. Do you want to ask a question, Larry? Go right ahead.

Commissioner WORTZEL. Dr. Shambaugh, how many missiles do they have that can hit India, according to IISS?

Mr. SHAMBAUGH. The medium-range ones—I'd have to check the military balance—my impression is about 150.

Commissioner WORTZEL. One hundred thirty-five to two hundred.

How many do they have that can hit Russia?

Mr. SHAMBAUGH. The Russian Far East?

Commissioner WORTZEL. Russia anywhere.

Mr. SHAMBAUGH. Well, the 16 to 20 ICBMs can; presumably those 135 that are based in the northern half of the country could.

Commissioner WORTZEL. How many do they have that could hit Japan?

Mr. SHAMBAUGH. I don't know.

Commissioner WORTZEL. One hundred thirty-five to two hundred according to IISS.

Now, if they seem to have a comfort level of 135 to 200 missiles as what they think deters aggression, and if somewhere between 300 and 600 missiles seems to be their comfort level in deterring a declaration of independence in Taiwan, why do you think they are going to limit it to 24 against the United States?

Mr. SHAMBAUGH. Because it is very expensive to build them. They believe they have a minimum deterrent and a second-strike capability—

Commissioner WORTZEL. Isn't it just as expensive to build the ones they've already got?

Mr. SHAMBAUGH. Yes. Excuse me. I'm trying to answer the question.

My response was that it is very expensive, point one. Point two is that they seek to have a minimum second-strike capability against the United States; they have always done so. They have concluded, obviously, that somewhere in the range of 16 to 20 constitutes a minimum second-strike capability. And all the discussions I have had with them and others about NMD are that they will continue to operate on a one-to-three ratio. In other words, if we go ahead with 200 interceptors, you can do the math on how many they think they are going to need of an ICBM force.

Commissioner WALDRON. And how expensive is India's NMD and Taiwan's NMD and Japan's NMD?

Mr. SHAMBAUGH. To—what is your question?

Commissioner WALDRON. Well, my point is that if—I think Larry has made an excellent point in two respects. First, he has shown that even with countries that have very limited capability of hurting China, China has a comfort level of a certain number of hundreds of ballistic missiles to be able to hit them, and if that's the case for countries which really pose very little threat, why should we imagine they should be satisfied with 16 to 20 for the United States?

You then bring in the issue of NMD, but the issue of NMD doesn't apply in those countries for which they have already developed these threats of several hundred missiles. And then, you also bring in the issue of cost; but obviously, they have already spent the amount of money that it costs to build the force that you yourself have just enumerated, so it is hard for me to understand why you think they would suddenly recoil at the cost of building missiles to deter the United States, which you have identified as being one of their two main strategic concerns.

Mr. SHAMBAUGH. First of all, it was Dr. Wortzel who gave the numbers based on the IISS; I assume he is correct—

Commissioner WALDRON. Well, in that case, then, there is no reason to bring up the question of numbers if you assume he is correct.

Mr. SHAMBAUGH. Excuse me? Your original question was about military buildup. We are zeroing in now on one component of that—ballistic missiles, which is a very important component—it is the one strength of the Chinese military.

My original statement had to do with the entire conventional range of weaponry, and I stick by that statement—

Commissioner WALDRON. All right. Well, then, let me rephrase my question and give you a second opportunity to answer it. What in your mind—you say that what you see now in your mind does not constitute a military buildup—what in your mind would constitute a military buildup? Please describe it. What would it look like?

Mr. SHAMBAUGH. Well, it would be, in terms of external purchases of arms, in the range of probably five to seven times what they are buying now per year from Russia. It would be probably a quadrupling of the internal allocation for procurement of equipment and indeed, investment into R and D. It would be procurement particularly of ships to acquire “blue water” capability, a submarine force as well, and in other categories of conventional equipment.

I don’t see in categories of conventional equipment such a—

Commissioner WALDRON. Let’s just look at one example, and then I’ll stop. What are their numbers of, say, aircraft that they are procuring yearly from Russia?

Mr. SHAMBAUGH. Well, they have procured one batch of about 70 SU-27s. As I understand it, they have about 15 that have come off the assembly line in Shenyang of coproduced SU-27s. They have about 40 SU-30s that they have contracted for. Whether they are in fact delivered or not, I do not know.

Commissioner WALDRON. So the total is what? So it is 90, and you—

Mr. SHAMBAUGH. Around 100.

Commissioner WALDRON. And you said that you would consider a buildup to be a quadrupling.

Mr. SHAMBAUGH. That is over the last seven years.

Commissioner WALDRON. All right. So what number—are you saying that if they procure 100, that’s not a buildup, but if they procure—what—1,000, that is a buildup?

Mr. SHAMBAUGH. Over what time frame?

Commissioner WALDRON. Over five years, six years, whatever. I’m just trying to—I guess my point should be obvious—

Mr. SHAMBAUGH. Maybe you should answer your own question. What constitutes a buildup to you, Arthur?

Commissioner WALDRON. Well, I think that what they’re doing now constitutes a buildup, and I think that, as Larry has spelled out very clearly and as all the statistics show, there is a buildup. And I think that’s how the neighboring countries are reacting.

Chairman D’AMATO. Can we move on?

Commissioner WALDRON. Okay.

Co-Chairman DREYER. The last questioner is Chairman D’Amato.

Chairman D'AMATO. You'll have a chance to get at the witnesses this afternoon who are talking about the forces to describe whether there are buildups in the navy and the army and the air force. I think that will be an interesting discussion.

I appreciate the panel coming. Something that you mentioned, Professor Shambaugh, which is of great importance to this Commission is the question of getting at Chinese language sources that are readily available not only in China but in the United States—books and periodicals.

I have in front of me a periodical called "Military Economic Research" which we were able to get the American Embassy to go to the Shanghai Library and Xerox for us, which is not available in this country, but you referenced this periodical in your article—there are a number of other ones, too.

One of the things that we are dedicated to is to try to get as much original material in terms of Chinese intentions and their perceptions and so on translated on the web, and we are surfing the Chinese web every day and selecting materials to do that.

In addition, we also understand that the Library of Congress is woefully inadequate in this area. Now, you yourself have done a study on this.

Mr. SHAMBAUGH. Yes.

Chairman D'AMATO. I'd like to get a copy of that study from you.

Actually, I just have one question for the panel, and it goes back to this question of military buildup and intentions. I'm not worried about the buildup; I don't see a buildup to any great extent beyond what we have seen in other countries. But what I am worried about is miscalculation. In the dialogue that we have seen coming out of some Chinese material now regarding what they call "assassin's mace weapons," and the issue of developing weapons that can be "trumps"—in other words, looking at us, it's hopeless to match our capabilities, therefore, how do you trump it; can you build the, quote, "magic weapon," which has been cited in Chinese history—the kind of asymmetrical analysis. Can we put together the possibility of calculation with the issue of whether there is some kind of self-deception or misunderstanding on the part of the Chinese—or produce the "magic weapon"—if you put those two things together, you have the kind of volatile mix that might lead to an unfortunate miscalculation.

So my question is do you see this dialogue or discussion on "assassin's mace weapons," any of you, that has apparently become more in vogue in the last couple of years, as worrisome in this respect, as the idea that we're going to find something that will trump the whole thing, and that might lead to miscalculation.

Mr. SHAMBAUGH. I'm not sure I am the best person to address that. I think Bates Gill is; he has written a book entitled, "Superb and Secret Weapons." I myself don't study asymmetric warfare with China very much. I don't know the answer to your immediate question. I think John and James Mulvenon and Bates may be better-poised to answer it.

But on the translation issue, let me simply say that I personally would be very happy to work with the Commission to move that process forward. I think there is a lot that needs to be said and done—some of it needs to be said not in a public session.

The Library of Congress study I did came on the heels of one that, in fact, Dr. Dreyer and some others did. There have been two major assessments of the Library of Congress' collection on contemporary China in the last eight years, both of which concluded that it is abysmal and that money is being sorely wasted. And neither report has really been actioned, I would say.

I would also draw this Commission's attention to the fact that some of what the Library of Congress gets from China comes on exchange from the National Library of China. It will be of interest to this Commission that a large percentage—I asked to see the list of sources that the Chinese asked the Library of Congress to send to China—at least 50 percent of them are military, U.S. military documentation. One wonders when you walk into a Chinese bookstore and see all these translations of American military books, where do they come from? Do the Chinese have this vacuum-cleaner operation in the United States, sucking up all these books? They don't. We give it to them on exchange. I would suggest that that is not in the national interest of the United States and should be rectified.

But the Library of Congress—this is for another whole subcommittee and a different subject—has a very substantial budget for purchase of Chinese materials. Given our interest in certain areas of Chinese national security, I would simply submit that the purchase of Chinese materials is not well-spent, but it is something to be pursued in this context.

Chairman D'AMATO. Do you have any comments, John, on this movement toward a dialogue on "assassin's mace weapons?"

Mr. FRANKENSTEIN. The phrase that David mentioned, "Superb and Secret Weapons," comes from a commentary written in about 1860 by a Chinese—I even brought the material down, but I left it in the hotel—a Chinese official who was looking at why the Western imperialist powers that were impinging on China's borders could have all these great effects against Chinese forces and beat them. And actually, they were looking around for some magic bullet to defeat the foreigners, and of course, the officials' perceptions of the "superb and magic weapons" that the foreigners had were in fact very ordinary conventional weapons owned by the Western powers at that time.

Commissioner WALDRON. Can we ask Dr. Frankenstein—would it be possible for you to supply the Commission with a copy of that? It sounds like an absolutely fascinating piece of material.

Mr. FRANKENSTEIN. Yes, I'd be pleased to. As we all know, Art, we all have pieces on our computer that we wish we had gotten published and managed never to get published. This particular study of mine dates from 1986, but it is historical, so it is still up-to-date.

Commissioner WALDRON. I am familiar with the problem, and who knows, maybe we can publish it for you.

Mr. FRANKENSTEIN. That would be very kind; I would look forward to that. I'd like to get that off the hook.

But getting back to this issue of "superb and secret weapons," or "assassin's mace weapons" and so forth, they are really interested in asymmetric warfare because they realize that they cannot really

confront the conventional forces of the United States. So they are looking for that.

My own experience leads me to believe that quick fixes and magic weapons don't work very well, but if we would like to encourage them to keep looking for them, let them look; it will certainly impinge on their military budget and decrease whatever threat there might be in the future.

Colonel CORBETT. I think I've been fairly clear on your first point and the question you had in terms of Chinese sources and books and acquisitions.

Chairman D'AMATO. Yes. We are very, very interested—

Colonel CORBETT. We need a concerted effort to come up with a plan—

Chairman D'AMATO. We need a national program.

Colonel CORBETT [continuing]. To do this, to finance it, and to manage and coordinate it and make the resources available to everybody else. And the way it is happening so far is just not working.

The question of "assassin's mace" fundamentally ties into the Chinese problem that they have had for a long time now of how the weaker country deals with a stronger country, a stronger adversary, a stronger foe—technological inferiority going against a superior power. When they analyze their military capabilities and the gap that they have in terms of dealing with 1) Taiwan and 2) the possibility that the United States is standing right there behind Taiwan, they have a daunting challenge if they are going to get into any military involvement. They have seen clearly our capabilities, not from our mil-to-mil program but from our military operations in the Gulf War, from our military operations in Kosovo, from our military operations ongoing now in Afghanistan, which they are looking at and studying thoroughly.

The U.S. has capabilities that they can't match, and they are trying to come up with a way to match it. We know they are trying to do that. And that is because they are looking for a solution that they can handle. And I won't be so glib as to say I don't believe in magic, but I will say that I haven't seen how they are going to come up with this magic weapon at this point in time—but that doesn't mean we don't keep watching—and this is where the critical side is—we are watching the modernization and ongoing reform of the military. Just as important, we watch the defense industrial complex, their S and T community, their research and development capability, and their ability to manufacture, design, and produce weapons and things. And we watch what and they get learn from acquiring technologies openly available through the United States and the rest of the world, and their defense industrial activities in the United States in those types of areas. These are areas of concern and areas that we should continue to be watching.

We should be looking for how they come up with technological innovations that they can apply to the military system and have an impact on us. It is something we look for, we watch for. At this point in time, I don't see it as a clear and present danger to us.

Co-Chairman DREYER. I need to say something. This is the focus of an article I wrote for "Issues and Studies" which was in fact edit-

ed by Dr. Marble, and that is that the PLA's reaction to Kosovo—there were three different schools of thought, one of which is that this proves people's war works, because look at how bravely the Yugoslavs stood up to the United States' superior weapons. Number two is we've got to match the United States weapon-for-weapon. And the third one is the "assassin's mace" kind of thing, asymmetric warfare. And there really wasn't any consensus in the PLA about which route ought to be pursued, because in fact a lot of people in the PLA made the argument that John Frankenstein just made for you—I don't believe in magic, it isn't going to work, and anything we can do to blind them with lasers or screw up their computer system, they can do to us.

I'll give the last word to Dr. Marble.

Mr. MARBLE. As this isn't my area of expertise, and it's almost 4 a.m. Taipei time right now, I'm going to pass.

Co-Chairman DREYER. Thank you.

Chairman D'AMATO. Well, you know, it's getting to be Christmas, and magic weapons are more available at Christmas-time. The question is not whether we believe the Chinese have one but whether they believe so, I think is the issue that I would be worried about.

In any case, thank you very much.

We're going to reconvene this afternoon at 2:15 for our next panel.

We thank all of you very much for coming and for the dialogue. It has been very valuable for us, and we look forward to dealing with you in the future.

[Whereupon, at 1:45 p.m., the proceedings were recessed, to reconvene at 2:40 p.m. this same day.]

(AFTERNOON SESSION, 2:40 P.M., FRIDAY, DECEMBER 7, 2001)

PANEL III: SERVICE COMPONENTS OF THE CHINESE DEFENSE
BUDGET

Co-Chairman DREYER. The Commission will come to order.

We have three distinguished panelists this afternoon, and we will lead off with Mr. Dennis Blasko. Mr. Blasko served 23 years in the Army as a military intelligence officer. He was Army Attaché in Beijing and in Hong Kong and has other numerous qualifications, not the least of which is that he is a fellow Floridian.

Dennis?

STATEMENT OF DENNIS J. BLASKO, U.S. ARMY, RETIRED

Mr. BLASKO. I want to thank you, Commissioner Dreyer, and I thank the Commission for the opportunity to be here today to testify.

I'd like to begin by characterizing China's military modernization to be proceeding at a moderate but deliberate pace. And I use those words intentionally, "moderate" and "deliberate," to characterize the modernization that we are seeing now, to differentiate between the descriptive terms "massive" or "rapid" which are often seen in the literature, the open media out there.

Chairman D'AMATO. Excuse me. Your words are "moderate" and "deliberate?"

Mr. BLASKO. My words are "moderate" and "deliberate," and whether we want to define "buildup," that might be a question of—

Chairman D'AMATO. Moderate buildup, deliberate buildup.

Mr. BLASKO. Yes. To answer some of the questions that were discussed earlier this morning, if you were to ask me what it would take to shift from where I consider they are now, from moderate and deliberate, to rapid and massive, I would say it would take on the scale of hundreds of billions of dollars each year for several years as opposed to several tens of billions of dollars that I believe are being dedicated to the defense budget today.

I don't know what proportion—

Commissioner DREYER. Excuse me. Do you mean that on a global basis in terms of the buildup, or do you mean that regionally? It seems to me there is a difference.

Mr. BLASKO. My estimate of the defense budget would be two to two-and-a-half-times the announced budget—so, somewhere in the \$40 billion range.

If we were to see \$200 billion a year, not through PPP, but \$200 billion applied to equipment training, personnel—the whole thing, then I would be willing to characterize that as a rapid and massive buildup across the board—across the board, not just for the ground forces but also for all the forces. But I'm talking about percentage

increases not at 17 percent but 170, 200 percent increase per year. That's my characterization.

That said, I don't know what proportion of the budget is currently dedicated to the ground forces, but again my judgment is that compared to modern, technologically advanced armies, the PLA ground forces remain under funded for an army their size to be properly equipped and trained for large-scale force projection operations.

I estimate that while a small portion of the army is currently capable of being projected outside of Chinese territory, the overall size of the force would need to be cut and expenditures increased greatly to build a truly significant ground force capable of fighting beyond China's borders.

Today, following the advice of Michael Pillsbury, I will try to put some of my observations into perspective by comparing the PLA to another military, in this case, the United States Army. I do this, however, without any intent to imply which army would be more capable in a head-to-head confrontation.

In my written testimony, I list five assumptions which I believe will likely continue into the foreseeable future. The most important of these is that national defense will continue to be subordinated to national economic construction. This means that military budgets will not increase so much that significant resources are diverted from economic construction. Therefore, my assumption at this point is that the \$200 billion figure will not materialize.

However, the speed and direction of Chinese military modernization may change if the perceived threat to China changes and/or if larger sums of money are devoted to the task.

I also point out six trends in modernization that were apparent by the late 1990s, the most important of which for this hearing are that the active duty forces will become quantitatively smaller; the PLA will retain many existing weapons in an attempt to develop new tactics and techniques to defeat a high-technology enemy, and only limited amounts of foreign weapons and equipment will be introduced into the forces.

If current trends proceed roughly as they have in the past decade, the PLA will continue to be a mix of low, medium, and high technology units. The PLA will improve its education and training standards according to the principle to let qualified personnel wait for the arrival of equipment rather than let equipment wait for qualified personnel.

At the same time, China will strive to improve its information warfare capabilities and capitalize on its traditions of speed, stealth, operational security, and, yes, Professor Waldron, deception.

There is no guarantee that the PLA will be successful in achieving its goals or that if achieved, the results will transform it into a force capable of accomplishing all of its missions of deterrence and defense.

