

THE ASSET-BACKED COMMERCIAL PAPER MARKET¹

Introduction

In recent months, problems in the US sub-prime mortgage market and the securities backed by these loans have led to a global reassessment of the risks associated with investing in structured credit products. Asset-backed commercial paper (ABCP) markets, both overseas and in Australia, have been particularly affected by this reassessment, with issuance falling sharply and spreads widening significantly.

ABCP is issued by so-called conduits and structured investment vehicles (SIVs) in order to finance the purchase of financial assets including mortgages, receivables and long-term securities (including residential mortgage-backed securities (RMBS)). It typically has a term to maturity of less than one year. Because short-term paper is issued to fund investments in longer-term assets, this type of funding strategy relies on the ability to ‘roll over’ the ABCP when it matures – in other words, vehicles issue new ABCP to repay maturing ABCP. While up until recently this strategy presented few problems, investors are now taking a much more cautious approach to purchasing paper, leading many ABCP vehicles to call on back-up lines of liquidity provided by banks. This has focused attention on a number of issues, including the sustainability of business models based on this type of funding, as well as the links between banks and the ABCP market.

This article discusses the characteristics of ABCP in Australia and the United States, the impact of the recent strains in financial markets on the ABCP market and the implications for banks of being liquidity providers to conduits.

Characteristics of ABCP

ABCP vehicles are used for a number of purposes which can be separated into two main categories: the funding of loans and the funding of investments in securities. The funding of loans can take several forms, including:

- to fund loans that have a short duration such as receivables, leases and margin loans;
- to temporarily ‘warehouse’ mortgages until a sufficient pool is built up for RMBS to be issued; and
- for longer-term financing of mortgages.

The use of ABCP to fund investments in securities depends on two interrelated properties:

- taking advantage of an upward-sloping yield curve to obtain short-term funding at a lower rate of interest than the yield on the long-term assets held; and

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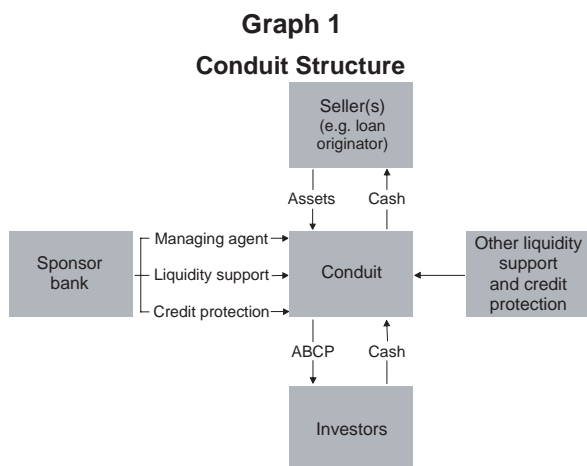
- issuing highly rated short-term paper at a rate of interest less than the yield on the long-term securities backing that paper, which is commonly referred to as credit arbitrage.

The use of ABCP is consistent with an incentive for banks to structure transactions in such a way as to minimise their regulatory capital requirements. In particular, under the Basel I capital rules, the undrawn back-up liquidity lines provided by banks to conduits (discussed below) are recorded as off-balance sheet exposures and generally did not attract a regulatory capital charge since the original term to maturity is usually less than one year.

From an investor's perspective, ABCP offers diversification, as it is issued against a pool of assets, and can provide exposure to traditionally non-marketable assets such as trade receivables. While investors could directly invest in securities such as RMBS instead of investing in ABCP backed by these assets, ABCP has historically been a more liquid short-term investment.

Of the two broad types of vehicles that issue ABCP, conduits are far more common, particularly in Australia where SIVs have little or no presence. Conduits are usually set up, or 'sponsored', by a bank, though they are a legally separate, 'bankruptcy remote', entity.² For a fee, the sponsor provides administrative services and often provides liquidity facilities and/or credit enhancement.

Credit enhancement and liquidity facilities can also be provided by third parties. Graph 1 shows a stylised representation of a conduit structure.³ Unlike vehicles that issue term securitisations (such as RMBS) that typically wind down after a few years, conduits are ongoing entities that have a revolving structure, with assets going in and out of the pool of collateral that backs the ABCP.



