Covered Bonds - The Holy Grail of Bank Funding?

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RBS™

The Covered Bonds – The Holy Grail of Banking Funding?

Covered Bonds offer:

- cheaper funding levels;
- broader investor base;
- strong regulatory support;
- (in some cases) higher protection than government debt

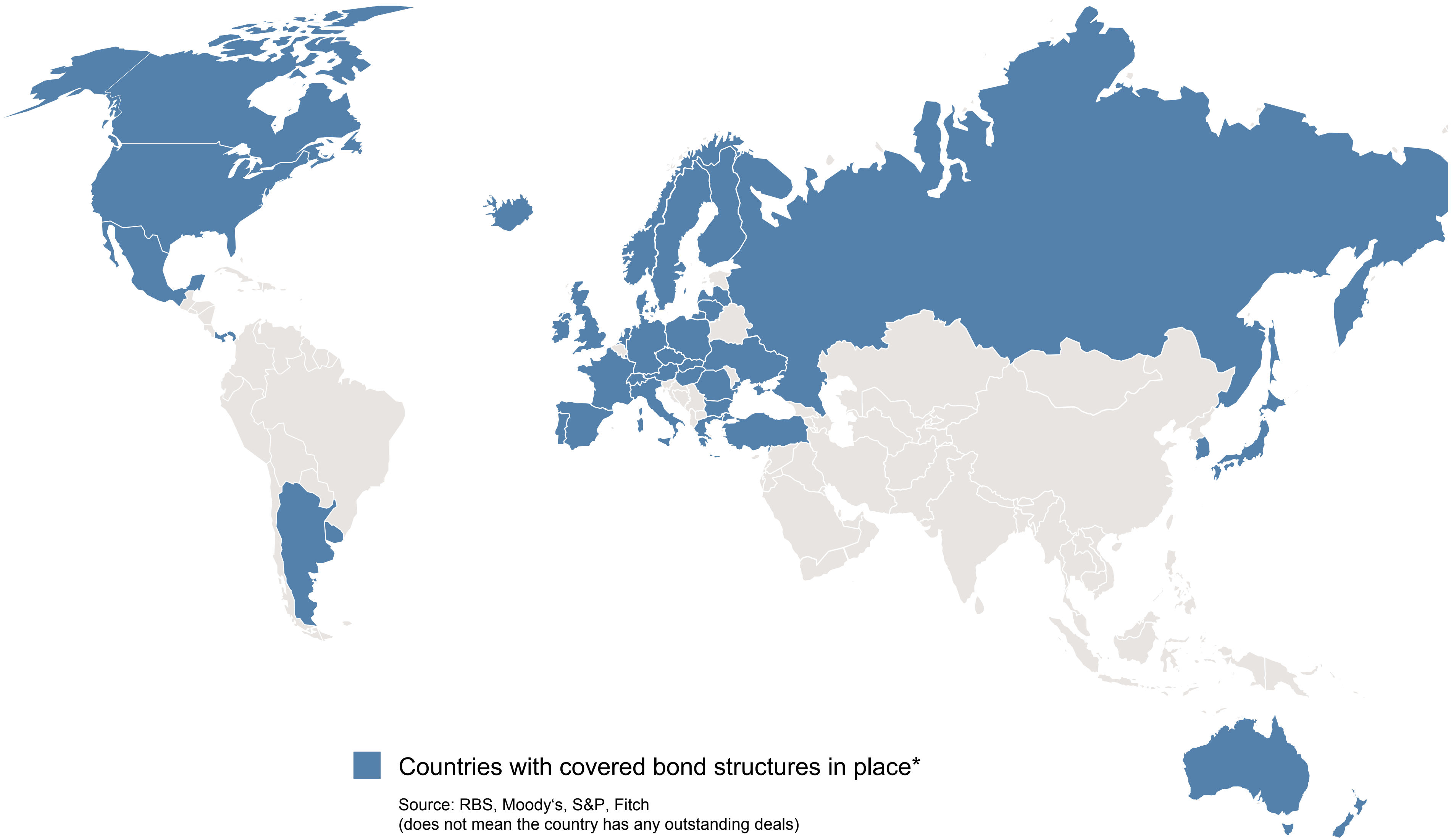
But can they replace senior unsecured funding given…

- structural subordination;
- limited availability of eligible assets;
- rating pressure

The Covered Bond Market

- Outstanding volume of about EUR2,500 billion equivalent
- Used in more than 35 countries
- Well-established in Europe, and also introduced in Canada, Australia, New Zealand, the US and South Korea
- Issued in the way of 40 different products
- Used by more than 300 financial institutions
- Available in at least 20 different currencies

The Covered Bond Universe

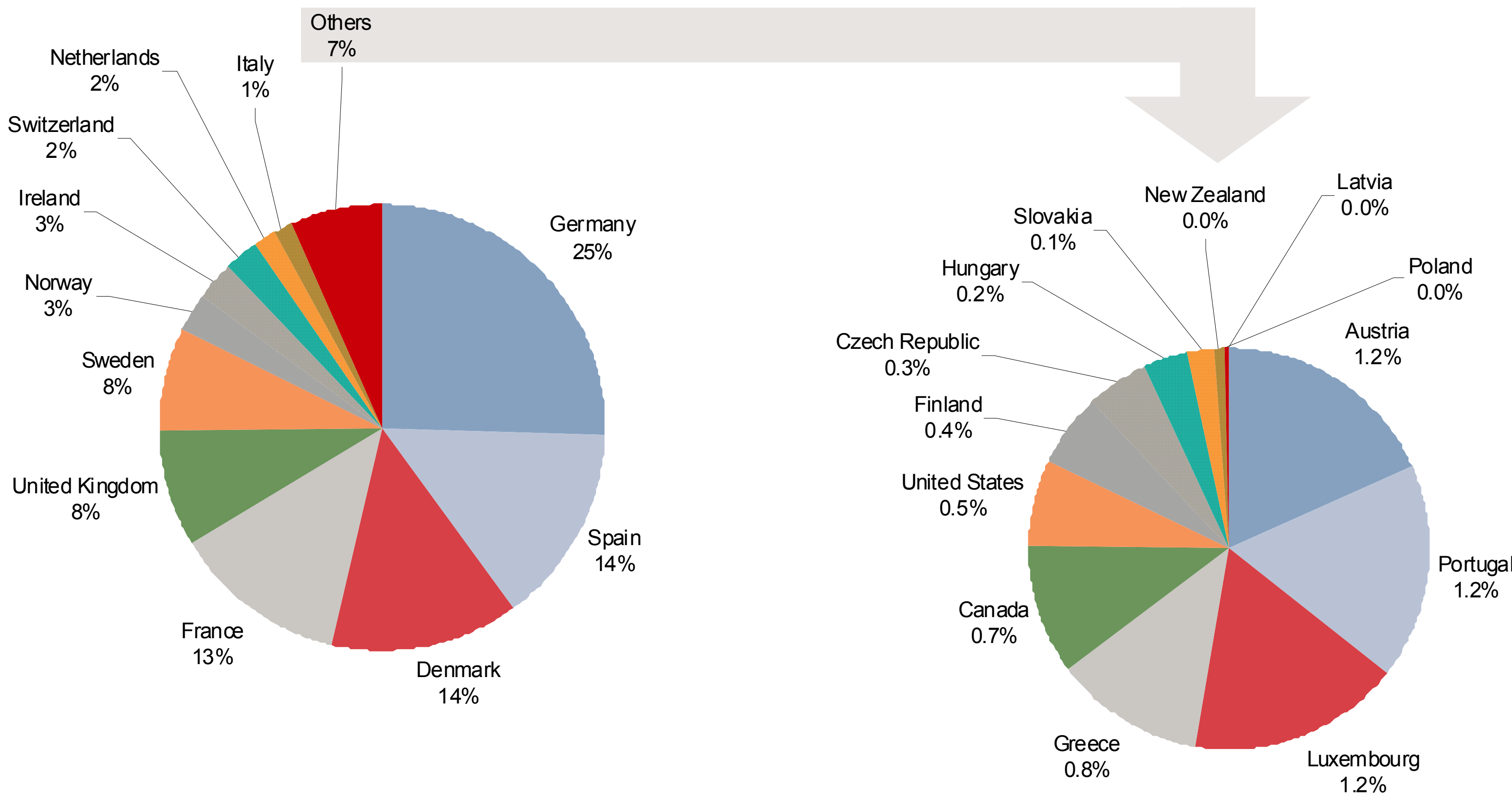


Countries with covered bond structures in place*

Source: RBS, Moody's, S&P, Fitch
(does not mean the country has any outstanding deals)

Total Outstanding Covered Bond Volume

Total Outstanding Volume of €2,504bn



Source: ECBC (Sep 2011; data as of end-2010)

Funding Situation of Banks

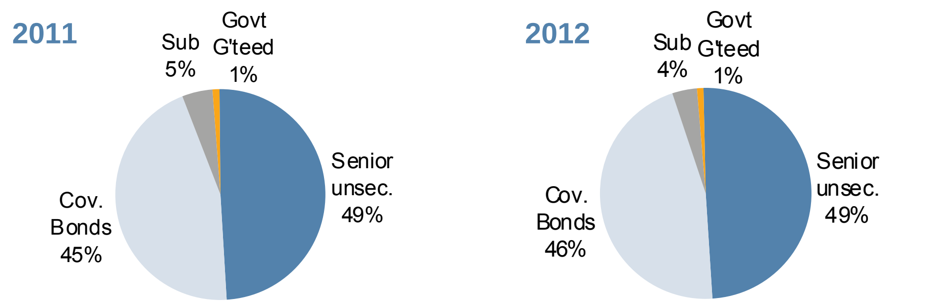
Issuance by European Banks in 2011 & 2012

