When Crises Collide

Stijn Claessens, M. Ayhan Kose, and Marco E. Terrones

Recessions accompanied by credit crunches or asset price busts are deeper and longer lasting

THE financial turmoil that started in the United States has already affected the real economy in countries around the globe. But how severe the impact will be and how prolonged the resulting recession is a matter of intense debate among economists.

This debate has highlighted a number of questions about the linkages between the financial sector and the real economy during recessions. For example, how do macroeconomic and financial variables behave during recessions, credit crunches, and asset (house and equity) price busts? And are recessions associated with credit crunches and asset price busts different from other recessions?

To shed light on these questions, we undertook a comprehensive analysis of the linkages between key macroeconomic and financial variables around business and financial cycles for 21 Organization for Economic Cooperation and Development countries between 1960 and 2007 (Claessens, Kose, and Terrones, 2008). This is the first detailed, cross-country empirical study addressing the implications of recessions when they coincide with financial market difficulties, including credit crunches, house price busts, and equity price busts.

Recessions, crunches, and busts

Before analyzing recessions and their interactions with credit crunches and asset price busts, it is necessary to determine the dates of those events. The methodology we employed for this purpose focused on changes in the levels of variables to identify cycles. Consistent with the guiding principles of the National Bureau of Economic Research, the unofficial arbiter of U.S. business cycles, this methodology assumes that a recession begins just after the economy hits a peak of activity and ends as the economy reaches its trough. With the help of this methodology, we identified cycles in output (GDP) and financial variables, including credit, house prices, and equity prices. After identifying cyclical turning points, we examined the main features of recessions, credit crunches, house price busts, and equity price busts.

There have been 122 recessions between 1960 and 2007. Recessions on average lasted about four quarters, with substantial variation across episodes—the shortest was 2 quarters and the longest 13 quarters (see Chart 1). The typical decline in output from its peak to its trough—the recession's amplitude—tended to be about 2 percent. We also computed a measure of cumulative loss that combined information about both the duration and amplitude of a recession to estimate its overall cost. The cumulative loss from a recession

A closed General Motors plant in Lansing, Michigan.

was typically about 3 percent. Severe recessions—those in which the peak-to-trough decline in output was in the top quartile of all recession-related output declines—were more than three months longer than the average recession and much more costly.

We identified 28 credit crunches, 28 house price busts, and 58 equity price busts. Credit crunches and asset price busts correspond to peak-to-trough declines in credit and asset prices that are in the top 25 percent of all episodes of credit and asset price declines, respectively. Credit crunches and housing busts are often long and deep. For example, a credit crunch episode typically lasted two and a half years and was associated with a nearly 20 percent decline in credit, which is measured by the volume of claims on the private sector (see Chart 2). A housing bust tended to last even longer—four and a half years, with a 30 percent fall in real house prices. An equity price bust lasted more than 10 quarters, and when it was over, the real value of equities had dropped by half.

If they were not followed by recessions, the episodes of crunches and busts were not necessarily associated with declines in output. In fact, although output growth slowed—especially during the early stages of credit crunches and house price busts—it often expanded at the end of these episodes. The eventual increase in output during crunches and busts is not surprising, because these episodes did not always fully overlap with recessions and lasted twice as long as the recessions. Still, the average growth rate of output during crunches and busts was much lower than during more tranquil periods in credit and housing markets.

Both credit crunches and house price busts were, however, associated with significant declines in investment. Credit crunches tended to coincide with a decline in residential investment of about 6 percent, whereas house price busts were accompanied by about twice as large a drop. The unemployment rate increased significantly, especially during the early stages of these episodes, as economic activity started to soften.

Cycles move in step across countries

Some observers see the global nature of the current crisis as unprecedented, with several advanced economies simultaneously experiencing declines in house and equity prices and difficulties in their credit markets. However, historical evidence shows this is not unusual. Recessions, crunches, and busts have often occurred at the same time across countries. Recessions in many advanced economies were clustered in four periods over the past 40 years—the mid-70s, the early 80s, the early 90s, and the early 2000s—and often coincided with global shocks.

