

Results of the 2007 survey on credit derivative and securitisation activities

by the Banking Policy Department

The overall level of activity of authorized institutions in the credit derivative and securitisation markets continued to grow significantly in 2007. The HKMA's annual survey shows credit derivative activity increased by 61% and securitisation transactions by 103%. The institutions were mostly engaged in credit derivative transactions for trading purposes and took on securitisation exposures as investing banks¹.

The US sub-prime fallout has prompted regulators and the market to be more cautious of certain securitisation transactions. Regulators, in particular, are re-examining the capital and disclosure treatment of these transactions, which may shape future market activities.

Introduction

Consistent with trends in global markets², the activities of the Hong Kong banking sector in the credit risk transfer markets have recorded significant growth in recent years. To facilitate supervisory monitoring of authorized institutions' (AIs) participation in these markets, the HKMA has conducted surveys on credit derivative transactions undertaken by licensed banks and restricted licence banks since 1999. The survey became an annual exercise in 2002³ and was expanded in 2003 to cover securitisation activities.

The latest survey collected data on the positions of AIs at the end of October 2007, based on transactions that were executed or booked in Hong Kong. It also sought information from the AIs on their reasons for engaging in such transactions and on their future plans.

Highlights of major findings

The survey showed

- (i) the overall level of credit derivative activity reported by the surveyed AIs increased by 61% in 2007. These activities continued to be concentrated among a few AIs;
- (ii) there were no significant changes in the nature and type of credit derivative activity undertaken in 2007. The transactions were mainly entered into for trading purposes. Medium-term (one to five years) credit default swaps with investment grade reference entities continued to be the most common product;
- (iii) the overall level of securitisation activity rose by 103% in 2007. Specifically, synthetic securitisation surged by 313% to account for 61% of the total outstanding securitisation exposures in 2007. The overall market activity

¹ In relation to securitisation transactions, the term "investing bank" is used in contrast with the term "originating bank". An investing bank holds securitisation issues that can be either for trading or for investment purposes.

² According to statistics compiled by the BIS, the outstanding amount of credit derivative transactions doubled each year in the past five years.

³ The results of the previous surveys were published as feature articles in the *HKMA Quarterly Bulletin* in June of the year following the survey.

generally remained heavily concentrated on the activities of a small number of AIs, which also explained most of these increases. The market share of local banks, most of which participated in such transactions as investing banks, increased from 69% to 83%, but again it was concentrated among a few AIs;

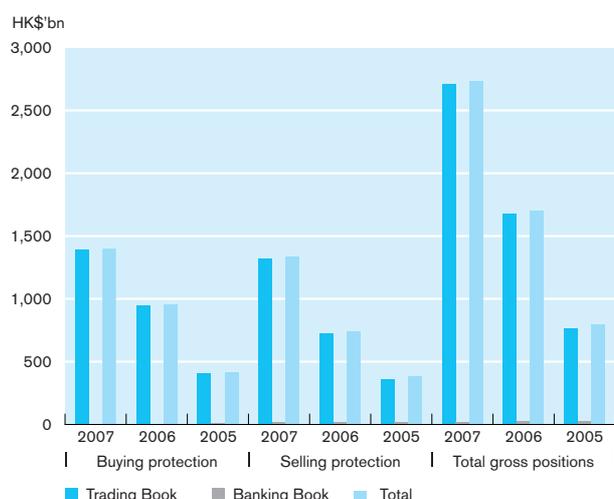
- (iv) Claims on central governments and central banks as well as residential mortgage loans continued to be the most popular types of underlying assets in securitisation transactions; and
- (v) many surveyed AIs indicated their intention to either expand or commence credit derivative and securitisation activities in the future.

Details of major findings

Credit derivative transactions

The aggregate gross notional amount of credit derivatives of all surveyed AIs increased significantly by 61% to HK\$2,736 billion at the end of October 2007. Table 1 provides a breakdown of the positions (in terms of notional amount) reported in the past three surveys (see also Chart 1). Altogether 44 AIs, comprising eight local banks and 31 branches and five restricted licence bank subsidiaries of foreign banks, had outstanding credit derivatives at the end of October 2007.

