FEATURE ARTICLE

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

by the Banking Policy Department

The HKMA introduced two new half-yearly surveys in November 2008 to help strengthen its oversight of the banking sector's exposure to structured credit products. The surveys collect data on authorized institutions' (AIs) exposures to selected debt securities, securitisation and derivatives transactions, including credit derivatives.

The results of the surveys, covering positions at the end of December 2008 and the end of June 2009, indicated the overall exposure of AIs to structured credit products and credit derivatives remained insignificant, and the activities were concentrated in a few AIs. During the first half of 2009, the surveyed AIs generally reduced their holdings of structured products, and increased their holdings of high credit quality, non-structured instruments, reflecting lingering concerns over the sustainability of market and economic recovery.

Introduction

The global financial crisis, triggered by the collapse of the US sub-prime mortgage market, has highlighted the need for supervisors to strengthen their oversight of banks' exposure to structured credit products and off-balance sheet activities associated with securitisation. Against this backdrop, the HKMA has introduced two half-yearly surveys:

- a Survey on Selected Debt Securities that collects data from licensed banks and restricted licence banks on the market value of their holdings in debt securities other than those issued by the Exchange Fund, the US Treasury and multilateral development banks
- a Survey on Off-balance Sheet Exposures in Derivatives and Securitisation Transactions that collects data on the notional amount and market value of derivative contracts including forwards, swaps, options and credit derivatives held by all AIs.

These two surveys have replaced the HKMA's annual survey on credit derivative and securitisation transactions conducted until 2008[1] and introduced the following improvements:

- refinements to the reporting basis to focus on positions booked by AIs in Hong Kong, rather than on transactions executed by AIs in Hong Kong (which could include transactions executed on behalf of other parties, for example, sister companies)

[1] The HKMA began conducting periodic surveys on credit derivative transactions undertaken by licensed banks and restricted licence banks in 1999. The survey became an annual exercise in 2002 and was expanded in 2003 to cover securitisation activities. The HKMA adopted the practice of releasing the survey results in the *HKMA Quarterly Bulletin* in June of the year following the survey, with those of the last survey conducted for the positions at the end of October 2007 released in June 2008.

- expansion of the coverage to include debt securities in addition to securitisation products and derivative contracts. Information on debt securities was previously only captured in the prudential returns submitted by AIs, while the new surveys collect more detailed information such as types of issuers, credit ratings, and the size of portfolios in the trading book and banking book

- an increase in the reporting frequency from annually to half-yearly. AIs are now required to report their exposures at the end of June and December each year.

The results of the two new surveys are, therefore, not directly comparable to those of the previous annual survey.

This article reviews the data collected from the new surveys relating to the exposures of the surveyed AIs at the end of December 2008 and June 2009.

Highlights of major findings

The survey results cover the period between December 2008 and June 2009 during which we experienced both the lowest point of the global financial crisis and the faster-than-expected rebound in financial markets.

The surveys showed that:

1. The market value of the selected debt securities[2] held by the surveyed AIs stood at HK$1,784 billion at the end of June 2009, rising by 4.9% compared with the position at the end of December 2008 when market sentiment was poor and risk aversion was extreme. The AIs held less structured securities[3] (down HK$81 billion or 55.3%) at the end of June and more non-structured securities (up HK$165 billion or 10.6%). The selected debt securities were held mainly for investment purposes.

2. The vast majority of the debt securities held by the AIs were non-structured securities (96.3%), most of which were issued by banks and sovereigns and assigned investment-grade credit ratings. This reflects institutions' continuing preference for simple securities of high credit quality in spite of the steady improvement in market conditions over the surveyed period.

3. The exposure of the banking sector as a whole to complex structured credit products was insignificant, amounting to HK$66 billion and representing only 0.6% of the AIs' total assets. Appetite for such products remained low and the holdings were concentrated in a few AIs, and were mostly (61.7%) attributable to mortgage-backed securities backed by residential mortgage loans of sound credit quality. About 13% of the exposures to mortgage-backed securities were backed by non-prime loans.[4]

4. Exchange-rate and interest-rate contracts were the main types of derivatives contracts traded by the surveyed AIs. The total notional amount of outstanding derivative contracts (other than credit derivatives) held by the AIs at the end of June 2009 was HK$34,445 billion, 22.3% lower than at the end of December 2008. The reduction mainly reflected the decline in outstanding positions of a few major market players in interest rate and foreign exchange-related contracts.

5. The total notional amount of credit derivatives at the end of June 2009 was HK$744 billion, and only accounted for 2.1% of all the outstanding derivative contracts reported. The holdings were concentrated in a couple of AIs.