- 2011 issuance from European banks was €740bn, a drop of €90bn (excl. ABS & short-term debt). Senior unsecured debt accounted for 49% followed closely by covered bonds with 45%.
- In each of the first five months of 2011, senior unsecured issuance exceeded covered bond supply volumes but in the second half of the year the senior unsecured market shut down.
- The ECB's 3-year LTRO has revived issuance from European banks

	Covered Bonds*	GGB	Senior Unsecured	Sub	Total
Jan	54.5	0.1	71.8	2.3	**128.7**
Feb	38.4	1.9	48.3	7.7	**96.3**
Mar	46.7	1.8	55.8	9.3	**113.7**
Apr	19.0	0.1	40.6	3.5	**63.2**
May	34.7	0.8	48.3	3.4	**87.1**
Jun	20.4	1.9	20.0	0.3	**42.6**
Jul	15.8	1.8	12.3	0.2	**30.2**
Aug	25.8	-	13.6	-	**39.4**
Sep	29.9	-	10.6	0.2	**40.7**
Oct	26.1	-	19.5	1.0	**46.6**
Nov	18.3	-	11.7	4.8	**34.8**
Dec	5.0	-	9.1	3.1	**17.2**
Total 2011	**334.7**	**8.3**	**361.6**	**35.9**	**740.4**
Jan	45.3	0.0	44.7	2.5	**92.5**
Feb	17.5	1.4	22.2	2.9	**44.1**

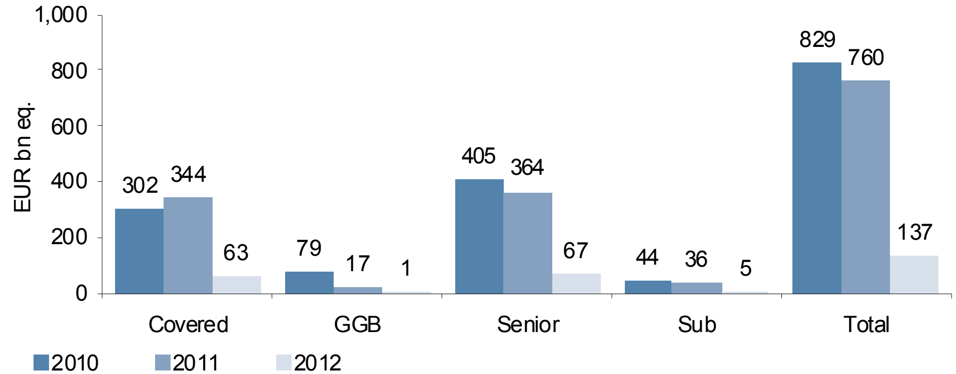
Source: dealogic (as of 20 Feb 2012) (* including non-benchmark and retained deals)

New Issuance by European Banks by Type in 2011 & year-to-date



Source: dealogic (as of 20 Feb 2012)

New Issuance by European Banks by Type since 2010



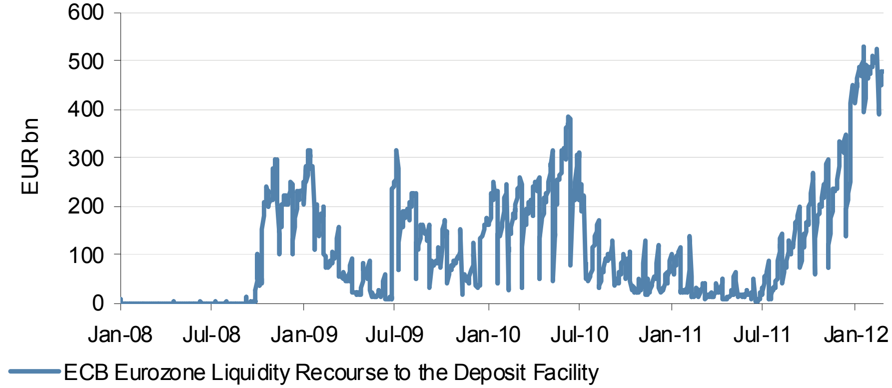
Source: dealogic (as of 20 Feb 2012)

Covered bonds have been the backbone of bank funding

European Banks’ Liquidity Position

- ECB is lender of last resort for banks but not sovereigns.
- Available collateral is only limiting factor (but broader collateral rules).
- Take up in the ECB’s first 3-year LTRO was €489bn of almost two-thirds was shifted from 7-day, 3-month and 1-year repos into the 3-year, resulting in net additional liquidity of €193bn.
- Eurozone banks’ recourse to the deposit facility has increased to an all-time high. How will banks use the additional liquidity?
- According to the ECB, (i) banks borrowing from ECB are not those depositing money at the ECB and (ii) high correlation between a bank’s first LTRO take-up and its Q1 redemption volumes.

Amount of Deposits held with the Eurosystem



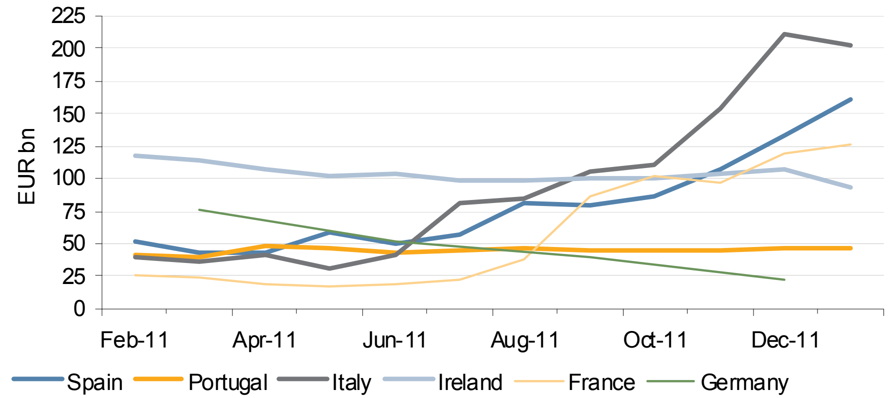
Source: Bloomberg, central banks, RBS

ECB 3-year Long-term Refinancing Operations

Announcement date	20 Dec. 2011	28 Feb. 2012
Allotment date	21 Dec. 2011	29 Feb. 2012
Settlement date	22 Dec. 2011	1 Mar. 2012
Interest rate	average rate of the main refinancing rate over the life of the operation (currently 1%)	
First early repayment date	30 Jan. 2013	27 Feb. 2013
Maturity date	29 Jan. 2015	26 Feb. 2015
Allotment	€489.2bn	€529.5bn
Net liquidity provided	€193.4bn	€314bn (estimate)
No. of participants	523	800

Source: ECB, RBS

Gross Lending by the Eurosystem



Source: Bloomberg, central banks, RBS

The first 3-year LTRO provided €193bn of net liquidity

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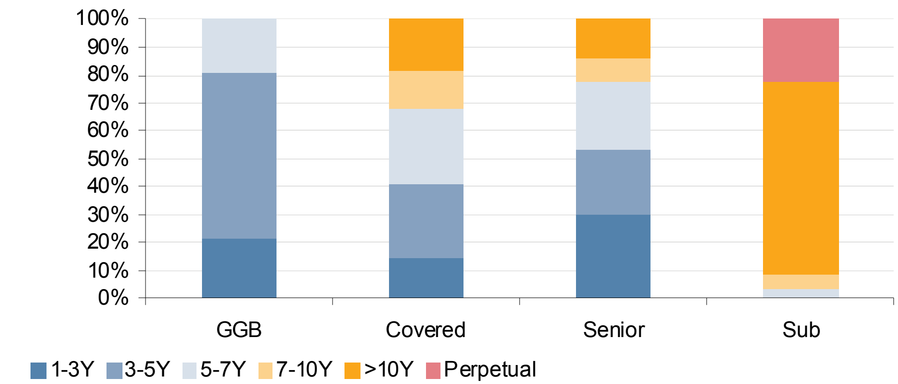
Redemption Profile of European Banks

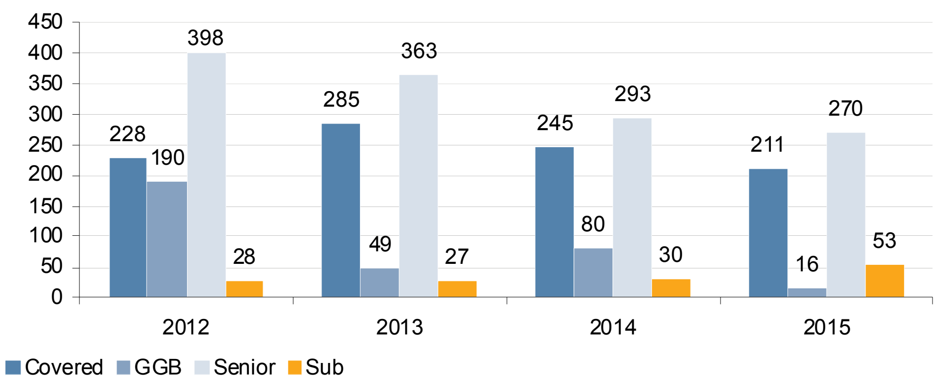
- Banks face market funding redemptions of €845bn equivalent in 2012 of which 27% are covered bonds, 22% GGBs, 48% senior unsecured and 3% subordinated debt.
- In the first three months, average monthly redemption volumes exceed €100bn.
- Banks need reliable long-term funding sources – also to fulfil upcoming regulatory requirements under Basel III (i.e. the NFSR).
- Covered bonds have traditionally been a medium to long-term funding instrument (59% of issuance in 2010 & 2011 was 5 years or longer) whereas senior unsecured is a short to medium term funding source (54% of issuance in 2010 & 2011 was below 5 years).

