Bank deleveraging: a diversification opportunity for with-profits and annuity funds?

Institute and Faculty of Actuaries

Life Conference 2013

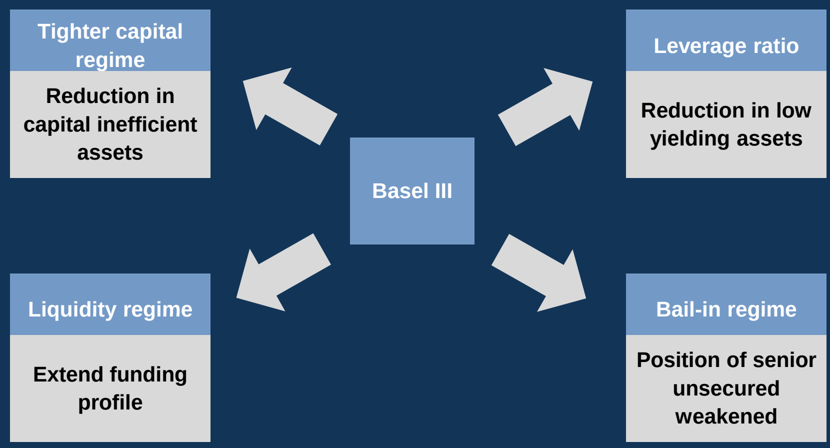
Etienne Comon
Goldman Sachs Asset Management
November 11th 2013

Examples of Changes in Bank Regulation

Basel III

- Tighter capital regime
- Leverage ratio
- Liquidity regime
- Bail-in regime

What is Bank Deleveraging?



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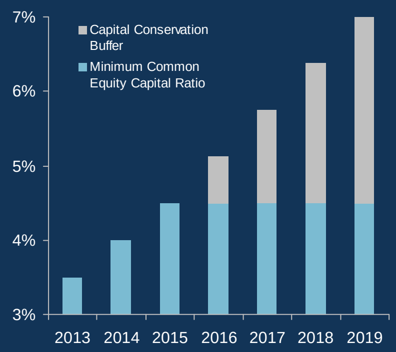
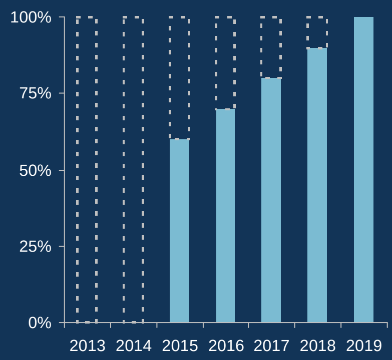
Phase-In Time Line of New Bank Regulation

Minimum Common Equity Capital Ratio



Liquidity coverage ratio



Source: Basel Committee on Banking Supervision, Basel III phase-in arrangements, 2013

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What Does it Mean for Life Insurance?

Assets | **Liabilities**

(1) Loans

Is there an opportunity for insurers to lend to the corporate / real estate / infrastructure sectors?

(2) Corporate bonds

New investment opportunities as market-making activity is changing?

Assets	Liabilities
Banking book	Secured
	Senior unsecured
Trading book	Sub debt
	Equity

(4) Secured funding

Should insurers provide liquidity to banks?

(3) Bank investments

Should insurers adapt their investment / risk management strategy for bank issued bonds / equity?

1 Loan investments in a life book

Diversity of the Loan Universe

Borrowers	Examples of collateral	Loan types
Corporates	PP&E Receivables	■ 1st lien / 2nd lien ■ Mezzanine Syndicated vs bilateral loans
Real estate projects / companies	Physical real estate	
Infrastructure projects	Concession PP&E	
Financials	Securities	■ Term repo ■ Collateral swaps

Evidence of Deleveraging

Evolution of European loan net issuance volumes

Source: ECB, as of October 2013

Example: Infrastructure Loans

What is it?

- Senior loans secured on infrastructure assets (e.g. hospitals, schools, roads, energy distribution)
- Typically 25-year loans with amortising principal

The case for the asset class…

- Long-dated cash flow profile appears suitable for annuity funds ; IG rating may be achieved
- Very high recovery rates historically achieved on infrastructure and PPP/PFI loans; default risk may decrease over time

… but we are concerned about the value and the fit to UK life books

- Prepayment options make the theoretical 25y structure less appealing
- Sourcing loans slow in primary and secondary markets
- Currently crowded market with spread pressure

Example: Senior Corporate Loans

How should insurers distinguish between (senior corporate) loans and bonds?