[2] 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.

[3] 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 papers (ABCPs) and any other similar structured products, but exclude credit-linked notes.

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

6. The off-balance-sheet securitisation exposures of AIs, which mainly consisted of liquidity facilities and credit enhancement provided to securitisation transactions, were minimal.

7. The active players in the markets for structured credit products and derivative contracts (including credit derivatives) were mainly branches of foreign banks.

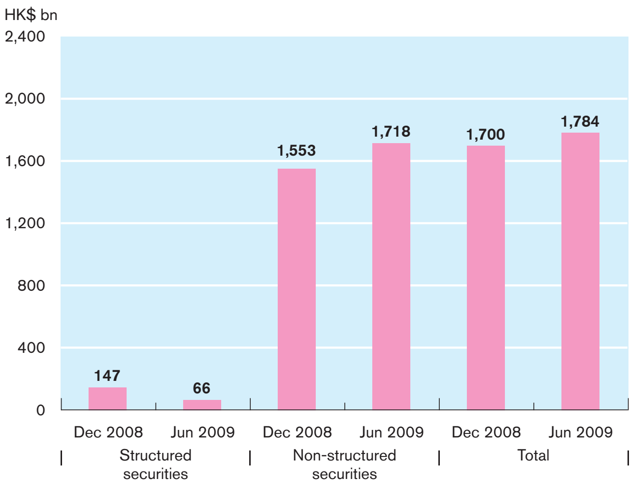
Details of major findings

Selected debt securities held

The aggregate market value of selected debt securities held by all surveyed AIs stood at HK$1,784 billion at the end of June 2009 (Chart 1), representing only 15.2% of the AIs' total assets. More than 80% of the debt securities were held for non-trading purposes. The AIs held 10.6% more non-structured instruments over the first half of 2009 amid improved market sentiment. However, their holdings of structured securities were small, and reducing, reflecting their continuing low risk appetite and continuing caution towards such products.

CHART 1

Market value of selected debt securities held by all surveyed AIs



Around HK$1,327 billion or 74.4% of the aggregate amount of the selected debt securities was held by local banks.[5] Their holdings were generally stable during the first half of 2009, however, there was a reduction in holdings of structured securities and an increase in the holdings of non-structured instruments. The value of structured securities held by local banks reduced by 70.3% to HK$33 billion, mainly due to divestment and write-downs.

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

Non-structured securities

By type of issuer/reference entity[6]:
The main types of issuer/reference entity were banks (56.5%) and sovereigns (24.4%) (Table 1). The majority of the growth in holdings during the first half of 2009 was due to new investments in debt securities issued by banks, implying that AIs' were cautious and preferred relatively safe instruments when investing or replenishing their investment portfolios.

TABLE 1

Percentage share by type of issuer/reference entity

Issuer/reference entity	All surveyed AIs	
	Jun 2009	Dec 2008
Sovereigns	24.4%	26.2%
Public sector entities	4.4%	3.6%
Banks	56.5%	48.0%
Non-bank financial institutions[7]	4.8%	4.2%
Investment funds and highly leveraged institutions (e.g. hedge funds)	0.0%	0.0%
Corporates	8.1%	16.2%
Others	1.7%	1.7%

Note: Figures do not add up to 100% due to rounding.

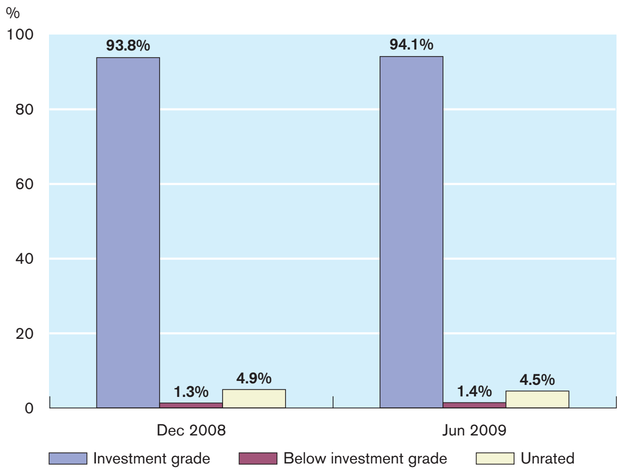
[5] Local banks refer to licensed banks incorporated in Hong Kong.

[6] This is applicable when the securities reported are credit-linked notes or when the credit risk of the securities is hedged by credit derivative contracts.

