The Institute of Chartered Accountants in Australia

The collapse of the US sub-prime mortgage market

Understanding the impacts under IFRS

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The collapse of the US sub-prime mortgage market
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Foreword

The collapse of the US sub-prime mortgage market has been written by the President of Disclosure Analytics Inc, Patricia Doran Walters, PhD, CFA for the Institute of Chartered Accountants. The report provides an insight into the many factors involved in the United States sub-prime mortgage market collapse, including the effects to financial statements of banks and other financial institutions and investors in mortgage-backed securities around the world.

I hope this paper will assist in understanding the complex issues, and contribute to an appropriate understanding of how the United States sub-prime mortgage market collapse occurred. Through the fictional story of Mr and Mrs Jones the paper examines the role of those responsible: borrowers; investors; and brokers and those who protect them: preparers; auditors; standard-setters; and regulators and makes recommendations of their roles in the future.

The paper recognises that none of the parties identified above can guarantee that investors will receive reliable and relevant information to assist in their decision making process, without the will and support of others. Regulators and standard setters when considering any future changes need to ensure they consider all parties rather than traditional scapegoats, being the accounting and auditing profession.

Concern is expressed in the paper that some capital market participants in the United States seem more concerned with structuring transactions to achieve a specific accounting outcome, rather than reflecting the economic substance of the arrangement.

It is pleasing to note that the United States Financial Accounting Standards Board has announced their intention to make changes to their accounting standards to address the current securitisation problems in the United States and propose working with the International Accounting Standards Board to achieve convergence in the area of de-recognition of assets and liabilities.

This paper is one of the Institute of Chartered Accountants leadership initiatives that look ahead, question, and positively influence the growth of our profession.

I trust you will find this paper both interesting and valuable.

Andrew Arkell
President
Institute of Chartered Accountants in Australia

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The story

To understand the current credit crisis in the United States and its effects on the financial statements of banks, other financial institutions, and investors in mortgage-backed securities around the world, it is important to understand the origins of the housing boom and the role of preparers and the accounting profession in reporting the impacts. In fact, the story begins with an ordinary American couple who dream of owning their own home.

A rocky road to home ownership: the story of Mr and Mrs Jones

Like most Americans, the Jones family dreamed of owning their own home. When Mr and Mrs Jones had applied for a mortgage from their local bank in 2000, they were denied the loan. Unfortunately, they had a poor 'credit score' based on high credit card debt, they also had no savings to use as a down payment. The bank's loan officer explained that the bank used 'credit scores' to evaluate if the potential borrower could manage to pay principal and interest on the loan. Mr and Mrs Jones were advised that, in order for the bank to reconsider their loan application, they would need to reduce the amount owing on their credit cards and save enough to make a 20 per cent down payment on the house.

The Jones' visit the mortgage broker and buy a house

In 2003, TV, radio and newspaper advertisements began appearing for mortgage loans with very low interest rates, little or no down payment requirements, and low monthly payments. After seeing one encouraging advertisement in their local newspaper, Mr and Mrs Jones went to see a mortgage broker, Mr Freemoney.

Mr Freemoney knew the Jones' financial situation. He also knew that Mr Jones had just started a new job and his employer would not be willing to verify his employment or salary.

Regardless, Mr Freemoney assured Mr and Mrs Jones that, despite their poor 'credit score', they would qualify for a 'no downpayment' mortgage, based on the value of the house. He explained that, since real estate prices would continue to rise, the Jones' could always re-finance their home if they ever had trouble making the mortgage payments. Mr Freemoney even allowed Mr Jones to verify his own employment and salary.

Mr and Mrs Jones did not understand how Mr Freemoney could arrange a mortgage when the local bank would not. Mr Freemoney explained that he only received a commission as the mortgage broker, the Last Bank and Trust (LB&T) was really the lender and trusted him to handle loan applications.

Mr Freemoney also talked with Mr and Mrs Jones about various loan options they should consider. Rather than a 30 year fixed-rate mortgage, he recommended they get a five year adjustable-rate mortgage (ARM). Mr Freemoney explained that an ARM would require very low monthly mortgage payments for the first five years of the loan based on an 'introductory' interest rate. The interest rate would adjust at the end of the five year period. Although the interest rate might increase, it could also decrease. Even if the interest rate were higher, Mr and Mrs Jones would always be able re-finance the house to a new ARM or fixed-rate mortgage at the end of five years. Mr Freemoney said that, since the value of their home would have increased substantially in five years, the Jones' might be able to qualify for a larger loan and get some cash back when they refinanced.

Mr and Mrs Jones were very pleased. They purchased their dream home and soon moved in. Their mortgage payments were less than their previous rent and they were even able to use the difference to pay off some of their credit card debt.

Five years later

In early 2008, when the interest rate and mortgage payment on their ARM increased substantially, Mr and Mrs Jones started to have financial difficulties. The new mortgage payment was three times what the payment had been for the first five years. At the same time, housing prices had fallen and interest rates on new loans had gone up. As they struggled to pay the mortgage, the Jones' began to rely more heavily on their credit cards as they tried to cover everyday expenses.

Mr and Mrs Jones were not alone and their neighbours were experiencing similar problems. When the low introductory rates on the ARM mortgages reset, mortgage payments rose higher than homeowners could pay. Because real estate prices fell at the same time, sometimes below the amounts owing on mortgage loans, many families were unable to re-finance their debts at any price. More and more homes went on the market and went unsold or sold for less than the purchase price. In many cases, the homeowner was better off financially to simply default on the mortgage.

The rocky road to mortgage lending: Last Bank & Trust Company

When LB&T gave the Jones family its mortgage, it was already in the habit of selling loans to investment banks. As more and more of these loans were 'sub-prime', selling these loans became even more important. Sub-prime loans are those made to borrowers, like the Jones' who have no downpayment, low 'credit scores,' and self-verified their employment and income. Selling mortgage assets to investment banks gave LB&T the cash to continue to make mortgage loans to new borrowers. In fact, the demand for these loans by the investment bank was so great, that LB&T couldn't make and sell their mortgage loans fast enough.

LB&T seemed to be in a 'no lose' situation. It made money by making and selling mortgage loans. It also didn't have to worry that the borrowers would default on the loans sometime in the future. The credit risk was transferred to the investment bank that bought the mortgage loans.