Borrower base

- Bond universe dominated by financials
- Corporate loans have negligible financial exposure

Security

- Senior unsecured bonds vs. senior secured loans

Liquidity

- Lower liquidity in syndicated loans compared to corporate bonds; longer settlement time
- Very low liquidity in non-syndicated loans

Term

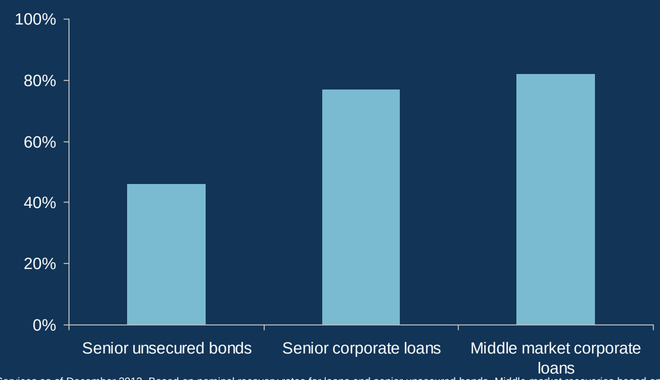
- Corporate loans have typically a short final maturity ; embed issuer call option

Rating

- Typically sub investment grade

Example: Senior Corporate Loans

Long-term ultimate recovery (1987-2012)



Source: S&P Ratings Services as of December 2012. Based on nominal recovery rates for loans and senior unsecured bonds. Middle market recoveries based on GS estimates. This information discusses general market activity, industry or sector trends, or other broad-based economic, market or political conditions and should not be construed as research or investment advice

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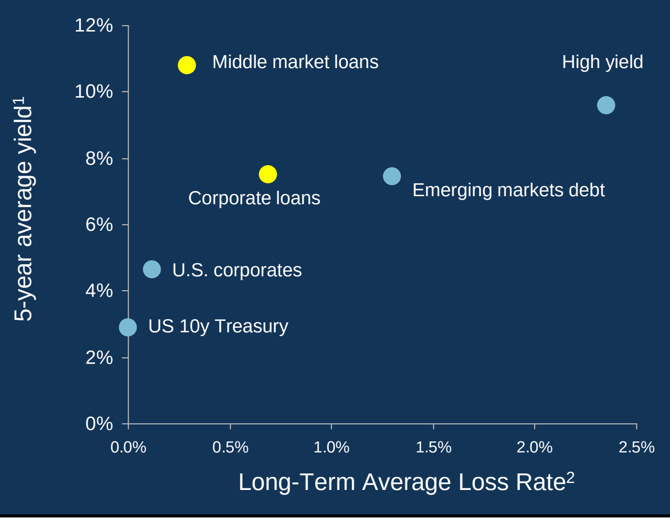
What Does it Mean for Life Insurance?

Long-term excess yield vs. average loss rate



US Corporates: BAML US Corporate Master Index

Corporate loans: S&P/LSTA Lev. Loan Index

Emerging markets debt: JPM Corporate Emerging Markets Bond Index

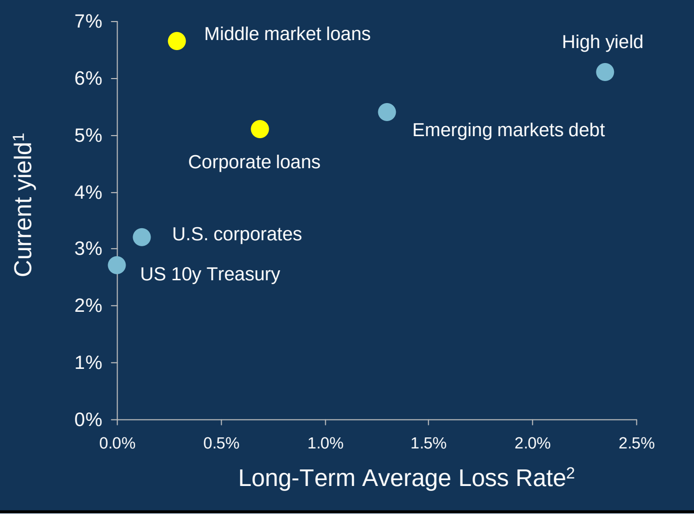
Middle market loans: S&P/LSTA Corporate Middle Market Index

