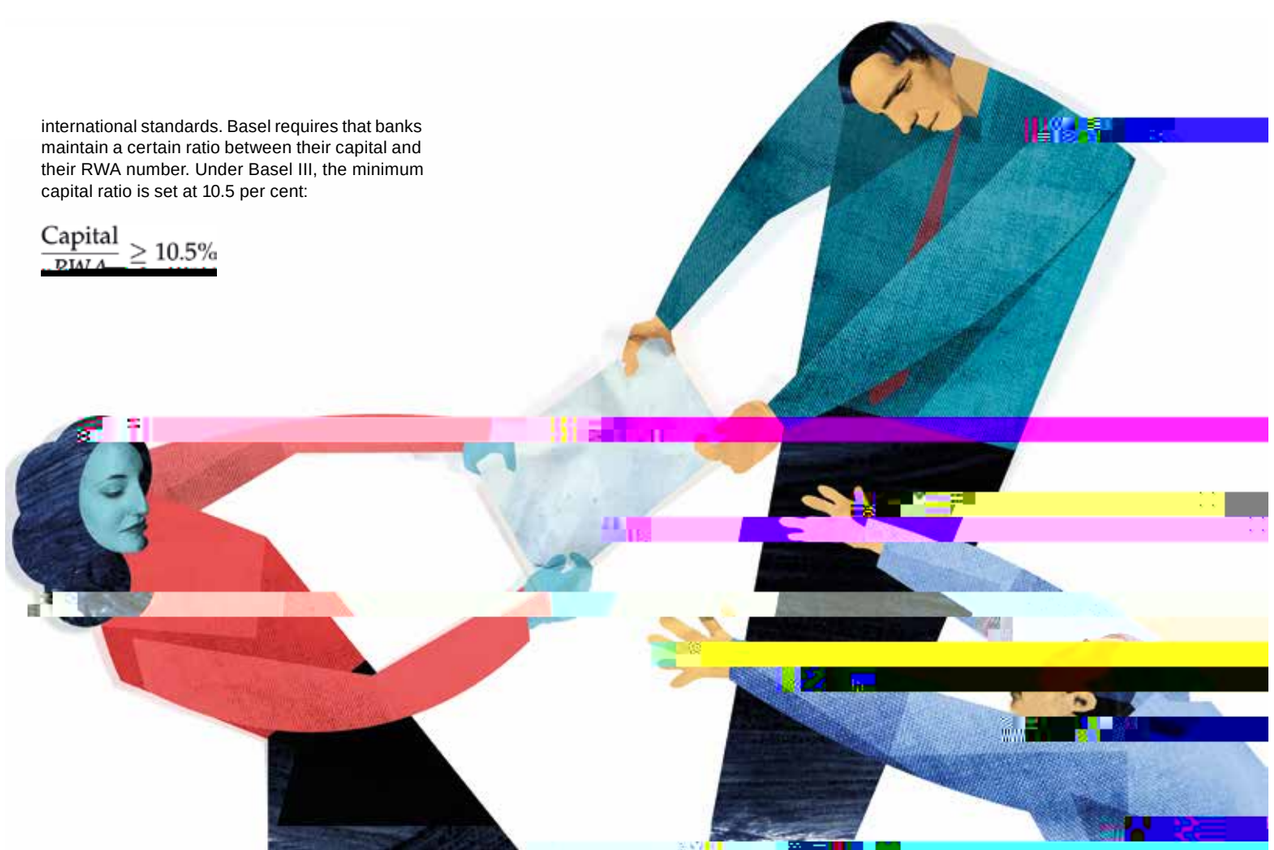
CARRRESEARCH

Taylor Spears examines some of Basel III's moving parts.

international standards. Basel requires that banks maintain a certain ratio between their capital and their RWA number. Under Basel III, the minimum capital ratio is set at 10.5 per cent:

$$\frac{\text{Capital}}{\text{RWA}} \geq 10.5\%$$



In this formula, the measurement of a bank's RWA is extremely important. All else being equal, if RWA shrinks in the denominator the bank will be required to hold less capital to maintain its ration at 10.5 per cent. Likewise, a bigger RWA number forces adopting CVA for capital determination, it ignored the

when the creditworthiness of its trading partners changes. For instance, if a bank has entered into a series of long-term derivatives contracts with a corporation, and the market's perception of the creditworthiness of that corporation deteriorates, then the CVA charge determines how much additional capital the bank must set aside to protect itself from changes in the value of its assets that arise from this increased risk of insolvency.

Until Basel III, the CVA capital charge was not an element of the accord. The Committee justi ed its decision to include CVA because nearly two-thirds of all credit-related losses during the nancial crisis were caused by changes in the credit risk of trading partners, and not by partners' failure to pay the owed amounts. Asia Risk, a popular trade publication among derivatives traders and quants,

reports that many bankers believe the Committee's motivation was overtly political. They say it was designed to push "over-the-counter" derivatives trading onto centralised clearing houses so that counterparty risk would be reduced.

Ever since the CVA charge was proposed in 2009, banks have been sparring with regulators. They have been vigorously lobbying local authorities thro5 TJ -0.014 Tc -0.071 Tw 7.897 0 0 8 623.622 283.8897 Tm [(f)12.4(or)-4.4(m)1.4(u)0.8(la)-0.7(s)15.1(e)-1.3(s)-5.4(d)-4.1(a)3.2(u)1.1(e)15.1(d)10.1(he)10

be done at the level of the portfolio, which means we would model all of our trades with a particular counterparty, simultaneously.

Banks spent millions building up incredibly sophisticated measurement systems in the late 1990s and early 2000s that use powerful computers to calculate CVA by simulating all of the possible future values of all the derivatives the bank has with a particular client.

All of this computational complexity has a surprising start. A former trader explained that at his bank, the system was initially deigned to make the interactions between traders and risk managers "less emotional". He recalled that before CVA was introduced, credit of cers imposed limits on the amount of risk traders were allowed to take. CVA eliminated this contentious process by transforming credit risk from a restriction set by a manager, into a price charged to the trader. The money collected by levying the charge was then used to "hedge" the additional risk the trader was taking by reinvesting it in instruments like credit derivatives.

If emotional management was the initial motivation, by 2006 banks gained an altogether different incentive to invest in the calculation of CVA. Thanks to the major accounting standards boards who would require banks to report their !“ @C§|D•’¾PÛ éO#Ò ¯ “ 0àRç|ÃfA·ï˜N’ y=^ up²UÖüL’5²~Ãw7| Cr¶—% ðD• °<Ú·œz-Ó ±’8›%ËM¨>óôp

the indigenous CVA calculation systems that had sprung up across the banks. Instead, the Committee put forward a standardized formula known as the "bond equivalent" approach, which derivatives industry trade group ISDA. Banks claimed this alien formula for calculating regulatory CVA was not only unnecessarily conservative, but actually discouraged them for reducing their CVA exposure by hedging their counterparty credit risks using credit derivatives.

At present, Basel III's CVA formula is a compromise between banks and regulators that co-exists beside the institution's internal CVA calculation. When the Basel Committee released a new proposal in December 2010, it maintained a formula-based approach albeit with re-developments to make the regulatory calculation less onerous and to more accurately capture the effect of credit risk hedging. However, the newer formula does not take into account changes in CVA that arise from changes in interest rates and asset prices.

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