CHART 1
Credit derivative positions of all surveyed AIs



The 2007 survey revealed that market activity was still highly concentrated on a few players, with the top four AIs accounting for 93% of the aggregate gross positions (the top five AIs accounted for the same share in 2006). Foreign banks continued to be the dominant players in the market, constituting 75% of the aggregate gross positions reported, down from 78% in 2006. All major players were mainly engaged in trading activities.

The aggregate gross positions of local banks' outstanding credit derivative transactions increased by 84%. These transactions were heavily concentrated on a very small number of banks.

TABLE 1

Credit derivative positions of all surveyed AIs⁴

(in HK\$ billion)

	Buying protection			Selling protection			Total gross positions		
	2007	2006	2005	2007	2006	2005	2007	2006	2005
Trading Book	1,395	946	405	1,318	730	363	2,713	1,676	768
Banking Book	5	7	8	18	17	18	23	24	26
Total	1,400	953	413	1,336	746	381	2,736	1,700	794

⁴ (i) The reported positions included those that were executed in Hong Kong but booked overseas.

(ii) There is an element of double counting in the aggregate gross positions. If the protection buyer and the protection seller of a credit derivative transaction are both surveyed AIs, the same transaction is reported under "buying protection" and "selling protection" respectively.

Three of the local banks had gross positions exceeding 10% of their respective capital base. Apart from a few, which used credit derivatives solely for trading purposes, most of the local banks took positions in the banking book, mainly for hedging or to improve yields.

The following analysis shows the distribution of outstanding credit derivative transactions reported by the surveyed AIs:

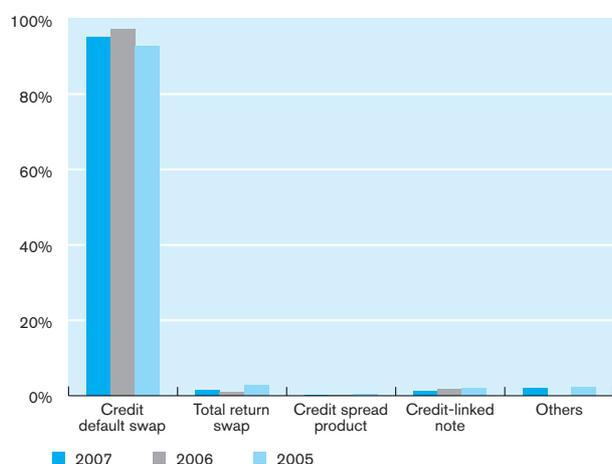
Type of product

Credit default swaps remained the most common type of credit derivative product, accounting for 95% of the gross positions at the end of October 2007 (Table 2 and Chart 2). The use of other products,

TABLE 2
Percentage share by type of product

Credit derivative product	All surveyed AIs		
	2007	2006	2005
Credit default swap	95.2%	97.2%	92.6%
in which:			
<i>single name</i>	84.3%	<i>n.a.</i>	<i>n.a.</i>
<i>multiple names</i>	0.5%	<i>n.a.</i>	<i>n.a.</i>
<i>index</i>	10.4%	<i>n.a.</i>	<i>n.a.</i>
Total return swap	1.5%	1.0%	2.8%
Credit spread product	0.1%	0.1%	0.4%
Credit-linked note	1.1%	1.7%	2.0%
Others	2.1%	0.0%	2.2%

CHART 2
Percentage share by type of product



such as total return swaps, credit spread products and credit-linked notes, remained at a much lower level.