High yield: BAML HY Master II Index

(1) HY Master II Index, US Corporate Master Index, and US 10-Yr Treasury 5-year average yields and current yields updated through July 22, 2013. JPM Corporate Emerging Markets Bond Index and S&P/LSTA 5-year average yield and current yield data as of June 28, 2013. (2) Based on 5-year average loss rate, except for JPM Corporate Emerging Markets (based on averages from 2007-2010) and S&P/LSTA Lev. Loan Index (based on averages from 1987-2012). Long term average loss rate for S&P/LSTA Corporate Middle Market Index based on GS estimates. Please note investors cannot invest directly in the indices shown above. This information discusses general market activity, industry or sector trends, or other broad-based economic, market or political conditions and should not be construed as research or investment advice. Please see additional disclosures. Past performance does not guarantee future results, which may vary.

What Does it Mean for Life Insurance?

Current excess yield vs. average loss rate



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Constraints
(1) Admissibility

- The admissibility of loan investments depends on the format of implementation

Direct loan investments

Loan fund

Funding of loan portfolios / securitisation

Constraints
(2) Matching Premium

- Corporate, infrastructure, and real estate loans often embed prepayment options.
- Such embedded calls conflict with the "matching adjustment" principles.
- Rating

The risk-free rate interest rates to calculate the best estimate of a portfolio of insurance obligations shall include a matching premium, determined in accordance with Article 42ter, provided that the following conditions relating to the insurance obligations and the assets covering them are met

(f) the cash-flows of the assets of the assigned portfolio of assets are fixed;

(g) the cash-flows of the assets of the assigned portfolio of assets cannot be changed by the issuers of the assets or any third parties;

(h) no assets of the assigned portfolio of assets shall have a credit quality which has been assigned to credit quality step 4 or worse

- Structuring work at origination
- Hedging
- Transitional measures

Source: EIOPA, Draft Implementing measures Solvency II

Loans – Conclusion

Certain segments of the loan market present attractive risk-adjusted yield / illiquidity premium…

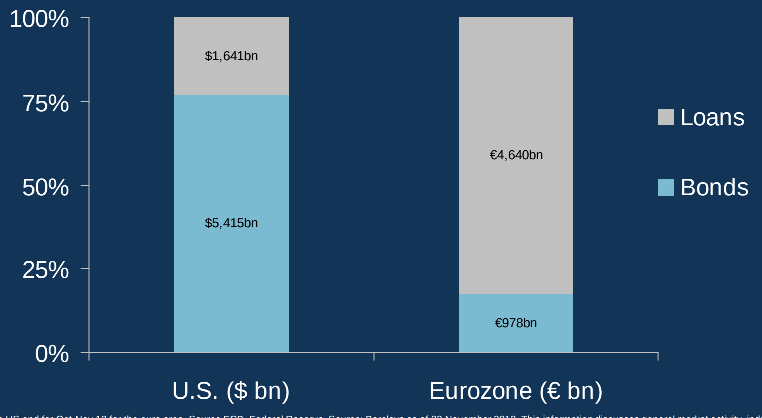
…but other segments are very crowded…

…and many loan structures have ratings and embedded options that can challenge annuity books

2 Impact on corporate bonds

Corporate Bond Supply
Contrasting Europe with the U.S.

Sources of non-financial corporate financing (%)

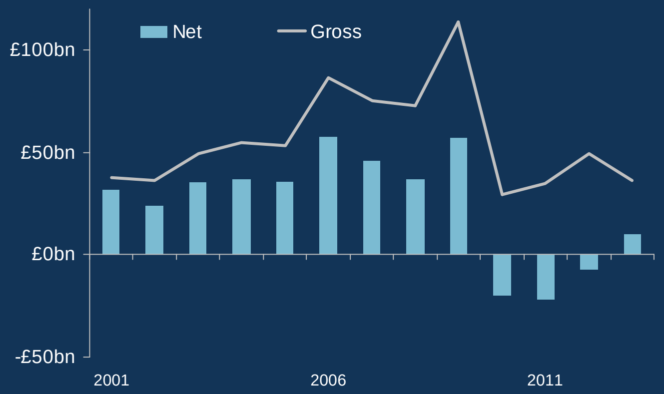


Data for Q3 12 in the US and for Oct-Nov 12 for the euro area. Source ECB, Federal Reserve. Source: Barclays as of 22 November 2012. This information discusses general market activity, industry or sector trends, or other broad-based economic, market or political conditions and should not be construed as research or investment advice. Please see additional disclosures.