2010 & 2011 Issuance by European Banks by Type & Maturity



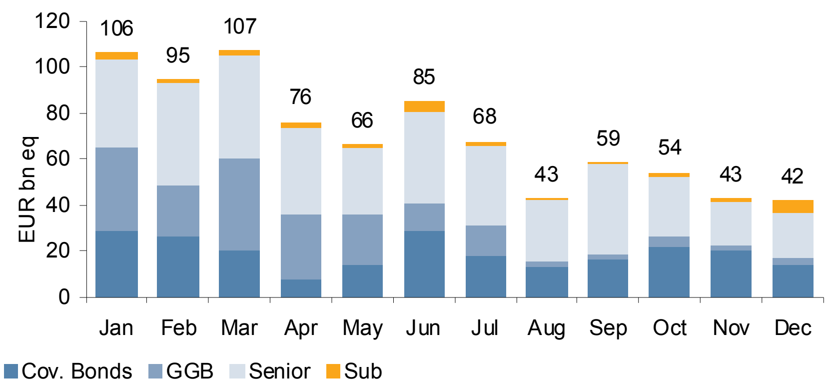
Source: dealogic (as of 30 Dec 2011)

Redemption Volumes of European Banks in 2012 – 2015



Source: dealogic (as of 30 Dec 2011)

Redemption Volumes of European Banks in 2012



Source: dealogic (as of 30 Dec 2011)

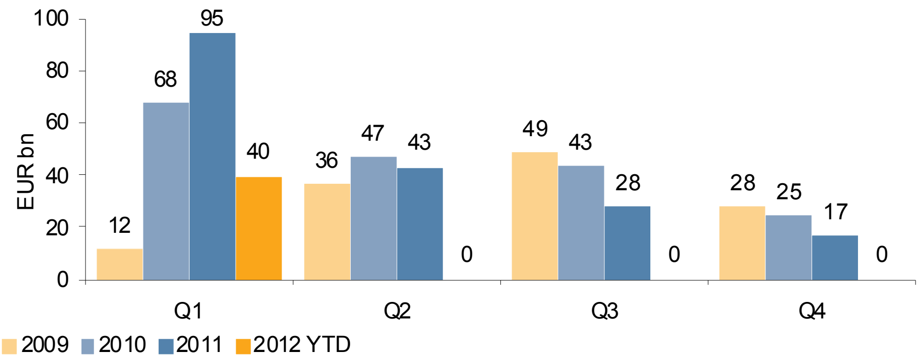
Covered bonds provide medium & long-term funding

Covered Bond Issuance 2012

Covered Bond Benchmark Issuance 2012

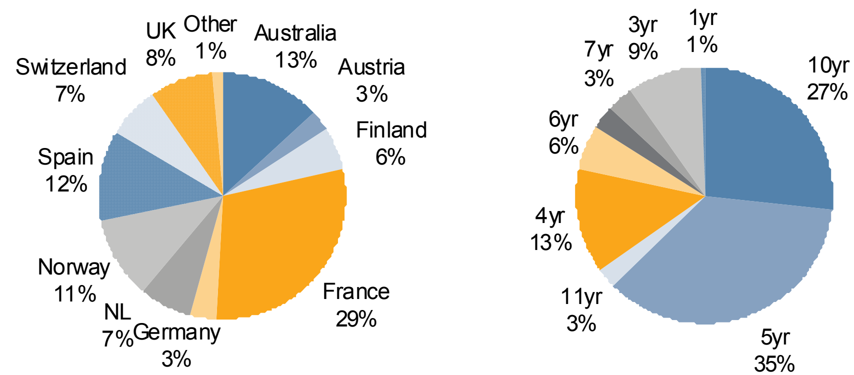
- Strong supply so far this year totalling more than €40bn (plus £7bn Sterling supply and $6.5bn of USD issuance)
- 41% was issued from outside of the Eurozone. French supply has also been strong accounting for about a third of year-to-date supply but also some issuance out of Spain up to 5 years
- Focus on 5-year maturities and the long-end of the curve
- CBPP2 has been supportive so far with average central bank participation in eligible deals at close to 20%.
- However, issuance wave due to:
  - The two 3y LTROs and the broadening of the collateral eligibility criteria, de facto eliminating liquidity risk for banks
  - High upcoming redemption volumes of bank paper
  - Investors (particularly insurers) being traditionally cash rich at the beginning of the year

Historical Quarterly € Benchmark Supply



Source: Bloomberg, central banks, RBS

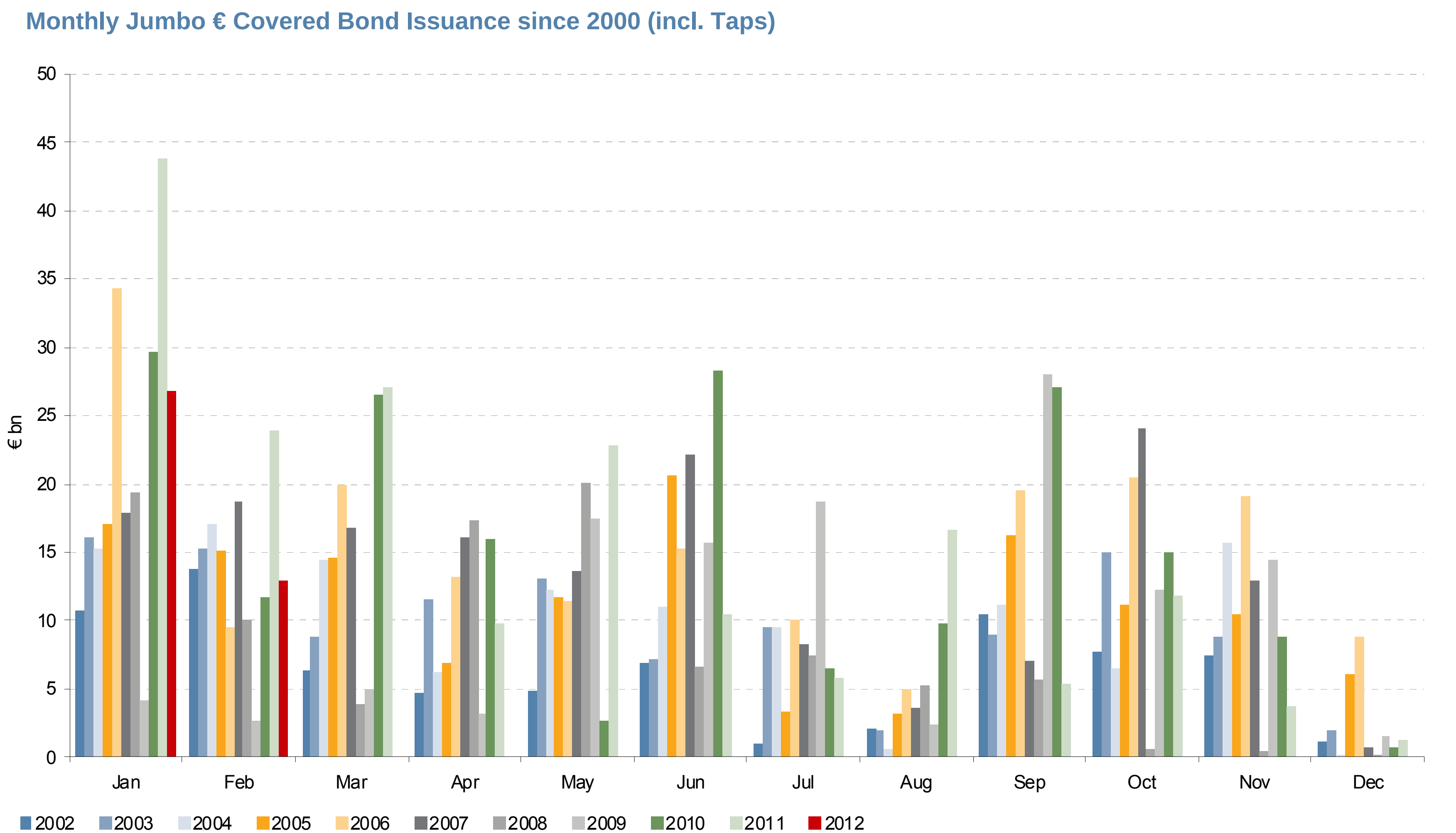
Composition of Year-to-date € Benchmark Supply



Source: Bloomberg, RBS (as of 20 Feb 2012)

Year-to-date supply mainly out of save-havens and with long maturities

Strong supply but not as strong as in 2011

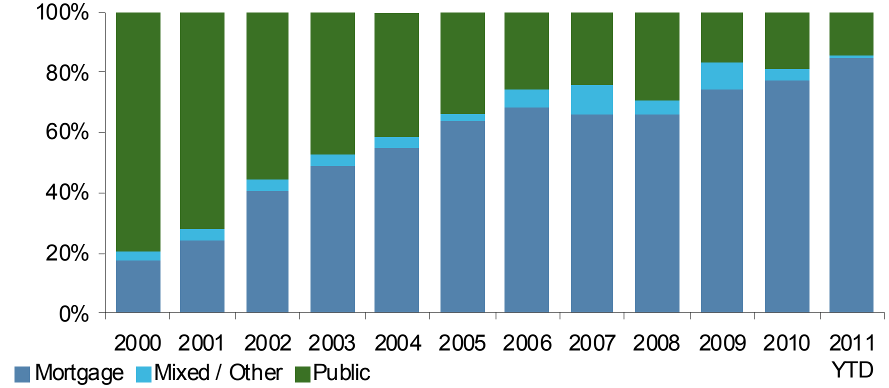


Source: RBS (as of 20 Feb 2012)