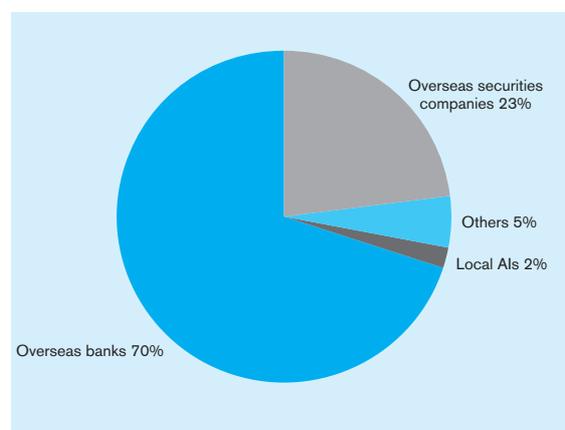
Type of counterparty

Overseas financial institutions, mainly banks and securities companies, continued to be the most common type of counterparties in credit derivative transactions. The former accounted for 70% and the latter 23% of the total gross positions reported (Table 3 and Chart 3). The level of credit risk transfer between the banking and insurance sectors remained insignificant.

TABLE 3
Percentage share by type of counterparty

Counterparties	All surveyed AIs		
	2007	2006	2005
Local financial institutions	2.1%	5.4%	2.7%
<i>of which AIs in Hong Kong</i>	1.9%	5.4%	2.5%
<i>securities companies</i>	0.1%	0.0%	0.2%
<i>insurance companies</i>	0.0%	0.0%	0.0%
Others	0.1%	0.2%	0.8%
Overseas financial institutions	97.9%	90.3%	88.5%
<i>of which banks</i>	69.9%	76.1%	75.2%
<i>securities companies</i>	23.3%	14.2%	12.5%
<i>insurance companies</i>	0.2%	0.0%	0.8%
Others	4.5%	4.1%	8.2%

CHART 3
Percentage share by type of counterparty (Oct 07)



Reference entity

By type:

Consistent with the 2006 results, the main types of reference entity were sovereigns (27%), banks (10%) and corporates (46%) (Table 4 and Chart 4). Credit derivatives linked to an index, or a basket of more than one type of reference entity, accounted for 10%. As the 2007 survey was the first time such information was collected, no comparative figures from previous years are available.

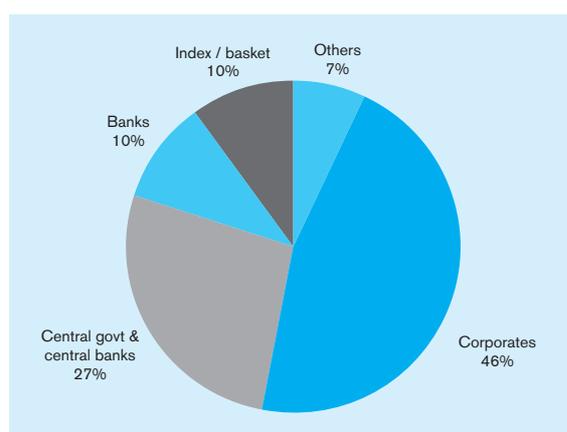
TABLE 4

Percentage share by type of reference entity

Type of reference entity	All surveyed AIs		
	2007	2006	2005
Central governments & central banks	27.4%	29.5%	29.8%
Public sector entities	1.2%	2.1%	3.0%
Banks	10.1%	8.8%	11.9%
Corporates	45.8%	52.4%	51.2%
Index / basket with more than one type of reference entity	9.9%	n.a.	n.a.
Others	5.6%	7.2%	4.2%

CHART 4

Percentage share by type of reference entity (Oct 07)



By geographical location:

Most of the reference entities (around 88%) continued to be located in the Asia Pacific region, mainly Australia, South Korea, the Philippines and Hong Kong, while those located in the US and Europe dropped back proportionately to levels similar to those in 2005 (Table 5 and Chart 5).