Conduits can be classified into three broad types:

- *Single seller* – There is a sole originator of the conduit's assets. Often the sponsor of the vehicle is the originator of the assets (commonly mortgages) and uses the conduit as an alternative source of funding for its own business activities.
- *Multi seller* – The conduit buys assets (often loans) from a number of different originators (bank and/or non-bank). The conduit is used to provide off-balance sheet capital market financing for the sponsor's clients, but can also be used by the sponsor.
- *Credit arbitrage* – ABCP is used as relatively lower-cost short-term funding to invest in longer-term higher-yield securities (as opposed to loans) to earn a spread.

2 Under a bankruptcy remote structure, the solvency of the conduit is independent of the sponsor (and the sellers).

3 Although not shown in Graph 1, it is common for assets to be held in an additional special purpose vehicle, in which the conduit either acquires an interest or provides a loan.

Around 15 per cent of Australian ABCP outstanding at end October 2007 was issued by single-seller programs, with the rest being issued by either multi-seller or credit-arbitrage programs (the breakdown between these two types is not available). In early 2007, the majority of US ABCP outstanding had been issued by multi-seller conduits (around 60 per cent), with both single-seller and credit-arbitrage conduits accounting for a further 15 per cent and SIVs making up just over 10 per cent.

SIVs also engage in credit-arbitrage activities, but have a number of features that distinguish them from traditional conduits, including being more complex and more expensive to set up. SIVs do not rely solely on issuing ABCP for funding, instead raising around 70 to 80 per cent of their funding by issuing subordinated medium-term notes and capital notes. The subordinated notes provide credit enhancement to the ABCP as they are the first to absorb any losses from defaults on the underlying assets.⁴ In contrast, conduits tend to provide credit enhancement through over-collateralisation of the asset pool (commonly 10 per cent) and/or a letter of credit from the sponsoring bank (often equal to 10 per cent of the ABCP).⁵ When conduits' ABCP is backed by highly rated securities, rather than loans or receivables, the program usually does not have additional credit enhancement, though the underlying securities may be highly rated because of their own credit enhancement, through subordination and/or lenders' mortgage insurance.

A variant of a SIV is a so-called SIV-lite. In comparison to SIVs, SIV-lites issue a larger share of their liabilities as ABCP (around 80 to 90 per cent). Reflecting this, ABCP issued by SIV-lites has less protection from subordination than ABCP issued by SIVs. Unlike traditional conduits and SIVs, SIV-lites are not perpetual (i.e. they are closed-end investments).

SIVs and SIV-lites also typically do not have back-up liquidity facilities covering 100 per cent of their ABCP. This is in contrast to more traditional conduits, which usually have back-up lines of credit in place that cover the full value of maturing paper. These back-up facilities are designed to mitigate the roll-over risk arising from the fact that the term to maturity of ABCP is usually less than the maturity of the underlying assets, so funding of the assets generally relies on the ability of the vehicle to issue new paper to repay investors in the maturing paper.

For conduits, an alternative to having back-up liquidity lines is to issue paper with an option to extend the maturity if the paper cannot be rolled over. If the paper is extended, the issuer pays a higher rate (often an extra 25 basis points) to the existing holders and the paper is repayable by a fixed maturity date, normally in less than 270 days. Extendible ABCP had become increasingly popular in recent years, particularly in the United States where it had been growing at a faster pace than traditional ABCP, partly due to the upcoming introduction of a regulatory capital charge on banks' back-up liquidity lines to conduits. However, it is questionable whether this trend will continue as some extendible ABCP conduits have come under considerable stress during the recent credit market turmoil (see below). Extendible ABCP accounts for only around 10 per cent of ABCP issued by Australian entities, with most of this issued into the United States.

⁴ SIVs that rely on the liquidation of their assets to repay maturing ABCP if it is not rolled over also often use market value swaps as a form of credit enhancement to cover any shortfall between the sale proceeds of assets and outstanding ABCP.

⁵ Credit enhancement can be transaction-specific or program-wide. Many conduits use a combination of both; the transaction-specific enhancement usually provides first-loss protection ahead of the program-wide enhancement. Transaction-specific credit enhancement provides protection on a specific asset pool and cannot be used to cover losses on the rest of the conduit's portfolio of assets (it is often provided by the seller).