The rocky road of investment banking: Insecurity Investment Bank

Insecurity Investment Bank: securitisation department

Insecurity Investment Bank (Insecurity) purchased mortgages from LB&T and from other banks that lent money for home purchases. Some of these mortgages were made under normal borrowing circumstances to borrowers with good credit, adequate down-payments, and good paying jobs. But other mortgages were to 'sub-prime' borrowers like Mr and Mrs Jones.

If Insecurity assumed the risk that borrowers like the Jones family would default on their mortgage obligation, how could it afford to buy all these loans? Wouldn't the potential 'credit losses' from defaults and foreclosures affect Insecurity's financial statements?

Insecurity was able to remove much of the risk of owning these sub-prime mortgages by 'securitising' the mortgages. Securitising is where an investment bank pools a number of mortgage loans together and uses them as collateral for an investment security, called a mortgage backed security (MBS) or collateralised debt obligation (CDO).

When the investment bank securitises loans, it divides the loans into groups of loans, called 'tranches,' based on how likely it was, in the bank's view, that the homeowners would fail to make mortgage payments and other risks. Insecurity made its money when an investor bought into a CDO tranche. The investors in a CDO were paid when the homeowner made a mortgage payment.

For example, the loans from the LB&T were divided into three tranches: Excellent, So-So, and Really Bad. Insecurity offered different rates of return to investors based on which tranche they bought. The more risky the assets in the tranche, the higher the interest rate paid. Interest rates paid to investors in 'sub-prime' CDOs were very high so there was a lot of demand for these securities when interest rates in more conventional investments are very low. Investors are attracted to investments with higher interest rates.

Insecurity pooled loans with the least risk of default into the Excellent tranche. Because investors in the Excellent tranche have the lowest risk, they were offered the lowest rate of return. The loans with the highest risk were pooled into the Really Bad tranche and investors received a much higher rate of return.

To help investors feel safe, Insecurity offered several types of 'credit enhancements' to investors in the Excellent and So-So CDOs. A credit enhancement reduces the risk that the investor won't receive the offered rate of return on the CDO. A high credit rating from a reputable rating agency and bond insurance are two forms of credit enhancement.

Insecurity purchased bond insurance for the Excellent and So-So tranches. Bond insurance means that the insurer will pay the investor if mortgage payments are not made. Insecurity also received credit ratings from the top credit rating agencies. Because the CDOs had bond insurance, most of the Excellent CDOs were rated AAA and its So-So CDO usually received a B rating. No credit enhancements were offered for the Really Bad tranche.

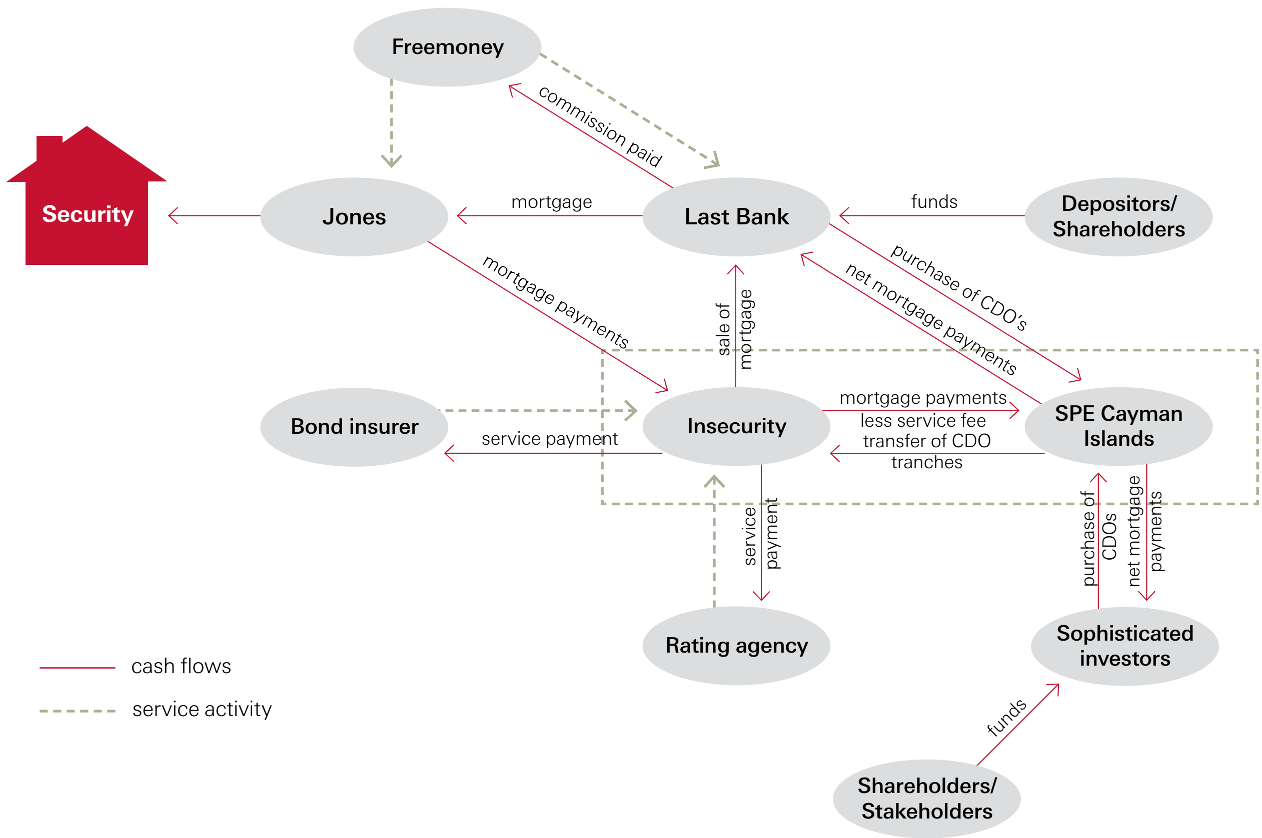
Who purchased Insecurity's CDOs? CDOs can only be sold to sophisticated, institutional investors, like insurance companies, banks, pension or superannuation funds, governments (including local governments) and international investors. The United States Securities and Exchange Commission (SEC), based on the risk involved in the investment, prohibits sales to personal investors. With such excellent credit ratings and bond insurance, many investors felt it was quite safe to invest in an Excellent CDO. Some investors who were able to tolerate more risk for a higher return also bought the So-So CDOs. The Really Bad CDOs were generally retained by Insecurity who paid itself well because the credit risk was so high.

