

CDO CREATIVE BALANCE SHEET RISK MANAGEMENT: VALUE CREATION?

Research Fellow Abraham Lu prepared this case under the supervision of Professor Andrea Buraschi as a basis for class discussion rather than to illustrate either effective or ineffective handling of a business situation.

Richard Mason, the structured finance specialist at Royal Bank of Scotland, was listening to his phone messages. It was an early morning in November 2006, London. One of the phone messages he had received was a request to take a look at the bank's balance sheet. Some board members had concerns about the regulatory capital and loan exposures and hoped some asset-backed securitization (ABS) solutions might help.

Mason was familiar with ABS solutions. In recent years he had advised clients on one type of asset-backed security in particular, collateralized debt obligation (CDO).¹ Traditional securitization removed assets to shrink the bank's balance sheet, as well as regulatory and economic capital. A special purpose vehicle (SPV) which was bankruptcy-remote was formed to acquire debt securities or bank loans. The debts were then repackaged, stratified and sold to investors. Synthetic securitization did not require a true sale of assets. Instead, a sponsor bank merely transferred the credit exposure to counterparty through a derivative agreement and the assets were still kept on the balance sheet.

The fundamental ways of securitizing assets had not changed much. Mason pondered what would be the implications of the securitization business. What were the risks inherent in the securitization structure? How much value would be added? Is it value enhancing from the perspective of Royal Bank of Scotland? Are the products created by RBS in this process (MINCS) interesting from an investor point of view? The yield to maturity is definitely very tempting!

More broadly, are regulatory capital and economic capital truly aligned under Basel II?

*Copyright © 2007 by **IMD** - International Institute for Management Development, Lausanne, Switzerland. Not to be used or reproduced without written permission directly from **IMD**.*

¹ Banks can manage debt exposure by using either collateralized loan obligations (CLO) to manage loan exposures, or collateralized bond obligations (CBO) to manage bond exposures.

The Royal Bank of Scotland Group

Businesses

The Royal Bank of Scotland Group (RBS) is a diversified financial services group engaged in a range of banking and financial activities in the UK, Europe, the US and Asia. The group provides its services to end markets including corporate, retail, insurance and wealth management. It has its headquarters in Edinburgh, United Kingdom and employs about 137,000 people. The group recorded revenues of £21,439 million during the tax year ending December 2005, an increase of 10.7% from 2004. The net profit was £5,501 million in tax year 2005, an increase of 5.1% from 2004 (*refer to Exhibits 1 and 2*).

The UK, RBS's most important geographical market, accounted for 75.1% of its total revenues in tax year 2005. The US accounted for 17.4% of the total revenues in tax year 2005 with revenues from the US reaching £4495 million, an increase of 29.5% from 2004. Europe accounted for 6.8% of the total revenues in tax year 2005. The rest of the world accounted for 0.7%, representing revenues of £192 million, an increase of 23.9% from 2004.

RBS generates revenues through its seven business divisions (including sub-divisions of retail markets): corporate markets (33.1% of the total revenues during tax year 2005), RBS insurance (20.5%), retail banking (20.4%), Citizens (12.3%), retail direct (7.4%), Ulster Bank (3.2%) and wealth management (3.1%).²

Loan Performance

RBS's global banking and markets sub-division serves over 95% of the FTSE 100 companies, over 80% of Fortune 100 companies in the US and has banking relationships with over 90% of the Dow Jones EURO STOXX 50[®]. Additionally, this sub-division figures as one of the top 10 banks globally for total debt issuance and as the top project finance bank globally.

At the end of fiscal year 2005, RBS's Tier 1 ratio was lower than that of its key competitors. The Tier 1 ratio is the capital adequacy ratio that allows a bank to absorb losses without being required to cease trading (*refer to Exhibit 3*). The Tier 1 ratio of the group was recorded at 7.6%, lower than its competitors including Credit Suisse (11.3%) and Citigroup (8.8%). The group's Tier 1 ratio was also lower than the average of 8% maintained by global banking institutions. A lower Tier 1 would put the RBS group's operations at greater risk than its competitors in the event of a financial crisis.

RBS's net interest margin declined from 3.1% in 2001 to 2.6% in 2005, mainly due to a higher proportion of corporate lending. The net interest margin is defined as: (interest income – interest expense)/average interest-earning assets shown as a percentage. The interest-earning assets represent various forms of lending. Essentially, the net interest margin measures the gross profit that is earned by a bank on its lending. Apparently, RBS's lower net interest margin in 2005 was a result of a higher proportion of lending to corporates which was not profitable for the bank.

² Information from Datamonitor.

RBS's return on average assets (RoAA) for the period 2001–2005 was 0.9%, significantly lower than the industry average of 1.2% for the same period. The group's return on average equity (RoAE) was also lower than the industry average. During the period 2001–2005, the RoAE for RBS was 11.4% as compared with the industry average of 15.4%.

Declining net interest margin, RoAA and RoAE might imply that RBS had not been able to deploy its assets profitably. At the end of 2006, the group's shares were trading at a PE of 10.36x, within the sector range which was still relatively cheap. UBS was at 12.9x and HSBC was at 12.4x.

Balance Sheet Engineering Objectives

Mason knew that he could do nothing about the decline of the net interest margin. Corporate lending was a core business and the client base had been established over three centuries. Bonding relationships would be destroyed if the bank refused lending or increased rates. Corporate lending was not profitable, but customers should be served well and retained.

The reality was tough. More corporate loans on the balance sheet would result in an even lower net interest margin. At the same time, the bank was required to maintain regulatory capital against the credit losses on its loan books. So a large loan book resulted in a low Tier 1 ratio, making the bank look riskier in the eyes of investors. The stretching situation might lower credit ratings, make borrowing costlier and squeeze the net interest margin on the expenses side. "Breaking the vicious cycle!" Mason said to himself.

