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Impact of global crises on statistical systems

The financial crisis and the need for better data

Note by the Bureau of Economic Analysis, United States Department of Commerce*

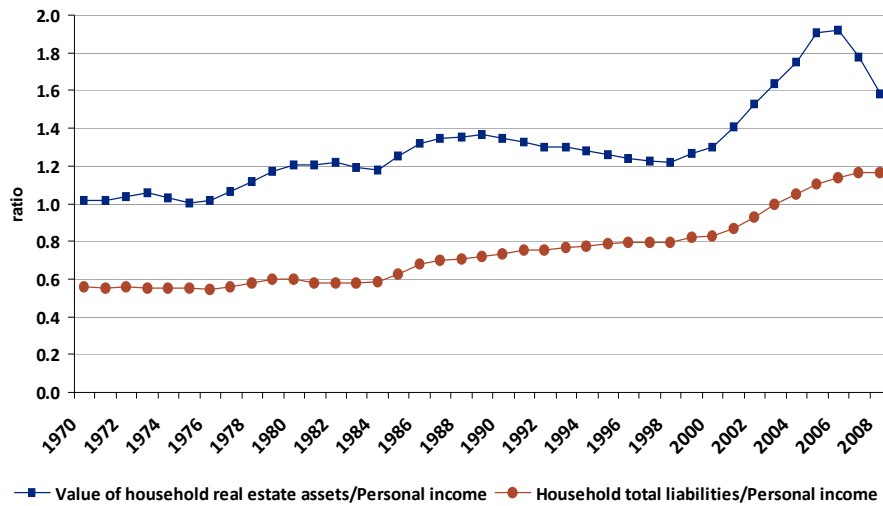
Summary

The current financial crisis has highlighted the need for up-to-date and transparent information by type of instrument, currency, creditors, and debtors. There seemed to be an overall consensus at the time that United States housing and stock prices were “too high” to be sustained and that consumers spent “too much” and saved too little. Since the mid 1990’s, consumers depended on the appreciation of their homes and portfolios to do their saving for them. However, most experts seem to have thought that the correction would occur smoothly over time, with a slowing in the rate of increase in house and equity prices below overall growth and inflation, or through a normal (mild) cyclical correction. Improved economic statistics could have helped in getting policymakers, analysts, and investors to focus on how out-of-line housing and equity prices were, and how big an adjustment was required.

* This document has been submitted late for technical reasons.