We have talked about the lack of transparency, so let me just begin with what is known in gross numbers about the size of the PLA.

According to the October 2000 Chinese defense white paper, the PLA was said to be less than 2.5 million, but it did not give a

breakdown of the force. It also listed the size and composition of defense expenditures but it did not break out what percentage went to specific services.

The latest DOD report to Congress on the Chinese military also provides some specific figures—for example, 2.4 million for the size of the PLA, but it also lacks the detail about the budget and the ground forces of concern to this Commission.

So without access to better numbers from China or the U.S. Government, I have used primarily data from the International Institute for Strategic Studies' "The Military Balance".

According to the latest "The Military Balance," currently, the PLA has a personnel strength of about 2.3 million, of which 70 percent, or 1.6 million, are ground forces. The army underwent the bulk of the recent 500,000-man reduction, and reduction appears to be continuing.

But there are many gaps in our knowledge. For example, we simply don't know how much a Chinese conscript makes, or an officer earns, or how many privates, sergeants, lieutenants, or generals are in their army.

Compared to the United States, the U.S. Army presently has about 477,000 soldiers, which is a little less than 30 percent the size of the Chinese ground forces, and the U.S. Army is about 35 percent of the total active duty strength of about 1.37 million. The U.S. Army has a projected budget of about \$80 billion for the year 2002, about 24 percent of the entire U.S. defense budget.

But unfortunately, comparing Chinese ground force numbers to U.S. active duty numbers is not a valid comparison. The 1998 Chinese Defense white paper states that "Different from many other countries, China includes civil cadres in the overall strength of the PLA." In other words, uniformed civilians in the PLA are considered as active duty soldiers. The United States does not include its civilian personnel as part of its active duty strength, and if it did, we would number about 2.04 million, and the U.S. Army about 700,000.

So when both apples and oranges of the PLA and the United States are counted, the overall manpower strengths are not as far apart as is often suggested.

If the "The Military Balance" is correct, the active duty strength is continuing to decline, but how low it will go is unknown. In my opinion, the PLA could cut its active duty ground forces in half and not decrease its overall combat effectiveness against a foreign foe, especially if it were allowed to retain its current budget and apply the same amount of money to the smaller force.

In particular, the new force will require more time and money to train in order to perfect the PLA's new war-fighting doctrine. However, I doubt that Beijing is likely to further reduce the ground forces as much as I estimate is possible, for several reasons that I outline in my written testimony, the most important of which is that China still considers itself a continental country that lives in a tough neighborhood and therefore believes it has got to have troops stationed all over the country.

As the active duty forces are being reduced, the reserves and the PAP, the People's Armed Police, appear to be expanding. And for a leadership that is very worried about domestic stability, a larger

PAP to them, in their minds, can provide a more cost-effective tool for maintaining domestic stability than does a huge standing army.

Of the \$6.2 billion in deliveries of military equipment from Russia that China received from 1993 to 2000, according to the Congressional Research Service, the ground forces got a few dozen helicopters and some SA-15 surface-to-air missile systems. I would not be surprised if there were some anti-tank weapons and precision-guided munitions also included, but the majority of this expenditure was devoted to China's air and naval forces.

The Chinese defense industries have also provided the ground forces with new equipment, most notably, limited numbers of helicopters and a few Type 98 main battle tanks. However, the actual numbers appear to be small for such a large standing force.

I would like to just use two data points to illustrate how much more expensive a modern ground force can be. According to the last two "Military Balances," China has somewhere between 7,000 and 8,000 main battle tanks, the majority of which are Type 59 Series purchased under the old centralized planning system. There may be up to 1,000 more advanced models, but for the October 1, 1999 parade, the ground forces could display only 10 of the newest Type 98 tanks, which appeared to be of a generation similar to the Soviet/Russian T-72.

I think it is extremely unlikely that the PLA will ever have as many newer-model tanks as it did Type 59s, yet whatever the new fleet will cost, it is going to be much more expensive than the old Type 59s. And just for comparison sake, in the United States Army, according to "The Military Balance," there are about 7,600 M-1 Series tanks. So obviously, the U.S. Army has invested many, many times greater than what has been made in the PLA tank force.

In the mid-1980s, Beijing also made the decision to create an army helicopter force. According to "The Military Balance," there are now 12 army aviation regiments in the PLA. Using figures that Luke Colton has provided me, he estimates that about 244 helicopters of all types, not all of which are operational, would be in the force. These are spread throughout the country, averaging about 20 helicopters per unit.

Luke—again, this is just an estimate—says that by the end of the decade, that force may reach about 400, which is still a very small number compared to the expected size of the ground force.

The implications of this deployment are obvious. Only extremely limited numbers of aircraft are available at any one time and place for training, and therefore, only small numbers of relatively small-size units, company and battalion, have the opportunity to train in what we would call air mobile operations. Again, just for comparison sake, the U.S. Army currently has approximately 4,700 helicopters in its active duty forces.

By these two examples, I do not mean to imply that the PLA will structure and employ its ground force in a manner similar to U.S. forces, but it will build a force as it perceives is necessary based on the resources available. I only use these examples to illustrate how much more expensive a modern force, no matter how constructed, will be to equip and train than the old-style infantry-heavy PLA.

I believe that in the past 10 years, the PLA has invested on the scale of tens of billions of dollars in the ground forces. I think that in order to approach the technical sophistication and size of a United States Army or a sophisticated ground force, they would have to invest on the scale of hundreds of billions of dollars, and that would be readily recognizable to outside observers.

There have been improvements made over the past decade, and one aspect that has not been mentioned often—or at all, to my knowledge—is the widespread introduction of trucks to the infantry forces. But this relatively low-tech, low-cost improvement gives the PLA much greater flexibility and mobility than it had just two decades ago.

In the future, I think what we need to be watching is the limited air, sea, transport available and the growth of logistics forces. The Chinese military planners, if told to do so, will select their objectives carefully to maximize speed, surprise, and deception in their operation. But even with a large manpower advantage on paper, the PLA will seek to concentrate combat power at decisive or vulnerable points that will not necessarily require the movement of large numbers of troops. Chinese operators would probably use its large forces to disguise the movements of fewer, smaller elements likely to be employed.

I believe that those who predict the massive use of PLA manpower in the initial stages of future combat operations probably underestimate the intellectual capabilities of Chinese military planners.

It seems reasonable to me to conclude that PLA planners would be more confident of their abilities the closer they are to their borders and the less technically advanced their foes are. However, the farther away from China the PLA must project force and the more technologically advanced the enemy, the less confident PLA planners would be in their ability to conduct operations successfully with existing forces.

In other words, in some circumstances against some foes, China's large ground force, mostly equipped with older weapons, would and could be militarily effective. However, I cannot predict the chance of success in any specific scenario.

Finally, I would like to mention that special operations forces have been emphasized in the past decade and will likely be a major ground force contribution to any local war scenario. SOF forces should currently be considered capable of being deployed beyond China's borders with existing air force or army aviation assets. Still, it is likely that these SOF soldiers number only in the low thousands.

I believe that the modernization of Chinese ground forces deserves careful monitoring and examination by the United States and China's neighbors. I believe that the debate in America about the China threat would be much better served if both governments of the United States and China release more information about Chinese military modernization. Contact between the defense establishments of both countries is essential for greater understanding of China's modernization, and many questions of direct interest to the Commission can be answered in part through direct contact with the PLA itself.

In conclusion, particularly in my written testimony I hope I have demonstrated that Chinese civilian and military leaders have different social, economic, and political factors from the United States as well as different military missions to consider when making the strategic decisions necessary to fund the modernization of their armed forces. To state the obvious, what might seem logical to us may not be applicable to the Chinese situation.

I give the Commission great credit for attempting to work through what can be a very frustrating problem, due in large part to the lack of credible and verifiable information.

I thank you again for this opportunity to appear here today.

Commissioner DREYER. Thank you, Mr. Blasko.

[The statement follows:]

PREPARED STATEMENT OF DENNIS J. BLASKO

I thank the Commission for the opportunity to testify in front of you today.

At this point, based on the amount of resources dedicated to the military and the apparent operations tempo of the force, I characterize China's military modernization to be proceeding at a moderate, but deliberate, pace.¹ In the great budget debate, I come down on the side that actual defense expenditure for the entire force is about two to two and a half times the official announced defense budget. I do not know what proportion of that budget is dedicated to the ground forces, but compared to modern, technologically-advanced armies, the PLA ground forces remain under funded for a force their size to be equipped suitably for their various missions and to conduct adequate training to prepare them for such operations.

As I will try to explain, I estimate that while a small proportion of the ground force is currently capable of projecting force outside of Chinese territory, the size of the force would need to continue to be cut and expenditures increased, not by tens of percentage points, but by hundreds of percentage points annually, in order to build a truly significant ground force capable of fighting beyond China's borders in the next decade. The bottom line question PLA planners must answer for themselves is how much ground force capability is enough, at what expense and in what timeframe, in order to accomplish the missions set before them by the leadership of the Party and the state.

Following the advice of Michael Pillsbury given at a conference at the U.S. National Defense University in October 2000, I also will try to put some of my observations about the PLA into perspective by comparing them to other forces—in this case, I will often compare developments in the Chinese ground forces to those in the United States Army,² since we are most familiar with the U.S. military and the U.S. military can be considered as close to a “state-of-the art” 21st century military force as there currently exists.³ I do this, however, without any intent to imply which force would be more capable in a head-to-head confrontation between the two.

General Assumptions underlying Chinese Military Modernization

Barring a major unexpected, external threat or the collapse domestic stability, several factors that have guided the PLA modernization program over the past decade will likely continue into the foreseeable future:

—National defense will continue to be subordinated to national economic construction, though as China grows richer, the military will expect to receive an appropriate and growing slice of the economic pie. This means that overall military modernization will remain a long-term goal, targeted for achievement in mid-century rather than in the next decade.

¹I intentionally use the terms “moderate” and “deliberate” to characterize China's military modernization program to differentiate between my judgments and those analysts who commonly use the adjectives “massive” or “rapid” to describe China's military modernization. I believe those words exaggerate the true nature of Chinese military development.

²My primary source for information on the U.S. military is the DefenseLINK website, with some help from The Military Balance.

³Perhaps a more enlightening comparison for this stage of PLA ground force modernization could be found in the size, level of technological sophistication, training regimen, and operations tempo of the Group of Soviet Forces, Germany (GSFG) in the early 1980s. At that time, the T-72 generation of tank was being introduced into the forces while older T-55 and T-62 remained in service, helicopter-borne air mobile operations were under development, and the concept of the operational maneuver group was being born.

- Military budgets, while likely to expand on roughly the scale they have since the late 1990s, will not be increased so much that significant resources are diverted from economic construction.
- The modernization of missile, naval, and air forces will receive higher priority than the ground forces because of (1) their leading roles in Local Wars under Modern High Technology Conditions and (2) the emphasis on deterring Taiwan's movement to independence as the PLA's primary military planning contingency.
- Nevertheless, defense of the Chinese mainland and deterrence of foreign invaders will continue to be a major planning factor, which will result in the likely continued predominance of ground force officers in senior military leadership positions. China perceives that it must maintain a significant ground force to provide for conventional deterrence and defense of the mainland.⁴
- PLA ground forces will also remain the ultimate guarantor of domestic stability and Chinese Communist Party survival should the civilian police and paramilitary People's Armed Police (PAP) fail to maintain internal security. Professional military officers do not seek this role, but the Chinese leadership expends great effort to ensure the loyalty of the PLA to the Party, which in their minds is also loyalty to the country.⁵

Six General Trends

By the late 1990s, six general trends that had developed since the Persian Gulf War were apparent in the Chinese military modernization program.⁶

- Active duty PLA forces will become quantitatively smaller, with an emphasis on technological quality.
- Reserves and the People's Armed Police will increase in size.⁷
- The PLA will retain many existing weapons and attempt to develop new tactics and techniques to defeat a high-technology enemy.
- Only limited amounts of foreign weapons and equipment will be introduced into the forces; the indigenous Chinese defense industry will be the source of the majority of modern weapons.
- Capabilities will emphasize rapid response and joint operations, focusing on precision attack, air operations, naval operations, information warfare, and space operations.
- Command and control organizations will be reorganized to better manage the requirements of future warfare.

These trends represent the strategic directions the PLA seeks to implement and can be deduced from Chinese publications and speeches. There is no guarantee that the PLA will be successful in achieving all their goals, or that if achieved the results will transform the PLA into a force capable of accomplishing all its missions of deterrence and defense. Of course, the speed and direction of Chinese military modernization may change if the perceived threat to China changes and/or if much larger sums of money are devoted to the task.

If current trends proceed for the next ten years roughly as they have in the past decade, the PLA will continue to be a force composed of a mix of low, medium, and high technology units. Modern equipment will enter the force in limited amounts while the PLA improves its education and training standards. The PLA prefers to "let qualified personnel wait for the arrival of equipment rather than let equipment

⁴For a recent Chinese military officer's perspective on conventional deterrence, see "PRC Military Journal Examines Conventional Deterrence" from Beijing Zhongguo Junshi Kexue, September 30, 2001, pp. 88-93 in Foreign Broadcast Information Service (FBIS) CPP20011106000255, November 6, 2001.

⁵For a more detailed discussion of the role of the PLA and the PAP in domestic security, see John F. Corbett, Jr. and my article, "No More Tiananmens: The People's Armed Police and Stability in China, 1997," in *China Strategic Review*, Spring 1998.

⁶The trends outlined in this paragraph are discussed in detail in my "A New PLA Force Structure," in *The People's Liberation Army in the Information Age*, eds. James C. Mulvenon and Richard H. Yang, Conference Proceedings published by RAND, 1999.

⁷For the past two years The Military Balance has listed the numbers of reserves between 500,000 and 600,000 personnel; in 1998, it held 1,200,000+ in the reserves. The 2000 DOD "Annual Report on the Military Power of the People's Republic of China" lists approximately 1.5 million in a "reserve-militia component." The Chinese language press often reports on new reserve units that continue to be formed. While I cannot say exactly how many personnel currently are in the Chinese reserve force, it seems reasonable that they would be expanding as the active duty force declines in number.

wait for qualified personnel to operate it.”⁸ At the same time China will strive to improve its information warfare capabilities and capitalize on its traditions of speed, stealth, operational security, and deception.

Some Basic “Known” and “Unknown” Elements

Any specific discussion of the relationship between the PLA ground forces and the Chinese defense budget is limited by a lack of transparency in the Chinese system and a lack of official, detailed information about both the force and the budget from which to draw conclusions. Let me begin by what is known.

Beijing has released two Defense White Papers, one in 1998 and the second in 2000.⁹ In October 2000, the White Paper gave the size of the PLA to be “less than 2.5 million,” but did not give a breakdown of the force by ground, naval, air, or missile forces. It also listed the size and composition of defense expenditures for the years 1998 through 2000, but it did not break out what percentage of this announced budget figure was allotted to specific services of the military, such as the ground forces.

Since 1997, the U.S. Department of Defense has produced four Reports to Congress that address certain elements of Chinese military modernization that are very useful to analysts outside the government. The latest of these (June 2000) provides some specific figures, for example, 2.4 million for the size of the PLA, but it also lacks the detail about the budget and the ground forces necessary for outsiders to make informed judgments about many of the issues of concern to this Commission. Without access to better numbers from China or current U.S. government figures, I use data from the International Institute for Strategic Studies (IISS) *The Military Balance 2001–02*, except where noted, as the basis for the following analysis.

According to *The Military Balance*, currently the PLA has a personnel strength of about 2,310,000 of which about 70 percent, or 1.6 million, are ground forces. The ground forces underwent the bulk of the recent 500,000-man reduction, in which well over 400,000 soldiers were demobilized—and reductions appear to be continuing.¹⁰

The United States Army presently is composed of about 477,000 soldiers, or about 35 percent of the total U.S. active duty strength of about 1,370,000. While we do not have figures for what percentage of Chinese military expenditure is allotted to the ground forces, the U.S. Army (which is about 30 percent of the size of the Chinese ground forces) has a 2002 budget projection of about \$80 billion, or about 24 percent of the entire U.S. defense budget.¹¹

Two elements of information that would help make an estimate of the ground forces part of the budget possible would be a pay scale table for the Chinese military and a breakdown of the numbers of personnel for each military rank (such information is readily available for U.S. forces). We simply do not know what a Chinese conscript or officer earns or how many privates, sergeants, lieutenants, or generals are in their army.

Comparing “Apples and Oranges”

Unfortunately, comparing Chinese ground force numbers to U.S. Army active duty numbers is not a valid comparison. I must confess, that in reading scores of articles and analyses of PLA capabilities, most of which focus on the size of the standing force, not one foreign observer has taken into consideration a fact revealed by the 1998 Chinese Defense White Paper: “Different from many other countries, China includes—civil cadres—in the overall strength of the PLA.” In other words, uniformed civilians in the PLA are considered as active duty soldiers.¹²

⁸Kuan Cha-Chia, “Military Authorities Define Reform Plan; Military Academies To Be Reduced by 30 Percent,” *Kuang chiao ching*, No. 306, March 16, 1998, pp. 8–9, in FBIS–CHI–98–084, March 25, 1998.

⁹A White Paper on Arms Control and Disarmament, which was issued in November 1995, also contains considerable information about the Chinese military.

¹⁰One newspaper article out of Hong Kong reports that in addition to the 500,000-man reduction, “the PLA might cut 100,000 or more personnel each year through much of the next decade.” Total numbers would bottom out around 1.75 to 2 million by 2010. Willy Wo-Lap Lam, “New-look PLA plans more cuts,” *South China Morning Post*, June 30, 1998.

¹¹I am reluctant to guess that a similar 24 percent of the Chinese defense budget goes to the ground forces because, whatever the Chinese percentage is, its much larger proportion of overall manpower strength and less technologically-advanced equipment skew the numbers so that mirror-imaging would not be appropriate.