Removing a portion of non-performing lending from the loan portfolio served many objectives. Firstly, the bank could lower the regulatory capital, so the Tier 1 ratio would be improved. Secondly, the proceeds from selling loans could be invested in more attractive lending opportunities and generate higher interest incomes. The RoAA and RoAE would both be improved if lending was done properly. The Basel II Accord would be phased in over year-ends 2006 and 2007. New rules for asset securitizations and new ways of calculating regulatory capital would have a significant impact for the bank.

Capital Adequacy Requirements

In 1988 the Basel Committee proposed a set of minimal capital requirements for banks. Specifically, the formula for calculating capital and credit risk was:

$$\frac{\text{Capital}}{\text{Credit Risk}} \geq 8\%$$

Capital was defined in two tiers. Tier 1 capital included the book value of common stock, non-cumulative perpetual preferred stock and published reserves from post-tax retained earnings. Tier 2 capital included general loan loss reserves, long-term subordinated debt and cumulative and/or redeemable preferred stock. A bank's capital could comprise a maximum of 50% of Tier 2 capital.

Credit risk was calculated as the sum of risk-weighted asset values. Generally, G-10 government debt was weighted at 0%, G-10 bank debt was weighted at 20%, and other debt, including corporate debt and the debt of non-G-10 governments, was weighted at 100%.

The risk weighting system provided an incentive for banks to hold the 0% risk-weighted debt of G-10 governments. In terms of the more profitable 100% risk-weighted debts, banks preferred the most risky corporate debt to higher quality corporate debt. It made sense as high quality corporate debt incurred exactly the same capital charges but was less profitable.

Since it was less efficient for banks to retain high quality loans due to their tight spreads relative to the regulatory capital charge, most investment grade loans were securitized and removed from the balance sheet. The result would be a continuous drain of high quality loans from the loan book, increasing the default probability. This practice, profiting from the shortcomings of the crude system, was called regulatory arbitrage.³

In January 1999, the Basel Committee proposed Basel II. The finalized Basel II Accord was released in June 2004 and was based on three pillars:

- Minimum capital requirements
- Supervisory review
- Market discipline

Basel II replaced the old treatment of credit risk, and it required capital for operational risk. The basic capital requirement for banks could be expressed as:

$$\frac{\text{Capital}}{\text{Credit Risk} + \text{Market Risk} + \text{Operational Risk}} \geq 8\%$$

Basel II provided banks with a few alternative means of determining the required capital for credit risk with respect to assets. The two major alternatives were referred to as the “Standardized” approach and the “Internal Ratings Based” (IRB) approach.

Under the Standardized approach, a bank is required to classify its assets into various asset classes prescribed under Basel II. The assigned risk weighting for each category is applied to determine a risk-weighted asset value for that class of assets. The minimum capital ratio of at least 8% did not change.

A bank must also classify its assets into pre-established asset categories under the IRB approach. The bank would then incorporate four factors (probability of default, loss given default, exposure at default and effective maturity) to arrive at a risk-weighted value for the asset class. Depending on whether a bank used the “Foundation IRB” approach or had been authorized to use the “Advanced IRB” approach, the bank would have a greater or lesser degree of flexibility to develop the values to be used in the formula from its own internal data and experience.

³ http://www.riskglossary.com/link/basle_committee.htm.

For example, for an exposure that had a long term rating of AAA to AA-, the assigned risk weighting was 20%. From A+ to A-, the assigned risk weighting was 50%; from BBB+ to BBB- it was 100%. At the other extreme, exposures rated BB+ to BB- were assigned a risk weighting of 350%. Any exposure that was rated below this level or was unrated, would receive even more unfavorable treatment. In most cases, for exposures rated below BB, a bank would have to take an actual deduction from its available capital (*refer to Exhibit 4*).

Basel II suggested the implementation of discriminatory risk-weightings across rating categories which better aligned the regulatory capital of a bank with its risk profile. Consequently, different loan grades would attract different commensurate risk weightings in the future. The low credit risk of investment grade loans would be transposed into a lower level of regulatory capital.

Basel II largely achieved the European regulators' objectives of addressing the shortcomings in the original accord's treatment of credit risk, incorporating operational risk and harmonizing capital requirements for banks and securities firms. Europe would apply Basel II to all banks with CAD III. US regulators were less enthusiastic and it remained unclear to what extent other countries would implement Basel II.

Complying with Basel II qualification standards required a significant history of consistent, accurate and granular data within credit management information systems. The cost of complying with Basel II had become a heavy burden for most banks. High compliance costs could exert downward pressure on the margins of the industry.

In 2005 RBS's Tier 1 capital was stretched thin. Was it due to the higher proportion of high quality assets or the lower quality assets? How would the Tier 1 ratio change under Basel II without securitization? If there was a higher proportion of a low quality asset in the lending portfolio, what would happen to the Tier 1 ratio under Basel II?

The CDO Securitization and Basel II

Securitization dates back to the early 1970s, with the development of mortgage-backed securities. Mortgage securitizations were followed by asset-backed securities (ABS). ABS's typically securitize a large pool of homogeneous assets, such as receivables, and they generally have simple structures.

CDOs first appeared in the market in the late 1980s, securitizing a pool of heterogeneous loans (CLOs) or bonds (CBOs). In the 1990s CDOs were issued against a much broader spectrum of underlying collateral, including corporate bonds, corporate loans, trust preferred stocks, high-yield loans, middle-market loans, asset-backed consumer debt and combinations of these asset classes.⁴ CDOs could have a variety of complex structures depending on their purpose, exposure to underlying assets and credit structure (*refer to Exhibit 5*).

⁴ A New Plateau for the U.S. Securitization Market, FDIC, <http://www.fdic.gov>.