Insecurity Investment Bank: financial reporting department

When the mortgage loans were securitised, Insecurity transferred the mortgage loans to a new company created solely for the purpose of collecting mortgage payments from homeowners and making interest payments to CDO investors. Sometimes these separate companies are called 'special purpose vehicles' (SPE) or 'variable interest entities' (VIE). Regardless of what they are called, the question is how would Insecurity account for these companies or the mortgage loans on its books and report information about them in its financial statements?

Since Insecurity had no interest in the Excellent and So-So CDOs, it was able to remove these loans from its books. Sometimes, Insecurity could structure the transaction so that even the Really Bad tranche loans could be removed from its books. In addition, the company it created to manage these CDOs was structured to be a 'qualifying SPE' which meant that Insecurity did not have to include the SPE's assets or liabilities in its consolidated financial statements. Even when Insecurity kept the investment in the Really Bad CDOs on its books, its estimate of the fair market value of the CDOs would not change very much from the price it originally paid for the loans from the local banks because its estimate of credit losses stayed low. Given its expectations about credit losses, Insecurity's estimate of the fair market value of these investments had not changed very much from the price it originally paid for the mortgage loans from the local banks.

The relationships outlined in the story are depicted below.



The housing boom busts: low interest rates rise

The day of reckoning for the Jones'

The Jones family's worst fears came true.

Increasing construction of new homes and fewer homebuyers created a housing glut. As a result, real estate prices began to fall. Mr Freemoney's belief that real estate prices would always rise proved to be false – to everyone's detriment.

The fall in real estate prices came at a difficult time for the Jones family. Their low interest rate (ARM) adjusted to the market rate of interest and resulted in their mortgage payment going up 300 per cent. Their house was worth significantly less than the purchase price. Mortgage payments were more than they could afford and, because the mortgage balance was more than their home's fair value, they could not find a lender who would refinance the mortgage to lower their monthly payments.

Mr and Mrs Jones realised that, even if they sold their home, the selling price would not pay off the mortgage. Because they had made no down payment and the mortgage payments had only paid interest, they had no equity in the home. The Jones family believed they really had no alternative (and no incentive) so they simply defaulted on their mortgage payments.

Insecurity's SPE, which owned the loan, foreclosed and took possession of the house. When their dream of home ownership became a nightmare, the Jones family were back to renting a small apartment. Their default on their mortgage makes it even less likely they will be able to buy a home in the future.

The day of reckoning for the Last Bank & Trust

LB&T was very happy that it had sold its mortgage loans to Insecurity. It would have been quite safe except that its investment department had purchased several of Insecurity's Excellent CDOs. The investment department couldn't understand why it was no longer receiving monthly interest payments. Didn't these CDOs have an AAA rating and bond insurance?

The bank learned that the bond insurers did not have sufficient assets to pay all of the insurance they had written. It also learned that the credit rating agency had recently downgraded all Insecurity's CDO investments. LB&T finally realised it would have to write-down its CDO investments to fair value, which could have a staggering impact on the bank's financial statements.

The day of reckoning for InSecurity Investment Bank

The investors in Insecurity's Excellent and So-So CDOs bore the losses from the mortgage defaults and failure of the bond insurers, but since Insecurity kept the Really Bad CDOs it recorded all of the credit losses from defaults on these mortgage loans. Since these Really Bad CDOs were the riskiest CDOs to begin with, Insecurity's credit losses would be very large.

It became evident that other investment banks were in worse shape than Insecurity. Some banks added a third credit enhancement and were the guarantor of last resort. They guaranteed the CDOs even if the bond insurance failed. These investment banks also needed to put these CDOs back on their books and record credit losses on these assets as well.

After the day of reckoning: the outcomes

Mr Freemoney collected his commissions for originating the loan. Mortgage brokers are not required to determine suitability of a loan to a client's financial position. These brokers only considered whether the potential buyer could pay the current payment and did not take into account a borrower's ability to pay when the mortgage payment would increase.

Mr and Mrs Jones lost their dream home. Many, but not all homebuyers, were as innocent and naïve as the Jones family. Some purchasers borrowed with little or no down-payment with the aim of selling at a profit when real estate prices rose. Regardless of a buyer's original intention, when real estate prices fell, buyers were unable to refinance their properties. Some had no incentive to continue to make payments that they would never recover. Defaults on mortgage loans and property foreclosures were higher than in the 1930s.

LB&T successfully sold all of its mortgage loans to Insecurity. If it hadn't reinvested in Insecurity's CDOs, it would have been safe. However, it was LB&T's lowering of its lending criterion that permitted Mr Freemoney to make the loan to the Jones family.

Insecurity 'sold' all of its Excellent 'no risk' and So-So CDO tranches while retaining no risk itself from these tranches. Its losses came from keeping the Really Bad tranche of the CDO. Credit losses on CDOs and mortgage loans retained by investment banks had risen into the billions. Investment banks that guaranteed other CDOs themselves had even higher losses.

Rating agencies reputations as independent assessors of risk were severely damaged.

Bond insurance companies were also in trouble. It is likely that they would not have sufficient funds to cover all investor losses. Several large bond insurers faced bankruptcy and sought additional capital to keep afloat.

CDO investors continued to lose money. Although some investors believed that the CDOs they purchased were safe because of the credit rating and bond insurance, others were enticed by the high interest rates being offered. Bond insurance was a worthless feature because the insurance companies did not foresee a wholesale meltdown of the real estate and credit markets.

Other groups of investors were also negatively affected by these events:

> Investors that own shares of banks, investment banks, rating agencies, insurance companies that participated in this market will likely see a decline in the share price of these companies (for example, Bear Stearns)
> Investors who have savings in pension funds or superannuation funds that invested in the CDOs either domestically or internationally will likely see a decrease in the value of these portfolios
> Investors who invested in products that were insured by the same insurers who also had CDO exposures should understand that this insurance may also be worthless
> New investors or shareholders in these companies and in these investments will be difficult to find if their credit ratings decline.

If the direct investors in the CDOs themselves couldn't see their losses coming, neither could these other indirect investors.