Table 1: Underlying Collateral of Outstanding Australian ABCP^(a)

October 2007

	\$ billion	Per cent of total
Residential mortgages	38.0	54
<i>Of which:</i> Prime	37.8	53
Non-conforming	0.2	0
RMBS	12.0	17
<i>Of which:</i> Prime	11.4	16
Non-conforming	0.6	1
Auto/equipment loans & leases	3.5	5
Equities	3.5	5
Margin loans	3.8	5
Infrastructure bonds	3.8	5
Small business loans	1.1	2
Trade receivables	1.1	2
CMBS	1.1	2
CDOs	1.4	2
Corporate bonds & loans	0.4	1
Credit card receivables	0.3	1
Other	0.7	1
Total	70.7	100

(a) ABCP issued by vehicles domiciled in Australia. Underlying collateral is higher than outstanding ABCP due to over-collateralisation.

Source: Standard & Poor's

In early 2007, extendible ABCP was estimated by Standard & Poor's to account for 17 per cent of total US outstandings.

Around 70 per cent of Australian ABCP is used to finance loans rather than invest in securities (Table 1). This is a much higher share than in the US. Around half of the underlying collateral for Australian ABCP is housing loans. Despite this, ABCP backed by housing loans accounts for just under 4 per cent of the value of Australian housing credit outstanding; in comparison, longer-term RMBS fund around 20 per cent of housing credit outstanding. In total, residential mortgages back just over two-thirds of Australian ABCP – this includes the 17 per cent of paper backed by RMBS. Only a small share of these housing loans and RMBS is non-conforming (1 per cent of ABCP collateral) and, according to Standard & Poor's,

Australian ABCP has little, if any, exposure to US sub-prime mortgages or collateralised debt obligations (CDOs) backed by US sub-prime RMBS.

In the United States, residential mortgages (housing loans or RMBS) are also the largest asset class backing conduits' ABCP, although they account for a smaller share of the total than in Australia (around one-quarter in mid 2007). The next largest categories are CDOs (13 per cent), auto loans/leases (10 per cent) and credit cards (10 per cent), all of which account for much higher shares than in Australia. It is difficult to gauge the overall exposure of US conduits to the sub-prime housing market; while conduits provide investors with regular updates on the underlying collateral, the asset classes used can be quite broad. This has led to criticisms about the opacity of this market, with uncertainty about exposures contributing to the dislocation in this market in recent months.

In the United States, SIVs invest in a wide range of securities: in mid 2007, just over 40 per cent of assets was made up of debt securities issued by financial institutions, 22 per cent was prime RMBS, 13 per cent was CDOs, 8 per cent was commercial mortgage-backed securities (CMBS) and 2 per cent was US sub-prime RMBS.⁶ While, according to rating agencies, most SIVs are well diversified, a small number have significant exposures to the US sub-prime market.

⁶ According to Standard & Poor's, 61 per cent of assets were rated AAA, 27 per cent were AA and 12 per cent were A, with less than 1 per cent in lower-rated assets.

SIV-lites appear to have invested almost entirely in US RMBS, with less than 5 per cent of assets consisting of CMBS and CDOs as at mid 2007, with some of these vehicles having very large exposures to the US sub-prime market; they have had to restructure their liabilities following the recent strains in the US housing market (discussed in detail below).

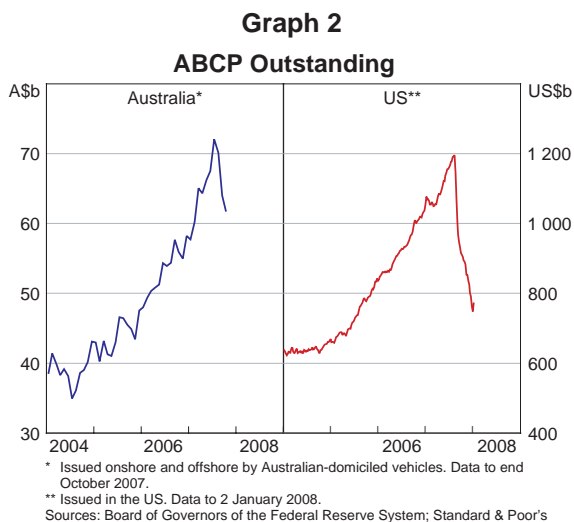
The credit quality of ABCP is potentially higher than that of the assets which back the paper. This is because, as discussed above, most ABCP programs have credit enhancement which protects investors against default on the underlying assets. Reflecting this, ABCP is generally highly rated – over 90 per cent of outstanding Australian ABCP is rated ‘A–1+’ by Standard & Poor’s, the highest rating available.

