Results of surveys on selected debt securities and off-balance sheet exposures to derivatives and securitisations

by the Banking Policy Department

In the second half of 2010, authorized institutions (AIs) recorded solid growth in holdings of selected debt securities and trading and hedging activities in derivatives coinciding with encouraging signs of global economic recovery. However, with the significant increase in market volatility in the first half of 2011, the growth in holdings of selected debt securities stagnated amid recurring concerns over the sovereign debt crisis in Europe and uncertainty over economic recovery in the US. Nevertheless, activities in derivatives continued to record moderate growth in the first half.

Preparatory work for the implementation in Hong Kong of the enhanced regulatory standards regarding capital charges for securitisation transactions under Basel 2.5[1] and over-the-counter (OTC) derivatives activities continued.

Introduction

The HKMA introduced two half-yearly surveys, the Survey on Selected Debt Securities and the Survey on Off-balance Sheet Exposures in Derivatives and Securitisation Transactions, in November 2008 to help strengthen its oversight of the banking sector's exposure to structured credit products and OTC derivatives. The surveys collect data on AIs' exposures to selected debt securities and securitisation and derivatives transactions, including credit derivatives.

In total, 168[2] AIs participated in the Survey on Selected Debt Securities and 194[3] AIs participated in the Survey on Off-balance Sheet Exposures in Derivatives and Securitisation Transactions for the 6-month periods ending December 2010 and June 2011.[4] This article presents the results of the surveys, covering the reported exposures of the surveyed AIs at the end of the two periods.

Highlights of major findings

The surveys showed that:

1. The market value of the selected debt securities[5] held by the surveyed AIs stood at HK$1,771 billion at the end of June 2011, an increase of 6.5% from the end of June 2010. The AIs' holdings of structured securities[6] remained insignificant despite a year-on-year increase of HK$8.5 billion or 18.3%. The selected debt securities were held mainly for investment purposes.

[1] See "Enhancements to the Basel II framework" issued by the Basel Committee on Banking Supervision in July 2009.

[2] Representing all licensed banks and restricted licence banks in Hong Kong of which the total assets at the end of June 2011, in the aggregate, accounted for 99.7% of the total assets of the banking sector.

[3] Representing all AIs (i.e. licensed banks, restricted licence banks and deposit taking companies) in Hong Kong.

[4] The results of the last surveys conducted for the positions at the end of December 2009 and June 2010 were published in the *HKMA Quarterly Bulletin* in December 2010.

[5] Selected debt securities are debt securities other than Exchange Fund Bills and Notes, US Treasury bills, notes and bonds, and debt securities issued by multilateral development banks.

[6] Structured securities include asset-backed securities (ABSs), mortgage-backed securities (MBSs), collateralised debt obligations (CDOs), notes issued by structured investment vehicles (SIVs), asset-backed commercial paper (ABCP) and any other similar structured products, but exclude credit-linked notes.

2. The vast majority of the debt securities held by the AIs were non-structured securities (96.9%). Although most of these were issued by banks and sovereigns with investment-grade credit ratings, the percentage share of bank issuers has been decreasing since June 2009, while that of sovereign issuers has picked up since June 2010, reflecting AIs' general preference for sovereign paper rather than bank paper.

3. The exposure of the banking sector as a whole to structured securities amounted to HK$55 billion at the end of June 2011, 18.3% higher than a year ago mainly because several AIs increased their investment in mortgage-backed securities (MBSs) and asset-backed securities (ABSs). Nevertheless, the exposure remained insignificant and only accounted for 0.7% of the total assets of the AIs holding the securities. Most of the securities (62.4%) were backed by residential mortgage loans. The proportion of securities backed by non-prime residential mortgage loans[7] further reduced to 6.3% (8.6% in June 2010).

