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Dutch covered bonds

Embracing extendable maturities

As the market for Dutch covered bonds continued to develop, it has proven itself as one of the best performing covered bond markets in the past two years. Against a backdrop of central bank purchases, factors such as the strengthened regulatory regime, improved housing market conditions, favourable rating agency developments and moderate supply conditions, have firmly supported Dutch covered bond spreads. Yet, market circumstances have become more challenging, while a certain spread dichotomy between pass-through and bullet bonds seems to have emerged.

With the amendments to the Dutch covered bond legislation coming into force at the beginning of last year, developments in the field of Dutch covered bonds have not slowed down. The Dutch conditional pass-through market expanded last year after the successful launch of Van Lanschot's and Aegon Bank's inaugural covered bonds, while Dutch hard bullet issuers have jumped on the bandwagon to mitigate the refinancing risks on their covered bonds via soft bullet maturity structures rather than liquidity provisions.

Although the changes to the Dutch covered bond legislation have been rating neutral, rating agency methodology changes have been favourable to Dutch covered bonds. SNS Bank's soft bullet covered bond programme made its long-awaited return to the AAA rating bucket, while the other bullet programmes saw the cushion of their covered bond ratings against any future issuer rating pressure improve.

Moreover, market sentiment regarding Dutch covered bonds has undeniably been encouraged by the improved housing market developments in the Netherlands. The average LTV ratios for some programmes, are now back below the 80% level, while collateral pool performance characteristics have improved, supported by stricter eligibility criteria under the amended legislation. Collateral pool fundamentals are also positively affected by the stricter mortgage market criteria implemented in the past few years.

In the meantime, the slower covered bond supply conditions in the Dutch market has not changed markedly, with the general funding need of banks not likely to expand rapidly, the stronger focus on private placements coming at the expense of public supply and capital and bail-in buffer considerations favouring non-covered debt issuance. € benchmark redemptions payments will also decline this year to €2bn.

All in all, after 2014's impressively strong performance, Dutch covered bonds widened by 6bp wider last year, outperforming the non CBPP3 supported alternatives, but ranking somewhere in the mid in terms of performance strength versus other CBPP3 supported core European markets. Market circumstances have become more challenging, primarily for the more expensive CBPP3 eligible alternatives, which will weigh on the performance prospects for Dutch covered bonds this year.

At the same time, the spread differences between Dutch bullet covered bonds and conditional pass-through alternatives have become more notable, particularly versus the newcomers in the pass-through market. Besides structural features, differences in the systemic importance of the issuing banks and the lesser investor familiarity with the smaller size new issuers in the conditional pass-through space play a role, in our view. However, if the current volatile market conditions ease, we expect this spread to narrow.

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Introduction

The Dutch covered bond market continues to develop

Since our August 2014 report on Dutch covered bonds (*Finessing fundamentals*, 11 August 2014), the Dutch covered bond market has remained subject to important developments. The amended regulatory regime for covered bonds in the Netherlands came into force on 1 January 2015, the year the Dutch benchmark covered bond market celebrated its 10th anniversary. The Dutch covered bond market also successfully welcomed two other newcomers in the conditional pass-through space last year, Van Lanschot and Aegon Bank, while traditional hard bullet issuers have been embracing soft bullet maturities as a means to reduce refinancing risks and avoid the penalizing liquidity reservation consequences involved with hard bullet maturities. Furthermore, rating agency methodologies have been subject to further changes on the back of to the Bank Recovery and Resolution Directive (BRRD), positively affecting Dutch covered bonds.

The amendments to the Dutch legislation create a very robust legal backbone

The first chapter discusses the amended **regulatory framework** that came into force on 1 January 2015. The Dutch regulator has done its utmost to align the regulatory requirements for Dutch covered bonds with the developments on a European level, including the EBA's July 2014's best practice proposals. The most important changes made to the Dutch covered bond legislation, include the introduction of the minimum nominal overcollateralization requirement of 5%, a 100% coverage requirement upon application of the 80% LTV cut-off percentages for residential mortgage loans prescribed by the CRR, and a 180 day liquidity rule, covering interest payments and (for hard bullet covered bonds) redemption payments due over a period of six months. The criteria for asset eligibility were also strengthened, while the minimum rating requirement for the issuance of covered bonds has been removed. The role of the asset monitor was formalised while the healthy ratio continues to subject issuers to soft asset encumbrance restrictions. With the requirement that, upon registration, the bank has to submit a plan for the management of the cover assets in the event of an issuer default, the post issuer insolvency administration features of Dutch covered bonds were reinforced, while issuers are now also subject to regulatory reporting requirements to investors

The programme differences are most evident for bullet covered bonds versus CPTCB

The chapter on **programme characteristics** gives a detailed overview of the structural differences between the Dutch covered bond programmes. We make no reference to the structured covered bond programme of Achmea Hypotheekbank as the issuer no longer has € benchmark covered bonds outstanding. Due to the absence of € benchmark covered bonds, also ING Bank's soft bullet covered bond programme is not discussed. Among the six registered Dutch covered bond programmes mentioned in this report, the structural differences are most evident between the bullet covered bonds and the conditional pass-through covered bonds. These differences stretch beyond the maturity extension feature, and include asset segregation characteristics, minimum overcollateralization commitments of 15% and 10%, respectively, features tackling commingling risks and set-off risks and the consequences of a breach of the programme tests. But even the conditional pass-through covered bond programmes have important differences. In the case of NIBC Bank and Van Lanschot the legal transfer of the mortgage loans to the CBC takes place via *sale* and *assignment*, whereas Aegon Bank (in line with the Dutch bullet programmes) transfers the assets via *assignment*. NIBC Bank tackles commingling risks via a collection foundation account, while Van Lanschot and Aegon Bank do not. All three conditional pass-through programmes commit to a minimum mortgage interest rate on the transferred loans, but this percentage is higher for NIBC Bank (3% versus 1.5% for Van Lanschot and 1% for Aegon Bank) and has Asset Cover Test implications if reset below this level. Neither of the three programmes have swaps in place, while all three can use them. Van Lanschot and Aegon Bank provide for the option to use interest rate swaps and portfolio swaps. Also the bullet covered bond programmes have distinct features. SNS Bank's programme stands out for its collection foundation account and a commingling risk reservation under the Asset Cover Test. The issuer also commits itself to an overcollateralization level in line with a Aaa rating at Moody's, irrespective of the actual rating of the covered bonds at this rating agency. ING Bank is the only issuer making use of automated valuation models (AVM) to calculate the original loan-to-market value on its mortgage loans, while ABN AMRO Bank qualifies mortgage receivables as defaulted (i.e. not eligible) if they have been in arrears for more than three months, rather than six months.

The housing market related policy changes improve cover pool fundamentals

In the chapter on **collateral pool resilience** today's housing market developments are discussed. The Dutch housing market is still recuperating from the price correction that started in 2008. Our economists expect that house prices will continue to rise on the back of stronger consumer confidence and improved housing affordability. For some programmes the average indexed loan-to-value ratios have returned to a level below 80%. Pool delinquencies remain low and have improved on the back of the introduced regulatory requirements. The 100% owner occupied and fixed rate loan characteristics of Dutch mortgage receivables, the solid social security system in the Netherlands and improving unemployment rates are supportive to the loan performance. Housing market related policy measures in recent years, such as the introduction of LTV caps, limitations to the tax advantage on mortgage interest payments and restrictions on interest only loans, will also enhance cover pool and covered bond fundamentals longer term.

The AAA ratings for Dutch covered bonds underscore their solid fundamentals

The **rating agencies** chapter discusses the view of Moody's, Fitch and S&P on Dutch covered bonds. All Dutch covered bonds are nowadays Aaa/AAA/AAA rated again, confirming the rating agencies' comfort with Dutch bank and covered bond fundamentals. Dutch bullet covered bonds have a Timely Payment Indicator (TPI) of "Probable" at Moody's, a D-Cap of 4 at Fitch, while S&P's jurisdictional support assessment is "Strong". By designing their programmes in such a way that payments on the assets can be passed-through to investors if redemption obligations cannot be met at the maturity date, the Dutch conditional pass-through programmes obtain a D-Cap of 8 at Fitch, while the potential uplift granted by S&P's collateral support analysis can exceed four notches. The most recent rating methodology revisions furthermore improved the average cushion against issuer rating pressure for Dutch covered bonds and facilitated the return of SNS Bank's covered bonds to the AAA equivalent rating segment.

Dutch covered bond supply remains subdued

In the chapter on **supply and demand dynamics** we show that at the end of 2015, the Dutch covered bond market had a €61bn size, of which €41bn was issued in benchmark debt. Covered bond supply did rise again last year, but remains low compared to the years 2010-2012 reflecting the lower funding need of banks. The moderate supply conditions are not expected to change notably this year, with the general funding need of banks expected to rise only modestly and banks expected to focus more on subordinated and senior issuance over covered bonds. On the demand side central bank participation in Dutch covered bonds issued since the start of CBPP3 came mainly at the expense of allocations to banks and the insurer and pension fund investor base.

Performance has been strong, but the relative performance potential is limited from here

The chapter on the **secondary performance** confirms the impressive performance of Dutch covered bonds compared to other core European market in 2014 and their relative performance resilience in 2015. The changes to the Dutch covered bond legislation, the improvement in the Dutch housing market conditions, the more favourable trend in Dutch covered bond ratings and the limited supply in Dutch covered bonds have all enhanced their performance strength. However, market circumstances have become more challenging for covered bonds in the second half of 2015, and in recent months even more so for the expensive CBPP3 supported covered bonds. In our view, this will restrict the performance potential of Dutch covered bonds versus other jurisdictions, although we do see some scope for converge in the pass-through space once sentiment improves.

Dutch regulatory framework

Regulatory background

The Dutch covered bond rules were initially structured in line with existing contractual arrangements…

The Dutch regulatory framework for the issuance of covered bonds initially came into force on 1 July 2008. The primary purpose of the introduction of a regulatory regime for the issuance of covered bonds in the Netherlands was to create a level playing field for Dutch banks issuing covered bonds in terms of risk weight treatment and exposure limits. The Dutch covered bond rules were structured in such a way that all contractual covered bonds that had been issued to that date would fit into the legal framework. However, as the covered bond rules were included in secondary legislation, the possibilities to subject Dutch covered bond issuers to additional requirements were restricted.

…but the rules have been upgraded to strengthen the supervisory regime

In order to strengthen the supervisory regime with respect to covered bonds, the Dutch government amended the Financial Supervision Act in 2014 raising the legal framework for covered bonds to the level of law. The new regulatory regime came into force on 1 January 2015 per Decree 534 of 11 December 2014. The issuance of Dutch covered bonds is now regulated via the Amendment Act Financial Markets of 19 November 2014, published on 5 December 2014,[1] the Amendment Decree Financial Markets 2015 of 28 November 2014, published on 19 December 2014,[2] and the Ministerial Regulation amending the Regulation Implementing the Financial Supervision Act on Registered Covered Bonds of 9 December 2014, published on 17 December 2014.[3]

Asset segregation

Assets have to be transferred to a separate legal entity, i.e. the Covered Bond Company

The asset segregation features protecting covered bondholders in the case of bankruptcy of the issuing bank and giving them preferential rights over other bondholders regarding the cover assets broadly remain the same. In order to secure cover assets in favour of the covered bondholders, the assets have to be transferred to a separate legal entity, i.e. the Covered Bond Company (CBC). This legal entity is established to isolate the cover assets from the other assets of the bank and is exclusively permitted to perform activities essential for the category of registered covered bonds.

The Covered Bond Company can, but is no longer obliged, to give a right of lien over the cover assets to another separate legal entity (the Security Trustee), that represents the interests of the covered bondholders. To ensure the bankruptcy remoteness of the Covered Bond Company, the issuing bank or other entities belonging to the same group, are not allowed to hold shares in, or have control over the policy of, this legal entity. The manager of the Covered Bond Company has to be a trust office licensed in the Netherlands, or a foreign legal entity subject to similar regulatory requirements. The Dutch Central Bank is responsible for supervising this trust office, also post issuer default.

The Covered Bond Company can enter into agreements for the administration and management of the cover assets, as well as for liquidity and risk management purposes. These include derivative contracts, servicer agreements, asset monitor agreements and management agreements, or any other necessary agreements related to the registered covered bonds and in the interest of the covered bondholders. The Covered Bond Company is allowed to make payments associated with these agreements. However, it is not permitted to engage in any action resulting in payment obligations ranking senior or equal to its coupon and redemption obligations to the covered bondholders, unless the action is related to the management, risk management, payment and administration of the registered covered bonds and the assets securing them. The key activities of the

[1] Wijzigingswet financiële markten 2015, nr 472

[2] Wijzigingsbesluit financiële markten 2015, nr 524

[3] Wijziging van de Uitvoeringsregeling Wft ter zake geregistreerde gedekte obligaties, FM 2014/1900 M

Covered Bond Company have to be specified in the articles of association of the entity. The Covered Bond Company also has to commit to support only one category of registered covered bonds, even if the articles of association do not explicitly specify this.

Irrespective of the asset segregation requirements under the Dutch covered bond legislation discussed in this paragraph, other issuance and asset segregation models are not specifically ruled out. If, as a consequence of market innovations, an alternative safe structure is considered to adequately secure the cover assets for the purpose of covered bondholders, this can be regulated at a later stage via a ministerial regulation upon consultation with the Dutch Central Bank (DNB).

Categorization and asset eligibility

Registered covered bonds are UCITS52(4) and CRR compliant

The Dutch covered bond legislation no longer provides for a distinct description for *"covered bonds"* versus *"registered covered bonds"*. Only the latter are defined by the law. Dutch **registered covered bonds** are *UCITS52(4) compliant*. This means that collective securities investment enterprises (CSIEs) and life- and non-life insurers are allowed to have exposure to one issuing bank of 25% and 40% respectively, compared to 10% or 5% for normal bonds. The covered bond rules are also fully aligned with *Article 129 of the CRR,* facilitating preferential risk weight treatment for banks holding the bonds.

Categorization

Upon registration issuers have to specify the major contractual features…

Upon request for registration of a category of registered covered bonds, the issuing entity has to specify to the Dutch Central Bank which conditions are applicable for the category of registered covered bonds. These comprise the contractual features backing the issuance of covered bonds under the registered programme, including the size of the programme, the rights and obligations of the Covered Bond Company, the rights of the covered bondholders, the type of cover assets and the risk management procedures. However, to enhance transparency to investors and to avoid that registered covered bonds that differ structurally are issued from the same programme, the bank has to specify at least the following conditions:

…such as the redemption structure of the covered bond,…

- The **redemption structure** of the covered bond: i.e. is the covered bond a *hard bullet* or a *soft bullet* covered bond, or does it have a *pass-through* redemption structure? More specifically the redemption structure allows for a distinction between two types of registered covered bonds:

  - *Regular covered bonds*: covered bonds with a hard bullet maturity structure or with a soft bullet maturity structure with an extension period up to 24 months.

  - *Pass-through covered bonds*: covered bonds with an extendible maturity structure of more than 24 months (conditional pass-through or pass-through).

  Hard and soft bullet covered bonds with an extension period up to 24 months can be issued under the same programme, but (conditional) pass-through covered bonds with an extension period of more than 24 months have to be issued under a different programme for covered bonds.

…the type of cover assets…

- The type or types of **primary cover assets** used as collateral, and if a combination of residential and commercial mortgage assets is used, the ratio of these assets.

…and the country where they are located

- In which **country** the debtors of the cover assets are located and by what law the cover assets are covered.

Programme conditions cannot be changed post registration

The issuing entity needs to make sure that covered bonds, registered within a specific category, continue to fulfil the conditions specified by the issuer upon registration.

Fig 1 Existing types of Dutch covered bonds

Type	Issuer
Structured Covered Bonds	Achmea Hypotheekbank
Registered covered bonds (CRR Art 129-compliant)	
Regular (hard bullet)	
(soft bullet)	ING Bank (SB programme), SNS Bank
(soft and hard bullet)	ABN AMRO Bank, ING Bank
Conditional pass-through	NIBC Bank, Van Lanschot, Aegon Bank

Source: ING

Primary cover asset eligibility criteria

Cover assets are defined as assets that, in the case of a default of the issuer, are allocated with priority to the covered bondholders to meet the coupon and redemption obligations of the registered covered bonds.

The **primary cover assets** securing the covered bonds can consist of:

- Exposures to or guaranteed by central governments, central banks, public sector entities, regional governments or local authorities in the EU;
- Exposures to or guaranteed by AA- or better rated central governments, central banks, multilateral development banks, public sector entities, regional governments or local authorities outside the EU;[4]
- Residential mortgage loans up to an LTV of 80%, and CRR eligible guaranteed housing loans;
- Commercial mortgage loans up to an LTV of 60%;[5]
- Ship loans up to an LTV of 60%.

Senior securitization notes do not qualify

Senior securitization notes do *not* qualify as primary cover assets. Issuers should in principle only secure the covered bonds with one type of primary cover assets. However, banks can opt to include both residential and commercial mortgage loans as primary assets as long as they predetermine a fixed proportion or a bandwidth for the ratio between the residential and commercial mortgage loans. The bandwidth should not undermine the “fixed relationship” requirement between the two asset types.

Assets have to be located in the EU or in countries with similar supervisory requirements

To ensure that the sale or liquidation of the cover assets is enforceable, the debtor of the cover assets, as well as the collateral securing these assets should be located in the European Union (EU) or within another member state of the European Economic Area (EEA). Also assets located within a jurisdiction, that according to the European Commission applies prudential supervisory and regulatory requirements at least equivalent to those applied in the European Union, are eligible as cover assets.[6]

Registered covered bonds can only be secured by CRR eligible asset types

With these requirements the Dutch regulator introduced strong collateral pool restrictions that were non-existent under the previous covered bond rules, improving transparency to investors. The asset eligibility criteria reduce the substitution risks for Dutch collateral pools, irrespective of the strict asset requirements that were already laid down in the existing programme documentation and the potential reputational consequences of programme amendments allowing for weaker asset types. By aligning the asset eligibility criteria with the CRR also uncertainty regarding the preservation of the CRR eligibility of Dutch covered bond programmes has been reduced. We consider it a strong positive that

[4] Exposures with a (second best) AA- equivalent rating or better are credit quality step (CQS) 1 exposures.

[5] The LTV ratio for commercial loans can exceed the 60% cap under the CRR up to 70% if the value of the assets pledged as collateral for the covered bonds exceed the nominal amount outstanding on the covered bonds by at least 10% and the bondholders’ claim takes priority over *all* other claims on the collateral.

[6] Countries and territories applying supervisory and regulatory arrangements to credit institutions equivalent to those applied in the European Union are: Australia, Brazil, Canada, China, Guernsey, Hong Kong, India, Isle of Man, Japan, Jersey, Mexico, Monaco, Saudi Arabia, Singapore, South Africa, Switzerland and USA.

the Dutch regulator specifically decided against expanding the scope of the eligible primary assets beyond the CRR eligibility criteria. If Dutch banks were to decide to issue covered bonds against aircraft loans, SME loans, corporate loans, credit card receivables or leasing receivables, they would only be able to do so in structured covered bond format. We do note however, that the regulator always has the option to expand the asset eligibility criteria at any future point in time via ministerial regulation.

Asset coverage

A minimum 5% nominal overcollateralization percentage is required

The Dutch covered bond rules oblige issuers to ensure that the value of the cover assets is at least 105% of the nominal value of the registered covered bonds issued. However, even more restrictive than the **5% nominal overcollateralization requirement**, is the **100% asset coverage requirement**, which recognizes the eligible assets securing the covered bonds only up to their respective CRR LTV cut-off percentages. Based upon the current LTV distribution of the residential mortgage loans in Dutch collateral pools this requirement results in a nominal overcollateralization level of 15% at an 80% LTV cut-off.

Under the previous Dutch covered bond rules, it was already the case that the cover assets had to be sufficient to pay coupon and redemption obligations on the covered bond as well as administrative costs and management fees under the covered bond programme. Although this *implicitly* required issuers to keep a certain amount of overcollateralization for administrative costs or management fees, the introduction of a) the *explicit* regulatory minimum 5% overcollateralization percentage and b) the 100% coverage requirement recognizing LTV restrictions, in our view, strengthened the regulatory security to investors. Issuers will always have to fulfil these minimum regulatory requirements. Banks typically do commit to higher overcollateralization levels under their programme documentation, among others for rating agency purposes, but a regulatory requirement remains the best protection mechanism against programme amendments that weaken the overcollateralization commitment.

Substitute cover assets are allowed up to 20%

Primary cover assets are recognized at their *nominal value* under the aforementioned collateralization requirements. However, to meet the asset coverage requirements, the issuing entity is also allowed to include **substitute cover assets** up to 20% of the nominal value of the covered bonds outstanding. Substitute cover assets are recognized at their *market value* in line with IRFS or Dutch GAAP, and consist of:

- Exposures to or guaranteed by central governments, central banks, public sector entities, regional governments or local authorities in the EU;
- Exposures to or guaranteed by AA- or better rated central governments, central banks, multilateral development banks, public sector entities, regional governments or local authorities outside the EU.[7] Public sector exposures outside the EU rated A+ to A- are eligible up to 20% of the covered bonds outstanding;[8]
- Exposures to AA- or better rated institutions up to 15% of the covered bonds outstanding and exposures to institutions with a maturity of less than 100 days that have at least an A- rating. Exposures to A- to A+ rated institutions could be allowed up to 10% if the supervisor were to apply a waiver to the AA- minimum rating criterion.

In-house exposures are not recognized for asset coverage purposes

Defaulted loans are not recognized for asset coverage purposes.[9] If the Covered Bond Company entered into a master sub-participation agreement or insurance savings

[7] Credit quality step (CQS) 1 exposures.

[8] Credit quality step (CQS) 2 exposures.

[9] According to Article 178 of the CRR a loan is in default when an institution considers the obligor unlikely to pay its credit obligations, without recourse by the institution to actions such as realizing security. A default also occurs when the obligor is past due for more than 90 days on its credit obligations to the institution. The competent authority may replace the 90 days with 180 days for exposures secured by residential or SME commercial real estate in the retail exposure class, as well as exposures to public entities.

participation agreement with a third party bank or insurer, which entitles this third party to a share of the revenues on a claim securing the covered bonds, the claim should be derecognized to the extent of the share of this third party. There is no legal requirement to make adjustments for deposit set-off risks. Furthermore, exposures to the bank entity issuing the covered bonds, or a member of the same group, should not be recognized as collateral.[10] These exposures can for example be in the form of deposits or bonds.

Property valuation

The immovable properties securing residential mortgage loans, guaranteed housing loans and commercial mortgage loans have to meet the CRR Article 208 and 229 1 requirements with regard to legal certainty, i.e. a) the mortgage or charge has to be enforceable in all relevant jurisdictions at the time of the conclusion of the credit agreement and has to be properly filed on a timely basis, b) all legal requirements for the establishment of the pledge have to be fulfilled, and c) the protection agreement and the legal process underpinning it must enable the institution to realise the value of the protection within a reasonable timeframe.

Properties have to be revalued at least on an annual basis…

Furthermore, the CRR requires institutions to monitor the value of the property on a frequent basis and at a minimum once every year for commercial real estate and once every three year for residential real estate. However, the Dutch covered bond legislation requires all properties securing the mortgage assets to be revalued at least on an annual basis. The Dutch Central Bank can request a more frequent revaluation. Property values have to be monitored more frequently if the market conditions are subject to significant changes. Property valuations also have to be reviewed if there are signs that the value of the property may have declined materially relative to general market prices. That review is carried out by a qualified and experienced valuer that is independent from the credit decision process. For loans exceeding €3m or 5% of the own funds of an institution, the property valuation shall be reviewed by this valuer at least every three years. Institutions may use statistical methods to monitor the value of the property or to assess whether property needs revaluation. The types of residential and commercial immovable property accepted have to be documented. So have the lending policies related to them. Banks also have to assure that proper procedures are in place to monitor that the property securing a loan is adequately insured against the risk of damage.

