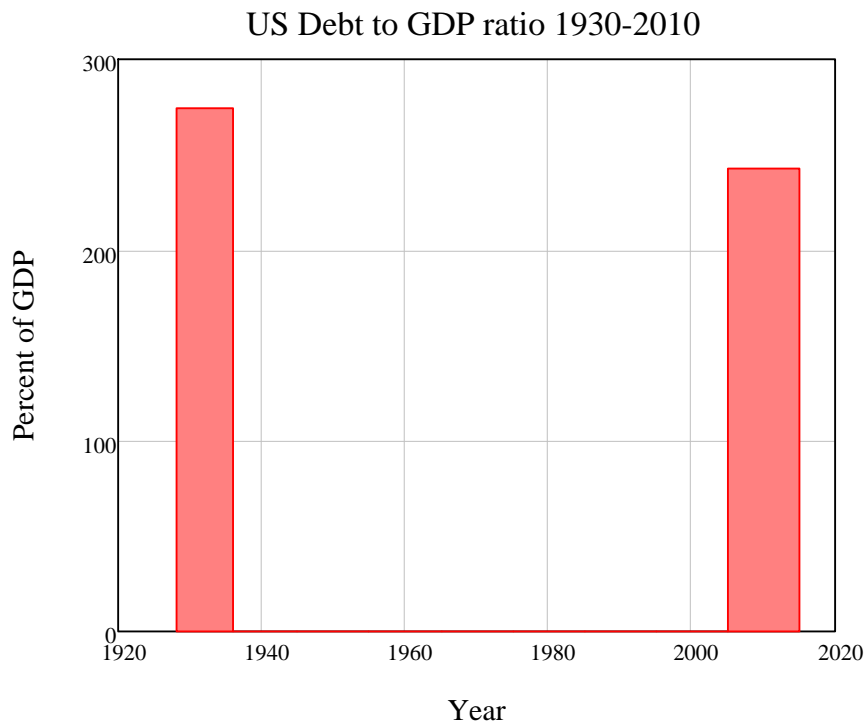


How I learnt to stop worrying and love The Bank

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Having just read the [World Economic Forum's Report on sustainable credit](#), I now realise that I was wrong to worry about the growth in debt. After all, since 1932, the US's debt to GDP ratio has actually fallen at a rate of 0.2% per year!



How could I ever have thought that the growth of credit could have caused the Great Recession, when in fact the growth rate of debt has been negative?

I am also chastened to realise that credit is only used for good purposes. As the report notes:

In the long run, the scale and distribution of credit is only economically sustainable if it also meets society's broader social objectives. Credit is linked to social objectives during all stages of a country's economic development. In early stages of development, credit is used to support family-owned businesses; next, it supports small and large corporations; and finally it is used to smooth consumption. Muhammad Yunus, founder of Grameen Bank, goes so far as to say that credit is a human right, and adds: "If we are looking for one single action which will enable the poor to overcome their poverty, I would focus on credit." (p. 39)

Foolish me: here was I, thinking that credit might also be used to fund Ponzi Schemes.

OK, enough with the irony. The WEF's report is not all bad—there are some very good bits that I'll get on to later—but it commits at least three fundamental errors: it uses a questionable base year for its analysis, it omits a crucial variable, and it maintains a wholly benign view of a factor that experience indicates has both benign and malignant attributes.

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A Questionable Base Year: why 2000?

The questionable base year is 2000. The WEF team, working with McKinsey & Company, have put together an impressive database on debt levels in 79 countries, with debt disaggregated into 3 sectors:

- *Retail credit: All household credit stock (loans outstanding), including mortgages and other personal loans such as credit cards, auto loans and other unsecured loans*
- *Wholesale credit: All corporate and SME credit stock (loans and bonds outstanding)*
- *Government credit: All public sector credit stock (including loans and bonds outstanding) (p. 19)*

But to start in 2000? That was just before the last big credit bust, when the DotCom fiasco came crashing down. Why not—at least for the countries where debt data is readily available—go back a bit further? Debt data for the USA is readily available to 1952 from the [Flow of Funds](#), and historical data for earlier years can be derived from the [US census](#). Australia's [Reserve Bank](#) publishes reliable [aggregate credit data till 1976](#), and earlier data is available to take it [back to 1953](#). As a sole individual, I've been able to acquire data till 1920 for the USA and 1860 for Australia. Surely the WEF and McKinsey and Co, with the resources they had to throw at this project, could have done better than 2000.