Those transactions were termed as the “traditional” approach to securitization. A traditional securitization involves the (economic) transfer of assets and other credit exposures through pooling and repackaging using a special purpose entity, into securities that can be sold to investors. This may be accomplished by legally isolating the underlying exposures from the originating bank or through sub-participation.⁵

Basel II imposed regulatory operational constraints to ensure a “clean break” between the bank originating assets and the securitization transaction itself. The clean break approach established regulatory requirements regarding the transfer of assets from the originating bank. Such requirements were intended to minimize the reputational risk of the bank sponsoring a securitization structure. For instance, originators of assets in certain countries might not provide liquidity facilities for their securitizations or use the name of the bank in identifying the securitization.

In order for an originating bank to remove a pool of securitized assets from its balance sheet for the purposes of calculating risk-based capital, the bank must transfer the assets legally or economically via a true sale. More specifically, a clean break can only occur when:

- The transferred assets have been legally isolated from the transferor; that is, the assets are put beyond the reach of the transferor and its creditors, even in the case of bankruptcy or receivership. This must be supported by a legal opinion;
- The transferee is a qualifying special-purpose vehicle (SPV) and the holders of the beneficial interests in that entity have the right to pledge or exchange those interests; and
- The transferor does not maintain effective or indirect control over the transferred assets.

If the minimum requirements described above are not met, then the securitized assets must remain in the originating bank’s risk-weighted assets for purposes of calculating its risk-based capital ratios – even if the transaction would otherwise be treated as a “true sale” under the home country’s accounting or legal systems.⁶

In 1997 the development of the credit derivatives market led to the construction of synthetic CDO structures. A synthetic securitization is one in which an originating bank transfers only the credit risk associated with an underlying pool of assets through the use of credit-linked notes or credit derivatives while retaining legal ownership of the pool of assets. Thus, this structure may be non-funded or partially funded. Synthetic CDOs allow banks to retain the loan portfolio on their balance sheet while simultaneously securitizing the credit risk in their loan portfolio.

An important determining factor in creating synthetic CDOs is the ability to obtain regulatory capital relief. Capital requirements for synthetic transactions are lower than those associated with traditional CDOs. Synthetic CDOs are critical in

⁵ Basel Committee, Second Working Paper on Securitisation - October 2002. <http://www.bis.org>.

⁶ Basel Committee, Second Working Paper on Securitisation - October 2002. <http://www.bis.org>.

the growth of CDO issuance and the development of a market for traded credit securitizations. Synthetic CDOs have become popular, especially in Europe where over 90% of deals are synthetic.

Basel II aligned regulatory capital on unsecuritized assets much more closely to underlying economic risk than Basel I, providing potential capital incentives for banks to hold credits for higher quality borrowers on the balance sheet rather than securitizing them. If the broad-brushed regulatory treatment of loans disappeared, banks would increasingly securitize non-investment loan assets. The differences between collateral requirements and the desired structured rating would widen in the future. Securitizing non-investment grade loans adds significance to the issue of credit enhancement.⁷ Originating banks would face higher costs if retaining junior tranches as credit enhancement for structured transactions.

The second element of Basel II's stemming of regulatory arbitrage is its treatment of securitized positions held by different banks. For instance, the standardized approach applies the same 8% charge on all tranches rated BBB+ to BBB-, while the IRB distinguishes between the differing risk profiles of these positions. For unrated securitization positions, standardized banks must hold £1 of capital for every £1 of exposure, a strong capital disincentive against holding unrated tranches. With standardized and IRB banks facing different capital charges on exactly the same securitization exposures,⁸ Basel II could potentially introduce new forms of regulatory capital arbitrage.

The Plain Vanilla CDO

Mason's first instinct was to use a plain vanilla CDO to remove the exposures directly from the balance sheet. As the originating bank, RBS would be responsible for selecting and structuring the loans to be transferred to an SPV. The SPV would be created to be "bankruptcy-remote." If the originator went bankrupt, then creditors of the originator could not claim assets within the SPV. The SPV would issue several tranches of fixed-income securities on the underlying reference portfolio of loans, e.g. the collateral. The securities would be stratified into credit tranches, senior tranches would carry triple-A rating, mezzanine tranches would carry A or BB ratings, and junior tranches would be called equity.

Mason was concerned about the size of tranches as they would be linked to the overall collateral quality. If the quality of the reference portfolio was too low, the rating agencies would insist on a large proportion of junior and mezzanine tranches, so the senior tranche would be protected from potential credit losses. As a rule in this structure, the originator would normally retain the lowest quality equity claims as credit enhancement. Since the originator would continue to service the loans, holding the risky part would actually show the originator's willingness to maintain or improve the collateral quality. The risk of retaining equity tranches would be mitigated by fees from servicing the loans. However, holding the first loss tranche would require the originator to deduct the nominal amount directly from its capital base for regulatory purposes.

⁷ Credit enhancement as a contractual arrangement is when the bank retains or assumes a securitisation exposure and, in substance, provides some degree of added protection to other parties to the transaction.

⁸ Fitch Ratings, Basel II: Bottom-Line Impact on Securitisation Markets, September 12, 2005.

The benefit of securitization would be overshadowed by the total cost of the structure. The administrative effort would not be trivial either if the bank had to review each loan one-by-one to comply with the stipulated eligibility criteria of the respective securitization structure. The process would be further complicated if debt covenants existed, prohibiting the bank from disowning a loan.

The SEQUILS/MINCS Structure

Mason had another proposal from JP Morgan, the SEQUILS/MINCS structure (refer to *Exhibit 6*). This was a complex structure involving two SPVs. The merit of this structure was achieving an investment-grade rating while securitizing sub-investment-grade loans. A contact at JP Morgan told him that JP Morgan had introduced the SEQUILS/MINCS structure as early as 1999. In the initial use of the structure, JP Morgan distributed the risk of \$1.5 billion of leveraged loans to the capital markets.

The basic innovation here would be that JP Morgan would securitize a portfolio of loans from RBS, back them up with its own credit swap, transfer the credit swap to investors through a separate SPV, and thereby, separate the funding and the credit risk on the loan portfolio into two separate pools of investors. This interesting structure would use two SPVs, one for the funding of the portfolio and the other for the securitization of the credit risk in the loan portfolio.

