

## THE FINANCIAL CRISIS: WHENCE AND WHITHER?

JACOB BOUDOUKH\*

### 1. INTRODUCTION

In my lectures at the annual Rothschild Caesarea Center summit in May this year,<sup>1</sup> the annual convention of the Israel Economic Association, and an evening workshop of the Pinhas Sapir Center for Development, also this year, I made it my goal to shed some light on the way the credit crisis that began in the summer of 2007 evolved into a systemic failure of the global financial system. The crisis savaged not only the financial markets; as it unfolded and in its wake, the economy itself collapsed temporarily: global Gross National Product fell by 3 percent, global trade tumbled by 12 percent, and several countries' exports lost as much as 25 percent. The questions I raised in my lectures were: how did we get to the state of systemic failure, how did we climb out of it, from what did we climb out, and from what have we not climbed out?

### 2. BACKGROUND OF THE FINANCIAL CRISIS

The general background of the financial crisis was rooted in the real-estate bubble and is not only economic but also political. The roots of the real-estate bubble lay in an express policy, attributable to the Clinton Administration, of encouraging private homeownership among all population strata including, foremost, the weak ones. Presumably and by necessity, such population groups are typified by meager ability to raise adequate equity and poor ability to absorb increases in mortgage payback. This combination of factors—high leveraging, adjustable-rate mortgage loans, and a bubbly real-estate market brought on by deliberate disregard—lies at the root of the crisis.

Some claim, correctly to some extent, that the credit bubble and high leveraging in the real-estate market, the leveraged-purchases market, the private-consumption market, and so on, owe their origins to global imbalances, i.e., export and savings surpluses in emerging markets that created an oversupply of available and cheap credit. Some claim, correctly to some extent, that the credit bubble was accompanied and inflated by “foolish credit,” i.e., credit given out at low margins and without adequate covenants, which due to its availability facilitated innumerable non-economic acquisitions and projects. Some claim, correctly to some extent, that the Fed kept up its low-interest policy and continued to flood

\* Arison School of Business, Interdisciplinary Center (IDC) Herzliya; Email: [jboudouk@idc.ac.il](mailto:jboudouk@idc.ac.il).

<sup>1</sup> For details, see the presentation at my home site: <http://www.faculty.idc.ac.il/kobi/media.htm>.

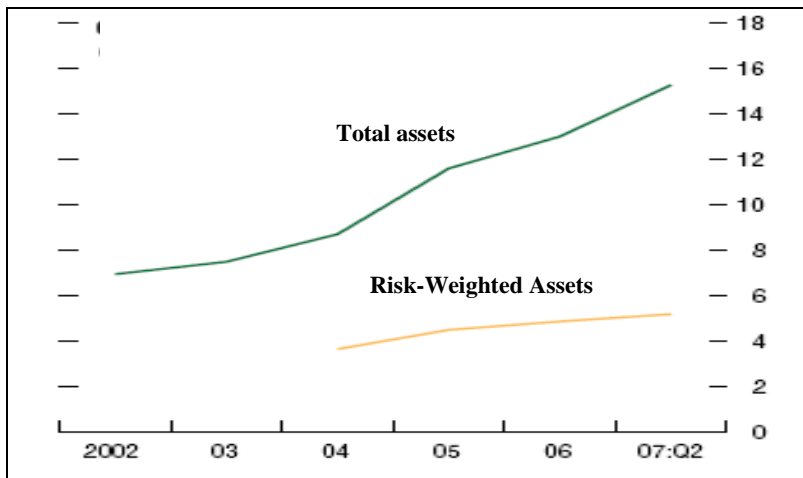
the market with cheap money long after the residues of the crisis occasioned by the bursting of the dotcom bubble made these measures necessary.

Indeed, these were all contributing factors and, to one extent or another, critical pieces in the puzzle that set the stage for the credit bubble and the great credit crisis of 2007–2009. These factors *per se*, however, do not adequately explain why a credit crisis that had been ostensibly inevitable and was similar to several others that had occurred since World War II, managed to topple the global financial system, as had not happened since 1929.