4. The increasing trend of the AIs' derivatives activities observed since June 2009 continued, with exchange-rate and interest-rate contracts remaining the main types traded. The total notional amount of outstanding derivatives contracts (other than credit derivatives) held by the AIs at the end of June 2011 was HK$54,663 billion, 13.6% higher than at the end of December 2010, the main drivers being interest rate swaps and foreign exchange forwards.

5. The total notional amount of credit derivatives has been decreasing since December 2008. The amount stood at HK$540 billion at the end of June 2011, accounting for only 1.0% of all the outstanding derivatives contracts reported. The holdings remained highly concentrated in a few AIs.

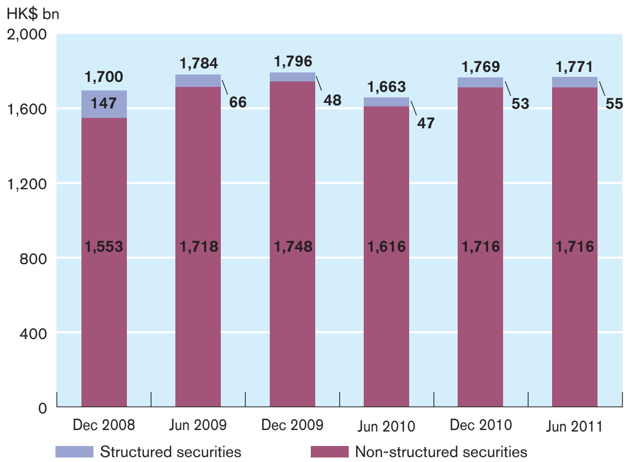
6. The off-balance-sheet securitisation exposures of AIs, which mainly consisted of liquidity facilities, and interest rate and currency derivatives provided to securitisation transactions, remained minimal.

Details of major findings

Selected debt securities held

The aggregate market value of selected debt securities held by all surveyed AIs increased to HK$1,771 billion at the end of June 2011, representing a year-on-year increase of 6.5% and gradually edging back to a level close to that of December 2009 (HK$1,796 billion) (Chart 1). The growth occurred mainly in the second half of 2010, and was generally due to non-structured securities rated A- or above issued by sovereigns. In the first half of 2011, the aggregate market value levelled off as the increase in holdings of certain AIs was almost offset by the decrease in holdings of other AIs. In terms of their share in AIs' total assets, selected debt securities continued to decrease, from 13.6% (June 2010) to 11.8% (June 2011), due to faster growth in loans and short-term bank placements. Consistent with the observations in previous years, around 80% of the debt securities were held for non-trading purposes.

CHART 1
Market value of selected debt securities held by all surveyed AIs



7 "Non-prime" refers to Alt-A and sub-prime, or their equivalents in the case of non-US markets.

AIs' holdings of structured securities at the end of June 2011 remained small, despite a year-on-year increase of 18.3%, which resulted mainly from an increase in investment in MBSs (mainly issued by Ginnie Mae) and ABSs (mainly backed by claims on public sector entities and credit card receivables) by several AIs (mostly local banks[8]).

Around HK$1,283 billion or 72.4% of the aggregate market value of the selected debt securities was held by local banks, 5.8% higher than at the end of June 2010. The market value of structured securities held by local banks increased markedly by 34.1% over the same period (from HK$24 billion to HK$32 billion) mainly due to new investments (in MBSs and ABSs). Nevertheless, these holdings remained insignificant overall, representing only 9.0% of the aggregate capital base of the local banks concerned at the end of June 2011.

The following analysis illustrates the distribution of debt securities reported by the surveyed AIs:

Non-structured securities

By type of issuer or reference entity[9]:

Within the two largest categories of securities by type of issuer or reference entity, the bank category (which decreased from 56.5% in June 2009 to 48.2% in June 2011) appeared to be gradually losing share to the sovereign category (up from 23.7% in June 2010 to 29.5% in June 2011) (Table 1). The switch in AIs' appetite might reflect their concerns over the financial positions of banks because of uncertainties arising from the European sovereign debt crisis, sluggish economic recovery in the US and the potential downgrade of the US sovereign credit rating during the period. New investments were mainly in debt securities issued by corporates and sovereigns.