…by an independent valuer

Immovable properties securing a mortgage loan should be valued by an independent valuer at or at less than the *market value.*[11] The valuer has to document the market value in a transparent and clear manner. Prior claims on the property have to be considered.

Liquidity coverage

Issuers need to maintain or generate sufficient liquid assets to cover coupon…

The Dutch regulator also introduced **a 180 day liquidity rule**. Issuers need to ensure that the Covered Bond Company always maintains sufficient liquid assets or generates sufficient liquidity via the cover assets to fulfil the *coupon and redemption obligations* on the covered bonds over a period of six months, including any other obligations ranking senior to the payments due to the covered bondholders. The latter consist of payments

[10] Herewith the Dutch legislation seems to meet the EBA's interpretation of the CRR Article 129 1(c) requirements, at least with respect to in-house counterparty exposures. In the EBA's view exposures arising from the use of account bank facilities, from derivative contracts entered into with credit institutions, or from the use of instruments issued by credit institutions as substitution assets, are examples of Article 129 1(c) exposures. CRR Article 129 1(c) caps exposures to AA- or better rated credit institutions at 15% of the nominal amount of the outstanding covered bonds. Exposures to EU institutions with a maturity not exceeding 100 days are subject to a minimum rating criterion of A- or better. After consulting the EBA, competent authorities do have the option to waive the AA- minimum rating criterion and apply an A- or better rating criterion for these exposures up to 10% of the total nominal outstanding covered bonds. Significant potential concentration problems in the member state concerned, due to the application of the AA- minimum rating requirement, would have to be documented in that case. So far the Dutch Central Bank has not applied for such a waiver. However, considering that derivative and account bank exposures related to Dutch covered bonds programmes are mostly in-house, the regulatory derecognition requirement for in-house exposures does facilitate compliance with CRR Article 129 1(c).

[11] Article 229 1 also provides for the option to use the *mortgage lending value* rather than the market value *as a reference*. However, the latter valuation methodology is only allowed in jurisdictions with strict statutory or regulatory provisions on the assessment of the mortgage lending value.

associated with management, asset monitor or servicer agreements. This safeguards that the issuer always has sufficient liquid means to fulfil its short-term obligations to the covered bondholders without having to liquidate less liquid (mortgage) assets.

…and hard bullet redemption payments over a period of six months

The liquidity buffer requirement with respect to redemption payments is not applicable for soft-bullet or conditional pass-through covered bonds with maturity extension periods of more than six months. Derivative or other risk management instruments related to the covered bond liabilities will be considered when calculating the liquidity requirements.

The following types of liquid assets qualify for liquidity coverage purposes:

- Exposures to or guaranteed by central governments, central banks, public sector entities, regional governments or local authorities in the EU;
- Exposures to or guaranteed by AA- or better rated central governments, central banks, multilateral development banks, public sector entities, regional governments or local authorities outside the EU. Public sector exposures outside the EU rated A+ to A- up to 20% of the covered bonds outstanding;
- Exposures to AA- or better rated institutions up to 15% of the covered bonds outstanding and exposures to institutions with a maturity of less than 100 days that have at least an A- rating;
- Exposures to A- to A+ rated institutions could be allowed up to 10% of the covered bonds outstanding if the supervisory authority were to apply a waiver to the AA- minimum rating criterion. While exposures to the bank entity issuing the covered bonds, or a member of the same group, are not recognized as collateral for asset coverage purposes, the can be recognized for liquidity coverage purposes.

Hard bullet versus soft bullet covered bonds

Liquidity requirements for redemptions purely serve to mitigate refinancing risks…

The sole purpose of the liquidity coverage requirements for redemption obligations is to reduce *refinancing risks*, not to mitigate *extension risks*. For that reason the Dutch regulator leaves soft bullet covered bonds and conditional pass-through covered bonds with maturity extension features of more than six months outside the scope of the liquidity test. In the case of these covered bonds refinancing risks are already tackled by the applicable maturity extension.

Liquidity test vis-à-vis the pre-maturity test

…and are stricter than existing pre-maturity tests due to the absence of rating criteria

The six month liquidity requirements covering the redemption obligations are stricter than the 12 month pre-maturity tests backing existing hard-bullet structures in the Netherlands, as they are not subject to minimum rating criteria (Figure 2). Dutch covered bond programme already backed by a pre-maturity tests, do continue to perform this test next to the legal maturity test.

Fig 2 Pre-maturity test rating triggers

	Moody's		S&P		Fitch		Test period	Cure period
	Short-term	Long-term	Short-term	Long-term	Short-term	Long-term		
ING Bank	P-1		A-1	A	F1+		12 months	10 business days after notification of failure
ABN AMRO Bank	P-1		A-1	A	F1+		12 months	10 business days after notification of failure

Source: Programme documentation, ING

There are also some differences in terms of the asset eligibility criteria between the pre-maturity test and the 180 days regulatory test. Expected proceeds on the underlying cover assets within the next 180 days can be included for the purpose of the regulatory liquidity test. These proceeds are not necessarily accepted as liquid assets under the pre-maturity test. Under the pre-maturity test voluntary overcollateralization above the asset cover test requirements can serve to cover the required redemption amount. Otherwise receivables have to be refinanced or sold, or the issuer has to obtain a guarantee in relation to its obligations satisfactory to the rating agencies. The pre-maturity test also allows for a takeout credit facility agreement to cover the pre-maturity test requirements.

Asset Monitor

An external asset monitor checks the coverage and liquidity calculations…

The issuer has to appoint an external asset monitor ahead of the first covered bond issuance under a registered programme. At least once a year, the asset monitor has to check whether the bank correctly performs the asset coverage and liquidity coverage calculations. The asset monitor agreement has to assure that the asset monitor continues to perform its duties even in the event of a default of the issuer. To this purpose, the Covered Bond Company can be made counterparty to the asset monitor agreement. The agreement can also stipulate that the situation of the issuing bank has no impact on the obligations of the asset monitor.

For as long as the issuing bank is capable of managing the cover assets, the asset monitor, at random, has to check the files relating to the cover assets on an annual basis. This includes verifying the valuation of the cover assets and the administration related to the cover assets. These files can be stored in physical or in electronic form. The asset monitor reports the results of this verification to the supervisor. The issuing entity can also arrange for these random checks via a separate agreement with an external accountant outside the asset monitor agreement.

…at least on an annual basis

We view the regulatory support for the appointment of an asset monitor as positive. However, the Dutch legislation does not specifically require that the accounting firm appointed as asset monitor is not one and the same accounting firm as the general accountant of the bank. Also the frequency of the checks on at least an annual basis is less strict than seen in some other covered bond jurisdictions, such as Belgium, where the regulator requires these checks to take place on a monthly basis.

Special supervision

Registration

Issuers have to apply for registration with the Dutch Central Bank…

Dutch registered covered bonds can be issued by licensed banks that are located in the Netherlands. The issuing bank has to apply for registration with the Dutch Central Bank, which in turn decides to include a) the issuing entity and b) the category of covered bonds (to be) issued in a *public register*.

…by proving that the cover assets are secured in favour of the covered bondholders…

To be registered, the bank needs to prove that, in the case of a default of the issuer, the covered bondholders have a priority claim over the eligible assets securing coupon and redemption payments due on the registered covered bond. In practice this means that the issuer has to provide evidence that the cover assets are secured in favour of the covered bondholders via the transfer of the assets to a separate legal entity, the Covered Bond Company. To this purpose, the issuer has to deliver an independent legal opinion confirming that the preferential claim of the covered bondholders is safeguarded via such a transfer of the assets to a separate legal entity. The relevant transaction documentation and administrative documents supporting this legal opinion also have to be made available to the supervisor.

An important new element to the Dutch covered bond legislation is the requirement that, upon registration, the bank has to submit a plan for the management of the cover assets in the event of an issuer default. This plan describes the operational procedures and internal controls related to the registered covered bond programme. The main purpose is to assure continuity of the administration of the cover assets by the separate legal entity, or any other third party appointed by it, in the event the issuer is no longer capable to manage the assets. The management, risk management, payment and administration activities related to the registered covered bonds and the cover assets should be described. Also the circumstances leading to a transfer of the management tasks to the

Covered Bond Company have to be detailed, such as insolvency or the loss of adequate creditworthiness of the issuer. The same holds for situations when the management tasks performed by a counterparty have to be transferred to a different counterparty. The operational aspects of a transfer of these activities, such as the IT and personnel consequences, also have to be specified. If a counterparty has the opportunity to suspend its agreement with the Covered Bond Company, if the issuing bank no longer meets the minimum required ratings, the issuer has to explain how the continuity of the management, payment and administration of the cover assets remain guaranteed.

Upon registration, the bank also delivers to the supervisor the agreement between the Covered Bond Company and its manager, as well as the agreement entered into with the asset monitor. The issuing entity furthermore has to provide the supervisor with a written statement by the board of directors that the bonds fulfil all the regulatory requirements regarding the asset segregation, asset coverage, liquidity coverage and risk management procedures. The supervisory authority can also request the issuer to transfer any other documents deemed relevant for registration purposes.

…and by demonstrating that all the relevant regulatory requirements are met

The issuer furthermore has to demonstrate that it fulfils all regulatory requirements ensuring that the payment obligations due on the registered covered bonds are secured in an adequate, transparent and responsible manner. These regulatory requirements include the bank's obligation to specify, upon request for registration, the conditions applicable to the category of registered covered bonds, such as the redemption profile, the type of primary cover assets, whether the assets are CRR eligible, and the geographical location of the assets. The bank also has to show that it has the required reliable and effective strategies and procedures in place to ensure that sufficient eligible cover assets and liquid assets are secured during the term of the registered covered bond. The bank furthermore has to demonstrate that it is able to fulfil its reporting obligations towards the Dutch Central Bank and the covered bondholders.

Failure to comply with the registration requirements post registration…

After registration, the issuer has to make sure that the registered covered bonds continue to meet the registration requirements. This issuer also has to inform the Dutch Central Bank about its intentions to issue any new covered bonds ahead of issuance. New covered bonds issued under a registered programme will also be registered, with specification of the date of issuance, the nominal value of the bonds and their maturity date. The Dutch Central Bank will furthermore confirm in the register whether a category of registered covered bonds meets the CRR Article 129 requirements. However, if the issuer fails to provide the central bank with sufficient information to verify this, the covered bonds are assumed not the meet the CRR requirements. This situation may rise if the issuer runs into problems and the Covered Bond Company takes over the management of the cover assets. For as long as the Covered Bond Company continues to provide the Dutch Central Bank with sufficient information and the registered covered bonds continue to meet the requirements, the CRR listing remains intact. Otherwise the Central Bank may decide to withdraw the CRR listing which will affect the preferential treatment of the bonds from a risk weight and LCR eligibility perspective.

Deregistration

…may result in a deregistration of the issuing entity…

…although the Dutch Central Bank is more likely to impose a penalty or a fine

The Dutch Central Bank can no longer deregister a category of registered covered bonds. However, the Central Bank can decide to **deregister the issuer**, if the bank no longer complies with the regulatory requirements ensuring that the payment obligations to the covered bondholders are secured in an adequate, transparent and responsible manner. Deregistration is also an option if the bank fails to meet its regulatory reporting obligations. We understand that deregistration of an issuing entity will not be used lightly. The Dutch Central Bank is more likely impose a penalty or fine if an issuer fails to meet its obligations. A deregistration of the issuer has no consequences for the prudential requirements applicable for the registered covered bonds issued by the bank. However, a deregistered issuer is not allowed to issue further covered bonds under an existing category of registered covered bonds. As such this does have refinancing consequences for the covered bond issuer.

If an issuer applies for registration again within five years after deregistration, the Dutch Central Bank may refuse to register the issuer or the category of covered bonds. The central bank is unlikely to reregister an issuer or a category of covered bonds shortly after deregistration, unless it is convinced that sufficient measures were taken to prevent a repeat of the reasons for deregistration.

Asset encumbrance restrictions

Asset encumbrance concerns are tackled by soft issuer specific issuance caps

The Dutch covered bond rules do not provide for hard asset encumbrance restrictions, specifying a maximum percentage with respect to the covered bonds that can be issued, or the assets that can be pledged. That said, the covered bond rules do make sure the issuer will not erode the claim of other creditors by unlimitedly pledging (higher quality) cover assets for the purpose of the covered bondholders.

The Dutch Central Bank ensures that a healthy relationship is maintained at all times between the nominal value of the registered covered bonds outstanding and the consolidated balance sheet total of the issuing bank. The supervisor will assess on a discretionary basis the *going-concern interests* of the bank in terms of stability and the need for an efficient combination of funding instruments, as well as the relevant *post-bankruptcy interests*, including those of other unsecured creditors. The financial position of the bank, its risk profile, the assets available to secure the covered bonds, the risks associated with these assets, other assets of the bank already encumbered, as well as the position of other unsecured creditors are all taken into consideration.[12]

Healthy ratio considerations can cause the supervisor to restrict further issuance

The Dutch Central Bank will typically determine the issuance ceiling for the category of covered bonds upon registration, based upon the applicable healthy ratio criteria. However, Issuance limits can be adjusted post-registration if healthy ratio considerations warrant this. If the Dutch Central Bank is of the opinion that a healthy relationship no longer exists, it can prohibit the bank from issuing any further registered covered bonds. The central bank can also decide to reject a request for registration on these grounds. Although in practice it is likely that the supervisor will consult with the issuer first before making such a decision, consultation is not specifically required by the regulation.

We consider it a strength of the Dutch covered bond rules that no hard asset encumbrance limits are specified by law and that the issuance ceiling is determined on an issuer-by-issuer basis. It gives the opportunity to take, at all times, both issuer as well as market specific characteristics and circumstances into consideration.

Risk management procedures and stress testing

The issuer has to employ reliable and effective risk management procedures

The issuing bank has to employ reliable and effective procedures and strategies to assure that during the term of the registered covered bond sufficient eligible cover assets and liquid assets are available at all times. The composition and nature of the cover assets and the liquid assets, as well as the minimum amount of outstanding assets in light of the regulatory asset coverage and liquidity coverage requirements, have to be considered to this purpose.

Derivative contracts have to remain intact post issuer default

The bank entity that issues registered covered bonds has to make sure that the Covered Bond Company can only enter into derivative contracts (such as currency swaps, interest rate swaps and total return swaps) or other risk mitigating contracts, if these support the

[12] Explicit reference is no longer made to the relationship between the total amount of eligible assets available and the covered bonds (potentially) issued. Implicitly, this is still one of the factors to be considered in the evaluation of the healthy ratio between the covered bonds versus the balance sheet of the issuer. The minimum regulatory overcollateralization requirement and the option to include substitution assets in the collateral pool are additional assurances for investors that sufficient cover assets are available to secure the registered covered bonds.

risk management of the programme in favour of the registered covered bondholders. The counterparty to derivatives or risk management agreements should not be given the right to terminate the contract or to suspend its obligations under the agreement if the creditworthiness of the issuing bank deteriorates. If the counterparty itself no longer meets the minimum creditworthiness requirements, it should provide for adequate security, by posting collateral or via a third party guarantee by a suitably rated guarantor, or alternatively replace itself. The counterparty's minimum creditworthiness requirements are at the discretion of the Dutch Central Bank.

Stress tests are conducted on a regular basis

The bank issuing registered covered bonds has to conduct **stress tests** on a regular basis to determine that a healthy ratio between the total consolidated balance sheet of the bank and the outstanding registered covered bonds is maintained in a situation of financial stress. Relevant risks, such as credit risk, market risk, currency risk and liquidity risk all have to be considered, including derivative contracts mitigating these risks.

Other risks deemed relevant in the opinion of the Dutch Central Bank have to be considered as well. The stress tests assessed by the Dutch Central Bank and conducted with regard to Dutch mortgage covered bonds at least incorporate the first and second round effects of the following scenarios on the collateralization requirements and the healthy ratio:

- A substantial housing market price shock based upon historical data. This includes an assessment of the deterioration of the underlying credit risk to the mortgage portfolio as a consequence of a significant economic downturn or regulatory measures such as a removal of the tax deductibility on mortgage interest payments;
- A significant rise in the liquidation costs related to a collateral execution;
- A downgrade of the credit ratings of the issuing entity and the potential impact on the derivative positions the Covered Bond Company entered into with the issuing bank.

The Dutch Central Bank would typically conclude that there is no longer a healthy balance sheet relationship if insufficient unpledged eligible assets are available under these stress scenarios to continue to meet the coverage requirements. Even if sufficient unpledged eligible assets are available to restore the required collateralization levels, the central bank may still conclude the balance sheet relationship is not healthy if it comes at the expense of the position of the other creditors of the bank.

Removal minimum covered bond rating requirement

Removal minimum rating requirement for covered bonds lessens refinancing risks

One of the key improvements to the Dutch covered bond rules, in our view, is the removal of the minimum AA- equivalent rating requirement for Dutch covered bonds. Under the old covered bond rules, the issuer was no longer allowed to issue new covered bonds if a programme lost its minimum AA- equivalent rating from a second best ratings perspective. The Dutch regulatory framework was the only covered bond legislation with such a minimum rating requirement for covered bonds, which was a refinancing risk negative. It prevents issuers from refinancing maturing covered bonds with new covered bonds if the rating of the bonds were to fall below the regulatory minimum. This can particularly be a problem under more difficult market or issuer specific circumstances when issuer ratings and covered bond ratings move down the rating scale, while at the same time access to unsecured funding is restricted. Both NIBC Bank's old soft bullet covered bond programme, as well as SNS Bank's covered bond programme, for a period of time failed this minimum rating requirement.

Reporting requirements

To the supervisor

Issuers have to give the Dutch Central Bank sufficient information,…

The Dutch covered bond rules already facilitated strict reporting requirements towards the Dutch Central Bank, which broadly remain intact under the amended legislation. The issuer has to provide the supervisory authority with sufficient information to assess that the registration requirements are fulfilled and continue to be met. In order to do so, the issuing entity has to demonstrate on a quarterly basis that the registered covered bonds fulfil the regulatory requirements regarding programme categorization and asset eligibility, asset coverage and liquidity coverage by reporting to the supervisor on the registered covered bonds and the assets securing them. Furthermore, the Dutch Central Bank has to be reassured on an annual basis that adequate strategies and procedures are in place to guarantee that sufficient assets have been transferred to the Covered Bond Company, considering the nature of the cover assets and liquid assets and the minimum asset and liquidity coverage requirements. The issuer furthermore provides the supervisor annually with information supporting its assessment of the healthy ratio. The issuer also has to provide the Dutch Central Bank with the annual reports for the Covered Bond Company within six months after the end of each reporting year. The bank has to confirm that these annual reports have been established and approved in line with the articles of association of the Covered Bond Company. The issuer furthermore has to inform the supervisor on any material changes intended to be made to the covered bond programme. All the relevant information and documentation has to be provided, deemed essential by the Dutch Central Bank for supervising the registered covered bond programme.

To the bondholders

…but also have to provide covered bondholders with reports on the cover assets

With the amended covered bond rules, issuers are also regulatory obliged to provide the covered bondholders with information on the registered covered bonds and the assets securing them. The bank has to inform investors at least on a quarterly basis on the credit risks, market risks, currency risks, interest rate risks and liquidity risks involved with the cover assets and the registered covered bonds. Information has to be provided on the nominal value of the registered covered bonds outstanding as well as on the total value and composition of the cover assets and the geographical distribution of the cover assets. The data provided should give insight in the relationship between the total value of the cover assets and the nominal value of the registered covered bonds outstanding in light of the 105% nominal asset coverage requirement. It should also give insight in the relationship between the value of the cover assets when taking into consideration the applicable LTV restrictions versus the nominal value of the registered covered bonds outstanding with reference to the 100% regulatory coverage requirement. The total value and composition of the liquid assets versus the payment obligations due within 180 days also has to be reported. Investors should be informed on the maturity structure of the cover assets and the outstanding registered covered bonds as well as on the percentage of cover assets past due for more than 90 days. Furthermore, specifics on the counterparties of the Covered Bond Company have to be given. The information must be sufficiently detailed to allow bondholders to make a proper risk assessment.

We note that CRR eligible programmes were already implicitly required to inform investors at least on a semi-annual basis on the value of the cover pool and the outstanding covered bonds, the geographical distribution of the cover pool, loan size, interest rate risks and currency risks, the maturity structure of the cover assets and the covered bonds, and on the percentage of loans past due for more than 90 days.[13] This is also one of the requirements for eligibility as extremely high quality covered bonds under the European Commission's October 2014 delegated act on the liquidity coverage ratio.

[13] Article 129(7)(a) of the CRR

Programme characteristics

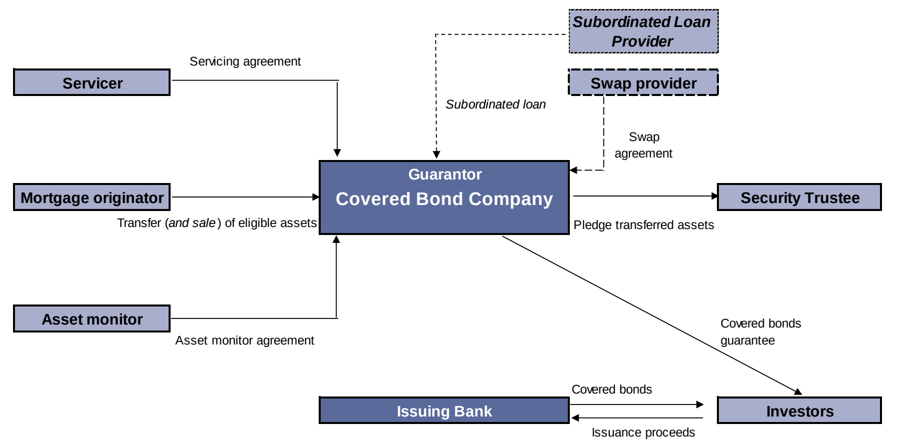
Asset segregation

Asset segregation takes place via an asset transfer to the Covered Bond Company

Under all Dutch covered bond programmes the eligible assets for covered bond issuance are transferred to a separate **Covered Bond Company (CBC)** by means of a *guarantee support agreement*. Under this agreement, the mortgage originator passes on eligible receivables to the Covered Bond Company via an *undisclosed* or *silent assignment*. The legal ownership of the mortgage loans is in that case transferred to the Covered Bond Company via a *deed of assignment*, or in the case of NIBC Bank and Van Lanschot a *deed of sale and assignmen*t with the tax authorities, without notifying the debtors of the receivables. Debtors will only by notified of a transfer if an *(assignment) notification event* occurs. Notification typically takes place if the credit rating of the issuer falls below a certain level,[14] if a *notice to pay* is served on the issuer and the Covered Bond Company,[15] an *issuer acceleration notice* is served, if the *Covered Bond Company defaults* or if a *Security Trustee pledge notification event* occurs. Other grounds for notification are a) if the originator defaults on its payment obligations or any other of its obligations under the relevant documents to which it is party, b) the originator has become subject to liquidation, dissolution or demerger proceedings, c) its assets are taken under administration, or d) if it enters into emergency regulations or a suspension of payments, e) goes bankrupt or becomes subject to any comparable insolvency proceedings.

