

How should the crisis affect our views about financial intermediation?

Adair Turner, IMF Conference, March 2011

This is absolutely the right question, because we need to ask fundamental questions about the value of financial intermediation, about how much financial intermediation is optimal, and about whether we can rely on free market forces to select the optimal level and precise mix of financial intermediation.¹

The last 30 years saw a remarkable growth in financial intensity, with increases in real sector leverage, but even more dramatic increases in financial sector balance sheets as a percent of GDP, increases in trading volumes as a percent of GDP, and the financial innovations of the derivatives market. [Slide 1]

And before the crisis there was a dominant conventional wisdom that assumed and indeed explicitly stated this was beneficial because

- it would increase allocative efficiency, since increased financial intensity completed more markets and because increased market liquidity ensured more efficient price discovery
- it would increase financial stability, since risk would be dispersed more efficiently into the balance sheets of those best placed to manage it

That was a conventional wisdom strongly asserted for instance by the IMF See IMF GSNR April 2006.

Clearly the second half of the conventional wisdom proved wrong It is essential we understand why. There are two broad schools of thought:

- The first assumes that problems are essentially those of market imperfections, opacity and perverse incentives. It seeks to identify the particular problems which prevented the system reaching an

¹ These comments present a summary of conclusions set out in more detail in a lecture at Clare College, Cambridge, *Reforming Finance: Are we being radical enough?* Available at www.fsa.gov.uk/Pages/Library/Communication/Speeches/index.shtml

efficient stable equilibrium and to put them right. We might call this the Micro-structuralist school.

- The second believes that the drivers of instability are deeper than amenable to increased transparency and the reform of incentives, and focuses on macro-prudential oversight and policy response, including on a discretionary basis. We might call this the Macro-Minsky school.

I would like to comment on the relative merits of the two schools, and to express some preference for the latter, while supporting action to address incentives and structures as necessary but not sufficient.

The key first step is to define the problem we are trying to solve. And the key problem is not the direct fiscal cost of public rescue of otherwise failing banks. While this is a key focus of popular outrage, actually (as IMF figures show) [Slide 2] the direct fiscal cost is the small change of the macroeconomic harm produced by bank failure. Indeed it is quite possible that in some countries it could turn out to be negative - public authorities in total may make a profit from the combination of equity injections, debt guarantees, and central bank operations.

Rather the essential problem is the supply of credit, first provided in excessive quantity and at too low price, in a self reinforcing cycle with asset prices (particularly real estate) then constricted, driving destructive and deflationary processes of overrapid deleveraging. [Slide 3]

A key measure of success of our public policy responses to the crisis is therefore whether they will reduce the amplitude of that cycle.

The structuralist school believes that if markets were made more efficient and in particular if incentives were better aligned, booms and busts would naturally be constrained. The core policy is therefore to fix the too-big-to-fail problem. The assumption is that bankers and traders did excessively risky things – in both the banking and shadow banking systems – because they knew that they enjoyed the put option of limited liability.

Therefore we must ensure resolvability of too-big-to-fail banks – enabling us to impose losses on debt holders. [Slide 4] In essence this means smoothly turning debt claims into equity claims when we need to do that.

This would clearly be a very good thing: indeed I think it is a necessary part of the reform process. And if we face in future the idiosyncratic failure of a large bank (the future equivalent of a Continental Illinois failure) it would also be a sufficient response.

But it is only a sufficient response to future problems of systemic instability and of the possible simultaneous, interconnected and self-reinforcing failure of large banks (or multiple small banks) if we can assume [Slide 5] that bank debt instruments will be held by unleveraged, non-maturity transforming investors, who are capable of taking losses without that producing knock on systemic effects, and without those investors collectively acting in a way which generates self-reinforcing fire sales and a downward asset price cycle.

These conditions would of course apply axiomatically if we can assume that investors are always foresightful and fully rational in their decisions: if they always consider the full range of future possible contingencies. But recent papers by Andrei Shleifer² and others, challenge that assumption, arguing that in fact many debt investors operate according to a model of “local thinking” in which during the good years they ignore the existence of the down-tail of the distribution of possible results, essentially assuming that objectively risky instruments are close to risk free. [Slide 6]

As a result, the financial system, particularly if intense, complex and innovative, is capable of generating an excessive quantity of debt instruments, and a quantity of apparently risk-free instruments greater than can be objectively risk free, given the fundamental risk and indeed Knightian uncertainty inherently present in the real economy.

Once initial problems emerge, however, investors/depositors bring the down-tail of the distribution into their consciousness and decision-making processes, generating self-reinforcing downward cycles of confidence, liquidity, asset prices and credit supply.