¹²Civilians in the PLA perform many of the same sort of functions DOD civilians do, primarily in headquarters, hospitals, research institutes, and educational facilities. China has not officially said what percentage of its active duty force are civilians. One PLA civilian gave me an estimate that perhaps 20 to 25 percent of the PLA is civilian, which would be considerably less than the additional 48 percent that would be added to U.S. active duty numbers.

The United States does not include its civilian personnel as part of the active duty end-strength. If it did, and U.S. personnel numbers were calculated as are Chinese numbers, the overall Department of Defense would total about 2.04 million and the U.S. Army about 705,000.

Both countries include the costs of civilian personnel in their defense budgets. When both the “apples and oranges” of the PLA and the U.S. armed forces are counted, the overall manpower strengths of the two countries are no longer as far apart as some analysis would suggest.

Reductions Continue, but the Reserves and PAP Expand

If The Military Balance is correct, the active duty strength of the Chinese military is continuing to be reduced beyond the 500,000 announced by Jiang Zemin in September 1997. How low the personnel strength will go is unknown.

In my opinion, the PLA could cut active duty ground forces in half from its current level and not decrease its overall combat effectiveness against a foreign foe, especially if it were allowed to retain its current budget and apply the same amount of money to this smaller force. However, Beijing is unlikely to further reduce the ground forces as much as I estimate is feasible.

There is a certain floor beneath which the Chinese leadership will not be willing to reduce the size of the ground forces. Among the factors used to determine this minimum force size may be:

- China is a continental nation, which, by its own count, borders “more than 20 countries, either contiguous or separated by stretches of sea.”¹³ Chinese leaders believe that PLA forces must be positioned throughout the country in numbers sufficient for both deterrence and defense. The difficult terrain in many border areas, a ground transportation network still under development, and limited military air transport slows down the rapid movement of large numbers of troops among widely separated Military Regions. Thus, it is likely that PLA planners will want to ensure that some amount of ground formations are stationed in all corners of the country.
- In addition to conventional military threats that could exist on China’s border, leaders in Beijing also perceive a cross-border or internal threat from “terrorists” or “separatists” which could require the use of PLA forces. For example, in November, Vice Premier Qian Qichen is reported to have told UN High Commissioner for Human Rights Mary Robinson that about 1,000 Chinese Uygurs have been trained in Afghan terrorist camps. Traditional infantry units, which need not be equipped with a lot of high technology equipment, can be effective against this type of threat. PAP forces can also be used in these operations.
- Large formations of the PLA (and the reserves and PAP) are useful to the central and local civilian leadership structures to be employed as “strike forces” in the event of natural disasters in rescue, relief, and humanitarian missions. A manpower-intensive, but organized, mobile, and disciplined, force is suitable for such contingencies. These missions also help improve the image of the PLA in the minds of the Chinese populace.
- China’s leaders may also choose to maintain larger forces than required by military necessity in order to provide jobs for mostly rural youth who otherwise might be unemployed or underemployed and thus a potential for instability.

Chinese military leaders must find the proper balance between active duty and reserve forces for their missions in the 21st century. Properly trained reserves can fulfill many of the tasks listed above, at a fraction of the cost of active duty forces. Many demobilized soldiers appear to be assigned to newly formed units of the reserve force. Much of the older equipment that is being retired from the PLA can be expected to be assigned to the reserve force. Doctrine for integrating the reserves with the active forces likely is under development.

As the ground forces get smaller and equipped with more advanced equipment, they will require more time to train in order to perfect the PLA’s new war fighting doctrine. These operations, which incorporate Special Operations Forces (SOF), helicopters, and armored formations, will be more expensive and harder on equipment than the infantry-heavy operations of the past. Many of the tactics and techniques used on the modern battlefield are not applicable to domestic security operations.

As the active duty PLA contracts in size, the PAP is expanding, with estimates varying from one million to 1.5 million.¹⁴ The PAP internal defense forces are basically truck-mobile, light infantry without most of the heavy equipment operated by its PLA brethren. These paramilitary units cost much less to equip and train than

¹³Year 2000 China Defense White Paper.

¹⁴The 2000 DOD Report to Congress lists the size of the PAP as both one million and 1.3 million; The Military Balance 2001–02 estimates it at 1,500,000.

do PLA units. For a Chinese leadership that is very worried about domestic stability, a larger PAP can provide a more cost-effective tool for maintaining domestic stability than does a huge standing army. With specialized equipment and proper training, a capable PAP may be able to avert the needless killings that occurred in 1989 in protest situations that have been a common occurrence in recent years and surely will continue in the future.

New Capabilities will be Expensive

Of the \$6.2 billion in deliveries of military equipment from Russia that China received from 1993 to 2000,¹⁵ the ground forces got a few dozen helicopters and SA-15 surface-to-air missile systems. I would not be surprised if some anti-tank weapons and precision munitions for artillery were also included, as well as a few other items. However, the majority of this expenditure was devoted to China's air and naval forces.

The Chinese defense industries have also provided the ground forces with new equipment, most notably limited numbers of several types of helicopters and a few Type 98 main battle tanks. However, the actual numbers of this new equipment appear to be small for such a large standing force.

As the PLA ground forces transform from an infantry and towed artillery-heavy force into one better suited for mobile, joint and combined arms operations, the weapons and equipment required will be considerably more expensive than in the past, especially if the Chinese defense industries charge the PLA market-value for equipment acquisitions. Expenses for ammunition, fuel, and maintenance will also increase dramatically, as will the cost of realistic training exercises. Savings that result from personnel and force structure reductions and the retirement of old equipment will not be enough to adequately fund a smaller, more technologically advanced ground force. I will use just two data points to illustrate how expensive a modernized ground force can be.

Main Battle Tanks

According to the last two Military Balances, China has somewhere between 7,000 and 8,000 main battle tanks, the majority of which (around 5,000) are the vintage Type 59 series that were purchased under the old central-planning system.¹⁶ While there are also up to a thousand additional more advanced models (Type 80 and Type 88), for the October 1, 1999 military parade, the ground forces could display only 10 of the newest Type 98 tanks, which appeared to be of a generation similar to the Soviet/Russian T-72. It can be assumed that the Chinese defense industries are producing more of this model as it is introduced into the force. The cost of the Type 98, purchased under market-economic rules, will be many times higher than the older models it will replace.

It is extremely unlikely that the new PLA will ever have as many newer model tanks as it did Type 59s. Yet, the actual cost of the new fleet will be much higher than whatever was spent in the past. Just for comparison sake, there are approximately 7,600 M-1 series tanks in the U.S. Army. The cost of maintaining and training this force is obviously a significant portion of the Army budget and the investment many times greater than what has been made in the PLA tank force.

Army Aviation

In the mid-80s, Beijing made the decision to create an army helicopter force. The first units were introduced in the late 80s, and now according to The Military Balance there are 12 army aviation regiments found in the PLA.¹⁷ Using figures supplied by my colleague Luke Colton, the total number of rotary-wing aircraft in the ground forces is currently about 244 of all types, not all of which would be deemed

¹⁵Richard F. Grimmett, CRS Report for Congress, "Conventional Arms Transfers to Developing Nations, 1993-2000," August 16, 2001, p. CRS-59.

¹⁶The Type 59 is equivalent to the Soviet T-55, which we have recently seen in action on the battlefields of Afghanistan. Under the proper conditions even a 40 to 50 year-old weapons system can be effective on a contemporary battlefield. From viewing television news reports, however, in Afghanistan the T-55s appeared to be employed more as mobile artillery, firing from prepared dug-out positions (or as troop carriers along the roads) than in maneuver warfare that would allow them to maximize their speed, mass, and shock value. The limitations of the Afghanistan terrain and proficiency of Northern Alliance tank crews probably were major factors contributing to the manner in which they were utilized.

¹⁷This number represents a growth of five over the previous edition of The Military Balance and probably represents the acknowledgement of a few training units and units directly subordinate to the General Staff Department. Each Military Region is known to have at least one helicopter unit assigned to its area of responsibility.

operational.¹⁸ These 244 aircraft are spread among the 12 units throughout the country, averaging about 20 helicopters per unit.¹⁹

The implications of this sort of deployment are readily apparent: only an extremely limited number of aircraft are available at any one time and place for training. Therefore, only relatively small numbers of units of relatively small size (company to battalion size) have the opportunity to train in what we would call “air-mobile” operations. Luke estimates that at the end of the decade the helicopter force may reach about 400—still a very small number compared to the expected size of the ground force.²⁰

Again, for comparison sake, the U.S. Army currently has approximately 4,700 helicopters in the active duty forces. The opportunities, and indeed the requirement, for infantry units to train in airmobile operations are obviously much higher in our forces than for the PLA. Plus, we have been conducting these operations for about 40 years now. Without knowing the exact figures, one can imagine the cost for the maintenance and training of such a large helicopter fleet. Clearly the PLA has not invested even a small fraction of what the United States Army has in helicopter operations.

Eventual PLA Force Structure will be Much More Expensive

By using these two examples, I do not mean to imply that the PLA will structure or employ its ground force in a manner similar to U.S. forces. Helicopter and tank units are only two important pieces among the many elements needed for ground force mobility and firepower. China will build its own force based on its perceived needs and resources available. Rather, I use these examples simply to illustrate how much more expensive a modern force, however constructed, will be to equip and train than the old-style infantry-heavy PLA.

As far as I can tell, the Chinese investment in ground force modernization has been on the scale of several tens of billions of dollars over the past decade. In order to create a force approaching the size and technical sophistication that the United States built in the 1980s, a country would need to spend more on the scale of hundreds of billions of dollars over several years.

If China decided to divert that scale of resources to the modernization of its ground forces, then such spending would be apparent first in the civilian projects it would have to slow down or eliminate in order to fund such a program. Then, after the equipment is purchased, the training necessary to prepare the troops to actually operate their new weapons at peak effectiveness would also be readily apparent to outside observers.

Improvements have been Made

An aspect of PLA ground force modernization that has received little attention is the widespread introduction of trucks to the infantry forces over the past 15 years.²¹ PLA infantry units now have organic ground transportation that allows them to move their men and supplies much more rapidly overland than in the foot-mobile infantry days. This relatively low-tech, low cost improvement gives the PLA much greater mobility and flexibility than two decades ago.

The force structure adjustments of the past decade, the implementation of a new fighting doctrine, the introduction of new training plans and methods, as well as the new equipment that has entered the force, have without a doubt improved the PLA's operational capabilities. Exactly how capable the PLA is today, or will be in 10 years, will only be proven in combat operations—something the PLA has not conducted for an extended period of time against an external force for over 20 years.

¹⁸In 2000, The Military Balance counted 212 helicopters of all types in the PLA ground forces. This year it reduced that number by not including the 30 Mi-8s it previously had included in the inventory.

¹⁹The PLA is known to retain equipment in its inventory well beyond their effective life cycles. It also has a tendency to skimp on maintenance and the purchase of spare parts, though that trend may be in the process of change. Furthermore, as a general rule, PLA aircraft are flown a considerable number of fewer hours than their Western counterparts. These three factors help keep the cost of the helicopter fleet down, but limit the operational proficiency of the force. Changing such practices would significantly increase the cost of the force.

²⁰This is an estimate based on trends of the past decade or so. We simply do not know what are the actual Chinese plans for helicopter production and army aviation force structure. As stated earlier, trends of the past could be changed if China perceives a greater need due to a more proximate threat and/or if more resources are devoted to military modernization.

²¹The 1984 Defense Intelligence Agency Handbook of the Chinese People's Liberation Army, lists only 30 cargo trucks in a single transportation company for an infantry regiment of 2,817 men. While I do not have an exact figure for the current number of trucks in an infantry regiment, each infantry company is likely to have at least four trucks which would triple the total number of trucks in an older regiment.

Unfortunately, if asked to predict the PLA's current or future combat capabilities, the only true answer I could give is "it depends on the situation."

With limited air and sea transport available for force projection,²² if ordered to conduct military operations, Chinese military planners will select their objectives carefully to maximize surprise, speed, and deception in their operations. Even with a large manpower advantage on paper, the PLA would seek to concentrate combat power at decisive or vulnerable points that would not necessarily require the movement of large numbers of troops. Chinese operators would probably use the activities of its large forces to disguise the movements of fewer, smaller elements that are likely to be employed. Those who predict the massive use of PLA manpower in the initial stages of future combat operations probably are underestimating the intellectual capabilities of Chinese military planners.

It seems reasonable to conclude that PLA planners would be more confident of their abilities the closer to their borders and the less technically advanced their foes are. However, the farther away from China the PLA must project force, and more technologically advanced the enemy, the less confident Chinese planners would be in their ability to conduct operations successfully with existing forces. In other words, in some circumstances against some foes, China's large ground force mostly equipped with older weapons would be militarily effective. Without taking into account political factors,²³ the chart below helps illustrate why the various countries in the region and the world can have different perceptions of the military threat posed by China.

Confidence Level of Chinese Military Planners Technological Level of the Enemy Low High Proximity To Chinese Forces Near Reasonable Low Far Low Least

No matter what the situation, should the PLA be ordered to conduct military operations, I believe the PLA will follow the orders of its state and Party leaders and attempt to employ its forces in the optimal manner possible. Since PLA planners know the true state of the readiness of their forces, I also believe that the methods they would use will probably to some extent surprise even knowledgeable foreign observers. Nevertheless, I still cannot predict their chance of success.

Things to Watch For

As highlighted above, the growth and training of the PLA's armored forces and helicopter units are important to be monitored in the coming years. These forces are often part of what have been identified as "Rapid Reaction Units," which comprise a small (but growing) proportion of the force and are found in all Military Regions.

Just as important to monitor is the growth of the air and naval assets that would project these forces beyond China's borders and the training exercises that demonstrate the PLA's ability to move forces from one Military Region to another. Ground force units are known to have moved personnel by air into Tibet on normal troop rotations and there have been reports of moving a division headquarters by aircraft as well. But to my knowledge, the PLA has not yet moved large ground force units and their major weapons and equipment in an exercise situation using PLA Air Force (PLAAF) aircraft.²⁴ This sort of heavy lift operation would be an important part of many force projection scenarios.

Special Operations Forces are one element of the ground forces that have been emphasized in the past decade and will likely be a major ground force contribution to any Local War scenario. SOF units should currently be considered capable of being deployed beyond China's borders with existing PLA Air Force or army aviation assets. (The 300 Y-5 biplanes in the PLAAF would be an appropriate mode of delivery for small SOF teams.) Some Chinese SOF units may have grown out of previously existing reconnaissance units, but others are likely to have been recently formed in addition to the pre-existing recon units. Still, it is likely that these SOF soldiers so far number only in the low thousands.

New equipment inevitably will continue to be introduced into the ground forces. However, it is very difficult for outsiders to determine the extent to which the new gear has been issued to the forces. News reports, especially internet sources, and sales promotion material describing new systems produced weapons manufactured by the Chinese defense industries should be read with a note of caution. Often a few weapons or vehicles of one sort or another are produced, photographed, and of-

²² China retains the option of mobilizing civilian aircraft and ships to support military operations. While such an effort will increase transport capacity, it will also be readily visible and likely compromise strategic surprise.

²³ Political factors may be external, such as the role of alliances, or domestic, such as historical or internal pressures.

²⁴ I stand ready to be corrected if this, or any other statements in my testimony, can be updated with current data.

ferred for foreign sales. A few prototypes may be tested by the forces and the implication is made that the weapons are in service in the PLA. Many of these weapons never actually are deployed to the forces in any significant number. The many variations and modifications of weapons and the various nomenclatures that they are known by compound the confusion.

Final Thoughts

The modernization of the Chinese ground forces deserves careful monitoring and examination by the United States and China's neighbors. The debate in America about "the China threat" would be better served if both the governments of the United States and China released more information about Chinese military modernization.

Contact between the defense establishments of the both countries is essential for greater understanding of China's modernization. Many questions of interest to the Commission can be answered, at least in part, through direct contact with the PLA itself.

It is my experience that when overall relations between the United States and China are good, military to military ties also improve and the PLA is granted permission to allow U.S. attachés and visitors greater access to PLA personnel and facilities.²⁵ But we also need to be mindful of what can be realistically expected out of the mil-to-mil relationship. There are many examples that illustrate that one or two meetings between high ranking officials will not produce the kinds of personal relationships that often occur with other militaries and can be called upon in times of emergency.

In conclusion, while I have used U.S. forces as a point of comparison, I hope my testimony has in some way demonstrated that Chinese civilian and military leaders have different social, economic, and political factors from the United States as well as different military missions to consider when making the strategic decisions necessary to fund the modernization of their armed forces. To state the obvious, what might seem logical to us may not be applicable to the Chinese situation. I give the Commission great credit for attempting to work through what can be a very frustrating problem due in large part to the lack of credible and verifiable information.

Thank you again for this opportunity to appear here today.

Co-Chairman DREYER. Next, we have Professor/Captain Cole. He is Professor of International History at the National War College and also an Associate Dean; and perhaps of most interest to members of the Commission, Professor Cole's wonderful book, "The Great Wall at Sea," has recently been published to widespread popular acclaim by the Naval Institute Press.

STATEMENT OF BERNARD D. COLE, ASSOCIATE DEAN FOR FACULTY AND ACADEMIC PROGRAMS AND PROFESSOR OF INTERNATIONAL HISTORY, NATIONAL WAR COLLEGE

Mr. COLE. Thank you.

I'd like to thank the Commission for the honor of asking me to appear today.

Chairman D'AMATO. We are all reading it.

Mr. COLE. Oh, thank you.

I was asked specifically to address the topic of the Chinese People's Liberation Army-Navy (PLAN) and its budget processes, which is very difficult challenge. What I have done in addition to drawing on my own research on the Chinese navy is also to draw on my own time with our navy and three years in the Pentagon, working on U.S. Navy budget issues, which is as complex a process as one is liable to find anywhere.