The diagram below highlights how the impact of a default by Mr and Mrs Jones spreads across the different sectors of the community.

Jones/Borrowers Defaults

Lenders

> Higher losses
> Less income
> Reduced liquidity
> Funding difficulties.

Investors

> Declining values
> Lower returns
> More risk adverse.

Consumers in the US

> Declining housing values
> Shaken confidence
> Reduced spending.

Businesses

> Reduced mortgage and lending activities
> Reduced securitisations
> Declining investment values
> Funding difficulties
> Declining economic conditions
> Loan covenant breaches.

Who's responsible?

Before identifying responsibility, let us assume that all the people and companies involved in this story acted with integrity. Each tried his or her best to live within the rules set down by standard-setters, regulators, and legislative bodies about information disclosure. This is a major assumption and is most likely false.

Mr and Mrs Jones

Mr and Mrs Jones and the mortgage broker believed that they could pay the mortgage. They believed that real estate prices would rise (or at least stay constant) and that the Jones' could refinance when the ARM interest rate changed.

Currently, there is no legal or regulatory requirement that the Jones family understand the implications of the terms of the mortgage contract.

Mr Freemoney

The mortgage broker is not accountable for getting the Jones' a mortgage that is suitable for their financial circumstances.

This begs the question, should mortgage brokers be required to assess suitability before recommending a loan to borrowers? Good lending criterion would include an assessment of the borrowers ability to pay.

Insecurity

The investment bank believed that risk could be segregated based on historical default rates for different types of mortgage loans and borrowers. It believed it could price the default risk for each group of loans. It was clear about the estimated default risk in the CDO contracts. Investors generally do not have the same level of expertise as the creators of these instruments. Should investors have been able to rely on the investment bank's expertise in designing and pricing CDO investments?

The investment bank sought external validation from the credit rating agency and purchased bond insurance for the less risky tranches. The 'credit enhancements' (rating and insurance) would have increased investors' confidence in the safety of a CDO investment.

Since the investment bank could only sell to 'sophisticated' investors (as defined by SEC), it believed investors would do their own due diligence, and that investors understood the risks. In the end, since the CDO creators did not bear the primary risks of these investments, they were willing to include riskier and riskier assets in their securitisations. The investment bank believed that the worst that would happen is the borrowers would refinance or the home would be sold at a considerable profit.

CDO investors

CDO investors do bear the primary risk from these investments. Many of these investors are not skilled in analysing and assessing the risks in securitisations. In the mistaken belief these investments were safe, they demanded more and more of these securities from investment banks, because the returns were higher than could be found elsewhere. They too believed that even if borrowers could not make mortgage payments they would refinance or sell the house at a profit.

Even if CDO investors could perform adequate analysis, they are often given very little information about the loan collateral itself. They often have very little time to analyse for investment decision-making. In my view, this is no excuse for purchasing an investment without a full understanding of its risks and rewards.

All CDO investments are risky. The higher the interest rate, the more likely it is that the investor would lose the principal. Unfortunately, these investments paid high interest rates over a long period of time with no loss of principal. Even sophisticated investors were lulled into complacency.

When losses do not occur, investors begin to believe that losses will not occur in the foreseeable future. Investors most likely relied on the reputation and assurances of the investment bank, rather than hard core financial analysis of the underlying mortgages when deciding to buy the CDO.

Other groups

Investors in the companies involved in creating, selling, rating, and insuring CDOs and other asset-backed securities must rely on the financial statements of the companies in which they invest. These financial statements are:

- Prepared by management according to accounting and disclosure rules or principles determined by an accounting standard setter
  - In the United States, the Financial Accounting Standards Board (FASB) is delegated this authority by the SEC, which in turn has this authority from the United States Congress. The SEC and Congress retain the right to overrule the FASB if they choose. (We will refer to the standards set by the FASB as US GAAP)
  - The International Accounting Standards Board (IASB) is delegated the authority to set accounting standards by similar regulatory and/or legislative bodies in many countries around the world. Similarly, regulatory and legislative bodies in the jurisdictions that have adopted International Financial Reporting Standards (IFRS) also retain the right to overrule the IASB. (We will refer to the standards set by the IASB as IFRS).

> Audited by independent, certified or chartered accountants licensed to perform audits in a particular jurisdiction
> Reviewed and enforced by the relevant regulatory body in the country or other jurisdiction that has adopted or permits use of either US GAAP or IFRS.

Capital market participants also perform an important review and 'enforcement' function by imposing higher costs of capital on companies with poor financial reporting and disclosure practices. Market participants can also expose companies' practices through the media. Unfortunately, this type of reputational enforcement is usually too late and very weak.

Companies and funds that invested in CDOs backed by US mortgage loans and their shareholders and creditors are all over the world. Therefore, the impact of the US credit crisis can and will effect companies, financial institutions, investment funds, and individuals everywhere.

Innocent or guilty?

It is hard to assume that every direct participant in the Jones' story acted with integrity. Responsibility must be laid at the door of those that created mortgage loans with payments structures that were doomed to increase beyond borrowers' ability to pay. Responsibility must be laid at the investment banks that created risk investment securities, in such volume that an unforeseen increase in defaults, would throw the entire financial system into chaos. It would seem these participants are not all innocent. The financial markets are already penalising them.

Credit rating agencies have rightly come under increased scrutiny. They suffer from the same conflicts of interest that auditors have often been accused of, though without the legislation requirements that exist in regards to the auditing profession. They are hired and paid by the companies they rate and whose products they rate.

Some responsibility must also be laid at borrowers who do not understand the long-term effects of changes in their debt contracts and investors who can only see the high returns, not the risks. Perhaps, they were naïve, but not altogether innocent. There is little excuse for 'sophisticated' investors or those who manage investment funds from not doing appropriate due diligence on the investments they purchase. If the instrument is too complex to be understood by an investor, it should not be purchased.

Who else bears responsibility?

We must also look to others, not directly responsible, but whose role in the financial markets is to protect the borrowers and investors. These are preparers, auditors, standard-setters and the regulators who enforce the standards and regulations designed to keep the global financial markets functioning efficiently, effectively and ethically. Is there more they should have done or could do in the future?