TABLE 1

Percentage share by type of issuer or reference entity

Issuer or reference entity	All surveyed AIs					
	Jun 2011	Dec 2010	Jun 2010	Dec 2009	Jun 2009*	Dec 2008*
Sovereigns	29.5%	29.0%	23.7%	24.6%	24.4%	26.2%
Public sector entities	7.7%	8.0%	7.9%	6.7%	4.4%	3.6%
Banks	48.2%	49.1%	54.5%	54.5%	56.5%	48.0%
Non-bank financial institutions[10]	4.4%	4.9%	4.8%	4.4%	4.8%	4.2%
Investment funds and highly leveraged institutions (e.g. hedge funds)	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Corporates	9.2%	8.4%	8.6%	8.0%	8.1%	16.2%
Others	0.9%	0.6%	0.5%	1.8%	1.7%	1.7%

* Figures do not add up to 100% due to rounding.

[8] Local banks refer to licensed banks incorporated in Hong Kong.

[9] When the securities held by an AI are credit-linked notes or when the credit risk of the securities held by an AI is hedged by credit derivatives contracts, the AI is required to report the type of the reference entities of the credit-linked notes or credit derivatives contracts concerned instead of the type of the issuer of the securities.

[10] Including securities firms, insurance companies, investment banks and fund houses.

By credit quality:

AIs' holdings of non-structured securities continued to be of high credit quality, with 91.7% of the securities (93.9% in December 2010) having investment-grade credit ratings (Chart 2) and 84.1% (86.7% in December 2010) having a single-A rating or above. However, the percentage share of investment-grade rated securities was the lowest since December 2008, mainly due to the disposal and redemption of such securities during the first half of 2011, and their partial replacement in AIs' portfolios by unrated securities issued by Asian banks.

Structured securities

By type of product:

Of the 168 AIs participating in the survey, only 29 had holdings in structured securities. The holdings were concentrated in a few AIs, with the top five (mainly local banks) accounting for 76.4% of the total market value of structured securities reported. In general, the holdings were in relatively simple securitisation products, such as MBSs (Table 2). AIs' investment in sukuk[11] remained insignificant.

By credit quality:

Of the structured securities, 87.6% (95.2% in December 2010) had investment-grade credit ratings (Chart 3) and 86.7% (94.2% in December 2010) had a single-A rating or above. There was a noticeable decrease in the percentage share of investment-grade rated structured securities in the first half of 2011 mainly because securities

CHART 2

Percentage share by credit quality of non-structured securities

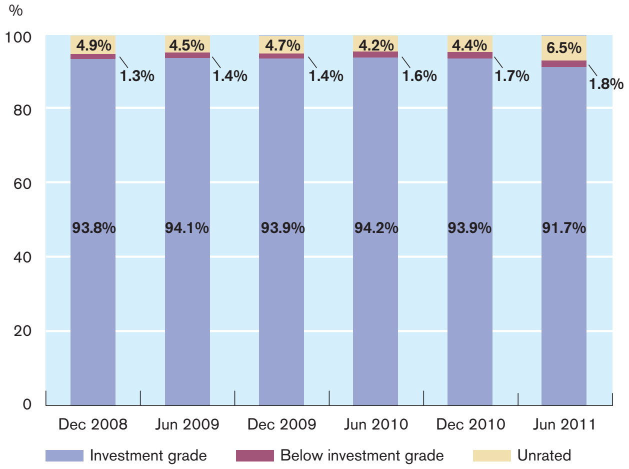
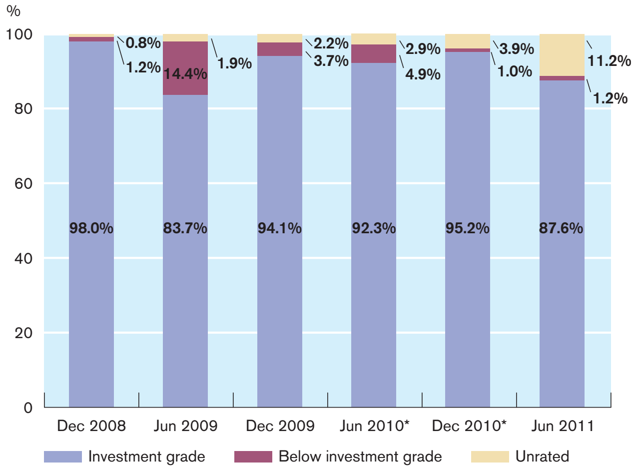