The first SPV, SEQUILS, consisted of traditional CDOs. SEQUILS would obtain access to the economics of the loan portfolio, worth £852.5 million, via the purchase of the loans using funds obtained from the SEQUILS note issuance. The loans could have low ratings from BB- to B+. The loan portfolio would be backed by a credit swap provided by Morgan Guarantee Trust. Under the swap, SEQUILS would pay a periodic fee, a percentage of the £852.5 million, in return for a payment that was contingent on the default of one or more loans purchased from RBS.

Through the support of the CDS transaction with Morgan Guarantee Trust, some of the tranches issued by SEQUILS would have AAA rating and some would be rated AA and BBB. The SEQUILS notes would be sold to investors, with principal to be paid at maturity and interest to be paid in the interim. In summary, by swapping credit risk out, a portfolio of BB- to B+ loans would be repackaged into higher rating notes.

On the other hand, Morgan Guarantee Trust would buy credit swaps from another SPV, called MINCS. MINCS would be capitalized with £144 million worth of notes. MINCS were synthetic CDOs, and would obtain access to the economics of the portfolio by synthetically referencing the portfolio via credit default swaps between SEQUILS, Morgan Guarantee Trust and MINCS. The MINCS program is essentially a first-loss, credit enhancement to the SEQUILS program.

The purpose of the structure would be to gain a BBB rating for MINCS, even though the loans would be mostly rated at BB- or B+. The £144 million proceeds would be invested in AAA rated securities. Thus, investors would be protected against loss of principal as their principal would be fully backed by AAA-rated investments.

At the same time, MINCS had provided a credit swap to Morgan Guarantee Trust which would be 6 times its capital. Morgan Guarantee Trust would pay a periodic fee to MINCS and in return would receive a payment equal in size to the actual write-off suffered from the default of loans held by SEQUILS. Therefore, the yield on the notes issued by MINCS would be enhanced to 6 times the credit swap premium over triple-A rate. By introducing both high yields and credit risk, the securities issued by MINCS would be BBB rated.

Since the proceeds of MINCS bonds would be invested in triple-A rated securities, MINCS noteholders would rely on the loan portfolio only for their spread. That would mean a guaranteed minimum spread, plus any extra yield on the portfolio. At maturity, their principal would absorb any remaining credit loss owed to Morgan Guarantee Trust.

Morgan Guarantee would achieve the triple-B rating for the lowest tranche of debt by placing itself between the two vehicles and smoothing the cash flows from the assets over the life of the deal. In a standard cash flow CDO, the high yielding assets would generate enough excess spread to cover much of the likely losses from defaults – but the excess spread would not necessarily arrive at the right moment. Morgan would reimburse SEQUILS for any credit losses and repay itself later from excess spread.

JP Morgan had now refined the structure to make it more palatable to investors. The previous transactions were rated by Fitch IBCA only, at AA for the SEQUILS notes and BBB for the MINCS bonds. In the new proposed deal, the SEQUILS notes would be tranching to allow some of them to achieve triple-A ratings – from Moody's and Standard & Poor's as well as Fitch IBCA. The SEQUILS would be structured as variable funding notes, to allow the asset manager to build up the portfolio in an unhurried way and have more time to pick the best assets.

Conclusion and Questions

Mason had to prepare for a meeting with the committee the following week. He knew that he should provide solutions to the regulatory capital requirement issue and the securitization concerns in the context of Basel II.

He sat in front of his computer and started to calculate regulatory capital requirements under Basel II. He wondered how much value could be added by the vanilla CDOs and the SEQUILS/MINCS under Basel II. What assets should be securitized to minimize regulatory capital charges? What impact would this have on share prices, PE ratio, RoAA and RoAE? How to communicate to investors, in the context of Basel II? How to generate higher returns if the board asked what to do with the proceeds from selling assets? Would credit rating change? What was the perceived risk? What was the potential cost?

Exhibit 1
Income Statement of Royal Bank of Scotland
(in £million, except share data)

	12/31/2005	12/31/2004 restated	12/31/2004 original
Net Interest Income	10,026.00	9,150.00	9,287.00
Interest Income - Total	<u>21,439.00</u>	<u>16,711.00</u>	<u>16,775.00</u>
Interest & Fees on Loans	21,331.00	16,632.00	15,179.00
Interest Income on Government Securities	-	-	1,517.00
Other Interest or Dividend Income	108	79	79
Interest Expense - Total	<u>11,413.00</u>	<u>7,561.00</u>	<u>7,488.00</u>
Interest Expense on Bank Deposits	10,142.00	6,880.00	6,807.00
Interest Expense on Debt	1,271.00	681	681
Interest Capitalized	0	0	0
Non-Interest Income - Total	18,073.00	16,947.00	11,906.00
Foreign Exchange Income	683	616	616
Trading Account Income	1,660.00	1,372.00	1,372.00
Trusts & Fiduciary Income/Commissions & Fees	6,750.00	6,473.00	6,634.00
Commission & Fees	6,750.00	6,473.00	6,634.00
Other Operating Income	8,980.00	8,486.00	3,284.00
Non-Interest Expense - Total	18,043.00	16,915.00	12,614.00
Staff Costs	5,992.00	5,188.00	5,344.00
Equipment Expense	1,313.00	1,177.00	1,184.00
Depreciation & Depletion	1,326.00	-	1,107.00
Operating Provisions	503	602	998
Other Operating Expense	8,909.00	8,793.00	3,981.00
Provision For Loan Losses	1,703.00	1,402.00	1,428.00
Operating Income	8,353.00	7,780.00	7,151.00
Extraordinary Credit - Pretax	0	0	0
Extraordinary Charge - Pretax	458	520	269
Other Income/Expense Net	0	0	0
Reserves - Increase/Decrease	0	0	0
Pretax Income	7,895.00	7,260.00	6,882.00
Income Taxes	2,378.00	1,995.00	2,144.00
Current Domestic Income Tax	2,179.00	1,923.00	1,027.00
Current Foreign Income Tax	-171	-212	684
Deferred Domestic Income Tax	370	284	433
Income Tax Credit	0	0	0
Minority Interest	57	177	250
Equity in Earnings	41	24	24
After Tax Other Income/Expense	0	0	0
Discontinued Operations	0	0	0
Net Income Before Extra Items/Preferred Div	5,501.00	5,112.00	4,512.00
Extr Items & Gain(Loss) Sale of Assets	0	0	0
Net Income Before Preferred Dividends	5,501.00	5,112.00	4,512.00
Preferred Dividend Require	109	256	256
Net Income to Common Shareholders	5,392.00	4,856.00	4,256.00
EPS Incl Extraordinary Items	1.69	1.57	1.38
EPS - Continuing Operations	1.69	1.57	1.38
Dividend Per Share	0.73	-	0.58
Common Shares Used to Calc Diluted EPS	3,243.00	3,158.00	3,158.00