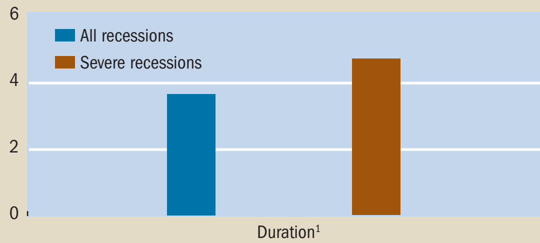
Just as many countries experience synchronized recessions, countries also go through simultaneous episodes of credit contraction. Moreover, declines in house and equity prices tend to occur at the same time. For example, house price declines are highly synchronized across countries—reflecting the importance of global financial factors, including common movements in national interest rates, in driving house price fluctuations. Equity prices exhibit the

Chart 1

A long and painful road

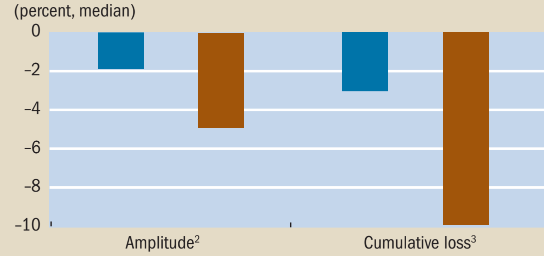
Severe recessions last longer . . .

(quarters, average)



. . . and are much more costly than other recessions.

(percent, median)



Source: Claessens, Kose, and Terrones (2008).

[1]Duration is the number of quarters between the peak and trough of a recession.

[2]Amplitude is the change in gross domestic product (GDP) between the peak and trough.

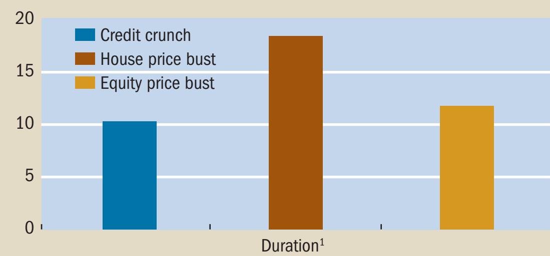
[3]Cumulative loss is the total amount of GDP lost between the peak and trough of a recession.

Chart 2

Extended and more costly

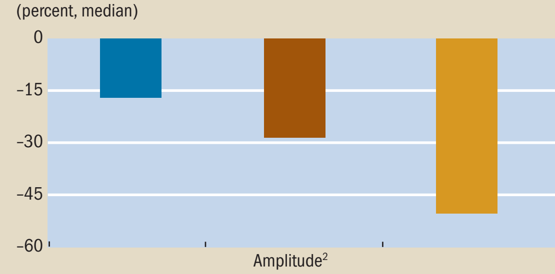
Credit crunches and asset price busts are often protracted events . . .

(quarters, average)



. . . with substantial declines in credit volume and house and equity prices.

(percent, median)



Source: Claessens, Kose, and Terrones (2008).

[1]Duration refers to the number of quarters between the peak and trough of a credit crunch or an asset (house and equity) price bust.

[2]Amplitude is the change in credit volume or asset price between the peak and trough of a credit crunch or an asset price bust, respectively.

highest degree of synchronization, likely because of the high financial integration of equity markets. But the number of countries experiencing bear equity markets frequently exceeds the number experiencing a recession. As the popular saying goes, "Wall Street has predicted nine of the last five recessions."

Double whammy

Are recessions associated with crunches and busts indeed worse than other recessions? To answer this question, we first used a simple "dating" rule to determine whether a specific recession is associated with a credit crunch or asset price bust. In particular, if a recession started at the same time as, or after the beginning of, an ongoing credit crunch or asset price bust, we considered that recession to be associated with the respective crunch or bust. This rule describes a "timing" association between the two events but does not imply a causal link.