Why omit financial sector debt?

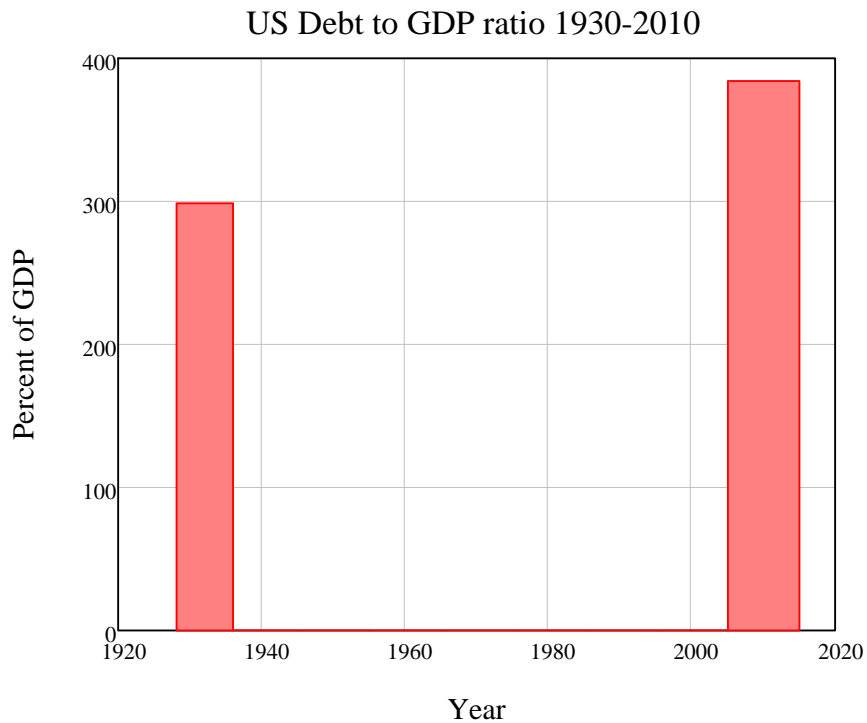
The report omits borrowing by within the financial sector from its record of total debt, when this has been a major component of the growth of debt (certainly in the USA) in the last 60 years. I include financial sector debt in my analysis for two reasons:

- The initial borrowing by the shadow banking sector from the banks creates both money and debt;
- The money lent by the shadow banking sector to other sectors of the economy creates debt to the shadow banking sector, but not money

I frequently get the argument that debt within the financial sector can be netted out to zero, but I think this ignores those two factors above: the creation of additional debt-backed money by the initial loan, and the creation of further debt to the financial sector—most of which has been used to fund asset bubbles rather than productive investment.

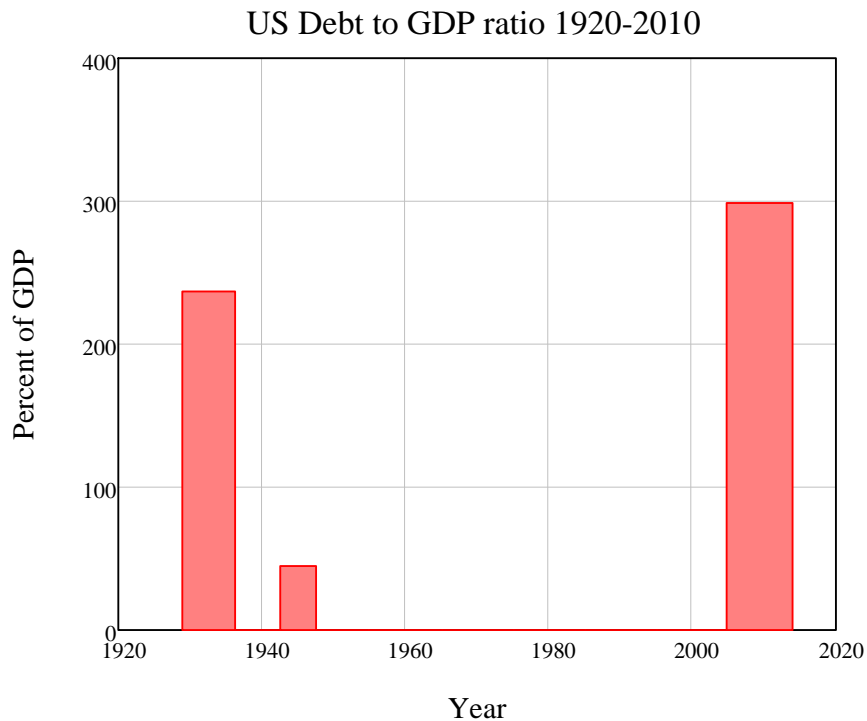
Just for comparison, here's that same 1932 to 2010 comparison, but with the financial sector's debt included:

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Even with the same nonsense base year, and even with combining private and public debt—factors that I believe should be kept separate—this paints a somewhat different picture.

And a focus on total private sector debt during and after the Great Depression also conveys a somewhat different perspective.



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Which raises the third issue...

Why ignore Ponzi Schemes—and Minsky?

The report's listing of the uses to which credit is put is so innocent as to make me wonder whether one of the author's primary school children wrote the relevant paragraph:

In early stages of development, credit is used to support family-owned businesses; next, it supports small and large corporations; and finally it is used to smooth consumption.

But maybe I'm being harsh: it could, after all, have been written by a neoclassical economist.

Please, let's get real: yes credit can do all of those things, but it can also fund asset bubbles and Ponzi Schemes, and that has been by far the dominant aspect of credit growth since the report's base year of 2000, and arguably since the 1987 Stock Market Crash. To ignore this aspect of credit after the biggest financial crisis since the Great Depression is simply puerile.

So is ignoring the one academic who analysed the dynamics of credit long before it was fashionable—Hyman Minsky. The report makes much of it academic research:

Finally, the research was underpinned by an extensive review of the key academic and industry literature. (p. 19)

Prior to 2008, such ignorance was excusable simply because it was so widespread, as the dominant neoclassical school simply ignored dissidents like Minsky. After the crisis, he is receiving long overdue respect for focusing on the importance of credit in a capitalist economy while neoclassical economists effectively ignored it.

This is why Minsky-oriented researchers like [myself, Michael Hudson and the late Wynne Godley](#) were able to see the Great Recession coming while neoclassical economists from Ben Bernanke down were denying that anything untoward was untoward. Publishing a major report on credit now, while ignoring the only significant research done into credit dynamics, is a sign of continued ignorance rather than wisdom.

Its overall conclusion—the only part of the report that is likely to get an airing in the general media—should therefore be taken with a truckload of salt:

The rapid expansion of credit in recent decades has enabled unprecedented levels of economic development, business activity, home ownership and public sector spending. Yet, excess lending in some markets and sectors sparked a global crisis which brought the entire financial system to its knees. Not surprisingly, many commentators believe credit should be scaled back, even at the expense of economic growth.

The analysis in this report suggests the opposite is true. There are major pockets of the world economy, particularly in developing markets, whose growth has been held back by credit shortages, even over the past 10 years. To unlock development in these areas, and to meet consensus forecasts of world economic growth, credit levels must grow substantially over the next decade. At the same time, public and private

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decision-makers must avoid a repeat of the credit excesses that have caused so much damage in recent years. (p. 19)

Like a Curate's Egg

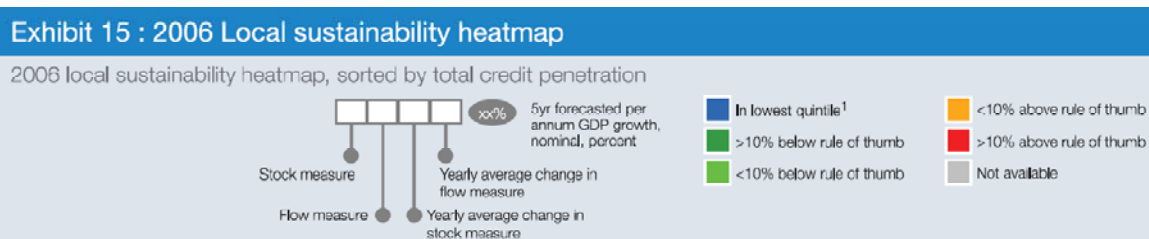
However, despite its deficiencies, the report is not all bad—but its good bits are too conservative. It proposes a number of “rules of thumb” to indicate whether credit levels and credit growth are sustainable or not:

Exhibit iii : “Rules of thumb” to ensure local sustainability of a credit segment

	Retail	Wholesale	Government
Stock measure	Personal financial liabilities ¹ over GDP > 75%	Outstanding Wholesale credit (incl. loans and bonds) over GDP > 80%	Outstanding Government credit (incl. loans and bonds) over GDP > 90%
Flow measure	Retail interest burden and average principal repayment over disposable income > 20%	Wholesale interest burden and average principal repayment over GDP > 25%	Government interest burden and average principal repayment over budget revenue > 30%
Yearly average change in stock measure	Average forecasted 5-year percentage point change in (PFL over GDP) > 4 PP	Average forecasted 5-year percentage point change in (out-standing Wholesale credit over GDP) > 2 PP	Average forecasted 5-year percentage point change in (outstanding Government credit over GDP) > 6 PP
Yearly average change in flow measure	Average forecasted 5-year percentage point change in Retail flow measure > 2 PP	Average forecasted 5-year percentage point change in Wholesale flow measure > 2 PP	Average forecasted 5-year percentage point change in Government flow measure > 2 PP

1 PFL represents total household credit stock outstanding
2 E.g. LTV on recent mortgage originations

These are related to the measures that I have been putting forward on this site for years—the debt to GDP ratio, the rate of change of debt, and recently the “Credit Impulse” as defined by [Biggs, Mayer and Pick](#) (see also [this paper](#)), the rate of change of the rate of change of debt, divided by GDP. I’ll come back to these later as alternate indicators, but it’s worth noting the guidance these rules of thumb gave for where credit crises might occur in the near future. Their Exhibit 15 showed a “local sustainability” index for their sample of countries in 2006, with the sample sorted by the aggregate level of debt (hence Japan is at the top). The guide is laid out according to this legend:



And the countries identified using 2006 data as potential trouble spots were those with one or more red cells next to their names:

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Countries	Retail				Wholesale				Government				
Japan	47	11	-1	0	77	16	0	0	163	35	-2	0	-0.9%
Portugal	83	14	3	1	82	19	5	1	83	19	0	0	1.7%
Spain	75	13	3	1	109	24	6	1	46	12	-1	0	1.8%
Greece	41	10	3	1	43	10	2	0	141	34	-2	0	2.0%
Denmark	115	28	2	1	64	15	3	1	42	8	-1	0	1.8%
Netherlands	106	24	2	1	60	13	3	1	49	12	3	1	2.2%
Switzerland	118	13	2	1	60	13	6	2	33	8	-1	0	3.1%
Belgium	48	9	1	0	41	9	3	1	113	23	-4	-1	2.3%
Italy	35	8	2	1	68	16	4	1	98	21	-1	0	1.2%
Austria	56	14	2	1	63	14	3	1	70	16	-2	0	3.1%
Ireland	87	21	3	1	82	17	7	2	19	5	-1	0	-2.2%
US	98	22	3	2	38	7	2	0	47	26	1	2	3.0%
UK	96	21	0	0	48	11	3	1	37	9	0	0	2.3%
Korea	62	20	1	1	66	14	5	1	50	23	0	0	6.6%
Germany	65	15	1	0	44	10	2	0	67	19	2	0	1.8%
Malaysia	53	28	2	0	83	17	6	1	40	17	-2	-1	7.4%
Canada	72	17	2	1	41	9	2	0	56	13	-2	0	3.6%
Taiwan	60	26	0	2	79	16	1	0	28	11	1	1	3.1%
France	45	9	2	1	57	12	3	1	63	14	-2	0	2.2%
Sweden	60	15	2	1	58	13	3	1	46	8	-2	0	2.6%
Hong Kong	57	13	-2	0	95	24	0	0	11	5	1	0	4.7%
Singapore	73	21	0	1	48	11	6	1	40	23	-13	-8	7.2%
Australia	83	21	2	1	60	16	3	0	14	5	3	1	6.5%
Finland	46	12	2	0	44	10	2	0	62	11	-1	0	2.2%
Thailand	24	8	1	1	79	17	7	1	37	20	-1	-1	6.7%
China	11	5	0	0	96	28	6	3	30	19	0	0	15.1%
New Zealand	95	31			11	3			20	5			4.2%

The same analysis on 2010 data yields the following table of suspects:

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Countries	Retail				Wholesale				Government				
Japan	48	10	0	0	80	16	0	0	211	42	2	2	1.2%
Portugal	89	15	1	1	104	22	-1	0	109	25	2	2	2.5%
Spain	82	14	-1	0	147	30	-4	0	66	19	4	2	2.6%
Greece	52	12	1	0	54	12	0	0	188	56	-1	2	2.0%
Denmark	133	32	0	1	81	19	2	1	47	9	0	0	3.9%
Ireland	110	26	-3	0	80	17	1	1	65	19	5	2	2.4%
Italy	43	11	1	0	91	19	1	1	118	25	2	2	2.6%
Netherlands	113	23	1	1	68	14	1	0	62	14	-1	0	3.3%
Belgium	56	9	1	1	52	11	1	0	131	26	1	1	3.4%
UK	107	18	-1	1	64	13	-1	0	59	13	5	2	4.1%
Switzerland	117	11	0	1	69	15	1	0	27	7	1	0	3.1%
Korea	65	22	0	1	94	19	0	0	54	24	1	2	7.5%
Canada	85	18	-1	1	49	10	0	0	73	17	1	1	5.9%
Austria	57	13	0	1	72	15	0	0	74	17	4	2	3.5%
US	94	22	-1	0	42	7	0	0	65	37	4	4	4.7%
France	52	9	1	1	68	13	1	0	78	16	3	1	3.7%
Hong Kong	56	13	0	1	116	25	0	1	26	9	-5	-2	7.3%
Malaysia	56	27	1	0	89	17	3	1	46	18	1	2	9.6%
Sweden	69	15	1	1	78	16	1	1	41	7	5	1	4.1%
Singapore	74	20	-1	1	64	14	0	0	49	26	2	1	8.0%
Germany	60	13	1	1	53	11	0	0	72	18	0	1	3.0%
Australia	90	20	3	2	65	16	1	1	23	8	-1	0	6.4%
Finland	57	12	1	1	55	12	1	0	66	12	3	1	4.6%
Taiwan	57	30	0	1	79	16	1	1	34	14	1	2	7.3%
Luxembourg	51	10	0	0	97	19	-1	0	12	5	0	0	6.5%
Hungary	44	25	1	-1	29	8	0	0	76	23	3	1	6.9%
Thailand	27	9	1	1	75	14	-1	0	46	23	3	3	8.9%
New Zealand	104	33	2	1	12	3	0	0	25	6	-1	0	5.4%

The rules of thumb themselves are pretty good. The weaknesses with their analysis are (a) that they allow the thumbs to be much too large, and (b) that they underplay the role of the banking sector in causing these problems in the first place.

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As regular readers would know, I site responsibility for this crisis on the lenders themselves, and not the borrowers, on a number of grounds (see my [Roving Cavaliers of Credit](#) post if you haven't seen these arguments before, and [this paper](#) for a more technical argument). The financial sector makes money by creating debt, and has funded a series of speculative bubbles since the early 1980s since that is the best way to encourage borrowers to take on more debt.

Minsky himself argued that the major objective of economic management should be to maintain a "robust financial structure":

, in order to do better than hitherto, we have to establish and enforce a "good financial society" in which the tendency by business and bankers to engage in speculative finance is constrained.

The financial instability hypothesis has policy implications that go beyond the simple rules for monetary and fiscal policy that are derived from the neo-classical synthesis. In particular the hypothesis leads to the conclusion that the maintenance of a robust financial structure is a precondition for effective anti-inflation and full employment policies without a need to hazard deep depressions. This implies that policies to control and guide the evolution of finance are necessary... (Minsky 1982, pp. 69, 112)

He asserted that the US passed from such a structure to a fragile one with the Penn State crisis in 1966.

The first twenty years after World War II were characterized by financial tranquility. No serious threat of a financial crisis or a debt-deflation process (such as Irving Fisher described¹⁵) took place. The decade since 1966 has been characterized by financial turmoil. Three threats of financial crisis occurred, during which Federal Reserve interventions in money and financial markets were needed to abort the potential crises.