Exhibit 2
Balance Sheet of the Royal Bank of Scotland
(in £million, except share data)

	12/31/2005	12/31/2004 restated	12/31/2004 original
Assets			
Cash & Due From Banks	7,660.00	6,922.00	6,922.00
Investments - Total	231,467.00	122,541.00	118,165.00
Treasury Securities	23,216.00	32,130.00	33,672.00
State & Municipal Securities	1,153.00	2,969.00	1,069.00
Mortgage Backed Securities	-	-	4,864.00
Other Securities	111,435.00	69,642.00	60,676.00
Other Investments	95,663.00	17,800.00	17,884.00
Loans - Net	484,912.00	405,695.00	403,729.00
Loans - Total	488,796.00	409,863.00	407,951.00
Interbank Loans	67,686.00	58,444.00	58,260.00
Lease Financing	11,687.00	-	9,968.00
Unspecified/Other Loans	409,423.00	351,419.00	339,723.00
(Less) Reserves For Loan Losses	3,884.00	4,168.00	4,222.00
Customer Liability on Acceptances	18,647.00	16,093.00	16,093.00
Real Estate Assets	4,347.00	4,162.00	0
Property, Plant & Equipment - Net	13,706.00	12,266.00	16,294.00
Other Assets	34,579.00	36,489.00	38,357.00
Total Assets	<u>776,671.00</u>	<u>588,075.00</u>	<u>583,467.00</u>
Liabilities			
Deposits - Total	342,867.00	283,315.00	285,062.00
Demand Deposits	-	-	193,988.00
Savings/Other Time Deposits	342,867.00	283,315.00	91,074.00
Total Debt	230,466.00	185,599.00	180,560.00
ST Debt & Current Portion of LT Debt	35,623.00	101,234.00	145,944.00
Long Term Debt	194,843.00	84,365.00	34,616.00
Non-Convertible Debt	194,843.00	84,365.00	34,616.00
Provision for Risks & Charges	3,897.00	3,138.00	2,099.00
Deferred Income	7,208.00	11,563.00	15,588.00
Deferred Taxes	1,539.00	2,014.00	2,873.00
Deferred Taxes - Credit	1,695.00	2,061.00	2,873.00
Deferred Tax - Debit	156	47	-
Other Liabilities	153,150.00	65,049.00	61,591.00
Total Liabilities	<u>739,127.00</u>	<u>550,678.00</u>	<u>547,773.00</u>
Shareholders' Equity			
Minority Interest	2,109.00	3,492.00	3,829.00
Preferred Stock	27	29	4,547.00
Common Equity	35,408.00	33,876.00	27,318.00
Common Stock	799	793	793
Capital Surplus	11,777.00	12,964.00	8,446.00
Revaluation Reserves	-	-	92
Other Appropriated Reserves	150	150	457
Retained Earnings	22,227.00	20,289.00	17,530.00
Unrealized Foreign Exchg Gain/ Loss	469	-320	0
Unrealized Gain/Loss on Marketable Securities	-14	0	0
Total Shareholders Equity	<u>35,435.00</u>	<u>33,905.00</u>	<u>31,865.00</u>
Total Liabilities & Shareholders Equity	<u>776,671.00</u>	<u>588,075.00</u>	<u>583,467.00</u>
Common Shares Outstanding	3,196.54	3,173.00	3,172.61

Exhibit 3
The Financial Services Authority (FSA): Framework for Tier 1 Capital

CP155 Proposals

- 3.1 Capital is divided into three tiers for regulatory purposes, reflecting the extent to which instruments meet the underlying principles of capital – loss absorbency and permanence. Core Tier 1 is the highest form of capital and so can be included without limit in a bank’s capital for regulatory purposes. Tier 2 and Tier 3 capital include features that conform less closely to the underlying principles and are therefore limited by reference to the amount of Tier 1 capital held.
- 3.2 In CP155, we set out the principles that underpin the classification of Tier 1 capital: capital must be able to absorb losses, and must be permanently available for this purpose. To meet these two fundamental criteria, we require the instrument to be deeply subordinated, undated, and non-cumulative.
- 3.3 If any of these characteristics is even slightly compromised, an instrument should at best be eligible for Innovative Tier 1 capital.
- 3.4 CP155 proposed that, provided a capital instrument is in all ways economically equivalent to preference shares, it will be considered Core Tier 1.
- 3.5 This proposal was meant to open the door to capital instruments that are liabilities (or prospective or contingent liabilities) provided they:
 - had an equivalent degree of subordination to shares;
 - had no feature that might have dated the instrument, weakened the permanence of the capital, or the right to waive coupon payments; and
 - were non cash-cumulative.

Under those terms, we believed TONs instruments met all criteria to be considered Core Tier 1.

