

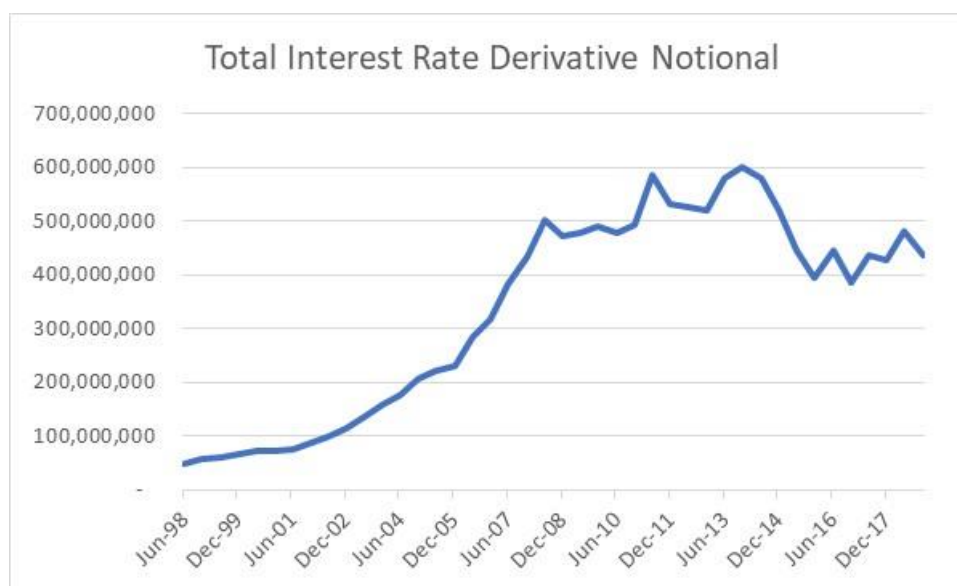
CLEARING HOUSES AND INITIAL MARGINS

 Russell Clark's
 Market Views

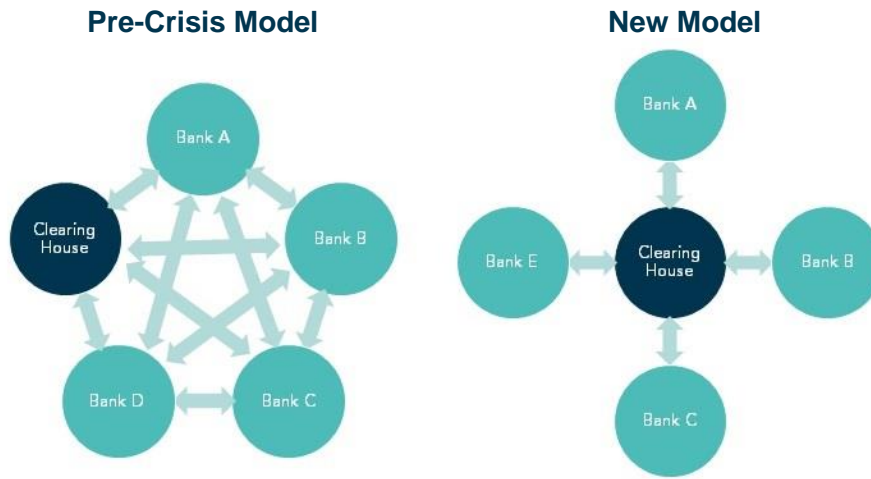
“During the financial crisis, the size of the derivative market became an issue. In the post crisis period, regulators have moved from a bank-centric risk model to a clearinghouse-centric model.”



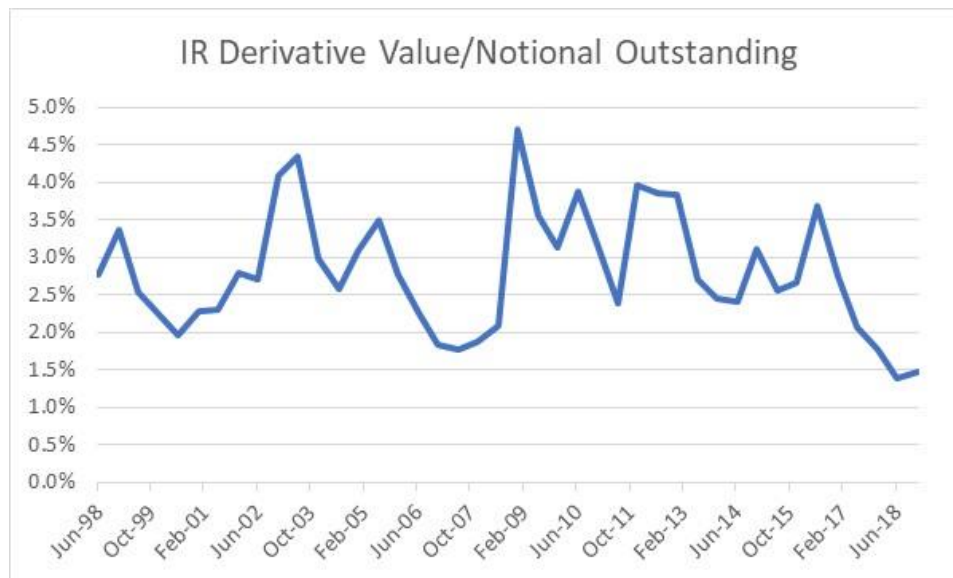
There is perhaps no market that shows the development and growth of globalisation and internationalisation more than the interest rate derivative market. Total notional outstanding of interest rate derivatives in 1998 was USD 48 trillion (1.5 times world GDP). It has now risen to USD 436 trillion as of end of 2018 (or 5 times GDP).