Debtors are not notified of such a transfer unless a notification event occurs

Fig 3 Structural overview



Source: Programme documentation

For as long as no (assignment) notification event has occurred and no notice to pay or acceleration notice has been served, the Covered Bond Company is not entitled to receive any proceeds from the transferred assets under most of the Dutch covered bond programmes. These proceeds will in principle all be received by the mortgage originators for their own benefit. The conditional pass-through covered bond programme of Aegon

[14] ABN AMRO Bank: Baa1(cr) (Moody's), BBB (long-term) (S&P), BBB+ (long-term) (Fitch). ING Bank: Baa1 (long-term) (Moody's), BBB+ (long-term) (S&P), BBB+ (long-term) (Fitch). SNS Bank removed the rating trigger for notification from its programme documentation after the issuer was downgraded below Baa1 at Moody's in January 2013. SNS Bank, the CBC and the Security Trustee at that time agreed that a rating trigger for notification was no longer required due the measures implemented by the issuer to reduce commingling risk, such as the structure of the collection foundations. Consequently no notification took place after the rating triggers were breached. NIBC Bank also has no notification event trigger ratings, with a collection foundation account addressing commingling risks. Notification will take place if NIBC Bank's Collection Foundation enters into a suspension of payments, goes bankrupt or becomes subject to insolvency proceedings. Van Lanschot and Aegon Bank have no rating trigger for notification and no collection foundation account to address commingling risk. However, the rating agencies do take the commingling risk exposure related to Van Lanschot's and Aegon Bank's programmes into consideration within their respective rating methodologies.

[15] In the case of NIBC Bank and Aegon Bank only if a notice to pay is served on the Covered Bond Company. SNS Bank excludes a notice to pay on the issuer as a result of a breach of the asset cover test as a notification event.

Bank is the only programme where a breach of the asset cover test should not be unremedied for the originators to remain entitled to receive the mortgage proceeds.

However, in the case of the conditional pass-through covered bond programmes of NIBC Bank and Van Lanschot, where there is an actual *sale* of the mortgage receivables to the Covered Bond Company, the Covered Bond Company is entitled to receive the proceeds on the transferred assets as of the first day of the month preceding the date of transfer and purchase. Under these particular programmes a **subordinated loan provider** grants a subordinated loan to the Covered Bond Company to finance the purchase of mortgage loans and substitution assets. Subordinated loan advances are furthermore made to fund the reserve account up to the reserve account required amount.

Addressing commingling risks: collection foundation accounts

Under the covered bond programmes of SNS Bank and NIBC Bank, *commingling risk* is addressed via a passive bankruptcy remote entity, the **collection foundation**, that maintains a separate ***collection foundation account*** with a **foundation account provider**. All payments made on the mortgage receivables are paid into the collection foundation account, to be distributed to the Covered Bond Company. The collection foundation account can also be used for other (mortgage) collections to which the originator is entitled vis-à-vis the collection foundation. In the case of SNS Bank, the collection foundation in turn will distribute the amounts received on the cover assets to the issuer. The amounts received will only be distributed to the Covered Bond Company after an assignment notification event or a notice to pay is served. The **foundation administrator** will perform these payment transaction services on behalf of the collection foundation.

If the collection foundation account provider no longer meets the minimum required ratings,[16] the collection foundation has to take remedial action within 30 days. For as far as an *external* collection foundation account provider is used, this includes a) the transfer of the collection foundation account to an alternative bank that meets the minimum rating requirements, b) the assurance that the payments received on the mortgage receivables on the collection foundation account will be guaranteed by a guarantor that fulfils these rating requirements, or c) the implementation of other actions acceptable or agreed upon with the rating agencies.

While NIBC Bank uses an *external* collection foundation account provider, SNS Bank uses *in-house* collection foundation account providers that no longer fulfil the minimum rating requirements.[17] SNS Bank has the option to take the following remedial actions: a) post sufficient additional collateral (which is currently provided for via Y2 under the Asset Cover Test), b) make sure sufficient funds are posted on the reserve fund or reserve account, c) guarantee an amount equal to the additional collateral or funds reserved via an eligible counterparty, or d) ensure that payments on the mortgage receivables will be made directly to the accounts of the CBC. Alternatively, SNS Bank can decide to transfer either the amounts standing to the credit of the collection foundation accounts, or the collection foundation accounts themselves, directly to a third party collection foundation account provider.

[16] NIBC Bank: F1 (short-term) and A (long-term) (Fitch), P-1 (short-term) (Moody's), BBB (long-term) S&P. SNS Bank: F1 (short-term) and A (long-term) (Fitch), Baa1 (Moody's). If the covered bonds would have been rated at S&P, an A-2 (short-term) and BBB (long-term) rating requirement would have been applicable at this rating agency.

[17] ABN AMRO Bank is the collection foundation account provider for NIBC Bank. SNS Bank and RegioBank are the collection foundation account providers for SNS Bank, with the programme facilitating the option to transfer the collection foundation accounts externally to Rabobank.

In the case of Van Lanschot and Aegon Bank, payments are typically made on the first day of the month into a bank account (collection account). This account is held internally in the case of Van Lanschot (transferor collection account) and externally in the case of Aegon Bank in with ABN AMRO Bank (Aegon Collection Account Bank). Both accounts can also be used for payments on other mortgage loans. Van Lanschot distributes the principal, interest and prepayment penalties received on the transferred mortgage loans to an account in the name of the Covered Bond Company on the 14th calendar day following the payment.

If an (assignment) notification event occurs (or in the case of Aegon Bank an unremedied breach of the asset cover test), or a notice to pay or CBC acceleration notice is served on the Covered Bond Company, the Covered Bond Company will be entitled to receive the proceeds from the transferred assets for its *own* benefit. Also under ABN AMRO Bank's and ING Bank's covered bond programmes, the borrower will no longer make payments on his mortgage loans directly to the originator following a notification. Payments will be made instead to a separate account maintained by the Covered Bond Company with an eligible account bank.[18]

Notification may address commingling risks, not necessarily deposit set-off risks

The requirement to make payments to a separate account post notification addresses the risk that payments received by the issuer on the cover assets will be commingled with the insolvency estate of the issuer post issuer bankruptcy (*commingling risk*). In the case of SNS Bank and NIBC Bank all payments made by the borrower are, irrespective of notification, paid into a separate bank account maintained by a bankruptcy remote **collection foundation** to deal with commingling risk (see box on collection foundation accounts). Notification does not necessarily address *set-off risks*. Even after notification a borrower can still invoke set-off, if his claim vis-à-vis the originator results from the same legal relationship as the eligible receivable.

The Covered Bond Company guarantees to make interest and principal payments

The Covered Bond Company guarantees in return to pay interest and principal on the covered bonds to the investors if the issuer defaults (*asset-backed guarantee*). The obligations of the Covered Bond Company are unsubordinated and unguaranteed obligations, secured indirectly through a parallel debt, by a pledge by the Covered Bond Company of the transferred assets to the **Security Trustee**.

Covered bonds do not accelerate if the issuer defaults

If the issuer defaults on his obligations, the Security Trustee may serve an *issuer acceleration notice* to the issuer and a *notice to pay* to the Covered Bond Company in line with the guarantee. As such the covered bonds do not accelerate in the case of a default event of the issuing bank, while the bondholders have full recourse to the assets of the Covered Bond Company. Any proceeds received by the Security Trustee from the issuer following a default will be paid to the Covered Bond Company, which will hold these amounts on a GIC/AIC account for the purpose of making payments on behalf of the covered bondholders.

[18] The account bank needs to be rated at least P-1 (short-term) (Moody's), A-1 (short-term) and A (long-term) (S&P) and F1 (short-term) and A (long-term) (Fitch). Otherwise an AIC/GIC/CBC Account Agreement needs to be opened with a financial institution that fulfils these rating requirements or the existing account bank needs to obtain a guarantee from a financial institution that fulfils them.

Issuer events of default

- A **default** by the issuer for a period of more than 7 calendar days on **redemption payments**, or a default for a period of 14 calendar days or more on the **payment of interest** on the covered bonds.
- A **default** by the issuer for more than 30 calendar days in the performance of **other material obligations** under the transaction documents related to the covered bond programme to which the issuer is a party.
- An order is made for **the dissolution** or **winding up of the issuer**. This excludes a dissolution or winding up for the purpose of a reconstruction, amalgamation, merger or following a transfer of the assets of the issuer, which has been approved by an extraordinary resolution of the covered bondholders.[19]
- **Liquidation procedures** were started in relation to the issuer or its assets, or the issuer initiates judicial procedures related to its bankruptcy.
- The issuer is found **bankrupt**, or **emergency regulations** in the interest of all creditors were imposed on the issuer.

In the case of an issuer event of default an **issuer acceleration notice** may be served by the Security Trustee. This is a notice from the Security Trustee in writing to the issuer that, against the issuer (but not against the Covered Bond Company), the covered bonds will become immediately due and repayable at their early redemption amount plus accrued interest. Before serving an issuer acceleration notice, the Security Trustee has to inform the issuer that one of the aforementioned events in its opinion is harmful to the interest of the covered bondholders. A failure by the issuer to make a payment in respect of the covered bonds will not automatically result in the service of an issuer acceleration notice. The Security Trustee is only *obliged* to serve an issuer acceleration notice upon request by the covered bondholders.

Following the service of an issuer acceleration notice, the Security Trustee will also serve a **notice to pay** on the Covered Bond Company under the Guarantee. The Covered Bond Company will subsequently be required to make payments of the guaranteed amounts when they are due and payable. Hence, the covered bonds do not accelerate post issuer default. Nor will a maturity extension (in the case of soft bullet covered bonds) or a pass-through of payments (in the case of conditional pass-through covered bonds) be triggered by a default of the issuer.

All amounts (*excess proceeds*) received by the Security Trustee from the issuer, or any administrator, liquidator or trustee appointed in relation to the issuer, following the service of an issuer acceleration notice and a notice to pay, may be paid by the Security Trustee to the Covered Bond Company. These excess proceeds discharge the issuer of obligations in respect to the covered bonds for an amount equal to these proceeds. However, the Security Trustee is not required to pay these amounts to the Covered Bond Company and the excess proceed receipts by the Security Trustee will not reduce the obligations of the Covered Bond Company under the Guarantee.

[19] A **programme resolution** is a) a written resolution by covered bondholders not representing less than 25% (ABN AMRO Bank, ING Bank, SNS Bank) or 50% (NIBC Bank, Van Lanschot, Aegon Bank) of the principal amount outstanding of all covered bonds issued, or b) an extraordinary resolution. An **extraordinary resolution** is subject to a 2/3 majority vote at a meeting of covered bondholders where at least 75% of the covered bonds outstanding are represented in the case of NIBC Bank, Van Lanschot and Aegon Bank (or one or more covered bondholders representing whatever principal amount outstanding at an adjourned meeting).The minimum quorum required for passing an extraordinary resolution is 50% for ABN AMRO Bank, ING Bank and SNS Bank. Only if the modifications to certain provisions of the covered bond, the related coupon or the trust deed are to be made these three programmes provide for a minimum quorum of 2/3[rd] of the covered bonds outstanding to pass an extraordinary resolution (or a minimum quorum of 1/3[rd] at the adjourned meeting).

Covered Bond Company events of default

- A **default** by the Covered Bond Company for a period of more than 7 calendar days on **redemption payments**, or a default for a period of 14 calendar days or more on the **payment of interest** on the covered bonds.
- A **default** by the Covered Bond Company **for more than 30 calendar days** on **other material obligations** under the transaction documents related to the covered bond programme to which the Covered Bond Company is a party.
- An order made for **the dissolution** or **winding up** of the Covered Bond Company.
- The Covered Bond Company **ceases to carry on its business**.
- **Liquidation procedures** were started in relation to the Covered Bond Company or its assets, or a conservatory attachment or an executory attachment is enforced upon the assets, or the Covered Bond Company initiates judicial procedures related to its bankruptcy or a suspension of payments.
- The Covered Bond Company is found **bankrupt**, or **emergency regulations** in the interest of all creditors were imposed on the Covered Bond Company.
- The Covered Bond Company claims the **guarantee is not in full force** and effect.
- The **Amortisation Test is not satisfied**. This only constitutes a CBC event of default under the regular Dutch covered bond programmes, not under NIBC Bank's and Van Lanschot's conditional pass-through covered bond programme.

The inability of the Covered Bond Company to pay redemptions on the intended *maturity date*, will not constitute a CBC event of default in the case of soft bullet or conditional pass-through covered bonds. It merely triggers maturity extension. Only a failure by the Covered Bond Company to make the redemption payments on the *extended due for payment date* will result in a default. In the case of a CBC event of default a **CBC acceleration notice** may (or in the case of a programme resolution will) be served. This is a written notice from the Security Trustee to the Covered Bond Company, with a copy to the issuer, that the covered bonds become immediately due and repayable (accelerate) against the issuer *and* the Covered Bond Company at their redemption amount plus accrued interest. Before serving a CBC acceleration notice, the Security Trustee will inform the Covered Bond Company that the CBC event of default, in its view, is harmful to the covered bondholders' interest.

The recourse of the covered bondholders against the Covered Bond Company under the Guarantee (or the Security Trustee after enforcement of the Security) is limited to the right of recourse in respect of the secured property. They have no recourse to any of the Covered Bond Company's other assets. If the Security Trustee confirms that the Covered Bond Company has insufficient funds to pay all its obligations to the covered bondholders, the bondholders will have no further claim against the Covered Bond Company or the Security Trustee for the unpaid amounts. The secured parties may still have an unsecured claim versus the issuer for the shortfall. The covered bondholders are not entitled to proceed directly against the issuer or the Covered Bond Company unless the Security Trustee fails to do so within a reasonable time.

Covered bonds may accelerate if the Covered Bond Company defaults

The covered bonds may accelerate if the CBC defaults. The Security Trustee in that case may deliver a *CBC acceleration notice* to the Covered Bond Company (with a copy to the issuer) whereupon the covered bonds immediately become due. If, after the service of a CBC acceleration notice, a default in the proper performance of the secured obligations takes place, an **enforcement event** occurs. The Security Trustee can in that case enforce the Security, including selling the cover assets, or take other necessary steps.

Security enforcement by the Security Trustee

The Security Trustee is a special purpose entity that solely performs Security Trustee tasks for the purpose of the covered bond programme. It acts for the benefits of the secured creditors in administrating and enforcing the security, and distributes the proceeds from the security in accordance with the applicable priority of payments.

With respect to the obligations of the Covered Bond Company towards the Security Trustee, typically a distinction is made between the so called *principal obligations*, and the obligations pursuant to the *parallel debt*. Under the trust deed, the Covered Bond Company commits to paying the Security Trustee amounts owed to the covered bondholders under the guarantee and amounts owed to other secured creditors under the transaction documents (the **principal obligations**). The **parallel debt** represents the Security Trustee's own claim to receive payment under the parallel debt from the Covered Bond Company, provided that the amounts due under the parallel debt will never exceed the amounts that may become due under the principal obligations to the secured creditors. The amounts payable by the Covered Bond Company under the parallel debt will be decreased by the payments made by the Covered Bond Company to the covered bondholders and other secured creditors to reduce the principal obligations. The principal obligations on the other hand will be reduced to the extent that the Covered Bond Company has paid any amounts to the Security Trustee under the parallel debt.

The parallel debt is secured by security rights granted by the Covered Bond Company to the Security Trustee, via a) a first ranking right of pledge over the **transferred receivables**, b) a first ranking right of pledge over the **substitution assets**, c) a first ranking right of pledge over all monetary claims of the Covered Bond Company versus the account bank, and d) a first ranking right of pledge over the Covered Bond Company's present and future rights versus debtors under any **transaction document**, other than the management agreement.

Following the service of an issuer acceleration notice or a CBC acceleration notice, the Security Trustee may at any time enforce the provisions of the *trust deed*, the covered bonds and the coupons against the *issuer* or the *Covered Bond Company*, but does not have to take these enforcement procedures, unless it has been directed to do so by a programme resolution, and has been indemnified and/or secured to its satisfaction. The Security Trustee can also at any time enforce the provisions of the *security documents* against the *Covered Bond Company*, and may after the security has become enforceable take steps to enforce the security. The Security Trustee does not have to take these steps unless: a) it has been directed to do so by a programme resolution, b) it has been directed in writing to do so by the secured creditors, and c) it has been indemnified and/or secured to its satisfaction.

Fig 4 Priority of payments under Dutch bullet covered bond programmes

	Issuer event of default		**CBC event of default**
	Post issuer acceleration notice & notice to pay		*Post CBC acceleration notice*
1	Trustee	1	Trustee
2	Tax authority	2	Paying agent or registrar
3	Paying agent or registrar		Calculation agent
	Calculation agent	3	Servicer
4	Servicer		Administrator
	Administrator		Account bank
	Account bank		Managing director and Security Trustee's director
	Managing director and Security Trustee's director	4	Total return swap provider
	Asset monitor	5	Interest rate swap provider
5	Total return swap provider	6	Structured swap provider
6	Interest rate swap provider		**Interest and principal due on covered bonds**
	Structured swap provider (non-principal related)	7	(Remaining) swap termination amounts
	Interest due on covered bonds	8	Issuer (if subject to insolvency proceedings)
7	Structured swap provider (principal related)		Originator (not subject to insolvency proceedings)
	Principal due on covered bonds		
8	Deposit (of 1-7) for next payment date		
9	(Remaining) swap termination amounts		
10	Indemnity amounts to originators		
	Costs and indemnity amounts to asset monitor		
11	Issuer (if subject to insolvency proceedings)		
	Originator (not subj. to insolvency proceedings)		

Source: Programme documentation, ING

Fig 5 Priority of payments under Dutch CPT covered bond programme

	Issuer event of default		**CBC event of default**
	Post issuer acceleration notice & notice to pay		*Post CBC acceleration notice*
1	Trustee	1	Trustee
2	Tax authority	2	Paying agent or registrar
3	Paying agent or registrar		Calculation agent
	Calculation agent	3	Servicer
4	Servicer		Administrator
	Administrator		Back-up administrator
	Back-up administrator		Account bank
	Account bank		Directors
	Directors	4	Portfolio swap counterparty
	Asset monitor	5	(Other) swap counterparties
5	Portfolio swap counterparty		**Interest due on covered bonds**
6	ther) Swap counterparties	6	**Principal due on covered bonds**
	Interest due on covered bonds	7	(Remaining) swap termination amounts
7	Replenishment reserve account	8	Interest subordinated loan*
8	**Principal due on covered bonds**	9	Principal subordinated loan*
9	Deposit (of 1-8) for next payment date	10	Issuer (deferred purchase price instalment)
10	(Remaining) swap termination amounts		
11	Indemnity amounts to transferors		
	Costs and indemnity amounts to asset monitor		
12	Interest subordinated loan*		
13	Principal subordinated loan*		
14	Issuer (deferred purchase price instalment)		

*In the case of NIBC Bank and Van Lanschot
Source: Programme documentation, ING

Collateral

Cover assets consist of Dutch first ranking residential mortgage loans

The majority of Dutch covered bonds are solely covered by Dutch first ranking residential mortgages. Non-Dutch eligible € mortgage loans can be included in the cover pools as well under most programmes upon approval by the rating agencies and Security Trustee. Loan sizes are capped at €1,500,000 (ABN AMRO Bank and SNS Bank) or €1,000,000 (ING Bank). Van Lanschot does not restrict the loan size and has loans in its pool above €1,000,000. Also NIBC Bank and Aegon Bank do not provide for a loan size cap under their programme documentation, but in practice have no loans in their pool that exceed the size of €750,000.

Interest only loans form the vast majority of Dutch collateral pools

Types of mortgage loans in Dutch collateral pools

Interest-only loans form the vast majority in Dutch covered bond collateral pools. These loans are not amortized until their due date. Until that date only interest is paid on the loans. Due to their non-amortizing character, monthly payments on the loans are relatively low, although the interest burden on these loans remains high. The loans granted before 2013 benefit from maximum interest rate tax deductibility. Since there are no savings accrued against these loans, the risk of residual debt if property prices fall is relatively high. Borrowers are not prohibited however from making loan repayments during the term of the loan. In general, these repayments can be made free of charge up to a maximum of 10% to 20% per annum.

A **bank savings loan** is an interest only loan combined with a blocked bank savings account with the bank that is connected to the bank savings loan. The borrower can either opt for a loan where the interest rate received on the savings account is not linked to the interest rate payable on the loan, or for an alternative where the two are linked. In the first case, the borrower makes fixed monthly payments. In the latter case, the monthly payments will be adjusted to make sure that the amount on the bank savings account (monthly payments plus accrued interest) is equal to the principal amount due by the borrower at maturity. A bank savings loan does not have an investment part and is not connected to a mixed insurance policy. If the amount on the bank savings account is insufficient to repay the mortgage loan the borrower has the make up the shortfall.

An **(insurance) savings loan** is an interest only loan linked to a savings insurance policy that combines a risk and a savings element (mixed insurance policy). The savings insurance policy due by the insurer matches the principal amount due by the borrower at the end of the loan term. If the proceeds are insufficient, the borrower makes up the shortfall. In the absence of an investment part, and due to the savings insurance policy, the risk of residual debt is limited, also at disease of the borrower.

Life mortgage loans or life insurance loans are interest only loans linked to a life insurance policy. Under the life insurance policy a borrower pays a premium consisting of a risk and capital component (mixed insurance policy). The borrower can opt for a ***traditional*** life insurance policy under which the amount to be paid out depends upon the performance of investments chosen by the *insurance company* with a guaranteed minimum yield. Alternatively, the borrower can opt for a ***unit-linked*** life insurance policy under which the *borrower* chooses the investment funds out of a selection provided by the originator. In the case of **universal life mortgage loans**, the interest rate accrued over the insurance premium paid is linked to the interest rate due on the mortgage loan. The insurance proceeds will be paid out at the death of the borrower or at the maturity of the life insurance policy. If the proceeds are insufficient, the borrower has to make up for the difference. Hence the risk of residual debt is also not fully removed with this type of loan.

Amortizing loans are either linear amortizing or annuity loans. A ***linear loan*** consists of a constant principal repayment component during the term of the loan. The interest component is based upon the remaining loan balance and as such declines after each successive principal repayment. ***Annuity loans*** pay a fixed period amount consisting of an interest and principal component. During the course of time, the interest component falls (due to the loan amortisation), while principal repayment rises. Since 2013 interest on *new* mortgage loans is only tax-deductible if the loans have an amortizing structure.

Investment loans are interest only loans that are linked to an investment account. The mortgage loans are not repaid until their due date and as such loans granted before 2013 benefit from maximum interest rate tax deductibility. However, borrowers pay either upfront or on a regular basis a certain amount to a securities account with an investment firm or bank that is invested in various investment funds of that institution (not connected to a mixed insurance policy). The borrower has the option to combine his investment account with a savings account and is, in that case, allowed to switch between investments and savings. If the investment/savings proceeds are insufficient to fully repay the mortgage loan at the end of the loan term, the borrower has the make up the shortfall. Hence there is risk of residual debt if property prices fall.

A **combination mortgage** is a mortgage loan that combines any of the aforementioned types of mortgage loans. A **hybrid loan** is an example as it is a combination of a life loan and a savings loan. The loan combines an interest only loan with an insurance policy consisting of a risk and an investment part (mixed insurance policy). The borrower has the right to invest the life insurance premiums in investment funds as with life insurance loans or in a savings part as with a savings insurance policy or to switch between the two alternatives. The insurance proceeds are due at the maturity of the loan or at the death of the borrower. The borrower makes up any shortfall.

Credit mortgages are revolving consumer loans (such as a **revolving credit loan**), with property as collateral. Amortisation of the loans occurs at the borrower's discretion. The borrowing can also make at any time drawings up to the agreed maximum amount or borrow again amounts that have already been repaid. The interest rate deductibility on these loans was limited in 2001.