International Discussions

- 3.6 Since the publication of CP155, other regulators expressed concerns about the ability of certain instruments to absorb losses on a going concern basis. In particular, they suggested that a capital instrument must be able to absorb losses in such a way that it would enable a bank to continue to trade normally, despite suffering losses up to the value of that capital.
- 3.7 During those discussions, it was agreed that the current Basel requirements had not kept abreast of market developments. A review of the definition of capital, once the New Accord is agreed, is now expected.

(continued)

Consequences for our Policy

Revised definition of loss absorbency on a going concern basis

- 3.8 In light of the above developments, we have clarified the meaning of “loss absorbency on a going concern basis” and re-assessed our policy accordingly.
- 3.9 If a capital instrument must be able to absorb losses in such a way that the issuing bank can continue to trade normally, despite suffering losses up to the value of that capital, then we need to be satisfied that an insolvency petition would not succeed if based on an assertion that liabilities exceed assets.

Core Tier 1 capital

- 3.10 Core Tier 1 capital is the highest form of capital. So, there must be no doubt that the capital instrument is available to absorb losses to allow an issuer to continue trading despite suffering losses up to the value of that capital. And, the capital must be permanently available for this purpose. We consider that only directly issued shares and retained earnings provide unequivocal loss-absorbency at issue and at the point of insolvency.
- 3.11 Core Tier 1 capital should only be made up of:
- perpetual non-cumulative preference shares and ordinary shares as defined under the Companies Act 19853. Shares must be subscribed, directly issued and fully paid-up⁴; and
 - retained earnings as defined under English law.
- 3.12 In addition, a Core Tier 1 instrument should have the following features.
- It should rank below or equal to non-cumulative perpetual preference shares on a winding up.
 - The payment of any dividend must be discretionary so the issuer is able to waive any payment obligation; and no dividends should be payable if the issuer has no distributable reserves.
 - The instrument must be marketed as perpetual. This means that even if the instrument can be called by the issuer after a certain date, the issuer ensures that neither it, nor its agents and advisors, express any intention to exercise the call.
 - Only the issuer may have the option to call, which must be at least five years from issue and unrelated to any other feature.
- 3.13 This is a change from our proposals set out in CP155 where we proposed to allow, in Core Tier 1, capital instruments in all ways economically equivalent to perpetual non-cumulative preference shares. We therefore revert to the current policy.

(continued)

- 3.14 On a consolidated basis, minority interests are, at best, eligible Core Tier 1 capital unless they are created through the use of an intermediary whose main purpose is to raise capital. In which case, they are at best Innovative Tier 1.
- 3.15 We also stated in CP155 that our rules would not depend on the treatment of a capital instrument under accounting standards (unless required to meet EU Directive requirements). However, the accounting treatment of a capital instrument may influence a court when deciding whether an instrument is a liability for the purpose of determining insolvency (see paragraph 3.19). Furthermore, for the purpose of determining whether an instrument qualifies as Core Tier 1, we do not want to rely on legal opinions regarding the likely treatment of the capital instrument for the determination of insolvency. So any instrument which is a liability, or a prospective or contingent liability, will not be eligible for Core Tier 1 capital.
- 3.16 We have also considered capital instruments which convert into Core Tier 1 capital on certain trigger events. Again, for the purpose of Core Tier 1 classification, we are not prepared to rely on the operation of conversion features which are so far untested and which may create evidential burdens in proving the trigger event has occurred.
- 3.17 Given the above, further issues of TONs instruments will no longer count as Core Tier 1 capital. At best, we consider this type of instrument as Innovative Tier 1 capital. Similarly, based on our revised definition of loss absorbency, Reserve Capital Instruments and Mandatory Convertible Securities only qualify for Innovative Tier 1.

Innovative Tier 1 and Upper Tier 2

- 3.18 Therefore our loss absorbency criteria are the same for Tier 1 and Upper Tier 2. Innovative Tier 1 and Upper Tier 2 should have the same ability to absorb losses to allow a bank to continue trading normally. However we will not insist on the same level of comfort as to the loss absorbency ability of a capital instrument in Upper Tier 2 or Innovative Tier 1 as we would for Core Tier 1.
- 3.19 For the purpose of Innovative Tier 1 as well as Upper Tier 2 classification, we are prepared to consider capital instruments that are liabilities, or prospective or contingent liabilities, provided that we can be satisfied that:
- a winding up or administration petition presented by the firm or any creditor (not only a holder of the instrument), based only on the grounds that the firm is unable to pay its debts because of its obligations under the capital instrument would be dismissed; and
 - the company's directors would not be at risk of wrongful trading if they continue trading while liabilities exceed assets (where liabilities include obligations under the terms of the capital instrument).
- 3.20 A bank wishing to issue a capital instrument should obtain an opinion from Queen's Counsel, or where the opinion relates to the law of a jurisdiction outside the UK, from a lawyer in that jurisdiction of equivalent status, confirming that these criteria are met.

(continued)

3.21 We expect a leading counsel to be able to form the opinions above if:

- the instrument states that the issuer is not liable to the holder for any sum to the extent to which that sum could cause the issuer's liabilities (including prospective and contingent liabilities) to exceed its assets;
- no creditor (including but not limited to holders of the instrument) should be able to petition for the winding up or administration of the bank on the grounds that the bank is or may become unable to pay any liabilities under the capital instrument;
- the holder agrees under the terms that any claim is subordinated and will not be paid until senior creditors have been paid in full; and
- the terms of the instrument should be such that the directors can continue to trade in the best interests of the senior creditors even if this prejudices the interests of the holders of the instrument.

3.22 An Innovative Tier 1 capital instrument should also have the following features:

- It should rank below or equal to non-cumulative perpetual preference shares on a winding up.
- The payment of any dividend must be discretionary so the issuer is able to waive or defer any payment obligation, and no dividends should be payable if the issuer has no distributable reserves.
- The coupons must not be cash-cumulative. Any deferred coupons must be paid in shares.
- Only the issuer can have an option to call, which must be at least five years from issue and unrelated to any other feature.
- There is no feature, in conjunction with a call, which might lead to the instrument being redeemed within the first ten years of issue.
- The instrument must be marketed as perpetual. This means that even if the instrument can be called by the issuer after a certain date, the issuer ensures that neither it, nor its agents and advisors, express any intention to exercise the call.

