

Oral Statement of  
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President  
Federal Reserve Bank of Kansas City  
before the  
House Financial Services Oversight and Investigations Subcommittee  
United States House of Representatives

May 6, 2010

## **Introduction**

Chairman Moore, ranking member Biggert, and members of the committee.

Among the factors that contributed to this recent financial crisis, there is no question that leverage was key. And the unwinding of this leverage contributed to the escalation of this crisis into the worst recession in 75 years, hurting Americans at all economic levels.

I have spent more than 36 years at the Federal Reserve deeply involved in bank supervision, and it has been apparent to me for some time that our nation's financial institutions must have firm and easily understood leverage requirements. Leverage tends to rise when the economy is strong as investors and lenders forget past mistakes and believe that prosperity will always continue. If we don't institute rules now to contain leverage, another crisis is inevitable.

My written testimony addresses the systematic increase in debt and leverage that has occurred in all major sectors of our economy over the past two decades. My comments today, however, will focus specifically on what occurred at the largest financial firms—which were the catalysts for this crisis.

Leverage is the ability to use debt to build assets as a multiple of a firm's capital base. The leverage at banking organizations has risen steadily since the mid-1990s, but was not immediately obvious because of the many different ways capital and leverage can be measured. In my judgment, the most fundamental measure of a financial institution's capital is to exclude intangible assets and preferred shares and focus only on tangible common equity—that is ownership capital actually available to absorb losses and meet obligations. Looking at tangible common equity, you see that leverage for the entire banking industry rose from \$16 of assets for each dollar of capital in 1993 to \$25 for each dollar of capital in 2007. More striking perhaps, this aggregate ratio was driven most significantly by the 10 largest banking companies. At these firms, assets rose from 18 times capital to 34 over the same period, and that does not include their off-balance sheet activities.

These numbers, in my opinion, reflect two essential points. First, that based on capital levels, the 10 largest banking organizations carried fundamentally riskier balance sheets at the start of this crisis than the industry as a whole. Second, their greater leverage reflects a significant funding cost advantage. Not only is debt cheaper than equity, but their debt was cheaper than for smaller organizations because creditors were confident these firms were too big to be allowed to fail.

This was a gross distortion of the marketplace, providing these firms an advantage in making profits, enabling them to build size, and then, in the end, leaving others to suffer the pain of their collapse. This is not capitalism, but exploitation of an unearned advantage. And the list of victims is long, including families who lost homes, workers who lost jobs, and taxpayers who were left to pay the tab.

This increase in leverage in the banking industry spread broadly to the other sectors of the economy, creating a general excess of credit growth over the past 10 years, especially among consumers.

This economy-wide rise in leverage was based on the assumption that asset prices would continue to rise, especially those in housing. When prices fell and defaults and losses mounted, capital ratios that had been systematically reduced over time proved grossly inadequate. To illustrate, suppose the 10 largest banking organizations had been required to confine their leverage to a historically more reasonable level of \$15 of tangible assets for every dollar of tangible common equity rather than the \$34 they had. Under this historically limit, they would have been forced to hold an additional \$326 billion of equity, 125 percent more than they actually had, to absorb potential losses, or they could have cut back on their growth by nearly \$5 trillion, or more likely, some combination.

The point is that institutions got away from the fundamental principles of sound management. And those institutions with the highest leverage suffered the most. Financial panic and economic havoc quickly followed. The process of deleveraging is underway, rebuilding capital has begun, but during this rebuilding loans are harder to get, which is impeding the economic recovery.

With this very painful lesson fresh in our minds, now is the time to act.

I strongly support establishing hard leverage rules that are simple, understandable and enforceable and that apply equally to all banking organizations that operate in the United States. As we saw in the years before the crisis, leverage tends to rise during economic expansions as past mistakes are forgotten, and pressure for growth and higher return on equity mounts. Straightforward leverage and underwriting rules require bankers to match increases in assets with increases in capital and prevent disputes with bank examiners over “interpretations” of the rules. As a result, excess is constrained, and a countercyclical force is created that moderates booms and forms a cushion when the next recession occurs.

I firmly believe that had such rules been in place, we would have been spared a good part of the tremendous hardship the American people have gone through during the past two years.

Critics of more conservative capital ratios say this will restrict growth. Yes, it will. The success of the U.S. economy is not the result of the size of financial institutions but the strength of the financial system. I would be pleased to answer your questions.

Leverage: The Double-Edged Sword

Written Statement of

Thomas M. Hoenig

President

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## **Introduction**

Chairman Moore, ranking member Biggert, and members of the committee. Thank you for the opportunity to testify at this timely hearing.

The financial panic of 2008 created the worst recession since the 1930s, sending unemployment soaring to 10 percent and dramatically changing the landscape of our financial system. While many factors were responsible for creating this crisis, there is no doubt that excessive debt and leverage was a major contributor.

Leverage, the ability to use debt to build assets as a multiple of a firm's capital base, is a double-edged sword. Credit is obviously essential to an economy's growth and prosperity. But when a tower of debt is built on a foundation of weak capital, the inevitable outcome is a collapse and loss of national wealth.

Following this most recent crisis, lawmakers and regulators are examining the issues of debt, leverage and financial strength. We are at a crossroads. The country must again review and define an acceptable leverage profile for our economy and specifically for financial institutions. Defining leverage standards too tightly inhibits growth. Defining them too loosely invites excess risk and crisis.

My views on this topic are based on 36 years of broad experience in the Federal Reserve. As head of bank supervision for the Federal Reserve Bank of Kansas City in the 1980s, I saw the damage caused nationally and locally by excessive leverage and bank failures—both small and large. As President of our Bank over the past 18 years, I've witnessed the anguish of individuals and businesses as they struggled to manage the downside effects of too much leverage.

## **Trends**

Over the past two decades there has been a systematic increase in debt and leverage within the United States, involving all major sectors of the economy. The charts I have included with my statement show asset-capital and debt-income ratios increasing annually across all sectors, rising to levels well above long-run trend lines. In hindsight most agree this build up was excessive and the markets and the regulators should have seen the crisis coming. But they didn't.

There are three components that we must look at in judging the safety of any level of leverage: the quality of assets, the quality of capital and the amount of capital. While asset quality is important, it is the quality and amount of capital that gets a company through unexpected asset

problems encountered during the course of business. For that reason, I will focus my attention here on the quality and amount of capital.