Strong Supply Has Been Driven By Different Factors

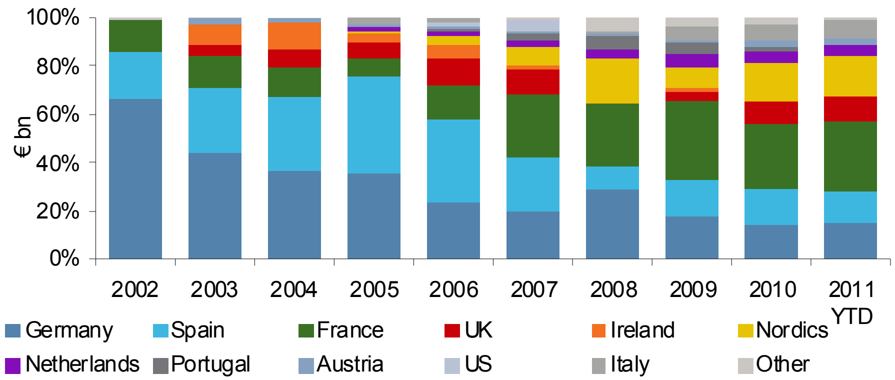
- Share of public sector backed covered bonds expected to decline further due to lower funding needs of the issuers in this low-margin business following significant asset reductions
- Funding needs at the longer end of the curve will increase throughout the year, partly because of ratings driven ALM requirements.
- More and more countries are active in the covered bond market

Annual € benchmark covered bond supply by type



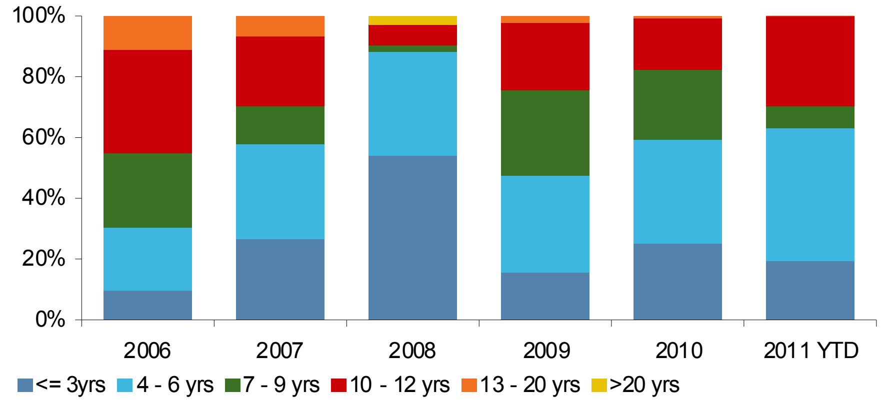
Source: RBS

Annual € benchmark covered bond supply by country



Source: RBS

Annual € benchmark covered bond supply by maturity

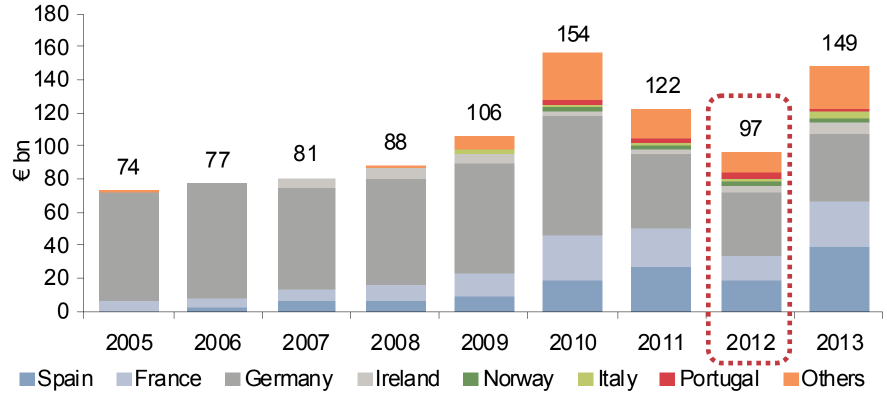


Source: RBS

€ Benchmark Redemptions Breakdown

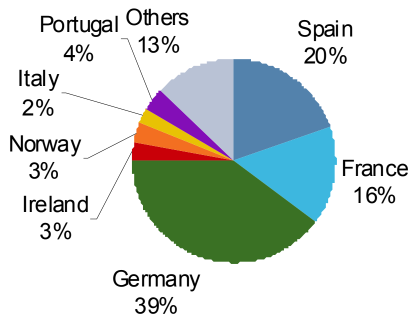
- The 2012 redemption volume for € benchmark transactions will be less than €100bn versus redemptions of €122bn in 2011.
- In addition, €93bn in EUR non-benchmark bonds will redeem in 2012 making it a total volume of €190bn (excluding Danish and Swedish CBs in domestic currencies).
- The peak in redemption flows will be in Q1.
- Public sector CB redemptions represent 41% of 2012 redemptions
- Given our supply forecasts for 2012 of €150-200bn, net supply will be about €50-100bn

Annual € Benchmark Covered Bond Redemptions



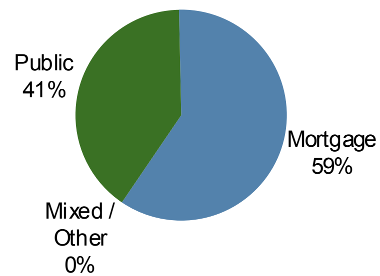
Source: RBS

Redemptions in 2012 by Country



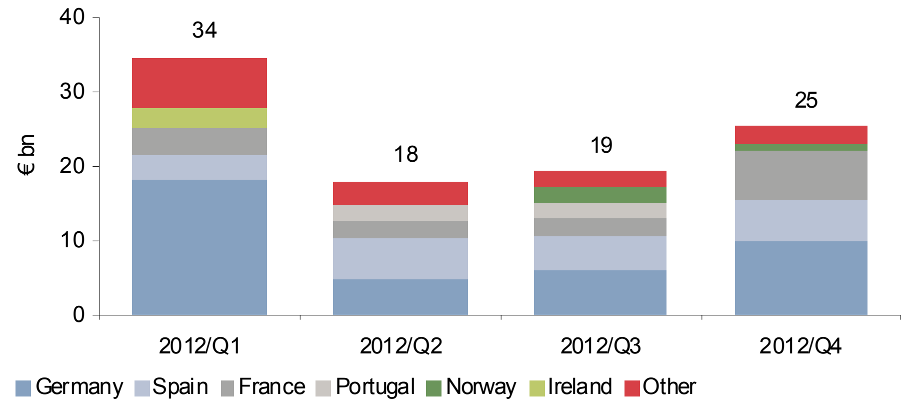
Source: RBS

Redemptions in 2012 by Type



Source: RBS

2012 € Benchmark Covered Bond Redemption by Quarter



Source: RBS

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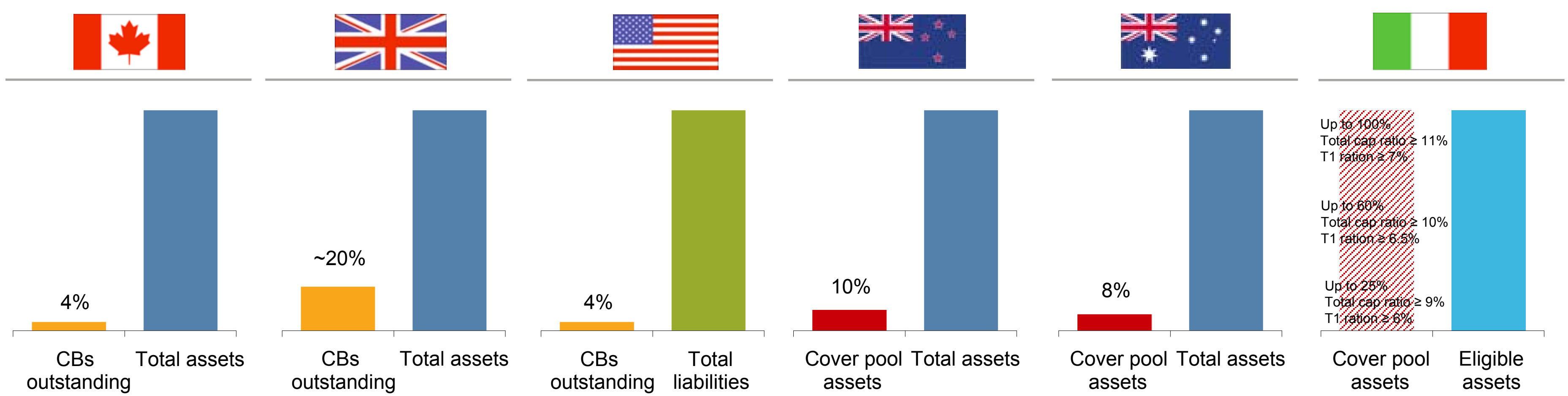
Asset Encumbrance