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

By credit quality:
Of the non-structured securities, 94.1% had investment-grade credit ratings (Chart 2) and 87.9% had a single-A rating or above.

CHART 2
Percentage share by credit quality of non-structured securities



Structured securities

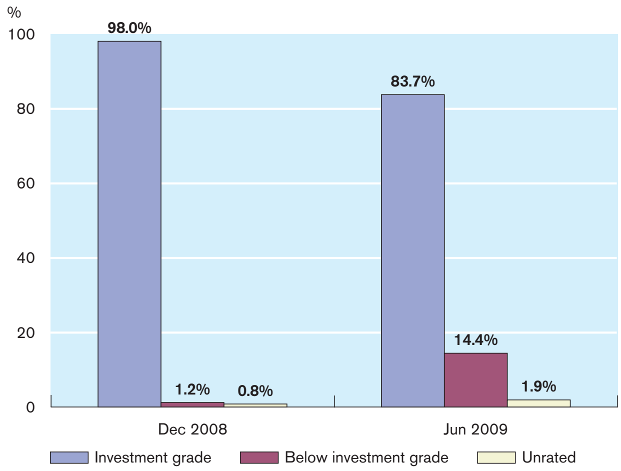
By type of product:
Of the 161 AIs participating in the survey, only 30 were exposed to structured securities. The holdings were concentrated in a few AIs, with the top five (mainly foreign banks) accounting for 80.7% of the total market value of structured securities reported. In general, the holdings were in relatively simple securitisation products, such as MBSs (Table 2). Although Islamic finance has recorded remarkable growth and caught the attention of the financial world in recent years, AIs' investment in sukuk remained insignificant.

TABLE 2
Percentage share by type of product

	All surveyed AIs	
Type of structured product	Jun 2009	Dec 2008
ABCPs	–	33.1%
CDOs	9.7%	5.8%
Re-securitisation[8]	6.7%	3.4%
SIV notes	7.9%	13.8%
Sukuk[9]	0.5%	0.4%
Others (e.g. MBSs and ABSs)	75.2%	43.5%

By credit quality:
Of the structured securities, 83.7% had investment-grade credit ratings (Chart 3) and 79.8% had a single-A rating or above.

CHART 3
Percentage share by credit quality of structured securities



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

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

By underlying asset:
In line with the results of the annual survey on credit derivative and securitisation activities previously conducted by the HKMA, a majority of the structured securities held by the surveyed AIs were backed by residential mortgages (61.7%). AIs' indirect exposure to non-prime assets (mainly consisting of sub-prime residential mortgage loans) and commercial mortgages (another class of assets with significantly increased default rates) were insignificant and the proportion of these assets in the underlying assets of the structured securities held has reduced to 17.8% (Table 3).

TABLE 3
Percentage share by type of underlying asset

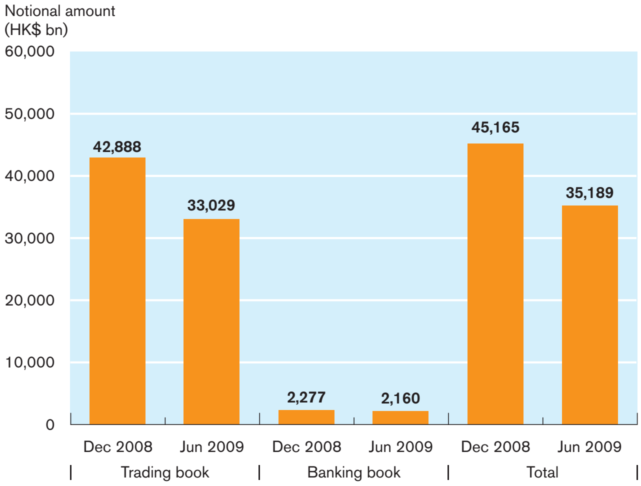
Type of underlying asset	All surveyed AIs	
	Jun 2009	Dec 2008*
Claims on sovereigns	0.6%	0.5%
Claims on public sector entities	0.4%	0.3%
Claims on banks	4.5%	8.1%
Claims on non-bank financial institutions	0.3%	0.8%
Claims on corporates	4.4%	2.3%
Commercial mortgages	5.5%	8.8%
Residential mortgages	61.7%	49.9%
of which non-prime	12.3%	21.4%
Credit card receivables	6.1%	3.7%
of which non-prime	0.0%	0.5%
Other personal lending	9.3%	12.6%
of which non-prime	0.0%	7.0%
Others	7.2%	13.1%

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

Exposures in derivatives

The total notional amount of outstanding derivative contracts held by all surveyed AIs at the end of June 2009 stood at HK$35,189 billion, 22.1% lower than at the end of December 2008 (Chart 4). The various types of contracts were held by the AIs mainly for trading purposes, while derivatives activity was dominated by a small group of mainly foreign banks. The positions of the top five AIs accounted for 66.9% of the total notional amount.