These parties include:

> Companies themselves (preparers) and their management who use US GAAP or IFRS in preparing financial statements and the accountants and lawyers who advise them on acceptable practices
> Auditors who assess whether US GAAP or IFRS is applied correctly and that appropriate disclosures are made and who report compliance (or not) to shareholders
> FASB or IASB as the bodies that create the accounting principles and/or rules and issue interpretations to reduce diversity in application by companies
> Securities commissions who review company financial statements for adherence to US GAAP or IFRS and take enforcement actions against companies for violations
> Legislative bodies that must support securities commissions and standard-setters in their respective roles in providing adequate and essential information to investors, whether in financial statements, product offerings and prospectuses, or other marketing documents.

None of these parties can guarantee investors will receive reliable and relevant prospectuses, product offering documents, financial reporting information, and other disclosures without the will and support of the others. No accounting standard, no matter how good, will protect investors if companies do not comply with the substance or intent of the standard, not just the letter. In addition, accounting standards will not help investors when much of the information provided to investors in advance of a securities purchase is not within the realm of the FASB or IASB, but of the relevant regulator.

The role of accounting standard setters in corporate financial reporting to investors

Corporate financial statements are the primary source of information about a company's financial position, performance and profitability and provide investors with key data on which to make their investment decisions in the company. As companies and their activities become more complex, it is essential for investors to have confidence in the information provided. Whether the information is provided in the financial statements themselves or in the required note disclosures, investors need to believe that they will receive the necessary information on which to judge the risks and rewards of investing in a particular company.

Although the path to reliable financial reporting begins with the standard-setters, the FASB or IASB, accounting standards alone are not sufficient to ensure reliability or timeliness of financial reporting. All of the parties mentioned above must play their part in providing, demanding, and enforcing transparency in financial reporting. The challenge is to make financial reporting more dynamic in reporting changes in risk or other forward-looking information, which could be required by regulators.

The FASB and the IASB can only create standards based on available information about a specific accounting issue. Accounting standards invariably reflect current thinking about the risks and rewards inherent in certain transactions. These standards also reflect the will of the regulators, legislators, and company management in the financial reporting process. Standard setting is, by its nature, a process of negotiation and consensus building among the constituents to the process.

Regrettably some participants in the capital market appear more concerned with structuring transactions to achieve a specific accounting result rather than appropriately reflecting the economic substance of the arrangement. No standard, whether rule- or principle-based, is impervious to management attempts to circumvent the standards requirements.

It is unrealistic to believe that any standard-setter can completely identify and account for all off-balance sheet risk, no matter how remote. However, the question still remains whether accounting and disclosures for securitisations or other balance sheet risks can be improved. From an investor perspective, this answer is usually a resounding 'yes'. Standard-setters and regulators together must work to improve reporting about existing risks and obligations and disclosures about the sensitivity of that reporting to a wide spectrum of changes in underlying assumptions. Sensitivity analysis can and should be more complex and informative than what otherwise is currently required. However, describing and requiring such analysis is generally the province of regulators and legislators, not standard-setters.

Accounting and disclosures

Accounting is a framework for recording and measuring transactions and events. Supplemental disclosures about recorded and unrecorded events are also required so that investors and other users of financial statements can make informed investment and credit decisions.

Accounting seeks to analyse and record transactions, without bias, reflecting the substance of the transaction in the financial statements. When making commercial decisions, company management is often concerned with the impact of these decisions on the financial statements. However, institutional factors or management intent are not valid reasons to record or fail to record a particular event or to alter its measurement.

Some believe that accounting communicates verifiable 'truth' to the readers of financial statements. Verifiability is an important component of the characteristic of reliability, and is essential for good financial reporting and is described in the conceptual frameworks of both the FASB and the IASB. However, verifiable information does not mean the information is 'true' in an objective sense.

Rather, accounting standards and measurement principles, and hence financial statements, are full of management estimates. If an investor examined the accounts of any company, he or she would find some degree of estimation in every account, even cash. How these estimates are computed is verifiable. Even when management provides its best, unbiased estimates, whether the assumptions about key variables that went into these estimates were reasonable cannot be 'verified' until some time in the future.

In the case of sub-prime mortgage loans and the sale of their cash flows through CDOs, the assumption that real estate prices would continue to rise was shown to be a false assumption. Estimates of default rates were also too low. The adequacy of credit enhancements, such as bond insurance and credit ratings, was also overestimated. Financial statement information, based on these faulty estimates and assumptions, was only proven to be wrong when real estate prices began to fall.

Unfortunately, real estate prices themselves would not have been included directly in the risk analysis. However, views about the real estate market would have implicitly underpinned the assumptions and estimates that were included. Extreme examples of implicit variables that could impact variables included in a risk analysis, but are not included directly in most cases, would be the risk of a terrorist attack or abrupt devaluation of a currency.

Therefore, is it realistic for companies to be able to identify and report on all fundamental risks to its assets or liabilities? In the current crisis, the risk that was realised is the sharp and persistent decline in real estate prices. This risk would have been considered remote therefore a low probability would have been assessed when the assets were being securitised.

Other questions to be asked include: Would disclosure of all potential implicit or inherent risks (like natural disasters or economic catastrophes) and sensitivity analysis of dramatic changes in those variables be useful for investors? Or would investors simply conclude the probability of these risks, based on historical information, to be remote and ignore the disclosures? These are some of the questions that standard-setters and regulators must address in considering changes or enhancements to current financial reporting and risk disclosures.

What are the accounting issues?

The accounting issues are complex, they are also dependent on the extent to which an entity or individual is either directly or indirectly impacted.

The main accounting impacts of the credit crisis can be classified into three areas:

> Securitisation and consolidation
> Fair value measurements
> Impairment assessment.

Securitisations and consolidation

Securitisations do not fit neatly into the accounting framework. They are rarely single transactions. Rather they are a process of identifying and categorising assets into risk groups. This process has its own data collection, measurement, and reporting processes which facilitate decisions about how to categorise the assets. This has been shaped by the credit rating process and its data requirements.

The decision to record or not to record a sale when assets are transferred to another company (an SPE) are conceptual challenges for standard-setters because, as we will see below, it is rare for all (or even substantially all) of the risks to be transferred to the SPE. The transferor usually retains some of risks. The question is always whether substantially all of these risks have been transferred and whether the transferor retains control of the assets.

