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The Great September Financial Catastroversary

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In view of the reaction to comments that I have made at a couple of recent events, I thought that I would write a thing, as people have been kind enough to suggest it might be vaguely interesting.

This September marked the 25th anniversary of the bailout of Long-Term Capital Management, the 15th anniversary of the collapse of Lehman Brothers and the 1st anniversary of the Liability-Driven Investment liquidity crunch. All three provide some potential valuable lessons on what happens when liquidity goes horribly wrong and also a warning on underestimating the capacity for governments to do really stupid things.

So what were these events?

Bailout of Long-Term Capital Management

Long-Term Capital Management (LTCM) was a hedge fund founded in 1994 by John Meriwether, bond-trading superstar and former head of fixed-income at Salomon Brothers, albeit that he had vacated that position under something of a cloud in 1991 after being assessed $50,000 in civil penalties after his team at Salomon was caught being involved in systematic market manipulation. Other principals at LTCM included Myron Scholes and Robert Merton, famed for the Black-Scholes model for which they won the Nobel prize for economics in 1997 when the Black-Scholes model was at peak infallibility. This was somewhat undermined by the failure of LTCM a year later. Fischer Black had already died, which made him ineligible for either a Nobel prize or a directorship at LTCM.

The LTCM model relied on making very high returns on very small movements in sovereign bonds by using spectacularly high levels of leverage. In early 1998 the investment partnership it managed had $5 billion of equity and $125 billion of debt.

What holed the LTCM partnership below the waterline was the Russian currency and debt crisis of August and September 1998, events which I was able to observe from the epicentre as I was working for PwC in Moscow at the time.

On 17th August 1998, the Russian government devalued the Rouble, defaulted its domestic debt (GKO and OFZ) and introduced a moratorium on foreign debt payments, arguably the most comprehensive sovereign default since that of the Ottoman Empire on 6th October 1875, itself something we should at some point cover in the historical trivia in our newsletter. The Rouble lost two-thirds of its value over the next month.

LTCM suffered an immediate loss on its Russian debt positions, but the bigger issue was the massive market flight to quality in government debt that the crisis triggered, which in turn created a liquidity crisis. Not only was the LTCM fund facing paper losses, it was forced to turn these into realised losses through selling assets to meet margin calls. Other investors had been replicating the LTCM positions, magnifying the issues and adding to this becoming a systemic risk.

Considerable detail is available from the report *Hedge Funds, Leverage, and the Lessons of Long-Term Capital Management (LTCM)* published in April 1999 by The President's Working Group on Financial Markets consisting of US Department of the Treasury, the Board of Governors of the Federal Reserve, the Securities and Exchange Commission and the Commodity Futures Trading Commission. In particular, it documents the near collapse and bailout from 18th to 23rd September 1998.

On Friday 18th September creditors and other counterparties to the fund were deeply concerned. As is a common theme in these cases, after a weekend to reflect, by the Monday they had concluded that its position seemed irrecoverable and that it was unlikely to meet its month -end obligations. A further market deterioration could result in a default by close of business on the 23rd. On the morning of the 23rd, Goldman Sachs, AIG and Warren Buffett offered to buy the LTCM business for $250 million and inject $4 billion into the investment partnership. LTCM unwisely rejected this. Following discussions in the afternoon and evening of the 23rd hosted by the Federal Reserve Bank of New York, a consortium of fourteen firms with the largest exposure to the fund agreed to contribute about $3.6 billion in new cash into the fund in return for 90% of the equity and operational control.

The near collapse and bailout had a major impact on the market, but a disorderly liquidation would have been significantly worse.

John Meriwether himself set up a new hedge fund manager, JWM Partners LLC, which raised a significant amount of capital and was very successful in the boom market for the next decade, but lost 44% of its value in the crisis that engulfed Lehman (see below) and closed down. He then set up yet another new hedge fund manager, JM Advisors LLC. By this stage, investors were rather sceptical about highly leveraged "relative value arbitrage" and it only raised a risible amount of capital.

Collapse of Lehman Brothers

The collapse of Lehman Brothers in 2008 is better known than the LTCM bailout, partly because it is more recent, but also because of the greater global impact. It is probably also an indication of what might have happened in 1998 if LTCM had not been bailed out.

It is also one for which I had a bit of a ringside seat, at least for the European part, as I was Real Estate Industry leader for the UK at PwC and had just been appointed to the EMEA role. The insolvency of Lehman Brothers International (Europe) is the largest in history and has to date earned PwC more than £1 billion in fees. In December last year, PwC obtained court approval to extend the administration to 2025.

So what happened to get Lehman Brothers to this point?

According to Lehman's former chief risk officer, Madelyn Antoncic, the bank was nearly brought down by the LTCM crisis in 1998, which is why she was brought in during 1999 to establish a risk management function. Initial enthusiasm for better risk management waned as the market recovered and reached its peak in 2006 and

early 2007, when the decision was taken by management to "to start putting the pedal to the metal". This push for growth was initially successful and when in January 2008 Lehman Brothers reported its results for the year to 30th November 2007, it had achieved record revenues of nearly $60 billion and record earnings in excess of $4 billion. Its share price peaked at $65.73 per share. Just under nine months later, on Friday 12th September, the share price closed down 95% at under $4.