Shleifer’s analysis fits well with what actually occurred in 2000 to 2007 to 2009. Look for instance [Slide 7] at the CDS spreads of major banks in this period, falling to historically low levels in June 2007, immediately ahead of the crisis, the discovered market price providing us with no

² Nicola Gennaioli, Andrei Shleifer and Robert Vishny, *Neglected Risks, Financial Innovation, and Financial Fragility*, September 2010

useful forewarning of impending problems, then swinging to excessive overreaction.

Shleifer's analysis means that myopia can be a problem as well as incentives. And if that is the case, fixing incentives, while highly desirable, is insufficient to ensure stability.

The implication of this in relation to the TBTF debate is that we should strongly prefer solutions which increased the equity ratios of large systemically important banks (SIFIs) [Slide 8], because only with equity instruments can we be reasonably certain that the instruments will be held by investors able to take losses without knock on systemic consequences.

And more generally what that illustrates, is that the core issues of financial stability are:

- the balance within the economy between debt and equity contracts
- and the aggregate maturity transformation which the financial system is in total performing

Within an economy we have equity and debt contracts. Debt contracts, like fixed wage contracts, respond to people's desire for apparent certainty in income flow – rather than expressing all contracts as equity/partner shares in the underlying value added which economic projects produce. (See Luigi Einaudi "Debiti", 1935)³ But debt instruments introduce into the economy important potential rigidities, irreversibilities and pro cyclical tendencies. These arise from the combination [Slide 9] of the institutions of bankruptcy, the possibility of fire sales, the need for debt to be continually rolled over, the existence of multiple equilibria depending on an endogenously determined credit risk spread, and self-reinforcing credit and asset price cycles.

Together these mean that cycles of irrational exuberance in debt markets are inherently more dangerous than equivalent cycles in equity markets. The Internet equity price boom and bust of 1995 to 2000 to 2002 produced large individual wealth gains and losses but little macro economic harm. Debt cycles – as both IMF analysis and Reinhart and Rogoff have shown, produce far greater harm. Therefore the total extent

³ Luigi Einaudi, *Debts*, *Selected Economic Essays*, Macmillan 2006. First published as 'Debiti, La Reforma Societe XLI, January 1934

of leverage in the real economy, but also within the financial system itself, is a vitally important macro variable.

But so too is the aggregate degree of maturity transformation – the extent to which the financial system in total, whether through bank balance sheets or via liquid markets, enables the nonfinancial sector to hold financial assets of shorter term maturity than liabilities. This is a vital and socially value creative transformation function, producing a yield structure of interest rates more favourable to long-term investment than would otherwise exist. But it is also inherently risky.

Measuring aggregate financial system maturity transformation is therefore vital: but also very difficult. And it becomes more difficult the more complex, interconnected and multi stage is the financial intermediation system. Almost certainly over several decades before the crisis, aggregate maturity transformation increased – households for instance accumulated far more long term liabilities (mortgages) but the household and corporate assets which effectively funded these were predominantly short term. But, fatally, we failed to understand that development.

In future we need to carefully monitor aggregate leverage and aggregate maturity transformation. And, for the reasons which Shleifer and others have set out, we cannot assume that the financial system left to itself, even with better incentives in place –will select the levels of leverage and maturity transformation which are optimal. Therefore we need policy instruments designed to influence those key macro stability parameters.

Not only, however, are levels important, with high levels of either leverage or maturity transformation creating vulnerability, but so too are changes in levels, i.e. cycles. And it is unclear whether there is any set of constant rules which we can rely on to limit occasional excess cyclicality. A degree of countercyclical through the cycle discretion, to lean against credit and asset price cycles, is therefore also essential.

So I am clearly arguing that the second half of the pre-crisis conventional wisdom – that increased financial intensity, complexity and innovation would ensure stability, was wrong. Empirically it was proved so: and the theoretical reasons why it was wrong can be identified.

But where does that leave the first proposition, that increased financial intensity and complexity delivered allocative efficiency benefits? [Slide 10]

That is a very wide and important question. I do not have time to address it in any detail now. But would like to finish with two points.

First, that we cannot simply assume axiomatically that increasing financial intensity produces valuable allocative efficiency benefits, given a wealth of theory which suggests it is possible for financial intensity to be rent extracting rather than value creative, and which suggests that any beneficial impact of increasing financial intensity in terms of allocative efficiency must be subject to declining marginal returns.

And second that the answer to this question does have implications for financial stability policy. Because many of the measures we could take to increased stability – such as higher capital requirements against trading activities or against intra financial system claims – might well be likely to reduce the scale of trading activity, and the liquidity of some markets. If these activities and related liquidity are value creative (at the social level), we may need to make a trade off between stability and allocative efficiency. If they are zero sum or rent extracting, there is no such trade off. The less certain we are that increased financial activity delivers improved allocative efficiency – the more radical we can be in the pursuit of stability oriented reforms.