Stockholder tangible common equity is the strongest form of capital. It is immediately available to meet creditor obligations and absorb losses. Fundamentally, this is what defines a meaningful measure of leverage. Other measures of capital include different hybrid debt instruments or intangibles that attempt to account for potential value and future earnings. For example, goodwill is an intangible that is not immediately available and evaporates quickly when a firm encounters asset problems. Trust preferred stock is a hybrid-debt instrument that carries cash flow demands over the life of the instrument. Thus, I measure leverage as a firm's total tangible assets measured against tangible common equity.

The leverage at banking organizations has been rising steadily since the mid-1990s. The increase, however, is not immediately obvious because of the different ways capital and leverage can be measured (Chart 1). For example, in 2007 just before the crisis began, leverage for all banking organizations based on total equity capital, which includes common equity, perpetual preferred stock, and goodwill and other intangible assets, was the same as it was in 1993, \$13 of assets for each dollar of capital.

The story is quite different when you focus on tangible common equity by excluding perpetual preferred stock and goodwill and other intangible assets. Tangible total assets rose from 16 times tangible common equity in 1993 to a multiple of 25 in 2007. The increased reliance on lower quality capital in recent years is clearly seen by the large gap among the various leverage measures in recent years as compared to the early 1990s when all the measures were about the same.

Moreover, a closer examination of the distribution of leverage across firms of different sizes shows that almost all of the increase in leverage is due to the largest banking organizations (Chart 2). For the 10 largest banking companies, leverage based on tangible common equity almost doubled from 18 in 1993 to 34 in 2007, and this doesn't include their off-balance sheet activities. For the rest of the industry, leverage rose from 14 to just 17 (Chart 3). I would also note that for broker-dealers, which are an increasingly important source of credit through the shadow banking system, financial leverage rose from 13 in 1992 to 47 in 2007 (Chart 4).

As a result, with twice as much leverage as all other banking organizations, the 10 largest had much riskier balance sheets at the start of the crisis. The much higher leverage and greater risk

exposure of the 10 largest firms clearly indicates that they had a significant funding cost advantage over all other organizations, and their creditors believed they had less exposure to losses.

This increase in financial sector leverage fueled a significant growth of debt in the nonfinancial sector of the economy and, as it turned out, led to a general excess of credit growth over the past 10 years (Chart 5). Bank lending rose from 39 percent of gross domestic product (GDP) in 2004 to 47 percent by the end of 2007, and that figure excludes the rapid growth in credit from the shadow banking sector and the GSEs, Fannie Mae and Freddie Mac. While bank loans relative to GDP have declined since 2008, it remains well above the long-term trend.

The increase in leverage and debt was most prominent in the consumer sector. Consumer debt as a percent of personal income generally has been rising since the 1950s (Chart 6). However, it began a rapid acceleration in 2000, rising from 76 percent to 110 percent by the end of 2007.

Nonfinancial business borrowing relative to nominal GDP also has followed an upward trend since the 1950s (Chart 7). During this most recent expansion, it has increased from 77 percent in 2004 to 89 percent at the end of 2007.

Finally, and no less importantly, the federal government deficit is at record levels and the current trend is unsustainable (Chart 8). The increase over the past two years is due partly to the automatic stabilizers that come in to use during a recession and to additional fiscal actions taken to restart the economy. These temporary actions will add to an already heavy burden of various programs that have sharpened the upward trend with no obvious end in sight.

## **Effects**

Given the levels of leverage in the economy, no one should have been surprised at the collapse triggered by the housing bubble bursting in 2006 and the rise in subprime mortgage defaults in 2007.

When housing prices fell, many discovered that they had taken on more financial risk than they previously assumed and more than their capital levels could support. The institutions with the highest leverage suffered the most, and, as it turned out, these were some of the largest institutions in the world. Financial panic quickly followed.

What started as a Wall Street panic soon created regional distress and finally Main Street suffering. And just like the largest institutions, the regional and community banks that were most



leveraged, were most likely to fail. The wave of losses, consumer foreclosures and business failures infected every element of the economy.

The deleveraging process commenced as highly-leveraged financial institutions, working with highly-leveraged consumers and business, had insufficient capital to withstand the financial blows. Increasing numbers of homeowners were unable to keep up with their mortgage payments, leading to higher defaults. Mortgage defaults, in turn, sharply lowered the values of mortgage securities held by financial institutions. These losses led banks to attempt to reduce their leverage, which required rebuilding tangible capital and reducing total assets – thus reducing loans. This placed downward pressure on asset values, losses worsened and the vicious cycle of deleveraging worsened. Homes and businesses were lost to foreclosure and liquidation, while unemployment climbed.

The large increases in leverage over the past decade have wrecked havoc on our economy and are responsible for the sluggishness of our recovery. Strong economic growth simply cannot occur if consumers and businesses must focus on rebuilding balance sheets instead of on increasing spending, production and hiring of new workers

Once again we have learned that the double edged sword of leverage is a pro-cyclical weapon.

### **Constraining Leverage**

Today, the largest financial firms are showing a solid recovery. Regional and community banks continue to show stress but problems may have peaked as they have worked to reestablish stable capital and leverage levels. The market appears to be correcting and leverage based on high quality capital is returning to more historic norms. In time credit will once again expand and the economy will improve. But it won't be quick or easy. Therefore, we must now turn to actions that will prevent the impulses of consumers, businesses, and financial institutions from assuming ever more leverage as the expansion becomes a boom. If we take action now, then when the next economic correction occurs there will be less devastation to our economy. If we don't change policy now, then this crisis will be remembered only in text books and leverage will rise again and lead to another crisis.

I strongly support establishing hard leverage rules that are simple, understandable and enforceable and that apply equally to all banks and bank holding companies that operate in the