CHART 3

Percentage share by credit quality of structured securities



* Figures do not add up to 100% due to rounding.

TABLE 2

Percentage share by type of product

Structured product	All surveyed AIs					
	Jun 2011*	Dec 2010*	Jun 2010*	Dec 2009*	Jun 2009	Dec 2008
ABSs (including MBSs)	86.9%	86.0%	83.0%	74.8%	75.2%	43.5%
CDOs	7.1%	7.8%	9.9%	13.5%	9.7%	5.8%
SIV notes	4.1%	4.3%	4.9%	4.9%	7.9%	13.8%
Re-securitisation[12]	1.8%	1.9%	2.2%	6.4%	6.7%	3.4%
Sukuk	0.2%	0.1%	0.1%	0.3%	0.5%	0.4%
ABCP	–	–	–	–	–	33.1%

* Figures do not add up to 100% due to rounding.

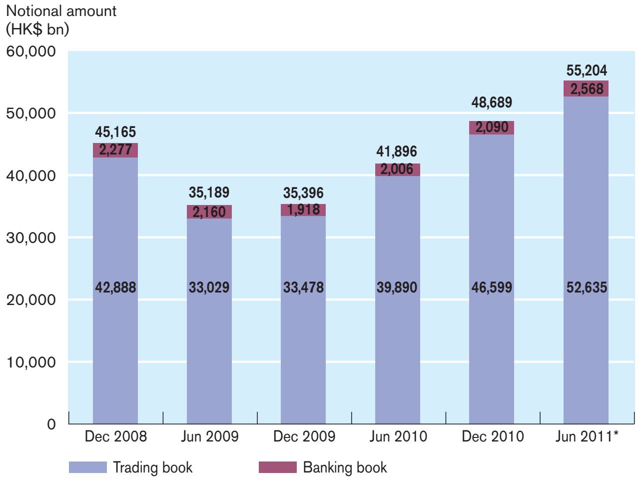
[11] Sukuk is an Islamic financial instrument broadly equivalent to bonds in the conventional financial market.

[12] Re-securitisation is defined in the survey as a transaction in which the underlying assets are mainly (50% or more) securitisation or structured products.

redeemed during that period were partly replenished by unrated MBSs issued by Ginnie Mae.

By underlying asset:
Residential mortgages (62.4%) remained the main type of asset underlying the structured securities held by AIs. As structured securities purchased in the first half of 2011 were mainly backed by claims on public sector entities and credit card receivables, the percentage shares of these two types of underlying asset showed an obvious increase during the period. AIs' indirect exposure to non-prime assets (mainly sub-prime residential mortgage loans) continued to decrease, with the proportion reducing from 8.5% at the end of December 2010 to 7.4% at the end of June 2011 (Table 3).

CHART 4
Derivatives contracts held by all surveyed AIs



* Figures do not add up to total due to rounding.