Asset Encumbrance

- Asset Encumbrance (AE) includes all assets that are pledged or reserved to secured creditors - not only covered bonds but also repos, securitisation, derivatives etc.
- The higher the AE ratio, the larger the risk of structurally subordinating unsecured creditor
- Missing transparency about full degree of AE
- Focusing only on covered bonds distorts overall AE situation
- Higher capital requirements partly offset structurally subordination of senior unsecured investors
- Modest AE could even be credit positive – only excessive AE is problematic

Covered Bond Issuance Limits

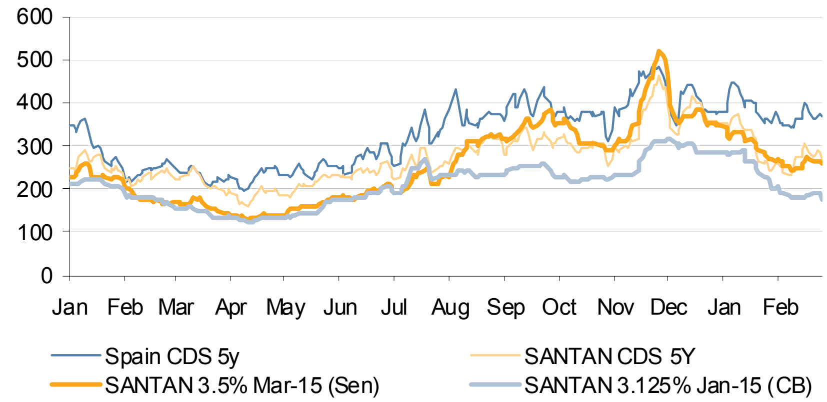
- **Canada** Covered bonds issuance limited to 4% of total assets.
- **UK** Since 2008 regulated banks must notify the FSA in advance of any transaction that will be executed for which collateral will be required. The FSA monitors asset encumbrance on a holistic basis and makes assessments on a case-by-case basis. Where the FSA becomes concerned with the level of a bank's encumbered assets, supervisory action may occur (most likely in form of higher capital requirements). As a general indication of the FSA's tolerance level, the FSA's approach prior to 2008 may be considered whereby banks were required to enter into discussions with the FSA once covered bond issuance approached 20% of a bank's total assets.
- **US** To be in line with the Policy Statement of the FDIC, the total outstanding volume of the covered bonds shall not exceed a level of 4% of the liabilities of the issuer or sponsor bank.
- **Netherlands** Bank dependent, regulators have limited the ratio of outstanding covered bonds to total assets to a 'healthy' level.
- **New Zealand** Cover pool size is limited to 10% of total assets.
- **Australia** Cover pool size is limited to 8% of total assets in Australia. The cap is tested before each CB issuance (rather than continuously) and does not prevent the issuer to transfer additional assets to the pool after CB issuance.
- **Italy** The ratio of assets that can be transferred to the SPV vs the total eligible collateral assets on the issuer's balance sheet depends on its capital ratios. The higher the capital ratio the lower restrictions the issuer is facing.
- **Spain** Mortgage covered bonds limited to 80% of eligible mortgages, public sector covered bonds limited to 70% of the eligible public loans.
- **Belgium** In the upcoming Belgium CB market the BNB will follow an issuer-by-issuer approach while closely following the individual use of covered bonds.
- **Switzerland** Initially the Banking Commission imposed a maximum limit of 20% of the mortgage portfolio. In the meantime the commission has switched to an issuer-by-issuer model allowing for higher levels



Limits can refer to outstanding covered bond volumes, cover pool size vs. total assets, eligible assets, or total liabilities

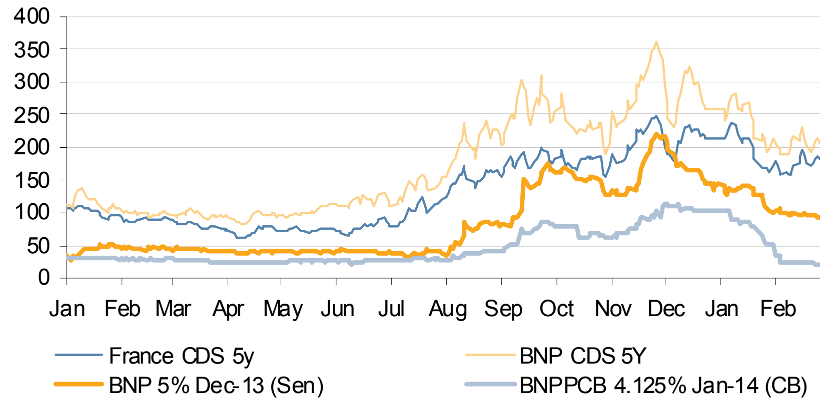
Covered Bonds vs Senior Unsecured Bank Debt vs CDS

Spain: Santander



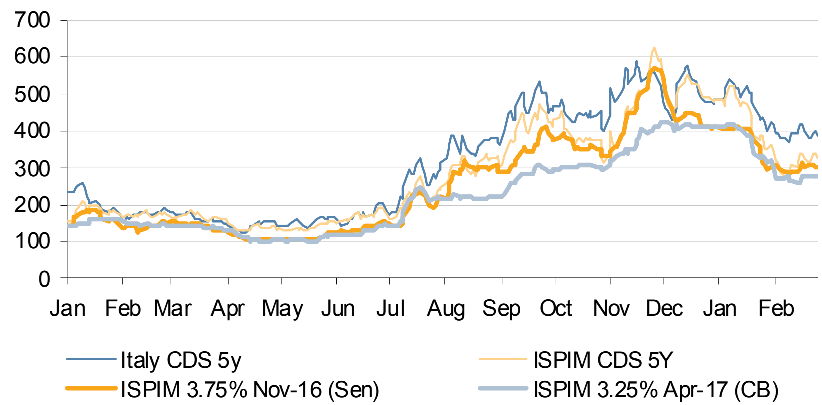
Source: RBS, MarkIt

France: BNP Paribas



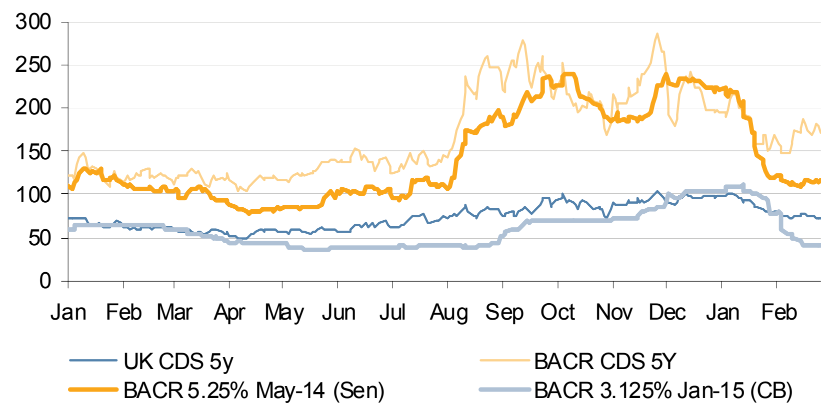
Source: RBS, MarkIt

Italy: Intesa Sanpaolo



Source: RBS, MarkIt

UK: Barclays



Source: RBS, MarkIt

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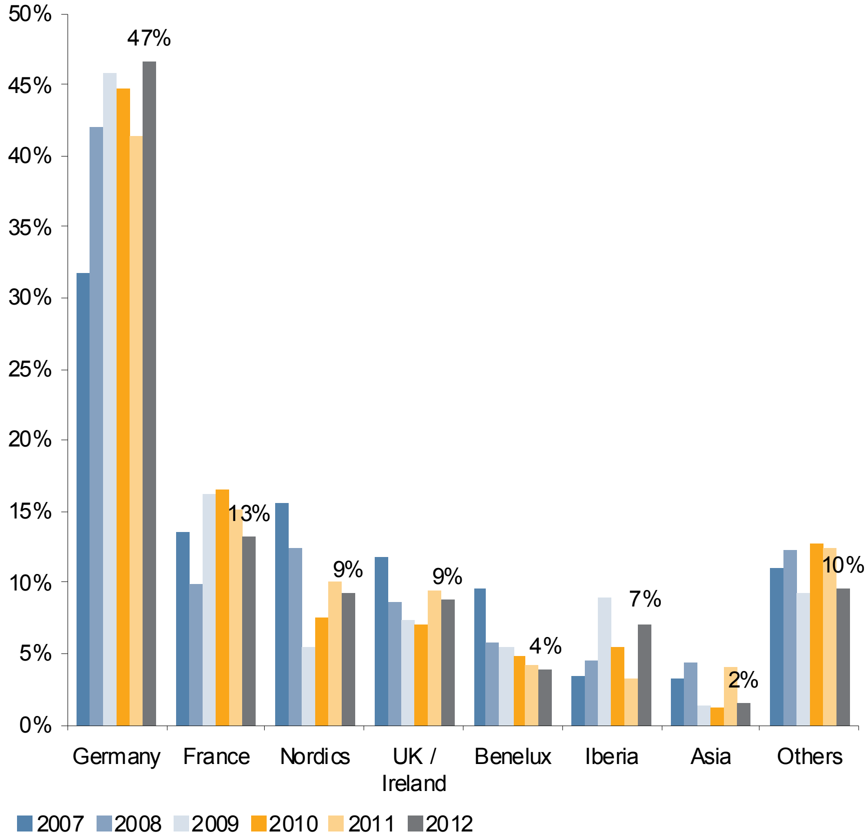
Investor Trends