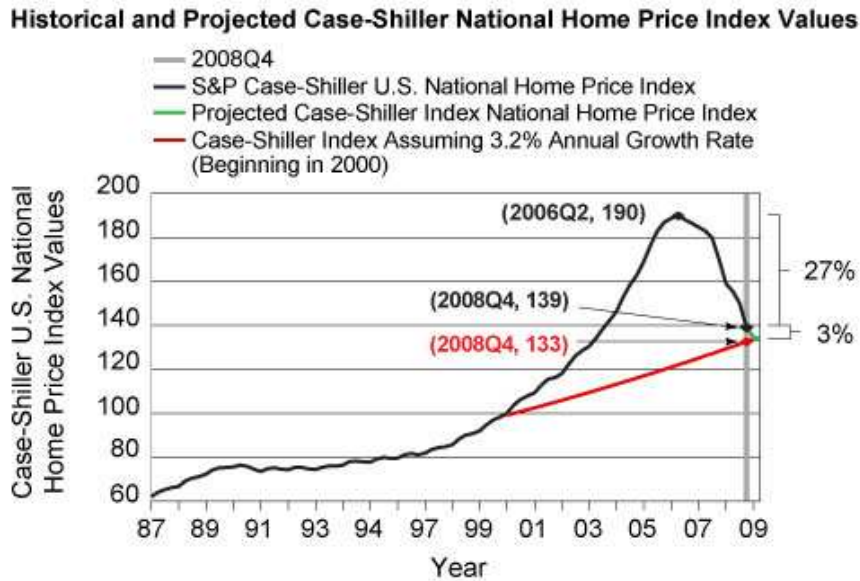
1. The current financial crisis has highlighted the need for up-to-date and transparent information by type of instrument, currency, creditors, and debtors. Emerging macro-prudential supervisors will need such information to identify emerging risks. There may also be a role for collaborative work by statistical agencies and regulators in developing alternative estimates of security values through indirect methods.
2. The business and popular press seem to have decided that no one – other than a few prescient soles, such as Nouriel Roubini, anticipated the collapse in United States housing and equity prices. What is probably more accurate is that few anticipated the suddenness or depth of the drop in housing and stock markets. And few anticipated the spread of the problems in United States asset markets around the world.
3. There seemed to be an overall consensus at the time that United States housing and stock prices were “too high” to be sustained and that consumers spent “too much” and saved too little. Since the mid 1990’s, consumers depended on the appreciation of their homes and portfolios to do their saving for them. However, most experts seem to have thought that the correction would occur smoothly over time, with a slowing in the rate of increase in house and equity prices below overall growth and inflation, or through a normal (mild) cyclical correction.
4. Improved economic statistics could have helped in getting policymakers, analysts, and investors to focus on how out-of-line housing and equity prices were, and how big an adjustment was required. Unfortunately, while much of the information was available, it was not presented in a fashion that attracted attention, or affected policy, in much the way Gross Domestic Product (GDP), inflation, or the unemployment rate affect monetary policy. While many attribute the collapse to the failure of monetary policy to confront asset inflation and of regulatory policy to confront excessive risk taking, good statistics play a key role in forming public policy by publicly highlighting the magnitude of emerging problems and aid in the building of public consensus about the need for action.
5. Figure 1 shows the rise in the value of the United States housing stock relative to personal income and GDP. Between 2000 and 2007, the value of the United States housing stock rose from 1.1 times personal income to 1.4 times personal income, as housing prices rose on average 9.2 percent annually, whereas personal income rose on average 4.8 percent annually. While part of this increase was driven by a drop in mortgage rates over this period, ultimately housing prices are dependent on personal income or expected further capital gains on housing investment. At some point, the price increase becomes an unsustainable bubble. And the regular publication of data such as that shown in Figure 2, including data on leveraging in housing markets might have been helpful in earlier recognition of the size and extent of that bubble.

Figure 1
Housing and personal income



Source: Bureau of Economic Analysis National Income and Products Accounts data

Figure 2
Historical and projected Case-Shiller national home price index values

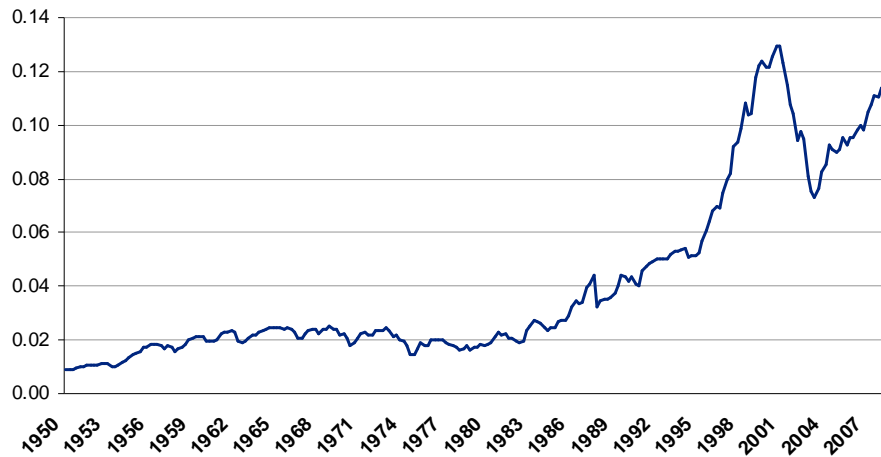


Source: Pollock, 2009

6. Figure 3 shows the rise in United States equity prices relative to GDP. For most of the post-World War II era, the S&P price index rose at roughly the same rate as GDP and corporate profits. This makes sense, because over time growth in stock prices must come

from growth in the economy, or a higher rate of return to capital investments and growing share of GDP going to corporate profits.[†] However, after the mid 1990s, United States stock prices — even after accounting the cyclical drop in profits in 2000 — soared relative to GDP and corporate profits. Part of the rise was based on the perception that the United States had entered a period of higher economic growth driven by technology. And as can be seen from Figure 3, while there was a bump-up in economic growth, above the slower growth experienced since the early 1970s, it was not sufficient to explain “irrational exuberance” seen in financial market expectations, nor was it particularly high in the context of long-term growth. Further, as predicted by growth theory and as can be seen in Figure 4, there has been very little change in shares of GDP over time.