Corporate Bond Supply

How much supply of corporate bonds?

Supply of Sterling investment grade corporate bonds (financials + nonfinancials)



Source: Barclays Capital, as of October 2013

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Corporate Bond Supply

Where will supply come from?

Outstanding amount of European corporate bonds: high yield vs investment grade

Source: Barclays Capital, as of November 1st 2013

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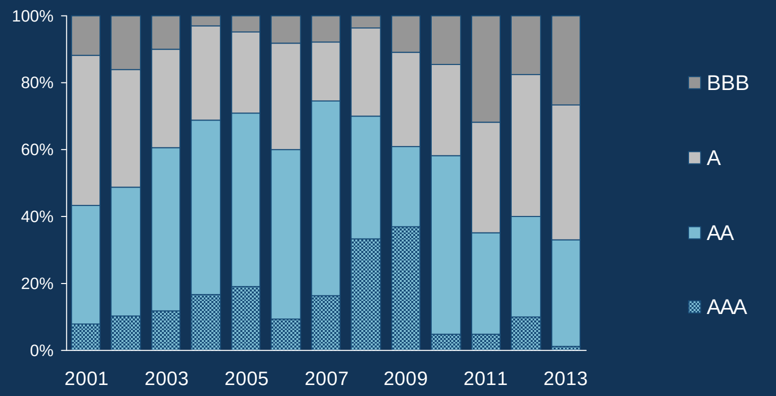
Corporate Bond Supply
Where will supply come from?

Supply of Sterling investment grade corporate bonds (financials + nonfinancials)



Source: Barclays Capital, as of October 2013

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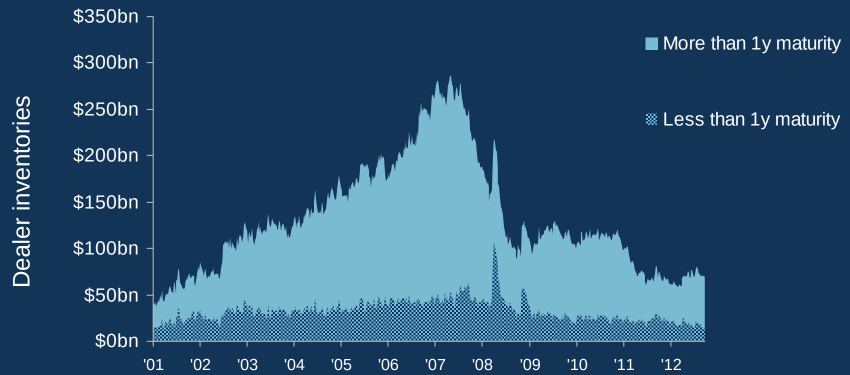
Corporate Bond Liquidity
Reduced dealer inventories

- Reduced ability of dealers to act as 'shock absorbers' (holdings <0.5% of outstanding volume)

U.S. dealers' corporate bond inventory



Source: New York Federal Reserve, as of October 2013

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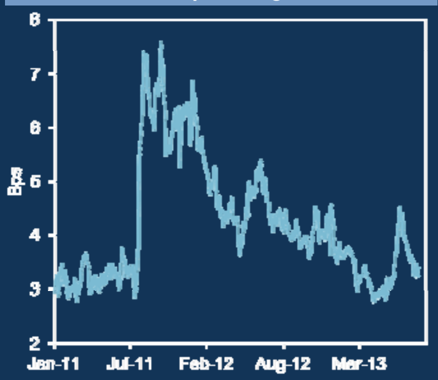
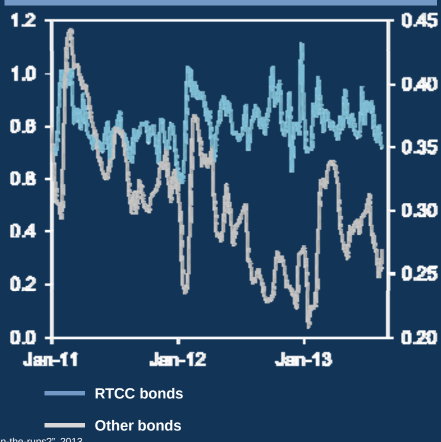
Corporate Bond Liquidity
Transaction costs remain contained

Round trip trading costs



Round-trip trading costs (RTCC) is the exponentially-weighted moving average of daily transaction cost (latter is median buy over median sell as a percentage of price)

Turnover ratios



Source: Goldman Sachs Global Investment Research, "Is trading liquidity improving, or simply shifting to on-the-runs?", 2013

Corporate Bond Liquidity
How to reconcile conflicting liquidity data ?

