What were the causes of the Great Recession?: The importance of the ‘which aggregate?’ debate

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Money and nominal GDP in the USA in the inter-war period
% annual changes in the quantity of money and nominal GDP from Gordon (ed.) The American Business Cycle

![Chart showing the quantity of money and nominal GDP in the USA during the inter-war period, with data points from 1918 to 1939.]
The monetary interpretation of the Great Depression

“A governmentally established agency – the Federal Reserve System – had been assigned responsibility for monetary policy. In 1930 and 1931 it exercised this responsibility so ineptly as to convert what would otherwise have been a moderate contraction into a major catastrophe.”


• “After reading Friedman and Schwartz, I knew what I wanted to do. Throughout my academic career, I would focus on macroeconomic and monetary issues.”

The money aggregate in chart and, predominantly, in Friedman and Schwartz 1963 is broadly-defined to include all time deposits. This was noticed by Robert Lucas in his review article on Friedman and Schwartz in the 1994 *Journal of Monetary Economics*. Friedman and Schwartz indeed expressed a clear preference for broad money in their *Monetary History*. Admittedly, Friedman then shilly-shallied about the topic, before reverting to support/defence of M2 broad money at end of career.
The monetary interpretation of the Great Depression – which aggregate?

- The only aggregate mentioned in the one paper on money in Bernanke’s *Essays on the Great Depression* is M1.
- Ending the publication of the M3 money aggregate in early 2006 was one of Bernanke’s earliest decisions as Fed chairman.
Andrew W. Lo ‘Reading about the financial crisis: a twenty-one book review’, *Journal of Economic Literature*, 2012, vol. 50, no. 1, pp. 151–78, contained not a single reference to the quantity of money on any definition. (Not even a Divisia money measure.)
Annual growth rates (1960 - 2015) of the two money aggregates still recognised by the Fed after 2006

M1
M2
Growth rates of US money aggregates at the time of the Great Recession - % annual growth rates, monthly data

M1 and M2 provide no insight whatsoever into the cycle.
Changes in the base and M3 are not correlated, and never have been.

- % annual changes, monthly data from 1960
Growth rates of 'the quantity of money' in the USA on the M3 definition, 1960 - 2015

% annual
% annualised in last three months
Growth rates of US money aggregates at the time of the Great Recession

- % annual growth rates, monthly data

M1
M2
M3
Collapse in US money growth

Growth of the USA's M3 money measure in the decade to 2012
Data from Federal Reserve until February 2006 and from Shadow Government Statistics thereafter
Broad money – relevant in the Great Recession, as in the Great Depression?

- Two periods of extreme instability in broad money growth, in the early 1970s following the end of $ convertibility into gold in 1971, and in 2006-10 period of the Great Recession.

- Deceleration in M3 growth, on the three-month annualised % change metric, was from 22.9% in October 2007 to 3.2% in November 2008. Sharpest deceleration in a 13-month period in the data.
Growth rates of 'the quantity of money' in the USA on the M3 definition, 1960 - 2015

% annual
% annualised in last three months

Sharpest deceleration in broad money growth since the 1930s....
US broad money data still available?

• US quarterly flow-of-funds data prepared since 1952, with all money holdings of the economy’s main sectors. But the data are quarterly. (Q4 since 1945.)

• The sum of the non-bank private sector money holdings might roughly equal M3, as separately estimated by the Fed, and the rates of change may be similar.

• Fed’s own M3 series starts in 1959.
Broad money from flow-of-funds data cf. broad money M3, as estimated by Fed 1959 - 2006

Quarterly data, $ billions

- Broad money, held by all sectors
- M3, estimate prepared by Fed, not s.a.
Money, wealth and expenditure in the UK

All money balances are relevant to the analysis, and the analysis must be concerned to determine national wealth (i.e., the prices of assets) as well as national income and expenditure (i.e., in which the price level of goods and services figures centrally). It makes no sense to view the determinations of national income and wealth as separate subjects.
Financial sector money is far more volatile than money held in the household sector; financial sector receives excess money from other sectors/loses balances when they have an excess demand for money.
Households' money balances and disposable income in the USA, 1969 - 2016

- Blue line: Household money, $b.
- Red line: PDI, annual rate, s.a., $b.
Changes in net worth and total liabilities ('debt') for US household sector since 1990 (in $b.)

- Changes in total liabilities
- Changes in net worth

Diagram showing changes in net worth and total liabilities for the US household sector from 1990 to 2014. The diagram indicates fluctuations over time, with a significant decrease around 2009. The graph uses two lines to represent changes in total liabilities (blue) and changes in net worth (red).
In this period of almost 60 years the assets of the USA's large savings institutions increased over 220 times, but the ratio of money and money-like assets to total assets changed relatively little.

In the USA, in the 58 years to 2010 the money holdings of the five main types of long-term savings institution increased by **9.3%** a year. Their total assets increased by **9.8%** a year.
Notice the extreme volatility of money held by financial institutions. If they keep the ratio of money to assets stable, value of assets must be similarly volatile.
Money balances held by financial institutions in the Bernanke Chairmanship and after

% annual change, quarterly data - from Federal Reserve

Annual growth rate of financial sector money peaked at 50.5% in Q2 2008 and then fell to minus 20.4% in Q2 2010. Large asset price movements are surely to be expected, with volatility of this sort.
Now we have a money concept (i.e., 'speculative' money) that fluctuates with similar amplitude to equity markets, with frequent annual changes in the double digits.
Growth rates of money in the USA, the Eurozone and the UK, 2005 - 2015

% annualised growth rate of the quantity of money in the last six months
Role of money in the Great Recession

In June a collection of papers on the impact of the sharp 2008 fall in money growth on demand, output and employment – in a book called *Money in the Great Recession* and edited by Tim Congdon – is being published by Edward Elgar Publishing.

- Problems in US housing finance market cast doubt on asset quality at some banks, and led to closure of global inter-bank mkt. to new business from August 2007.
- Easy enough to meet, in principle, with large lending facilities from central bank, as in Eurozone, where business activity little affected until late 2008. Bank credit to private sector in Eurozone in fact higher than in year from Q2 2007 than in previous year, and broad money growth remained positive and quite high until Q3 2008, although falling from the 2007 peaks.

• But intensification of downturn from October 2008 – which led to the moniker ‘the Great Recession’ becoming applicable – mostly due to the tightening of bank regulation, esp. to increases in K/A ratios.

• Policy-makers simply did not understand the linkages from increases in K/A ratios, to banks’ asset shrinkage, to the destruction of money balances and to the deflationary consequences of such money destruction. They had forgotten the quantity theory of money, and the Friedman and Schwartz analysis, or they had misunderstood.....
‘...the Great Recession was in fact caused by a collapse in the rate of growth of the quantity of money. This was the result of a mistimed and inappropriate tightening of banks’ capital regulations, which had vicious deflationary consequences at just the wrong point in the business cycle. Central bankers and financial regulators made serious mistakes.’
The monetary interpretation of the Great Depression/Recession

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What does one say about policy from mid-2007 to late 2008?