Despite a weekend of frantic activity on the 13th and 14th September (see our comment above about weekends), Lehman Brothers, the fourth largest US investment bank, filed for Chapter 11 bankruptcy, the largest in US history on the Monday.

A huge amount of detail is available in the monumental 9 volume Examiner's Report into the Chapter 11 Bankruptcy. Lehman had acquired sub-prime residential mortgage brokerage businesses and had become a huge originator. It was syndicating part of each pool, but was retaining the highest risk tranche on its own balance sheet. This had become so dominant that it was effectively a giant hedge fund, along similar lines to LTCM, but with two major aggravating features. Firstly, it was syndicating away the lower risk parts of the investments such that it only retained the highest risk element. Secondly, it was funding this on a day-to-day basis in the Repo market so a loss of confidence could result in the tap being turned off completely rather than it being an exposure only to margin calls, although this is really just a massive margin call on steroids.

Which brings us back to Friday 12th September and the impending collapse. Over the weekend of 13th and 14th September, the Secretary of the Treasury, the President of the Federal Reserve Bank of New York and the Chairman of the SEC met with the chief executives of leading financial institutions to discuss a potential rescue. The Treasury made it clear that the US Government could not fund a solution. On 14th it looked as though Barclays might come to the rescue and acquire Lehman but the UK regulator (at that time the Financial Services Authority) put the kybosh on that idea. That evening the Chairman of the SEC telephoned the Lehman Board and "conveyed the Government's strong suggestion that Lehman act before the markets opened in Asia". Lehman Brothers filed for Chapter 11 bankruptcy at 1.45am.

The most immediate fallout was for insurer AIG, which had a massive book of credit default swaps (CDS). This was already looking toxic, but was pushed over the edge by the Lehman bankruptcy. The Federal Reserve had to intervene with a loan $85 billion, and with further advances later.

The broader impact was that it turned the existing banking liquidity crisis into a global financial crisis, some of the consequences of which are touched upon later in this paper.

Liability-Driven Investment liquidity crunch

This is still fresh in the collective memory. Liability-Driven Investment (LDI) is a way for defined benefit pension funds to match the present value of their assets to the present value of their liabilities. If interest rates fall, the LDI makes a profit, which

offsets the rise in the present value of pension liabilities. If interest rates rise, the present value of pension liabilities fall so less cover is needed. However, there is a consequential loss in the LDI, which triggers a margin call. This is fine if the changes to interest rates happen at the usual pace which allows pension schemes to meet those margin calls. It did not take account of the possibility that the Prime Minister and the Chancellor of the Exchequer might lob in a hand grenade, and choose to do it on a Friday to give everyone a whole weekend to panic (see our comments above regarding weekends). This resulted in a 140 basis point spike in gilt yields giving rise to LDI losses. As this was too rapid to meet margin calls LDI funds became forced sellers of underlying investments, creating a risk of a death spiral. According to the Investment Association, the amount invested in LDI at that point was approximately £1.3 trillion, or about equivalent of two thirds of UK GDP. The Bank of England had to intervene to provide a liquidity backstop and stabilise the market.

Unlike LTCM and Lehman, the crisis was contained, helped by a complete U-turn 17th October on the Budget measures that had provoked the panic.

For those who are interested, you can find our cynical view on the UK mini-budget of 23rd September 2022 in our newsletters of the time, here and here.

What are the common features?

There are several common denominators to all three events:

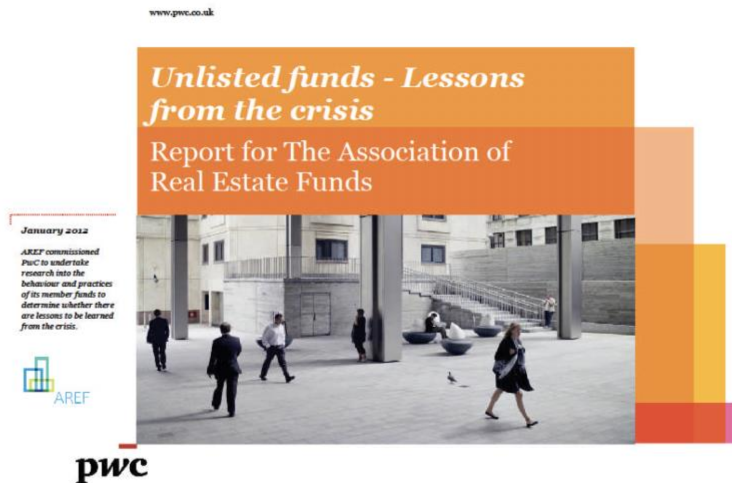
- Gearing contingent on the ability to post collateral, in the first two cases at eye-watering levels. Real estate funds have faced the same challenges, see below, but this is in slow motion in comparison with the need to meet margin calls on a daily basis;
- The ugly interaction of liquidity and leverage with investors trying to get out whilst being asked to put more in to make good deficits.
- Failure to stress test the impact of unexpected but hugely problematic scenarios. Clever financial models are only part of the answer;
- Size, couple with a high degree of inter-connectivity giving rise to systemic risk;
- Weekends and Septembers..