### 3. FINANCIAL INSTITUTIONS TAKE ON A SURFEIT OF CRISIS RISKS

Due to time limits I cannot delve into all the details, but in a nutshell I may state that it was mainly a series of regulatory failures in the financial system that induced the financial crisis. In 2005–2007, large banks around the world allowed their risk assets to increase steeply without increasing their capital commensurably. Figure 1 shows the upturn in total assets and risk-weighted assets. The increase in total assets, from EUR 8 trillion to EUR 16 trillion, presumably took place in low-risk assets; otherwise, how can one explain the EUR 1 trillion increase in these institutions' risk-weighted assets? These processes unfolded concurrently under the brightest regulatory spotlight of all, that of banking supervision. The key to the possibility of the process is that regulation sets low capital-adequacy requirements for assets in the highest rating bracket, AAA.

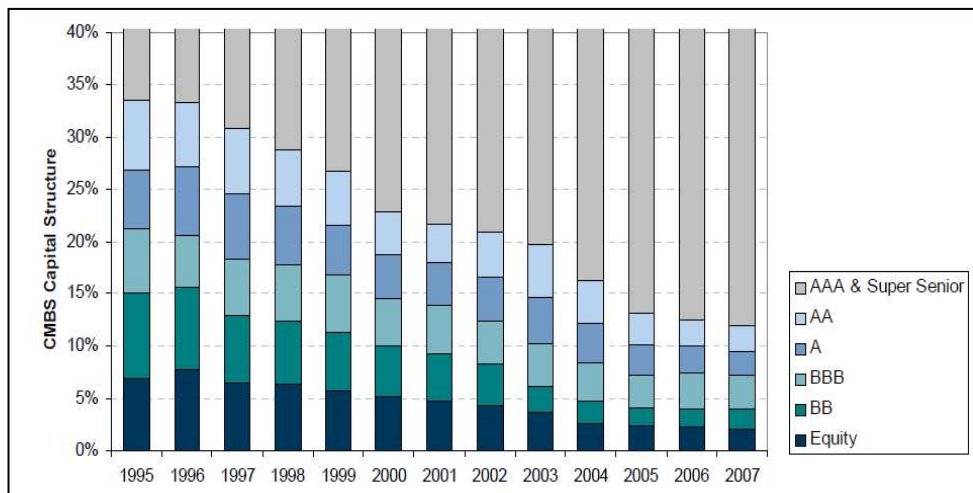
**Figure 1**  
**Growth in Total Assets and Risk-Weighted Assets (In trillions of euros)**



Source: IMF report, 2008.

In practice, of course, AAA ceased to be an absolute value that denotes low risk and lends itself to lenient capital rules. During these years, as we know, the departments of the New York firms that rate the credit-worthiness of structured products tossed aside all professional standards, especially when rating synthetic mortgage-backed assets. Figure 2 shows that the share of assets rated AAA spiraled upward during this time even as the quality of borrowers and the loan portfolios into which they packaged their debts deteriorated; thus, in practice, there was an increase in risk. This “economic miracle” was facilitated largely by the use of erroneous models for the estimation of default risk in various and sundry complex synthetic assets that had the commonality of weak and enormously leveraged mortgage loans and, in many cases, the integration of several such portfolios on the assumption of full risk dispersion. (The correlation was not far from zero.)

**Figure 2**  
**CMBS Capital Structure Evolution**



Source: Goldman-Sachs report on the mortgage-loan market.

Banks and broker-dealers loaded such risk assets onto and off of their balance sheets. As the crisis proceeded, these assets absorbed severe losses. It is difficult to estimate how much they lost because the banks did whatever they could to avoid realizing loss assets for reasons discussed below. However, according to MARKIT, a company that gives quotes on non-liquid assets traded over the counter, AAA-rated mortgage-loan portfolios dating from 2006–2007 have lost some 50 percent (Figure 3).

These downturns undermined the capital adequacy of mammoth institutions and drove them into economic bankruptcy. In the last quarter of 2008 and the first quarter of 2009, the economic world teetered on the brink of an abyss. The crisis erupted simultaneously at GSEs (Fannie Mae and Freddie Mac), banks (foremost Citibank, Bank of America, and Washington Mutual), broker-dealers (above all Lehman Brothers, Bear Stearns, and Merrill Lynch), and insurance companies (e.g., AIG and several monolines).

**Figure 3**  
**Decline in Mortgage Credit Default Swap ABX Indices**



Source: Marcus Brunnereier, 2008.