Dutch issuers cap the *LTFV* ratio for (non guaranteed) mortgage loans at 125%

Dutch covered bond issuers apply, in general, a 125% *loan-to-foreclosure value* (LTFV) limit on mortgage loans that do not benefit from a national mortgage guarantee (Nationale Hypotheekgarantie or NHG). Mortgage loans with a LTFV between 125% and 130%, can be included however under different programmes, albeit mostly only up to a maximum of 5% of the cover pool. In the case of NIBC Bank such an increase is possible if the 5% above the 125% is used for an upfront premium for the payment of protection insurance. The foreclosure value (FV) is 85% to 90% of the market value (MV) of the property under Dutch covered bond programmes (Figure 6). Hence at a 85% FV/MV ratio, the LTMV cap of 106.25% to 110.5% under ABN AMRO Bank's programme, is comparable with the 125% and 130% LTFV caps seen under the other Dutch programmes. ING Bank furthermore caps the LTFV ratio for interest only loans at 100%, while ABN AMRO Bank has a comparable 85% cap on interest only loans on a LTMV basis.

Fig 6 Dutch covered bond programmes

	ABN AMRO Bank	ING Bank	SNS Bank	NIBC Bank	Van Lanschot	Aegon Bank
Type	Dutch registered Bullet	Dutch registered Bullet	Dutch registered Bullet	Dutch registered CPT	Dutch Registered CPT	Dutch Registered CPT
Programme size	€30bn	€35bn	€15bn	€5bn	€5bn	€5bn
Amt issued	€23.0bn	€27.3bn	€3.4bn	€1.5bn	€0.5bn	€0.8bn
Covered bond rating						
Moody's	Aaa	Aaa	Aaa			
S&P	AAA	AAA		AAA	AAA	AAA
Fitch	AAA	AAA	AAA	AAA	AAA	AAA
Issuer rating						
Moody's	A2	A1	Baa1	Baa1	-	-
S&P	A	A	BBB Pos	BBB-	BBB+	A+
Fitch	A	A	BBB	BBB-	BBB+	A-
Short-term issuer rating						
Moody's	P-1	P-1	P-2	P-2		
S&P	A-1	A-1	A-2	A-3	A-2	A-1
Fitch	F1	F1	F3	F3	F2	F2
Asset segregation	Transfer	Transfer	Transfer	Transfer and sale	Transfer and sale	Transfer
Guarantor	ABN AMRO Covered Bond Company	ING Covered Bond Company	SNS Covered Bond Company	NIBC CPT Covered Bond Company	Van Lanschot CPT Covered Bond Company	Aegon CPT Covered Bond Company
Subordinated loan provider				NIBC Mortgage Backed Assets	Van Lanschot	
Collateral	Dutch residential mortgage loans	Dutch residential mortgage loans	Dutch residential mortgage loans	Dutch residential mortgages	Dutch residential mortgages	Dutch residential mortgages
Non-Dutch eligible assets allowed	Yes	Yes	Yes	No	No	No
Maximum maturity mortgage loan	-	-	-	30yr	30yr	30yr***
Maximum loan amount	€1,500,000	€1,000,000	€1,500,000	-	-	-
Regulatory coverage requirement						
Nominal	105%	105%	105%	105%	105%	105%
Recognizing LTMV cut-off	100%	100%	100%	100%	100%	100%
Asset percentage (ACT)	Max 92.5%, Committed 79%	Max 97%, Committed 79.5%	- Committed 75%	- Committed 95%	- Committed 90%	- Committed 93%
Contractual nominal OC	-	-	-	15%	15%	10%
Max LTFV*		125% (100% if interest only)	125% (max 5% 125-130%)	125% (130% if 5% ins. premium)	125%	130%
Max LTMV**	106.25% (max 5% 106.25% to 110.5%, 85% if interest only)		110%	4% (ex. transfer tax)	4% (ex. transfer tax)	4% (ex. transfer tax)
FV versus MV	85%	90%	87.5%	85%	83.7%	90%
LTMV cut-off	80%	80%	80%	80%	80%	80%
Market value	Original market value	Based on AVM	Original market value	Original market value	Original market value	Original market value
Indexed value	Land Registry house price index	Land Registry house price index	Land Registry house price index	Land Registry house price index	Land Registry house price index	Land Registry house price index
Indexation	85% increase, 100% decrease	90% increase, 100% decrease	100% increase, 100% decrease	90% increase, 100% decrease	90% increase, 100% decrease	90% increase, 100% decrease
Derivatives	Yes	Yes	Yes	No (but possible)	No (but possible)	No (but possible)
Minimum mortgage interest rate				3%	1.50%	1.00%
Substitute collateral	Yes	Yes	Yes	Yes	Yes	Yes
Maturity	*HB and SB*	*HB and SB*	*SB*	*CPT*	*CPT*	*CPT*
Hard bullet (HB)	Pre-maturity test (12 months)	Pre-maturity test (12 months)				
Soft bullet (SB)	Extendible (12 months)	Extendible (12 months)	Extendible (12 months)			
Conditional pass-through (CPT)				Extendible (32 years)	Extendible (32 years)	Extendible (32 years)
Maximum maturity covered bond	45yr	45yr	40yr	15yr (47yr extended)	15yr (47yr extended)	15yr (47yr extended)
Covered Bond Label Compliant	Yes	Yes	Yes	Yes	Yes	Yes
UCITS 52(4) Compliant	Yes	Yes	Yes	Yes	Yes	Yes
CRR Compliant	Yes	Yes	Yes	Yes	Yes	Yes
Risk weight CRR (Standardized)	10%	10%	10%	10%	10%	10%

* Loans originated before August 2011
** All loans originated after August 2011 are subject to a LTMV cap of 104% plus transfer tax (2%).
Since 2013 this cap is reduced by 1%-point per year to 100% by 2018 (i.e. 102% including transfer tax for loans originated in 2016).
*** Long-term mortgage loans may have a maturity longer than 30yr.
Source: Programme documentation, ING

Some loans benefit from an NHG Guarantee

NHG Guarantee

Dutch NHG loans are loans backed by a national mortgage guarantee (**Nationale Hypotheekgarantie** or NHG). Only if the borrower is not able to fulfil its mortgage obligations and the only option left for the borrower is to sell the house, the NHG may provide for the residual debt if the sales price is insufficient to repay the mortgage loan. Whether forced sale is the only option left, is determined on a case-by-case basis and always with the intention to find an acceptable solution (to the bank and borrower) to prevent such a forced sale. Since 1 January 2013 the national mortgage guarantee will only be provided for annuity or linear amortizing mortgage loans.

The NHG Guarantee is an **amortizing guarantee** on a 30 year annuity basis, issued by the **Stichting Waarborgfonds Eigen Woningen** (WEW). It covers principal, accrued interest and disposal costs related to the guaranteed mortgage loan. The WEW in principle funds itself. Borrowers under the scheme pay a one-time 100bp charge against their mortgage loan balance. At the end of December 2015, the WEW guaranteed €187bn in mortgage loans, while the fund assets summed to €880mn (0.47% of the guaranteed amount). The WEW is a private institution with fall-back agreements with the government and municipalities. It is rated Aaa and AAA by Moody's and Fitch in line with the rating of the Dutch government. If the WEW is not able to meet its obligation under the guarantee, the Dutch government and municipalities will provide the WEW with subordinated interest rate free loans to make up for the difference. NHG loans are consequently considered to be government guaranteed mortgage loans and as result benefit from lower risk weight requirements than non-guaranteed mortgage loans for bank capital purposes. Borrowers in turn are typically charged a lower mortgage rate on their mortgage loan.

The NHG is **not income dependent**. However, the main purpose of the guarantee is to support home ownership and house improvements for lower income and middle income households. Only primary residences fall under the scope of the NHG. A guaranteed mortgage loans has to fulfil the Nationaal Instituut voor Budgetvoorlichting (Nibud) requirements. The maximum guaranteed amount that can be borrowed is for example determined via a living quote, which represents the relationship between the future housing costs (recognizing other special monthly expenses) and the borrower's income. Before an NHG loan is granted, the financial position of the borrower is checked with Bureau Krediet Registratie (BKR). Other loans registered with BKR will have a negative impact on the maximum amount that can be borrowed under the NHG. NHG loans will not be granted to borrowers that are BKR registered due to payment problems in the past and for example are still in the midst of a debt settlement procedure.

In 2009 the guarantee system was expanded to €350,000 to support the Dutch housing market, but is now gradually reduced again. Since **1 July 2015 the amount that can be borrowed with the NHG is €245,000**. This amount will be further lowered to €225,000 per 1 July 2016. After that, the average house price in the Netherlands will determine the annual cap for the NHG, as had been the practice before 2009. The size of the mortgage loan is not allowed to exceed the maximum guaranteed amount. Additional costs, such as notary fees, advisory fees and the payable transfer tax, are included for this purpose.

When the mortgage loan is granted, the bank assesses whether all conditions are met to accompany the loans with an NHG. If a borrower at a later stage runs into problems and a forced sale of the house cannot be prevented, the bank will provide NHG with a loss declaration. Since the beginning of 2014, banks have a 10% own risk regarding losses arising from a forced sale for guarantees provided after 1 January 2014. NHG will assess whether a mortgage loan meets the requirements for debt remission. Remission will be provided if a) the borrower has acted in good faith, i.e. if the inability to fulfil the payment obligations on the mortgage loan is due to the end of a relationship, unemployment or labour disability; and b) the borrower has provided full cooperation to assure the house can be sold at the best achievable price. If NHG concludes that these conditions are not properly met, or if the Nibud requirements for granting the NHG loan were not met to begin with, the residual debt will not be remitted by NHG. In the latter case, i.e. if the Nibud requirements were not met but the borrower itself has fulfilled all the conditions for remittance on his part, the bank that wrongly granted the guaranteed loan becomes liable for remitting the residual debt. Every year, circa **10% of the loss declarations are declined** by NHG.

The *LTMV* ratio for new mortgage loans is gradually reduced to 100% by 2018

Following the introduction of the new Code of Conduct by the Dutch banking industry on 1 August 2011, new mortgage loans granted after that date are capped at a *loan-to-market-value* (LTMV) equal to 104% plus the transfer tax of 2%.[20] Considering the aforementioned FV/MV ratios, this LTMV limit of 106% was not that much stricter than the LTFV limits previously adhered to (125% LTFV equivalent at a FV/MV ratio of 85% or 118% LTFV equivalent at a ratio of 90%). However, since 1 January 2013 until 2018 the Dutch government will gradually lower the LTMV cap for new mortgage loans by 1% per year to 100% (including transfer tax). For 2016 a cap of 102% is applicable for new loans. Only in the case of energy saving investments an LTMV of 106% remains possible.

Conservatism in terms of recognizing house price rises differs per programme

LTV ratios are marked-to-market via the Land Registry (Kadaster) housing price index. A decrease in the house price index fully translates into a lower property value under all covered bond programmes, while conservatism in terms of acknowledging rising house prices differs. One programme recognizes house price rises for only 85% in the calculation of the indexed market value of a loan, while another programme recognizes them for the full 100%. The other four Dutch programmes discussed in this report consider 90% of the house price rise (Figure 6). Most programmes compare the indexed market value of the loan with the original market value of the loan. Only ING Bank compares the indexed market value with the actual market value of the loan based upon an automated valuation model. The automated valuation model is a valuation model of an independent external provider. It is a statistically based computer programme that uses real estate information such as comparable sales, property characteristics, tax assessments and price trends to estimate the value for a specific property. This estimate is never older than 18 months.

Registered covered bond programmes apply an 80% LTV cut-off

Dutch registered covered bond programmes apply an 80% LTMV cut-off percentage for asset coverage calculation purposes. This is in line with the Dutch legislation and the EU Capital Requirements Regulation (CRR) requirements for a preferential risk weight treatment. The mortgage loans can still be transferred to the Covered Bond Company in full, but will only be recognized as collateral up to 80% of the property value for the 100% regulatory coverage purposes. This 80% cut-off percentage also applies to (NHG) guaranteed mortgage loans. Loan parts above the 80% cut-off percentage are recognized for the purpose of the regulatory 105% coverage requirement.

Substitution assets that fit the collateral requirements of the CRR and the minimum rating agency requirements can be included in the cover pool under all programmes up to 20% of the covered bonds outstanding.

[20] The transfer tax was temporarily reduced from 6% to 2% on 15 June 2011 to stimulate the Dutch housing market, but this measure was made permanent per 1 July 2012.

Asset Cover Test

The Asset Cover Test makes sure that the cover asset availability is sufficient

Under the asset monitor agreement between the issuer, the administrator, the Covered Bond Company and the Security Trustee, and under the guarantee support agreement, the assets pledged under Dutch covered bond programmes must at all times fulfil the **Asset Cover Test (ACT)**. This test makes sure that the amount of eligible cover assets in relation to the covered bonds outstanding is at a sufficient level, as long as no notice to pay, issuer acceleration notice or CBC acceleration notice has been served. The asset coverage requirements (including the regulatory requirements) consist of different parts:

- The Covered Bond Company and the issuer must first of all make sure that at the end of each calendar month, the **adjusted aggregate asset amount** (as discussed later) exceeds the euro equivalent of the principal amount outstanding of the covered bonds, i.e. the amount of credit support must exceed 100%. The (current) committed asset percentages, ranging from 75% to 95%, and the 80% LTV cut-off percentage for the residential mortgage loans are of relevance for this test.
- On top of that, in the case of the Dutch conditional pass-through programmes, the **net outstanding principal amount** of all mortgage receivables (nominal), excluding defaulted receivables, but including the market value of the substitution assets and the amounts on the CBC transaction accounts (excluding swap collateral and the balance of the construction account), must at least be equal to 110% (Aegon Bank) or 115% (NIBC Bank and Van Lanschot) of the covered bonds outstanding.

Fig 7 Asset cover test Dutch covered bond programmes

(€)	ABN AMRO Bank	ING Bank	SNS Bank	NIBC Bank	Van Lanschot	Aegon Bank
Principal amount mortgage loans	32,678,341,330	38,285,875,289	4,956,967,636	1,823,029,810	639,266,690	941,242,262
Value saving deposits	1,459,908,394	1,355,637,179	156,973,490	40,741,833	8,945,185	46,151,493
Net principle balance	*31,218,432,935*	*36,930,238,110*	*4,799,994,146*	*1,782,287,977*	*630,321,505*	*895,090,769*
Construction deposits	8,213,290			396,461	1,538,973	3,338,493
Adjusted net principle balance	31,210,219,645	36,930,238,110	4,799,994,146	1,781,891,516	628,782,532	891,752,276
A = sum of current balances	24,406,979,840	29,428,208,058	3,599,995,609	1,553,819,969	555,218,008	808,211,902
B = principal receipts						
C = cash collateral account*				50,099,924		3,000,000
D = substitution assets**						
E = cash in pre-maturity ledger	550,000,000	753,971,742				
X = suppl. liquidity reserve ledger						
Y1 = coverage deposit set-off risk			4,701,404			
Y2= coverage commingling risk***			69,975,515			
Z = coverage for negative carry						
or						
Z = interest reserve required amt.****						
Adjusted aggregate asset amount:						
A+B+C+D+E-X-Y1-Y2-Z	24,956,979,840	30,182,179,800	3,525,318,690	1,603,919,893	555,218,008	811,211,902
Outstanding bonds	22,977,102,114	27,321,566,467	3,352,500,000	1,500,000,000	501,000,000	750,000,000
Pass/fail	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
ACT Ratio (%)	108.62	110.47	105.15	106.93	110.82	108.16
Nominal overcollateralization (%)	*135.87*	*135.17*	*143.18*	*118.82*	*125.81*	*119.35*

*In the case of NIBC Bank, Van Lanschot and Aegon Bank, under the ACT no separate recognition is made for cash amounts from principal receipts versus other cash collateral (including interest receipts). Consequently the amount included under C in this figure, is reported under B in NIBC Bank's ACT report.
**Transferred Collateral in Substitution Assets would be reported under C in the case of NIBC Bank's, Van Lanschot's and Aegon Bank's ACT report.
***SNS Bank is the only issuer that makes a reservation Y2 for commingling risk
****Under NIBC Bank's, Van Lanschot's and Aegon Bank's ACT, Z represents the interest reserve required amount.
Source: Investor reports (closing date 31 December 2015), ING

The 10% and 15% minimum overcollateralization requirement excludes set-off risk adjustments related to deposits and saving mortgage receivables (if no savings participation agreement is in place), or for loans in arrears for more than three months. Hence, it cannot be compared one-on-one with the overcollateralization commitments derived from the maximum asset percentages (varying from 92.5% to 97%) under the two combined soft and hard bullet Dutch covered bond programmes. We will prove later in

Figure 8 that the 10% and 15% overcollateralization commitment for the Dutch conditional pass-through programmes under the second part of the Asset Cover Test is at current collateral pool compositions modestly stricter than the amount of collateral required to pass the Asset Cover Test.

- The Dutch covered bond legislation requires that **first regulatory current balance amount**, being the sum of a) the aggregate (nominal) amount of the current balance of the mortgage receivables, excluding defaulted loans, and b) the market value of the substitution assets, must at least be equal to 105% of the covered bonds outstanding.
- The **second regulatory current balance amount**, being the sum of a) the aggregate current balance of the mortgage receivables, and b) the market value of the substitution assets, must at least be equal to 100% of the covered bonds outstanding under the Dutch regulatory requirements. The aggregate current balance of each mortgage receivables is determined as the lower of i.) the sum of the current balance of the mortgage receivables, excluding defaulted receivables and ii.) the regulatory cut-off percentage of the indexed valuation relating to the mortgage receivable.

Understanding the Asset Cover Test

A = the **Sum of Current Balances**

Mortgage loans are recognized up to 80% of their LTV under the ACT…

Under the Asset Cover Test, (A) is the lower of the sum of all Adjusted Current Balances of the transferred mortgage loans (A(a)), recognizing the mortgage loan only up to 80% of its indexed market value adjusted for certain set-off risks, or the Asset Percentage times the sum of the (set-off risk adjusted) Current Balance of the mortgage loans (A(b)).

A = min [A(a) ; A(b)], in which

$$A\ (a) = \Sigma \min [CB - \alpha\ ;\ 0.8*IMV - \beta]$$

$$A\ (b) = \text{asset percentage} * \Sigma\ (CB - \alpha), \text{ with}$$

CB = current balance, IMV = indexed market value, α = Gross set-off and β = Net set off.

…adjusted for certain set-off risks

The **gross set-off α** adjusts the current mortgage loan balance of the loans in the cover pool for the adjustments stated in the following box.

Set-off risk adjustments under A

Products that have **no deduction risk** include:

- Products with **no savings**, **no investment part** and **no mixed insurance policy** (*Category 1*), such as interest only, amortizing or revolving credit loans.
- Products with **an investment part but no mixed insurance policy** (*Category 2*), such as investment mortgages. These mortgages are not subject to set-off risks as the investment accounts linked to the loans are usually held with bankruptcy-remote special purpose vehicles. However, set-off may be possible if **index guaranteed contracts**, that link the amount payable upon maturity to the value of an index, form part of the investment portfolio.

Amortizing and investment mortgage loans have no deduction risk

Products that have **deduction or set-off risk** include:

- Products with **a mixed insurance policy where the borrower selects the insurer** (*Category 3*), such as *life loans*. These products are typically not expected to be subject to set-off risks as the borrower selects the insurer himself and should be aware that he has entered into two separate relationships. However, deduction risk cannot fully be excluded if there are circumstances giving the borrowers the wrong impression that he did not enter into two separate relationships, such as via sales material or via a reference to the originator in the insurance conditions.

Saving, life insurance and hybrid mortgage loans are exposed to set-off risk

- Products with **a mixed insurance policy** and **no switch element** where **the originator pre-selects the insurer** (*Category 4*), such as *(insurance) saving loans* and *life loans*. With a saving or life insurance mortgage the borrower can try to set-off the savings accrued against the mortgage loan if the bank or insurer becomes insolvent. Set-off risk rises if there is a link between the two products. This can be the case if the mortgage loan and saving or life insurance product were sold as a single product, such as in the case of a savings loan if the interest base applicable to the savings loan is linked to the interest base applicable to the savings account, or if the mortgage and savings provider or life insurer are part of the same group or represented by the same representative.

  If a *master sub-participation agreement* or *insurance savings participation agreement* is in place, no set-off adjustments related to the paid-in savings premium amounts need to be made under the Asset Cover Test for *saving loans*.[21] Under a master sub-participation agreement, the savings deposit provider transfers all savings receivables to the Covered Bond Company in return for a participation in the loan. The participation is reduced by the set-off amount if a borrower were to set-off.

  Some Category 4 loans are subject to a *master transfer agreement* between the insurer and the mortgage loan originator. In that case part of the loan is transferred on a monthly basis to the insurer against on-payment of the savings premium. If the loan is transferred to the Covered Bond Company, the latter will on a monthly basis retransfer part of the loan to the originator which will on-transfer it to the insurer. The Covered Bond Company in turn receives a savings premium which constitutes principal proceeds on the loan and is distributed in line with the priority of payments. There is a risk the borrower may invoke set-off versus the Covered Bond Company if he is not able to invoke set-off versus the insurer if the latter defaults on its obligations to pay out proceeds under the insurance policy. This risk can be mitigated by a *further master transfer agreement* or a *master sub-participation agreement*.
- Products with **a mixed insurance policy** and **switch element** between the savings and investment part where **the originator pre-selects the insurer** (*Category 5*) such as *hybrid loans*. Set-off risks for hybrid loans will be accounted for in the Asset Cover Test unless the insurer has transferred the insurance contracts and underlying savings and investments to a bankruptcy remote special purpose entity that reinsures the risk element of the insurance with the insurer. Deduction risks can also be covered by a transfer of the savings and investments to a special purpose entity that accepts liability for the obligations to the borrower.
- Products with **a savings part**, but **no investment part** or **mixed insurance policy** (*Category 6*) such as *bank savings loans*.[22] Amounts standing to a bank savings account may, if certain conditions are met, by law be set off against the related bank savings loan.[23] To mitigate set-off risk related to bank savings receivables a *master sub-participation agreement* or *bank savings participation agreement* is entered into. If a participation agreement is in place no set-off risk adjustment has to be made as the participation is already deducted as part of the definition of the net outstanding principle balance.[24]

[21] For life loans set-off risks may be recognized in full under the ACT. With Category 4 life loans the originator must in general confirm that the life insurance and mixed insurance policy were not sold as one product and that the guaranteed yield on the capital component is not linked to the interest base applicable to the mortgage loan.

[22] Bank savings loans are Category 1 loans under ING Bank's covered bond programme.

[23] These conditions include, an activation of the Deposit Guarantee Scheme (DGS) if in respect of the bank by the Dutch Central Bank, or if the bank is subjected to emergency regulations or is declared bankrupt. Other conditions for set-off may be if notification of the assignment of the mortgage receivable to the CBC has not been made or if other services (such as investment advises) related to the loan are provided by the bank to the borrower.

[24] The net outstanding principal balance in relation to a transferred receivable is the gross outstanding principal balance, less the participation amount if it is a participation receivable.

Loans in arrears for more than three months are *not* recognized or only for 30%

*Set-off risks for **life loans**, **saving loans** or **hybrid loans** in the Asset Cover Test are calculated on the basis of a methodology notified to the rating agencies.*

Furthermore:

- ***Defaulted loans*** are not recognized under the Asset Coverage Test (0% weight). A loan is in default if it is overdue for more than 90 days (ABN AMRO Bank, Aegon Bank), or 180 days (ING Bank, SNS Bank, NIBC Bank, Van Lanschot). A receivable is also in default if it is declared irrecoverable by the originator, if legal proceedings have been started for its recovery, or if the borrower is bankrupt, was granted a payments suspension or entered into a debt rescheduling arrangement.
- ***Loans in arrears for more than 3 months*** are not recognized in the case of NIBC Bank and Van Lanschot, and only for 30% in the case of ING Bank and SNS Bank.
- ***Loans used to fund construction deposits*** are not recognized as assets.
- ***Loans in breach of mortgage receivable warranties*** are also not recognized.