Many recessions were indeed associated with credit crunches or asset price busts. In one out of six recessions, there was also a credit crunch under way, and in one out of four recessions a house price bust. Equity price busts overlapped for one-third of recession episodes. There can also be considerable lags between financial market disturbances and real activity. A recession, if one occurs, can start as late as four to five quarters after the onset of a credit crunch or housing bust.

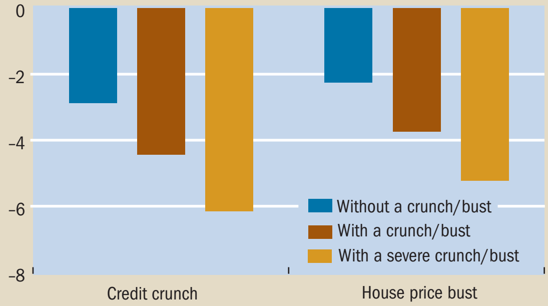
One of the key questions surrounding the current financial crisis is whether recessions associated with crunches and busts are worse than other recessions. Here, the international evidence is clear: these types of recessions are not only longer, but also are associated with much greater output losses than others. In particular, although recessions accompanied by severe credit crunches or house price busts last only three months longer on average, they typically result in output losses two to three times greater than recessions without such financial stresses (see Chart 3).

Chart 3

Battered by severe crunches and busts

Recessions that coincide with severe credit crunches or house price busts exhibit larger cumulative GDP losses.

(cumulative loss, percent, median)



Source: Claessens, Kose, and Terrones (2008).

Notes: Cumulative loss is the total amount of GDP lost between the peak and trough of a recession. Severe credit crunches and house price busts are those that are in the top half of all crunch and bust episodes.

Why are recessions associated with crunches and busts longer and deeper? Financial market problems stemming from credit crunches and asset price busts can prolong and deepen recessions through a variety of channels. For example, sharp declines in asset prices can reduce the net worth of firms and households, limiting their capacity to borrow, invest, and spend. This in turn leads to further drops in asset prices. Banks and other financial institutions might restrict lending as their capital bases diminish during credit crunches, resulting in protracted and deeper recessions.

A somewhat mechanical examination of changes in the main components of output during recessions reinforces that conclusion. Consumption and investment usually register much sharper declines, leading to more pronounced drops in overall output and employment during recessions coinciding with financial problems. For instance, the decline in consumption during recessions associated with house price busts was typically twice that of recessions without busts, likely reflecting the effects of the substantial loss of housing wealth. Moreover, the rate of unemployment typically registered a larger increase during recessions accompanied by crunches and busts.

Although recessions associated with equity price busts also tended to be longer and deeper than recessions without, the differences across these episodes were not statistically significant. This confirms that equity price busts have a less tight relationship with developments in the real economy than do credit crunches and house price busts.

Lessons for today

The global economy has been experiencing a financial storm of historic proportions. The lessons from the earlier episodes of recessions, crunches, and busts are sobering, suggesting that recessions following this storm may be more costly, because they are likely to take place alongside simultaneous credit crunches and asset price busts. Furthermore, although the effects of the current crisis have already been felt gradually around the world, past evidence suggests that its global dimensions are likely to intensify in the coming months. Nevertheless, the nature of a recession in a particular country can be shaped by many factors—including the financial health of its firms, banks, and households prior to the recession, and the policy measures that authorities employ to mitigate its adverse effects. Continued decisive policy actions at both the national and global levels could help meet the evolving challenges of the crisis. ■

Stijn Claessens is an Assistant Director, and M. Ayhan Kose and Marco Terrones are Senior Economists in the IMF's Research Department.

Reference:

Claessens, Stijn, M. Ayhan Kose, and Marco Terrones, 2008, "What Happens During Recessions, Crunches, and Busts?" forthcoming IMF Working Paper.