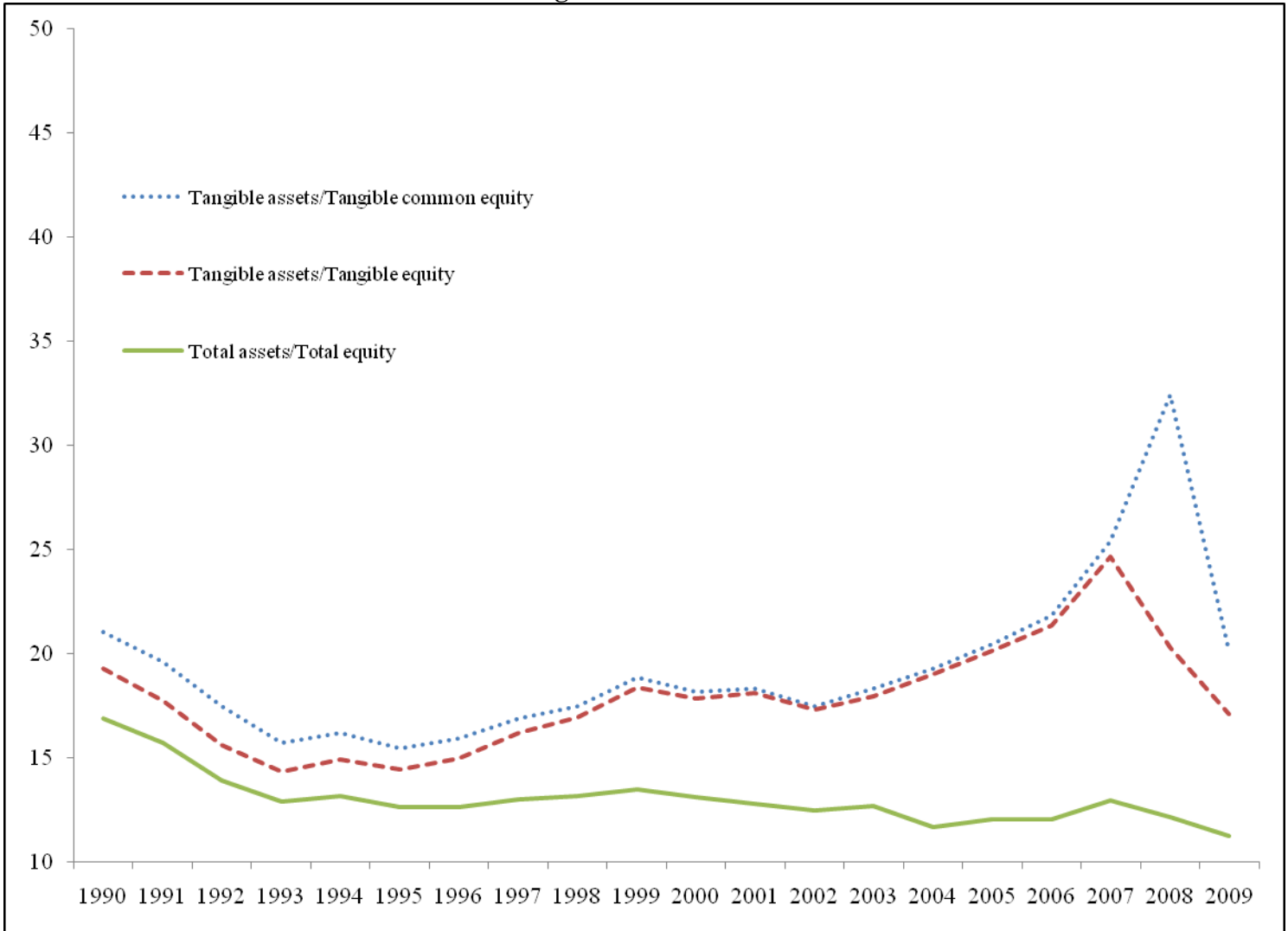
United States. As we saw in the years leading up to the current crisis, leverage tends to rise during economic expansions as investors and lenders forget their past mistakes and believe that prosperity will continue with no end in sight. Straightforward leverage and underwriting rules are not procyclical, so that as the economy expands and heats up, bankers must match increases in assets with increases in capital, which constrains reckless growth. Thus, such rules would serve to limit growth beyond a prudent level by creating a counter-cyclical force that moderates booms and provides a cushion to bank losses when the next recession occurs.

For an example of the power of a hard leverage rule, consider the impact on assets and/or equity of restricting bank holding companies to holding no more than \$15 of tangible assets for every \$1 of tangible equity capital (Chart 9). As I noted, at the end of 2007, the 10 largest bank holding companies held \$34 of tangible assets for every \$1 of tangible equity capital. If the maximum leverage ratio was 15:1, these companies would have had to reduce their assets by \$4.9 trillion (56 percent), increase their tangible common equity by \$326 billion (125 percent), or some combination of the two.

Simple rules also provide examiners with the tools they need to prevent leverage from rising and underwriting standards from declining. Without hard rules on leverage ratios and lending standards, bank examiners were disadvantaged in taking actions on rising leverage and declining loan-to-value ratios because bankers could correctly claim they were following supervisory guidance on capital levels, and their loan problems were very low, while profits were strong.

Finally, the rise in leverage in the last cycle was facilitated by the complexity of international risk-based-capital requirements. In particular, the Basel I risk-based capital standards in place leading up to the crisis provided very crude measures of asset riskiness, which increasingly underestimated risk as asset markets deteriorated. Banks also could arbitrage capital standards and raise their risk-based capital ratios by shifting assets to favorably treated off-balance sheet vehicles or exchanging assets such as prime mortgages for “lower risk” subprime mortgage-backed securities. The Basel II risk-based standards, which we were starting to phase in, would have enabled an even greater amount of leveraging to occur. These standards, which allow banks to use model-based risk estimates for many types of assets, actually suggested banks were holding too much capital in the months leading up to the crisis.