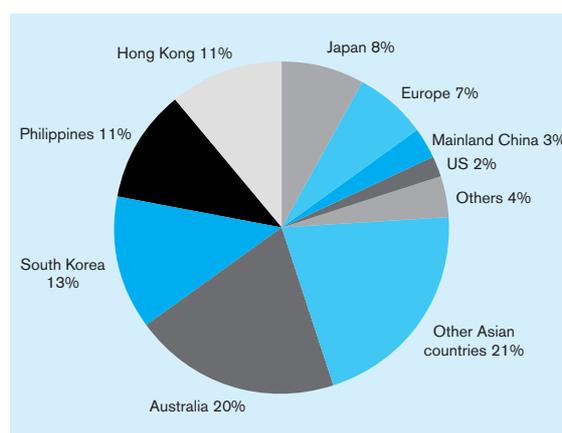
TABLE 5

Percentage share by geographical location of reference entity

Geographical location of reference entity	All surveyed AIs		
	2007	2006	2005
Hong Kong	10.5%	11.6%	18.3%
Mainland China	3.0%	3.3%	4.8%
Japan	8.1%	5.4%	3.6%
South Korea	13.5%	17.1%	23.7%
Australia	20.4%	12.7%	n.a.
Philippines	11.2%	n.a.	n.a.
Other Asian countries	21.3%	29.2%	28.3%
US	1.7%	3.3%	1.8%
Europe	6.8%	13.0%	6.4%
Others	3.5%	4.4%	13.1%

CHART 5

Percentage share by geographical location of reference entity (Oct 07)



By credit quality:

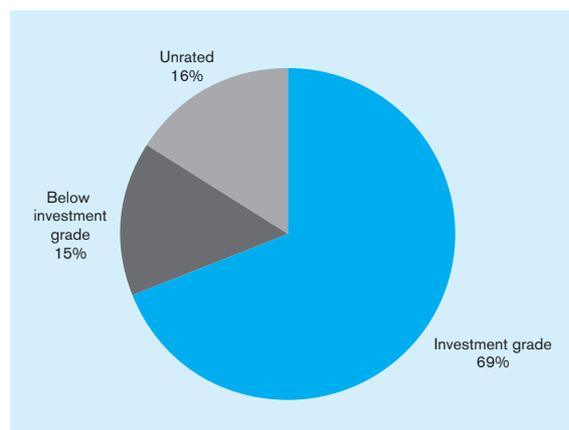
Of the credit derivatives, 69% were linked to reference entities with investment-grade credit ratings and 51% to those with a single-A rating or above. There are no comparative figures from previous years as the 2007 survey included such information for the first time (Table 6 and Chart 6).

TABLE 6
Percentage share by credit quality of reference entity

Credit quality	2007
Investment grade	69.3%
Below investment grade	14.8%
Unrated	15.9%

CHART 6

Percentage share by credit quality of reference entity (Oct 07)

*Tenor*

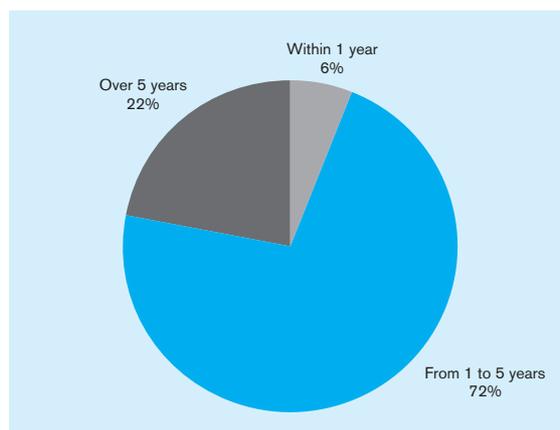
Medium-term contracts (from one to five years) remained dominant in terms of the original maturity of outstanding transactions, accounting for 72% of the gross positions (Table 7 and Chart 7).

TABLE 7
Percentage share by maturity

Maturity of contracts	All surveyed AIs		
	2007	2006	2005
Within 1 year	6.3%	8.1%	4.4%
From 1 to 5 years	71.8%	72.8%	44.7%
Over 5 years	21.9%	19.1%	50.9%

CHART 7

Percentage share by maturity (Oct 07)



Securitisation transactions

In 2007, 39 AIs reported having securitisation exposures compared with 33 in the 2006 survey. Their aggregate exposures amounted to HK\$319 billion, a rise of 103% over the previous year. Those held by AIs as investing banks accounted for 93% of the aggregate, compared with 88% in 2006 (Table 8 and Chart 8). Market activity was still heavily concentrated on a small number of AIs, with the top four responsible for 84% of total exposures reported by the surveyed AIs.