The topic of the naval budget in China certainly has important implications for U.S. interests and policy in East Asia, and any dis-

²⁵ See David M. Finkelstein and John Unangst, "Engaging DOD: Chinese Perspectives on Military Relations with the United States," The Center for Naval Analyses, October, 1999, particularly Chapter 5 for a description of the elements of the Chinese government involved in decisions about the mil-to-mil relationship.

cussion of Chinese military spending—and I steal this line from Bates Gill—should begin with Mark Twain’s reminder that “There are three kinds of lies—lies, damned lies, and statistics.”

For instance, estimates of the PLA’s 1994 budget range from the Chinese Government’s \$6.3 billion to the \$92 billion given by two American observers. The budget for 1995 includes the Chinese Government’s \$7.5 billion figure, the U.S. Arms Control and Disarmament’s Agency’s \$63.5 billion, and a later estimate by a RAND analyst of \$150 billion or more.

There are several reasons for our difficulty in accurately estimating the count of the Chinese naval budget. First is the conviction by the Chinese Government that anything having to do with the military ought to be secret.

Second, Beijing has more than one way of describing the resources it puts into its military’s budget. It simply doesn’t use the same sorts of budgetary concepts, that we and many other nations do.

Third, the Ministry of Finance in China categories allocations as either central or local, which complicates budget determination.

Fourth, budgeted defense spending is not clear with respect to the inclusiveness of allocations for many categories—for instance, some research and development, capital construction, and some personnel accounts.

Fifth, the military draws on some non-central government funding, including profits from commercial enterprises.

And finally, frankly the lack of knowledgeable American observers of the Chinese navy who speak and read Chinese sufficiently well to understand not just what is being said, but understand what is not being said, I think severely limits our ability to understand what they are doing.

Despite these difficulties, I think we have to attempt to understand the budget resources being allocated to the PLAN, since that in turn can help us understand the purposes for which Beijing is engaged in modernizing the PLAN and increasing its capability to serve as an instrument of national security policy.

During the last decade, China has been converting its very large but generally obsolete navy into a force far more able to participate effectively in achieving national security goals. Beijing is attempting to build a navy able to operate effectively in Asia, where China’s most vital maritime interests lie. These include, first and foremost, defense of the homeland, a relatively straightforward task given the current lack of military threats. Second is the reunification of Taiwan with the mainland, and third is other sovereignty claims. Fourth is the maritime economic interests, including East Asian regional sea lines of communication as well as offshore mineral and biological resources; another consideration is the heavy concentration of modern economic enterprises in China’s coastal regions.

There is little doubt that China views the United States as the primary maritime threat to its perceived national interests in East Asia, especially Taiwan.

I mentioned that the strength of the PLAN increased significantly between 1990 and 2000. The total number of combatant ships remained about the same as older ships were decommis-

sioned, but today's Chinese navy includes more modern warships and submarines and is significantly more capable than its 1990 fleet.

The most important new ships and submarines have been those acquired from Russia—four Kilo-class conventionally-powered submarines and two Sovremenny-class guided missile destroyers, although systems for those and other ships have been acquired from many other nations.

Foreign purchases were likely not funded from the annual PLAN budget, but by special allocation from the Chinese Government through the Central Military Commission (CMC). Nonetheless, the navy's annual budget would have still been stressed by these new purchases, since they required specialized personnel training, maintenance packages, and spare parts supplies.

In addition to the two Sovremennys, the Chinese navy's most modern warships are two Luhai-class and one Luhai-class guided missile destroyers, all constructed in China, but all equipped with many foreign systems. It is presently unclear whether the Chinese navy will receive funding sufficient to buy additional Sovremennys from Russia, although there has been much open-source press reporting to that effect, and to also build more Luhais, which is their newest class of warship. I don't think, based on conversations I have had with Chinese officers, that the navy will receive that funding and has opted to acquire additional Luhais, although it may well improve that ship's capabilities by arming it with the Moskit, (or the "Sunburn" as it is also known), anti-surface ship missile.

On the submarine front, China is building the successful Ming and potentially more capable Song-class of conventionally powered submarines, turning out about one per year of the former and one of the latter every two years, although the pace of construction of the Song may well increase as they solve noise-level problems with the first two ships.

This construction probably means that Beijing will not purchase additional Kilo-class boats from Moscow. Rather, China may be holding back on foreign purchases until a successful submarine design incorporating air-independent propulsion (AIP) is available, perhaps a variation of the Russian Amur-class, long under development. Air-independent propulsion allows a conventionally-powered—that is, a non-nuclear-powered—submarine to remain underwater for several days; and an AIP submarine is much less expensive than one that is nuclear powered. When I say much less expensive, I include both the cost of the construction itself and the price of training the crew to operate it.

Hence, the PLAN budget—

Commissioner BRYEN. The price compared to nuclear submarines?

Mr. COLE. Yes, sir.

Hence, the PLAN budget must be assumed to include a continued indigenous submarine construction program, without the supplementary funding that would be allocated if additional Russian submarines are purchased.

The most significant addition to the future Chinese submarine force, however, may be a nuclear-powered attack submarine des-

ignated “Type 093,” now under construction, almost certainly with extensive Russian assistance.

The design and construction dollars for this new nuclear-powered submarine (SSN), will probably come from the navy’s “regular” budget, but it is equally likely that the central government, through the CMC, has provided additional extra-budgetary funds to pay for the Russian assistance in both design and construction engineering that is being used in building the boat.

In designing its budget, the navy leadership first formulates its request within a paradigm of several categories, which I would list under the following: personnel, education and training, ops and maintenance, research and development, procurement, construction, and civil sector.

While the budgetary process within the navy remains opaque, the navy itself defines itself as having five operational forces—surface, submarine, aviation, coastal defense, and Marine Corps.

Each of these obviously has a bureaucratic stake and an input into the PLAN budget process, as would presumably PLAN headquarters departments in Beijing and the three operating fleets—North Sea, East Sea, and South Sea. The process itself no doubt follows a formal schedule of analysis, estimate, submission, review, and resubmission, but also no doubt is relatively continuous throughout the year.

A review of the PLAN’s changes in force structure and operational capabilities during the past decade serves as an indicator of the efficacy of the navy’s budget gamesmanship, despite our lack of precise knowledge. I conclude that the PLAN is severely resource-constrained, but has nonetheless been receiving more than its fair share of the budget. By that, I mean that in a military of a couple of million people, the navy only numbers perhaps 230,000, and yet the amount of budget dollars it is receiving from the PLA overall is in excess of that proportion of personnel.

What about operational implications? There is little doubt, I think, despite post-September 11 developments, Taiwan remains the preeminent concern of the Chinese navy, and that concern translates into a primary PLAN focus on the U.S. Navy. Hence, PLAN budget priorities will continue to concentrate on those systems and capabilities that may facilitate a successful campaign in the East China Sea linked to Taiwan, with possible U.S. intervention.

I really don’t think it is necessary to talk about “magic-mace” weapons; I think they already exist. I spent one year in charge of the U.S. Navy’s mine warfare effort in the Pentagon, and frankly, we still don’t know how to deal adequately with mines designed in 1908. (The mine that the USS Tripoli (LPH-10) in the Persian Gulf hit in 1991 was a 1908 Russian design, coincidentally).

There are four factors which I think will serve as significant harbingers of Chinese intent to increase its navy’s role in the Taiwan scenario. The first would be an increased rate of acquisition of the SS-N-22, the “Sunburn” anti-ship cruise missile, and more ships like the Sovremenny or the Luhai, which can fire it.

Second would be the transfer to the navy of SU-27s and SU-30s presently being acquired from Russia but assigned only to the Chinese air force.

Third would be the acquisition and conversion of naval submarines and surface ships dedicated to mine-laying, with a concomitant buildup of the PLAN's stock of modern sea mines.

Fourth, a purchase of several more Kilo-class submarines from Russia and a store of wake-homing torpedoes to arm them would be a significant sign.

Finally, and perhaps most importantly, would be dramatically increased expenditures on PLAN training in submarine warfare, anti-submarine warfare, anti-air warfare, and anti-surface warfare.

Looking back at the last 10 years of development and modernization in the Chinese navy, I think the most significant thing it has done is the overhaul and development of its schools and training establishment.

A range of expenditures for future major ships and systems is provided by Bates Gill. His high and low "Estimate Range of Costs for Annual Chinese Defense Procurement" ranges from \$10.75 billion to \$14.3 billion—really not a significant sum compared to certainly many other defense budgets.

The processes by which the Chinese navy requests, receives, and spends its funding provide a skeletal structure of PLAN capabilities and serves as an important indicator of China's intention and capabilities in the contested East Asian security realm. Understanding that requires not only classic intelligence work, but the closest interaction possible between our military and academic observers and their Chinese counterparts. The PLAN is a closely guarded book, but it is not closed.

Thank you very much.

Commissioner DREYER. Thank you very much, Professor.

[The statement follows:]

PREPARED STATEMENT OF BERNARD D. COLE

The views expressed in this paper are those of the author and do not reflect the official policy or position of the National War College, the Department of Defense, or the U.S. Government.

Allow me to begin by thanking you, Mr. Chairman, and the members of this distinguished Commission for the opportunity to take part in the hearings you are holding today on the topic of the budget of the Chinese People's Liberation Army (PLA). As requested, I will focus my comments on the PLA Navy's (PLAN) role in determining and sharing the PLA's budget.

Introduction

This topic has potentially important implications for U.S. interests and policy in East Asia, and thus warrants continued close attention by American observers of China. As a student of China's military, especially its navy, and its foreign policy, I am very pleased to be able to share my views on this subject.

Any discussion of Chinese military spending would do well to begin with Mark Twain's acerbic reminder that "there are three kinds of lies . . . lies, damned lies, and statistics."¹ For instance, estimates of the PLA's 1994 budget range from the Chinese government's \$6.3 billion, to the \$92 billion given by two American observers; those for 1995 include the Chinese government's \$7.5 billion figure, the U.S. Arms Control and Disarmament Agency's \$63.5 billion, and a later estimate of approximately \$150 billion provided by a RAND Corporation analyst.² Hence, what fig-

¹Cited by Bates Gill, "Chinese Defense Procurement Spending: Determining Intentions and Capabilities," in James R. Lilley and David Shambaugh (eds.), *China's Military Faces the Future* (Washington, D.C.: AEI and M.E. Sharpe, 1999), p. 195.

²Charles Wolf, "Asian Economic Trends and Their Security Implications," RAND, MR-1143-OSD/A.2000, p. 19, estimates Chinese military spending on an exchange rate and parity basis: \$120-\$180 billion is the figure for 2000; \$249-\$373 billion is projected for 2015 under conditions of stable growth in China.

ure are we to use when Beijing announces, as it did early this year, that it is increasing its military budget by 17.7 percent?

It is difficult to estimate accurately the amount of the Chinese navy's budget, for several reasons. First is the innate sense of secrecy by the Chinese government and military. They simply do not agree with American (and other foreign) conceptions as transparency as a commendable means of reducing international tension and building bilateral confidence.

Second, Beijing has more than one way of describing the resources it puts into its military's budget. "Defense budget" is not a commonly used term in China (or in many other countries, for that matter); Beijing prefers "defense expenditure" or "military expenditure," and covers many categories of spending. Third, the Ministry of Finance categorizing allocations as either central or local complicates budget determination. Local government funding probably includes much of the budget of People's Armed Police (PAP) and militia land forces. There are also sea borne militia units, and there is very little evidence about how these forces are organized, funded, and operated.

Fourth, budgeted defense spending is not clear with respect to the inclusiveness of allocations for many categories, including research and development, capital construction, and some personnel accounts, including some retirement and demobilization costs. For instance, money allocated under one account may well be obligated for other purposes. Fifth, the military draws on non-central government funding, including profits from commercial enterprises.³ These unofficial funding sources which complicate any evaluation of China's defense budget result from what one distinguished observer notes as the "overriding financial fact in the development of the PLA: inadequate funding."⁴

Sixth, the navy has achieved an increasingly important status during the past decade and probably has increased the percentage of China's defense spending it receives. It is not apparent, however, that this has resulted in a meaningful shift of national security emphasis in China from continental to maritime security concerns.

Analyzing The PLAN Budget

The following remarks are based on four general assumptions. First, the Chinese military continues not to be accorded top priority by China's leaders. Second, the land forces continue to dominate the Chinese military, as evidenced in the size and leadership role of that service. Third, the PLA has to deal with inter-service rivalries similar to those experienced in the United States and other militaries. Fourth, I further assume that within the PLAN, the different naval arms—including submarines, surface ships, and aviation—compete with each other for budget resources.

Despite these difficulties and uncertainties, we must attempt to understand the budget resources being allocated to the PLAN. Such knowledge will help us understand the purposes for which Beijing is engaged in modernizing the PLAN and increasing its capability to serve as an instrument of national security policy.

During the past ten years, China has been converting its very large but generally obsolete navy into a force more able to participate effectively in achieving national security goals. These goals do not, in my view, include deploying a PLAN able to operate globally, as a conventional force. By that, I mean that Beijing does not aspire to deploy aircraft carrier battle groups around the globe; it will continue to engage in a program of naval diplomacy, based on sending groups of two–three ships on long cruises. China is also likely to continue trying to deploy a small sea-based nuclear deterrent force, which of course has global implications.

Instead, Beijing is attempting to build a navy able to operate effectively in Asia, where China's most vital maritime interests lie. These include first and foremost, defense of the homeland, a relatively simple task given the current lack of military threats. Second is the reunification of Taiwan with the mainland, while third is other sovereignty claims, including the land features and associated water areas of the South China Sea, the Diaoyu Tai (or Senkaku Islands) that lie northeast of Taiwan, between that island and Okinawa, and various maritime boundary disputes.

Fourth is the maritime economic interests vital to China. These include, first, the sea lines of communication (SLOCs) located in Asia's coastal waters, a term I define

³See Arthur S. Ding, "China's Defense Finance: Content, Process and Administration," *The China Quarterly* (June 1996), pp. 428–442; and Shaoguang Wang, "The Military Expenditure of China, 1989–98," *SIPRI Yearbook 1999: Armaments, Disarmament and International Security* (Oxford: Oxford University Press, 1999), pp. 334–349, for discussion of this process.

⁴Ellis Joffe, "The PLA and Economy: the Effects of Involvement," paper presented at IISS/CAPS Conference on "Chinese Economic Reform: The Impact on Security Policy," Hong Kong (8–10 July 1994), p. 12.

as those ocean areas within 200 nautical miles (nm) of the coast.⁵ Beijing is also vitally concerned about much more far-ranging SLOCs, of course, especially those that pass through the South China Sea and the Indian Ocean to the Middle East, and across which is imported approximately 30 percent of the daily oil requirements of China's growing economy.⁶ Second are offshore mineral and biological resources; these include approximately 10 percent of China's known petroleum (oil and natural gas) reserves, and the fisheries industry, an important source of protein to the Chinese diet. Third is the heavy concentration of modern economic enterprises in China's coastal region.

Beijing's goal is to deploy naval and air forces sufficient to deter and if necessary defeat any threats to the security of these maritime interests. This in turn requires an estimate of the operational situation, based on likely threats. There is little doubt that China views the United States as the primary maritime threat to its perceived vital national interests in East Asia.

The strength of the PLAN increased significantly between 1990 and 2000, a decade of growth between the end of the Soviet Union and the continued intensification of the Taiwan issue. The trend during that decade, a trend that continues today, is a modest addition of approximately 1.5 new surface combatant ships and one submarine per year. The total number of combatants has remained about the same, as older ships are decommissioned, but today's PLAN includes more modern—if rarely state of the art—warships and submarines, and is significantly more capable than its 1990 fleet.

The most significant new ships and submarines have been acquired from Russia. China's navy was begun in 1950 with large-scale Soviet assistance in all areas, from training schools to ships, and Beijing continues to rely on Moscow for naval support.

Four Kilo-class conventionally powered submarines were ordered from Russia in 1993. Although a 1970s design, these are still very capable conventionally powered attack submarines. In 1998, Beijing purchased two Sovremenny-class guided-missile destroyers (DDGs) for approximately \$900 million; both of these ships are now homeported with China's East Sea Fleet. Armed with the formidable SS-N-22 Moskit missile, these ships were designed by the Soviets in the 1970s to attack aircraft carriers and cruisers.

These foreign purchases were likely funded not from the annual PLAN budget, but by special allocation from the Chinese government through the Central Military Commission (CMC). The annual budget would have been still stressed by these new purchases, however, since they required specialized personnel training, maintenance packages, and spare parts supplies. In fact, it is probable that the PLAN tried to save money with the first two Kilo-class submarines by attempting to have both commissioning crews share one crew's training package; the results were, predictably, poor performance by these first two boats.

China has also been modernizing its navy with indigenously-built surface combatants, submarines, and aircraft. This latter category is significant, given the central importance of airpower to modern naval forces; apparently none of the Su-27 and Su-30 aircraft acquired from Russia have been assigned to the PLAN.

In the category of warships, however, the PLAN now deploys two Luhai-class and one Luhai-class DDGs. These are powered by gas-turbine engines acquired from the United States during the 1980s in the case of the Luhus, and from Ukraine in the case of the Luhai.⁷ Despite these modern power-plants (more efficient than the Sovremennys' trouble-prone steam plants), the three Chinese-built DDGs possess limited weapons and sensor suites, especially in the areas of anti-air and anti-submarine warfare. It is presently unclear whether the PLAN will receive funding sufficient to both buy additional Sovremennys, although there has been much open-source press reporting to that effect, and to build more Luhais. I do not think the navy will receive that funding, and has opted to acquire additional Luhais, although it may well improve the ship's capabilities by arming it with the Moskit anti-surface ship cruise missile, and with a phased-array type of anti-air warfare (AAW) radar.