CHART 4
Derivative contracts held by all surveyed AIs



The total notional amount of outstanding derivative contracts held by local banks reduced by 11.5% to HK$17,484 billion, reflecting changes in the trading positions of a couple of dominant banks.

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

Type of product

Swaps and forwards were the major types of over-the-counter (OTC) derivative contracts held by AIs, accounting for 61.1% and 25.2% respectively of the total notional amount of all derivative contracts held at the end of June 2009 (Table 4).

TABLE 4
Percentage share by type of product

Derivative product	All surveyed AIs	
	Jun 2009	Dec 2008
Exchange-traded derivatives	3.9%	8.9%
OTC derivatives	96.1%	91.1%
of which		
Forwards	25.2%	26.3%
Swaps	61.1%	50.8%
Options	6.0%	11.3%
Credit derivatives	2.1%	1.9%
Others	1.7%	0.8%

Type of underlying risk

AIs' derivative contracts were dominated by interest-rate contracts and exchange-rate contracts, representing 53.2% and 42.8% respectively of the total notional amount (Table 5).

TABLE 5

Percentage share by type of underlying risk

Underlying risk	All surveyed AIs Jun 2009	All surveyed AIs Dec 2008
Interest-rate risk	53.2%	49.8%
Foreign-exchange risk	42.8%	45.2%
Equity risk	1.6%	3.0%
Commodity risk	0.1%	0.1%
Credit risk	2.1%	1.9%
Other risks	0.1%	0.1%

Note: Figures do not add up to 100% due to rounding.

Type of counterparty

Banks and related parties of reporting AIs (for example, parent banks and sister branches) were the most common types of counterparty in derivative transactions, in aggregate accounting for 86.2% of the total notional amount of derivative contracts reported (Table 6).

Credit derivatives[10]

Altogether 29 AIs, including three local banks, had outstanding credit derivatives at the end of June 2009. Chart 5 shows a breakdown of the total notional amount of credit derivatives reported. The activities were concentrated in a couple of AIs with the contracts being held mainly for trading purposes.

TABLE 6

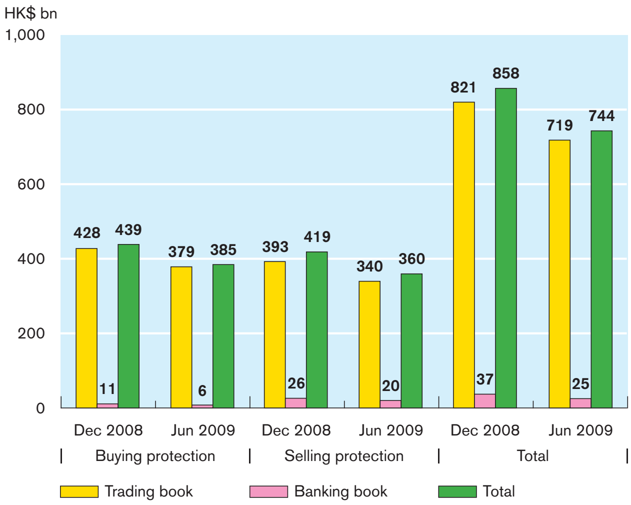
Percentage share by type of counterparty

Counterparty	All surveyed AIs Jun 2009	All surveyed AIs Dec 2008
Related parties	24.6%	22.6%
Independent parties	75.4% *	77.4%
of which		
Banks	61.6%	54.3%
Non-bank financial institutions	3.7%	4.6%
Investment funds and highly leveraged institutions	0.2%	0.1%
Corporates	4.2%	4.6%
Others (e.g. individuals)	5.6%	13.8%

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

CHART 5

Notional amount of credit derivatives held by all surveyed AIs



[10] The previous annual survey captured credit derivative transactions executed in Hong Kong regardless of whether or not the risks of the transactions were assumed by the reporting AIs. Given the change in the reporting basis, a large amount of credit derivative contracts executed by overseas incorporated AIs is no longer captured by the new survey because these contracts are executed by the AIs for their head offices or sister branches and booked outside Hong Kong. Consequently, the notional amount of credit derivative contracts reported in the new survey was considerably smaller than that reported in the previous annual survey.