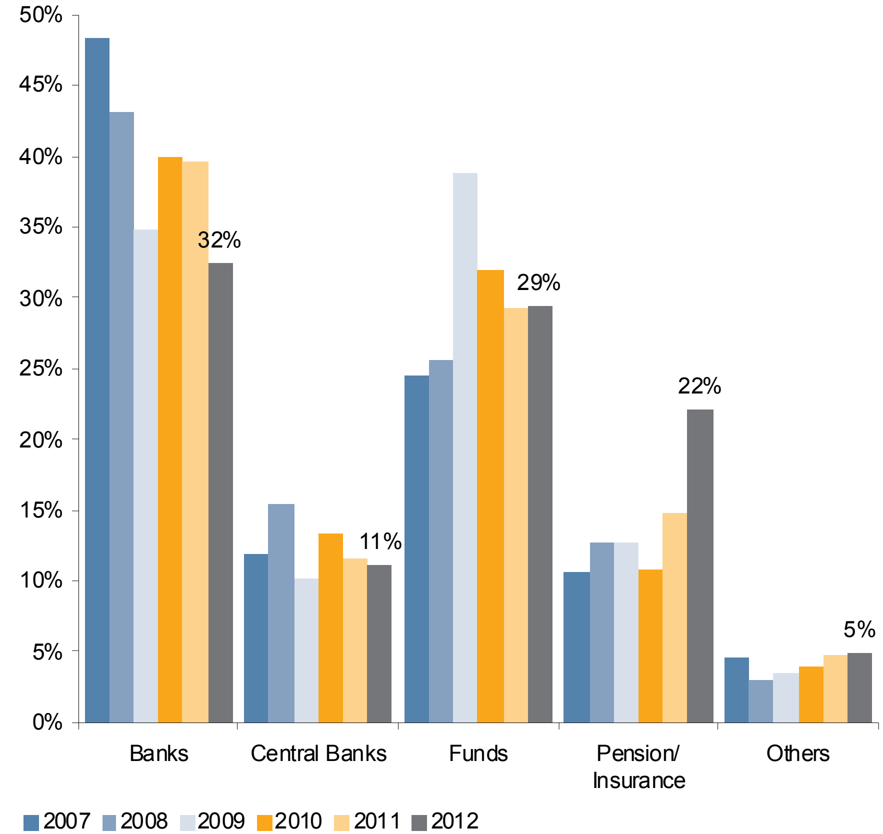
Investor Analysis by Region and Type

€ Benchmark Covered Bond Investors by Country



Source: RBS

€ Benchmark Covered Bond Investors by Type of Investor



Source: RBS

Nordic accounts shifted demand from French to German/Swiss and “domestic” covered bonds

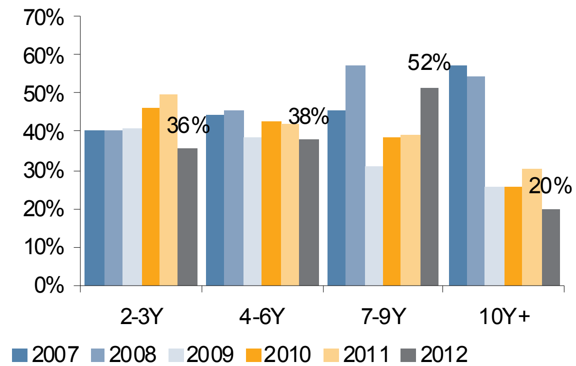
Investor Analysis by Type and Maturity

Generally speaking…

- **Banks** prefer shorter to medium-term maturities up to 5 years and are primarily swap-spread driven.
- **Fund managers** have an appetite across the maturity spectrum up to ten years and to a lesser extent for longer tenors. They are spread and/or yield driven and many are also index driven.
- **Central banks** usually demand shorter maturities up to three years and are typically yield driven*
- **Pension & Insurance companies** prefer longer maturities beyond ten years and are mostly driven by yield but also indices

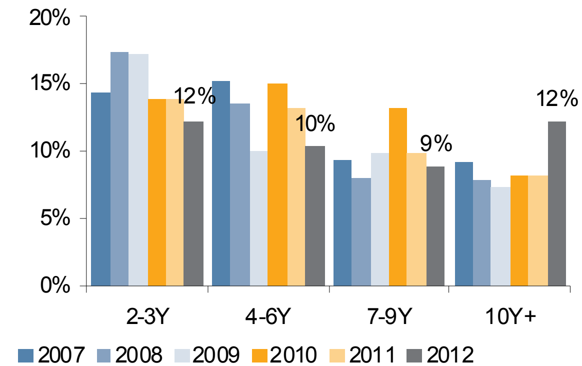
* Central banks' take-up in the 4 to 6-year and 7 to 9-year buckets saw a sharp increase in 2010. This is probably due to the ECB purchase programme under which bonds with tenors of 3 to 10 years were targeted. CBPP2 will increase the share of central bank demand over the next 12 months.

Bank investor distribution by maturity



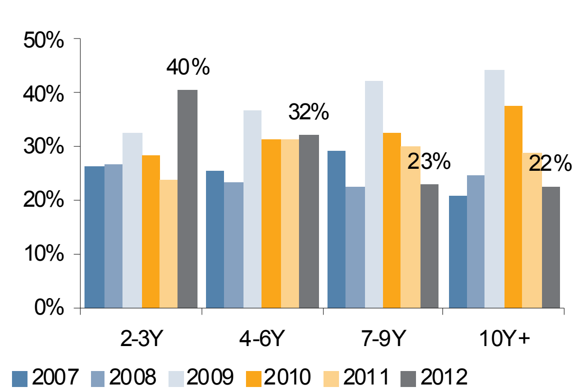
Source: RBS

Central bank distribution by maturity



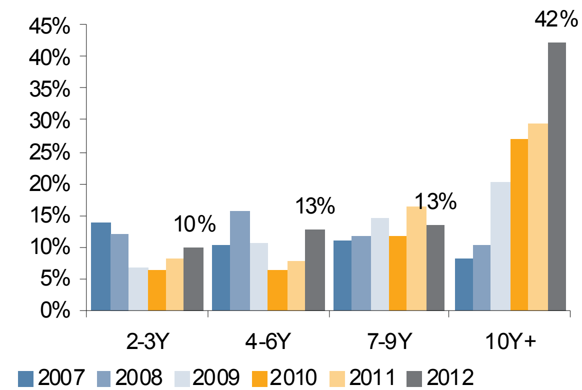
Source: RBS

Fund manager distribution by maturity



Source: RBS

Pension Funds/Ins. distribution by maturity



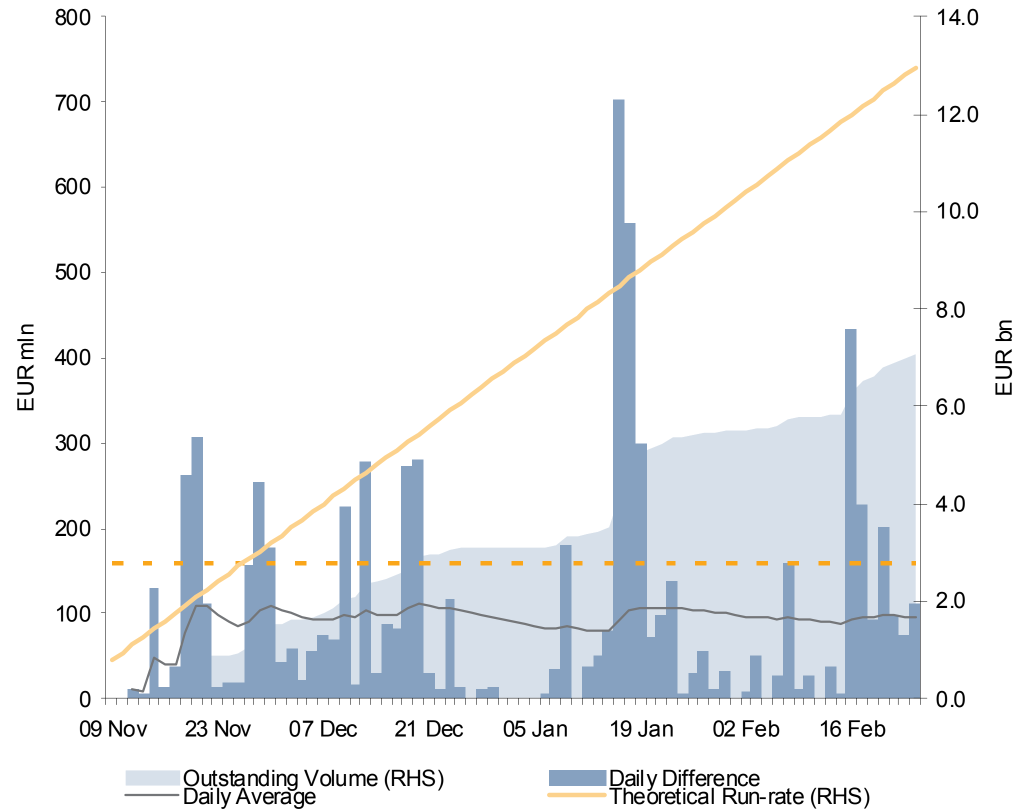
Source: RBS

RBS

Purchase Volumes under CBPP 2

- As of 24 February 2012, the outstanding amount of covered bonds bought under the CBPP2 by the Eurosystem was €7.089bn. This is an average daily purchase volume of €97.2mln.
- Surprisingly, as of the end of January, only 40% of the purchase volume were bought in the primary market.
- The ECB plans to buy €40bn by the end of October 2012. This equals an average weekly purchase volume of €769mln and an average daily amount of €160mln. The gap between the theoretical daily run-rate of €160mln and the actual buying volume is currently €5.9bn.