3.23 An Upper Tier 2 capital instrument should have the same features as an Innovative Tier 1 instrument, but:

- the coupons can be cumulative in cash or kind; and
- a pure call or any feature, in conjunction with a call, which might lead to the instrument being redeemed, is permitted after a minimum of five years from issue.

(continued)

3.24 IPRU(BANK) CA 6.6(d) clearly sets out that a debt agreement should provide for the debt and unpaid interest to be able to absorb losses, while leaving a bank able to continue trading. The requirement suggests two ways to achieve this:

- CA 6.6(d)(i) – the automatic conversion of the debt and unpaid interest into share capital when reserves become negative; or
- CA 6.6(d)(ii) – by treating the debt and unpaid interest as if it will be converted into share capital the day immediately preceding the presentation of a petition for the bank’s winding-up.

3.25 Because this IPRU text requiring conversion into share capital has not been enforced so far, and to be consistent with our new definition of loss absorbency, we propose to delete from IPRU(BANK) CA 6.6(d)(i) and (ii). This ensures consistency across Tier 1 and Tier 2 capital. The relaxation of this guidance also reflects our belief that conversion is not the sole means of achieving the necessary degree of loss absorbency.

Other regulators’ approach to Core Tier 1

3.26 We are aware that some other regulators approve capital instruments as Core Tier 1 other than share capital and retained earnings. The differences of regulatory treatments can often be explained by the differences in national law between the UK and other jurisdictions. Because countries operate under different insolvency laws, this means that instruments which may be regarded as liabilities in the UK when creditors or directors seek to wind up a company would not give rise to the same problems overseas. So we may have to be more restrictive in the UK in the features we permit Tier 1 instruments to contain to achieve a similar degree of loss-absorbency.

3.27 But similarly, there are areas where we are less strict than other regulators. For instance, we permit non-cumulative preference shares to qualify as Core Tier 1 capital, whereas some jurisdictions either do not have the concept under national company law of preference shares, or do not permit them to count as Tier 1 capital.

3.28 Also, we do not consider this to be an appropriate time to ease our standards given the Basel Committee’s undertaking to review the definition of capital. We cannot predict whether such a review of Basel requirements will result in international standards on the quality of capital being raised or lowered.

3.29 However, we will continue to discuss these issues with the rest of the regulatory community in an attempt to maintain a level playing field.

**Exhibit 4
Sample Calculation of Risk-based Capital Ratio for a Bank**

Assume a bank has £40,000 in total capital and the following assets and off-balance sheet items:

Balance Sheet Assets:	
Cash & Due From Banks	£7,000
Treasury Securities	£23,000
Interbank Loans	£65,000
Mortgage Backed Securities	£5,000
Unspecified/Other Loans	£400,000
Total Assets	£500,000
Off-balance sheet items:	
Loan commitment to corporates	£100,000

The bank's capital ratio would be its total capital of £40,000 divided by its total assets of £500,000. The ratio would be 8%. The bank's risk weighted assets under Basel II:

Off-balance sheet items	Face Value	Conversion Factor	Credit Equivalent Amount
Loan commitment to corporates	£100,000	1	£100,000

1. The off-balance sheet item converted into the credit equivalent amount
2. Each asset and the credit equivalent amount would be multiplied with its corresponding risk weight

Off-balance sheet items	Face Value	Conversion Factor	Credit Equivalent Amount
0% Category			
Cash & Due From Banks	£7,000		
Treasury Securities	£23,000		
	<u>£30,000</u>	0.00%	£0
20% Category			
Interbank Loans	£65,000	20.00%	£13,000
50% Category			
Mortgage Backed Securities	£5,000	50.00%	£2,500
100% Category			
Unspecified/Other Loans	£400,000		
Credit Equivalent Amount	£100,000		
	<u>£500,000</u>	100.00%	£500,000
Total Risk Weighted Assets			£515,500

The risk-based capital ratio of the bank would be $\frac{£40,000}{£515,500} = 7.76\%$, which is below the minimum capital adequacy requirements.

Exhibit 5
Global CDO Market Issuance Data¹ (Adapted from the Bond Market Association)

By Issuance Type (\$ million)

	TOTAL ISSUANCE	Cash Flow and Hybrid²	Synthetic Funded³	Market Value⁴	Arbitrage⁵	Balance Sheet⁶	Long Term⁷	Short Term⁸
2004-Q1	24,982.5	18,807.8	6,174.7	0.0	23,157.5	1,825.0	20,495.1	4,487.4
2004-Q2	42,861.6	25,786.7	17,074.9	0.0	39,715.5	3,146.1	29,611.4	13,250.2
2004-Q3	42,086.6	36,106.9	5,329.7	650.0	38,207.7	3,878.8	34,023.9	8,062.7
2004-Q4	47,487.8	38,829.9	8,657.9	0.0	45,917.8	1,569.9	38,771.4	8,716.4
2004 TOTAL	157,418.5	119,531.3	37,237.2	650.0	146,998.5	10,419.8	122,901.8	34,516.7
2005-Q1	47,816.3	40,759.6	7,056.7	0.0	41,965.0	5,851.4	43,381.3	4,435.0
2005-Q2	60,630.0	51,152.6	9,247.4	230.0	51,230.1	9,399.9	54,223.1	6,406.9
2005-Q3	50,983.6	45,316.7	5,666.9	0.0	48,624.9	2,358.6	47,632.7	3,350.9
2005-Q4	89,888.4	70,548.0	18,950.3	390.1	69,617.9	20,270.5	79,916.5	9,971.9
2005 TOTAL	249,318.3	207,776.9	40,921.3	620.1	211,437.9	37,880.4	225,153.6	24,164.7
2006-Q1**	92,446.3	82,435.4	10,010.9	0.0	85,849.5	6,596.9	81,338.8	11,107.5
2006-Q2**	111,794.1	92,214.9	16,823.5	2,755.8	94,278.2	17,515.9	106,743.7	5,050.4
2006-Q3	117,769.1	90,174.8	9,666.6	17,927.7	106,864.8	10,904.2	105,744.7	12,024.4
2006 YTD TOTAL	322,009.5	264,825.1	36,501.0	20,683.5	286,992.5	35,017.0	293,827.2	28,182.3