- Inventory, trading volume, and transaction cost data convey a nuanced picture of the liquidity of corporate bonds

Inventory
- Low dealer inventories reduce their capacity to stabilise the market

Trading volumes
- Trading volumes remain strong but polarised on the larger, on-the-run issues

Transaction costs
- Corporate bond transaction costs are low today – because volatility is at a very low level

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Corporate Bonds – Conclusion

Potential increase in corporate bond issuance in Europe

… but incremental bond issuance may be lower rated than what U.K. life books ideally need

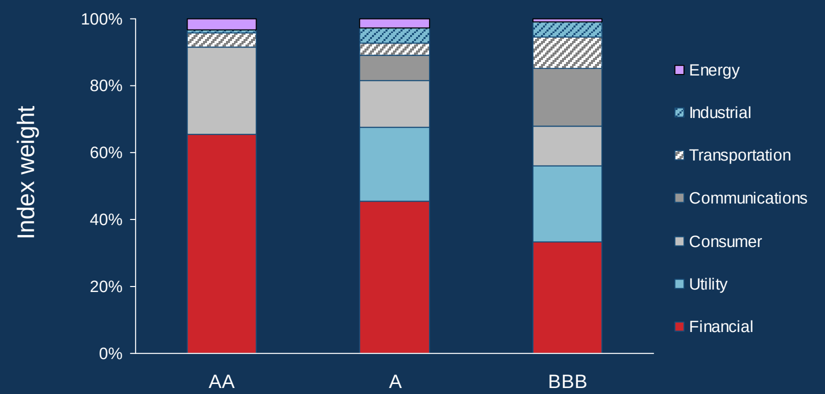
Polarisation of liquidity in benchmark on-the-run bonds – opportunities in off-the-run issues

Life companies have the liquidity and time horizon to take advantage of changes in corporate bond liquidity

3 Investments in bank debt

The Weight of Banks in Insurance Asset Portfolios

Weight of banks in major corporate bond indices



Source: Barclays Capital, as of 31 October 2013 (Sterling Credit Corporate Index)

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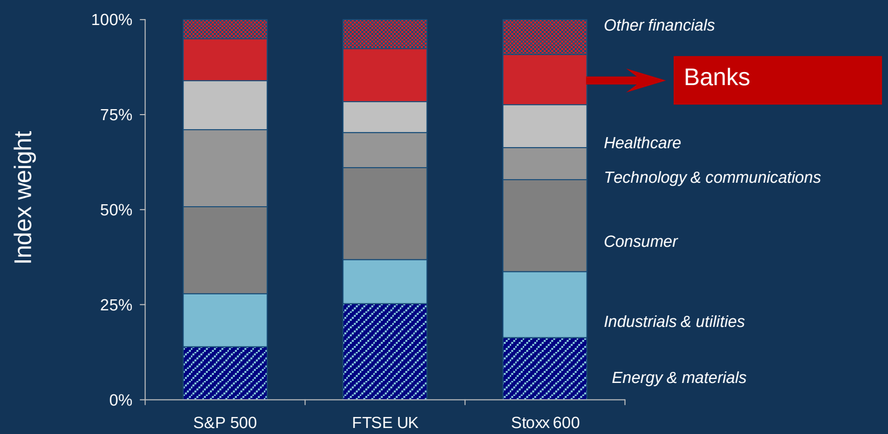
The Weight of Banks in Insurance Asset Portfolios

Weight of banks in major equity indices



Source: Standard and Poor's, FTSE ; as of 31 October 2013

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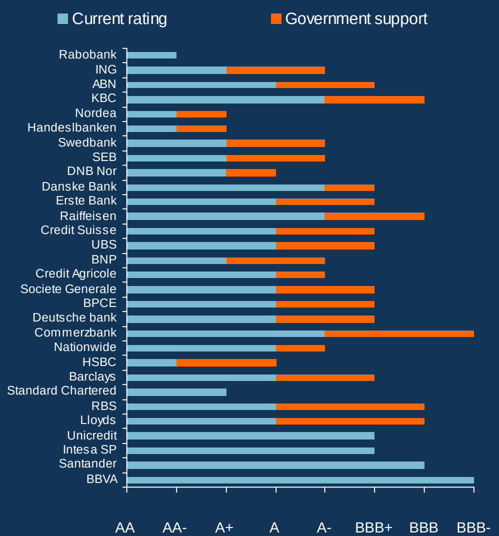
Opportunities in the Bank Capital Structure