During the financial crisis the size of the derivative market became an issue; the bankruptcy of Lehman Brothers meant it was difficult for banks to know their actual exposure. In the post crisis period, regulators have moved from a bank-centric risk model to a clearinghouse-centric model. Regulators have also encouraged this move by imposing a capital charge on uncleared trades. According to BIS data, in OTC derivative markets central clearance rates have been running at around 80% since 2013. The effect of these changes has been to move central clearing houses from a participant in the interest rate derivative market, to the central player through which all other participants trades.



Interest rate (“IR”) derivatives, and how they are priced are an important market variable. Using BIS data, we can get the value of all these derivatives, and compare that to the notional value of them, to get an idea of how these derivatives can fluctuate in value. As can be seen, valuation tends to be cyclical, with lows coinciding with market volatility in 2000, 2007 and in 2018.



Like all derivatives, IR derivative values tends to rise with rising volatility. The MOVE Index (a volatility index for Treasury options) has begun to rise this year which should also cause the value of options to rise.



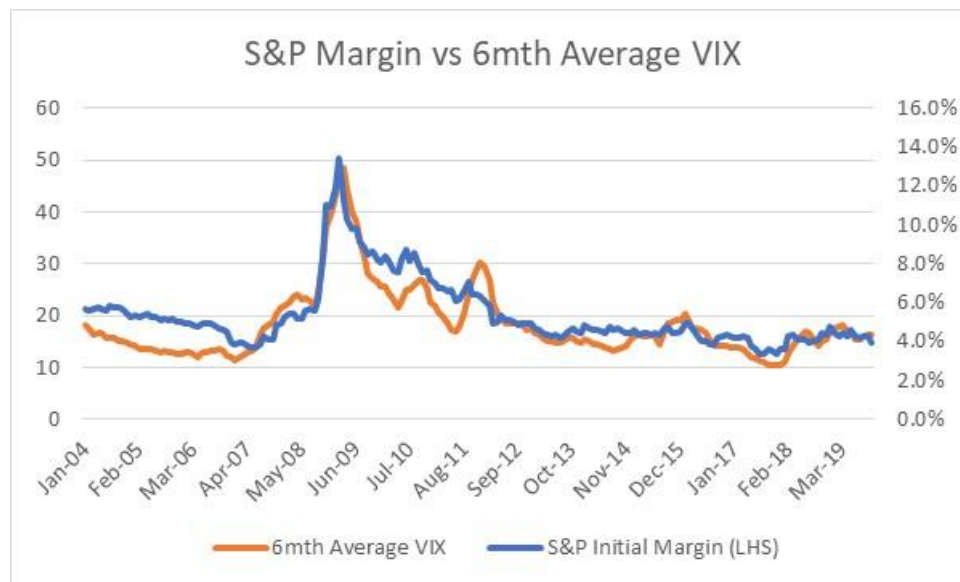
London Clearing House (“LCH”), owned by the London Stock Exchange, is the dominant interest rate derivative clearinghouse. Through public disclosures we can see how money flows through LCH. The two key flows are variation margin, which is the daily flow of the profits or losses between two different clients due to fluctuations in underlying values; and initial margin, which is the capital clients need to pay on the initial placing of the trade. It has been noticeable that the initial margin position at LCH has been reduced even as variation margin has increased. From the chart below a 2016 Brexit style event could see initial margins rise 10 times from current levels, assuming constant variation margin.



The current compression of initial margins is also apparent when looking at equity futures. Using CME data, the initial margins being asked from traders for futures on the S&P, Nasdaq and Nikkei are also at near all-time lows, and have become increasingly correlated over time.



Clearinghouses by design do not take a view on the market. Most clearing house calculations of the level of initial margin are set with a lookback period, and in the case of S&P margin, it is highly correlated to 6-month historic VIX (see chart below).



There is no doubt that a default by a clearinghouse member is more likely when initial margins are low and may be caused by a sharp unexpected move in the underlying markets. In the event of a default by one member this could trigger a chain reaction. Firstly, initial margins will rise in an event of a default, which will restrict other trader's ability to participate in the market possibly exacerbating the move in the underlying markets. Secondly, if the defaulting member was a particularly large player in one asset (likely, as this would be the cause of the default), the members with opposite positions may not receive variation margin and hence will become unhedged at the very moment they need hedging. Thirdly, the clearinghouse may well have to recapitalise itself from the surviving members.

Major clearinghouse members (including JP Morgan) appear to be seriously worried about a clearinghouse problem after the default by a member of Nasdaq Clearing AB prompted [this](#) response. It is asking for the clearinghouses to raise more capital, and to set up a resolution scheme in case of bankruptcy. They are also seeking to limit the ability of clearinghouses to draw on the resources of its members to recapitalise clearinghouses. The default by a member of the Nasdaq Clearing AB in Sweden left remaining members unhedged. This made resolution more difficult as the surviving members were asked to bid for the defaulting member's position as well as recapitalise the clearing house

The big question is now that the financial crisis market volatility was over 10 years ago, and mainly excluded from initial margin calculations, then do backward looking margin calculation models mean that there is too little initial margin within the system just when it may be needed ie prior to turning points or market shocks?

INFORMATION

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 Investor Relations: Samantha Dunn
 Email: info@horsemancapital.com
 Telephone: +44 (0)20 7838 7580
 Website: www.horsemancapital.com
 Business and registered address: Horseman Capital Management Limited, 9 Chester Close, London SW1X 7BE, United Kingdom.
 Registered in England and Wales - Company number: 04034280

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