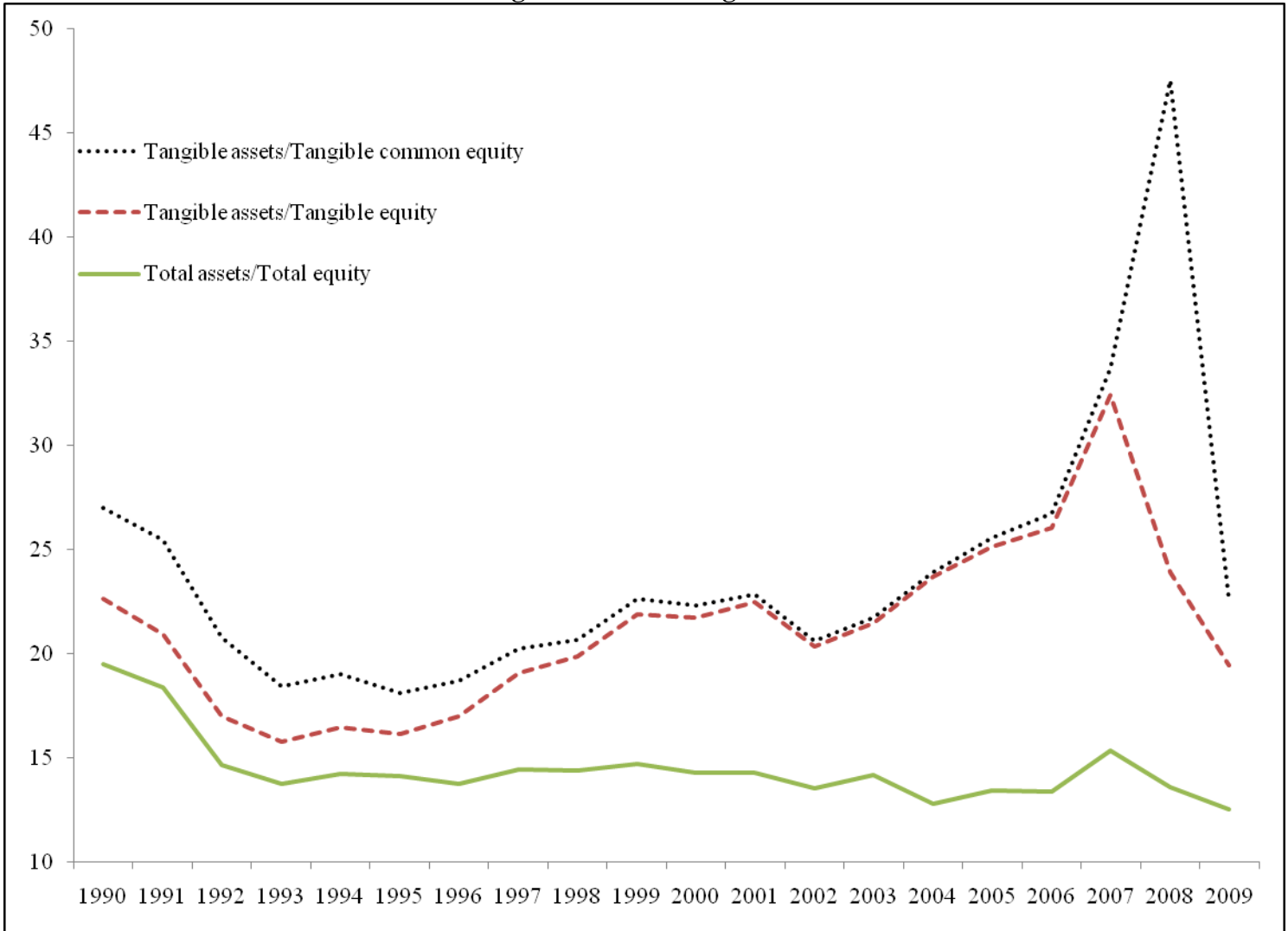
Chart 1  
Leverage Ratios - All BHCs



**Source:** FR Y9-C, End of Year

**Note:** Tangible assets/tangible common equity is calculated as total assets less goodwill and other intangible assets divided by equity capital less perpetual preferred stock, goodwill and other intangible assets. Tangible assets/tangible equity is calculated as total assets less goodwill and other intangible assets divided by equity capital less goodwill and other intangible assets. Total assets/Total equity capital is calculated as total assets divided by total equity capital.

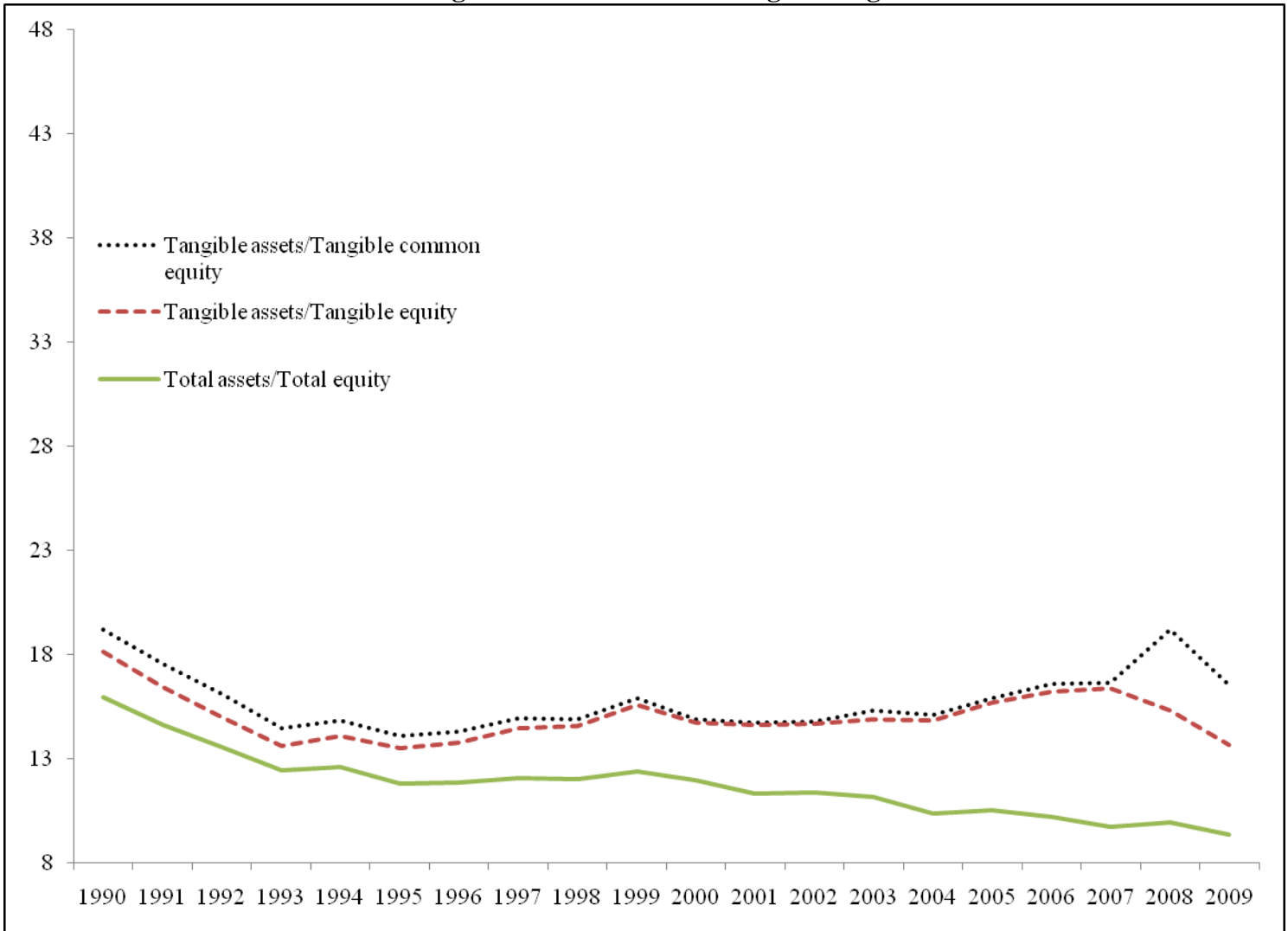
Chart 2  
Leverage Ratios - 10 Largest BHCs



**Source:** FR Y9-C, End of Year

**Note:** Tangible assets/tangible common equity is calculated as total assets less goodwill and other intangible assets divided by equity capital less perpetual preferred stock, goodwill and other intangible assets. Tangible assets/tangible equity is calculated as total assets less goodwill and other intangible assets divided by equity capital less goodwill and other intangible assets. Total assets/Total equity capital is calculated as total assets divided by total equity capital.