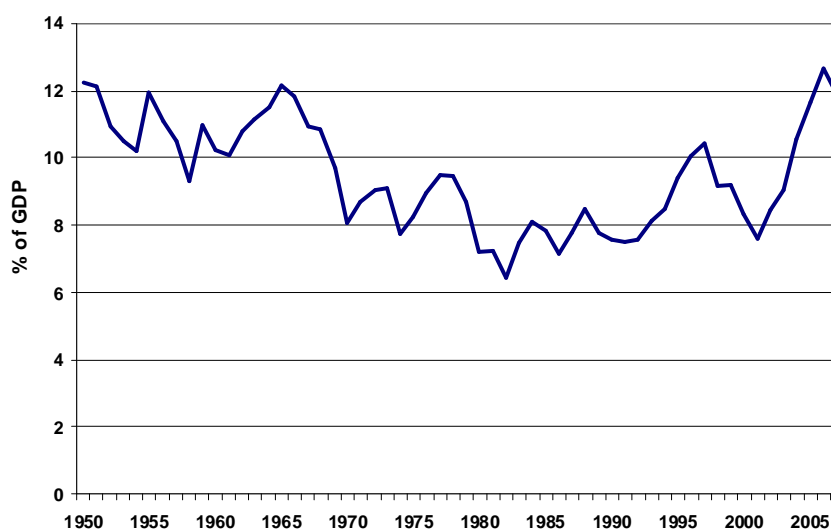
Figure 3
Growth in equity prices relative to Gross Domestic Product



Source: Bureau of Economic Analysis National Income and Products Accounts Standard and Poor's data

[†] Since United States rates of return to foreign investments are higher than foreign rates of return to investment in the United States, a growing share of profits coming from overseas investments can boost profits and stock prices, but this trend has not been significant enough to explain the post 1995 run-up in stock prices.