⁵ One nautical mile equals 2,076 yards, or approximately 1.15 statute miles. I am not aware of an authoritative description of these waters by Chinese strategists.

⁶ The U.S. Department of Energy estimates China's daily oil use at 4.6 million barrels per day, with 1.4 million barrels of that imported.

⁷ The United States sold China five LM-2500 marine gas-turbine engines manufactured by GE; four of these engines power the two Luhus; the location of the fifth is not known. China has acquired an unknown number of engines from Ukraine; two of these power the Luhai.

This will still require the Chinese to purchase the ships' gas-turbine engines from a foreign source, probably Ukraine.⁸

China is building the successful Ming and potentially more capable Song-classes of conventionally-powered submarines, turning out one per year of the former and one of the latter about every two years. This construction probably means Beijing will not purchase additional Kilo-class boats from Moscow. Rather, China may be holding back on foreign purchases until a successful submarine-design incorporating air-independent propulsion (AIP) is available, perhaps the Russian Amur-class, long under development.

Hence, the PLAN budget must be assumed to have to accommodate a continued indigenous submarine-construction program, without the supplementary funding that would presumably be allocated if additional Russian submarines were purchased. The most significant addition to the future Chinese submarine force, however, will likely be the nuclear-powered ship (SSN) designated "Type 093," now under construction, almost certainly with extensive Russian assistance.

The PLAN already deploys five Han-class SSNs, but these have never been completely reliable, and it is doubtful that more than three of them are currently operational. The Han is modeled on the old Soviet November-class, designed in the 1950s, which had a troublesome nuclear engineering plant; the Type-093 is presumably modeled on the more modern and far more capable Victor III-class of Soviet boat (designed in the 1970s). The design and construction dollars for this new PLAN SSN probably come from the navy's "regular" budget, but it is likely that the central government has provided additional, extra-budgetary funds to pay for the Russian assistance in building the boat.

The Budget Process

The PLAN's budget process involves a number of steps. First, the navy leadership formulates its request within a paradigm of several categories. These may be listed under the following headings:

1. *Personnel*.—Pay and fringe benefits to naval personnel, to include some food, uniforms, pensions, and possibly allowances provided personnel who are demobilized; this category also includes the pay and fringe benefits provided civilian employees.

2. *Education and training*.—This category would include each of the three geographic fleet's shore-based training establishments; recruit and new officer training; naval academies; thirteen naval colleges ranging from entry-level academies for officer-candidates to training for commanding officers in over 200 technical, tactical, and operational subjects; and possibly the PLAN contributes to the cost of operating various inter-service schools. Not included in this category may be specialized training packages for newly-purchased foreign systems, such as the Kilo-class submarines obtained from Russia.

3. *Operations and Maintenance*.—This includes ships, submarines, and aircraft, as well as the Marine Corps and other units under PLAN command; everything from fuel to spare parts for most equipment. Other budget lines include meteorological-oceanographical support and shore-based communications systems. An important sub-category here for the PLAN is "hotel services": these include housing and shore-support for ships and other operating units and their crews.

4. *Research and Development (R&D)*.—The bulk of PLA R&D likely is conducted and funded on a centralized basis, but the PLAN probably has its own R&D establishment for addressing such navy-specific areas as anti-submarine warfare (ASW). This category should include the complete range of research (categorized into four levels in the U.S. Navy), from basic laboratory experiments to afloat-testing of operational systems.

5. *Procurement*.—While headline-grabbing items purchased from foreign concerns—primarily Russian, French, and Israeli during the past decade—are almost certainly funded directly by the central government, the PLAN must allocate resources for indigenously produced items, ranging from Luhai-class DDGs and Song-class submarines to small arms and personal equipment for its personnel.

6. *Construction*.—This budget category focuses primarily on naval base and other facility construction, ranging from piers to warehouses to personnel housing and recreational facilities. Another important line item here concerns the navy's fuels systems, including storage, pipelines, and pumping facilities.

7. *Civil Sector*.—This is a particularly uncertain category, and would include funding the PLAN may be obligated to provide naval militia units ashore and afloat. It

⁸The first gas-turbine powered warship went to sea in 1936, and one of the curious shortcomings of China's military-industrial complex is its apparent inability to design and produce an effective maritime gas-turbine engineering plant.

also refers to budgetary interactions between the navy and local governments, ranging from provincial support to inland PLAN facilities to support of navy personnel draft and recruiting teams; these involve some naval expenditures, but also accrue monetary and other support to the PLAN.⁹

The budgetary process within the navy remains opaque. Extrapolating from the annual cycle the PLAN uses for requesting special operational assignments, and basing my discussion on the cyclical nature of governmental budgeting procedures in other navies, I offer the following description. The PLAN includes five operational forces: surface vessel units, submarine units, aviation units, coastal defense units, and Marine Corps.¹⁰

Each of these has a stake and an input in the PLAN's budget process, as would, presumably, the PLAN Headquarters departments and the operating fleets: North Sea, East Sea, and South Sea. The process itself no doubt follows a formal schedule of analysis, estimate, submission, review, and resubmission, but also no doubt is relatively continuous throughout the year. This continuous process results from competition for scarce budgetary resources both within the PLAN, and from that service's competition with the air and ground forces.

Conclusion

Our lack of precise knowledge of the procedures followed by the Chinese navy is obtaining and spending its share of the nation's defense budget is not surprising, given the commitment to secrecy by the PLA. However, a review of the PLAN's changes in force structure and operational capabilities during the past decade can serve as an indicator of the efficacy of the navy's budget gamesmanship.

Future Spending

As for the next decade, we are forced to estimate PLAN expenditures based on the international situation, especially that in East Asia, policy statements by China's government; and observed acquisitions and doctrinal developments within the PLAN. Another factor is the future of the Chinese economy, which is likely going to be subject to major perturbations resulting from membership in the World Trade Organization.

There is little doubt, despite the post-September 11th developments in west China, that Taiwan will remain the preeminent concern of the Chinese navy. That concern translates into a primary PLAN focus on the U.S. Navy. Hence, PLAN budget priorities will continue to concentrate on those systems and capabilities that may facilitate a successful campaign in the East China Sea against possible U.S. intervention, should China's determination to reunify Taiwan with the mainland result in Beijing using the military instrument of statecraft.

The development of an aircraft carrier, interestingly, would not very significantly affect this operational situation: during any contest in the vicinity of Taiwan, the PLAN would be able to rely on airpower based on the mainland. The presence of one or two carriers would present the PLAN with more of a burden—the carriers would embody so much political capital for Beijing that they would have to be protected at all costs—than a advantage.

Four factors serve as more significant harbingers of Chinese intent to increase its navy's role in a Taiwan scenario. First would be an increased rate of acquisition of SS-N-22 anti-ship cruise missiles and the ships, probably of the Luhai-class, aboard which to deploy them. The decision to build additional Luhais would be signaled by Beijing's acquisition of numbers (two per ship) of maritime gas-turbine engines, probably from Ukraine, as discussed above. This program might also be supported with significantly increased production of Chinese-manufactured C-802 anti-ship cruise missiles.

Second would be the immediate transfer to the navy of Su-27s and Su-30s being acquired as a result of contracts with Russia (and the exercising of newly-acquired AWACs and aerial refueling aircraft with these fighters). Third would be the acqui-

⁹This discussion draws on two articles by Shaoguang Wang, who lists thirteen categories of "the Chinese official defense budget" in his SIPRI Yearbook article (p. 37), and eleven categories of China's "military expenditure" in his China Quarterly article (p. 890).

¹⁰Described by PLAN commander Admiral Shi Yunsheng: quoted in Huang Caihong, Chen Wanjun, and Zhang Zhao, "China Enhances the Navy's Comprehensive Strength—Interview with Naval Commander Vadm Shi Yunsheng," Liaowang, Nr. 16 (Beijing), 19 Apr 99, 13–15, in FBIS–CHI–99–0513. Also see Ren Yanjun, "Forging A Shield of Peace for the Republic—Part 1 of Roundup on 50 Years of Achievements in Army Building," Jiefangjun Bao, 6 Sep 99, 1, 2, in FBIS–CHI–99–0911; and Xu Zuzhi, "Backgrounder on National Day Celebrations," Zhongguo Xinwen She (Beijing), 1 Oct 99, in FBIS–CHI–99–1002.

sition/conversion of naval craft dedicated to mine-laying, with a concomitant build-up of the PLAN's stock of modern sea mines.¹¹

Fourth, a purchase of several more Kilo-class submarines from Russia, and a store of wake-homing torpedoes to arm them, would demonstrate China's determination to rapidly expand this most dangerous naval warfare capability. This determination would be further buttressed by a significant increase in the production of the indigenously designed Song-class submarine. China is also building the first of a new class of SSN, the Type-093. It is very doubtful, given China's record of indigenous production of very complex military platforms, that more than one or possibly two of these new SSNs will be deployed before the end of the decade. In any event, conventionally-powered submarines still pose a threat sufficiently serious enough to serve Beijing's national security purposes in East Asian waters.

Finally, and perhaps most important, would be dramatically increased expenditures on PLAN training in ASW, AAW, and anti-surface warfare (ASUW). I deliberately omit amphibious warfare training/exercises from this list of indicators, given China's demonstrable lack of interest in the relatively easy acquisition of the ships necessary to execute this mission in the classic sense.

A range of expenditures for future major ships and systems is provided by Bates Gill¹² in the article cited above. His high and low "Estimate Range of Costs for Annual Chinese Defense Procurement, circa 2000–2005" for 21 large surface combatants, 20 submarines, and 500 cruise missiles runs from \$10.75 billion (low estimate), to \$14.3 billion (high estimate). As noted above, however, budget allocations serve as indicators which must be considered in conjunction with the tenor of the political climate in Beijing and in East Asia.

The processes by which China's navy requests, receives, and spends its funding is no clearer than are many of the other processes through which Beijing administers the PLA. Nonetheless, it is a process we must continue to try to understand, since it provides the skeletal structure of PLAN capabilities and hence may serve as an important indicator of China's intentions and capabilities in the contested East Asian security issues. That understanding requires not only classic intelligence work, but the closest interaction possible between our military and academic observers and their Chinese counterparts. The PLAN is a closely guarded book, but it is not closed.

Co-Chairman DREYER. Our next presentation will be by Luke Colton, who is an independent consultant and the author of a number of reports on aerospace and defense matters.

Mr. Colton?

STATEMENT OF LUKE COLTON, INDEPENDENT DEFENSE CONSULTANT

Mr. COLTON. Thank you, Dr. Dreyer.

Let me begin by thanking the members of the U.S.-China Commission for extending their invitation to appear before you here today. I should stress at the outset that I am not a budget analyst, so the observations which I will share with you today are related more to the weapons system acquisition process of the People's Liberation Army Air Force.

Given the time constraints, I shall limit myself to a discussion of four broad, interrelated issues which I believe are central to the procurement system process, each one of which poses its own unique challenges. The following insights presented are more of a general nature and not necessarily program-specific, although some things might be inferred as being program-specific.

The Chinese air force acquisition process is complex, lengthy, and influenced by a number of key organizations with interests well beyond those of its own. There are four key determinants which I be-

¹¹ The PLAN currently operates one dedicated minelayer, although some of its surface combatants (and presumably its submarines) are nominally required to exercise at least once a year at laying mines.

¹² Gill, pp. 220, 222. Estimates are in \$U.S. and, while obviously very approximate, are useful when attempting to decipher China's defense spending.

lieve are significant to this process: specific mission requirements; long-term aeronautical industry strategy; limited availability of program funding; and relations with foreign governments and system providers.

Platform acquisition is first and foremost a function of the operational requirements which result from the PLAAF's mission. Currently, the air force continues to view as its principal mission the defense of PRC territory and air space, while gradually emphasizing offensive operations into the future. While its secondary missions are a key to providing air support to PLA ground and naval forces, the air force readily admits that it cannot meet these missions. More specifically, since the establishment of the air force in 1949, it has struggled with the definition of its mission and the development of appropriate associated mission statements. This in turn has prevented their effective translation into what we call Request for Proposals or RFPs and Formal Statements of Work or SOWs, which are needed by Aviation Industries of China, the overarching entity of the aviation industry in China, to define hardware performance requirements.

Fundamentally, I believe that this is an institutional problem with the net result being the induction of a new system with capabilities which fall far short of the specified technical objectives.

While there is a complicated formal process that underpins system procurement which is centered around the Equipment Department of Headquarters Air Force, perhaps the most influential factor which I believe guides acquisition is whether or not the specific system may be designated a so-called focal point program. Such a classification suggests its perceived importance within the highest policymaking circles of the General Staff Department, the Central Military Commission, and the State Council.

This high-level political support in turn translates generally into favorable funding, which can significantly determine the scope and pace of the program itself. By contrast, lower-priority programs may continue at a gradual pace with funding that is secured by entities other than the central government.

Moreover, I believe that there exists a direct correlation between the critical absence of what I call "program champions" within the PLAAF—that is, high-ranking officers with the necessary experience, foresight, and clout to aggressively promote and defend their aircraft program vis-a-vis other competing defense interests—and the ability of that particular program to attract the required funding that is necessary either for its development or procurement.

Symbiotically tied to these hardware specifications which are produced by the ED is the central government's long-term aeronautical development strategy. In spite of what appears to be an increasing reliance on Russian weapons systems to meet selective air force modernization objectives, China's ultimate aspirations are to eventually develop a fully self-sufficient aircraft industry as a matter of national strategy and prestige.

To this end, AVIC seeks to meet the technical requirements which are articulated in the project documents of the PLAAF. However, the lack of superior managerial expertise; effective program controls, coupled to a very tight accounting system; the absence of many appropriate technologies, and mastery of the systems inte-

gration discipline; and test equipment and methodologies—all fused into an enterprise system which is largely incompatible with the technological innovation and effective dissemination; lack of recognition of individual accomplishments and insufficient protection of and disagreements over ownership of intellectual property rights, as well as serious industry employment concerns, all effectively conspire to subvert the performance benchmarks set by the PLAAF. This is a situation which I believe is generally understood by many at the beginning of a new program.

The air force, whose top priority is to acquire a platform which will meet its operational requirements, all too often recognizes that industry is simply incapable of meeting the stipulated project requirements. As a result, a significant and widening dichotomy exists between the air force specifications and the ability of industry to design, develop, test, and manufacture in militarily useful quantities effective weapons systems at a cost acceptable to the government.

It is not possible for the air force to make its own procurement decisions that are independent of AVIC. Not surprisingly, their relationship is at times characterized by a considerable degree of friction and diametrically opposed interests.

By the same token, it is also perceived that foreign acquisitions represent the only short-term solution to accommodate an air force requirement. Yet the need to import an appropriate system is undesirable, both from the perspectives of the central government and industry alike, because the State Council must exercise strict fiscal responsibility in allocating limited hard currency reserves to the financing of the purchase of a major foreign platform, it is prudent to assume that the procedures that proscribe such acquisitions contrast sharply with those of locally-sourced solutions.

While entering into a cooperative relationship with some international manufacturers is desirable for reasons which have as much to do with national prestige and symbolism as with actual system performance and capability, a deeply ingrained sense of ambivalence and mistrust toward foreigners is often noticeable among the Chinese teams that conduct these commercial negotiations.

As a result, a considerable effort is made to ensure the appropriate allocation of the State Council's limited resources, and in securing the representation of skilled interlocutors and highly-qualified technologists on the pertinent team to carefully evaluate all aspects which are related to such a potential acquisition.

While the import of critical defense equipment from abroad may be favored by PLAAF planners, trying to sell the government and AVIC on such an idea is considerably more difficult. With a non-domestic acquisition, the probability of any local industry participation in such a program precipitously drops to an extremely low level, if any. This can only strengthen industry's resistance to support the use of scarce hard currency for the purposes of financing its cost. In particular, given the reorganization of China's defense industrial complex in 1998 and 1999, and earlier enacted policies that state-owned enterprises or SOEs must rely less on central government funding to secure their continued viability into the future, it is not difficult to see why many SOE general managers are

unenthusiastic when the air force opts for a foreign platform rather than a locally-developed one.

In cases where a consensus has been reached to exploit a foreign channel, the air force probably identifies key international suppliers and produces a comprehensive assessment of their capabilities to either develop the weapon system and/or the products which are likely to meet the desired specifications.

While cost estimates certainly form an integral part of the decision making process, final selection criteria probably also give due consideration to the political relationship the PRC enjoys with the government of the targeted supplier. Although a cooperative relationship with a Western system provider may result in significant benefits, both tangible and intangible, air force planners and the State Council are equally cognizant that it is in their interest to look to non-Western suppliers to meet certain weapon requirements.

At the same time, it would be a mistake to interpret air force sourcing from an oligarchy of suppliers representing a single country as constituting end-user approval or satisfaction. Instead, I believe that such cases reflect high-level pragmatic decision making by group consensus which is necessary to secure imperative hardware requirements within a reasonable time frame.

There is a curious contradiction inherent in such decisions. On the one hand, great importance and prestige is attached to a high-performance machine or quality product offered by a reputable manufacturer. On the other, there exists an underlying but elusive antipathy toward a foreign system. This subtle perception may be traced to China's difficulty in accepting its power and position within the international system, coupled with a highly-developed and astute sense of manifest destiny to correct what it regards as historical anomalies at a critical juncture in the country's place and time.

A more practical set of concerns is that a commercial relationship with an international manufacturer can provide significant opportunities for a foreign government to disrupt or deny the supply of associated product support and/or to acquire information sensitive to the PRC's national security. Thus, while the PLAAF may seriously consider a cooperative relationship with a new systems provider, a culture of institutional secrecy and conservatism probably gives priority to established, proven, and predictable supplier relationships.