The number of local banks reported as having securitisation exposures at the end of October 2007 increased to 15 from 11 a year ago, and their market share rose from 69% to 83% because of the increase in exposures arising from synthetic

securitisations. Most of them were again held by just a few local banks.

Securitisation exposures by type of transaction structure

Synthetic securitisation transactions continued to increase in importance in 2007. These accounted for 61% of the reported securitisation transactions, compared with 30% in 2006 and 22% in 2005. Claims on central governments and central banks became the largest type of underlying assets, with the proportion of securitisation exposures based on these underlying assets surging to 52% from 17% a year earlier. This increase was mainly due to one unrated securitisation issue. Correspondingly, the proportion of securitisation exposures based on residential mortgages, the most popular type of underlying assets in the past years, dropped from 47% to 29%. (Table 9 and Chart 9).

CHART 8

Securitisation exposures of all surveyed AIs

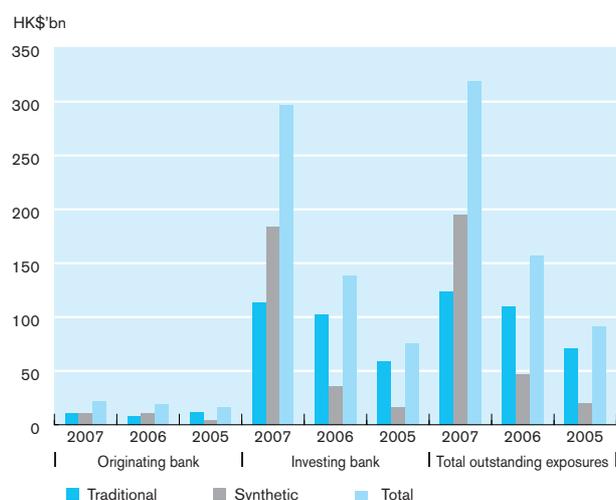


CHART 9

Percentage share by type of underlying asset (Oct 07)

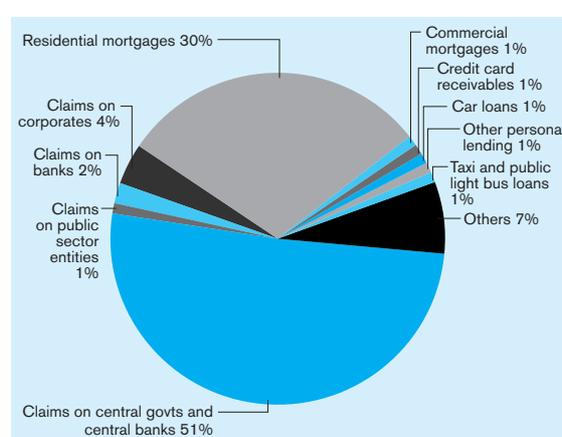


TABLE 8

Securitisation exposures of all surveyed AIs⁵

(in HK\$ billion)

Form of securitisation	Originating bank			Investing bank			Total outstanding exposures		
	2007	2006	2005	2007	2006	2005	2007	2006	2005
Traditional	11	8	12	113	102	59	124	110	71
Synthetic	11	11	4	184	36	16	195	47	20
Total	22	19	16	297	138	75	319	157	91

⁵ If the originating bank and an investing bank of a securitisation transaction are both surveyed AIs, the same transaction is reported under "originating bank" and "investing bank" respectively.

