

## **Appendix I: Patterns of Indicators**

Appendix I of the autumn 2005 Report to the Congress on International Economic and Exchange Rate Policies, *Analysis of Exchange Rates Pursuant to the Act*, discussed the use of indicators in considering the question of whether “countries manipulate the rate of exchange between their currency and the United States dollar for purposes of preventing effective balance of payments adjustments or gaining unfair competitive advantage in international trade”.<sup>1</sup> That Appendix stressed that in considering the question of designating countries pursuant to the terms of the Act, a range of indicators need to be assessed. While individual indicators – such as a reserve or a current account position – yield important information, they do not in and of themselves provide a comprehensive picture of a country’s economic situation or external position.<sup>2,3</sup> Also, the pattern of change in indicators typically provides the most useful information. For example, a country with a large current account surplus would be viewed one way if the country also had a large reserve increase and a depreciating exchange rate, and viewed another way if its reserves were not increasing and the exchange rate were appreciating. In addition, patterns of movements of indicators must be examined in terms of the specific country and the global economic environment.

The current analysis is an extension of that presented in the autumn 2005 report, but incorporates full-year 2005 data. This analysis provides a useful framework for understanding the wide array of factors that can underpin economies’ external positions, even economies with sizeable current account surpluses. Also, as previously noted, at a time when the United States – the world’s largest economy – runs a large current account deficit, the counterpart to that deficit is inevitably going to be large surpluses in some other countries of the world. Table 1 updates the limited set of numerical indicators constructed for a cross section of significant economies that was described in the autumn 2005 Report.

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<sup>1</sup> The Omnibus Trade and Competitiveness Act of 1988 states, among other things, that: “The Secretary of the Treasury shall analyze on an annual basis the exchange rate policies of foreign countries, in consultation with the International Monetary Fund, and consider whether countries manipulate the rate of exchange between their currency and the United States dollar for purposes of preventing effective balance of payments adjustments or gaining unfair competitive advantage in international trade.”

<sup>2</sup> The autumn 2005 Appendix also included a discussion of various indicators and their relevance. That work was derived from Treasury’s March 11, 2006, Report to the Committees on Appropriation on Clarification of Statutory Provisions Addressing Currency Manipulation. The report can be found at <http://www.treas.gov/press/releases/js2308.htm>.

<sup>3</sup> The General Accounting Office (GAO) report, “Treasury Assessments Have Not Found Currency Manipulation, but Concerns about Exchange Rates Continue”, discussed Treasury’s assessments. The GAO report can be found at <http://www.gao.gov/cgi-bin/getrpt?GAO-05-351>.

Table 1<sup>4</sup>

	Current Account Balance		Foreign Exchange Reserves			Real Effective Exchange Rate (% appreciation) Feb02 - Feb06	External Sector Contribution to Growth Rate (Average %) 2003-2005	Relative Dependence of GDP Growth on External Sector (Average %) 2003-2005
	Level (%GDP) 2005	Change over period (%GDP) 2002-2005	Ratio to 2005 GDP (%) Dec 2005	Ratio to short-term external debt (%) September 2005	Change in reserves (%) Dec04 to Dec05			
Singapore	28.5	7.2	98.8	124.1	3.4	16.4	5.6	5.2
Saudi Arabia	28.3	22.0	7.8	151.4	3.4	-19.4	0.7	-5.1
Norway	16.7	3.9	15.6	45.6	7.1	14.0	-1.4	-4.9
Malaysia	15.3	6.9	55.1	371.1	10.1	-11.3	-0.6	-7.1
Venezuela	18.1	9.9	16.4	717.4	28.7	3.5	0.1	-5.7
Switzerland	13.7	5.2	9.6	7.4	-34.2	-5.1	0.1	-0.9
Russia	11.4	3.0	22.9	413.5	45.4	28.6	-0.2	-7.3
China	7.1	4.4	36.9	1110.8	34.3	-4.0	1.0	-8.0
Sweden	6.6	1.3	6.0	11.4	3.6	-0.3	1.0	-0.8
Netherlands	6.3	3.8	na	na	na	na	0.6	0.3
Taiwan	4.7	-4.0	73.1	618.3	4.8	-6.4	1.0	-2.3
Germany	4.2	2.1	na	na	na	na	0.5	0.1
Japan	3.7	0.8	18.1	211.3	0.6	-11.5	0.6	-1.2
Korea	0.7	0.4	26.7	294.4	6.0	23.3	2.5	1.1
Canada	2.2	0.3	2.7	21.3	1.7	20.1	-1.6	-5.8
Mexico	-0.8	1.3	9.5	300.3	16.3	-1.0	0.3	-2.3
Euro Area	-0.3	-1.1	1.7	5.0	-7.4	17.5	-0.1	-1.6
United Kingdom	-2.6	-1.1	1.9	1.9	3.6	-3.3	-0.6	-3.7
Thailand	-2.0	-7.6	28.6	372.1	4.2	6.5	0.2	-5.4
India	-1.8	-3.4	18.1	447.2	4.7	0.9	0.2	-7.7
Australia	-6.0	-2.1	5.8	22.2	20.9	38.6	-1.9	-6.9
Turkey	-6.5	-5.7	14.1	120.9	42.1	14.8	-3.0	-12.9
United States	-6.4	-1.9	0.3	2.8	-11.4	-19.2	-0.5	-4.5
Spain	-7.4	-4.1	na	na	na	na	-1.8	-6.7
Portugal	-9.3	-1.4	na	na	na	na	-0.3	-0.6