In conclusion, I would like to address one final point. PLA writings often uphold the U.S. military as "the" model from which China must learn if it is to complete selective military modernization into the future. Specifically, in certain cases, the PLAAF seems to be influenced by institutional and/or analytical misperceptions to support its transformation into a capable fighting force by procuring similar or comparable weapons systems USAF either has, may have, or is scheduled to introduce into the future. This is endemic of a much larger problem, compounded by the country's great physical distance to the United States and its as yet unproven ability to consistently innovate at a standard which is commensurate with its current level of development and capabilities.

Moreover, its near complete prohibition from participation in international defense industry forums and joint military training exercises effectively precludes the Chinese air force from benefiting from the intangible but invaluable types of analytical exchanges, synergistic interactions, and intimate operational experiences at all levels which the United States Air Force and other leading air forces exploit to their advantage.

Put another way, in my words, the opportunity cost for the PLAAF to accelerate development of its own unique corporate memory is inversely proportional to the square of the rate at which USAF is rapidly advancing along the learning curve. As a result, the PLA's apparent heavy orientation toward the U.S. military experience suggests the conclusions it has drawn are incorrect at times and not necessarily applicable to selective modernization of its air force into the future.

I thank the Commission again for its invitation and would be happy to address any questions which you may have concerning the arms acquisition process or selective modernization into the future.

Commissioner DREYER. Thank you, Mr. Colton.
[The statement follows:]

PREPARED STATEMENT OF LUKE G.S. COLTON

THE PLAAF ARMS ACQUISITION PROCESS: KEY ISSUES IN SYSTEM PROCUREMENT
COMMITTEE HEARING ON CHINESE BUDGET ISSUES AND THE ROLE OF THE PLA IN THE
ECONOMY

PANEL III: SERVICE COMPONENTS OF THE CHINESE DEFENSE BUDGET PEOPLE'S
LIBERATION ARMY AIR FORCE

OPENING STATEMENT

Let me begin by thanking the Members of the U.S.-China Security Review Commission (USCC) for inviting me to share some of my observations related to the weapon system acquisition process of the People's Liberation Army Air Force (PLAAF). Given the time constraints, I will limit myself to discussing four broad, interrelated issues central to PLAAF system procurement, each of which poses its own unique challenges. The following insights presented are of a general nature and not program-specific.

KEY DRIVERS IN WEAPON SYSTEM PROCUREMENT

The Chinese air force acquisition process is complex, lengthy, and influenced by a number of organizations with interests beyond those of its own. Four key determinants are significant to the process: Specific mission requirements; long term aeronautical industry strategy; limited availability of program funding; and relations with foreign governments & system providers.

Defining Mission Requirements

Platform acquisition is first and foremost a function of the operational requirements resulting from the PLAAF mission. Currently, the air force continues to view as its principal mission the defense of PRC territory and air space, while gradually emphasizing offensive operations into the future. While its secondary missions are keyed to providing air support to PLA ground and naval forces, the air force admits it cannot meet these missions. More specifically, since its inception in 1949 the PLAAF has struggled with the definition of its mission and the development of appropriate mission statements. This, in turn, has prevented their effective translation into Request for Proposals (RFPs) and formal Statements of Work (SOWs) needed by Aviation Industries of China (AVIC I & II) to define hardware performance requirements. Fundamentally, this is an institutional problem, with the net result being the induction of a new system with capabilities well short of the specified technical objectives.

While there is a complicated formal process underpinning system procurement centered around the Equipment Department [ED] (kongjun zhuangbeibu/kongzhuang) of Headquarters Air Force/PLAAF, perhaps the most influential factor guiding acquisition is whether or not the specific system may be designated a “focal point program” (zhong dian zhi yi). Such a classification suggests its perceived importance within the highest policymaking circles of the General Staff Department (GSD), the Central Military Commission (CMC), and the State Council. High level political support, in turn, generally translates into favorable funding which can significantly determine the scope and pace of the program itself. By contrast, lower priority programs may continue at a gradual pace with funding secured by entities other than the central government. Moreover, a direct correlation exists between the critical absence of so-called “program champions” within the PLAAF—i.e., high ranking officers with the necessary experience, foresight, and clout to aggressively promote and defend “their aircraft program” vis-a-vis other competing defense interests—and the ability of that program to attract the required funding either for its development or procurement.

Long Term Aeronautical Development Strategy

Symbiotically tied to the hardware specifications produced by the PLAAF is the central government’s long term aeronautical development strategy. In spite of the apparent increasing reliance on Russian weapons systems to meet selective air force modernization objectives, China’s ultimate aspirations are to eventually develop a fully self-sufficient aircraft industry as a matter of national strategy and prestige. To that end, AVIC I & II seek to meet the technical requirements articulated in ED project documents. However, the lack of superior managerial expertise; effective program controls coupled to a tight accounting system; the absence of many appropriate technologies and mastery of the systems integration discipline; and test equipment & methodologies—all fused into an enterprise system incompatible with technological innovation and its effective dissemination; lack of recognition for individual accomplishments; insufficient protection of and disagreements over ownership of intellectual property rights (IPR); and serious industry employment concerns—conspire to effectively subvert the performance benchmarks set by the PLAAF. This is a situation which is generally understood by many at the beginning of any new program.

The air force, whose top priority it is to acquire a platform which will meet its operational requirements, all too often recognizes industry is simply incapable of meeting the stipulated project requirements. As a result, a significant and widening dichotomy exists between PLAAF specifications and the ability of industry to design, develop, test, and manufacture in militarily useful quantities effective weapon systems at a cost acceptable to government. It is not possible for the air force to make its own procurement decisions independent of AVIC I & II. Not surprisingly, their relationship is, at times, characterized by a considerable degree of friction and diametrically opposed interests.

Limited Availability of Program Funding

By the same token, some foreign acquisitions represent the only short term solution to accommodate an air force requirement. However, the need to import an appropriate system is undesirable, both from the perspectives of the central government and industry alike. Because the State Council must exercise strict fiscal responsibility in allocating limited hard currency reserves to finance the purchase of a major foreign platform, it is prudent to assume the procedures proscribing such acquisitions contrast sharply with those of locally sourced solutions.

While entering into a cooperative relationship with some international manufacturers is desirable for reasons which have as much to do with national prestige and symbolism as with actual system performance and capability, a deeply ingrained sense of ambivalence and mistrust towards foreigners is often noticeable among Chinese teams conducting the commercial negotiations. As a result, a considerable effort is made to ensure the appropriate allocation of the State Council’s limited resources, and in securing the representation of skilled interlocutors and highly qualified technologists on the pertinent team to carefully evaluate all aspects related to the potential acquisition.

While importing critical defense equipment from abroad may be favored by PLAAF planners, trying to sell the government and AVIC I & II on such an idea is considerably more difficult. With a non-domestic acquisition the probability of any local industry participation in the program precipitously drops to a very low level—if any—which can only strengthen industry’s resistance to support the use of scarce hard currency for the purposes of financing its cost. In particular, given the reorganization of China’s defense industrial complex in 1998–1999 and earlier enacted

policies that state-owned enterprises (SOEs) must rely less on central government funding to secure their continued viability into the future, it is not difficult to ascertain why many SOE general managers are unenthusiastic when the air force opts for a foreign platform, rather than a locally developed one.

Relations With Foreign Governments & System Providers

In cases where a consensus has been reached to exploit a foreign channel, the PLAAF probably identifies key international suppliers and produces a comprehensive assessment of their capabilities to either develop the weapon system and/or their products which are likely to meet the desired specifications. While cost estimates form an integral part of the decision making process, final selection criteria probably also gives due consideration to the political relationship the PRC enjoys with the government of the targeted supplier(s). Although a cooperative relationship with a Western system provider may result in significant benefits, PLAAF planners and the State Council are equally cognizant that it is in their interests to look to non-Western suppliers to meet certain weapon requirements. At the same time, it would be a mistake to interpret air force sourcing from an oligarchy of suppliers representing a single country as constituting end-user satisfaction. Instead, such cases reflect high level pragmatic decision making by group consensus necessary to secure imperative hardware requirements within a reasonable time frame.

There is a curious contradiction inherent in such decisions. On the one hand, great importance and prestige is attached to a high performance machine or quality product offered by a reputable manufacturer. On the other, there exists an underlying but elusive antipathy towards a foreign system. This subtle perception can be traced to China's difficulty in accepting its comparatively low state of technological development vis-a-vis that of the West and its relative power and position within the international system, coupled with a highly developed and astute sense of manifest destiny to correct what it regards as historical anomalies at a critical juncture in the country's place & time. A more practical set of concerns is that a commercial relationship with an international manufacturer can provide significant opportunities for a foreign government to disrupt or deny the supply of associated product support, and/or to acquire information sensitive to the PRC's national security. Thus, while the PLAAF may seriously consider a cooperative relationship with a new systems provider, a culture of institutional secrecy and conservatism probably gives priority to established, proven, and predictable supplier relationships.

A FINAL THOUGHT

In conclusion, I would like to address one final point. PLA writings often uphold the U.S. military as the model from which China must learn, if it is to complete selective military modernization. Specifically, in some cases the PLAAF seems to be influenced by institutional and/or analytical misperceptions to support its transformation into a capable fighting force by procuring similar weapon systems USAF either has; may have; or is scheduled to introduce into the future. This is endemic of a much larger problem, compounded by the country's great physical distance to the United States and its as yet unproven ability to consistently innovate at a standard commensurate with its current level of development and capabilities.

Moreover, its near-complete prohibition from participation in international defense industry forums and joint military training exercises effectively precludes the Chinese air force from benefitting from the intangible but invaluable types of analytical exchanges; synergistic interactions; and intimate operational experiences at all levels which USAF and other leading air forces exploit to their advantage. Put another way, the opportunity cost for the PLAAF to accelerate development of its own unique corporate memory is inversely proportional to the square of the rate at which USAF is rapidly advancing along the learning curve. As a result, the PLA's apparent heavy orientation towards the U.S. military experience suggests the conclusions it has drawn are—at times—incorrect and not necessarily applicable to selective modernization of its air force into the future.

Co-Chairman DREYER. We have a couple of people on our questioning list. Commissioner Bryen?

PANEL III DISCUSSION AND QUESTIONS AND ANSWERS

Commissioner BRYEN. Thank you.

One strategy that has sometimes been thought to be a Chinese goal and the challenge for them is how to push back the American

aircraft carrier task forces since that is the inhibitor to having a freer hand in the area.

I think someone touched on that in one of their comments, but do you see a concerted policy—acquisition policy, training policy, programmatic policy—on the part of the Chinese to do that? Do you think that that is one of their major goals? And I'll let everyone answer that.

Mr. COLE. Certainly in the open source literature, that's written about all the time. I think the purchase of the Sovremenny class with the SS-N-22 missile—that's a missile that is clearly designed for very large surface ships.

What the Chinese do not have is an effective way to protect the Sovremenny, since the ship itself has relatively weak anti-air and anti-submarine capabilities. But I think the acquisition of the SS-N-22 clearly fits the anti-carrier description.

More potent to me as an anti-carrier "weapon" is not necessarily sinking aircraft carriers as keeping them out of the operational area. If, for instance, the Chinese on day one of a campaign can sortie two dozen submarines from various ports and get them out a couple hundred miles to sea, it would take the U.S. Navy so long to reassure itself that it had enough of a fix on those Chinese submarines that it was safe to put a carrier into harm's way, that they would create an of opportunity window". Whether that "window" would be two weeks or two months or six months is difficult to say.

We have so few aircraft carriers (and I think this is one of the reasons why the Chinese have hesitated to build an aircraft carrier) that it becomes a national treasure; if you lose an aircraft carrier, you aren't just losing a ship—it has national impact.

So I think the Chinese are clearly focusing on an attempt to at least keep the American aircraft carriers out of the fight if a fight develops, as well as trying to attack them directly, of course.

Commissioner BRYEN. You mentioned that the Chinese are building a new type of submarine with Russian help. Can you tell us a little bit about it and how it plays into that equation?

Mr. COLE. In the 1960s, with significant Soviet assistance they Chinese built an attack nuclear submarine, the Han class; they built five of them, anywhere from two to four of which are now operational. They then took that hull, basically cut it in half, stuck in some missile tubes, and built one Xia-class ballistic missile-carrying submarine. The Chinese are now, apparently with Russian help, in the process of building a new nuclear-powered attack submarine probably patterned after the Soviet's late 1970s "Victor III" design. I am assuming that after China completes the hull, it will begin construction of a variation of that boat that would be equipped to carry ballistic missiles, probably a maritime equivalent of the DF-31, also designated the JL-II.

How many of those boats they will build is difficult to estimate. China has taken a very long time in the past to design and construct new submarines. We may see the first new nuclear-powered attack submarine by 2005; I doubt we will see a new nuclear-powered ballistic missile submarine much before 2010 or even 2015. That's assuming the Chinese decide to build a ballistic missile-carrying submarine.

Commissioner BRYEN. Another approach to modernization is not to necessarily replace platforms but to upgrade existing platforms. For example, the T-72—I don't know the Chinese equivalent, but I assume it is very similar—the T-72 tank has some weaknesses that can be overcome by new electronics, better mechanisms in the turret, things of that sort, which can significantly improve it. It has a big gun on it anyway.

Is there an effort in China to take existing platforms and try to improve those, particularly in the land army but also the artillery, aircraft, and so on?

Mr. BLASKO. Upgrades to existing platforms is absolutely a program. The Type 59 has been modified so many times you don't know when it moved into the Type 80, the Type 69—I don't know—but yes, that is certainly a strategy. And one of the things that they showed on this Type 98 that I call a T-72 equivalent is sort of a "laser-dazzler" kind of thing. It is exactly the kind of thing you're talking about. You stick it on there, and it helps to either blind somebody who is trying to look at you or perhaps divert incoming missiles. So yes, that obviously is part of their strategy. And in my opinion, from what I see, it appears to have been the majority of the thrust of the ground forces modernization over the years.

Commissioner BRYEN. The last question, a quick one. There have been references today to, obviously, help from Russia, which is quite considerable; Israel, which is also considerable; and very little said about Europe, particularly France, but also the British and others. Is that of any significance or concern? Is there much of a transfer of know-how and technology from those places?

Mr. COLE. I know that the newest class of Chinese guided missile frigate, the Jiangwei class, is equipped with German diesels and that probably the new Song class conventionally-powered submarine has a French-designed sonar array on the bow. I think both of those are very significant.

The fact that the United States no longer deals with the PLA means that it doesn't have any follow-on to the five gas turbines China acquired during the eighties, so it has gone to the Ukraine to buy gas turbine engines.

Going back to your first point on expansion or modernization, the Luhai-class ship, although it has the same basic combat suite as does the Luhu-class, is half again as big because the Ukraine gas turbine engines are much bigger than U.S. models. This has the perhaps unintended benefit of providing the PLAN with a hull that can accommodate much more modernization than can the smaller Luhu.

Commissioner BRYEN. Thank you.

Mr. COLTON. Perhaps I might add one point to your question, Commissioner Bryen, on help and support from Europe. In terms of the air force—I shouldn't really say the air force—but in terms of aeronautical development strategy, definitely, there has been some considerable assistance coming particularly from France, from Eurocopter, and from a couple of other suppliers, to upgrade as well as help develop specific capabilities within the helicopter industry as well as in the aircraft industry.

Commissioner BRYEN. My colleagues at the Pentagon also tell me that they have had a lot of upgrade of their command and control capabilities, thanks to the fiberoptics and telecommunications technology transfer taking place.

Mr. COLE. The new ships have the TAVITAC French-designed combat control panels in their combat information center, and the new ships have Italian torpedoes. There are dozens of Western-origin pieces of equipment on these new ships.

Mr. BLASKO. As for the fiberoptics, I would completely agree with you that the PLA has benefited from China skipping a generation or two from the copper wire to both satellite and fiber optic communications. I see that primarily right now at the major headquarters levels, teleconferencing like we did this morning. My question—

Commissioner BRYEN. If they do it like we did it this morning, we don't have to worry too much.

Mr. BLASKO. My question is how far that has trickled down into the actual operational forces, and I simply don't have any information to make that judgment.

Commissioner BRYEN. Thank you.

Commissioner DREYER. Commissioner D'Amato?

Chairman D'AMATO. Thank you, Madam Chairman.

I read your book—you gave me the assignment when we last saw you—and this is a very well-researched book, and I have to conclude that the Chinese navy is about as unimpressive as anything I have seen in terms of pretending to be even a moderate-power navy.

Let me just quote for my fellow commissioners a couple of parts of this:

“China's continued reliance on foreign sources results from the ready availability of advanced Russian and other foreign systems”—I assume Israeli. “The apparent realization is that the Chinese military industrial complex is either not capable or is unwilling to research, design, develop and produce many of the modern naval systems that the PLA navy wants and needs. As a result, China enters the new century with the naval sector neglected in many ways” that you document, and it goes on to say that “The United States' fleet remains the determinant factor in East Asia's maritime crisis. There is no evidence the PLA navy arguments for 'blue-water' naval capability have received support within PLA Headquarters or the Chinese Central Military Commission,” concluding that “Beijing believes that its national security objectives can be attained by modernizing its current naval force structure. Consequently, China is not investing the major resources required to build the large capital ships and supporting auxiliaries necessary for extended 'blue-water' operations. Beijing apparently does not believe current maritime concerns are serious enough to change China's historic dependence on continental power or to build a modern maritime force that will dominate the Asia Pacific.”

I conclude from this that the Pacific is still an American lake and will remain so as far as the eye can see, and that if we weren't so worried about the Taiwan Straits, we wouldn't be thinking about Chinese naval capabilities and their modernization as anything that could touch the American maritime capability in the region. Maybe I am overstating the case, but I was a naval officer for 32

years, and this looks to me like about as easy a clean sweep as you could have in a matter of hours if the balloon went up, from the point of view of naval forces.