TABLE 9

Percentage share by type of underlying asset

Type of underlying asset	All surveyed AIs		
	2007	2006	2005
Claims on central governments and central banks	52.1%	16.9%	3.3%
Claims on public sector entities	0.6%	2.7%	5.1%
Claims on banks	2.4%	1.2%	1.8%
Claims on insurance companies	0.4%	0.4%	0.5%
Claims on securities companies	0.0%	0.0%	0.1%
Claims on corporates	3.8%	6.5%	5.8%
Residential mortgages	29.4%	47.4%	45.5%
Commercial mortgages	1.5%	2.9%	2.3%
Credit card receivables	0.7%	4.7%	11.2%
Other personal lending	1.0%	2.0%	4.0%
Car loans	1.0%	5.0%	3.5%
Taxi and public light bus loans	0.6%	1.4%	2.8%
Non-performing obligations	–	–	–
Others	6.5%	8.9%	14.1%

In the 2007 survey, 45% of the securitisation exposures were of investment grade, down from 78% in 2006. However, this is not an indication of a general change in risk appetite or deterioration in credit quality, but rather the result of the unrated securitisation issue referred to earlier, which caused the aggregate amount of unrated securitisation exposures to rise by 397% during the year. If this issue was excluded, the proportion of investment grade securitisation exposures actually increased to 92%.

Categorised by the type of interest rate payments, 69% of the traditional securitisation transactions involved floating interest rates (59% in 2006) and 84% of the synthetic securitisation transactions were fixed interest rates (53% in 2006).

Only a few AIs reported having held securitisation exposures under ABCP programmes during the 1-year period ending 31 October 2007 in the form of liquidity facilities⁶. And, at the same time, only one AI had exposures under ABCP programmes as an

investing bank, which were unrelated to liquidity facilities. No comparative figures from previous years are provided as the 2007 survey was the first time such information was collected.

Future plans for credit derivative and securitisation operations

Many surveyed AIs expressed an interest in either expanding or commencing credit derivative operations in the future, mainly for hedging or taking on credit exposures in the banking book. A few AIs, which did not have any credit derivative operations in the 12-month period up to the end of October 2007, planned to start them in both the banking book and trading book. Conversely, there were some AIs that intended to gradually reduce their credit derivative activities.

In addition, many surveyed AIs would like to either expand or commence securitisation operations, both as investing or originating banks.

⁶ An ABCP programme is a programme under which a bankruptcy-remote special purpose entity (SPE) in a securitisation transaction issues debt securities with (i) an original maturity of not more than one year and (ii) the payments in respect of which are secured by a pool of underlying assets acquired from third parties and held by, or to the order of, that SPE.

Conclusion

The development of the credit risk transfer markets will no doubt remain an important subject for the banking industry and regulators, particularly in view of the repercussions of the US sub-prime mortgage crisis.

As indicated in the results of this and other ad hoc surveys the HKMA has recently conducted, the Hong Kong banking sector's exposures to sub-prime and sub-prime related credits have not had a material effect on the sector's overall assets. Any AIs holding instruments which were affected by the sub-prime crisis are expected to continue to ensure that the instruments are properly valued and adequately provided for. The HKMA also expects AIs taking on exposures in complex-structured products to exercise due caution in understanding and assessing the credit, market and liquidity risks beforehand. This is particularly valid in view of the limitations of any external credit ratings these products may have, and the possible disruptive scenarios that could arise based on the sub-prime experience.

Various international standards setters have identified regulatory weaknesses to be addressed as a result of the crisis. For instance, the Basel Committee on

Banking Supervision has undertaken a series of remedial initiatives, and plans to release detailed proposals for consultation in the coming months where necessary. These include:

- strengthening capital treatment of certain complex structured products (such as “re-securitisations”, for example, collateralised debt obligations of asset-backed securities, and liquidity facilities to support asset-backed commercial paper);
- strengthening sound practices for liquidity risk management and guidance for stress testing; and
- improving market discipline through better disclosure and valuation practices.

To ensure the prudent development of the credit risk transfer activities of AIs in Hong Kong, the HKMA will keep a close watch on the development of international standards and work closely with the industry in promoting relevant sound risk management practices. The HKMA will also consider further improvements to its data collection requirements to better capture AIs' exposures to complex-structured products given the rapid market developments and the potential risks these could entail as exemplified by the sub-prime crisis.