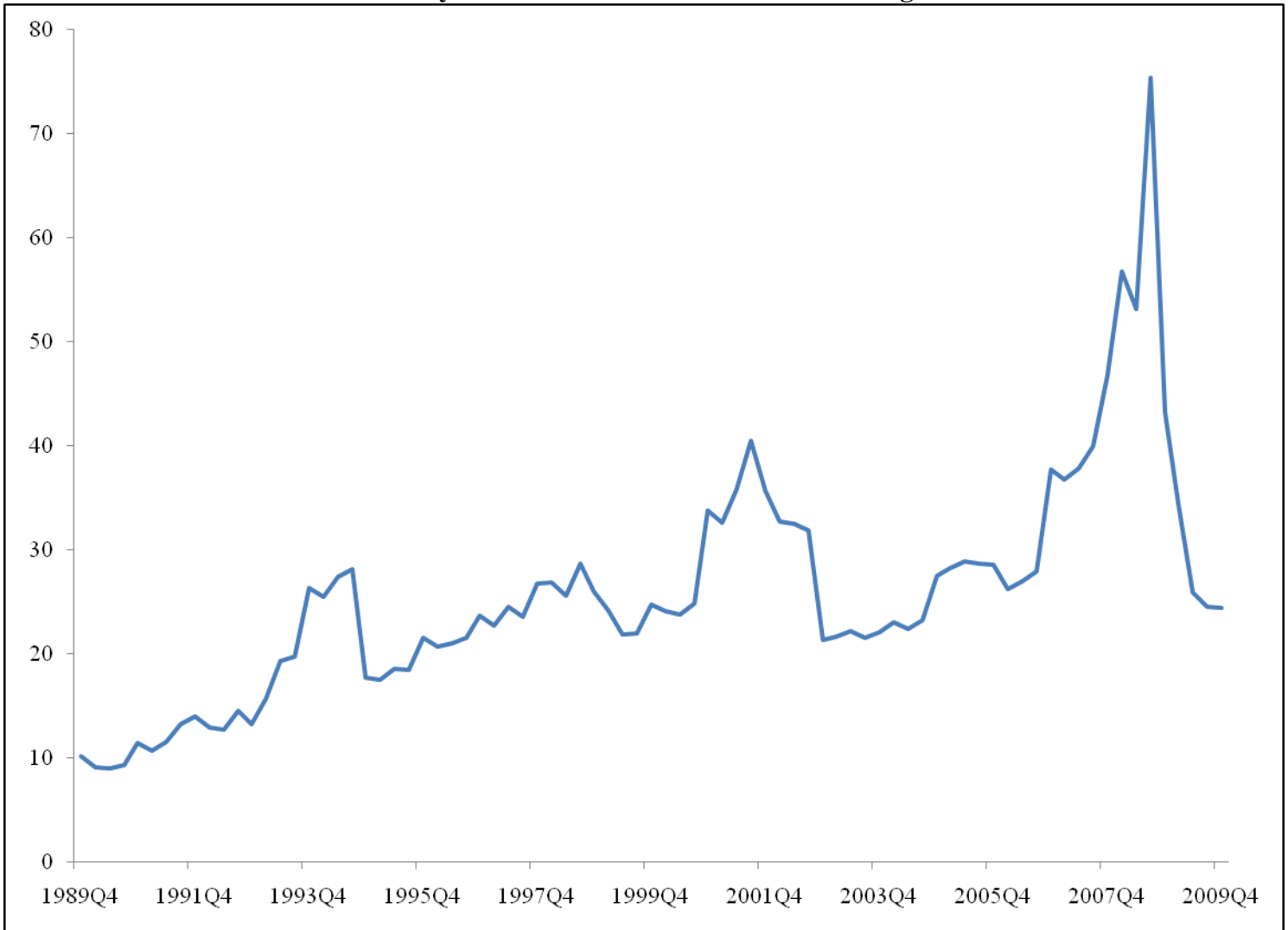
Chart 3  
Leverage Ratios - BHCs Excluding 10 Largest



Source: FR Y9-C, End of Year

Note: Tangible assets/tangible common equity is calculated as total assets less goodwill and other intangible assets divided by equity capital less perpetual preferred stock, goodwill and other intangible assets. Tangible assets/tangible equity is calculated as total assets less goodwill and other intangible assets divided by equity capital less goodwill and other intangible assets. Total assets/Total equity capital is calculated as total assets divided by total equity capital.