That's my conclusion from what your book is saying here. I don't know if that's an overstatement or not. It's nice to have onesies and twosies and little pieces of equipment from the Italians and the Israelis, but that doesn't make a maritime power without the will or the kind of money that they would have to put into this, which would be very, very substantial over many years. And there is no history of it or any plans for it.

Does that sum up the situation?

Mr. COLE. It does from one perspective, sir. But I have to point out that we also should look at it from a much less ambitious perspective: if you are concerned, for instance, about doing something around Taiwan, and you pick the time when the Seventh Fleet aircraft carrier and battle group is in the Persian Gulf, and you look at the overhaul schedules for various aircraft carriers on the West Coast and at the steaming times from the East Coast, you could find a window when few U.S. naval forces would be present in the Western Pacific. Whether that window is two weeks or a month—and it would be at least two weeks—would be long enough for the Chinese to decide that they could do something in the Taiwan Straits area, I just don't know.

In other words, at the operational level, the overall size of naval forces is not an adequate gauge for measuring potential operational scenarios.

I would point out, that the strongest navy in East Asia on a given day is the Japanese Maritime Self-Defense Force, with the South Korean navy a close second—and the Taiwan navy is also a formidable force.

Chairman D'AMATO. So really, the scenario—I appreciate that the precise problems of timing and scenarios and force presence and so on in the Taiwan Straits is really what we are worried about. In that respect, do you see any evidence that there is a capability being developed in terms of navy maritime air or any kind of air-surface coordinating ability on the Chinese side that gives the kind of capability that would complicate our problems with adequate forces in the Taiwan Straits area?

Mr. COLE. They certainly write about it a lot, but PLAN exercises over the last decade or so have not shown much evidence that the Chinese have made a lot of progress in perfecting what we would call "joint warfare operations."

Chairman D'AMATO. Thank you, Madam Chairman.

Commissioner DREYER. Commissioner Lewis?

Commissioner LEWIS. I have a question for Professor Cole. You said that the most significant navy is the Japanese, next is South Korea, and next is Taiwan. Are each of those stronger than your perception of the Chinese navy?

Mr. COLE. The Japanese navy certainly is. The South Korean navy is certainly very capable, except for its questionable ability to counter China's Sovremenny's (with the SS-N-22) and the Chinese submarine force.

The problem that Taiwan faces, of course, is very different and very difficult, simply because of geography. Taiwan is so close to

the mainland that the Taiwan Strait would be a sort of no-man's-land. The Taiwan navy's biggest problem would be air power coming off the continent.

Commissioner LEWIS. But clearly, the Japanese and South Korean navies are stronger than the Chinese navy as of today?

Mr. COLE. The Japanese navy certainly is I'd have to hedge about the South Korean navy, as I mentioned, a bit because I'm not sure about their ability to counter the Chinese submarine force—and geography also counts against the Korean navy.

Commissioner LEWIS. Thank you.

You make the statement, "There is little doubt that China views the United States as a primary maritime threat to its perceived vital national interest in East Asia." What do you think China views us as a threat to do what?

Mr. COLE. I think one of the lessons that the Chinese learned after 1996, when the United States deployed two aircraft carrier battle groups to the neighborhood of Taiwan, is that if China wants to do anything that involves flying through the air or crossing the water, the United States basically has to acquiesce to them doing it. Therefore, since I think Taiwan is probably China's number one geopolitical concern, China views the United States as the most significant barrier to achieving that reunification of the island with the mainland.

Commissioner LEWIS. Okay, so they see us as a threat to maybe offensive decisions that they would want to make, not as an offensive threat against them.

Mr. COLE. That's correct, sir. I don't believe China thinks the United States is going to come over and launch an amphibious invasion, other than possibly in connection with the Taiwan scenario.

Commissioner LEWIS. Thank you.

Mr. Blasko, do you agree with that, that they perceive us as the number one threat?

Mr. BLASKO. They assume our intervention in, I believe, any Taiwan scenario, and that's their worst case scenario; so they are planning, as all militaries do, I think, against worst case scenarios.

Commissioner LEWIS. So the threat, again, would be that we would be a defensive threat against their offensive actions?

Mr. BLASKO. The word "defensive" is always very interesting, because I think the best defense is a good offense, as a lot of people would say, and there is right now a great debate, I think, in Taiwan going on about the ability to reach out and touch the mainland.

So this is a political constraint and something that we have got to work on in Washington and Hawaii as to exactly if that case were to come up, how much we would strike at the mainland, which obviously has an impact on the way that our forces are employed. Would our rules of engagement allow us only to interdict aircraft and ships that have crossed the center line? Would we be able to go initially to strike the ports? I don't know.

Commissioner LEWIS. But do you think China sees us as a potential offensive threat against them on their land?

Mr. BLASKO. Yes, yes.

Commissioner LEWIS. Really?

Mr. BLASKO. They perceive it; I don't think they want it to occur, but I think they certainly perceive this as a potential threat. They just look at the cruise missile strikes——

Commissioner LEWIS. And you don't agree with that?

Mr. COLE. I don't believe China seriously sees the United States as an offensive threat against the homeland.

Commissioner LEWIS. Thank you.

I'd like to ask each of you this question. Mr. Blasko, you made the statement, "Contact between the defense establishments of both countries is essential for greater understanding of China's modernization." This morning we discussed the issue of whether it would be in the United States' interest to help them with their budgeting process to make it more transparent so they would be more efficient, but we would have more knowledge.

I'd like to ask you if you think that would be in our interest, and I'd like to ask Professor Cole and Mr. Colton whether you think contacts with the defense establishments of both countries would be in our national interest.

Mr. Blasko, why don't you answer first?

Mr. BLASKO. It would probably be very difficult to sell politically in the United States, helping them with their budget process. I personally believe that people who know something about the Chinese military and militaries in general, when they had contact with the Chinese military, they learned more about the Chinese, and it was in our benefit——

Commissioner LEWIS. You think it would be in our interest to do that.

Mr. BLASKO. I would want to look at the parameters of something like that, but I would see it as relative; compared to a lot of other things that have been considered, it would be not harmful to our national security.

What I would like to see are some real facts about the Chinese military modernization to be able to be put out on the table so that we can have the proper debate, and I'm willing to go where the facts lead me. If indeed they are spending \$200 billion a year, I'm willing to revisit my analysis. So if we could come down through this process with a realistic estimate of what they are spending and how they are doing it, yes, it would be useful.

Commissioner LEWIS. Thank you.

Professor Cole?

Mr. COLE. I think the ability for our military officers and others to interact is much more beneficial to us than it is to the Chinese. I have hosted a few senior-level Chinese delegations in the United States, and I have traveled enough in China to know that because of the secretiveness of their society in general and their military, and the general openness of ours, that we learn far more from those contacts than do the Chinese. I think the Chinese naval attach here in town, for instance, is so swamped with open-source literature that he doesn't have time to go spying around; he's too busy packing things up in foot lockers to send back to Beijing.

Let me give you one example. At one point in my research, I was trying to figure out how many submarine squadrons are stationed with each of the three PLAN fleets, and I was never really able to

come up with a firm answer, even after talking to Chinese naval officers and Taiwan naval officers.

At another point, I was looking to see how many ships with the United States navy had home ported with the Seventh Fleet in Japan. I got on the Internet, and on the Seventh Fleet website and the individual websites for these ships, I found complete descriptions of the ships, the names of their captains, the names of their ombudsmen, the names of their command master chiefs, and an indication of their schedules. There is just no comparison between the open information sources available about the Chinese and U.S. Navies. I firmly believe that interaction benefits us more than it does the Chinese.

Commissioner LEWIS. How about the budget process issue?

Mr. COLE. I don't know how practical it is to think that we could help them with their budget or that we should. I think the systems are entirely too different to try to do that.

Commissioner LEWIS. Thank you very much.

Mr. Colton?

Mr. COLTON. I would tend to agree, or I would actually summarize or synthesize, actually, from what both of my colleagues here on the panel have said. In general, yes, I believe that contact between the defense establishments is beneficial and actually helps us understand them much better; but whether or not it is a reasonable assumption to assume that we may learn more from their budget process through closer interaction and maybe even to assist is, I think, kind of a far stretch simply because the factors that govern our process here are quite different from theirs.

Commissioner LEWIS. Thank you very much.

Thank you.

Commissioner DREYER. Commissioner Mulloy?

Commissioner MULLOY. I just want to follow up on a point on Taiwan.

Dr. Cole, you talk about this issue on pages 11 and 12 of your testimony, that Taiwan remains the preeminent concern of the Chinese navy. And Mr. Blasko said there is no massive defense build-up by the Chinese. The Taiwan issue seems to be the one thing that could cause difficulty or confrontation between us and the Chinese militarily in the foreseeable immediate future.

And then, we had a discussion this morning about the economic integration between Taiwan and the PRC that is going on. The question is what would it require for that Taiwan-PRC thing to happen—I mean, for them to feel they've got to do something regarding Taiwan. Would it require something that Taiwan would do, or could it happen just on any given Sunday?

Mr. Blasko?

Mr. BLASKO. The Chinese White Paper on Taiwan issued in February of 2000, I believe, outlines a lot of those things. Mostly, they are actions that the Government of Taiwan would take—

Commissioner DREYER. Or not take.

Mr. BLASKO [continuing]. Or not take. The problem is—and I believe John Corbett or somebody else mentioned it—they can come to agreements between themselves that we could never see. I think there is also the problem that Taiwan could do something that would make us wonder what upsets the Chinese and they could

overreact. So far, that hasn't happened, and I think China has learned that its past practices haven't moved its case forward either with the people on Taiwan or in the international community.

But this is a gut issue for the Chinese, its sovereignty, and it is something that oftentimes, you and I as Americans would find hard to understand exactly what would push them over the top. But yes, it could happen.

I think that a year and a half or two years ago, we thought we were a lot closer to getting to that point. In the past year and a half or so, I believe the general analysis is that while things certainly haven't much improved, they haven't gotten much worse.

Commissioner LEWIS. When you say "getting to that point," what do you mean?

Mr. BLASKO. A year and a half or two years ago, many people were predicting that China had decided that it was just a matter of time before the use of force was necessary to bring Taiwan back into the fold.

Now those predictions of force and the use of force are not as common.

Commissioner MULLOY. Dr. Cole?

Mr. COLE. We all know about the three conditions under which Beijing says they would feel free to take military action—

Commissioner MULLOY. Why don't you state them again?

Mr. COLE. If Taiwan declares independence; if Taiwan decides to develop nuclear weapons; if Taiwan is invaded by another country—and I think another one is if internal unrest breaks out on the island.

From a slightly different perspective, I think the number one national security goal in Beijing is keeping the Chinese Communist Party in power, and I think that if the party leadership decides that the Taiwan situation is such that they need to take military action to remain in power, they will.

I'm not sure what that would be, but as Professor Dreyer pointed out earlier, this gets to be a matter of perception. It may be that President Jiang Zemin toward the end of his term, or Hu Jintao at the beginning of his term, decides that the way to keep the party in power is to take some draconian action against Taiwan; that could be the trigger. That would be very difficult to anticipate.

I do agree with Col. Blasko that because of the economic downturn in Taiwan in the last several months, and because of the events of September 11, right now Beijing probably feels a little calmer about the island—but that's supposition.

Commissioner MULLOY. Mr. Colton?

Mr. COLTON. I would concur with both of my colleagues on the issue, but I would also be loathe to really nail it down specifically to what would push Beijing over the top to lead it to an outright conflict.

If I may add another comment. One of the central predicaments that I see over the last couple of years in terms of this issue is that the goalpost is being moved further away, at least from the perspective of how Beijing views the whole Taiwan situation. I think that for quite a long time, the leadership in Beijing was not comfortable with but had more or less settled into the perception that Taiwan would not declare independence, but yet also wouldn't

make any statements as to returning to the motherland as well. That goalpost has moved further and further away, especially in light of the DPP now having come to power. So I think the criticality of how this issue will be handled in the future is exactly as Dr. Cole has said. With a new leadership under Hu Jintao coming into power, who knows—perhaps there will be some type of situation or something where the leadership sees it needs to take some type of action and make Taiwan return back to the fold, because this issue will not go away. It is directly tied to the legitimacy of the leadership, and there are certain parties and groups that have a very significant stake in the resolution of the Taiwan issue.

Commissioner MULLOY. Thank you.

Commissioner DREYER. A slight correction on the matter of the three conditions. The second one, at least originally, was that if China seeks the help of another power—they understand the United States, but if, for example, Taiwan were to seek the help of the Soviet Union—

Mr. BLASKO. It's called "foreign intervention" is what they usually say.

Commissioner DREYER. I'm sorry?

Mr. BLASKO. Foreign intervention.

Commissioner DREYER. Yes—or, seek the help of another power. I'll explain it to you later, but it had a lot to do with the time when the Chinese and the Soviets were not getting along. Victor Lui [phonetic], who was a KGB agent who was apparently posing as a TASS correspondent, used to appear in Taiwan. So that's what they meant by "seeking the help of another power."

Last year, that white paper that you gentlemen alluded to a few minutes ago mentioned another condition—because I don't think anybody is really concerned anymore that there is going to be a huge outbreak of social unrest on Taiwan, so they thought up a new condition—and the new condition is that if Taiwan refuses to negotiate sine die. And then they said you have got to negotiate, but before you can negotiate, you have to accept our definition of one China, which Chen Shui-bian could not do, because he would have given away his negotiating position as a prerequisite to negotiating. So you see they set up a catch-22 there, which I think did not work, because the Bush Administration rather simply said no use of force.

Anyway, to my questions. Mr. Blasko, you mentioned both in your paper and in your testimony that you thought it would be desirable if the United States Government would release more information on Chinese military modernization. I wonder if I can infer from that that you think that there are things that are known that are not being released; would you want to go that far?

Mr. BLASKO. Oh, certainly. I think there are plenty of things that the U.S. Government has derived through unclassified Chinese sources that they could say yes, this is pretty close to accurate that we can confirm through other sources.

I personally think that when a U.S. delegation goes to China and is briefed by the Chinese, "We have this, that, and the other thing," that the Chinese intend for us to know about it, and if they didn't, they wouldn't tell us. Certainly there are times in negotiations secretary to minister kinds of conversations that you don't want out.

But when they take us to certain places and show us certain things, I think they expect us to at least disseminate it amongst the government more, and in my opinion, that is unclassified.

Commissioner DREYER. I see. Thank you.

You also mentioned that one reason why the Chinese have so much military is that they do station it in various different parts of the country to keep order.

Mr. BLASKO. Yes.

Commissioner DREYER. I wonder if that indicates a certain lack of faith in the PAP, the People's Armed Police.

Mr. BLASKO. I discuss a little bit of that in my written testimony, and yes, the PLA is the third line of defense; it would prefer not to be called into that situation but it will, as it has in the past. But I do believe that one lesson of 1989 that they did learn is that they need to increase the training and the sophistication of the PAP to contend with these kinds of situations. One of the benefits of moving 14 divisions in 1996–1997 from the PLA into the PAP is that these units can easily be trained to conduct these domestic security operations, but wearing the PAP uniform.

Commissioner DREYER. Of course, we were told that after 1989 in which PAP was a fiasco that they did improve and that apparently, the level of confidence in the PAP by the government is still not what was required.

Mr. BLASKO. Yes, you would assume that since they put 14 division in the late nineties into the PAP. One thing, though—this could be the case of the dog that hasn't barked—there are demonstrations and protests all over China all the time, and every once in a while, you hear about the police going in to take care of the situation, and it is hard to tell, especially in the Western press, whether that is the civilian police or the armed police or what. But to the best of my knowledge, the PLA has not been called on to subdue any of these hundreds, thousands or more—

Commissioner WALDRON. Not true; that's not true.

Mr. BLASKO. Well, then, this may be part of the information that the government could release—but how often is that the case?

And then, the PAP seems to have done a fairly good job. I am willing to be enlightened by any bit of knowledge that can be shared.

Commissioner DREYER. Well, we can do that later, but Xinjiang is one place where they do use the PLA, for example. Anyway—

Mr. BLASKO. Yes, but my question there would be is that directed toward what they would call the terrorist or the separatist kind of thing.

Commissioner DREYER. The terrorist is a post-September 11 construct; before then, it was simply unruly, the small handful of unruly elements.

Commissioner WALDRON. Hooligans.

Mr. BLASKO. Again, I looked back through my newspaper articles from 1997 when there were some people killed out in Xinjiang, and it was unclear as to who actually did the killing. By now, perhaps we know much better. That just hasn't been at least publicly released as far as I know.

Commissioner DREYER. Yes, perhaps you're right.

Professor Cole, I was very interested in what you were saying about that we have German and Ukrainian gas turbines and TAVITAC from France, and something I didn't catch from Italy.

Mr. COLE. Torpedoes.

Commissioner DREYER. Torpedoes. Are there any problems integrating these systems on the ships?

Mr. COLE. They must be massive. I was once in the electronic warfare training facility at Dalian, and on the electronic warfare modules—it looks like a radar scope or a TV screen—the symbology/letters came up in English, which means that theoretically, the enlisted personnel using the equipment have to understand at least enough English to read the symbology and the words that come up on the screen. Even on their very newest ships, the systems are simply not integrated the way they are in most modern navies.

Commissioner DREYER. It would, of course, affect their ability to prosecute a naval conflict to some extent.

Mr. COLE. But again we have to be careful. If the PLAN is going against the Seventh Fleet or even the Japanese Maritime Self-Defense Force, that's a factor; but if the PLAN is trying to intimidate somebody in Southeast Asia, that may not be quite so important.

Commissioner DREYER. Yes, it does make a difference.

Tell me about the gas plant on the Sovremennys. You were saying there were some problems with the turbines—

Mr. COLE. The steam-powered plant?