The first post-World War II threat of a financial crisis that required Federal Reserve special intervention was the so-called "credit crunch" of 1966. This episode centered around a "run" on bank-negotiable certificates of deposit. The second occurred in 1970, and the immediate focus of the difficulties was a "run" on the commercial paper market following the failure of the Penn-Central Railroad. The third threat of a crisis in the decade occurred in 1974-75 and involved a large number of over-extended financial positions, but perhaps can be best identified as centering around the speculative activities of the giant banks. In this third episode the Franklin National Bank of New York, with assets of \$5 billion as of December 1973, failed after a "run" on its overseas branch.

Since this recent financial instability is a recurrence of phenomena that regularly characterized our economy before World War II, it is reasonable to view financial crises as systemic, rather than accidental, events. From this perspective, the anomaly is the twenty years after World War II during which financial crises were absent, which can be explained by the extremely robust financial structure that resulted from a Great War following hard upon a deep depression. Since the middle sixties the

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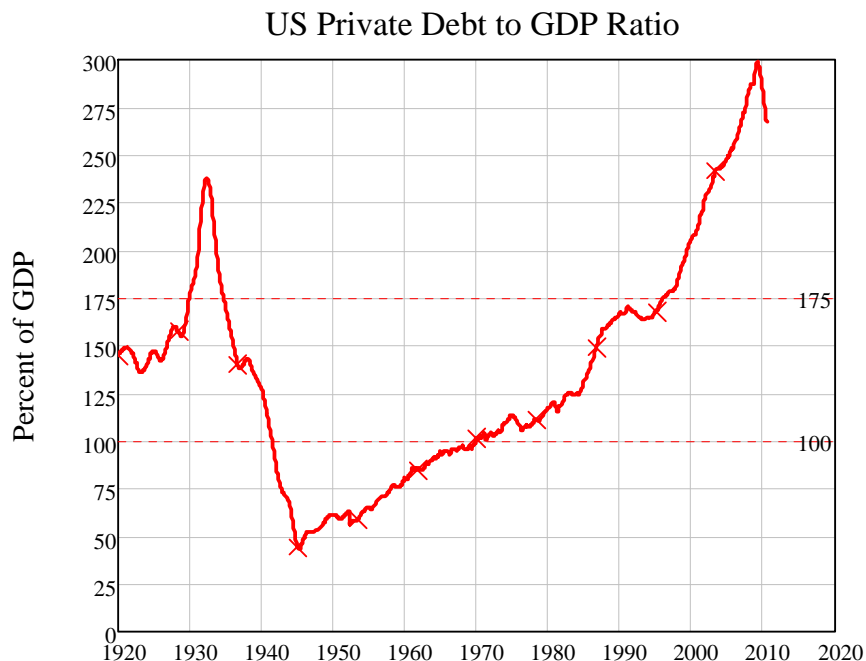
historic crisis-prone behavior of an economy with capitalist financial institutions has reasserted itself. The past decade differs from the era before World War II in that embryonic financial crises have been aborted by a combination of support operations by the Federal Reserve and the income, employment, and financial effects that flow from an immensely larger government sector. This success has had a side effect, however; accelerating inflation has followed each success in aborting a financial crisis. (Minsky 1982, pp. 62-63)

On that basis, the correct time period from which to derive rules as to how big the “sore thumbs” of finance should be is the 1960s, and not 2000. That implies alternative figures for the WEF’s indicators that would have most of its indicator table in red—certainly the first column for household sector debt.

My three indicators are the debt to GDP ratio (which tells you how many years it would take to repay debt and is a measure of the degree of pressure debt is exerting on the economy), the rate of change of debt as a percentage of GDP plus the change in debt (which tells you how much of aggregate demand is debt-financed, and therefore whether you are in danger territory for a financial crisis), and the credit impulse—the rate of change of the rate of change of debt as a fraction of GDP, which tells you whether a crisis is imminent and how deep it is when it strikes.