#### 4. REGULATORY ARBITRAGE

The commonality in all of this is a structural incentive to take synthetic risk. All these institutions were typified as being immune to bankruptcy on the “to big to fail” principle; as such, they were able to pile on cheap debt at narrow spreads of 20 basis points or less. This debt, or alternatively, debt taken on indirectly through the financial commercial paper market via various SPV structures, was used for investment in synthetic AAA assets at no capital cost or zero capital cost. There were other stories of risk-taking without an adequate capital cushion, of course. An example is the unlimited credit insurance that AIG issued; although this demarche does not fully fit the description above, it does share the wish and the ability to take enormous cost-free risk—a synthetic risk—and the existence of a regulatory lacuna, or more accurately, a regulatory trench through which these companies passed.

Taking an unpriced synthetic risk and harvesting the proceeds of government bankruptcy insurance is nothing but a transfer of wealth or an act of regulatory arbitrage. By the same token, of course, there was enormous demand for investment in low-risk USD assets, but the yields on these assets hardly surpassed those of government bonds, which were paying low interest and, in fact, negative real interest at the time. Figure 4 illustrates the exercise of the no-cost option implicit in the assurance given to these institutions’ creditors by showing the banking system’s risk spread (the spread between government-bond interest and swap interest at expirations of 2, 5, and 10 years). When the crisis was at its worst, the risk climbed to levels resembling those observed during the 1998 LTCM

crisis. The stunning part of the picture is not the widening of the financial system's risk spread—a familiar and well-known tableau—but how steeply and quickly the spread narrowed again. The decline in risk was occasioned partly by intervention programs that bought up assets (TARP) and bailed out troubled firms (Fannie Mae, Freddie Mac, AIG) and, above all, by USD 12 trillion in backstop guarantees, courtesy of the Administration. In fact, all those implicit guarantees became explicit ones. It was the losses, not the institutions, that were nationalized, and they were shifted from the financial sector to the government one.

**Figure 4**  
**2Y, 5Y, and 10Y Spreads between Government Bond Interest and 2Y, 5Y, and 10Y Swaps**



## 5. IS IT OVER? NOT EVEN CLOSE

When the losses were nationalized, some were handed on to the taxpayer but others remain buried in the financial institutions' balance sheets. Today, as during the crisis, these institutions are continuing to take risks in order to dig their way out of the pit of their explicit and implicit losses. This has cost the economy dearly—business credit has become scarce and expensive, a millstone around the economy's neck.

At the peak of the crisis, I argued that the choice made—the nationalization of the losses—would cost the global economy a “lost decade” like Japan's (which, of course, has already lasted more than a decade). This argument, of course, was not tantamount to a recommendation of the alternative that policymakers could have adopted in the winter of 2008/2009, the nationalization of the institutions, which would have induced a much steeper failure in the employment market as the economic system reset itself.

There is no easy way to reduce leveraging in the private business sector to economically competitive levels without pain. Nationalizing the institutions would have been very painful, as stated; it would have included losses to bondholders and wipeouts of shareholders. The nationalization of the losses, in contrast, came at the cost of long-term pain, partial rescue of shareholders, and, in the main, rescue of the financial institutions' bondholders. The bill was handed on to the government. The choice was made in the winter of 2008/2009; all that remains now is to acknowledge the significance of the choice and understand what it implies.

The economic demarche derived from the choice is complicated to carry out and rife with risks. On the one hand, only growth can generate enough revenue to cover the debts that are now being apportioned among all sectors—private, business, and government. On the other hand, belt-tightening by all sectors would induce recession and deflation.

The global economy will spend the foreseeable future in a manic-depressive state. For a moment, we will believe that the markets of the East will generate the requisite growth, that the governments of the West will swing mammoth projects into action, and that the printing press will numb the pain of the debt. The next day, we will remember that the economy of the East is bubbly and relies on Western consumption, that the Western economies are spiraling toward a crash, and that the widening of these governments' credit spreads is leading them to a point of no return. Pessimism and optimism will alternate, mistakes and wise, courageous, and coordinated actions will alternate, fear and risk appetite will alternate, and round and round it will go. This uncertainty will be reflected in enormous volatility in the currency, equity, and commodities markets. Looking several years ahead, it will probably be said in retrospect that the post-crisis years marked the onset of an era typified by sluggish growth, high unemployment, and harshly grinding gears in the inevitable process of the shift of economic hegemony from the markets of the West to those of the East.