Purchase Volumes under CBPP2



Source: ECB, RBS

Significant gap between theoretical and actual purchase volumes

Investor Analysis – Who is buying what?

German investors show the strongest appetite for non-domestic deals while the others prefer issuers out of their home countries

The average number of accounts in the order books had almost doubled from 57 before '09 to 105 in 2009 while the average order size had almost halved from €44m to €25m.

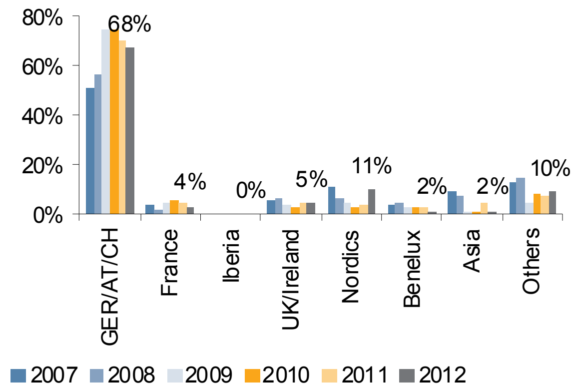
While the average number of accounts has dropped to 85 in 2011, the average order size has slightly increased to €21m.

Changes in Order Books

	2006 - 2008	2009	2010	2011
Average deal size (€bn)	1.45	1.19	1.01	1.05
Average # of orders per deal	57	105	88	85
Average volume of orders (€mn)	44	25	18	21

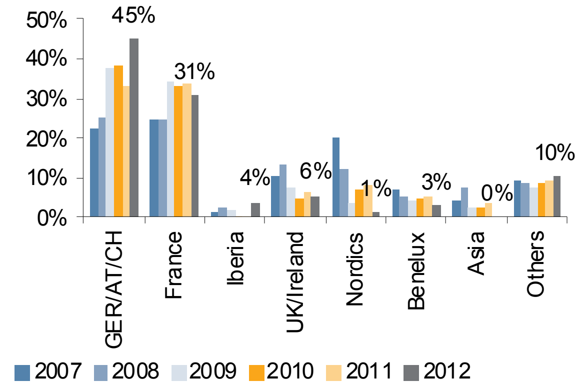
Source: RBS

Investors of German/Austrian/Swiss CBs



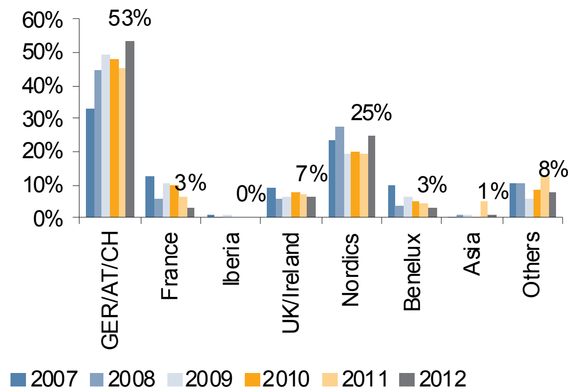
Source: RBS

Investors of French Covered Bonds



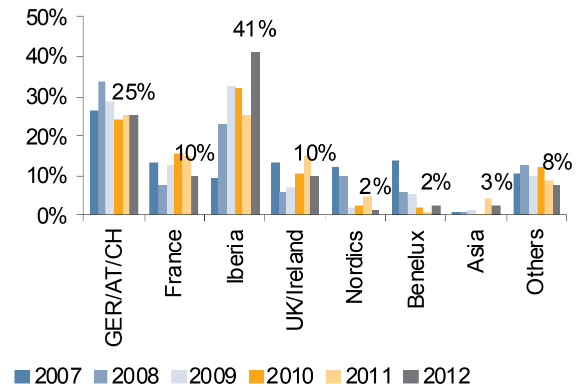
Source: RBS

Investors of Nordic Covered Bonds



Source: RBS

Investors of Spanish Cédulas



Source: RBS

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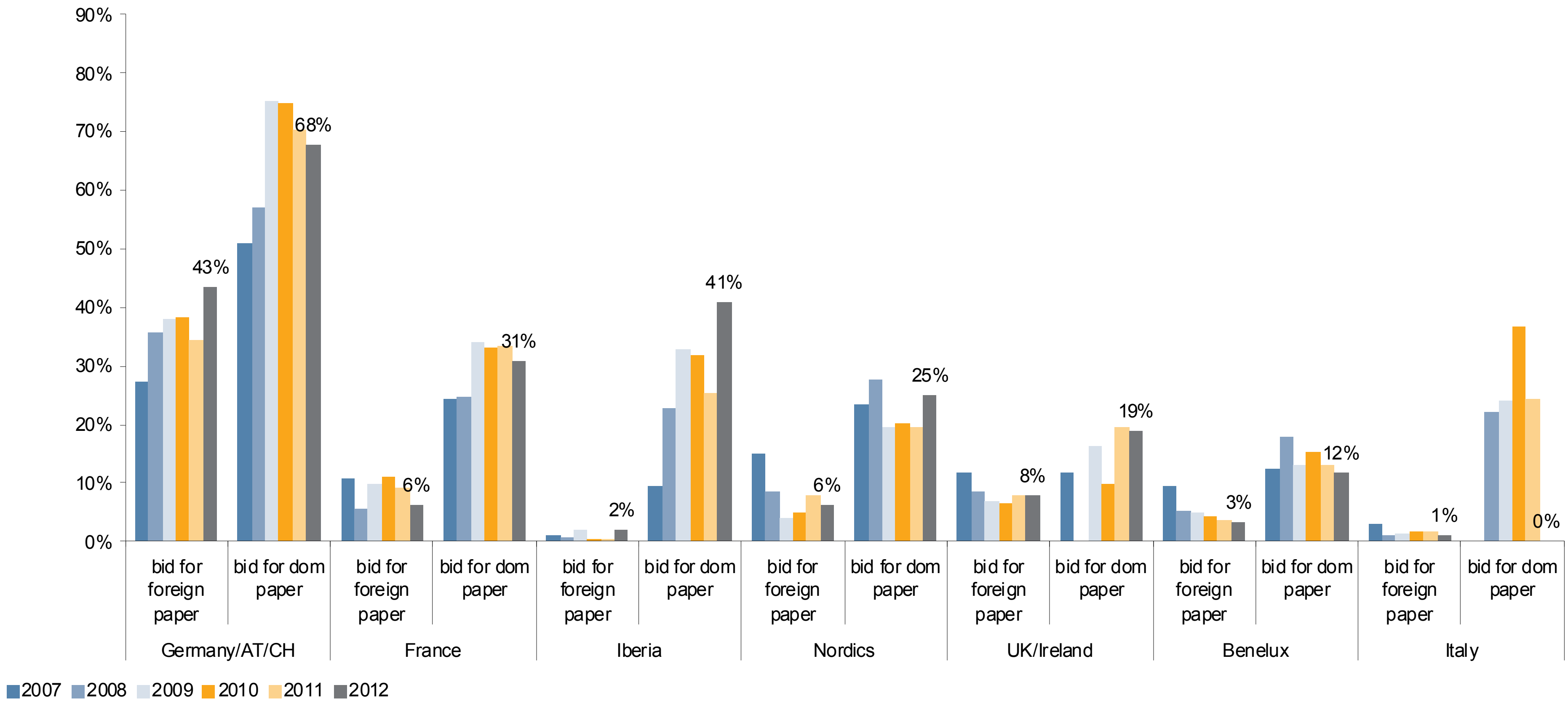
The Rising Relevance of the Domestic Bid

Domestic bid drives new deals



Source: RBS, based on publicly available allocation stats

Is there an over-reliance on domestic demand?

Rating Agencies

The Linkage of the Covered Bond Rating to the Issuer Rating

The covered bond ratings are constrained by the credit ratings of the issuer and the respective linkage factor

S&P's Covered Bond Categories

		Category 1			Category 2			Category 3		
Asset-Liability Mismatches	**Zero**	**Low**	**Moderate**	**High**	**Low**	**Moderate**	**High**	**Low**	**Moderate**	**High**
Issuer Rating	**Un-restricted**	**+7 notches**	**+6 notches**	**+5 notches**	**+6 notches**	**+5 notches**	**+4 notches**	**+5 notches**	**+4 notches**	**+3 notches**
AAA to AA-	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA
A+	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AA+
A	AAA	AAA	AAA	AAA	AAA	AAA	AA+	AAA	AA+	AA
A-	AAA	AAA	AAA	AA+	AAA	AA+	AA	AA+	AA	AA-
BBB+	AAA	AAA	AA+	AA	AA+	AA	AA-	AA	AA-	A+
BBB	AAA	AA+	AA	AA-	AA	AA-	A+	AA-	A+	A
BBB-	AAA	AA	AA-	A+	AA-	A+	A	A+	A	A-

Fitch's Discontinuity Factor (excluding up to two notches of rating uplift for recoveries)