- Set-off risk in relation to ***revolving credit loans*** can rise due to, for example, non-compliance of the loan originator with its obligations under the applicable loan agreement. Consequently, although under ING Bank's covered bond programme, revolving credit loans are classified as Category 1 loans (no set-off risk), an amount related to the maximum amount that can be drawn under the loan agreement will be deducted to account for this set-off risk.
- Set-off risk in relation to ***index guaranteed contracts*** rises, if the borrower is not able to recover its claim in relation to this type of contract post issuer default. Set-off risk will predominantly rise if at the time of notification of the assignment, the claims under the index guaranteed contract have become due and payable. Van Lanschot makes a deduction for this type of set-off risk under A for an amount equal to the value of the index guaranteed contract, minus amounts guaranteed under the Deposit Guarantee Scheme (DGS), considering DGS deductions related to deposit set-off risk adjustments discussed below.
- Aegon Bank also makes an adjustment for ***long term mortgage loans*** in its pool if these loans exceed 10% of the mortgage receivables transferred.[25] Long term mortgage loans are receivables that do not provide for a maturity date or have a remaining maturity beyond 30 years.
- NIBC Bank adjusts for the **difference** between the committed **minimum mortgage interest rate** of 3% **and the actual mortgage interest rate** on a mortgage receivable if the latter interest rate is lower.
- NIBC Bank, Van Lanschot and Aegon bank are the only issuers that account for ***deposit set-off risks*** under A. If the issuer's rating falls below A-1 (short-term) or A (long-term) at S&P, or F1 (short-term) or A (long-term) at Fitch, an additional amount for possible set-off risk will be deducted, equal to a) the amount deposited with the issuer for mortgage loans issued by the issuer (in the case of van Lanschot and Aegon Bank adjusted for amounts guaranteed under the Deposit Guarantee Scheme (DGS)), or b) a lower amount if this will not adversely affect the covered bond ratings.

[25] The adjustment equals the current (positive) balance of the long term mortgage loan multiplied by the **excess long term mortgage loan ratio**. This ratio is a) the aggregate current balance of the long term mortgage loans that exceeds 10% of the aggregate current balance of the mortgage loans, divided by b) the aggregate current balance of the long term mortgage loans

The **net set-off β** is calculated as β = min [0.8*IMV ; α – L], in which

- L = 0 if CB – 0.8*IMV < 0
- L = α if CB – 0.8*IMV > α
- L = CB – 0.8*IMV otherwise

With the three scenarios worked out in the following box we show that, if there are no set-off risks to consider (α=0), a loan will always be included as 80% of the indexed loan-to-market value under **A(a)** as long as the loan-to-market value (CB/IMV) exceeds 80%.

Three scenarios for L

*In order to find how a single loan i is included in **A(a)**, we work out three scenarios for L with different boundary conditions:*

Scenario 1:

Condition 1a: 0.8*IMV > CB

Condition 1b: 0.8*IMV > α

Condition 1c: 0.8*IMV < α

From condition 1a we get that L = 0, leaving β = min [0.8*IMV ; α], which is reduced by condition 1b to β = α. Substituting this into the formula for A(a) and using condition 1a we get **$A(a)_i$ = CB – α.** Condition 1a combined with condition 1c, for obvious reasons, results in the loan being disregarded ($A(a)_i$ = 0).

Scenario 2:

Condition 2a: CB > 0.8*IMV or CB – 0.8*IMV > 0

Condition 2b: CB – 0.8*IMV < α

From the two conditions we get L = CB – 0.8*IMV, so the net set-off β = min [0.8*IMV ; α – CB + 0.8*IMV]. Substituting the net set-off in the formula for A(a) we get **$A(a)_i$** = min [CB – α, max[0, CB – α]] **= CB – α.**

Scenario 3:

Condition 3a: CB > 0.8*IMV

Condition 3b: CB – 0.8*IMV > α

From condition 3b we get L = α, so the net set-off β = min [0.8*IMV ; 0] = 0. Using this result and condition 3a it follows that **$A(a)_i$ = 0.8*IMV.**

However, with approximately still 44% to 50% of the mortgage loan receivables of the regular Dutch covered bond issuers having an LTV of less than 80%, and with the asset cover percentage for bullet issuers below 80%, **A(b)** (i.e. the sum of the current balance times the asset percentage) tends to determine the balance *A* that is incorporated for Asset Cover Test purposes. This is different for Aegon Bank and NIBC Bank's conditional pass-through covered bond programmes. The asset percentages applicable under A(b) is much higher for these programmes at 93% and 95% respectively, while due to the high percentage of NHG loans in Aegon Bank's and NIBC Bank's pool, these issuer reports for 79% and 78% of the assets in their pool average current loan to indexed market values above 80%. Hence for these particular programmes **A(a)** is leading to determine the balance *A*. In the case of the conditional pass-through programme of Van Lanschot A(b) is marginally leading. This programme has an asset percentage of 90%, while the break-even asset percentage where A(a) becomes leading over A(b) is around 91% (Figure 8).

Fig 8 Estimating the credit enhancement (CE) advantage of conditional pass-through issuance (%)

	ABNANV	INTNED	SNSBNK	NIBCAP	LANSNA	AEGON	Average
Actual ACT ratio	**108.6**	**110.5**	**105.2**	**106.9**	**110.8**	**108.2**	
Calculated ACT ratio (own AP)	**109.7**	**107.2**	**108.7**	**108.8**	**113.2**	**111.0**	
A(a) = A	124.9	124.9	145.6	108.8	114.9	111.0	
A(b) = A							
AP = 75%	104.3	104.1	108.7	92.5	94.4	89.5	
AP = 95%	131.5	131.2	138.2	116.2	119.5	113.4	
Max CE Difference CPT vs bullet	*27.2*	*27.0*	*29.6*	*23.8*	*26.9*	*26.8*	*26.9*
CE adv. due to dominance A(a)	*20.6*	*20.7*	*23.9*	*16.4*	*20.6*	*21.5*	*20.6*
AP crossover A(b) vs A(a)	90.2	90.3	91.1	88.8	91.4	93.0	*90.8*
% indexed LTV over 80%*	50.2	55.1	55.6	78.3	50.0	79.2	*61.4*

*For NHG loans no indexed LTV distributions are reported, which means this number may overstate the actual percentage of loans with an LTV above 80%
Source: Investor reports, ING

Estimating the credit enhancement advantage of CPT issuance

In Figure 8 we give an overview of the estimated advantage for issuers from conditional pass-through issuance in terms of lower credit enhancement (CE) requirements. The calculations are based upon the indexed loan-to-value distribution statistics provided by each issuer for the end of December 2015. The *calculated ACT* ratios differ from the *actual ACT ratios* reported due to the fact that a) no set-off risk adjustments have been made for calculation purposes and b) we have taken the mid of the LTV distribution ranges. Actual indexed LTV ratios per range may differ.

CPT issuance may reduce OC requirements by 21%

The figure confirms that in the case of conditional pass-through issuance A(a) becomes dominant over A(b) for the purpose of determining A under the Asset Cover Test as reflected by the lower ACT ratio for A(a) compared to A(b). This is caused by the LTV cut-off of 80% that has to be made on higher LTV loans under A(a). Hence differences in the overcollateralization requirements of the rating agencies as implied by the asset percentages applied for bullet versus conditional pass-through structures, tend to overestimate the actual credit enhancement advantage that can be realised with conditional pass-through issuance. Depending on the applicable asset percentages, current cover pool sizes and compositions and covered bonds outstanding, we estimate a **credit enhancement (or overcollateralization) advantage of 21%** on average rather than a maximum achievable 27% for conditional pass-through versus bullet issuance for Dutch programmes.

For conditional pass-through covered bond programmes the second part of the Asset Cover Test, where the issuers commit to a 10% (Aegon Bank) or 15% nominal overcollateralization (NIBC Bank and Van Lanschot), is also modestly stricter than the first part of the Asset Cover Test requirements at the current composition of the collateral pools. Irrespective of the fact that asset percentages of 95% or 93% (in the case of NIBC Bank and Aegon Bank) equate to 5% and 7.5% nominal overcollateralization, ignoring set-off risk adjustments, the dominance of A(a) over A(b) due to the application of an 80% LTV cut-off, adds 7.4% to 2.4% to these overcollateralization levels under A(a). Van Lanschot's 90% asset percentage equates to 11% overcollateralization with A(b) being dominant.

As a rule of thumb, we estimate that 90.8% is currently the average asset percentage below which A(b) becomes dominant over A(a) under Dutch Asset Cover Tests (the AP crossover point for A(b) to A(a) referred to in Figure 8).

The asset percentages applied provide for the by the rating agencies required minimum credit enhancement

The **asset percentages** applied for the purpose of the Asset Cover Test are in line with rating agency requirements to maintain sufficient credit enhancement for current rating levels. They are obtained from the rating agencies in the last month of each quarter. Otherwise the Covered Bond Company or the administrator on its behalf will in that month calculate or obtain the calculation of the *weighted average foreclosure frequency* (WAFF) and the *weighted average loss severity* (WALS) for all transferred receivables or for a random sample of the transferred receivables. These WAFF and WALS numbers will be used as input in one or more cash flow models provided or approved by the rating agencies, to test the required credit enhancement and the asset percentage needed to provide the credit enhancement under various cash flow scenarios.

These committed percentages do vary from time to time and currently range from 75% to 95%. Although, SNS Bank, NIBC Bank, Van Lanschot and Aegon Bank make no reference to a *maximum* asset percentage in their programme documentation, ING Bank and ABN AMRO Bank cap their asset percentages at a maximum of 97% and 92.5%.[26] Any increase in the asset percentage under these programmes is also subject to rating agency confirmation. SNS Bank, NIBC Bank, Van Lanschot and Aegon Bank may request the Covered Bond Company to increase or decrease the asset percentage as well. However, the Covered Bond Company will only accept a request for an increase if none of the rating agencies (after being notified of such a request) communicates that this will negatively affect the current covered bond ratings. In addition, SNS Bank specifically states that the asset percentage applied is always sufficient to maintain an Aaa rating at Moody's on an expected loss basis, regardless of the actual rating of the covered bond programme.

B = **Principle receipts** on transferred mortgage receivables up to the end of the immediately preceding calculation period

C = **Transferred cash collateral**

D = Mark-to-market value of eligible €-denominated **substitution assets** in line with the EU Capital Requirements Directive and rating agencies requirements.

Substitution assets can be included if they fulfill EU CRR and rating agency requirements

CRR eligible substitution assets

- Exposures to or guaranteed by central governments, central banks, public sector entities, regional governments or local authorities in the EU (CRR Art 129(1)(a));
- Exposures to or guaranteed by AA- or better rated central governments, central banks, multilateral development banks, public sector entities, regional governments or local authorities outside the EU. Public sector exposures outside the EU rated A+ to A- are eligible up to 20% of the covered bonds outstanding (CRR Art 129 (1)(b));
- Exposures to AA- or better rated institutions up to 15% of the covered bonds outstanding and exposures to institutions with a maturity of less than 100 days that have at least an A- rating. (CRR Art 129 (1)(c));
- Exposures to A- to A+ rated institutions up to 10% if the supervisory authority (DNB) were to apply a waiver to the aforementioned AA- minimum rating criterion in accordance with CRR Art 129(1) third paragraph.

Substitution assets are capped at 20% of the covered bonds outstanding under the Dutch covered bond legislation.

[26] SNS Bank initially used to have a maximum asset percentage of 94%.

Rating agency requirements for substitution assets

The combined soft and hard bullet programmes of ABN AMRO Bank and ING Bank also provide for the following rating agency requirements related to the eligible substitution assets:

Moody's minimum short-term/long term rating requirements

- exposures maturing within 30 days: P-1/A2
- exposures maturing within 1-3 months: P-1/A1
- exposures maturing within 3-6 months: P-1/Aa3
- exposures maturing over 6 months: P-1/Aaa

Substitution assets may not exceed 20% of the covered bonds outstanding

S&P minimum short-term/long term rating requirements

- exposures maturing within 30 days[27] or 60 days[28]: A-1 or A-1/ A
- exposures maturing within 1-12 months or 2-12 months: A-1+/AA or A-1+/AA-/AAAm (money market funds)
- exposures maturing over 1 year: AAA

A-1 rated substitution assets may not exceed 20% of the covered bonds

Fitch minimum short-term/long term rating requirements

- exposures maturing within 30 days: F1/A
- exposures maturing within 1-12 months: F1+/AA-

The pre-maturity ledger covers for a breach of the pre-maturity test for hard bullet covered bonds

E = **Pre-maturity liquidity ledger** plus **supplemental liquidity reserve ledger**

In order to mitigate liquidity risks for hard bullet covered bonds a **pre-maturity test** has to be conducted twelve months (with all three rating agencies) ahead of the final maturity date of a hard bullet covered bond if the issuer's short-term credit rating falls below a by the rating agencies specified minimum (*supplemental liquidity event*).

- S&P < A-1 (short-term) and A (long-term): bonds maturing in 12 months
- Moody's < P-1(cr) or P-1 (short-term): bonds maturing in 12 months
- Fitch < F1+ (short-term): bonds maturing in 12 months

If the pre-maturity test is failed, the Covered Bond Company will notify the Security Trustee and the originators. The originators must make sufficient liquidity available via the pre-maturity ledger to repay the bonds maturing, taking into account all other covered bonds that mature ahead of these bonds. This can be done by selling or refinancing selected receivables, the transfer of eligible collateral to the Covered Bond Company, a guarantee for the issuer's obligations satisfactory to the rating agencies, a covered bond takeout credit facility agreement (CBTF agreement) or a combination of these measures. If the rating of the CBTF provider falls below the aforementioned minimum, the Covered Bond Company will draw the full amount available under the CBT facility and credit this to the pre-maturity ledger.

A *failure* of the pre-maturity test has to be fixed within 10 business days after notification of the failure. Otherwise it will result in a *breach* of the pre-maturity test. A breach of the pre-maturity test does not constitute an issuer event of default, nor does it prevent the issuer from issuing further covered bonds unless it coincides with a breach of the Asset Cover Test. That said, the Security Trustee is also in the case of a breach of the pre-maturity test entitled to serve a notice to pay under the Guarantee. If solely a notice to pay is served under the guarantee, without an issuer acceleration notice (as with an

[27] ABN AMRO Bank

[28] ING Bank

issuer default), the Covered Bond Company is not obliged to start making payments under the Guarantee. Only a failure by the issuer to repay the covered bond at maturity will result in an issuer event of default and service of an issuer acceleration notice. A service of a notice to pay does mean that the *Amortisation Test* has to be performed.

ABN AMRO Bank and ING Bank are the only two issuers that have Dutch covered bonds in hard bullet format outstanding under their combined soft and hard bullet programmes. Both are in breach of the required minimum short-term rating requirement at Fitch and consequently had amounts credited to the pre-maturity ledger at the end of December in relation to their hard bullet covered bonds maturing within 12 months.[29]

We do note that at an earlier stage both programmes removed their *selected asset required amount (SARA)* clause and the *supplemental liquidity reserve amount (SLRA)*. Hence E no longer represents the **supplemental liquidity reserve ledger (SLRL)** for these two programmes. Only SNS Bank still has a SARA clause and related supplemental liquidity reserve amount in place. This issuer has only issued soft bullet covered bonds. Consequently for this issuer, E only represents the supplemental liquidity reserve ledger explained below.

X = **Supplemental liquidity reserve amount**

The SLRA serves as liquidity risk mitigant

To reduce liquidity risks related to the mismatch between the maturity of the assets in the cover pool and the maturity of the covered bonds, Dutch covered bond issuers, such as ING Bank, ABN AMRO Bank and SNS Bank initially introduced a **supplemental liquidity reserve amount (SLRA)**.

Following a notice to pay, the SLRA is reduced by assets sold to fund the SLRL

Prior to a service of a notice to pay the SLRA is calculated on the basis of a method notified to the rating agencies in connection with the funding of the *supplemental liquidity reserve ledger (SLRL)*. This currently equates to *0% of the aggregate outstanding notional balance of the cover assets* for SNS Bank, but may be a different percentage. ABN AMRO Bank and ING Bank, which issued hard bullet covered bonds and perform a pre-maturity test, used to apply 5%. These two programmes now no longer have X under their Asset Cover Test. If a notice to pay is served, the SLRA is reduced by the amount of assets sold or refinanced to fund or replenish the Supplemental Liquidity Reserve Ledger.

Furthermore, it moderates the pro-rata allocation impact of SARA clauses

The SLRA serves to moderate the impact of **selected assets required amount (SARA)** clauses. To reduce the risk of time subordination of longer maturity covered bondholders, SARA clauses put limitations on the amount of assets that can be sold to repair a failure of the pre-maturity test or to repay maturing covered bonds after a default of the issuer. The aggregate current balance of the selected assets that the Covered Bond Company is allowed to sell cannot exceed the so-called *required current balance amount*. The latter roughly restricts the amount of assets that can be sold to the redemption amount of the covered bond maturing as a percentage of all covered bonds outstanding times the total assets in the cover pool. SARA clauses thus essentially allocate the assets available on a pro-rata basis to the covered bonds outstanding.[30] Rating agencies tend to require more

[29] With the amendments made to ABN AMRO Bank's and ING Bank's programme documentation in December 2013 and February 2014 respectively, the minimum short-term rating requirement at S&P was changed from A-1+ to A-1, while at the same time the coverage period for this rating agency was expanded from six months to 12 months. Consequently at their current short-term rating of A-1 (and long-term rating of A) at S&P, both issuers do not have to set aside sufficient liquidity under the pre-maturity ledger to meet S&P's requirements.

[30] The **required current balance amount** is the **adjusted current balance amount x A/B**, in which **A** is the current balance of all receivables and other transferred assets minus the supplemental liquidity available amount. The *supplemental liquidity available amount* is a) prior to a notice to pay, the SLRA minus assets sold or refinanced to fund the supplemental liquidity reserve ledger, or b) following a notice to pay, the SLRA.

B is the required redemption amount of all covered bonds outstanding minus the required redemption amount provided for in cash. The r*equired redemption amount* is the amount outstanding for each covered bond x (1+ (0.005 x (days to the final maturity date (for hard bullet covered bonds) or extended maturity date (for soft bullet covered bonds))/365). Hence to further mitigate time subordination longer maturity covered bonds have more weight than shorter maturity covered bonds in the calculation of the selected assets required amount.

The **adjusted current balance amount** is a) in the case of a breach of the pre-maturity test, the required redemption amount for a hard bullet covered bond minus the amount on the pre-maturity liquidity ledger, or b) following a notice to pay and issuer acceleration notice, the required redemption amount for the earliest maturing covered bonds less the amounts on the GIC or AIC account, authorised investments and substitution assets.

overcollateralization for covered bond programmes with SARA clauses than for covered bond programmes without these clauses. SLRAs mitigate the additional overcollateralization consequences of SARA clauses.

Y1 = Coverage for **deposit set-off risk**

Deposit-taking issuers account for deposit set-off risks on breach rating triggers

Covered bond issuers that are also deposit taking institutions can be subject to set-off risk. Upon bankruptcy of the issuer, mortgage borrowers may be able to subtract (set-off) deposits from their mortgage loan. This **deposit set-off risk** is accounted for under Y or Y1 in the Asset Cover Test. If an issuer no longer fulfils the minimum required ratings, additional assets need to be pledged to make sure that sufficient assets are available in the pool to fulfil the claim of covered bondholders plus potential set-off amounts of the mortgage borrowers. The minimum rating requirements are as follows:

- S&P: A-1 (short-term) or A (long-term)[31]
- Moody's: P-1(cr) or P-1 (short-term)
- Fitch: F1 (short-term) and A (long-term)[32]

The **deposit amount** (Y for ABN AMRO Bank and ING Bank) is typically defined as an additional amount calculated on the basis of a method notified to the rating agencies for set-off risks related to deposits, other than deposits linked to bank savings loans. The latter will be accounted for under the set-off risk adjustments (α) under A if no participation agreement is in place. SNS Bank and ABN AMRO Bank specifically define the deposit amount (Y) under its Asset Cover Test as deposits that are not covered by the Deposit Guarantee Scheme (DGS):

$$\Sigma \min [D - D_{dgs} ; MR], \text{ where}$$

D = deposit amount held by the borrower of the mortgage receivable with the originator, D_{dgs} *= the deposit amount claimable under the Deposit Guarantee Scheme and MR = outstanding principal amount of the mortgage receivable.*

The deposit amount under all programmes is always at least zero, and is reduced by A(b)-A(a) if A(b) exceeds A(a), or by the excess credit enhancement if A(b) is lower than A(a).[33] SNS Bank is the only issuer that makes a reservation under Y1 for deposit set-off risk as the issuer does not meet the minimum rating requirements. NIBC Bank, Van Lanschot and Aegon Bank fully account for deposit set-off risks under A.

Y2 = Coverage for **commingling risk**

SNS Bank introduced a commingling risk remedial action under the ACT

In the case of SNS Bank the mortgage loan originators and the foundation account providers are the same entities. Therefore, there is still a risk that amounts standing to the credit of the collection foundation account will form part of the bankruptcy estate of the originator (**commingling risk**). Consequently, at the end of April 2014, SNS Bank introduced an additional reservation for commingling risk under the Asset Cover Test via **Y2** as a commingling remedial action to mitigate this risk.

If the issuer's credit ratings fall below P-1 (short-term) at Moody's, or below F1 (short-term) or A (long-term) at Fitch, an additional amount in connection with commingling risk has to be made available. This amount equals the original principal amount of all mortgage receivables on the last day of the preceding month, multiplied by the average monthly payment percentage for the twelve calendar months preceding the calculation date,[34] multiplied by 1.5. No reservation has to be made under the Asset Cover Test if the

[31] Until December 2013 and February 2014, this used to be A-1+ (short-term) under ABN AMRO Bank's and ING Bank's covered bond programmes.

[32] SNS Bank removed in the past the requirement that these Fitch ratings should not be on rating watch negative.

[33] The excess credit enhancement is the difference between A(b) based upon the Asset Percentage notified to the rating agencies and the actual outcome of A(b).

[34] Principal and interest payments made on the mortgage loans in a month, divided by the outstanding principal amount of all mortgage receivables at the end of the preceding month.

issuer is not in breach of the minimum rating criteria or has taken alternative measures to reduce commingling risk.

Dutch covered bonds do not need to cover for negative carry due to presence of TRS

Z = Coverage for **negative carry**
The Asset Cover Test also covers for the **negative carry** that may rise between the **GIC or AIC rate** and the **coupon on the covered bonds** after a default of the issuer. The coverage for negative carry is *zero* if a total return swap, or standby total return swap, is in place, as is the case with all Dutch bullet covered bond programmes.

If there is no total return swap in place, but a **portfolio test** is performed or an alternative hedging methodology is in place, the coverage for negative carry equates to the weighted average maturity (WAM) of the covered bonds outstanding multiplied by the principal amount of the covered bonds multiplied by a percentage P. P represents the **negative carry factor** and is defined as the weighted average margin of the outstanding covered bonds minus the GIC or AIC margin/rate, defined in the GIC or AIC Account Agreement.[35] The negative carry factor is typically 0.5% for covered bond programmes that do not have a total return swap in place.