Reference entity

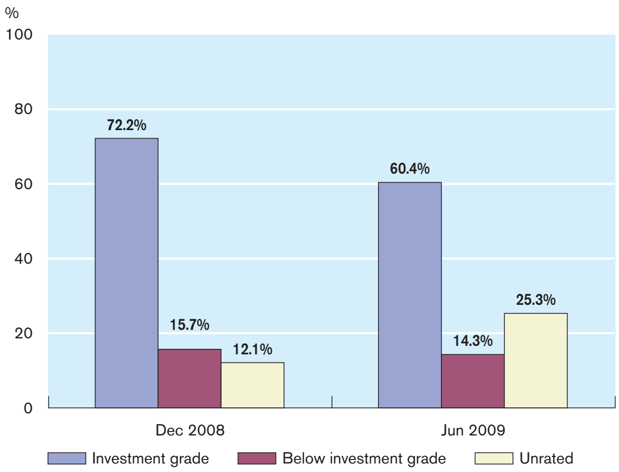
By type:
Consistent with the observation from the previous annual survey on credit derivative and securitisation activities, the main types of reference entity were corporates (56.0%), sovereigns (22.1%) and banks (11.2%) (Table 7).

TABLE 7
Percentage share by type of reference entity

Type of reference entity	All surveyed AIs	
	Jun 2009	Dec 2008
Sovereigns	22.1%	20.9%
Public sector entities	0.6%	0.7%
Banks	11.2%	11.3%
Non-bank financial institutions	6.9%	8.0%
Investment funds or highly leveraged institutions	–	–
Corporates	56.0%	56.3%
Tranches of MBSs, ABSs or CDOs	–	–
Others	3.2%	2.8%

By credit quality:
Of the credit derivatives, 60.4% were linked to reference entities with investment-grade credit ratings (Chart 6) and 41.7% to those with a single-A rating or above. This is in line with the global trend for credit default swaps with investment-grade reference entities to be the most actively traded credit derivatives and, therefore, potentially capable of providing the liquidity needed for active management of risks and trading strategies.

CHART 6
Percentage share by credit quality of reference entity



Off-balance sheet securitisation exposures

Off-balance sheet securitisation exposure of the surveyed AIs was minimal, amounting to HK$6.3 billion at the end of June 2009. The exposures were mainly undrawn liquidity facilities and credit enhancement provided to securitisation transactions.

Conclusion

The two surveys indicated that the exposure of AIs to complex structured products and credit derivatives was small compared with the size of their total assets and overall level of derivative activities. During the first half of 2009, AIs divested themselves of investments in complex structured products (from an already very low base) and wrote down their exposure to sub-prime related products. Funds were deployed to relatively safe, simple and high credit-quality debt securities issued mainly by banks. Overall, derivative trading activities contracted slightly despite the rebound in financial markets.

Regulatory developments

OTC derivatives and securitisation markets have been identified as among the sources contributing to the global financial crisis, and there have been calls for more regulation and transparency. As a result, international standard setters and regulators in major economies have put forward a number of proposals to refine the regulatory regime.

In July the Basel Committee on Banking Supervision (BCBS) announced measures to strengthen the Basel II framework for trading book positions and securitisation exposures (in particular re-securitisation products, such as collateralised debt obligations of asset-backed securities). In addition, the leaders of the G20 agreed at their Pittsburgh Summit in September to pursue agreement on an international framework of reform to, among other things, improve the OTC derivatives markets in the following ways:

- all standardised OTC derivative contracts should be traded on exchanges or electronic trading platforms, where appropriate, and cleared through central counterparties by the end of 2012 at the latest
- OTC derivative contracts should be reported to trade repositories
- non-centrally cleared contracts should be subject to higher capital requirements.

The proposed regulations are expected to change markedly the landscape of the OTC derivatives and securitisation markets.

To ensure the prudent development of the OTC derivatives and securitisation activities of AIs in Hong Kong, the HKMA will monitor closely the development of international standards and regulations, and work with the industry in implementing relevant supervisory proposals and promoting related sound risk management practices. As part of its implementation of the BCBS's Basel II enhancements, the HKMA is currently developing a supervisory guideline on credit risk transfer. This guideline will incorporate the BCBS's supplemental Pillar 2 guidance on off-balance sheet exposures and securitisation risk, to assist AIs in improving their risk management practices on securitisation, off-balance sheet vehicles and credit derivatives.

The HKMA will continue to release the results of the two surveys annually as part of its efforts to facilitate the general public understanding of the major activities and risk profile of the Hong Kong banking system.