Covered	*Security over collateral remains unchallenged by regulation*
Senior unsecured	*Bail-in framework – senior spreads have repriced to the level of bail-in risk. Key issue: removal of sovereign support to impact rating*
T2	*Traditional subordinated debt is phasing out – new T1 and T2 instruments are introduced, with new risk exposures for life investors*
AT1	
Equity	*Valuation multiples of European banks*

Senior Unsecured Bank Debt

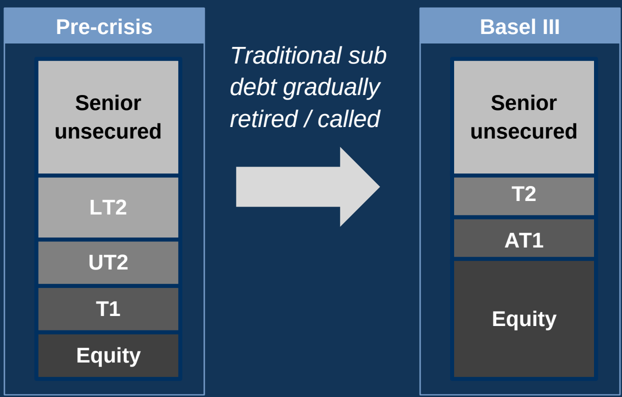
- New bail-in regime increases the risk of loss on senior unsecured debt.
- While this risk was not fully priced in at the beginning of the year, senior unsecured spreads have now adjusted, in our view.
- Senior unsecured ratings may be at risk as rating agencies remove sovereign support.



Source: Morgan Stanley, "European Loans & Deposits Tracker: All eyes on the AQR", October2013

Subordinated Bank Debt

- European insurers have traditionally been significant investors in subordinated bank paper across the capital structure.
- The structure of subordinated debt is fundamentally overhauled.



- New subordinated debt instruments have write-down and equity conversion features
- All subordinated debt is now 'loss absorbing' (contractually upon hitting trigger or statutorily though non-viability)

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Bank Investments – Conclusion

Banks represent a large fraction of bond investments by life insurance companies

Secured debt (covered bonds) remain attractive economically and for return on regulatory capital

Senior unsecured debt is now explicitly exposed to bail-in risk

Opportunities in subordinated debt – with very different structures to traditional sub debt

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4 Liquidity & Funding

Regulatory Framework for Bank Liquidity & Funding

- Liquidity has become a central component of bank regulation (initiated by PS 09/16 in the U.K.)
- Most banks have started reporting LCR / NSFR ahead of regulation

Liquidity coverage ratio

$$LCR = \frac{\textit{Eligible liquid assets}}{\textit{30d cash outflows}}$$

2015	**Phase-in starts**
2019	**Fully in force**

Net stable funding ratio

$$NSFR = \frac{\textit{Available net stable funding}}{\textit{Required net stable funding}}$$

2015	**Monitoring**
2018	**Fully in force**

Market Implications

- In order to manage their liquidity profile, banks are turning to different forms of on-balance sheet and off-balance sheet secured funding that represent potential investment opportunities for U.K. life insurers.

Collateral swaps / borrow/pledge

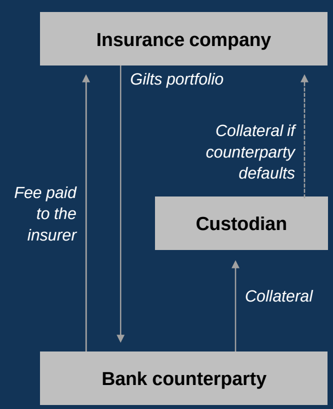
Non-traditional term repo

Total return swaps

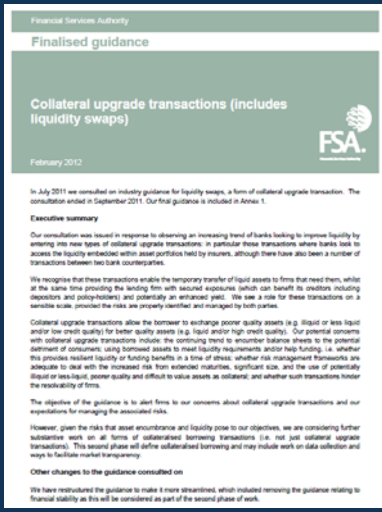
Example: Secured Funding of Securities and Loans

Example: collateral swap

- In a gilt stock loan transaction, the insurance company lends its Gilts to a bank counterparty for a fixed period of time (e.g. five years), and receives a lending fee.