In the case of the Dutch conditional pass-through covered bond programmes,

Z = the **interest reserve required amount**
Z = max [0 ;(U + V – W)], in which

U = interest payable on the covered bonds until their maturity date,

V = (i) x (ii) x (ii), in which

(i) = max [0 ;(WAL_{assets} – $WAL_{covered\ bonds}$)],
(ii) = the principal amount outstanding on the covered bonds
(iii) = the WA interest rate on the covered bonds after maturity

WAL_{assets} = weighted average remaining life of the cover assets, $WAL_{covered\ bonds}$ = weighted average remaining life of the covered bonds until maturity

W = the estimated interest income on the cover assets

The Interest Reserve Required Amount under the Dutch conditional pass-through covered bond programmes essentially requires the issuers to pledge additional collateral if the expected interest payments due on the covered bonds until their intended maturity date and during the expected extended maturity term were to exceed the expected interest income from the cover assets during this period.

A breach of the Asset Cover Test

A breach of the Asset Cover Test does not trigger a maturity extension,…

A breach of the Asset Cover Test does not constitute an issuer event of default, and consequently does not trigger soft bullet or pass-through extension features. Following a failure of the Asset Cover Test the originators have to transfer sufficient eligible receivables to restore the breach, otherwise no further covered bonds can be issued. If the Asset Cover Test is not restored by the end of the next calculation date, the Security Trustee can serve a notice to pay, or in the case of the conditional pass-through programmes a **breach of asset cover test notice**, on the Covered Bond Company.[36] Under the conditional pass-through programmes, the Covered Bond Company is not allowed to make any payments to the issuer or the subordinated loan provider for as long

…but issuers are not allowed to issue further covered bonds until the breach is restored

[35] The GIC or AIC Account Agreement requires the Covered Bond Company to hold an GIC AIC Account with an eligible account bank in which the amounts it receives on its cover assets will be paid. The account bank pays interest on the amount of money standing on the AIC Account agreed upon in the AIC Account Agreement. The AIC rate is 1m Euribor minus the AIC margin. The minimum rating criteria applied for the account bank are P-1 (short-term) at Moody's, A-1 (short-term) at S&P and F1/A (short-term/long-term), or alternatively F1+ RWN / A+ RWN, at Fitch.

[36] A notice to pay under this programme can only be served if an issuer event of default occurs *and* results in the service by the Security Trustee of an issuer acceleration notice on the issuer. A failure by the issuer to make a payment in respect of the covered bonds will not automatically result in the service of an issuer acceleration notice. The Security Trustee is not obliged to serve an issuer acceleration notice unless this is specifically requested by the covered bondholders.

as the Asset Cover Test is not repaired. However, the mere service of a notice to pay or breach of asset cover test notice, *without* an issuer acceleration notice (as in the case of an issuer event of default) or a CBC acceleration notice (following a CBC event of default), does not oblige the Covered Bond Company to start making payments under the Guarantee. The Covered Bond Company is only required to make payments if a notice to pay is served in combination with an issuer acceleration notice. In that case the Covered Bond Company is also required to sell or refinance receivables if the covered bonds have an (extended) maturity date within twelve months (bullet covered bonds). Otherwise the guarantor will undertake its best efforts to sell and refinance mortgage receivables to make payments under the guarantee (conditional pass-through covered bonds). Until the Asset Cover Test is remedied, the Amortisation Test has to be performed.

Amortisation Test

The Amortisation Test replaces the Asset Cover Test if the issuer defaults

Following the service of a notice to pay but prior to a service of a CBC acceleration notice, an **Amortisation Test** is performed to make sure that the amount of cover assets in relation to the covered bonds is at a sufficient level. The Covered Bond Company has to notify the Security Trustee if the Amortisation Test is breached, which in turn is then entitled to serve a CBC acceleration notice. Under the Amortisation Test, the Amortisation Test Aggregate Amount, A+B+C-X-Z, needs to be at least equal to the amount of covered bonds outstanding.

A = the Amortisation Test Current Balance = Σ min [CB – α ; 0.8*IMV – β], with

CB = current balance, IMV = indexed market value, α = Gross set-off and β = Net set off.

Furthermore,

B = cash on the GIC or AIC or CBC accounts, including interest and principal receipts

C = the mark-to-market value of substitution assets

X = the supplemental liquidity reserve amount

Z = the coverage for negative carry, which is zero if a total return swap is in place

or in the case of NIBC Bank, Van Lanschot and Aegon Bank

Z = the interest reserve required amount

Under the Amortization Test NIBC Bank and Aegon Bank make no set-off risk adjustment α anymore for deposit set-off risks. Aegon Bank also no longer adjusts for construction deposits, while NIBC Bank no longer accounts for the difference between the committed 3% minimum mortgage interest rate and (if lower) the actual mortgage interest rate.

In the case of the Dutch conditional pass-through covered bond programmes the net outstanding principal amount of all mortgage receivables (excluding defaulted receivables) plus the market value of the substitution assets also have to be at least 110% (Aegon Bank) or 115% (NIBC Bank and Van Lanschot) of the covered bonds outstanding. This is where the conditional pass-through covered bond programmes still commit to minimum 10% and 15% overcollateralization levels, while for the bullet programmes A(a) (as applicable under the Asset Cover Test) will become leading. This may reduce the required credit enhancement under these programmes by 15% to 23% at the current pool composition and 80% LTV cut-off applied (see Figure 8).

Also the 105% and 100% regulatory coverage requirements have to be met. The **first regulatory current balance amount**, i.e. the sum of a) the aggregate (nominal) amount of the current balance of the mortgage receivables, excluding defaulted loans, and b) the market value of the substitution assets, must at least be equal to 105% of the covered bonds outstanding. The **second regulatory current balance amount**, i.e. the sum of a) the aggregate current balance of the mortgage receivables, and b) the market value of the substitution assets, must at least be equal to 100% of the covered bonds outstanding. The aggregate current balance of each mortgage receivables is the lower of i.) the sum of the current balance of the mortgage loans, excluding defaulted receivables and ii.) the regulatory cut-off percentage of the indexed valuation relating to the mortgage receivable.

A breach of the Amortisation Test

A breach of the Amortisation Test leads to payment acceleration on bullet covered bonds,...

A breach of the Amortisation Test will in the case of all the Dutch bullet covered bond programmes constitute a CBC event of default, entitling the Security Trustee to service a **CBC acceleration notice**, meaning that the covered bonds will accelerate. Only in the case of the Dutch conditional pass-through covered bond programmes a breach of the Amortisation Test will not result in a CBC event of default. The Security Trustee is here entitled to serve a **breach of amortisation test notice** (i.e. not a CBC acceleration notice) on the issuer and the Covered Bond Company. However, under these particular covered bond programmes, if the Amortisation Test is breached and following an issuer event of default and service of a notice to pay on the guarantor, *all* covered bonds become pass-through with a 32 year legal final maturity extension period. All available funds for repayment will in that case be divided pro rata to all covered bonds. For covered bonds with a shorter maturity date it may then take longer before they will be repaid, while for covered bonds with longer maturity dates repayment may occur earlier than expected. A CBC event of default does take place, however, if the pass-through covered bonds have not been repaid in full by the end of the 32 year extension date.

…while *all* CPTCB become pass-through

Matching

Dutch bullet covered bond issuers hedge their interest rate risks and currency risks

Under the bullet covered bond programmes, interest rate risks that arise due to the mismatches between the mortgage payments received and the covered bond payments due are mitigated via various swap contracts. Via a **total return swap** (TRS) the Covered Bond Company swaps the mortgage payments received for a 1m floating rate. If applicable, the basis risk between the floating rate payments received under the TRS and the fixed rate payments due on the covered bonds is hedged via **interest rate swaps**. The Covered Bond Company will also enter into a **structured swap** if a covered bond is issued in another currency than the Euro, which covers interest rate and currency mismatches. Counterparty risks to the swap contracts are mitigated via minimum rating requirements for the swap provider (or alternatively a guarantor) or otherwise additional collateral postings.[37] In addition, to reduce the risks inherent to intra-group swap counterparties, SNS Bank has back-up swap facilities in place.

Bullet covered bond programmes have total return swaps in place

NIBC Bank, Van Lanschot and Aegon Bank have no swaps under their conditional pass-through covered bond programmes, but for all three issuers the programme documentation does make reference to the option to use swaps to hedge certain risks. Van Lanschot's and Aegon Bank's programme documentation make a distinction between portfolio swaps and interest rate swaps. In the case of a **portfolio swap**, all revenues to be received on the transferred assets, multiplied by a portfolio swap fraction, are exchanged for a fixed or floating rate of interest on one or more series or on all series of covered bonds. The *portfolio swap fraction* equates the principal amount outstanding of the *relevant series* of covered bonds divided by the principal amount outstanding on *all* covered bonds. Under the **interest rate swap**, a specific fixed or floating rate is exchanged for a specific rate on one or more series or all series of covered bonds.

[37] The minimum rating criteria are: ING Bank: P-1 (short-term) and A2 (long-term) (Moody's) (or A1 (long-term) if there is no short-term rating), A (long-term) (S&P), F1 (short-term) and A (long-term) (Fitch); ABN AMRO Bank: P-2(cr) (short-term) and A3(cr) (long-term) (Moody's), (A-1) (short-term) and A (long-term) (S&P), F3 (short-term) and BBB- (long-term) (Fitch); SNS Bank: P-1(cr) (short-term) and A2(cr) (long-term) (Moody's) (or A1(cr) (long-term) if there is no short-term rating), F1 (short-term) and A (long-term) (Fitch); NIBC Bank: A-1 (short-term) and A (long-term) (S&P), F1 (short-term) and A (long-term) (Fitch); Van Lanschot: A-1 (short-term) and A (long-term) (S&P), F1 (short-term) and A (long-term) (Fitch); Aegon Bank: A-1 (short-term) and A (long-term) (S&P), F1 (short-term) and A (long-term) (Fitch).

Conditional pass-through issuers commit to a minimum mortgage interest rate

NIBC Bank, Van Lanschot and Aegon bank do commit to a **minimum mortgage interest rate** of 3%, 1.5% and 1.0% respectively on the mortgage loans in their pool. Under the servicing agreement, *following notification* of the borrowers of the assignment of their mortgage loan, the servicer will only offer the borrowers an interest rate for the next succeeding interest rate period that is at least equal to the minimum mortgage interest rate. This percentage can only be amended by the Covered Bond Company and the issuer subject to rating agency confirmation and with consent of the Security Trustee, subject to the mortgage conditions and applicable law, including principles of reasonableness and fairness. In the case of NIBC Bank, if the interest rate is set below the minimum mortgage interest rate, the difference will have to be taken into account in the Asset Cover Test.

NIBC Bank pledges extra collateral under the ACT for loans set below the minimum

NIBC Bank's programme documentation also stipulates that under the guarantee support agreement, the transferor will be obliged to repurchase the mortgage receivables sold and assigned to the CBC if the interest rate on the loan is reset at a rate lower than the minimum mortgage rate. Such a repurchase is not required if the current balance of the loan is adjusted in relation to the difference under the Asset Cover Test. In the case of Van Lanschot and Aegon Bank the guarantee support agreement provides that *prior to notification*, the transferor of the mortgage loan will reset interest rates on the mortgage loans in accordance with the mortgage conditions. However, the transferors are not allowed to reset the interest rate materially above or below the then applicable current market rates for comparable mortgage loans, and also not below the minimum mortgage interest rate. There always remains a remote risk, however, that if the transferors do not comply with these obligations, the interest received by the Covered Bond Company may not be sufficient to pay the interest obligations due on the covered bonds.

Portfolio test

Bullet programmes have the alternative of performing a portfolio test

As an alternative to a total return swap the bullet issuers can opt to perform a **portfolio test** which will be carried out by the administrator. Under the portfolio test the **net present value** (NPV) of future cash flows on the transferred receivables and other balances related to the covered bond programme (i.e. cash balances, substitution assets or the mark-to-market value of structured and interest rate swaps) need to exceed the NPV of the covered bonds by a certain amount (x) subject to rating agency requirements. More specifically and as an example, under a portfolio test:

$$\Sigma\,[A + B + C + D + E + F + G] - [\text{NPV of the covered bonds}] \geq x, \text{ where:}$$

A = NPV of future cash flows on the transferred receivables

B = receipts on the transferred receivables in the preceding calculation date that were not applied in accordance with the Trust Deed

C = the principal balance of any transferred collateral other than substitution assets

D = NPV of future cash flows from the substitution assets

E = other cash and deposits held with the Covered Bond Company

F = mark-to-market value of structured swap agreements

G = mark-to-market value of interest rate swap agreements

In addition, the difference in **basis point duration**[38] between the cover assets and covered bonds may not exceed a specified percentage (y), i.e.

$$\text{Dur}\,\Sigma\,[A + B + C + D + E + F + G] - \text{Dur}\,[\text{NPV of the covered bonds}] \leq y\%$$

[38] The **basis point duration** is the percentage change in the net present value of a financial asset due to the change in the relevant interest rate by one basis point.

Finally, the difference in **basis point duration** between the cover assets for that **term point** and the covered bonds may not exceed a specified percentage, where term points can be defined as:

1-3, 4-6, 7-9 and 10-12 months; and

2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 15, 20, 25 and 30 years.

A breach of the portfolio test does not constitute an issuer event of default. However, the issuer is not allowed to issue further covered bonds until the portfolio test is restored. A breach of the portfolio test needs to be remedied by the following calculation date, otherwise the Security Trustee may serve a notice to pay on the Covered Bond Company under the guarantee. The documentation for conditional pass-through covered bond programmes does not provide for the option of a portfolio test.

Refinancing risk mitigants

The Covered Bond Company is a special purpose entity that has no banking license. As such it cannot attract central bank funding for the purpose of refinancing covered bonds that mature after the issuer has defaulted. However, there are other refinancing risk mitigants, such as for example the **regulatory 180 days liquidity coverage requirement** and the allowance for **more liquid substitution assets**. There are also programme specific features that address refinancing risks. These include the pre-maturity test for hard bullet covered bonds, the maturity extension features in the case of soft-bullet and conditional pass-through covered bonds and the commitment to establish a reserve account or a reserve fund if the issuer's credit rating falls below a certain level.

Pre-maturity test

The pre-maturity test ensures sufficient liquidity to repay hard bullet covered bonds

ABN AMRO Bank and ING Bank still have hard bullet covered bonds outstanding, that are backed by a pre-maturity test to provide for sufficient liquidity to cover redemption payments due on the covered bonds within twelve months if the credit ratings of the issuers fall below a certain level (a failure of the pre-maturity test). A failure of the pre-maturity test has to be restored within 10 business days, by selling receivables or by posting additional collateral via the pre-maturity liquidity ledger, or through a guarantee or covered bond takeout facility (CBTF). Otherwise a breach of the pre-maturity test occurs. The Security Trustee may then serve a notice to pay on the Covered Bond Company, in which case the Amortisation Test instead of the Asset Cover Test has to be performed.

Soft bullet maturities

A 12 month maturity extension mitigates refinancing risks on soft bullet covered bonds

In the case of soft bullet covered bonds, if the Covered Bond Company has insufficient funds available to make redemption payments following an issuer event of default, this obligation is automatically deferred to the extended due for payment date, one year after the maturity date. If the Covered Bond Company has sufficient money available to pay redemption amounts due in part, these partial redemption payments have to be made on any monthly interest payment date. Payment of unpaid amounts is deferred until the extended due for payment date.

A forced sale of assets is delayed until six months ahead of the extended maturity date

A failure by the Covered Bond Company to pay redemption amounts prior to the extended due for payment date does not constitute a CBC event of default. However, if the CBC fails to pay the final redemption amount on the extended due for payment date, this will constitute a CBC event of default. If a covered bond's extended due for payment date falls within twelve months, the Covered Bond Company is required to sell or refinance selected mortgage receivables for the best terms available but at least for the required redemption amount. If the receivables are not sold for the required amount six months prior to the extended due for payment date, then the Covered Bond Company can sell or refinance them at the best terms, even if this is less than the required amount.

Conditional pass-through feature

Conditional pass-through covered bonds can be extended by 32 years

All Dutch conditional pass-through covered bonds have a maximum 32 year maturity extension period. In the case of pass-through covered bonds, the risks run by the mismatch between the maturity of the covered bonds and the assets underlying them is for the account of the investor. A pass-through of payments to covered bondholders, if the Covered Bond Company, post issuer default, has insufficient funds are available to fully repay the covered bonds on their maturity date, removes market risks involved with a potential fire sale of the cover assets at an unfavourable price. Mortgage loans will only be sold to repay the pass-through covered bondholders if the sales proceeds are sufficient to redeem the bonds. If the mortgage receivables cannot be sold for the required amount, the covered bonds will be redeemed to the extent funds are available. The Covered Bond Company will however make its best efforts to sell mortgage receivables every six months to repay the covered bondholders. This reduces the extension risk involved with the pass-through covered bonds. A failure to sell or refinance these assets prior to the extended due for payment date will not lead to a CBC event of default. Only a failure by the Covered Bond Company to make these final redemption payments after 32 years on the extended due for payment date will constitute a CBC event of default.

Liquidity provisioning

The 180 days regulatory liquidity requirements meet outflows not covered by the contractual reserves

Pursuant to the Dutch covered bond legislation, issuers need to ensure that the Covered Bond Company always maintains sufficient liquid assets or generates sufficient liquidity via the cover assets to fulfil the *coupon and (hard bullet) redemption obligations* on the covered bonds over a period of six months. This includes any other obligations ranking senior to the payments due to the covered bondholders. In practice, the regulatory liquidity requirements overlap with the contractual reserve requirements provided for by the Dutch covered bond programme documentation. There are some programme specific differences however in the way this is structured. In the case of the bullet covered bond programmes, the liquidity provisioning is adjusted for the reserve fund requirements. The conditional pass-through programmes establish a reserve account representing the higher of the reserve account required amount or the liquidity reserve required amount.

The bullet covered bond programmes require the Covered Bond Company to maintain a **mandatory liquidity fund** (ABN AMRO Bank and ING Bank) or **liquidity reserve fund** (SNS Bank) on the AIC Account or GIC Account. The issuer will transfer to the Covered Bond Company an amount equal to the *mandatory liquidity required amount* or the *liquidity reserve required amount*, which in turn will credit this amount to the mandatory liquidity fund or liquidity reserve fund.

- In the case of the hard/soft bullet covered bond programmes of ABN AMRO Bank and ING Bank, the **mandatory liquidity fund** is administered via a) the *mandatory liquidity revenue ledger* and b) the *mandatory liquidity principal ledger*. The mandatory liquidity revenue ledger covers the interest payments due on the covered bonds outstanding over the coming six months, while the mandatory liquidity principal ledger covers the hard bullet redemption payments due in the coming six months. If the proceeds from the transferred assets and the amounts standing to the credit of the AIC Account, representing the pre-maturity ledger and the reserve fund ledger, fall short of the mandatory liquidity buffer over a period of 180 days, the *mandatory liquidity required amount* will cover this shortfall.
- The **liquidity reserve required amount** under SNS Bank's covered bond programme represents the amounts required to meet the interest payment obligations under the soft-bullet covered bonds for the following six months, including higher ranking items in the relevant priority of payments and taking into account the expected cash flows, *minus* the amount on the GIC Account representing the reserve fund.

The **liquidity reserve required amount** credited to the reserve account under the Dutch conditional pass-through covered bond programmes (when exceeding the reserve account required amount) represents the amounts required to meet the interest payment obligations under the conditional pass-through covered bonds in the following six months, including higher ranking amounts and taking into account the expected cash flows and other amounts required as liquidity under the Dutch covered bond regulations. Further details on the reserve fund and reserve account requirements are discussed below.

Reserve fund

Both the reserve fund (bullet programmes)…

In the case of the bullet Dutch covered bond programmes, the Covered Bond Company will be required to maintain a **reserve fund** on the AIC/GIC Account (*reserve fund ledger*), if the issuer's credit rating falls below the minimum required ratings:

- S&P: A-1 (short-term) or A (long-term)
- Moody's: P-1(cr) or P-1 (short-term)
- Fitch: F1 (short-term) and A (long-term)

As a consideration for the Covered Bond Company assuming the guarantee, the issuer will credit an amount equal to the **reserve fund required amount** to this account, covering three months of interest payments and third party expenses.

Reserve fund required amount

- If **no interest rate or structured swap** is in place: the aggregate scheduled interest on the covered bonds due in the following three months.
- If there is an **interest rate or structured swap with an *external* counterparty**: the aggregate interest component due by the Covered Bond Company under the interest rate swap or structured swap in the coming three months.
- If there is an **interest rate or structured swap with an *internal* counterparty**: the higher of a) the aggregate scheduled interest due and b) the interest component due by the Covered Bond Company under the interest rate swap or structured swap on the covered bonds for the coming three months.
- The anticipated aggregate amount payable in the next three months to the Security Trustee, tax authorities, the agents and registrar, the servicers, the administrator, the account bank, managing director and Security Trustee's director and the asset monitor.

If the rating trigger is no longer breached, the amounts on the reserve fund ledger will be repaid to the issuer. If a notification event occurs or after notice to pay or CBC acceleration notice has been served on the Covered Bond Company, the Covered Bond Company is no longer required to maintain a reserve fund:

- **Three months after a notification event**, when the borrowers have been notified of the transfer of the mortgage receivables and have been instructed to make payments on the mortgage receivables directly to the Covered Bond Company.

- After the date that the Covered Bond Company demonstrates that the **borrowers pay** the required amounts on their mortgage loans **to the Covered Bond Company**.

The amounts standing to the credit of the reserve fund will then be added to the other income of the Covered Bond Company and will be used to make payments under the covered bond programme in line with the relevant priority of payments.

Reserve account

…and reserve account (CPTCB) cover three months of interest and third party expenses

Under the Dutch conditional pass-through covered bond programmes the Covered Bond Company is required to open a **reserve account** with the account bank. The reserve account represents the higher of a) the *reserve account required amount* or b) the *liquidity reserve required amount* (discussed above). In the case of NIBC Bank and Van Lanschot the reserve account will be credited by the Covered Bond Company from the proceeds of the subordinated loan. For these two programmes, the **reserve account required amount** covers the interest payments due on the covered bonds over the next three months,[39] or if higher the accrued interest since the last interest payment date of each bond, plus 0.03% of the principal amount outstanding of the covered bonds plus a fixed amount of €62,500. Aegon Bank on the other hand adds 0.045% of the principal amount outstanding of the covered bonds plus a fixed amount of €30,000 to the three months (or accrued) interest coverage requirement.

If the interest receipts and the principal receipts on the cover assets are insufficient to meet the payments due related to the covered bond programme, all amounts credited to the reserve account will be available to meet the interest payments on the covered bonds and third party expenses due. If during an interest period, a notice to pay is served on the Covered Bond Company, the amount of scheduled interest due on the covered bonds in this period will be paid directly from the reserve account.

Fig 9 Amounts standing to the credit of the reserve fund ledger or reserve account (€)

	ABN AMRO Bank	ING Bank	SNS Bank	NIBC Bank	Van Lanschot	Aegon Bank
Reserve Fund	-	-	7,312,735	8,765,925	1,227,189	633,893

Source: Investor reports, ING

Monitoring

Servicer

The servicer services the transferred receivables and prepares investor reports

A servicer is appointed to service the transferred mortgage receivables on a daily basis, which includes collecting principal and interest payments.[40] The servicer will among others things prepare the monthly investor reports for the Covered Bond Company and assist the administrator in the preparation of the monthly asset cover report. Issuers typically perform the role of servicer themselves, but are allowed to sub-contract their servicing role to a third party servicer. The Covered Bond Company and the Security Trustee may terminate the servicing agreement with the servicer, if the latter defaults on its payment obligations or other obligations under the agreement, goes bankrupt or is no longer licensed. The servicer may itself terminate the agreement upon a twelve months' notice. A licensed substitute servicer with the proper experience in administrating mortgage loans will have to be appointed in that case. Yet, any delays in such an appointment could negatively impact the ability of the Covered Bond Company to make timely payments on the covered bonds post a default of the issuer. Note that not the servicer, but a **custodian** is responsible for the management of substitution assets.