Exposures in derivatives

Derivatives activities have been growing since June 2009, with the total notional amount of outstanding derivatives contracts held by all surveyed AIs at the end of June 2011 standing at HK$55,204 billion, 13.4% higher than the corresponding amount at the end of December 2010 (Chart 4). Most of the contracts were held for trading purposes with the majority of the AIs increasing their positions in the first half of 2011. It appears these AIs did so with the aim of boosting trading income or hedging trading positions amid high market volatility during the period under review. The growth was mainly due to the increased positions in interest rate swaps and foreign exchange forwards held by a small number of AIs. Derivatives activities were dominated by a small group of foreign and local banks, with the positions of the top five AIs accounting for 71.4% of the total notional amount.

TABLE 3
Percentage share by type of underlying asset

Type of underlying asset	All surveyed AIs					
	Jun 2011	Dec 2010	Jun 2010	Dec 2009	Jun 2009	Dec 2008*
Claims on sovereigns	0.2%	0.1%	0.2%	1.5%	0.6%	0.5%
Claims on public sector entities	4.5%	0.2%	0.3%	0.3%	0.4%	0.3%
Claims on banks	0.9%	1.1%	1.3%	3.0%	4.5%	8.1%
Claims on non-bank financial institutions	0.2%	0.3%	0.3%	0.3%	0.3%	0.8%
Claims on corporates	1.6%	2.4%	3.0%	5.2%	4.4%	2.3%
Commercial mortgages	4.6%	5.1%	3.5%	4.8%	5.5%	8.8%
Residential mortgages	62.4%	62.9%	63.7%	55.5%	61.7%	49.9%
of which non-prime	6.3%	7.0%	8.6%	9.1%	12.3%	21.4%
Credit card receivables	10.1%	9.0%	9.1%	8.9%	6.1%	3.7%
of which non-prime	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%
Other personal lending	9.7%	12.8%	11.6%	12.3%	9.3%	12.6%
of which non-prime	1.1%	1.5%	2.2%	2.8%	2.3%	7.0%
Others	5.8%	6.1%	7.0%	8.2%	7.2%	13.1%

* Figures do not add up to 100% due to rounding.

Most local banks also increased their trading activities in derivatives in the first half of the year, leading to a rise of 17.4% in the total notional amount of outstanding derivatives contracts held to HK$33,988 billion. Much of the increase was attributable to a couple of local banks.

The following analysis illustrates the distribution of outstanding derivatives contracts reported by the surveyed AIs:

Type of product

There was little change in the composition of products held by AIs. Swaps and forwards remained the major types of OTC derivatives contracts held, accounting for 59.5% and 24.7% respectively of the total notional amount of all derivatives contracts held at the end of June 2011 (Table 4).

Type of underlying risk

AIs' derivatives contracts continued to be dominated by interest-rate contracts and exchange-rate contracts, representing 53.5% and 43.4% respectively of the total notional amount (Table 5), whereas most contracts held by individual local banks were exchange-rate contracts.

TABLE 4

Percentage share by type of product

Derivatives product	All surveyed AIs					
	Jun 2011	Dec 2010	Jun 2010	Dec 2009	Jun 2009	Dec 2008
Exchange-traded derivatives	6.1%	5.4%	4.0%	3.3%	3.9%	8.9%
OTC derivatives	93.9%*	94.6%*	96.0%*	96.7%*	96.1%	91.1%
of which						
Forwards	24.7%	25.1%	28.1%	23.7%	25.2%	26.3%
Swaps	59.5%	59.9%	56.5%	61.9%	61.1%	50.8%
Options	6.8%	5.7%	6.4%	5.2%	6.0%	11.3%
Credit derivatives	1.0%	1.2%	1.6%	1.9%	2.1%	1.9%
Others	2.0%	2.8%	3.5%	3.9%	1.7%	0.8%

* Figures do not add up to total due to rounding.