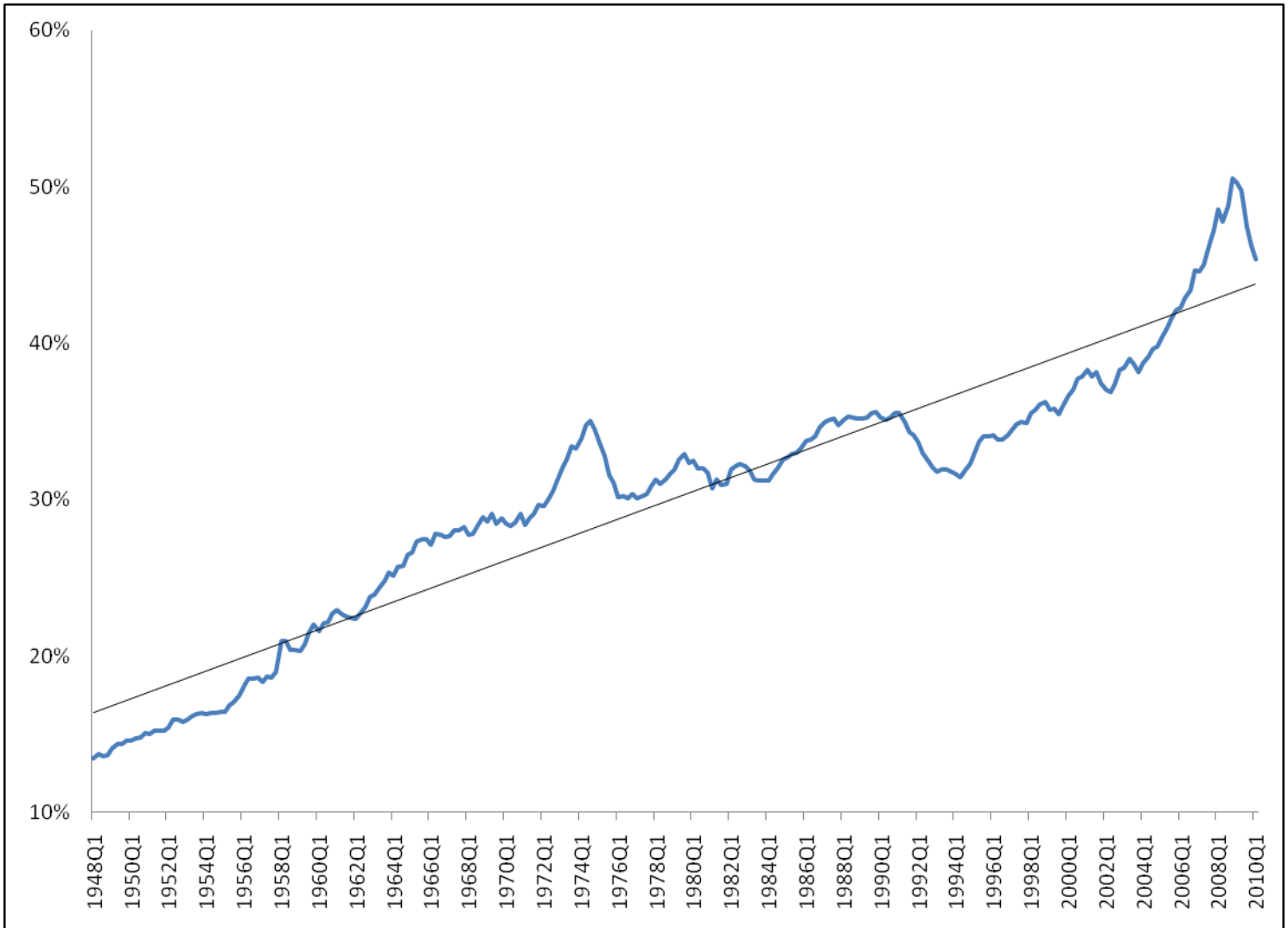
Chart 4  
Security Broker and Dealers Financial Leverage



**Source:** Board of Governors Z.1 – L.129, quarterly data, not seasonally adjusted.

**Note:** Financial leverage is financial assets divided by the difference between financial assets and liabilities.

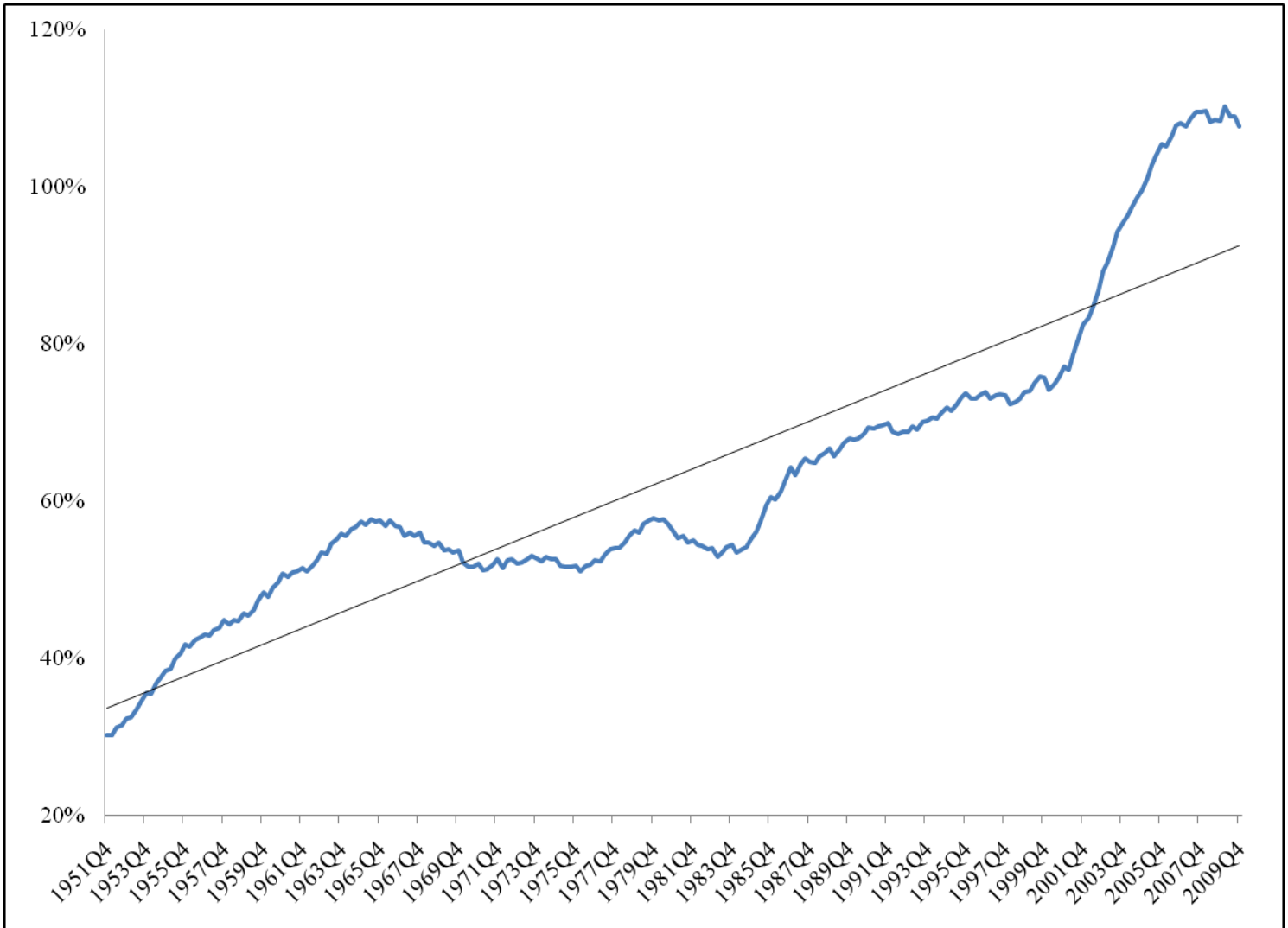
Chart 5  
Bank Loans relative to GDP



**Source:** Board of Governors, H.8, quarterly data, seasonally adjusted; Bureau of Economic Analysis, NIPA Table 1.1.5., quarterly data, seasonally adjusted.

**Note:** Bank loans relative to GDP is calculated as loans and leases of all U.S. commercial banks divided by nominal GDP.