The consolidation and transfer requirements surrounding SPEs can have quite different results under US GAAP versus IFRS. For more information on the requirements under each jurisdiction see Appendixes one and two.

Looking back to Insecurity's securitisation in the story. The investment bank retained the risks and rewards of the Really Bad tranche what is often referred to as the 'equity tranche'. Under IFRS, these assets would remain on the books. However, we also talked about a 'credit enhancement' where the transferor was able to use the assets from the Really Bad tranche as replacements for any assets (loans) in the Excellent and So-So CDO, that were not making payments. Under IFRS, this credit enhancement would qualify as 'continuing involvement'. Therefore, the portion of the Excellent and So-So tranches that is eligible for replacement assets would also stay on the transferor's balance sheet. Under US GAAP, the Excellent and So-So tranches would have been removed from the investment banks books since they had been 'sold' to a 'qualifying SPE'.

When the transferor continues to recognise a portion of the transferred assets on its books, it will also recognise a related liability for the proceeds from the transfer of these assets to the SPE.

Comparing IFRS and US GAAP on securitisations and consolidations

Fewer securitisations should qualify as true sales and, hence, fewer securitised assets would be removed from the transferor's books under IFRS. IFRS requires transferors to assess the substance of the securitisation transactions rather than simply meet specific criteria (such as qualifying SPE's and legal isolation required under US GAAP).

However, decisions about what constitutes 'substantially all' and measurements of 'continuing involvement' still require considerable professional judgment. The IASB does not want to eliminate professional judgment because doing so would lead to the same 'bright line' rules that exist in US GAAP. Experience has shown that 'bright line' rules encourage structuring of transactions to accomplish a particular accounting objective. Only through interpretation can the IASB itself reign in diversity in practice or wilful blindness to the principles in its standards. (This is where regulators need to exercise their responsibility and influence as well.)

Fair value measurements and impairment

Accounting by the investors in CDOs and other securitised assets under IFRS and US GAAP is essentially the same.

Classification

Investments in such assets must be classified when acquired as either assets held for trading, available for sale, or held to maturity. IFRS also permits these assets to be designated as 'fair value through profit and loss'. A classification, except in rare circumstances, cannot be changed. The accounting for each classification is quite different, but straightforward.

Measurement

Financial assets classified as held for trading, designated at fair value through profit and loss, or available for sale are all measured at fair value on the investor's balance sheet. Fair value is assessed at the balance sheet date. The difference in the treatment for these classifications is where the changes in fair value are reported in the financial statements. Changes in fair value on assets classified as held for trading or at 'fair value through profit and loss' are shown on the income statement. Changes in fair value on available for sale assets are recorded in a special owner's equity account.

For complex securities, like CDOs, estimating fair value is particularly complex and relies on estimates of the same variables used by the transferor to price the assets. The definition and determination of fair value is crucial and IAS 39 *Financial Instruments: Recognition and Measurement* provides a hierarchy for the determination of fair value. The existence of published prices in an active market is the most reliable measurement of fair value. If there is no active market for a particular instrument, fair value should be determined using a valuation technique, unless no reliable fair value is obtainable.

Under US GAAP, when assets are classified as available for sale, the investor is not required to recognise a write-down of the assets as an impairment charge in the income statement, unless there is a fundamental or 'other than temporary' change in those risk variables. Under IFRS, companies must regularly check for the existence of an indicator of impairment and test for impairment when such indicator exists (for example, a significant financial difficulty of the SPE borrower). Impaired assets are written-down to fair value (where the CDO is treated as 'held for sale' or 'available for sale') but such impairments may be reversed in the future.

Financial assets classified as 'held to maturity' (HTM) are recorded at amortised cost. To qualify for this classification, investors must have both the intent and ability to hold the asset to maturity. That means the investor cannot sell or reclassify the asset, except as permitted, without severe penalties. Some of the permissible reasons for selling a HTM security, and not triggering a reclassification out of the HTM category, are significant deterioration in the issuer's credit worthiness or a significant increase in the risk weights associated with the specific securities.

Changes in variables such as prepayment rates or interest rates are not permissible reasons for reclassifying a HTM asset. Therefore, even investors who could predict the decline in fair value for these assets, but had classified their CDOs as HTM, would be reluctant to sell them when they could. A sale would trigger reclassification and an inability to classify new investments as HTM for a specified period of time. When it became obvious that the investor would not collect substantially all of its investment, and began to sell some of its CDOs, the remaining CDOs would be reclassified from the HTM category and trigger the penalty.

Disclosures

In circumstances where the application of accounting standards requires management to make significant judgments and estimates, an explanation of the uncertainties surrounding these amounts is also required in accordance with IAS 1 *Presentation of Financial Statements*.

What's next?

Standard setting

It is inevitable that the FASB and the IASB will re-address this issue. A wide variety of commentators have called upon them both to improve the accounting for securitisations so that investors are better informed. However changes to accounting standards with improved disclosures will not prevent crises of this nature in the future if the variables that create them are not part of companies' risk modelling or management process.

On Wednesday, 2 April 2008, at the FASB Board meeting, the board decided to remove the concept of a qualifying special-purpose entity from FASB Statement No. 140 *Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities* and FASB Interpretation No. 46 (revised December 2003) *Consolidation of Variable Interest Entities*. It also decided to amend the de-recognition criteria in Statement No. 140 to improve financial reporting in the short term and to consider working on a joint de-recognition research project with the IASB.

Measurement and disclosures under current standards

Disclosures of financial instrument risks are likely to improve, particularly in IFRS, given the additional risk disclosures required by IFRS 7, *Financial Instruments: Disclosure*, in respect of all financial instruments. A recent policy paper by the Global Public Policy Committee (GPPC)[1] of the six largest international accounting firms recognised the far reaching nature of the current credit crisis for companies and investors directly affected. Indirect or secondary effects have come from lenders' reluctance to provide the same level of liquidity as they had previously. This paper recommends that companies improve their disclosures regarding all financial instruments, not just CDOs, and provide adequate disclosures of 'exposures to risk, risk management, accounting policies, and valuation methodologies'. The GPPC makes several recommendations to companies who are assessing fair values during the current market crisis. In making these recommendations, the GPPC refers to the criteria and discussion for determining fair value in IAS 39. (See appendix three).