Recent Developments in the ABCP Market

The ABCP market grew strongly over the three years to mid 2007, reflecting robust growth in securitisation more generally. Outstanding ABCP issued in the United States almost doubled over the three years to end July 2007 (Graph 2). The US dollar market is estimated to account for around 80 per cent of the global ABCP market, with US and European domiciled vehicles mostly issuing paper in the United States. Similar to the US market, it is estimated that ABCP issued by Australian-domiciled conduits – issued onshore and offshore – roughly doubled over the past three years to a peak of \$72 billion in July 2007.⁷ In mid 2007, ABCP accounted for around one-quarter of both US and Australian asset-backed securities outstanding.

The period since the peak in ABCP outstanding in late July/early August 2007 has been one of considerable turbulence in financial markets. As has been well documented elsewhere, the trigger for this current episode of volatility was the collapse of investor confidence in securities backed by US sub-prime mortgage debt, which led to a general reassessment of the risks involved with structured credit markets.⁸ The ABCP market has been one of the most affected. Uncertainty over exposure to the US sub-prime market has resulted in many investors becoming unwilling to roll over ABCP or only doing so at shorter maturities and significantly higher spreads.

As a result of these difficulties, some vehicles have used their back-up liquidity facilities. The impact of this on liquidity providers is discussed in the next section. ABCP vehicles without



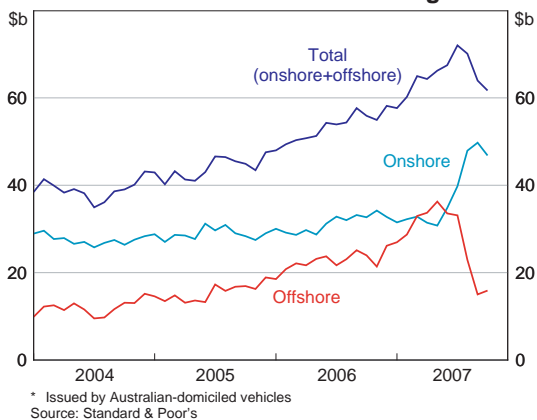
⁷ These data cover those programs rated by Standard & Poor's and do not include programs that are privately placed and/or unrated.

⁸ See Reserve Bank of Australia (2007), Financial Stability Review, September and Reserve Bank of Australia (2007), Statement on Monetary Policy, November.

100 per cent back-up liquidity facilities have been the most affected by difficulties in rolling over ABCP. In particular, some SIVs and SIV-lites have defaulted on payments – the first defaults in the ABCP market in its more than 20 years’ existence, according to Standard & Poor’s. For these vehicles, funding difficulties were compounded by a sharp decrease in the liquidity of their underlying collateral (such as RMBS) which made it difficult to repay investors in ABCP with the proceeds of asset sales. As a result, most SIVs and SIV-lites are restructuring their balance sheets, including by reducing leverage by selling assets or seeking alternative sources of funding for a more conservative balance between short- and long-term liabilities, or by the sponsor assisting the vehicles by providing a back-up liquidity facility or bringing the assets on balance sheet (in part or entirely). Conduits that issue extendible ABCP have also been significantly affected by the turmoil in markets. Notably, some vehicles that were unable to roll over their ABCP were forced to exercise the option to extend – according to Moody’s, this is the first time this has occurred since the extendible ABCP market began 12 years ago.

US ABCP outstanding has fallen by US\$420 billion, or 35 per cent, since its peak in early August. The decline in outstandings reflects vehicles selling down assets, banks providing liquidity facilities in the form of a loan or purchasing assets, and some vehicles being wound up and taken on balance sheet. Recently, some additional banks have announced that they will also take the SIVs they sponsor on balance sheet – the value of these vehicles is estimated to be over US\$100 billion.