Figure 4
Profit share of Gross Domestic Product

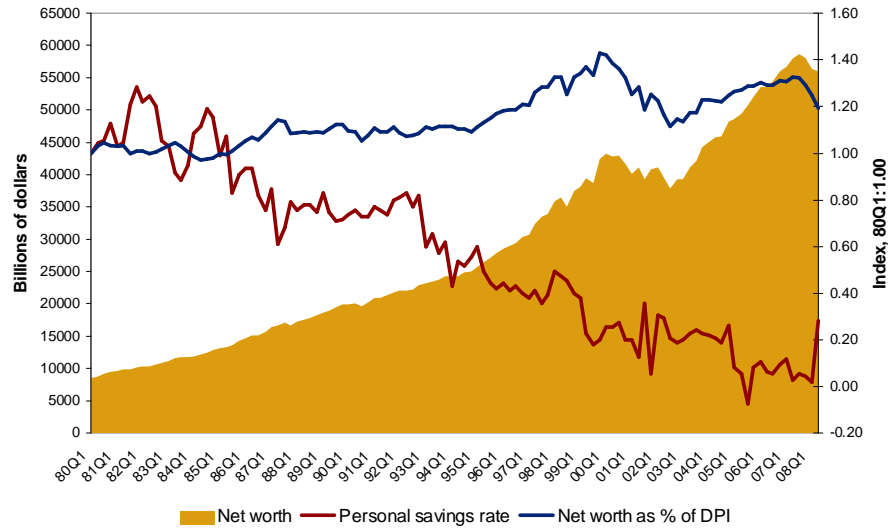


Source: Bureau of Economic Analysis National Income and Products Accounts data

7. Figure 5 shows the share of the increase in household's net worth (saving) came from saving out of current income as compared to capital gains on their home or their investments. Between 2000 and 2007, households saw their net worth rise from \$42.0 trillion to \$62.6 trillion.[‡] In response, households saw little need to save out of current income and the personal saving rate dropped from 2.3 percent to 0.6 percent. There seem to be little need for households to be concerned about the future, because "saving" through appreciation in their portfolio was more than offsetting the drop in their saving out of current income, and the ratio of net worth to disposable income was actually increasing. These unsustainable trends – based as they were on the unsustainable rise in housing and equity prices – not only had significant implications for the adequacy of household retirement assets, but significant implications for the United States and world macroeconomy that would result from a rise in United States saving out of current income and the corresponding drop in the 70% of United States GDP accounted for by consumer spending.

[‡] Federal Reserve Board, Flow of Funds data available:
<http://www.federalreserve.gov/econresdata/default.htm>

Figure 5
Household asset values and savings

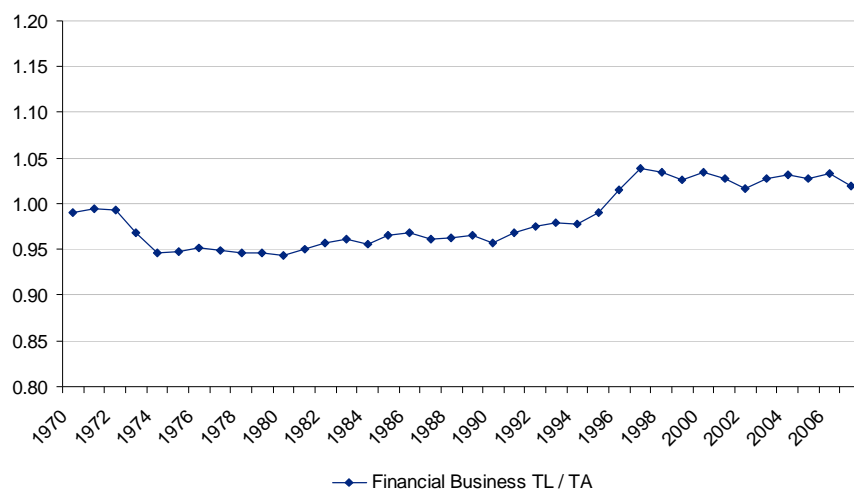


Source: Bureau of Economic Analysis National Income and Products Accounts data and Federal Reserve Flow of Funds data

8. These figures – which are all based on available data -- vividly illustrate how far “out-of-line” the prices were in housing and stock markets, and the extent to which households saving rate out of current income was unsustainable. Unfortunately, these charts, and associated ratios were not produced, or highlighted, by the Bureau of Economic Analysis (BEA) — which produces the United States GDP, personal income, and profits data — and the Federal Reserve Board — which produces the United States domestic financial and household balance sheets — in the decentralized United States statistical system. A recent paper by Parker and Palumbo, which examined how an integrated set of accounts would have performed during the current crisis, found that the “facts” related to housing prices, household leveraging, and saving would have been highlighted by such a set of accounts.

9. Where there was simply a gap was in macro-economic data to warn of the looming crisis in credit markets. The available data in Figure 6 showed on leveraging in the financial sector only show a slight higher average leverage ratio of 1.03 beginning in the late 1990’s compared with an average ratio of .97 over the previous two decades, indicating the fact that the United States data are too aggregate to isolate the dramatic increase in leveraging that was taking place in mortgage banks and other financial institutions, as well as in special purpose entities, that were masked by decreasing leverage in other financial institutions.

Figure 6
Financial business sector leverage



Source: Bureau of Economic Analysis/FRB (Federal Reserve Board) integrated United States macroeconomic accounts

10. What was also missed because the data were too aggregate, were detailed data on maturity to identify misalignment of assets and liabilities; detailed data by type of instrument, such as how much of United States international bond sales were of collateralized sub-prime loans.

11. Finally, there was a lack of data on the ownership of these collateralized sub-prime loans. In the Spring of 2008, as United States financial markets were experiencing significant difficulties, Europe viewed these as uniquely American problems. Better data on the ownership of these assets might have aided in earlier and better coordinated international macroeconomic policy in the emerging international recession.

References

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