How Does That Fit in a Life Portfolio?


Financial Services Authority

Finalised guidance

Collateral upgrade transactions (includes liquidity swaps)

FSA.

February 2012

In July 2011 we consulted on industry guidance for liquidity swaps, a form of collateral upgrade transaction. The consultation ended in September 2011. Our final guidance is included in Annex 1.

Executive summary

Our consultation was issued in response to observing an increasing trend of banks looking to improve liquidity by entering into new types of collateral upgrade transactions: in particular those transactions where banks look to access the liquidity embedded within asset portfolios held by insurers, although there have also been a number of transactions between two bank counterparties.

We recognise that these transactions enable the temporary transfer of liquid assets to firms that need them, whilst at the same time providing the lending firm with secured exposures (which can benefit its creditors including depositors and policy-holders) and potentially an enhanced yield. We see a role for these transactions on a sensible scale, provided the risks are properly identified and managed by both parties.

Collateral upgrade transactions allow the borrower to exchange poorer quality assets (e.g. illiquid or less liquid and/or low credit quality) for better quality assets (e.g. liquid and/or high credit quality). Our potential concerns with collateral upgrade transactions include: the continuing trend to encumber balance sheets to the potential detriment of consumers; using borrowed assets to meet liquidity requirements and/or help funding, i.e. whether this provides resilient liquidity or funding benefits in a time of stress; whether risk management frameworks are adequate to deal with the increased risk from extended maturities, significant size, and the use of potentially illiquid or less-liquid, poorer quality and difficult to value assets as collateral; and whether such transactions hinder the resolvability of firms.

The objective of the guidance is to alert firms to our concerns about collateral upgrade transactions and our expectations for managing the associated risks.

However, given the risks that asset encumbrance and liquidity pose to our objectives, we are considering further substantive work on all forms of collateralised borrowing transactions (i.e. not just collateral upgrade transactions). This second phase will define collateralised borrowing and may include work on data collection and ways to facilitate market transparency.

Other changes to the guidance consulted on

We have restructured the guidance to make it more streamlined, which included removing the guidance relating to financial stability as this will be considered as part of the second phase of work.

Key questions

- Is the **liquidity profile** of the life book resilient enough to support a long-dated illiquid position (e.g. lapse)
- Has the insurance company the ability to **monitor collateral** received?
- What are contingency plans for the **management of the collateral** if/when physical delivery takes place?
- What is the **capital efficiency** of such transaction?

Liquidity & Funding – Conclusion

Increased need for term funding by banks

Certain life books can provide liquidity to banks for term at economically attractive levels

Risk management, collateral surveillance, and collateral management are key

Conclusion

Conclusions

1	Selectively invest in loans (e.g. senior secured corporate)
2	As a long-term investor, take advantage of European corporate bond dynamics
3	Bank debt remains the top exposure of most life portfolios
4	Provide secured funding, supporting bank liquidity against yield enhancement based on illiquidity premium

Asset Management

Questions?

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Use of Derivatives. Use of Derivatives in connection with tactical tilts involves risks different from, or possibly greater than, the risks associated with investing directly in securities or more traditional investments, depending upon the characteristics of the particular Derivative. Certain swaps, options and other derivative instruments may be subject to various types of risks, including market risk, liquidity risk, counterparty credit risk, legal risk and operations risk. In addition, swaps and other derivatives can involve significant economic leverage and may, in some cases, involve significant risk of loss. Derivatives may entail investment exposures that are greater than their cost would suggest, meaning that a small investment in derivatives could have a large potential impact on performance and may result in significant losses.

Reliance on Models. Success with a tactical tilt strategy is largely dependent on constructing models that attempt to predict asset-class returns. These models may, for a variety of reasons, fail to accurately predict returns, including because future events may not necessarily follow historical norms or because of defects in the models. There is no assurance that any tactical tilt strategy will be implemented successfully.

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