What happens next and why is this important for real estate funds?

Real estate funds have faced the same issues. During the global financial crisis both comparable liquidity and leverage collateral issues arose, albeit in relative slow motion compared to those funds in other asset classes that need to manage liquidity and margin calls on a daily basis. The challenges faced by real estate funds were therefore never as dramatic and the industry has changed very significantly.

I was the author of two reports for the Association of Real Estate Funds (AREF) which are relevant to this discussion.

The first, when I was still a partner at PwC, was “Unlisted funds- lessons from the crisis”, published in January 2012.



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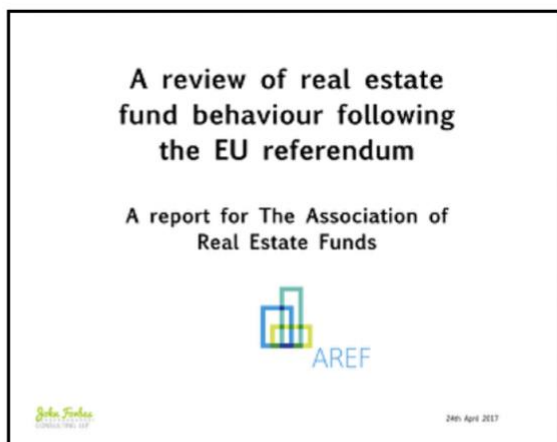
This looked at the way real estate fund managers behaved in the boom before the 2007 liquidity crunch and the 2008 collapse of Lehman Brothers and in the aftermath. Although not all of the lessons appear to have been fully learnt, in terms of liquidity management tools and leverage, the industry had already changed significantly by the time the report was written and continues to do so. The changes have been driven by investors and the managers themselves rather than regulation.

The second report, “A review of real estate fund behaviour following the EU referendum” looked at the specific problems faced by open-ended real estate funds for retail investors.



You can find it here.

The (very) broad conclusion from this is that the specific challenges faced by the funds affected did not amount to anything approaching a systemic risk and indeed the widespread suspension of redemptions mitigated the risk that did arise. It would be better if such funds had a broader range of liquidity tools at their disposal, but

they are hampered by the investment architecture in the UK and by tax and regulation. The FCA's proposed "one-size-fits-all" reforms which do not really fit anybody are not a helpful direction of travel.

If the specific characteristics that gave rise to the three events covered in this paper are not directly relevant to real estate funds as the tools are in place to deal with this, why am I bothering to write this?

There are three reasons.

Firstly, the general themes of liquidity management, risk management, transparency and good governance remain extremely important, particularly in a more stressed market.

Secondly, another catastrophic event of this type would have an impact on the real estate industry, so it is best to be watching the horizon.

Thirdly and importantly, global regulators are deeply concerned about the risk of a systemic market shock and are considering major changes to the regulation of what are now called non-bank financial intermediations (NBFI), but used to go by the more understandable term, "shadow banking".

As covered in our regular newsletter in July, the International Organization of Securities Commissions (IOSCO), the global regulator of regulators, published a consultation report, Anti-dilution Liquidity Management Tools – Guidance for Effective Implementation of the Recommendations for Liquidity Risk Management for Collective Investment Schemes. You can find it here.

At the same time, the Financial Stability Board (FSB) published its own consultation report, *Addressing Structural Vulnerabilities from Liquidity Mismatch in Open-Ended Funds – Revisions to the FSB's 2017 Policy Recommendations.* You can find it here.

Although the regulation is ostensibly for NBFI / shadow banking, nowhere in the consultations do they make this clear, and many of the assumptions that underpin it are not correct for real estate funds or indeed even real estate "shadow banking" funds. The FSB consultation report includes the suggestion in a throw-away aside that all funds investing in illiquid assets should be closed-ended.

The risk here is that the real estate funds industry becomes trapped in a global macro-prudential regime designed for a different asset class. AREF has submitted robust responses to the consultations for which I was delighted to draft the most ranty elements.

You can find our newsletter that covers this here.

We will continue to monitor developments on this topic.

Conclusion, of sorts

I am not sure that there are any profound conclusions to draw, other than the note the ability of human ingenuity to re-invent things that have failed in the past and the

perennial tendency of investors to invest in things that they do not really understand. Perhaps the best we can hope for is to take advantage of the probably brief period when underlying fundamentals are in fashion before the next piece of alluring financial wizardry comes along. And in the meantime hope that we do not get accidentally regulated out of existence.

John Forbes
25th September 2023

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