TABLE 5

Percentage share by type of underlying risk

Underlying risk	All surveyed AIs					
	Jun 2011*	Dec 2010*	Jun 2010	Dec 2009	Jun 2009*	Dec 2008*
Interest-rate risk	53.5%	54.5%	52.2%	57.2%	53.2%	49.8%
Foreign-exchange risk	43.4%	42.8%	44.4%	39.4%	42.8%	45.2%
Equity risk	1.7%	1.3%	1.7%	1.3%	1.6%	3.0%
Commodity risk	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%
Credit risk	1.0%	1.2%	1.6%	1.9%	2.1%	1.9%
Other risks	0.3%	0.1%	0.1%	0.1%	0.1%	0.1%

* Figures do not add up to 100% due to rounding.

Type of counterparty

Banks and related parties of surveyed AIs (for example, parent banks) remained the most common types of counterparty in derivatives transactions, in aggregate accounting for 83.2% of the total notional amount of derivatives contracts reported (Table 6). Nevertheless, there has been a slight decrease each year since June 2009 in the percentage share of AIs' transactions with banks, despite the upward trend during the same period in their outstanding derivatives transactions, as more transactions were entered into with non-bank financial institutions and corporates.

Credit derivatives

At the end of June 2011, 21 AIs (24 in June 2010), including four local banks (two in June 2010), had outstanding credit derivatives. Chart 5 shows a breakdown of the total notional amount of credit derivatives reported. The positions were mainly held by a few AIs and have been shrinking over the past three years. The positions of the top five AIs in aggregate accounted for 98.9% of the total notional amount. The contracts were held mainly for trading purposes.

CHART 5

Notional amount of credit derivatives held by all surveyed AIs

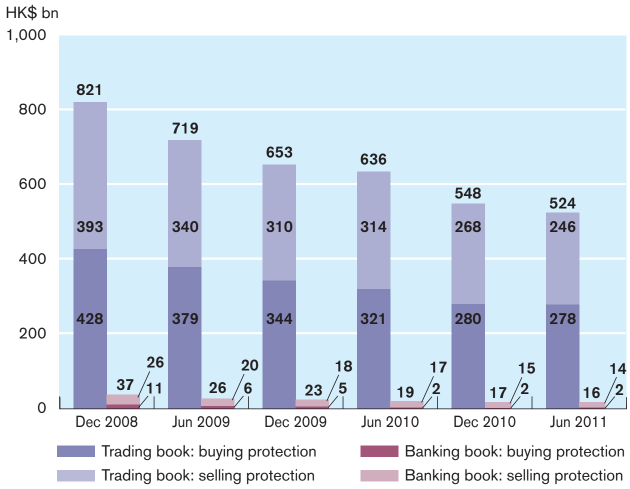


TABLE 6

Percentage share by type of counterparty

Counterparty	All surveyed AIs					
	Jun 2011	Dec 2010	Jun 2010	Dec 2009	Jun 2009	Dec 2008
Related parties	25.4%	25.4%	25.3%	25.1%	24.6%	22.6%
Independent parties	74.6%	74.6%*	74.7%*	74.9%	75.4%*	77.4%
of which						
Banks	57.8%	58.2%	60.1%	60.6%	61.6%	54.3%
Non-bank financial institutions	4.5%	4.5%	4.0%	4.0%	3.7%	4.6%
Investment funds and highly leveraged institutions	0.2%	0.2%	0.2%	0.2%	0.2%	0.1%
Corporates	6.5%	5.0%	5.0%	5.0%	4.2%	4.6%
Others (e.g. individuals)	5.6%	6.8%	5.3%	5.1%	5.6%	13.8%

* Figures do not add up to total due to rounding.

Reference entity

By type:

Consistent with last year's observation, the main types of reference entity were corporates (50.9%), sovereigns (28.9%) and banks (13.8%) (Table 7). The respective shares of contracts with sovereigns and banks as reference entities have both been increasing since December 2008, accompanied by a downward trend in the share of those with corporates as reference entities.

