

In their latest article on Basel 3, **STEPHEN WELLS** and **BRAD CARR** explore the specific impacts for derivatives transactions and what this means for superannuation funds' risk management strategies.

**B**asel 3 requires banks to hold an increased level of capital against derivatives commonly used by superannuation funds and other counterparties to hedge various exposures, including foreign exchange and interest rate risk. Australian banks are generally well capitalised and will be able to satisfy the regulatory demands for more capital. However this is likely to impact bank returns on this business activity, potentially leading to impacts on the costs for super funds seeking to hedge against various risks in their investment portfolios.

This raises a number of considerations for super funds in their approaches to risk management, including the nature and tenor of hedging required, the ability to collateralise trades, and how to assess and monitor different bank counterparties.

### BASEL 3 DERIVATIVES REQUIREMENTS

According to many observers and regulators, the global financial crisis (GFC) identified a number of shortcomings of the global financial system and called out specifically that many banks' risk models lacked coverage for some of the risks inherent in derivatives products.

As part of the regulatory response to the GFC, Basel 3 now demands significant increases in the capital banks' hold for counterparty credit risk on their derivatives transactions, such as interest rate swaps, cross currency swaps, inflation swaps and FX forwards. These additional requirements include:

- a new capital charge for the risk of mark-to-market (or credit valuation adjustment) losses;
- additional requirements to use stressed inputs in bank models; and
- moves to direct banks to clear trades via central counterparties (CCPs).

While some elements of Basel 3 are being progressively phased in or have substantial lead times, these particular requirements have a formal compliance deadline for

banks in 2013 and will be reflected in the capital positions that Australian banks declare in their respective financial results this year. As a result, banks and their counterparties can expect to see an impact in this area virtually immediately.

### SENSITIVITIES ACROSS TRANSACTION TENORS AND COUNTERPARTIES...

The Basel Committee has estimated that the Basel 3 changes will (on average) double the amount of equity that banks are required to set aside for their derivatives products. Our expectation is that this will be more sensitive for longer dated trades in particular but also depend on the creditworthiness of the counterparty. Indicative impacts of the added capital charge for uncollateralised derivatives are estimated across different tenors, and for counterparties with different implied credit ratings, in Figure 1.

It may seem somewhat counterintuitive that the proportionate increases in capital requirements will generally be greater for stronger rated counterparties, however this is a reflection of the amounts of capital currently set aside under existing (Basel 2) base-levels, and the incremental amounts required under Basel 3. This is relevant for superannuation funds as most banks would assess them as a higher rated counterparty and the incremental change will therefore be higher going forward.

Without any adjustment in pricing on derivative transactions, increased capital requirements will reduce the profitability

of this particular business activity.

Assuming that banks will seek to maintain profitability levels, they will therefore need to raise the pricing of these products. As noted in Figure 1, these implications are particularly profound for longer dated hedges, with better rated counterparties.

In addition to these incremental capital amounts on all transactions, there is a further capital charge in circumstances when banks are dealing with counterparties that are defined under Basel 3 (and relevant local authorities) as 'financial institutions', ie either unregulated financial services entities or those with total assets of greater than A\$100bn. In these situations banks will need to apply an additional multiplier of 1.25 to the capital requirements. While no Australian superannuation fund is large enough to be subject to this directly, it could be a factor in the future given projected growth and potential consolidation within the sector. This additional multiplier could also apply immediately for cases where a superannuation fund executes FX hedging through an external manager, if that manager exceeds the scale thresholds and undertakes hedging with a bank counterparty on behalf of the fund.