Graph 3
Australian ABCP Outstanding*



While ABCP issued by Australian entities has also declined sharply, the decline has not been as large, with outstandings falling by 14 per cent from end July to end October – the latest data available – compared with a 26 per cent decline in US ABCP over the same period (Graph 3). This largely reflects the fact that conditions in Australian markets have not deteriorated as sharply as in the United States or Europe, with the result that Australian-domiciled conduits have shifted much of their ABCP funding onshore; over the two months to end September ABCP

outstanding onshore increased by \$10 billion (25 per cent) while offshore outstandings fell by \$18 billion (55 per cent). This was partially reversed in October, with onshore issuance falling slightly and offshore issuance picking up. Overall, around three-quarters of Australian ABCP outstanding at the end of October had been issued onshore, compared with around half prior to the recent turmoil in credit markets. Most of the offshore paper was issued in the United States, with a small share in the European market.

Nonetheless, conditions in the Australian market have been strained and some Australian conduits have drawn on their liquidity facilities.⁹ Moreover, liaison with market participants suggests that sponsors/liquidity providers to Australian conduits have often purchased some portion of the ABCP itself (rather than providing a loan). An implication of this is that the paper remains ‘outstanding’ as measured in the aggregate data, so onshore issuance data likely overstate the strength of the domestic market.

Reflecting investors’ reassessment of risk and reduced willingness to roll

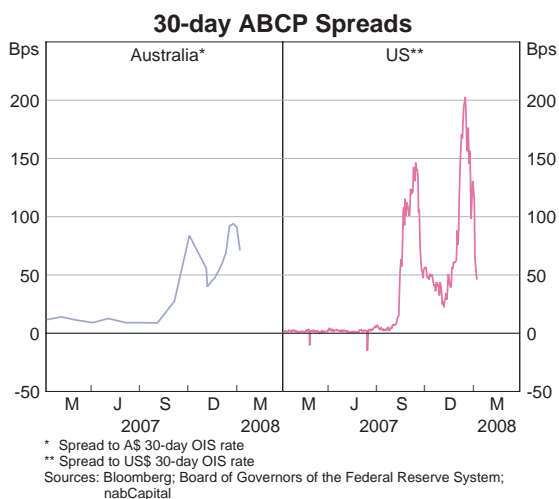
over ABCP, spreads picked up sharply in August and September, particularly in the United States where the spread to the US dollar overnight indexed swap (OIS) rate increased to 150 basis points in late August, after averaging only a few basis points over the first half of the year (Graph 4). In Australia, spreads to the Australian dollar OIS rate rose to 80 basis points, compared with an average spread of around 10 basis points in recent years. Conditions improved somewhat in October, with spreads easing and vehicles able to issue paper, albeit at shorter maturities than previously, with investors willing to purchase paper backed by a transparent high-quality asset pool. However, spreads again reached new highs in December, due to a ‘second wave’ of risk reassessment triggered by announced losses by US investment banks and stronger demand for liquid assets approaching year-end, before falling back later in the month.

To date, rating downgrades have been predominantly to paper issued by SIVs, SIV-lites and extendible ABCP conduits. Some of the downgrades have been very sharp, to below investment grade, and, as discussed above, in some cases to ‘default’. While the subordinated debt issued by SIVs and SIV-lites has been more sharply downgraded than their (senior) ABCP, the ABCP issued by many of these vehicles has been broadly downgraded or put on negative credit watch.¹⁰ Despite the generalised dislocation in the ABCP market, rating downgrades have not been widespread among other, more traditional, conduits that have 100 per cent liquidity support and which account for the bulk of ABCP outstanding.

The rating downgrades have largely been to vehicles that have the following characteristics:

- their portfolios of assets are highly concentrated in US sub-prime mortgages, mainly through RMBS and CDOs of ABS;

Graph 4



9 In early September, the Reserve Bank broadened the range of securities that could be used for repo, including, among other additions, ABCP backed by residential mortgages. Full details are available at <http://www.rba.gov.au/MarketOperations/Domestic/eligible_securities.html>.