By credit quality:

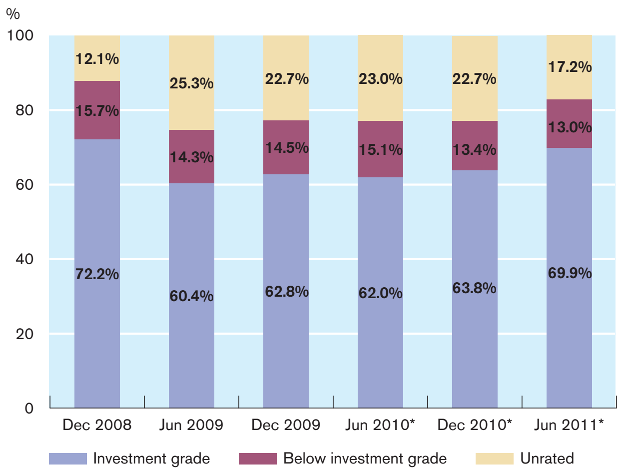
For the composition of reference entities by credit quality, 69.9% (62.0% in June 2010) of the credit derivatives were linked to reference entities with investment-grade credit ratings (Chart 6) and 49.6% (42.7% in June 2010) to those with a single-A rating or above. There was no significant difference between the composition (by credit quality) of reference entities for which protection was bought and that for which protection was sold. Both followed a pattern of composition similar to that shown in Chart 6.

Off-balance sheet securitisation exposures

Off-balance sheet securitisation exposures of the surveyed AIs remained minimal, reducing further to HK$4.1 billion at the end of June 2011 (from HK$7 billion in June 2010). The exposures were mainly held by a few AIs in the form of liquidity facilities, and interest rate and currency derivatives provided to securitisation transactions.

CHART 6

Percentage share by credit quality of reference entity



* Figures do not add up to 100% due to rounding.

Conclusion

AIs' holdings of non-structured debt securities recorded noticeable growth in the second half of 2010 amid signs of general economic recovery. Such growth, however, levelled off in the first half of 2011 as concerns over the European sovereign debt crisis and a US economic slowdown intensified, and the markets became progressively worried about the potential downgrade of the US sovereign rating during the review period and its effects on the global economy. AIs' appetite for structured debt securities remained low and holdings of credit derivatives continued to decline. In contrast, trading activities in derivatives, other than credit derivatives, continued to grow moderately in the first half of 2011.

See separate box on regulatory developments.

TABLE 7

Percentage share by type of reference entity

Reference entity	All surveyed AIs					
	Jun 2011	Dec 2010	Jun 2010*	Dec 2009	Jun 2009	Dec 2008
Sovereigns	28.9%	25.8%	24.9%	23.0%	22.1%	20.9%
Public sector entities	0.3%	0.3%	0.3%	0.6%	0.6%	0.7%
Banks	13.8%	12.9%	12.1%	11.6%	11.2%	11.3%
Non-bank financial institutions	6.0%	5.9%	6.5%	8.6%	6.9%	8.0%
Investment funds or highly leveraged institutions	–	–	–	–	–	–
Corporates	50.9%	55.1%	56.1%	52.7%	56.0%	56.3%
Tranches of MBSs, ABSs or CDOs	–	–	–	–	–	–
Others	0.1%	0.0%	0.0%	3.5%	3.2%	2.8%

* Figures do not add up to 100% due to rounding.