Administrator

The administrator monitors compliance with the ACT

The administrator is appointed to monitor compliance with the Asset Cover Test, Amortisation Test, pre-maturity test (in the case of hard-bullet covered bonds) and portfolio test (if implemented as an alternative to a total return swap), and offers administration and cash management services to the Covered Bond Company on a daily basis. The administrator also has to prepare the monthly asset cover reports. The Covered Bond Company and the Security Trustee may terminate the administration agreement with the administrator, if the latter defaults on its payment obligations or other obligations under the administration agreement, or goes bankrupt. The administrator may

[39] If this had been applicable under conditional pass-through covered bond programmes, also amounts payable by the Covered Bond Company under swap agreements entered into would have to be covered for the coming three months.

[40] The Servicer is subject to minimum rating requirements under the covered bond programmes of ING Bank: Baa3 (Moody's), BBB+ (S&P) and BBB- (Fitch), and ABN AMRO Bank: Baa3 (Moody's), A-2 (short-term) and BBB (long-term) (S&P) and BBB- (Fitch). A third party servicer has to be found within 60 days if these rating criteria are no longer met.

itself terminate the agreement upon a twelve months' notice. Issuers typically perform the role of administrator themselves. In the case the administration agreement is terminated, a substitute administrator has to be appointed. With the amendments made to SNS Bank's programme documentation at the end of April 2014, the issuer transferred its role of administrator retroactively per January 2012 to a third party administrator. Also van Lanschot has a third party administrator. NIBC Bank and Aegon Bank already appointed a back-up administrator as substitute administrator in the case the appointment of the bank itself as administrator were to be terminated. In all these cases Intertrust Administrative Services is the third party or back-up administrator.

Fig 10 Administrators and back-up administrators of Dutch covered bond programmes

	ABN AMRO Bank	ING Bank	SNS Bank	NIBC Bank	Van Lanschot	Aegon Bank
Administrator	ABN AMRO Bank	ING Bank	Intertrust	NIBC Bank	Intertrust	Aegon Bank
Back-up administrator	-	-	-	Intertrust	-	Intertrust

Source: Investor reports, ING

Asset Monitor

The asset monitor verifies the accuracy of the administrator's calculations

The Dutch covered bond legislation requires the appointment of an external accountant as asset monitor. The asset monitor has to check on a regular basis the calculation of the legal overcollateralization requirements and the legal liquidity buffer requirements. The asset monitor also performs a yearly check on a sample of files related to the cover assets. Prior to a notice to pay, the asset monitor monitors on a yearly basis the calculations of the administrator in respect of the Asset Cover Test. Following a notice to pay, the asset monitor will verify on a monthly basis the calculations of the administrator in respect to the Amortisation Test. The monitoring of the calculations will be more frequent if the rating of the issuer/administrator falls below certain levels (in the case of the bullet programmes only), or if material errors are found in the calculations of the administrator.[41] The findings of the asset monitor on the arithmetic accuracy of the administrator's calculations will be sent to the administrator, the Covered Bond Company, the issuer, the Security Trustee and the rating agencies. If mistakes were found in the calculations, the correct results will be provided by the asset monitor report. The role of asset monitor is performed by independent accountant firms. The Covered Bond Company may, subject to Security Trustee approval, terminate the appointment of the asset monitor upon a 30 days prior written notice. Termination will not take place unless a replacement asset monitor is found within this time. The asset monitor may in turn decide to terminate its appointment upon a 60 days prior written notice, subject to the requirement that the asset monitor will identify a replacement if the Covered Bond Company has not found one within this period.

Fig 11 Asset Monitors and auditors of Dutch covered bond issuers

	ABN AMRO Bank	ING Bank	SNS Bank*	NIBC Bank	Van Lanschot	Aegon Bank
Auditor to the issuer	KPMG	Ernst & Young	KPMG	PwC	Ernst & Young	PwC
Auditor to the CBC	KPMG	Ernst & Young	KPMG	PwC	PwC	PwC
Asset Monitor	Ernst & Young	Ernst & Young	KPMG	PwC	PwC	PwC

*SNS Bank has appointed Ernst&Young as the independent auditor to audit its financial statement for 2016.
The bank also considers to transfer the Asset Monitor role to Ernst&Young early 2016.
Source: Programme documentation, investor reports, ING

[41] Calculations have to be verified on a monthly basis if the issuer/administrator ratings fall below the following levels: ABN AMRO Bank: Baa3(cr) (long-term) (Moody's), BBB- (long-term) (S&P) and BBB- (long-term) (Fitch), ING Bank: A3 (long-term) (Moody's), A- (long-term) (S&P) and F1 (short-term) or A (long-term) (Fitch), and SNS Bank: Baa3(cr) (Moody's) and BBB- (Fitch). Furthermore all programmes stipulate that in the case of material errors in the arithmetic accuracy resulting in a failure of the Asset Cover Test failed where the administrator recorded it as being satisfied, or a misstatement of the Adjusted Aggregate Asset Amount or Amortisation Test Aggregate Asset Amount by more than 1%, leads to an increase in the monitoring frequency to a monthly basis for a period of four consecutive months.

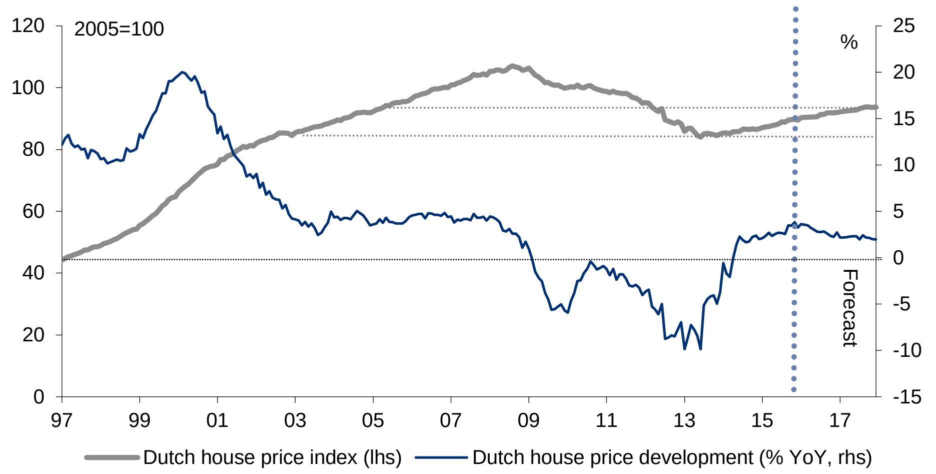
Cover pool resilience

Dutch mortgage market developments

The Dutch housing market is recovering

The Dutch housing market has been slowly recuperating from the price correction that started at the end of 2008 and lasted for almost five years. Although the broad set of housing market related policy measures that were implemented in recent years (as summarised below) have removed some uncertainty with respect to the favourable tax treatment of mortgage interest payments in the Netherlands, they have also been a burden to housing price growth, by reducing the affordability of new homes to borrowers.

Fig 12 Dutch house prices are back at 1H04 levels



Source: CBS, ING Economics Department

As of 2018 loan-to-market values will be capped at 100% including transfer tax

With the introduction of the revised Code of Conduct (Gedragscode Hypotecaire Financieringen (GHF)) by the Dutch Banking Association per 1 August 2011, the Dutch banking sector agreed to limit the loan-to-market-value ratio of mortgage loans to 106% (104% plus the transfer tax of, at that time, 2%). The temporary reduction of the transfer tax from 6% to 2% per 15 June 2011 to support the Dutch housing market was subsequently made permanent by the government per 1 July 2012. However, since 1 January 2013 the LTMV cap for new mortgage loans is gradually lowered by 1% per year to 100% (including transfer tax) in 2018. For 2016 a cap of 102% is applicable for new loans. In the case of energy saving investments an LTMV of 106% remains possible.

Only new amortizing loans are tax deductible. Interest only loans are capped at 50%

Moreover, as of 2013 only *new* amortizing mortgage loans that will be repaid in full within 30 years (at least in annuity form) will qualify for tax deductibility. While existing interest only mortgage loans originated ahead of that date still qualify for tax deductibility, new interest-only loans no longer benefit from this tax advantage since. However, if in the case of a full amortization the monthly payment burden becomes temporarily too high, a mortgage borrower can opt for a combination mortgage. This mortgage type consists of two loans: the first loan is a fully amortizing (annuity) loan with mortgage interest payments that are fully tax deductible; the second loan is a loan capped at 50% of the value of the first loan, which can be used to (partly) repay the first loan. Interest payments on the second loan part are not tax deductible. This is effectively similar to a cap of 50% on interest only loans, although in practice very few, if any, of these types of mortgages are provided. Note that as part of the introduction of the revised Code of Conduct in 2011, the Dutch banking industry already decided to limit the interest-only part of new mortgages to 50% of the original amount.

Tax rate at which interest can be deducted is lowered by 0.5% per year from 52% to 38%

Starting 2014 the maximum tax rate against which mortgage interest payments can be deducted will be reduced by 0.5% per year during a period of 28 years from 52% (tax rate applicable for the highest income bucket) to 38%. The government has also taken some measures to alleviate the pressure on Dutch house prices from the reduction of the tax advantage on mortgage loans in the Netherlands. These include the government's decision to make available additional funds for extra loans for first-time home buyers per 2013. Also the interest payments and costs related to residual debt on houses that are sold at a loss in the period 29 October 2012 until 31 December 2017 are temporary tax deductible for a period of 15 years (was 10 years before 1 January 2015). Interest payments on mortgage loans related to second houses for sale, also remain permanently tax deductible for three years following the purchase of a new house. Furthermore, since the beginning of 2014 residual debt related to guaranteed (NHG) loans that were granted before 2014, can be funded via a new NHG mortgage loan.

Housing market fundamentals will improve in time, while house prices slowly recover

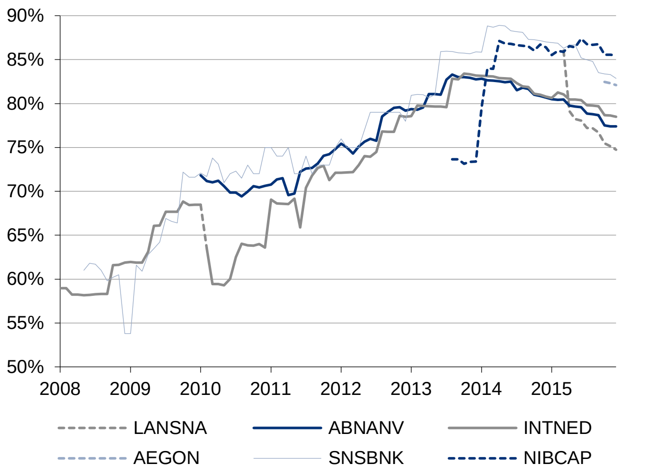
House prices in the Netherlands are still 15.5% below their 3Q 2008 peak, despite the 5.6% pick-up of Dutch house prices since the end of 2013 (see Figure 12). House prices were in November advancing at their most rapid annual pace in seven years at 3.8% YoY (3.2% YoY in December), with prices in big cities such as Amsterdam seeing even much sharper rises. This is encouraging, considering that some measures, such as for example the favourable VAT tariff for home improvements until July last year, are no longer applicable. Furthermore, the maximum NHG amount as well as the maximum percentage against which mortgage interest payments can be deducted, are gradually lowered. ING economists expect that house prices will continue to recover by 2.9% YoY in 2016, comparable to last year, with house price growth to slow modestly in 2017 to 2.2% YoY. Demand remains supported by the stronger consumer confidence and improved affordability due to a combination of lower house prices and the low mortgage interest rate environment.

Collateral pool developments[42]

LTV ratios for Dutch pools are gradually declining again due to house price rises…

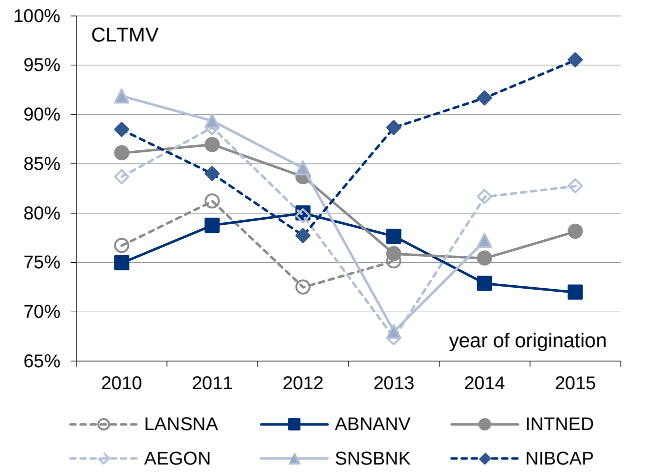
The persistent house price declines in the years 2009 up until the end of 2013 in the Netherlands have not missed their impact on Dutch loan-to-value ratios. Since house prices peaked in 3Q 2008 up until the end of 2013, indexed LTV ratios of Dutch collateral pools have deteriorated on average by 25%-point.

Fig 13 Dutch WA current indexed LTMV developments



Source: Investor reports, ING

Fig 14 Most pools confirm lower LTVs for recent loans



Source: Investor reports, ING

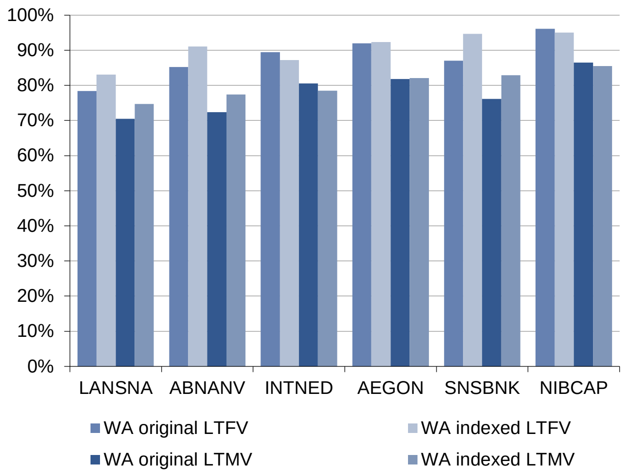
[42] The statistics in this paragraph are based upon issuer investor reports with 31 December 2015 as cut-off date

…and stricter LTV criteria upon mortgage origination

As a rough estimate, for each 10% decline in Dutch house prices, LTVs have risen in this period by 12.5% points (Figure 13).[43] Since the end of 2013 we have seen LTV ratios for most programmes decline again, mainly reflecting the gradual improvement in Dutch housing market conditions and to a lesser extent stricter mortgage origination criteria. Dutch collateral pool statistics indeed confirm lower weighted average current indexed LTVs for loans originated in recent years, reflecting among other things the gradual tightening of the LTMV cap for new mortgage loans (see Figure 14).

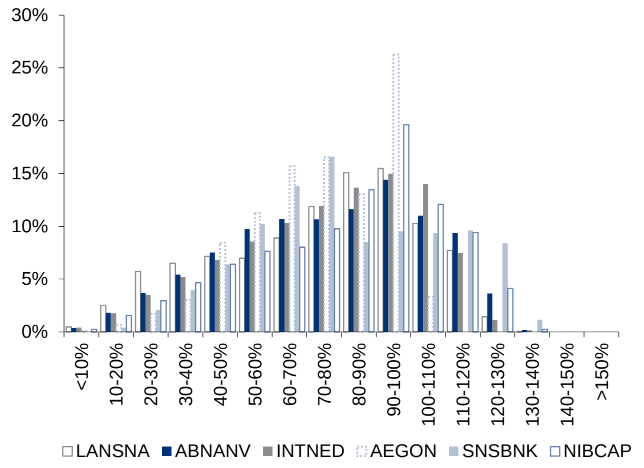
The noteworthy exception in terms of improvement of LTV characteristics in Figure 13 is the pool backing NIBC Bank's conditional pass-through covered bonds, which fail to show a decline in the LTV statistics. This partly reflects the inclusion of relatively *higher* LTV loans originated in recent years as depicted in Figure 14. NIBC Bank also saw a strong rise in the LTV ratios beginning of 2014, after the issuer decided to add a chunky amount of NHG loans to its pool, which typically have higher LTVs compared to non-NHG loans.

Fig 15 Average loan-to-value ratios Dutch pools



Source: Investor reports, ING

Fig 16 Pool distribution by indexed LTMV buckets



Source: Investor reports, ING

Figure 15 shows that the indexed loan-to-market value of the mortgage loans in Dutch collateral pools is below 80% again for three programmes. Yet, the indexed loan-to-value ratios are still higher than the original loan-to-value ratios of the mortgages for most Dutch collateral pools. ING Bank does not make a good reference in this figure, as the original loan-to-value ratios for this issuer are indexed via automated valuation models (AVM), while the indexed loan-to-value ratios reflect the interim discrepancy between the original loan-to-market value based upon automated valuation models and the monthly adjusted AVM loan-to-market values based upon the Kadaster house price index developments. Hence all levels shown for this issuer are indexed levels.

We estimate a 5%-point lower LTV for Dutch mortgages if savings are considered

These LTV ratios do not reflect the savings or investment balances that have been accrued against the mortgage loans. We estimate that recognition of accrued savings and investments could reduce the LTV-ratios of Dutch collateral pools by approximately five percentage points versus current levels. These calculations are a rough estimate, based upon the current seasoning of the cover pools and assume a "linear" accrual of savings and investments (without any recognition of the actual current value of these investments) over a period of 30 years against the non-interest only and non-amortizing mortgage parts in Dutch collateral pools.

Figure 16 plots the distribution of Dutch collateral pools across the different indexed LTMV buckets, illustrating the highest pool concentration in the 90% to 100% current-

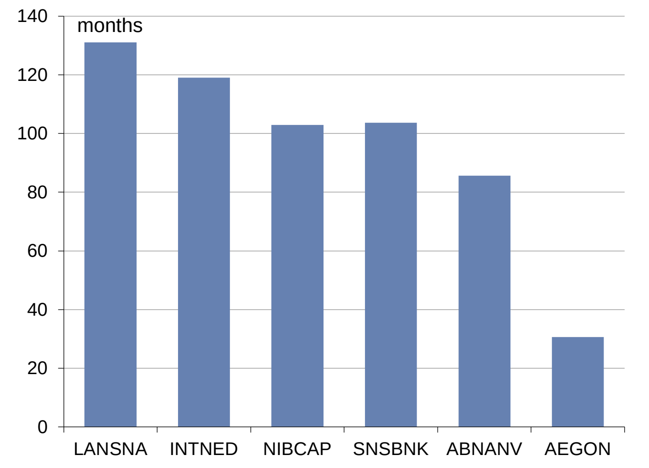
[43] The break in the LTV development for ING Bank around January 2010 can be explained by the fact that, beginning of 2010, this issuer started reporting loan-to-market values rather than loan-to-foreclosure values.

loan-to-indexed-market-value (CLTIMV) bucket. NIBC Bank, Aegon Bank and SNS Bank make a nice comparison. These pools have on average the highest CLTIMV ratios. However, SNS Bank's highest loan concentration is in the 70%-80% CLTIMV bucket, while for NIBC Bank and Aegon Bank it is in the 90-100% bucket. NIBC Bank's and Aegon Bank's pool distributions are more skewed towards the left of the 90%-100% bucket, while SNS Bank has a higher percentages of loans in the buckets beyond 100%.

The impact of house price rises has been less for more seasoned pools…

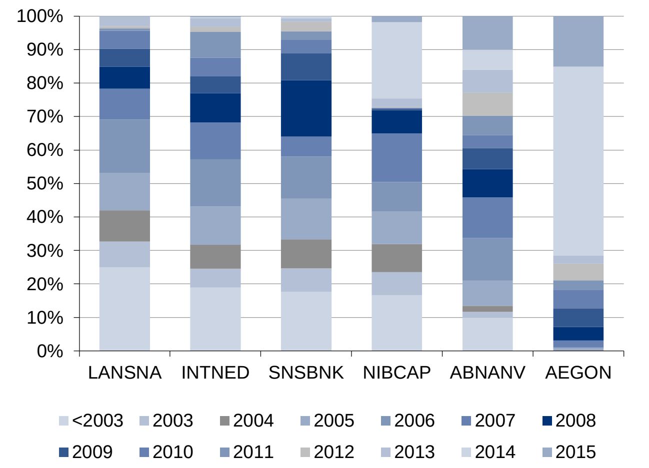
A comparison between Figure 15 and Figure 17 shows that less seasoned pools, such as ABN AMRO Bank's and Aegon Bank's collateral pools, do not necessarily coincide with higher indexed loan-to-market-values. This is mainly due to the differences in the original loan-to-value ratios for Dutch issuers. Hence, in order to assess the impact of the house price developments on LTV ratios, one has to compare the level of the indexed loan-to-market value with the original loan-to-market value of the pool. In the case of NIBC Bank the indexed loan-to-value ratio is even 1% point lower than the original loan-to-value ratio (Figure 15). For Aegon Bank the indexed loan-to-value ratio is approximately the same as the original loan-to-value ratio (only 0.3% point higher). This illustrates that house price developments have been more or less neutral to the current indexed LTV statistics for the collateral pools of Aegon Bank and NIBC Bank. This difference between the original and indexed loan-to-market value is on the other hand 4% points for Van Lanschot, 5% points for ABN AMRO Bank and 7% points for SNS Bank.

Fig 17 Weighted average seasoning



Source: Investor reports, ING

Fig 18 Cover pool by origination year*



Source: Investor reports, ING

…and for pools with less loans originated in peak housing price year 2008

The cover pool by year of origination, as plotted in Figure 18, offers the most important explanation in our view for the differences observed between the original and indexed loan-to-market values. Dutch house prices have been subject to price declines since the 3rd quarter of 2008. Hence, loans originated in 2008 have been exposed to the strongest house price declines. SNS Bank has the largest percentage of loans originated in 2008 in its pool. House prices in the Netherlands are currently back at the levels seen in the first half of 2004 and the second half of 2012, after bottoming in 2013. This means that for the mortgage loans in Dutch pools originated in the period in between have been affected by house price declines. Aegon Bank has no loans in the pool originated before 2004, but the large majority of the loans in this pool were originated after 2012. Also ABN AMRO Bank has a relatively smaller share of loans originated before 2004 but has more loans in the pool originated after 2012. NIBC Bank has next to Aegon Bank the highest percentage of loans in its pool originated in 2014 in 2015. Hence house price developments have been unfavourable for almost 74% of SNS Bank's pool, 72% of ING Bank's pool, 65% of ABN AMRO Bank's pool and 64% of Van Lanschot's pool. In the case of NIBC Bank only 49% of the pool has been exposed to price declines and for

Aegon Bank only 26% of the pool. This explains the closer alignment of the original loan-to-value ratio with the indexed loan-to-value ratio for these particular pools in Figure 15.