The GPPC paper highlights some of the issues to companies preparing financial statements under current IFRS. In my view, it communicates to companies what their auditors will be expecting with respect to recognition, measurement, and disclosures as long as current market conditions exist. It also highlights what is expected of companies when standards are based on the principle that disclosures must be adequate for investor decision making. Careful preparation and auditing of financial instrument measurements and disclosures now can lead to better accounting and disclosure in the future.

Regulators

Regulators (and legislators where appropriate) may inevitably be asked to address the problems created by the collapse of the credit markets and market illiquidity. If they do so, any new regulations should address the underlying causes of the crisis, especially the roles of loan originators, credit agencies, and investment banks and other securitises. The accounting standard setters have already begun deliberating improvements to the relevant accounting standards.

To support the FASB, the IASB, investors and regulators must expend adequate resources in enforcing accounting standards and disclosure requirements. New accounting standards, or regulations, will not change preparers' attitudes towards compliance with both the underlying principle in a standard and its specific requirements. Only strict enforcement of all accounting standards and heavy penalties for non-compliance will support investors and restore confidence, effectiveness and efficiency to the global financial markets.

The Institute of Chartered Accountants in Australia believes that regulators need to ensure that they do not overreact and that any additional regulation addresses the underlying causes, rather than looking for traditional scape goats, being the accounting and auditing profession.

Investors

Investors, large and small, must take more responsibility for their own financial decisions. They must be more sceptical and less accepting of the status quo in financial reporting and disclosure. They must critically evaluate their reliance on valuations provided by the sellers' of securities. If they cannot fully understand the risks and rewards of a security themselves, they should not buy it regardless of how attractively it is marketed.

Investors must also show more interest in accounting standard-setting and better communicate their needs to the FASB and IASB. Without sufficient input from investors, standard-setters must rely on the views of preparers and auditors about what is useful, reliable, verifiable and relevant information. Only those who actually use financial statement information to make credit and investment decisions can provide the necessary support and validation for improvements to the existing standards.

Communication of what is essential and currently provided in the financial statement disclosures and also what specific information would improve investment decision-making has been conspicuously lacking in past standard-setting debates. Let this crisis be the impetus investors need to take on this challenge.

1. The GPPC comprises representatives of BDO International, Deloitte, Ernst & Young, Grant Thornton International, KPMG, and PricewaterhouseCoopers. The GPPC focuses on public policy issues facing the accounting profession and financial reporting.

Appendix one

Accounting under US GAAP

The primary standard that prescribes the accounting for securitisations is SFAS 140[2]. This standard covers all transfers of financial assets, not just securitisations. As securitisation transactions grew in number and complexity, the challenge for the FASB was to develop reporting rules for transfers of financial assets from one company's books to the temporary books of another company (that is by its nature 'not a growing concern'). Companies create separate SPEs for each securitisation. When the securitised assets have been collected (or not) and investors paid (or not), the SPE is liquidated.

This situation was a challenge for the FASB. Two key questions had to be answered:

1. When could a transfer of financial assets be treated as a sale of assets?
2. When could an SPE controlled by the transferor not be consolidated in the financial statements of the transferor?

In the Jones' story, InSecurity Investment Bank is the transferor. We explain below how Insecurity and other transferors achieved off-balance sheet accounting for the assets transferred to the SPE.

Under US GAAP, a transfer of financial assets could be accounted for in several ways[3] depending upon its facts and circumstances:

> As a sale of assets when the transferor has no continuing involvement with the assets and receives proceeds from the sale

> As a financing of assets (or secured borrowing) when the transferor fails to meet one of the criteria in US GAAP for recording a sale

> As neither a sale nor a financing if the transferor failed to receive proceeds other than beneficial interests in the transferred assets

> As a partial sale of assets if the transferor retains the servicing rights and/or one of more of the tranches in the securitisation. (In our story of the Jones', InSecurity could have had a partial sale because it retained the assets in the Really Bad tranche)

> As a part sale, part financing when the assets in some tranches meet the criteria for a sale but other tranches do not.

By far the most common accounting is as a partial sale.

In developing US GAAP for the transferor, the FASB created the concept of a qualifying special purpose entity (QSPE) to permit off-balance sheet treatments for real securitisations. A QSPE can only purchase financial assets that were previously recognised by the transferor under GAAP. In addition, for the transfer to be accounted for as a sale of assets, whether a full or partial sale, there must be a 'sale in law'. A 'sale in law' requires the assets to be 'legally isolated', even a bankruptcy trustee cannot access the assets.

The next step to qualify for sale accounting is for the QSPE to sell CDOs ('beneficial interests') in the assets to investors and to produce cash for the transferor. These are the proceeds or consideration that provide evidence of the sale. In effect, by selling beneficial interests in the transferred assets, the three criteria for a sale are met:

1. The QSPE demonstrated it has a right to freely pledge or exchange the assets
2. The transferor demonstrated it has relinquished effective control of the assets
3. The transferor received monetary consideration in exchange for control.

When it creates a QSPE meeting all three criteria above and ensuring 'legal isolation' for the assets, the transferor qualifies for off-balance sheet treatment of these assets.

Therefore, if Insecurity's securitisation met these criteria, it could remove the transferred assets from its books.

Unfortunately, other SPEs exist that do not meet the definition of a QSPE. The FASB has labelled these Variable Interest Entities (VIE). Each participant in a VIE must determine separately whether it needs to consolidate the assets held by the VIE. An entity that bears a majority of the economic risks of the cash flows from the assets in the VIE, regardless of the source of those risks (For example, market and credit) must assess whether its 'expected loss' from these risks meets the quantitative threshold set by the FASB.[4] This threshold depends on many estimates and assumptions that may prove false as time goes by. If the threshold is met, the entity must consolidate the VIE. If the economic risks are shared so that each participant only has a minority share, then no entity consolidates the VIE. It is likely that a VIE can be structured so that no participant consolidates it.

US GAAP does have extensive disclosure requirements that go beyond the usual management discussion and analysis. These disclosures and the risk they are designed to transfer (for example interest rate risk, credit risk) do not try to identify or measure more primary risks, such as the risk that real estate prices will fall or that the economy will enter a recession and unemployment will increase.