Regulatory developments

As mentioned in the survey results published in December 2010, a wide range of measures have been proposed by international standard setters to strengthen the regulation of OTC derivatives and securitisation activities. Following Basel 2.5 issued in July 2009 (which requires higher capital requirements and additional disclosure for market risk and securitisation exposures), the Basel Committee on Banking Supervision issued the final text of Basel III[13] in December 2010. This contains measures to strengthen the capital framework for counterparty credit risk (CCR) exposures in OTC derivatives and securities financing transactions. In particular, banks using internal models to calculate their CCR capital charge will be required to use stressed inputs in the capital calculation and all banks will be required to provide a credit valuation adjustment capital charge for OTC derivatives, except transactions with central counterparties (CCPs). The above measures under Basel 2.5 will come into effect from 1 January 2012, and those under Basel III from 1 January 2013. In addition, the Basel Committee issued a revised consultative document in November 2011 on the capitalisation of CCR exposures to CCPs. The Committee aims to finalise these CCP proposals this year for implementation from 1 January 2013. The proposals include the capital treatment for banks' exposures to "qualified" CCPs, namely, a concessionary risk weight of 2% for a bank's trade exposures (for example, mark-to-market and potential future exposures in outstanding derivatives transactions with CCPs) as well as methodologies for calculating the capital charge for default funds contributed by a bank to these CCPs.

In Hong Kong, the legislative process for the implementation of Basel 2.5 has been completed, with the Banking (Capital) (Amendment) Rules 2011 and the Banking (Disclosure) (Amendment) Rules 2011 due to take effect on 1 January 2012 as scheduled and in accordance with the Basel Committee's timetable. As indicated from the results of the two surveys, local banks' trading positions in debt securities and exposures to securitisation transactions were generally small. In addition, most of the strengthened capital requirements for trading book exposures are designed for banks that use internal models to calculate their market risk capital charge. Hence, it is expected the impact of the implementation of Basel 2.5 on small-to-medium sized local banks will not be significant.

A Banking (Amendment) Bill for the implementation of Basel III has been prepared. This will amend the Banking Ordinance to establish the necessary legal framework for the capital, liquidity and disclosure standards under Basel III. The Bill is scheduled for introduction into the Legislative Council later this month. The HKMA will shortly be consulting the industry on its proposals for making rules to implement the Basel III minimum capital standards (namely the definition of capital, minimum capital ratio requirements and enhanced CCR capital requirements) which are due to go into effect from 1 January 2013, according to the Basel Committee's timetable. This will be followed by a phased consultation process covering other aspects of Basel III, including the capital buffers and liquidity standards. To assess the impact of Basel III implementation, the HKMA has invited 20 locally incorporated AIs (mainly local banks) to participate in a local quantitative impact study (QIS). Participating AIs will be informed of their individual QIS results in early 2012.

[13] See "Basel III: A global regulatory framework for more resilient banks and banking systems" issued by the Basel Committee on Banking Supervision in December 2010 (updated in June 2011).

The HKMA has also been working with other local authorities to strengthen the regulatory framework and infrastructure for OTC derivatives activities in Hong Kong, in accordance with the commitment by G20 Leaders in September 2009.[14] Indeed, the HKMA and the Securities and Futures Commission (SFC) issued a joint consultation paper in mid-October 2011 on the proposed regulatory regime for Hong Kong's OTC derivatives market (the consultation period ended on 30 November 2011). Under the proposed regime, the HKMA will oversee and regulate the OTC derivatives activities of AIs. OTC derivatives transactions will have to be reported to a trade repository being set up by the HKMA. And, standardised OTC derivatives transactions will have to be centrally cleared through designated CCPs, with Hong Kong Exchanges and Clearing Limited deciding to establish a clearing house for the clearing of OTC derivatives transactions. The reporting and mandatory clearing obligations will initially only cover certain interest rate swaps and non-deliverable forwards, but will subsequently be extended to other product classes after further market consultation. The HKMA and SFC are working towards meeting the G20 implementation deadline at the end of 2012. However, much depends on external factors, including the progress of reform initiatives in other major markets, completion of the legislative process, and the readiness of relevant market infrastructure and participants.

[14] The G20 Leaders' September 2009 Communique called for all standardised OTC derivatives contracts to be traded on exchanges or electronic trading platforms, where appropriate, and cleared through central counterparties by the end of 2012 at the latest; for all OTC derivatives contracts to be reported to trade repositories, and for non-centrally cleared contracts to be subject to higher capital requirements.