10 Standard & Poor’s has downgraded all of the capital notes issued by the SIVs they rate.

- the market price of these assets decreased sharply and liquidity decreased significantly;¹¹ and
- they predominantly rely on the proceeds from the liquidation of their assets to repay maturing ABCP if it is not rolled over and do not have sufficient credit enhancement to cover any shortfall.

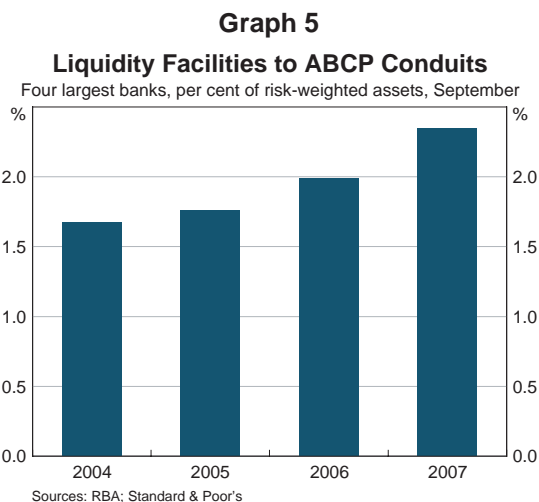
Reflecting the very limited – if any – exposure of Australian ABCP to the US sub-prime market, there have been no downgrades of Australian ABCP related to difficulties in the US sub-prime market. Standard & Poor’s explained that ratings of traditional conduits globally were broadly unaffected, despite some exposure to the US sub-prime market, due to adequate credit enhancement and/or liquidity support. It is important to note that ratings are from the perspective of investors; the fact that ABCP issued by most traditional conduits has not been downgraded suggests that rating agencies believe that, at this stage, the probability that investors will bear losses from default remains very low. However, the risks associated with traditional conduits that have invested in US sub-prime RMBS still exist, though these risks have been transferred to liquidity providers or parties providing credit enhancement.

Implications for Banks of Liquidity Provision

As noted above, conduits face significant roll-over risk and most have back-up liquidity facilities in place to help mitigate this risk. According to Standard & Poor’s, as at October 2007, \$71 billion of back-up lines had been pledged to rated Australian conduits, with around 85 per cent of this provided by conduit sponsors.¹² The four largest Australian banks accounted for around \$26 billion, or 36 per cent, of these facilities, with foreign bank branches accounting for most of the remainder. Although the liquidity facilities pledged by these banks has nearly

doubled over the past three years, it was equivalent to only 2.3 per cent of their aggregate risk-weighted assets as at September 2007 – the latest data available (Graph 5). By way of comparison, some of the large US banks have reported back-up lines to their ABCP vehicles with a value equivalent to 10 per cent or more of their risk-weighted assets.

A conduit is able to draw on its contracted back-up liquidity facilities in the event of disruptions to the ABCP market, provided that it is solvent and its assets are not



11 Rating agencies have emphasised that the recent decline in the market value of RMBS and the illiquidity in this market is outside of the expected range, and unprecedented – it is far greater than the previous largest periods of instability during the 1998 emerging-market debt crisis and following the events of September 11, 2001.

12 These figures are likely to understate the overall exposure of Australian banks to conduit vehicles, as banks also provide liquidity to conduits not captured in the Standard & Poor’s data, such as foreign conduits and unrated programs.

in default. For the largest Australian banks, the most common form of contracted liquidity support is via a loan to the conduit to repay maturing paper. An alternative is an asset purchase agreement whereby the conduit sells an interest in the underlying assets to the liquidity provider. Some contracts contain a combination of these options, although the latter has generally not been used by Australian banks because asset purchase agreements may contravene prudential requirements for liquidity facilities. A third option is for the liquidity provider to purchase the ABCP itself in order to avoid formal draws on the liquidity facility; as already noted, this option has been used in Australia during the recent turmoil, particularly by foreign bank branches. In the United States and Europe, banks have reportedly provided liquidity through all three means: some sponsoring banks have taken the assets in these vehicles back on to their balance sheets, others have provided a loan and some have bought the ABCP. In addition, some sponsoring banks are winding up their SIVs, as discussed earlier.

The recent disruption to the ABCP market has raised a number of issues in relation to these back-up liquidity facilities.