2. In reality, SFAS 140 is just the place to start in trying to understand US GAAP for securitisations. There are many interpretations and other authoritative guidance issued by the FASB, its Emerging Issues Task Force and the SEC on this issue.
3. *Securitization Accounting*, M Rosenblatt, J Johnson, and J Mountain (Deloitte Touche, 2005).
4. The threshold is 'one half the standard deviation of the present value of future cash flows weighted by their probability of realisation'.

Appendix two

Accounting under IFRS

IAS 39 is the IFRS that prescribes the accounting treatment for transfers of financial assets and securitisations. There are several important differences between SFAS 140 and IAS 39 in the accounting for transfers of financial assets. The first difference is the definition of a 'transfer of a financial asset'. As noted above SFAS 140 covers all transfers of financial assets by the transferor. In contrast, IAS 39 tries to get at the heart of those transfers of financial assets that we call securitisations. These are important criteria because if a transaction does not meet the definition of a transfer of a financial asset, then the company must continue to recognise the asset on its balance sheet.

To qualify as a transfer, the transferor must either:

> Transfer the contractual right to receive the cash flows from the asset

> Retain the contractual right to receive the cash flows of the 'original' financial asset and assume a new contractual obligation to 'pass through' the cash flows to others ('the investors').

If the arrangement is a 'pass through' arrangement as described in the list above, then the following additional conditions must be met to qualify as a 'transfer':

> The transferor has no obligation to pay the investors unless it collects cash from the original asset

> The transferor cannot sell or pledge the original asset, except as collateral for the investors

> The transferor must pay the cash it collects from the original asset promptly to the investors. Prior to paying the investors, the cash collected can only be reinvested in cash and cash equivalents.

It is believed that no revolving structure would meet the third criteria above. Revolving structures are often used for securitisations of home equity loans and require securitisation of the balances of the home equity loans as of the start of the securitisation and securitisation of any future borrowings by the homeowner from the equity line of credit. If the transferor is permitted to keep the return on any temporary investments of cash, collected but not yet paid to investors, then this feature would prevent the transaction from qualifying as a transfer and the assets would remain on the transferor's balance sheet. All servicing agreements would need to meet all the criteria above as well for the securitisation to qualify as a transfer.

If a securitisation qualifies as a transfer, the next question is whether the transfer will result in removing the assets from the transferor's balance sheet. There are several key differences between IAS 39 and SFAS 140 in determining whether transfers will qualify for derecognition.

Under IFRS:

1. It does not matter if the transfer is directly to investors or through an SPE
2. Legal isolation is not required
3. There is no concept of a 'qualifying' SPE. All SPEs are treated equally.

Therefore, if the transferor transfers the assets to an SPE, then the transferor must first consolidate all of its subsidiaries according to IFRS standards and interpretations governing consolidation. The consolidation principle, as articulated in SIC-12, *Consolidation of Special Purpose Entities*, is that an entity must consolidate all SPEs that it controls. The entity is deemed to control an SPE, even one 'on autopilot', if it has a right to the majority of benefits or is exposed to significant risks. (This is a stricter test of control that exists for a QSPE in SFAS 140.)

Whether the transfer results in the transferor removing all or part of the assets from its balance sheet depends on how much of the risks and rewards are transferred to the investors and how much it keeps itself.

> If the transferor keeps substantially all of the risks and rewards of ownership, there is no sale and the transferred asset stays on its balance sheet and it recognises a corresponding liability for the proceeds of the transfer

> If the transferor gives up substantially all of the risks and rewards of ownership, there is a sale and the transferor removes the assets from its books and recognises any new assets or liabilities created by the contractual arrangement with the SPE. The SPE has taken on substantially all of the risks and rewards of ownership

> If neither the transferor nor the SPE has substantially all of the risks and rewards of ownership after the transfer, then the transferor must determine whether or not it controls the transferred assets

- If the transferor has no control over the transferred assets, it removes the assets from its balance sheet and recognises any new assets or liabilities created by the transfer
- If the transferor has retained control over the transferred assets, it continues to recognise the financial assets on its balance sheet 'only to the extent of its continuing involvement'.

Transferors retain control over the assets unless the SPE can unilaterally and without restrictions sell the assets to an external buyer. This is rarely, if ever, the case. Therefore, under IFRS, most securitisations will result in the transferor giving less than substantially all of the risks and rewards of ownership to the SPE. How much, if any, of the assets will be removed from the balance sheet will depend on the transferor's understanding of 'continuing involvement' and how to measure it.

Appendix three

The following contains a synopsis of the discussion in a recent policy paper by the Global Public Policy Committee (GPPC)[5] of the six largest international accounting firms:

Determining fair value of financial instruments

The GPPC reminds companies of the definition of fair value and the hierarchy in IAS 39 that requires the use of observable prices from an active market when available.

An active market requires 'regularly occurring market transactions'. The paper cautions companies that 'regularly occurring' does not require a consistent number of transactions from period to period. It also cautions that a lower than normal number of transactions does not 'automatically mean that the transactions that are occurring are motivated other than by normal business considerations'. The GPPC concludes that it would not be appropriate for companies to ignore these transactions (presumably to avoid recognition or disclosure of these prices in favour of prices derived from a valuation model.) The GPPC rejects the view that prices during a market slowdown implies that the prices are 'irrational'.

The GPPC also provides its views on use of a valuation model. Specifically, it reminds companies that, if it uses a model, the model must 'factor in current market conditions, including current credit spreads, and the relative liquidity of the market'. Information about actual prices must be included in the model.

The GPPC also cautions that companies must carefully consider all variables and assumptions included in the valuation models used to be sure they are consistent with current market conditions

Disclosures

The GPPC believes that current market conditions will require companies to make additional disclosures. The policy paper specifically references the objective of IFRS 7 to provide 'users with information that enables them to evaluate the significance of financial instruments for the entity's financial position and performance and the nature and extent of risks arising from financial instruments and how the entity manages those risks'. The paper reminds companies of the requirements of IAS 1 as well as those of IFRS 7.[6]

5. The Global Public Policy Committee (GPPC) comprises representatives of BDO International, Deloitte, Ernst & Young, Grant Thornton International, KPMG and PricewaterhouseCoopers. GPPC focuses on public policy issues facing the accounting profession and financial reporting.

6. *Determining Fair Value of Financial Instruments under IFRS in Current Market Conditions, Global Public Policy Committee*, 13 December 2007, pp 1-5.

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