The same methodology used in the November 2005 report is used below to examine more closely the patterns of indicators by assigning qualitative values of low, medium, or high (numerically 0, 1, or 2) to the indicators and constructing indices based on alternative weighting schemes which give different emphasis to the various indicators. The three schemes are:

- A focus on changes in the current account balances, in foreign exchange reserves and in real effective exchange rates, assigning each a 1/3 weight.
- A focus on current account balances, changes in current account balances, changes in foreign exchange reserves, changes in real effective exchange rates, and relative dependence of GDP growth on the external sector, assigning each a 1/5 weight.
- A focus on current account balances, changes in current account balances, and relative dependence of GDP growth on the external sector, assigning each a 1/3 weight.

<sup>4</sup> The “Contribution to Growth of the External Sector” is calculated as the annual change in real net exports (in the National Income and Product Accounts) as a percent of real gross domestic product. The “Relative Dependence of GDP Growth on the External Sector” is measured as the external sector’s contribution to GDP growth minus the contribution of the growth in domestic demand. This dependency measure reflects the view that a country will be generally more concerned about the contribution of the external sector to GDP growth if the contribution of the domestic sector to GDP growth is relatively small. For example, Singapore’s export sector contributed 5.6 percent to GDP growth during 2003-2005 while domestic demand contributed only 0.4 percent. China’s export sector, on the other hand, contributed only 1.0 percent to GDP growth during 2003-2005 while domestic demand contributed 9.0 percent. Turkey’s external sector subtracted 3.0 percent from GDP growth during this period while domestic demand contributed 9.9 percent. The “Real Effective Exchange Rate” is JP Morgan’s Broad Real Effective Exchange Rate Index.

## Results

The three weighting schemes yielded the following rankings:

Scheme I		Scheme II		Scheme III	
Saudi Arabia	1.7	Singapore	1.4	Singapore	2.0
Malaysia	1.7	Saudi Arabia	1.4	Switzerland	1.7
Venezuela	1.3	Malaysia	1.4	Netherlands	1.7
Switzerland	1.3	Switzerland	1.4	Saudi Arabia	1.3
China	1.3	Venezuela	1.2	Norway	1.3
Japan	1.3	China	1.2	Malaysia	1.3
Singapore	1.0	Sweden	1.2	Venezuela	1.3
Russia	1.0	Japan	1.2	Sweden	1.3
Sweden	1.0	Norway	1.0	Germany	1.3
Taiwan	1.0	Russia	1.0	Korea	1.3
Mexico	1.0	Netherlands	1.0	Russia	1.0
Norway	0.7	Taiwan	1.0	China	1.0
Korea	0.7	Korea	1.0	Japan	1.0
Canada	0.7	Germany	0.8	Taiwan	0.7
United Kingdom	0.7	Mexico	0.8	Canada	0.7
India	0.7	Canada	0.6	Mexico	0.7
Turkey	0.7	United Kingdom	0.6	Euro Area	0.3
Netherlands	0.3	India	0.4	United Kingdom	0.3
Germany	0.3	Turkey	0.4	Portugal	0.3
Thailand	0.3	Euro Area	0.2	Thailand	0.0
Australia	0.3	Thailand	0.2	India	0.0
Euro Area	0.0	Australia	0.2	Australia	0.0
Spain	0.0	Portugal	0.2	Turkey	0.0
Portugal	0.0	Spain	0.0	Spain	0.0

- As in the appendix to the autumn 2005 Report, oil-exporting economies score high whichever weighting scheme is chosen. This primarily reflects the impact of recently increasing oil prices that have resulted in recent large current account surpluses and reserve accumulations. These countries also maintain relatively fixed exchange rates. Saudi Arabia, for example, ran a current account surplus of around \$85 billion in 2005, or 28 percent of GDP. Russia also ran a current account surplus of \$85 billion, or greater than 10 percent of GDP, while reserves rose 45 percent. Norway ran a current account surplus of \$50 billion, or 17 percent of GDP.

In past periods of sharp run-ups in oil prices, some oil-exporting countries quickly spent increased proceeds, often on projects with low rates of return, and then ran large fiscal deficits and built up debt burdens during periods of low oil prices. There are reasons to believe that the rise in oil prices in the current cycle will prove to be a more lasting and durable phenomenon. This factor, coupled with the limited short-term absorptive capacity of a number of oil exporters, raises the question of their appropriate policy response.