Source: Thomson Financial

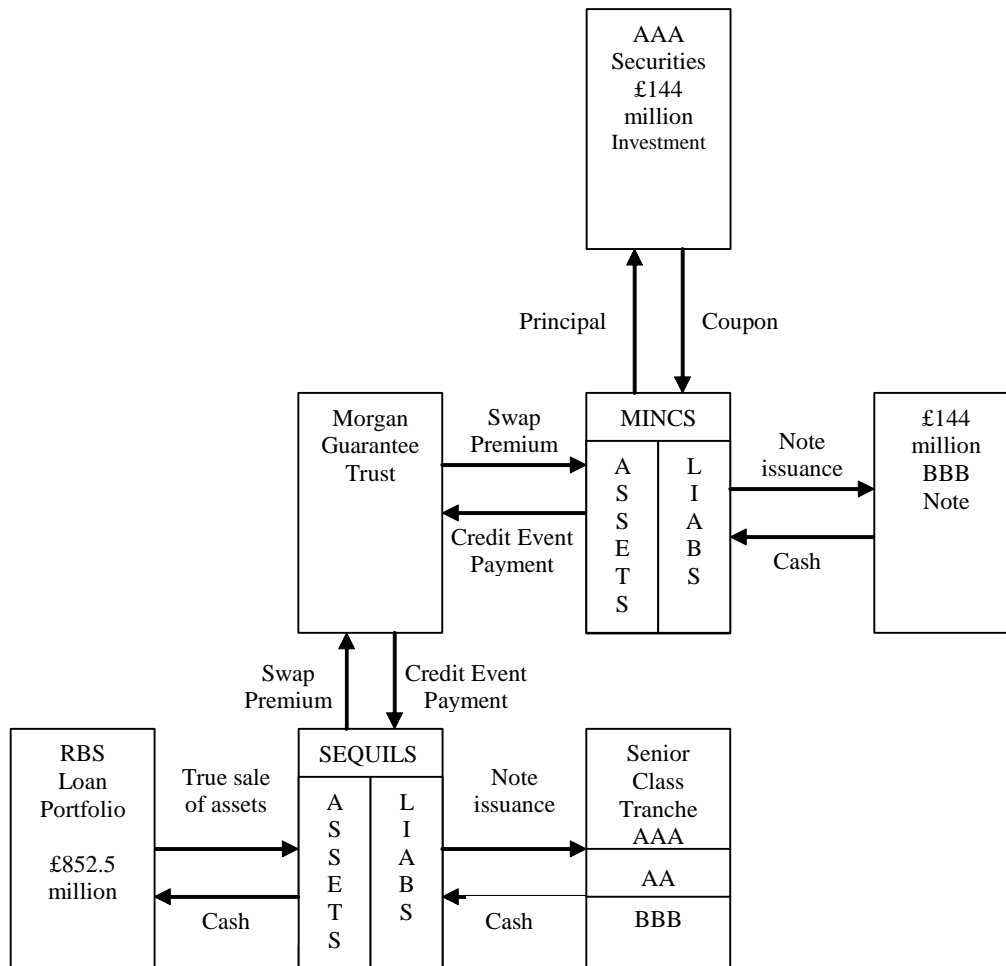
Totals may not foot due to rounding.

**Revised to reflect changes in classification or information submitted after prior cut-off date.

Exhibit 5 (continued)
Notes

1. Unfunded synthetic tranches are not included in this analysis. SME deals are classified as ABS and are not included in this analysis.
2. Cash flow CDOs are structured to pay off liabilities with the interest and principal payments (cash flows) of their collateral. Hybrid CDOs combine the funding structures of cash and synthetic CDOs.
3. Synthetic CDOs sell credit protection via credit default swaps (CDS) rather than purchase cash assets. Synthetic CDOs use credit default swaps (CDS) to synthetically replicate a cash flow CDO. Funded tranches require the deposit of cash to an SPV at the inception of the deal to collateralize portions of the SPV's potential swap obligations in the transaction; losses result in principal writedowns of the issued notes.
4. Market value CDOs are structured to support liabilities through the value of the collateral.
5. Arbitrage CDOs attempt to capture the mismatch between the yields of assets (CDO collateral) and the financing costs of the generally higher rated liabilities (CDO tranches).
6. Balance sheet CDOs remove assets or the risk of assets off the balance sheet of the originator. Balance sheet CDOs may be cash or synthetic. In cash deals they are used to move assets off of a balance sheet (frequently to reduce regulatory capital requirements, among other reasons, similar to traditional ABS securitizations). In synthetic deals, the risk is moved off balance sheet by the originator's purchasing protection from the SPV through CDS.
7. Long term tranches are defined as tranches with maturities of greater than 18 months.
8. Short term tranches are defined as tranches with maturities of less than 18 months.

**Exhibit 6
Structure of the SEQUILS/MINCS Transaction**



SEQUILS would pay Morgan Guarantee Trust a periodic fee which would provide a contingent payment in the case of the default of any loans on SEQUILS' balance sheet. The CDS protection would gain the lowest BBB rating for SEQUILS' note issuance. Morgan Guarantee Trust would transfer both the swap premium and credit exposure to MINCS. MINCS investors would receive triple-A rate, plus 6 times the credit swap premium. At maturity, MINCS investors' principal would absorb any remaining credit loss to Morgan. By introducing both high yields and credit risk, the securities issued by MINCS would be BBB rated.