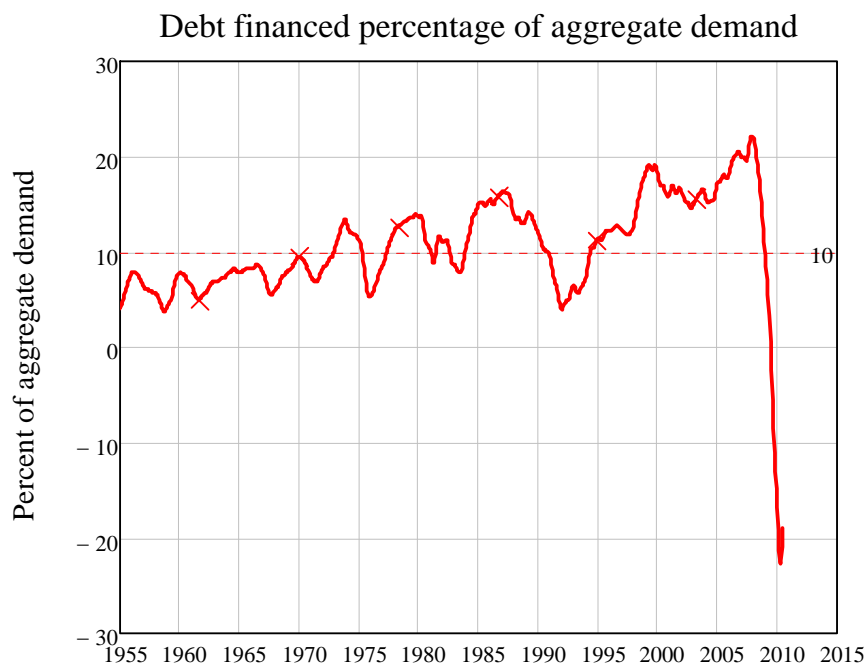
My thumb size rules, based on these indicators and for the USA only, are the following:

The US was financially robust when the total private sector debt to GDP ratio was below 100%; it was approaching potential Depression-level fragility when this ratio exceeded 175% of GDP.

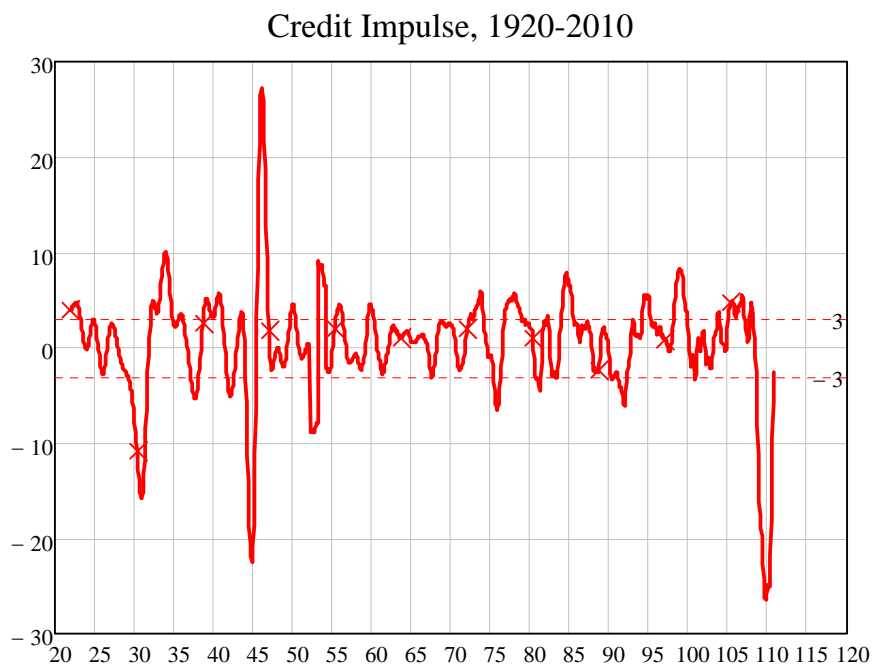


When debt-financed demand accounts for more than 10 percent of aggregate demand, trouble is afoot (again for the USA—other countries may have different thresholds):

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Finally, and somewhat tentatively, I'd see danger coming when the Credit Impulse exceeds 3% in either direction: 3% plus indicates a bubble, and 3% minus indicates that you are in a bust. On that metric, this is the biggest bust of all (the 1945 figure was an aberration as we moved from a war economy to a peacetime one).



On all three indicators, the USA has been in a financially fragile state since the early 1970s—a conclusion that accords with Minsky's decision to date the transition to a fragile financial structure in 1966—rather than the year 2000. The WEF's report, while it does perform a useful service in finally

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recommending that credit and credit growth be taken seriously in economic management, will ultimately be seen as an indicator of just how seriously economists underestimated the role of credit in causing economic crises, even when they were in one.

Minsky, H. P. (1982). Can "it" happen again? : essays on instability and finance. Armonk, N.Y., M.E. Sharpe.