Chart 6  
**Consumer Debt Burden**

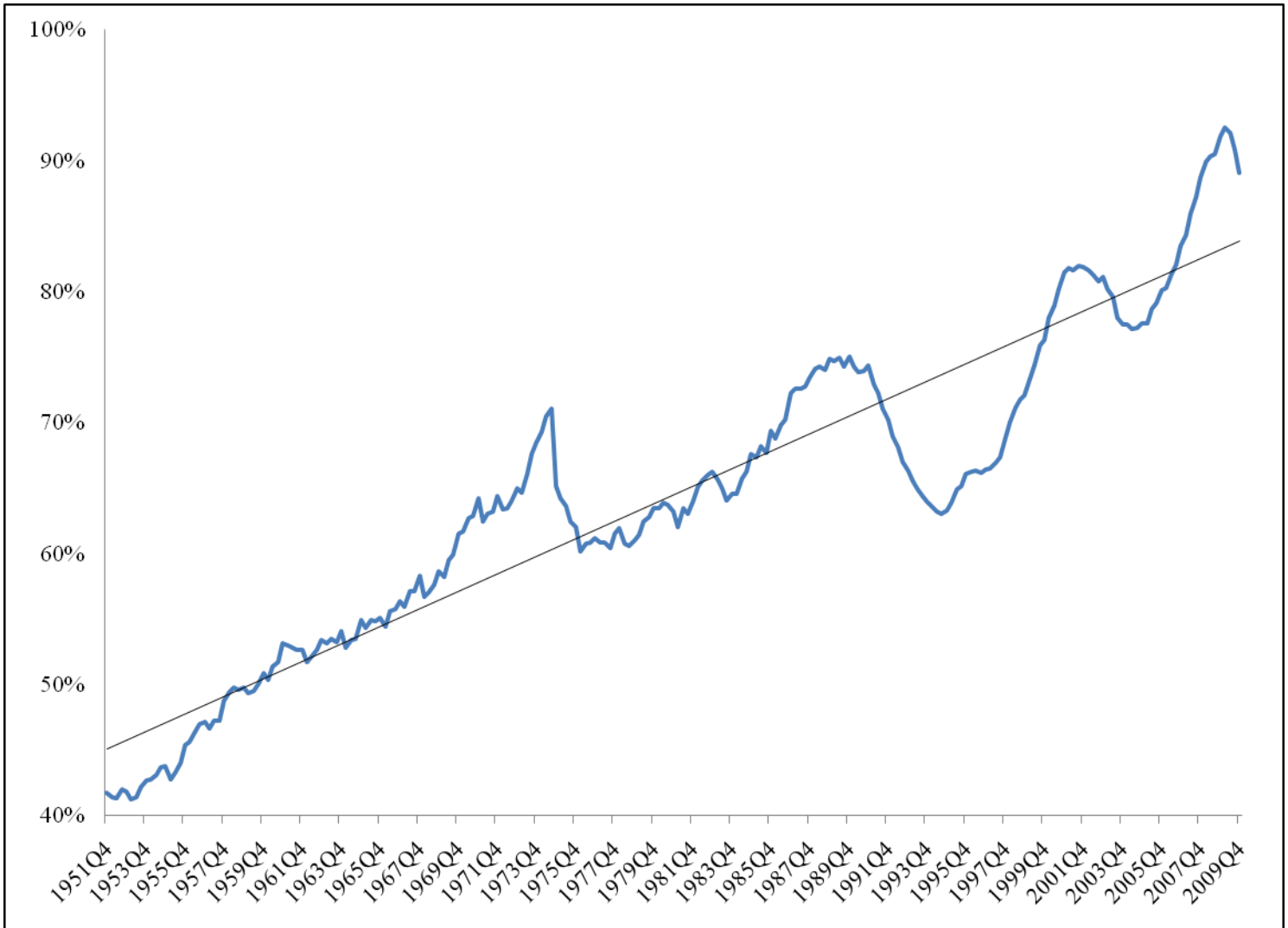


**Source:** Board of Governors, Z.1 – L.100, quarterly data, not seasonally adjusted; Bureau of Economic Analysis, NIPA Table 2.1., quarterly data, seasonally adjusted.

**Note:** Consumer debt burden is consumer liabilities divided by nominal personal income. The consumer liabilities are calculated as credit market instruments less municipal securities and commercial mortgages.



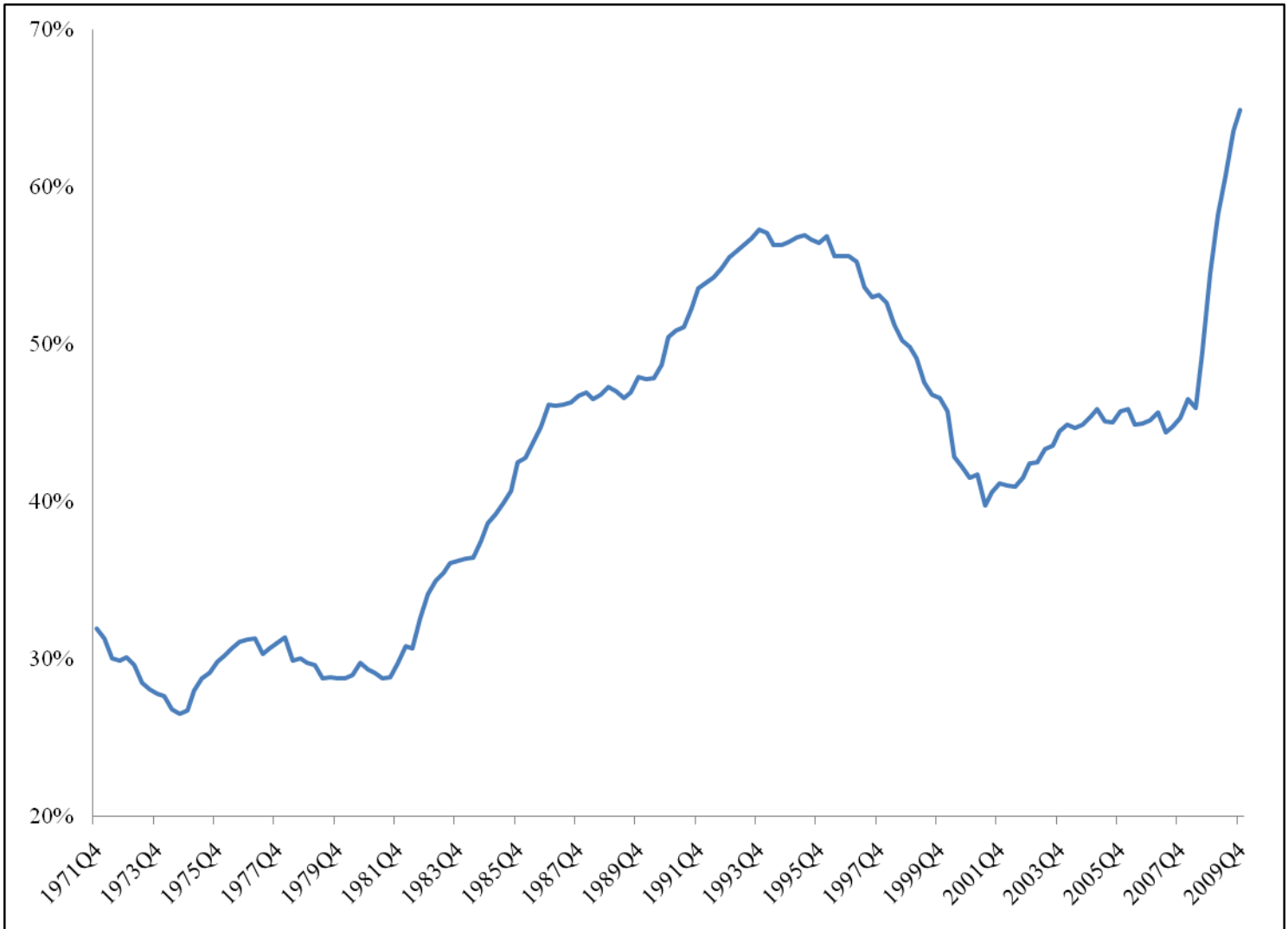
Chart 7  
**Nonfinancial Business Debt Burden**



