

## Economic and Financial Climate Change: A Business Economist's Perspective

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*Over the past 50 years, one of the key elements of the evolution of the world economy has been the increasing complexity of financial transactions. This complexity is manifested in financial layering and disintermediation that has increased risk in the real as well as the financial sectors. The consequences of an adverse outcome of this risk are obvious in the current economic situation. This paper analyzes the imbalances that have arisen between the real and financial sectors and the consequences of the ballooning of the financial sector without producing positive contributions to the real sector and increasing risk to both. It calls for restraint on excesses of financial innovation and risk taking that cannot be held in check by market forces alone.*

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This paper is informed by over 20 years of working first in academia and later in the private sector as a business economist in the automotive and financial services industries. Those experiences, along with two years at the President's Council of Economic Advisers, have provided me with a rich and varied view of business economics and the changing business environment—both cyclical and structural.<sup>1</sup>

<sup>1</sup>The analysis and remarks herein are my own views and are not in any way associated with or a representation of my employer, Ford Motor Company.

This article is based on the author's Presidential Address, given to the National Association for Business Economics at its 50th annual meeting in Washington, DC, on October 6, 2008.

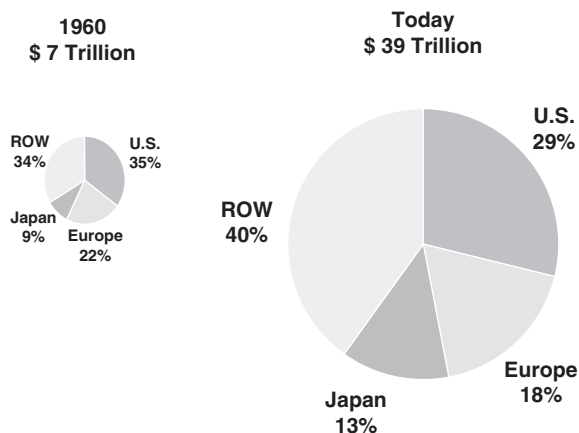
\*Ellen Hughes-Cromwick is Past President of NABE and a director and chief economist at Ford Motor Company. She joined Ford in 1996, and now directs the corporate economics group with major responsibility for the company's global economic and automotive industry forecasts. Prior to joining Ford, she was a senior economist at Mellon Bank from 1990 to 1996, and assistant professor of economics at Trinity College in Hartford, Connecticut, during the late 1980s. She served for two years as a staff economist on the President's Council of Economic Advisers during the Reagan Administration. She recently served on the Congressional Budget Office Panel of Economic Advisers. She received her bachelor's degree from the University of Notre Dame and a master's degree in international development and a Ph.D. in economics at Clark University in Massachusetts.

Because this is NABE's 50th anniversary year, I use the years 1958 and 2008 as the basis for contrast and discussion. There have been myriad changes to the global economic and financial environment since 1958. Without question, a key characteristic of that period is increasing complexity of financial transactions, culminating, in part, with disintermediation and the layering of financial instruments on top of each other in the late 1990s. This layering builds a pyramid, so to speak, of the financial instruments away from the underlying assets, as is seen today with mortgage-backed securities and other structured credit products. The impact of this layering—accompanied by the massive bundling and then worldwide distribution of these instruments—is unprecedented in size and scale. This paper will focus on how these financial innovations played a crucial role in contributing to a severe imbalance between the financial and nonfinancial sectors of the economy. As has been painfully and cataclysmically demonstrated in these past months, this inequality means the relationship between these two sectors changed; and, as a consequence, catastrophic imbalances resulted. I will also discuss the implications of these imbalances, how they might be resolved, and how the United States might fare in a rapidly changing world of economic growth and wealth creation in emerging markets.