Issuer rating	5-Year PD (%)	90	80	70	60	50	40	30	20	10	8.75	5	0
AAA	**0.030**	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA
AA+	**0.094**	AA+	AA+	AA+	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA
AA	**0.203**	AA	AA	AA+	AA+	AA+	AA+	AAA	AAA	AAA	AAA	AAA	AAA
AA-	**0.255**	AA-	AA	AA	AA	AA+	AA+	AA+	AAA	AAA	AAA	AAA	AAA
A+	**0.501**	A+	A+	AA-	AA-	AA-	AA	AA	AA+	AAA	AAA	AAA	AAA
A	**0.561**	A+	A+	A+	AA-	AA-	AA	AA	AA+	AAA	AAA	AAA	AAA
A-	**0.787**	A-	A	A	A+	A+	AA-	AA-	AA	AA+	AA+	AAA	AAA
BBB+	**1.016**	BBB+	A-	A-	A	A+	A+	AA-	AA	AA+	AA+	AAA	AAA
BBB	**1.582**	BBB	BBB+	BBB+	BBB+	A-	A	A+	AA-	AA	AA+	AA+	AAA
BBB-	**3.361**	BBB-	BBB-	BBB	BBB	BBB	BBB	BBB+	A	AA-	AA-	AA	AAA

Moody's Timely Payment Indicators

Issuer Rating	Very Improbable	Improbable	Probable	Probable-High	High	Very High
Aaa to A1	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa
A2	Aa1	Aa1	Aaa	Aaa	Aaa	Aaa
A3	Aa2	Aa2	Aaa	Aaa	Aaa	Aaa
Baa1	Aa3	Aa3	Aa1	Aa1	Aaa	Aaa
Baa2	A1	A1	Aa2	Aa2	Aa1	Aaa
Baa3	A3	A2	A1	Aa3	Aa2	Aa1

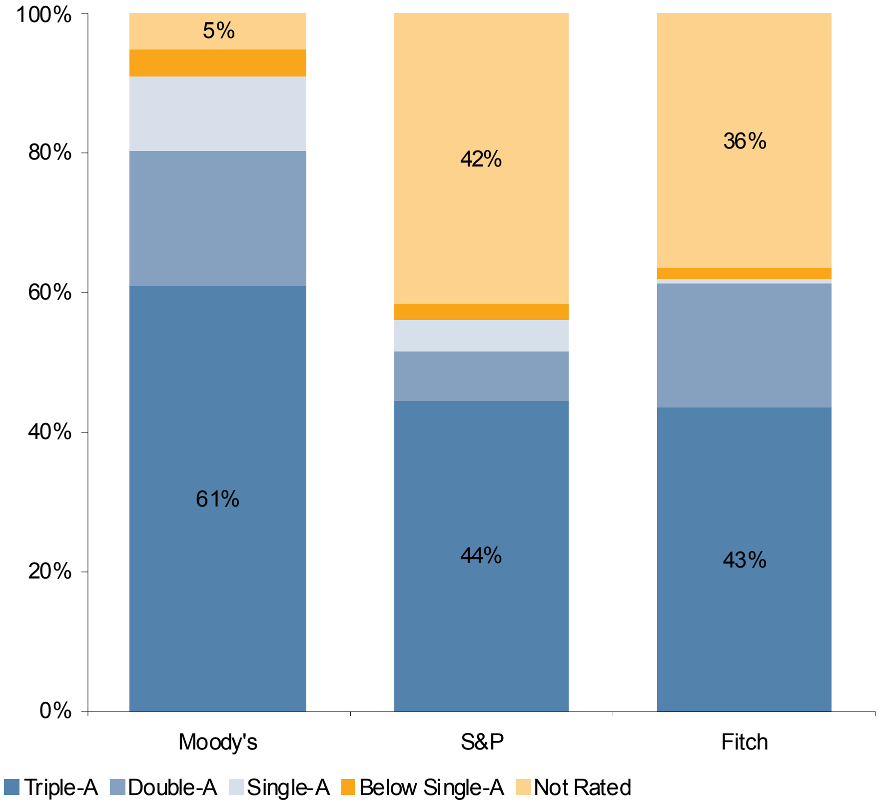
Sovereign Caps for Covered Bonds

		S&P		Moody's		Fitch	
Country	Type	Sovereign Rating	CB Rating Cap	Sovereign Rating	CB Rating Cap	Sovereign Rating	CB Rating Cap
Ireland	Public Sector	BBB+	A-	Ba1	n/a	BBB+	n/a
	Mortgage		AA+		n/a		AA
Italy	Public Sector	BBB+	A-	A3	Aa2	A-	n/a
	Mortgage		AA+		Aa2		n/a
Portugal	Public Sector	BB	BB+	Ba3	Baa1	BB+	n/a
	Mortgage		A		Baa1		A
Spain	Public Sector	A	A+	A3	Aa2	A	n/a
	Mortgage		AAA		Aa2		AA-

Source: RBS, Moody's, S&P and Fitch

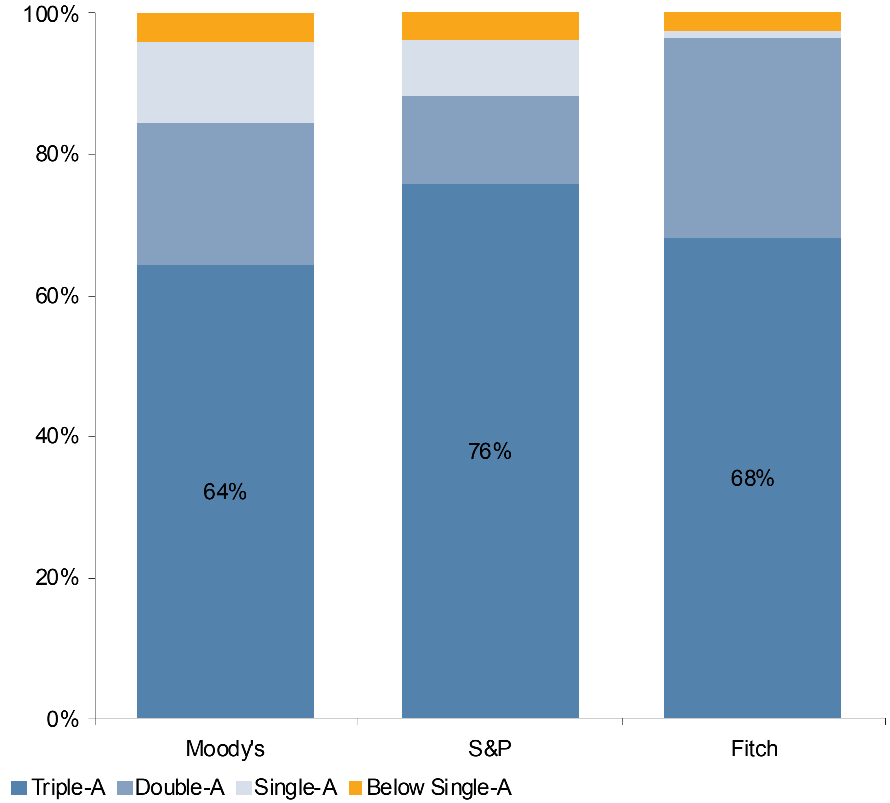
Covered Bond Rating Overview

Rating Overview (volume-weighted; including non-rated bonds)



Source: RBS, Bloomberg

Rating Overview (volume-weighted; excluding non-rated bonds)



Source: RBS, Bloomberg

Moody’s has highest market but (now) lowest share of triple-A rated covered bonds

Regulatory Support

Strong Regulatory Support for Covered Bonds

- Low risk weighting under CRD
- Favourable treatment under Solvency II
- Eligible liquid buffer assets
- No bailing-in of covered bonds under new restructuring laws in the UK, DK, Germany, most likely the EU
- Favourable repo treatment by central banks (in particularly by the ECB; even own covered bonds are eligible)
- ECB purchase programmes only for sovereign debt and covered bonds

Our Recommendations for 2012

EUR Covered Bond Swap Spread Matrix

- Gap between safe havens and periphery covered bond has tightened but remains elevated
- French covered bonds remain wide, so do UK covered bonds relative to our safe haven names

Covered Bond Swap Spread Matrix

	2-3Y	4-6Y	7-8Y	9-10Y	10Y+
Public sector Pfandbriefe	+7	+41	+40	+30	
Mortgage Pfandbriefe	+8	+28	+29	+38	
Obligations Foncières	+61	+111	+119	+140	+153
French CBs	+31	+78	+95	+109	+115
Cédulas Hipotecarias	+249	+313	+457	+432	+495
Cédulas Territoriales	+176	+221			
UK CBs	+57	+109	+109	+125	+131
Swedish CBs	+7	+29		+48	
Danish CBs		+56	+70	+73	
Norwegian CBs	+1	+41	+61	+60	
Dutch CBs	+56	+66	+70	+92	+80
Mortgage ACS	+668	+694			
Public sector ACS	+126	+241	+276		
Obrigações Hipotecárias	+741	+924	+679		
Obbligazioni Bancarie Garantite	+254	+280	+293	+270	+274

Source: RBS (as of 02 Mar 2012)

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Trade Recommendations for 2012

LTRO short-term positive but underlying sovereign risks remain:

- The 3-year LTROs significantly reduce liquidity risk for banks. It buys time and has a positive market impact – at least in the short-term but increases refinancing risk in 2015.
- The liquidity does not solve the underlying sovereign problems. Even Greece's target debt-to-GDP ratio of "close to 120%" would most likely be not sustainable. Portugal will most likely also need a PSI and additional support form the Eurozone.
- We remain negative on the periphery in the medium-term, and recommend to stay in non-Eurozone names such as:
  - UK Covered Bonds
  - Canadian Covered Bonds
  - Australian Covered Bonds
  - Scandinavian names
  - Swiss Covered Bonds
- Current spread levels in periphery are maybe a opportunity to take profit

We recommend to remain defensive in covered bonds.

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The Covered Bonds – The Holy Grail of Banking Funding?

“But choose wisely,
for while the true Grail will bring you life,
the false Grail will take it from you “

Grail Knight to Indiana Jones

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