Commissioner DREYER. The steam-powered turbines, yes.

Mr. COLE. The Soviets designed the Sovremennys in the 1960's and early 1970's with a 750 or 900-pound-per-square-inch steam plant, and the higher the PSI, the more problems you are liable to encounter.

When the United States Navy still had steam plants they were mostly 1,200 PSI, which posed very significant problems.

But what the Sovremennys—and the Soviet's stopped building them not just because of the end of the Cold War, but because they were having problems with the engineering plants—exhibits is a problem called "carryover." I don't want to get too deeply into steam engineering, but basically—

Commissioner DREYER. I'll talk with you about that at some other time.

Mr. COLE. Okay, basically, in the steam plant, you require very pure "feed water", water which you distill aboard ship because you can't carry enough; the feed water is then boiled and possibly super-heated. Now, of course, you have steam, which you then drive against the blades of a turbine; the turbine turns, a shaft, the shaft turns a propeller, and the ship moves. You then collect the steam, recondense it back into feed water, and then start the cycle again. Theoretically, it is a closed cycle.

"Carryover" refers to the fact that if you imperfectly turn the feed water into steam, you may get little droplets of water that "carryover" with the steam. When you direct the steam flow against the turbine blades, if there are little droplets of water in there, the turbine blade will be damaged, possibly catastrophically. As a recent result, the ship will lose power and may even go dead in the water.

Commissioner DREYER. Yes, it could be a problem.

Mr. COLE. There are degrees to which that can happen. You may simply begin to hear the engine tear itself apart and shut it down in time; or you may literally stop. This "carryover" problem has been endemic to the Sovremenny.

I haven't seen enough about their underway operations to know how the Chinese are doing with it.

Commissioner DREYER. That's fascinating.

Here is an easier question: Has there been any attention to building amphibious landing craft?

Mr. COLE. I am surprised at the low rate of production the Chinese navy has maintained for amphibious craft. I think they built two LSTs last year.

Commissioner WORTZEL. The total fleet has gone down.

Mr. COLE. They have actually converted some of their troop transports to the civilian merchant fleet.

Chairman D'AMATO. That means they would do it in another way.

Commissioner DREYER. For those of you who don't follow the navy, this has direct relevance to a possible invasion scenario of Taiwan.

Mr. COLE. Yes. By the same token, building an LST or landing ship tank is relatively easy, so China may just figure that's something it could do in six months. But there has been a lack of attention to building up the amphibious fleet, certainly.

Commissioner DREYER. Thank you.

Mr. BLASKO. May I just interject that one of the things that I think we are seeing overall in the air force, the navy, and the army is a build-down of older equipment. And this may not seem right to us, but by building down on some of these things, they may actually end up with more capability.

That is why I don't like the term "buildup"—but they are on a modernization program, and that is many-faceted.

Commissioner DREYER. In general, fewer but better.

Mr. BLASKO. Yes.

Commissioner DREYER. Thank you.

Mr. Colton, I was very interested in what you were saying about PLAAF. We understand from an earlier briefing that the Taiwan air force is in absolutely dreadful shape; they have 60 pilots for 180 F-16s, for example, and there are various other problems. I also remember that Professor Cole said there were some problems as well—the Taiwan navy is reasonably good, but the Taiwan air force has some problems.

Could you elaborate a little on that from your perspective?

Mr. COLTON. Well, unfortunately, Dr. Dreyer, I'm not an air strategist, and I have not really looked at Taiwan, although I do read things about it. Do you want me to elaborate on Taiwan or on China?

Commissioner DREYER. No, no, no—because the real problem is not "the PLAAF" or "the Taiwan air force" but how they go together.

Mr. COLTON. You mean head-on in a confrontation.

Commissioner DREYER. Yes—or sideways on in a confrontation.

Mr. COLTON. Well, I think that both the Taiwan air force and the PLAAF have rules of engagement, when they are flying across the Taiwan Straits—I think the rules of engagement at least for the Chinese air force if I remember correctly are “we leave when you come.” So if they see Taiwanese airplanes in the air that are closing in, then the PLAAF has to leave the area; and likewise, by the same token, the Taiwanese air force will do the same if they are patrolling a certain area.

I would be loathe to get into any types of air combat scenarios. I think that’s not something that I would discuss here.

Commissioner DREYER. Thank you.

Chairman D’Amato?

Chairman D’AMATO. Thank you, Madam Chairman.

I was thinking that if one of the tests of possible Chinese involvement in the Taiwan Straits were social unrest in Taiwan, I was thinking it would be more likely that social unrest in the mainland would cause the nationalistic response to the foreign enemy or the foreign diversion, given the amount of social unrest that we understand is going on sporadically and increasingly.

I have a couple of quick questions. Mr. Colton, you made some interesting comments about innovation and the question of Chinese innovation and the lack thereof in terms of their air force. That is a very interesting question, and I know there are some people in DOD interested in that issue—the question of the level of innovative capability on the part of the Chinese in this area.

Are there some sources that you can give us in terms of analysis of their ability to innovate given their lack of contact, I presume, with other air forces and their lack of synergy with the U.S. Air Force and other forces where they are on their own?

Mr. COLTON. That’s absolutely correct, Chairman D’Amato. Thank you for drawing attention to that particular issue.

Lack of technology innovation within the industry as well as tactical innovation within the air force itself continue to be significant inhibitors to the kind of progress that would normally be associated with the modernization program.

I don’t have any written sources that I can cite to you other than to draw your attention again back to Kenneth Allen, who is the resident PLAAF expert on these issues; maybe he has some insights into that.

But in interacting sometimes with the Chinese, I do find it surprising, too, that they don’t understand or that their perception is such that they fail to grasp the importance of a certain way of doing things. And even if you lay it out to them at times, even if you perhaps present an idea that has some significant benefits and that you know from your own analysis would probably be favorable on how they would conduct operations—

Chairman D’AMATO. They don’t get it.

Mr. COLTON [continuing]. Well, at times, I think they do—but they are very secretive about it. The limited interaction that I have had, certainly no one tells me, “Oh, that was a really good point you made.” I think that that is all processed later on amongst themselves, but without my being there, participating in it.

Chairman D’AMATO. So the immediate light bulb doesn’t go on—

Mr. COLTON. No.

Chairman D'AMATO [continuing]. But it might later.

Mr. COLTON. One also has to remember, especially in terms of the industry, that number one, the Chinese like to do things their way; there are a number of cooperative agreements that the Chinese have entered into. Take, for example, the helicopter industry with the French, with Eurocopter. Let's say Eurocopter comes in and shows them how to set up the kits and develop the manufacturing capability, the specifications, the tight tolerances that are needed, and they will go along with that for a while, but after the French leave, things are back to normal to the way the Chinese like to do things.

The second aspect related to that I would say is that they have a distaste for Western things, I think, in that sense. They don't want some Westerner coming in and telling them, "This is how we think you ought to train or how you may improve your operations or how you may improve your technological capabilities." China is very proud of itself, and they want to do that on their own.

Mr. BLASKO. May I just add something?

Chairman D'AMATO. Yes, go ahead.

Mr. BLASKO. The Minister for Science and Technology, Zhu Lilan, I believe and prior to that, the Commissioner for Science and Technology before it was a ministry, both have been reported in FBIS giving speeches to the science and technology community, and they generally start off by saying, "Gee, guys, you're really doing great—10,000 projects here, 1,000 gold stars there," patting them on the back, and it always ends up with "But we are really having a problem with this innovation thing, and we've got to get cracking on it." And I'm sure it wouldn't take too much of a search on FBIS. I can remember numerous articles of speeches, again, to internal audiences that address exactly the problem of innovation in the Chinese defense industries.

Chairman D'AMATO. One more quick one to any of you who are knowledgeable about this; this is about the India-Chinese relationship. Could you address China's perception of the Indian threat? India is fast becoming China's biggest competitor economically in the area of globalization, particularly in the area of foreign direct investment. Is this in any way compounding China's fear of India? Is this having any impact on their defense planning?

Do any of you have a sense of the Indian relationship?

Mr. COLE. Other than a general discomfort, obviously, with the Indian advent as a nuclear power, I don't know of any specific defense decisions that China has made with respect to India.

Chairman D'AMATO. You don't see anything necessarily.

Mr. Colton?

Mr. COLTON. I think the Indians are more preoccupied with the Chinese than the Chinese are occupied with the Indians. I think there is a common perception that "We'll deal with them if that time ever comes," or "They aren't a threat to us in that sense—nothing that we can't handle." But with the Indians, I think it's the other way around—it is quite a different perception.

Commissioner LEWIS. When you say it's a "different perception," can you amplify on what that is?

Mr. COLTON. Well, the only real example that I can think of is from 1962—the border war that India fought against China in which China today still retains territory that is claimed by India. So I think there is a perception in India that not only were they defeated, but also humiliated which stands to this day.

Mr. BLASKO. I have just two points. Earlier this morning, I think Dr. Wortzel and Professor Waldron mentioned the number of intermediate-range nuclear missiles that at least theoretically have the range to target India.

There is one footnote I would like to add—it all depends on where those are located. Not all 130 I don't think could hit India, just as not all 130 or 200, whatever, could hit Japan or Russia. It depends on where they are stationed.

Also, one thing that the Chinese are not real happy about as far as I can tell is the Indian navy on the Chinese side of the Malacca Straits. So they are obviously watching that just as the Indians are watching the Chinese go the other way.

Chairman D'AMATO. Thank you very much.

Commissioner DREYER. Commissioner Waldron?

Commissioner WALDRON. I know it may have looked to some of you as if I was taking a little nap over here during part of the testimony—

Commissioner LEWIS. I didn't think so, Arthur.

Commissioner WALDRON [continuing]. But let me make a couple of comments. The first thing is that in my reveries, a voice kept coming through, and the word it kept saying was "Taiwan, Taiwan, Taiwan," and this woke me up because I think one of the great mistakes we make is to take too seriously something that every Chinese will tell us very, very seriously when they meet us, which is that the Taiwan issue is the key issue between our current situation of some estrangement and a possible future in which we walk off into the sunset hand-in-hand to kill [inaudible] together in the Northwest or whatever it is going to be.

I frankly think that the Taiwan issue is not the most important issue that China faces. It is not the thing that they are most focused on, and I think it is very important for us to realize that they face a lot of far more important issues.

In Northeast Asia, they have the issue of Japan which is now coming alive thanks to their Korean friends firing a missile over them. Korea itself is strong. In Southeast Asia, they have a whole series of maritime issues. And I am glad that India was finally brought up. It has struck me that the single greatest strategic setback that China has encountered, I guess with the possible exception of the collapse of the Soviet Union, that they have encountered in 30 or more years was the development of nuclear weapons by India. What this means—traditionally in China, there has been a tension between so-called Haifang, or the defense of the maritime front here, and Saifang, the defense of the internal front here, and like Russia, they are not really capable of handling both. And the fact of a well-equipped nuclear India now means that whatever sort of operation they get started in, they immediately face the possibility of a two-front war.

I well remember Minister of Defense Fernandez saying to me, "What do we need? We need intermediate-range ballistic missiles,

ranging 3,000 kilometers"; and we need this, we need that. He had it all very well figured out, and the Indians, of course, certainly have the capability to do this.

China was very, very foolish, I think, even in the fifties and sixties. Nehru was well-disposed toward China; there was the real possibility of a close relationship. They adopted a hard line, and they have now succeeded in making of India potentially a very difficult sort of adversary.

My final comment—I don't have any questions for any of you, so you can relax. I thought you all had cogent and wonderful presentations. But on the issue of innovation, I think there is another reason for the lack of innovation, and that has to do simply with the fact that this is a repressive society in which the nail that sticks out is hammered down, or as a famous "Straits Times" headline in Singapore put it, "Let's Have More Spontaneous Fun"—that's the headline—subhead, "Here's How." China very much has that problem. People want to be creative and spontaneous and innovative, but they are not about to do it until they get the party instruction about what exact form that should take.

So I would like to thank all three of you. And Professor Cole, I was particularly interested in your discussion of steam propulsion. Not since "The Sand Pebbles" have I been so absorbed.

Thank you.

Mr. BLASKO. Professor Waldron, may I just respond that I am actually disappointed because I was hoping I would have something to tell my grandchildren.

Commissioner WALDRON. You'll have plenty to tell your grandchildren, but I hope none of it will have to do with this hearing.

Mr. BLASKO. Actually, what you said about Taiwan I think fits into what I was trying to say, that the Chinese perceive themselves to be living in a very dangerous neighborhood, and because of that, they believe they need a bigger military than I personally think they do.

Commissioner WALDRON. I agree.

Mr. BLASKO. And I personally would call the missile buildup opposite Taiwan an economy of force measure. We have not seen major infantry, armor movements into that area, so they are putting missiles there and some aircraft. But meanwhile, all around the rest of the country, there are just about as many troops as there were years ago.

Commissioner WALDRON. I think that's an excellent point. I might just add one more historical analogy. I think the missile buildup opposite Taiwan is exactly what you describe; it is unsupported by any massive buildup of other capabilities associated with an invasion. Nonetheless it has the effect—and if you think back to the Anglo-German naval race, which if you ever want to understand arms races and diplomacy, this is the place to begin and the place to study—and the fact is that the fleet the Germans built was a big waste of money and made no difference in the First World War at all, but it did have one very important effect, which is that it poisoned European diplomacy for the decades leading up to the First World War, greatly increased suspicion, and thus made the likelihood of war far greater. And I think that this Chinese buildup—and particularly the one of the missiles opposite Taiwan—is

having exactly the same effect, and if anyone in this room is going to pass word back to the PRC—not that what I have to say counts for much—one of the smartest things they could do would be to take every one of those missiles and destroy them. It would have no effect on their military posture, but it would make a tremendous plus for their diplomatic posture.

Commissioner DREYER. I think that you two gentlemen are dealing with a chicken and an egg, and I'm not prepared to say who is the chicken and who is the egg—

Commissioner WALDRON. I'm not the chicken.

Commissioner DREYER. Okay, you're the egg.

Anyway, the Chinese actions across the Taiwan Straits in 1995–1996 really, really scared the Japanese. And the best thing that could have happened for them was that North Korean missile sailing across their air space, because it was the exact excuse they needed to do what they felt they needed to do against China for a long time.

So China can then start bleating about the Japanese race toward remilitarization in the 1930s and build up its missiles and do all sorts of things.

Commissioner WALDRON. And once again, the Koreans can gloat in the fact that they have completely thrown sand in the wheels of Chinese diplomatic policy as they did in 1950 with the Korean War, which stopped them from getting Taiwan then, and as they did with the missile firing over Japan, which all of a sudden drew attention to China's own missile buildup.

Commissioner DREYER. The final question goes to Commissioner Mulloy.

Commissioner MULLOY. I want to come back to Taiwan. The issue of Taiwan—is this a heartfelt thing by the Chinese people, or is it something that the regime uses to help them maintain power? I mean, everybody keeps saying they haven't really had Taiwan for 100 years—it was under the Japanese from 1895 to 1945 and then from 1949 it was out of their control, so is unifying Taiwan with the motherland or whatever it is—is that something that the regime uses to whip up support with the people, or is that something that the regime has to do because it has whipped up support with the people, or is it something that the people of China really feel strongly about, regardless?

Mr. BLASKO. Well, I would hate to speak for the people of China—

Commissioner WALDRON. And could I just add it is illegal to do polling data. There's lots of polling data in China, good polling data, on lots of issues, but that's one question you are forbidden from asking.

Mr. BLASKO. One problem is that it is such a great propaganda campaign by the government, you really can't tell what the people really think.

I have had a relatively independent thinker, a Chinese contact, who, when I presented him with, "You guys really would go to war over Taiwan," said, "I don't want to die for Taiwan; I wouldn't," and "No, I don't think it's important."

But like I say, the problem is that it is pounded into people's heads by the government that this is our national destiny, and we

must do this, so they know that they can't say otherwise. So it is hard to get to the bottom of that question.

Commissioner DREYER. There are a lot of peasant kids who don't think for themselves in the way that your friend does—

Mr. BLASKO. Right, exactly—and those are the ones who are taken by the propaganda, and yes, they are going to run with the flag and jump into the Straits.

Commissioner MULLOY. Thank you.

Dr. Cole?

Mr. COLE. I think that if you did do a poll, most Chinese people would say yes, Taiwan ought to be part of China; but I don't think the average Chinese when he or she gets up in the morning thinks about Taiwan right off. So I tend to think that it's more of an instrument that the government uses.

Commissioner DREYER. Larry is dying to say something.

Commissioner WORTZEL. Yes. I want to make a comment on this. Both Mr. Colton and Professor Cole made reference to the very central nature of Taiwan and how that defines legitimacy for the Communist Party.

On October 5, 1976, the Communist Party defined the legitimacy in China as four people from Shanghai, the Gang of Four, leading China into the future, and everybody danced in the streets, and all the headlines said "This is legitimacy in China, and we'll collapse without it."

On October 6, they were arrested by parts of the Chinese Communist Party; and on October 7, everyone was dancing in the streets, saying, "We've got a new future, and it's the Chinese Communist Party, and the enemies were the Gang of Four." Now that Communist Party controls all media, all public policy, and it is capable of defining itself. It is its own threat to its legitimacy—not Taiwan—and it will recreate its future or its past as it sees fit, in my view.

Commissioner DREYER. With that, ladies and gentlemen, thank you so much. Thank you to our panelists. We really appreciate your guidance and enlightenment, and we may get back to you with some more questions.

Mr. BLASKO. Certainly.

Mr. COLE. Thank you.

Mr. COLTON. Thank you.

Chairman D'AMATO. The Commission will reconvene on January 17 and 18 for further hearings.

Thank you all, Commissioners.

[Whereupon, at 4:30 p.m., the proceedings were adjourned.]