The appropriate response will entail a mix of increased saving, increased spending, and perhaps exchange rate appreciation. It is understandable that countries would wish to maintain sound fiscal positions, build up stabilization funds, and reduce debt burdens. It is also important to ensure that spending achieves high social rates of return. Moreover, spending plans cannot be implemented overnight. Accordingly, increasing saving is an understandable response. As fiscal positions strengthen, spending should increase, promoting the recycling of petrodollars. Some exchange rate adjustment could also facilitate

the global adjustment process, translating oil producers' higher oil revenue stream into higher real incomes and imports.

- Germany appears in the middle the weighting schemes. Germany has a large current account surplus, roughly \$130 billion and equal to 4.2 percent of GDP. Yet, Germany is part of the Euro-zone and thus cannot conduct an independent monetary policy. Further, the euro is a freely floating currency, and the Euro-zone in aggregate has a small external deficit. German growth in 2005 rested almost entirely on the contribution of external demand. On balance, Germany's current account surplus is fundamentally associated with persistently weak investment and domestic demand.
- Japan can be found in the upper half. Japan's current account surplus as a share of GDP in 2005 was 3.6%, and in dollar terms over \$170 billion. Japan has intervened heavily in foreign exchange markets in the past but has not done so since March 2004. Though Japanese private saving has declined in past years and the public sector has run fiscal deficits, corporate saving has been strong. But investment and domestic demand have been weak. In 2005, Japan gained economic momentum, and the economy became less reliant on external demand for stimulus. However, low Japanese interest rates – a product of Japan's appropriately and highly accommodative monetary policy aimed at overcoming deflation – stimulated large capital outflows from Japan in 2005. Japan has moved down the list since the November report in two of the three schemes.
- Switzerland again remains toward the top of the weighting schemes. It has a large current account surplus reflecting not its merchandise trade balance, but rather significant surpluses in trade in financial services and investment income. The Swiss franc is an independently floating currency, and Swiss authorities have not intervened in the exchange market.
- As in last autumn's report, China is toward the upper end of the first weighting scheme, in the middle of the second, and in the middle of the third. China's current account surplus as a share of GDP rose sharply in 2005, reaching 7.1 percent of GDP. China's reserve accumulation was large and excessive last year, and reserves are continuing to rise rapidly this year. The currency remains rigidly managed. These factors account for the high ranking using the first weighting scheme, which underscores the need for continued fundamental reform in Chinese exchange rate policy. Still, the real effective exchange rate has strengthened, especially over the last year. The contribution of China's external sector to growth is positive,<sup>5</sup> but growth in domestic demand is so strong that the overall external contribution appears to be modest. Indeed, China's strong growth is an important source of demand for the global economy. These considerations impact China's ranking in the second and third weighting schemes.
- Malaysia tends to have a high ranking, on the whole, in the weighting schemes. It has a tightly managed exchange rate. It ran a 14 percent of GDP current account surplus last year, in part due to higher oil export earnings, and its reserves rose rapidly.

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<sup>5</sup> As noted above this measure is of the change in net exports relative to the size of GDP. Given the size of China's economy, the level of the current account surplus is large by international standards.

- Singapore also has a relatively high ranking in each of the three schemes. Singapore's current account surplus, at a very large 29% of GDP, is due to demographically-related high saving. The monetary authorities pursue a managed currency in terms of a currency basket (the composition of the basket is not published), and Singapore uses its heavily managed foreign exchange rate as its monetary policy anchor.
- Russia is running a large current account surplus and for several years has had one of highest rates of reserve accumulation in the world. Its real trade-weighted exchange rate has appreciated over the last year due to its continuing double digit inflation. Although its large and growing current account surplus and rapidly growing reserves have pushed Russia up in two of the weighting schemes, real ruble appreciation has constrained its movement toward the top of the weighting schemes. The Russian economy is, in fact, partially adjusting to increases in the value of its oil exports without nominal exchange rate adjustment through inflation and the reduction in competitiveness of its non-oil sector.

## Conclusions

This Appendix has updated the three weighting schemes used in the November report to include full year 2005 data. The picture largely remains the same.

- Some oil-exporting countries remain atop the various schemes, highlighting ongoing high oil prices. The analysis, though, highlights the need to give greater attention to the policy choices facing oil-producing countries, especially those with low absorptive capacity and high debt burdens, in a period of sustained high oil prices.
- Some major developed countries also remain atop some of the weighting schemes. This pattern is in fundamental respects associated with economic performance that has been persistently weak in the past but that, hopefully, will improve.
- Another effect of adding full-year 2005 data to the analysis is to move China and Malaysia, two countries featured prominently in the autumn report, slightly higher. Interestingly, Malaysia scores higher than China in each weighting scheme. China's strong contribution to the global economy is welcome. But the weighting schemes, particularly after the relevant indicators are further scrutinized in-depth, underscore the very real and difficult considerations raised for the global economy by Chinese and Malaysian external performance and the continuing need for fundamental policy reforms, including in exchange rate management.