One is that in difficult market conditions the provider of the facility needs to maintain sufficient liquidity to be able to meet its commitments at short notice as, in most cases, funds are required to be available on a same-day basis. A prominent overseas example of a bank that had difficulty meeting its obligations to a SIV that it sponsored is the German bank IKB; other German banks joined forces in late July to provide the liquidity when IKB was unable to do so.

A second issue is that the provision of back-up liquidity facilities exposes the provider to the credit risk of the underlying assets, given that these facilities are secured by the underlying assets or may take the form of purchasing the assets. As noted, the collateral backing Australian ABCP is relatively low credit risk since it is predominantly residential mortgages and highly rated RMBS.

A third issue is the potential effect of a drawdown on the regulatory capital requirements of the provider. As discussed above, if standby lines of credit have an original maturity of less than a year, as is normally the case, under the Basel I Capital Accord they did not attract a regulatory capital charge while undrawn. However, when the facility is drawn, a regulatory capital requirement applies – that is, lending to the conduit boosts the level of risk-weighted assets against which banks are required to hold capital.

The extent of any increase in capital requirements depends on the nature of the liquidity provision. If it takes the form of a loan, then like most corporate loans under Basel I it attracted an 8 per cent capital charge, though the capital charge on a loan may be lower under Basel II. If the sponsoring bank purchases the maturing ABCP itself, the capital charge depends on whether the paper is held in the trading or the banking book, although the former is most likely. Under the standard approach for calculating the capital charge for market risk, for example, investment-grade ABCP would attract a ‘specific’ capital charge of 0.25 per cent if the remaining term to maturity was less than six months, or 1 per cent if it was more than six months. However, APRA’s prudential guidelines place restrictions on the proportion of a program’s paper that a bank can purchase. In the case of an asset purchase, which appears to be a more common feature of contracted support for conduits sponsored by foreign bank branches, any repurchased assets would attract the capital charge that would apply to the underlying asset.

The introduction of Basel II may have some effect on the ABCP market going forward. Basel II is more explicit in recognising the risks arising from securitisation, including through the back-up liquidity facilities provided to conduits. Under the new framework, banks must hold regulatory capital against these facilities, regardless of the initial term to maturity. For example, under the standardised approach to securitisation, undrawn facilities meeting certain criteria with an original maturity of less than one year will generally attract a regulatory capital charge of at least 20 per cent of an equivalent on-balance sheet exposure. On the other hand, it is possible that the capital charge on drawn liquidity facilities will be lower under Basel II than under Basel I.

Conclusion

The ABCP market has been one of the markets most affected by investors' recent reassessment of the risks involved in participating in structured credit products. Reflecting this, global ABCP outstanding has declined sharply as investors became reluctant to roll over maturing paper, and where ABCP has been issued recently it has been at shorter maturities and higher spreads. Conditions in the Australian ABCP market have also been strained, although less so than in a number of overseas markets, with Australian issuers redirecting a significant amount of their issuance back onshore. In part, the better performance of the Australian market appears to reflect the different purpose of ABCP conduits in Australia, which are used to fund loans rather than securities to a greater extent than in the United States.

Notwithstanding the recent difficulties in this market, ABCP, like other forms of securitisation, can allow financial institutions to diversify their sources of funding, and enable credit risk to be packaged and sold to meet the preferences of investors. Recent events have, however, highlighted a number of issues that are likely to receive ongoing attention. One of these is the important role of transparency in the smooth operation of the market, with the reluctance of investors to roll over ABCP partly reflecting the opacity of the market both in the composition of the asset pools and the lack of publicly quoted prices. Given this lack of information, investors are now reportedly requiring more transparency regarding the collateral backing ABCP. A second issue arises from the fact that rolling over ABCP has proved to be more problematic than many had previously assumed. The difficulties have been compounded by a sharp decrease in the liquidity of the underlying collateral, which has made it difficult to repay maturing ABCP with the proceeds from asset sales. Looking forward, more attention will need to be paid to the maturity mismatch between assets and liabilities of vehicles that issue ABCP. A third, related, issue is that banks can be exposed to significant risks arising from their links with conduits. Reassessment of these risks is likely to have an impact on the future growth of the ABCP market, as will the imposition of a regulatory capital charge on banks' back-up liquidity facilities as part of the introduction of Basel II. ❧