**Source:** Board of Governors, Z.1 – L.101, quarterly data, not seasonally adjusted; Bureau of Economic Analysis, NIPA Table 1.1.5., quarterly data, seasonally adjusted.

**Note:** Nonfinancial business debt burden is nonfinancial business liabilities divided by nominal GDP. The nonfinancial business liabilities are calculated as trade payables and credit market instruments less municipal securities.

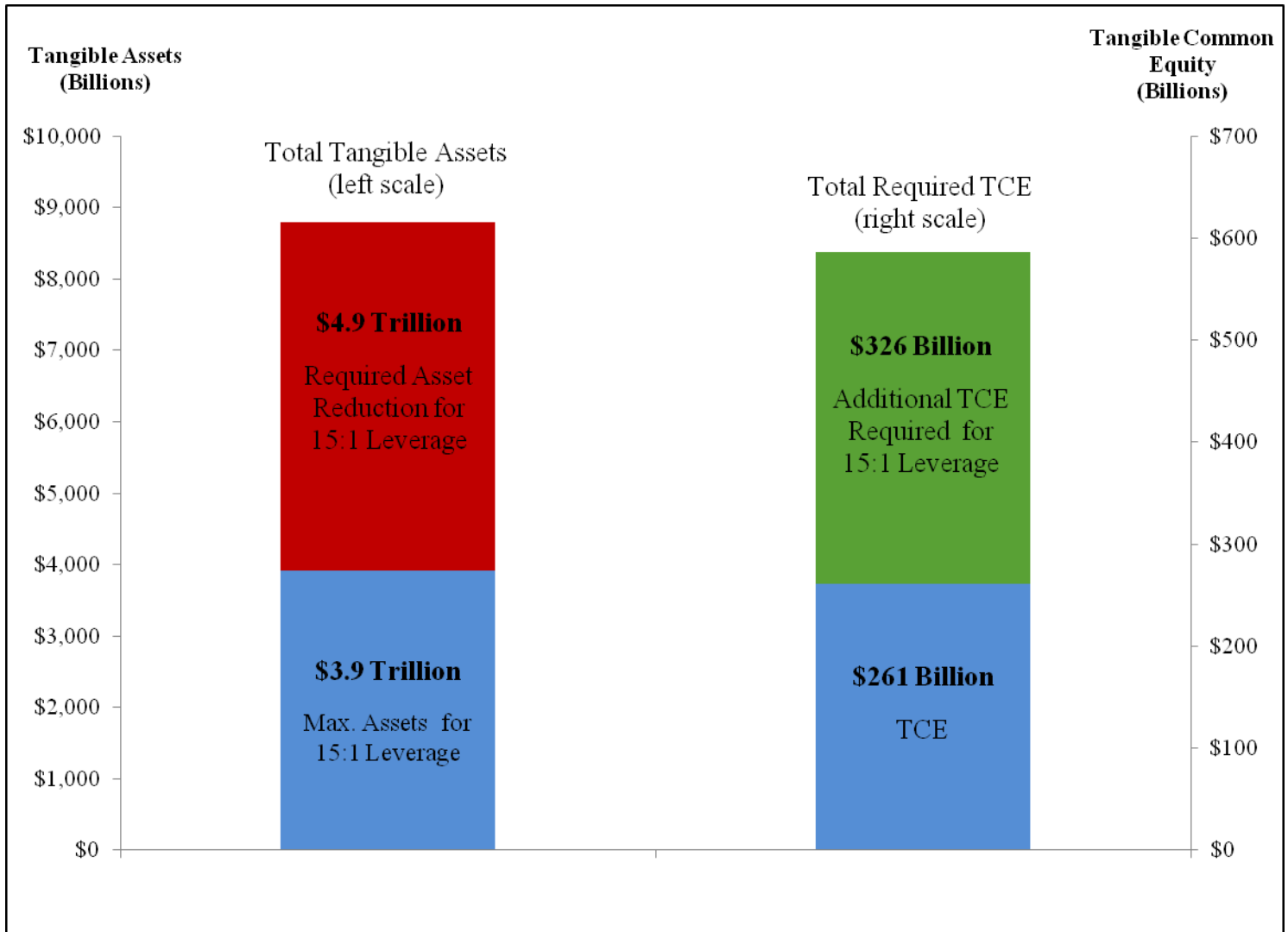
Chart 8  
Federal Government Debt Burden



**Source:** Board of Governors, Z.1 – L.106, quarterly data, not seasonally adjusted; Bureau of Economic Analysis, NIPA Table 1.1.5., quarterly data, seasonally adjusted.

**Note:** Federal government debt burden is federal government liabilities divided by nominal GDP. The Federal government liabilities are calculated as credit market instruments, trade payables, insurance reserves, and miscellaneous liabilities.

Chart 9  
**Top 10 BHC's – Reduction in Assets or Additional Tangible  
Common Equity to Achieve 15:1 Leverage Ratio**



**Source:** FR Y9-C, December 2007

**Note:** Tangible assets is total assets less goodwill and other intangible assets. Tangible common equity (TCE) is total equity capital less perpetual preferred stock, goodwill and other intangible assets.