### ... PLUS MACRO-LEVEL BANK CAPITAL

These specific capital impacts on derivatives transactions compound other requirements for banks to hold an increased level of capital to improve their overall capital adequacy. While the

**Figure 1 – Increase in capital requirements on uncollateralised derivatives (expressed as a multiple of the previous capital level under Basel 2)**

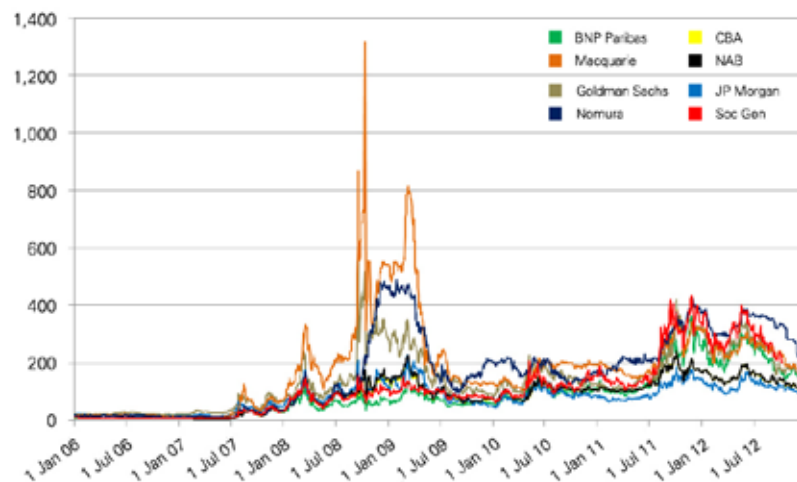
Implied credit rating	0.5 year	1 year	3 year	5 year	10 year	15 year
<b>AA</b>	1.8-2.1	1.8-2.1	2.1-2.4	2.1-2.4	3.0-3.3	3.5+
<b>A</b>	1.5-1.8	1.5-1.8	1.8-2.1	1.8-2.1	2.5-2.8	3.0+
<b>BBB</b>	1.1-1.4	1.1-1.4	1.5-1.8	1.5-1.8	1.9-2.2	2.3+
<b>B</b>	1.1-1.4	1.1-1.4	1.6-1.9	1.6-1.9	2.2-2.5	2.7+



# Basel 3 implications



**Figure 2 – Movements in banks' five-year USD credit default swaps**



Australian major banks are each already at, or very close to, the new benchmarks (required later this decade), a number of international banks need to raise considerable amounts of capital to comply. A Basel Committee survey of 102 banks globally determined that those requiring more capital will need an additional €374b in core equity and €219b in other Tier 1 Capital (ie, €593b in new Tier 1 Capital).

These constraints impose a sense of 'balance sheet scarcity' on some banks and have already driven some European banks to pull back from Australia and other non-core markets, while they focus on recapitalising in their home markets. However Australian banks have the required capital available from a macro perspective and, as a result, on a relative basis the cost and accessibility of derivatives transactions should be more favourable over the long-term with Australian banks than with those foreign banks with greater macro, as well as derivative-specific, capital needs.

#### MANAGING COUNTERPARTY RISK

The GFC and increased capital requirements have placed a greater emphasis on proactively managing counterparty risk. Prior to the GFC many Australian superannuation funds, investors and corporates limited counterparty credit

assessment to restricting dealing activities to banks with investment-grade ratings, and monitoring overall exposure levels.

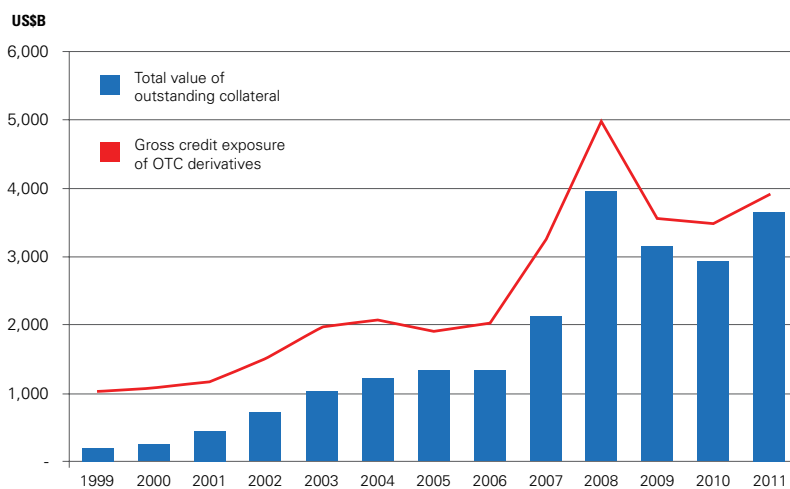
The GFC has changed this approach, given the reduced perceived creditworthiness of many banking counterparties, reflected in either repeated downgrades by ratings agencies or movements observed in the spreads on credit default swaps, as depicted in Figure 2.