### 1. Looking Back 50 Years

The crossroad and disequilibrium between the nonfinancial and financial sectors during 1958 to 2008 evolved in ways no one could have predicted. In 1958, the global economy was nascent but

Figure 1. World Output Shares: 1958 and Today



Source: World Bank, in constant 2000 U.S.S.

growing at a rate that was boosted by recoveries following World War II. Europe was bearing fruits from growth in manufacturing output. In fact, the 1950s were part of the European “Golden Age,” aided by postwar stimulus, technological advances, and currency devaluations as part of the Bretton Woods system, that allowed export growth to accelerate. Meanwhile, the U.S. economy fell into recession in August 1957 and troughed in April 1958. This was followed by a very brief expansion that ended in April 1960. With a \$2 trillion U.S. economy, the first quarter of 1958 fell at an annual rate of 10.4 percent—steep by any measure. Consumer spending fell over five percent. Fifty years ago, over 50 percent of the \$7 trillion global economy was represented by U.S. and European output, as shown in Figure 1.

In contrast, today’s global economy of \$39 trillion is powering ahead with substantial growth in emerging markets. United States and Europe now represent less than 50 percent of global output, a much different profile than 50 years ago.

Most importantly, as shown in Figure 2, the structure of the U.S. economy has changed during this period. The financial sector (finance and insurance) of the economy has gained in prominence during the last 50 years. With the economy growing in real terms from \$470 billion to \$14 trillion today, the share of value added from manufacturing has shrunk from one-quarter of output to 12 percent in 2007, due to substantial gains in productivity and increased international competition, particularly from Japan and emerging market economies. At

the same time, the share of finance and insurance has gone from under four percent to over eight percent during this period. Table 1 provides this historical comparison for employment as well. Finance employment was three percent of all jobs in 1958—as compared with 4.5 percent today. At the same time, the manufacturing job share has declined from 29 to 10 percent. The value-added “role reversal” between finance and manufacturing is a development that is now being reassessed in light of the significant deflation in the value of financial sector output.

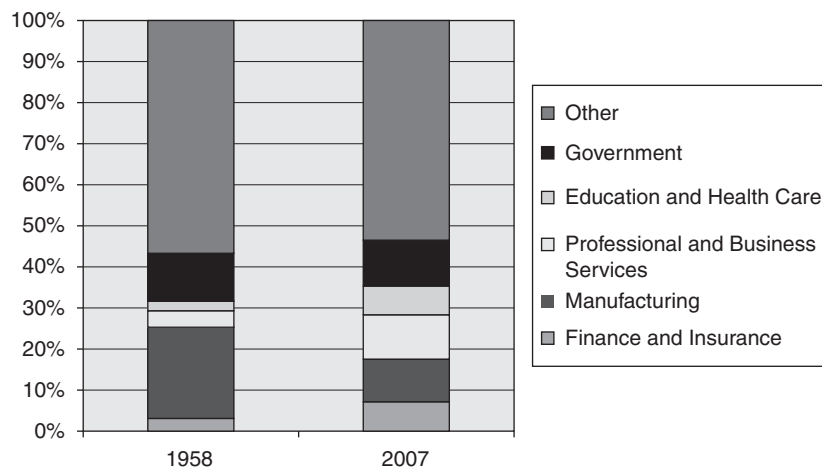
Compare this to the output and employment shares of the rest of the economy as represented by the third column of data for output and employment shares in Table 1. This is the nonfinancial sector excluding manufacturing (but including government.). All of these industries represented 71 percent of output in 1958, and grew to just over 80 percent by 2007. At the same time, these industries employed about 69 percent of workers in 1958 and expanded this share to over 85 percent by 2007.

This brief synopsis of shifting shares between the U.S. sectors during the last 50 years is a useful backdrop to today’s turmoil and what it means for the challenges the United States may face during the next 50 years. Although quite arguable, it may be asserted that the excessive risk-taking undertaken by the financial sector has produced two results. First, it ballooned the value-added of the sector beyond what was now known to be a sustainable level; and the profits of the sector doubled during the last 50 years, from 13 percent of all U.S. corporate profits in 1959 to 26 percent in 2007.<sup>2</sup> As financial intermediaries, it is not clear why this sector’s profitability should grow in relation to the size of aggregate economic activity. However, this growth is partly related to the broader growth of global economic performance and the role that U.S. financial firms have played in facilitating this growth.

