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Collateral damage

The world changes! So we're in a situation today where the only policymakers that have flexibility are central banks. But they don't have the instruments! So they've had to experiment, and the more you experiment, the more uncertainty and the higher the risk of collateral damage.

Mohamed El-Erian [i]

The UK's LDI pension fund fiasco was, in my mind, a preview to forthcoming attractions coming to a financial system near you - Liquidity crises. Attempts to solve them post 2008 made the situation worse.

Pre-2008, OTC derivatives varied from exchange traded derivatives in important ways. OTC positions were not margined; each counterparty took on the other's credit risk until a derivative's expiry. In contrast, exchange traded derivatives were interposed by an exchange. For a fee, the exchange demands initial margin at the start of the deal and then variation margin along the way, which they pass on to whichever counterparty is 'winning'.

In 2008 there were about 600 trillion in notional OTC derivatives globally.[ii]

Every bank owed every other bank tens of billions in OTC contracts. Lehman broke the who-owns-who daisy chain, resulting in the "Lehman moment" where it was thought that ALL banks could subsequently default.

In response to that crisis, regulators demanded that all OTC contracts be margined and collateralised on a daily basis to ensure that no single bank could pose a systemic risk to the whole system as a whole.

Makes sense, right?

Roll forward to 2022. I believe the risk has changed from a systemic risk for banks, to a liquidity risk for everyone.

Today, about a quadrillion dollars ($1000 trillion)[iii] in notional derivatives are outstanding globally, of which $600 trillion are OTC. Interest rates and CDS derivatives account for over 80% of the OTC market.

Today, most, if not all, OTC and traded derivatives are margined and collateralised on a daily basis.

Initial margin is calculated roughly on a two standard deviation move (it is ridiculous that we're still using VaR to calculate Black Swan risk). Variation margin can vary depending on the whim of the relevant exchange or clearing member or counterparty. It tends to go up disproportionately in a crisis. They also demand bigger haircuts on anything else other than cash or T-bills.

A big move in interest rates and CDS, in particular, could generate margin calls in a crisis that may be bigger than there is actual collateral available. I mean bigger than actually exists!

If there are two counterparties to every transaction, $500 trillion of derivatives will be losers and the other half winners. You have to assume a proportion is netted off by counterparties so cut that figure by 5 (thumbsuck estimation) and let's call it $100 trillion. If there is a move of 10% in the interest rate and CDS markets, assuming equities do something similar, that could be anything up to a $10 trillion variation margin call which would need to be posted the VERY NEXT DAY, and most of these derivatives are USD based which means non-US counterparties will have to buy USD and sell their respective currencies within a day, or risk getting closed out of their positions at liquidation prices.

There are a lot of assumptions and generalisations here and I have used my absolute worst case but you get the point. Is 10% a worse case? I will leave that for you to decide.

Even if I am out by a factor of 10, any "real" crisis is still going to create a major liquidity crisis globally alongside USD strength which will be impossible for anyone, including the Fed, to contain, unless the Fed opens its window to basically any multi-currency collateral.

The LDI pension crisis was a mini version of exactly this. Pension fund managers massively underestimated the amount of liquidity they needed on their derivative interest rate deals and, when the sh$t hit the fan, they had to sell what they had. i.e. long dated bonds and subsequently swamped that market to such an extent the BOE had to step in a buyer of last resort.

March 2020 was also a mini version of this when equities tumbled so quickly. But as it was equities and therefore notionally much smaller, it went by largely unnoticed when the Fed stepped in and added massive liquidity to the system.

So, the very act of margining and collateralising OTC derivatives has not removed the risk. It has just shifted, and probably amplified, it.

The last few months have seen large moves in interest rates and CDS which brings this liquidity crisis hypothesis into play as well as the uber strong USD scenario, both of which are displaying classic signs of worry but not panic.

Volatility in either of these scenarios would be higher than we have ever seen in our lifetimes and for me that is a long time!

I really hope I am wrong on this or wrong by a factor of 100 not 10.

It is a small consolation that long volatility funds will be on the right side of history and help protect portfolios from these dark scenarios.

Two quotes from a Business Insider article published in May 2010[iv] are still very relevant:

"The success in bailing out the system on the previous occasion led to a superbubble, except that in 2008 we used the same methods. Unless we learn the lessons, that markets are inherently unstable and that stability needs to be the objective of public policy, we are facing a yet larger [sovereign debt] bubble. We have added to the leverage by replacing private credit with sovereign credit and increasing national debt by a significant amount."

George Soros

"when the financial history of this decade is written, it will surely speak of the internet bubble of the late 1990s and the housing bubble of the early 2000s. But the US Treasury bond bubble of late 2008 may be regarded as almost as extraordinary."

Warren Buffett

Disclosure

[i] https://www.pbs.org/newshour/economy/how-do-negative-interest-rates-work-anyway
[ii] https://www.businessinsider.com/bubble-derivatives-otc-2010-5?r=US&IR=T
[iii] https://www.investopedia.com/ask/answers/052715/how-big-derivatives-market.asp
[iv] https://www.businessinsider.com/bubble-derivatives-otc-2010-5?r=US&IR=T