As a result, many counterparties are taking a revised approach to managing counterparty risk, including monitoring specific counterparties more closely and investigating collateral arrangements.

#### COLLATERAL

A Credit Support Annex (CSA) is one tool for managing counterparty risk on derivatives. Under a CSA, the parties to a derivative transaction will post collateral to cover mark-to-market exposures following a change in market prices.

CSAs have historically been used commonly between banks however, since the height of the GFC, there has been an increase globally in their use among a number of counterparties seeking to mitigate counterparty credit risk. Since 1999 the gross credit exposure of over-the-counter (OTC) derivatives has grown from US\$1 trillion to US\$3.9 trillion, while the

**Figure 3 – Growth in derivatives and collateral usage**

Source: Bank for International Settlements, International Swaps and Derivatives Association Inc

amount of collateral posted over the same period has grown from US\$200 billion to US\$3.7 trillion, as shown in Figure 3.

As well as minimising financial loss in the event of a counterparty defaulting when there are unrealised gains on a derivative transaction, a CSA also enhances the bank's view of a transaction's credit risk, with potential implications for pricing. Over time, banks are likely to incentivise their clients to enter into CSA agreements, with differentiated pricing on derivatives with or without a CSA. These benefits need to be weighed up against the potential requirement to post collateral in response to market fluctuations, requiring available liquidity to be maintained at potentially low returns to meet unplanned cashflows.

#### CONSIDERATIONS FOR SUPER FUNDS

These developments make it pertinent for super funds to revisit their existing currency and interest rate risk management policies, as most market participants more broadly are currently doing.

Market participants are generally placing a greater emphasis on the selectivity of their counterparties, with a focus on creditworthiness as well as competitiveness. Superannuation funds

need to consider how they can protect themselves from the risk of a counterparty bank defaulting, as well as being able to assess differentiated pricing from various counterparties, in terms of both their credit rating and collateral terms.

To mitigate some of the impacts, superannuation funds may need to review internal policies to consider the impacts of entering into a collateral agreement and determine appropriate CSA terms and conditions. With a requirement to have cash or liquid assets immediately available to be posted when triggered by a change in market prices, there may also be a significant challenge to a superannuation fund's liquidity management and operational risk positions, and require considerations around the returns on liquid cash given changes to other aspects of banking regulation, as discussed in earlier articles. This also needs to be considered in the context of how superannuation funds would account for derivative valuations and volatility in their reporting.

In this context, over time superannuation funds should also monitor banks' use of CCPs. As banks look to recover some benefit where they can execute derivatives trades via CCPs, and potentially

apply a greater capital cost against trades that are intermediated via an external manager, it may emerge that super funds can benefit by transacting directly with bank counterparties.

Superannuation funds should also monitor the type and tenor of hedging transactions. Initially an assessment of the tenor of their hedging transactions against the effectiveness of that hedging for the fund is likely warranted. However superannuation funds should also consider the capital structure and hedging of equity investments in assets or companies that borrow offshore. As we outlined in the November issue of *Superfunds*, the impacts on longer dated cross currency swaps add an additional cost to offshore issuance, in the scenario where Australian borrowers have needed to convert USD borrowings into AUD, for instance. This could serve to reduce the current funding cost advantage experienced by domestic Australian borrowers in offshore markets and may encourage Australian corporate and infrastructure providers to look more to local investors to obtain funding, potentially opening up additional investment opportunities for superannuation funds.

As all banks globally are required to strengthen their stable funding, liquidity and capital positions, the transition to Basel 3 presents different challenges for each bank and its customers. This will become an increasingly significant theme for superannuation funds in liquidity management, investment, hedging and counterparty selection, and superannuation funds need to consider not only the ratings and stability of their bank counterparties but also the counterparty's capacity to support their businesses going forward. **SF**

*Stephen Wells is Managing Director, Head of Superannuation Funds, Financial Institutions Group, NAB.*

*Brad Carr is Director, Superannuation Funds, Financial Institutions Group, NAB.*