Second, excessive financial risk-taking led to repercussions on the nonfinancial sector and adverse consequences for employment. In some sense, the risky activity of the financial services sector is akin to a tax on economic activity with the incidence of the tax borne by workers in the nonfinancial sector. This tax incidence, if you will, is a

<sup>2</sup>Pretax corporate profits with inventory valuation adjustment and without capital consumption allowance, based on billion of current dollars. Source: U.S. Bureau of Economics Analysis.

Figure 2. Shares of GDP, 1958 and 2007



Source: U.S. Department of Commerce, NAICS GDP by Industry Value Added.

Table 1. U.S. Output and Employment Shares 1958 and 2007

	Value Added as % of Real GDP			Employment as % of Total		
	Mfg	Finance and insurance	Other	Mfg	Finance and insurance	Other
1958	25.1	3.5	71.4	28.5	3.0	68.5
2007	11.7	8.0	80.3	10.1	4.5	84.4

Source: Bureau of Economic Analysis, NAICS GDP by Industry, Value Added Employment Data from Bureau of Labor Statistics.

form of negative externality associated with the production of structured financial products with no effective “protection” against the adverse consequences that are and will be incurred by workers in the nonfinancial sector.

## 2. Today's Predicament: Unequal Returns in the Financial and Nonfinancial Sectors

Although financial disintermediation has been very beneficial to global economic growth, particularly in the United States, *it has led to an inequality between the nonfinancial and financial sectors.* Financial innovation has borne captive fruits of labor to those who were able to lever best and often, usually through disintermediation. In the nonfinancial sector, however, firms and most con-

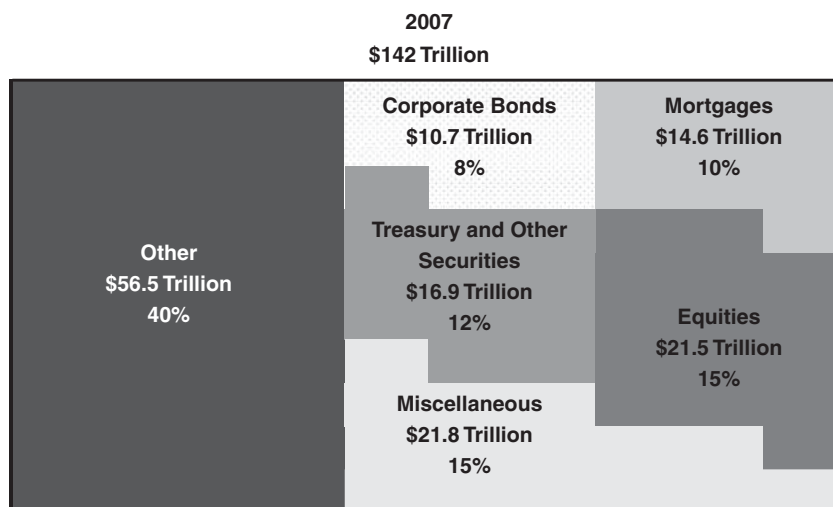
sumers are anchored in physical assets that, in most circumstances, are limited in leveragability and flexibility, often because they are bound by geography or tangible product. For consumers, their exposure to a financial liability, such as a mortgage, is tied to their home values; but there are no adequate tools available to them to hedge this exposure should the home price fluctuate. The same is true for a vehicle purchased by a consumer. Although financial market participants have options available to manage their exposure to corporate bonds, a consumer has far fewer options to employ as protective mechanisms should the residual value of a car, for example, deviate from the initial calculation embedded in the loan or lease.

The incongruity in flexibility and access to hedging tools is quite apparent when evaluating global flows of economic and financial activity. The “fixed vs. flex” dilemma has become more pronounced in recent years with the advent of a new era of financial innovation.

In the era of disintermediation, financial firms have created a variety of investment vehicles that, when left unregulated, have an organic momentum to lever more and more. Although nonfinancial firms and consumers have benefited from this activity, they have also been penalized, as we see in our present predicament.

More than a handful of economists and regulators have lamented excess leverage and rents earned from laying off risk without incurring the true social costs of such activity. As Figure 3 shows, the amount of mortgage assets in the U.S.

Figure 3. U.S. Financial Assets



Source: Federal Reserve, Flow of Funds, Z.1.

economy is relatively small at 10 percent of a total of \$142 trillion of financial assets. Financial assets peaked at 10 times the size of gross domestic product (GDP), or a full four times greater than the average for that prevailed prior to the 1980s. Of course, now we have learned that this represented excesses of financial assets beyond what would be sustainable for a given level of economic activity. And we now know that this excessive outcome produced significant moral hazard and a severe downturn as this financial “innovation” progressed unchecked. Economists likely will agree that most innovation is highly correlated with economic progress as measured by advances in the nation’s standard of living. In the case of the recent financial innovation in structured credit products, however, nothing could be further from the truth. Although a small minority of our population benefited, many have lost dearly. The net external costs are very large—likely not adequately measured by the \$1 trillion or more in writedowns that will be incurred by the time this crisis concludes.

Leaving aside the well-publicized turmoil in mortgage-backed securities and other highly structured credit products, one area that is particularly worrisome is the exponential growth in so-called over-the-counter (OTC) commodity derivatives. Mindful that the primary purpose of the financial sector is to facilitate growth and prosperity of

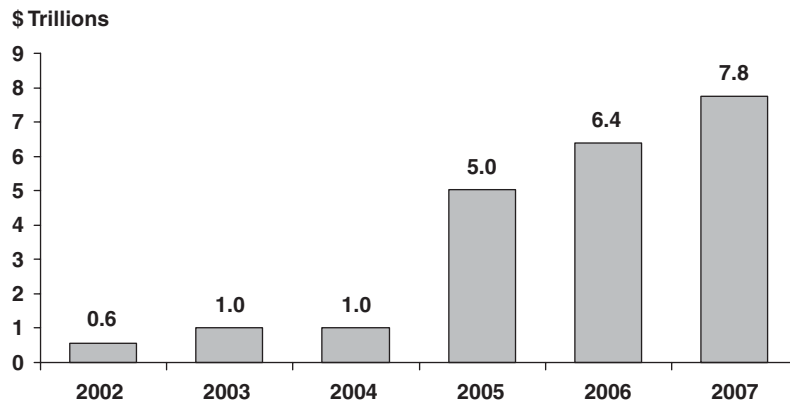
nonfinancial business, the degree of unsustainable value creation in many of these markets has turned into a fountain of net external costs to society. Figure 4 shows that the notional amount of commodity derivatives had risen 13-fold between 2002 and 2007. Similarly, the dimensions of the global credit default swaps (CDSs) market are an example of excess financial product growth. These stood at \$46 trillion as of December 2007, compared with world GDP at \$54 trillion in 2007.<sup>3</sup> Global and U.S. regulators are now beginning to establish mechanisms to increase transparency in the market for these instruments.

One of Herb Stein’s famous laws is “If something cannot go on forever, it will stop.” As any business economist will agree, this common-sense law is invaluable in the trade. Apropos these remarks, Stein was born in Detroit and received his Ph.D. in Economics in 1958, the same year as the founding of NABE. Stein’s law has been particularly helpful to those who have experienced and assessed the effects of bubbles and devaluations, such as the recent ASEAN, Argentine, and

<sup>3</sup>Sources: Bank of International Settlements (CDS), December 2007 Report; IMF (GDP), based in U.S. dollars at market exchange rates; CDS is based on notional amounts outstanding sold.

Figure 4. OTC Commodity Derivatives

Notional amount of commodity derivatives has risen 14-fold since 2002



Source: Bank of International Settlements; excludes gold and precious metals; period end.

Table 2. Derivatives Markets and Competition

Over-the-counter (OTC) Equity-Linked Derivatives Contracts

Forwards and swaps	Herfindahl Index*
Europe	738
Japan	1,308
Latin America	7,420
United States	803
Other Asia	1,350

Source: Bank of International Settlements, End December 2007 Report.

\*Index (HI) is a measure of competition: Below 1,000: Unconcentrated market; 1,000–1,800: Moderate concentration; 1,800 and above: High concentration.

by the Department of Justice in its determination whether a proposed merger or acquisition may limit the degree of competition in the affected market. The formula is simply the square of the sum of market shares of the firms producing the particular good or service. A HI below 1,000 indicates a competitive market, but a value between 1,000 and 1,800 indicates moderate competition. A value above 1,800 is an uncompetitive market. As Table 2 indicates, the degree of competition in OTC equity-linked derivatives is highly variable across geographic markets. Some of this outcome is due to the degree of regulation that is implemented, while other markets may require transactions bundles or technologies that are too large or costly for small agents. Left unchecked, the lack of competition in markets is associated with excess rents earned by certain firms and investors.

Brazilian vintages, or the most recent litany of financial failures and restructurings.

Aside from the size and excessive growth of derivatives, another feature that is important to examine is the absence of competition and transparency, which can have severe consequences. Table 2 shows the Bank of International Settlements data on one measure of competition, the Herfindahl Index (HI), for OTC equity-linked derivatives contracts. This index is used widely in estimating competition. It is one of the criteria used

### 3. Implications of the Financial and Nonfinancial Disequilibria

In conclusion, this paper highlights some of the structural changes that have emerged during the last 50 years. There are many other factors not discussed here that were also very important in the evolution of U.S. economic activity during this period. But what are the implications? Why is this important? In my view, the imbalances between the nonfinancial and financial sectors played a crucial role in producing today's crisis. Left unregulated, there were no market forces that adequately tem-

pered the excesses of financial innovation and risk-taking that grew wildly, particularly in the period since 2002. In some respects, the financial sector hobbled the nonfinancial sector's ability to function. Further, businesses had very few tools to employ to protect them from the tumult instigated by the financial services sector.

Truly massive policy action on a global scale, combined with what we may come to characterize as a new period of "restrained" market forces, will result in restructuring and reform. Stein's law is enforceable. So the key implication of the imbalances is that they will stop. We baby-boomer business economists are now attentive to how government and central banks provide limits to how far such imbalances may be allowed to progress in the next generations.

What we do know is that many economies are reaching the take-off stage of economic growth, with significant prospects for improvements in the global standard of living. For the U.S. economy, it will be very important that this present turmoil and resolution of the crisis give way to domestic productive activities that meet the rise in consumption demand that is most likely for emerging markets. Our national challenge will be engineering a path to a more appropriate level of government intervention in markets following what may be an extensive

period of fiscal assistance and economic restructuring. The opportunities that will materialize in the global economic recovery likely will be the spark for such a way forward.

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*Author's Epilogue:* Between the time that this speech was given on October 6 and the preparation of this manuscript on December 10, events have unfolded at a pace that any business economist would herald as faster than the speed of light. It is with great humility that I have written just a few perspectives about the implications of the imbalance that emerged in the U.S. economy between the financial and nonfinancial sectors. The events of these past several months has provided a wealth of empirical data upon which to gain better perspectives in coming years about the appropriate role of the financial sector in a global economy as well as a proper institutional infrastructure to provide for some limits to the tail risks we are now experiencing.