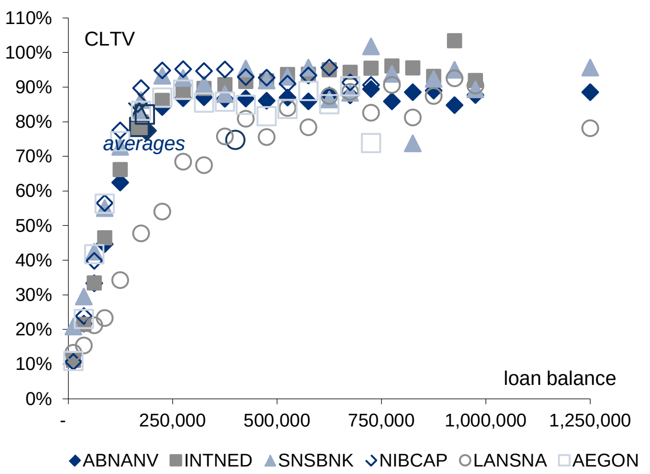
Beyond a certain loan balance, the size of the loan does not impact LTV ratios

Figure 19 furthermore plots the distribution of loan balances for Dutch collateral pools against current original loan-to-value ratios of Dutch pools. In the case of ING Bank the original loan-to-value statistics are indexed via automated valuation models. Average loan balances in Dutch pools typically vary from €166,380 for NIBC Bank to €187,747 for ABN AMRO Bank. Van Lanschot is an outlier with an average loan balance of €400,204. However, the figure confirms that higher loan balances do not necessarily coincide with higher loan-to-value characteristics. Only when loan balances decline below €175,000 we see LTV ratios decline. This does not necessarily mean that the size of the loan balance does not impact the riskiness of a pool or recovery prospects in case of a default on a loan. Higher loan balances would typically coincide with a lower number of borrowers and somewhat weaker borrower diversification characteristics.

Dutch pools have high shares of interest-only loans and small percentages of amortizing loans

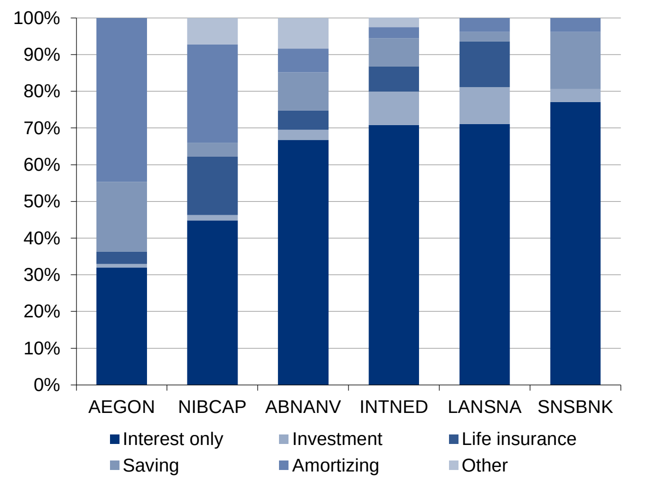
A common characteristic of Dutch mortgage pools, contributing negatively to their relative riskiness, is the high percentage of interest-only loans in Dutch pools. This makes the performance of the pools more exposed to house price declines from a residual debt perspective. Figure 20 shows that SNS Bank has the largest share of interest only loans as collateral (77%), while in the case of Aegon Bank and NIBC Bank the percentage of interest only loans is limited at 32% and 45% reflecting the higher share of loans in these pools originated since 2013, i.e. after the amended tax deductibility conditions came into force. The figure furthermore highlights that the percentage of amortizing loans in Dutch collateral pools remains small for pools with fewer loans originated after the changed rules for tax deductibility, ranging from 3% for ING Bank to 6.4% for ABN AMRO Bank. Aegon Bank and NIBC Bank on the other hand have a 44.7% and 26.7% share of amortizing loans in their pool, related to the chunky share of loans originated since the beginning of 2013 (74% and 27% respectively). ABN AMRO Bank also has a relatively high share of loans in its pool originated since 2013 (23%). However for this issuer, the share of amortizing loans in the pool has only risen by 2.2% points since June 2014.

Fig 19 High loan balances do not result in high LTVs



Source: Investor reports, ING

Fig 20 Large percentage of interest only loans



Source: Investor reports, ING

Loans in arrears are low for Dutch pools

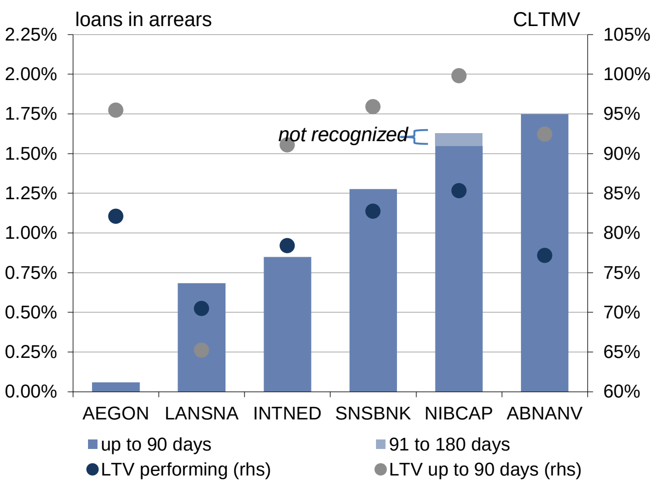
That said, percentage of loans in arrears in Dutch collateral pools remains relatively low varying from 0.1% for Aegon Bank to 1.75% for ABN AMRO Bank (Figure 21). We note that loans in arrears for more than 90 days would typically not be eligible as collateral for asset coverage purposes under the amended Dutch covered bond legislation. Hence, with the exception of the negligible percentage of loans in arrears for more than 90 days up to 180 days in NIBC Bank's pool, there is no single Dutch covered bond programme left with mortgage loans in the pool that have been in arrears for more than 90 days.

Performing loans have on average lower LTVs than loans in arrears

Delinquency statistics do in general confirm a negative loan performance relationship with the level of the LTV ratios. Performing loans have on average lower LTV ratios than the loans in arrears in Dutch pools. The difference in LTVs for performing loans versus loans in arrears for up to 90 days is 13% to 15% points for Dutch programmes. Only in the case of Van Lanschot's collateral pool the average LTV for the loans in arrears is 5% points lower than for the performing loans in the pool. The CLTMV ratios in Figure 21 are all indexed loan-to-value ratios.

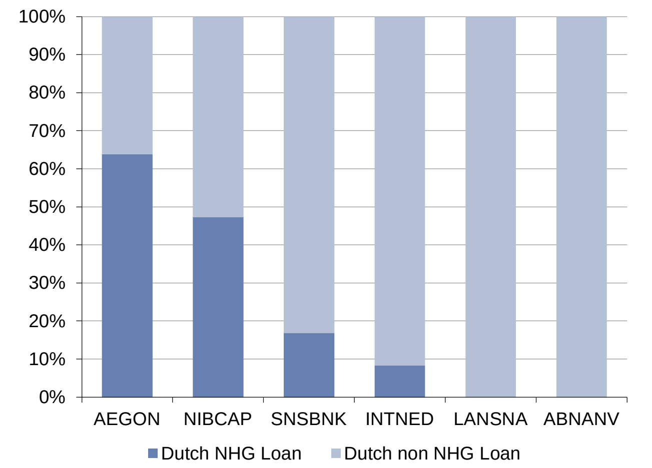
The relatively higher LTV characteristics of NIBC Bank's collateral pools compared to for example Van Lanschot, may partly explain the relatively higher percentage of loans in arrears in the pool for this issuer, irrespective of the pool's on average smaller loan balance, the lower percentage interest only loans and the relatively high percentage of guaranteed mortgage loans in this particular pool (Figure 22). However, in our view, it offers not more than a very weak explanation, considering the even higher percentage loans in arrears up to 90 days in the case of ABN AMRO Bank.

Fig 21 Loans in arrears in Dutch pools versus LTVs



Source: Investor reports, ING

Fig 22 Exposures to NHG and non-NHG loans



Source: Investor reports, ING

Positives are the owner occupied and fixed rate characters of the mortgages

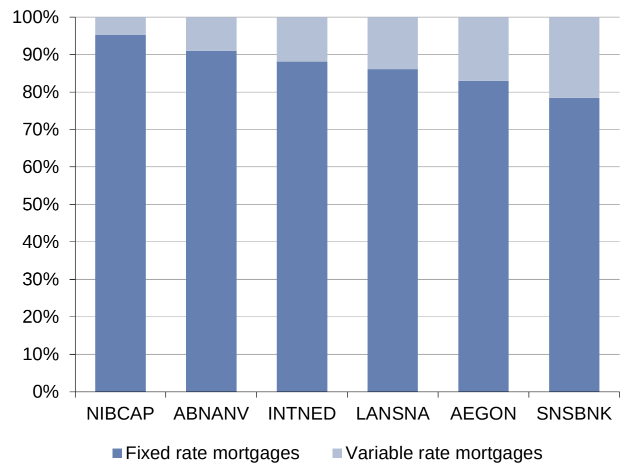
Notwithstanding the relatively higher Dutch LTV ratios, it is a positive that mortgages in Dutch collateral pools are 100% owner-occupied, which assures an optimal incentive for the mortgage holder to fulfil its mortgage obligations. The Netherlands also benefit from a relatively solid social security system, cushioning the average loan performance against a rise in unemployment rates, although the maximum term during which unemployment benefits can be received has been shortened. Furthermore, although the Dutch unemployment rate did peak in February 2014 at 7.9% it has declined again since (6.6% in December) and remains well below the 10.7% Eurozone average. In addition, the percentage of fixed rate mortgages in Dutch collateral pools is high within a range of 78% for SNS Bank to 95% for NIBC Bank (Figure 23). Fixed rate mortgage loans may give the issuers less opportunity to adjust their lending rates to higher funding costs, but they also make mortgage takers less vulnerable to interest rate volatility.

Figure 24 illustrates that despite the low interest rate environment, the average interest rates for Dutch collateral pools is still above 3.5%, due to the dominance of fixed rate mortgages in the pool. However, the lower average coupon on loans with a less than one year seasoning confirms the impact on collateral pool interest revenues due to the addition of more recently originated loans. Interest reset periods vary from 4 years for SNS Bank and ABN AMRO Bank, to 12 years for Aegon Bank. In the case of Van Lanschot and SNS Bank the interest rate on 27% and 35% of the pool respectively will be reset within one year. This can partly be explained by the higher share of variable rate mortgages in these collateral pools, with SNS Bank generating higher interest revenues

Mortgage interest rates are above 3.5% despite the low interest rate environment

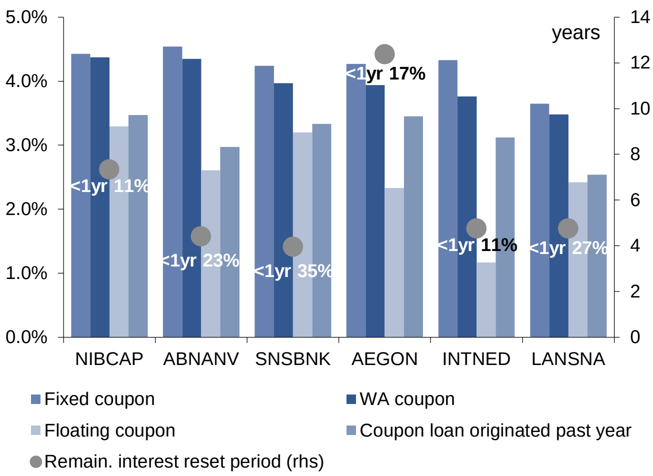
on its floating rate loans than Van Lanschot. Both NIBC Bank, Van Lanschot and Aegon Bank do not have swaps in place to cushion against the risk of changing mortgage interest rates versus covered bond funding costs on pool margins. However, NIBC Bank and Aegon Bank have on average the highest interest reset periods of all Dutch pools, with only 11% and 17% of these pool reset within one year. NIBC Bank has also committed to a minimum 3% interest rate on new loans included in its pool and has a relatively high average rate on its floating coupon loans. In the case of Aegon Bank the minimum interest rate committed to is 1%. From a margin perspective, we furthermore note the more favourable funding cost environment as a result of the low interest rates, with the Dutch 5-7yr € benchmark covered bonds issued last year printed at coupons of 0.25% to 0.275% and the most recent 10yr € benchmark bond at a coupon of 0.875%.

Fig 23 High percentage fixed rate loans in Dutch pools



Source: Investor reports, ING

Fig 24 Average mortgage interest rates above 3.5%

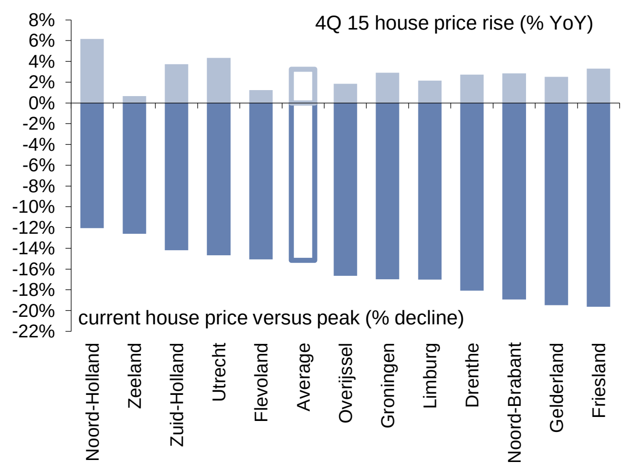


Source: Investor reports, ING

Regional distribution stats confirm a larger exposure to stronger performing regions

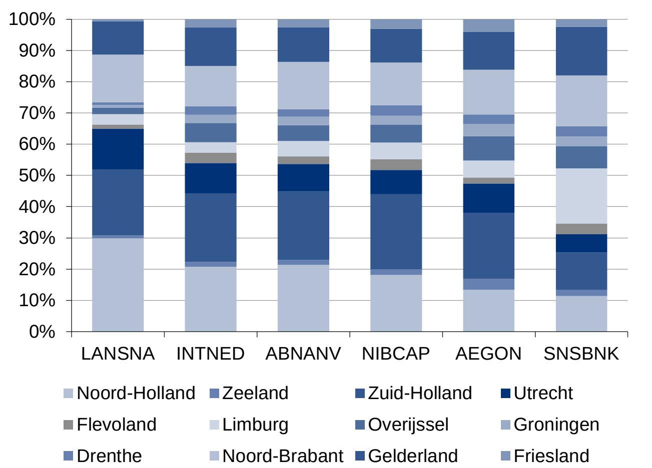
Figure 25 plots the housing price decline per region from the 2008 peak. Varying from -12% for Noord-Holland to -19.6% for Friesland, house price declines per region have not been far off the -15.2% average. House price developments for the province of Flevoland (-15.1%) have been most similar to the average drop versus the peak. Figure 26 gives an overview of the regional exposure of the Dutch collateral pools. The provinces plotted in the bar chart above but excluding the grey area representing Flevoland have consequently all experienced above average house price declines.

Fig 25 Regional Dutch house price developments



Source: CBS, ING

Fig 26 Regional collateral pool distribution



Source: Investor reports, ING

This confirms that most Dutch pools on average have a tad less exposure to the weaker than to the stronger regions, due the relatively higher share of the on average stronger performing provinces of Noord-Holland and Zuid-Holland in Dutch pools. Van Lanschot is the only issuer with more 65% of its pool exposed to the above average performing regions. SNS Bank on the other hand is more exposed to the weaker performing regions, such as Limburg, Noord-Brabant and Gelderland.

Rating agencies

Moody's

Moody's introduced a CR Assessment under its revised rating methodology

Last year, Moody's made several adjustments to its rating methodology affecting covered bonds. The rating agency introduced a **Counterparty Risk (CR) Assessment** to reflect the probability of default of certain senior bank obligations and other contractual commitments. It differs from debt, deposit or issuer ratings as it will only look at the likelihood of default and not at the expected loss in case of default. The CR Assessment applies to counterparty obligations and contractual commitments and serves under Moody's revised rating methodology as a reference point for the CB anchor.

The rationale for introducing the CR Assessment was Moody's conviction that in resolution critical functions and operations will be maintained to fulfil certain payment obligations, even when losses are imposed on senior unsecured debt holders or certain depositors. The CR Assessment is consequently typically higher than the senior unsecured rating of a bank. The starting point for the CR Assessment is the adjusted baseline credit assessment (BCA). The position of the CR Assessment versus the adjusted BCA depends on the degree to which capital and debt instruments shield counterparty obligations from loss. The uplift of the CR Assessment versus the adjusted BCA gives recognition to potential government support.

In Moody's view banks are subject to an *operational resolution regime* if 1) specific legislation enables orderly resolution of a failed bank, 2) via legislation, there is a clear understanding of the impact of a bank failure and resolution on depositors and other creditors, and 3) there is a policy and regulatory conviction to use this specific legislation to reduce the probability of government support. Within operational resolution regimes, two types of resolution are distinguished: a) *going concern* and b) *liquidation or sale*.

A possible three notch CRA uplift for banks under operational resolution regimes

The starting point for the CR Assessment for banks that are subject to *liquidation or sale* in an operational resolution regime is the adjusted BCA plus a one notch uplift for a lower probability of default (PD) plus government support (if any). Under *going-concern operational resolution regimes*, the difference between the CR Assessment and the adjusted BCA depends on the level of debt subordinated to a given bank instrument class under Moody's advanced loss given failure (LGF) approach. More specifically, a ratio that compares the average assumed loss rate as a percentage of liabilities versus the subordination level to an instrument class as percentage of liabilities, determines the notching from the adjusted BCA. If this ratio exceeds 1.5x, the CR Assessment uplift will be three notches versus the adjusted BCA, before the addition of any government support. Based upon the Bank Recovery and Resolution Directive (BRRD) for the European Union, Moody's typically includes bank subordinated debt, senior unsecured debt and junior (non-protected) deposits in order to calculate the level of subordination.

Fig 27 Moody's CR Assessment uplift versus the adjusted BCA (going concern)

Subordination to instrument class (% liabilities)	Notching
≥0<0.5x	0
≥0.5x<1x	1
≥1x<1.5x	2
≥1.5x	3

x = average assumed loss rate as % of liabilities
Per September 2014 RFC: 5% Very Strong/Strong/Moderate macro profile (banks with lower asset volatility and subject to going concern resolution), 10% Weak/Very Weak macro profile (banks with higher asset volatility or subject to a resolution process involving bankruptcy, receivership or liquidation)
Source: Moody's

The CR Assessment for Dutch banks is one notch higher than their deposit ratings. In Moody's view, in the event of a resolution, authorities are likely to honor the operating

Dutch banks benefit from a one notch CRA uplift versus their deposit ratings

obligations the CR Assessment refers to, in order to preserve a bank's critical functions and reduce potential for contagion. Under Moody's Advanced LGF analysis, the loss given failure for long-term deposits and senior debt (reflected by the average two-notch uplift from the adjusted BCA) is very low taking into account the protection offered by the banks' sizeable volumes of deposits and senior debt, and the amount of debt subordinated to both senior debt and deposits. Dutch systemically important banks, such as ABN AMRO Bank, ING Bank and SNS Bank, furthermore all benefit from a one notch additional uplift included in their senior unsecured and deposit ratings. (Figure 29).

The new CB anchor is the CR Assessment plus one notch

Under Moody's current covered bond rating methodology, the CR Assessment is used as a reference point for the **CB anchor**. For covered bonds that fall under the EU BRRD, such as Dutch covered bonds, a further one notch uplift versus the CR Assessment is applied, considering the protection provided by the BRRD to covered bondholders. Moody's previous rating methodology, determined the CB anchor as 0-1 notch versus the senior unsecured rating (SUR) depending on the percentage of loss-absorbing debt subject to bail-in or available to recapitalize the bank. ABN AMRO Bank was the only Dutch covered bond issuer rated by Moody's benefiting from a one notch uplift.

Dutch covered bonds have a TPI of "Probable" at Moody's

The **Timely Payment Indicator (TPI)** for Dutch covered bonds was not affected by the amendments made to the Moody's rating methodology. Dutch covered bond programmes all still have a Timely Payment Indicator of "Probable" at Moody's. That said, the aforementioned revisions made to Moody's rating methodology have been favourable for Dutch covered bonds:

SNS Bank's covered bonds were upgraded to Aaa

- The covered bonds of SNS Bank were upgraded from Aa2 to Aaa at Moody's at the end of May 2015 after Moody's upgraded the bank's long term bank deposit ratings by one notch to Baa1 but kept the issuer's senior unsecured debt ratings unchanged at Baa2. At a CR Assessment of A3(cr), CB anchor of CRA + 1 notch and a TPI of "Probable" the TPI Leeway for this programme improved to 1 notch at the current Aaa rating compared to 0 notches at the previous Aa2 rating. The overcollateralization consistent with the current rating is 13% again, down from an initially higher 16%.

A one notch TPI Leeway improvement for ABN AMRO Bank…

- In the case of ABN AMRO Bank the CR Assessment of A1(cr) and CB anchor of CRA + 1 notch improved the TPI Leeway for the issuer's Aaa rated covered bonds from 2 to 3 notches at a TPI of "Probable". The required overcollateralization consistent with the current rating was reduced by Moody's from 11% to 6.5%.

…and a three notches TPI Leeway improvement for ING Bank

- The TPI Leeway for ING Bank's Aaa rated covered bonds improved from 1 notch to 4 notches due to Moody's methodology change. ING Bank has a CR Assessment of Aa3(cr) and CB anchor of CRA + 1 notch. The previous CB anchor was the SUR+0 notches. Hence, Moody's overcollateralization requirement consistent with the current rating became significantly lower at 1% compared to a previous 14.5%.

NIBC Bank's, Van Lanschot's and Aegon Bank's conditional pass-through covered bond programmes are not rated at Moody's. However, Moody's stated in April 2014, that the credit quality of a conditional pass-through covered bond can be de-linked from the rating of the bank if the credit risks related to the role of the bank supporting the covered bonds are sufficiently removed or protected against. If the credit quality continues to depend upon the supporting bank, the covered bonds will continue to have ratings that are constrained by Moody's Timely Payment Indicator framework. The rating may nevertheless still be higher than for hard bullet or soft bullet covered bonds.

Dutch CPTCB are not rated at Moody's but rating de-linkage is possible for CPTCBs

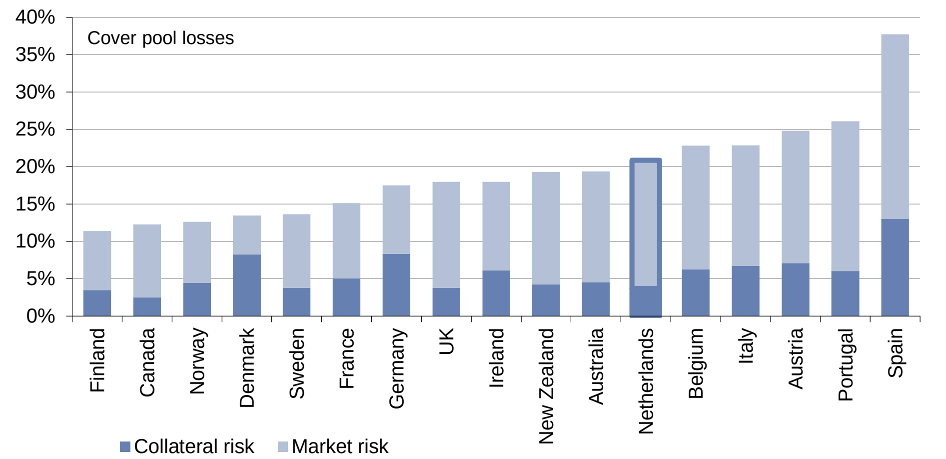
Analysing Dutch CPTCB programmes on Moody's criteria for de-linkage

According to Moody's, de-linkage between the rating of a conditional pass-through covered bond and the rating of the issuer can be achieved if a programme sufficiently removes the risk of asset fire-sale. Switching to pass-through is not sufficient by itself. Moody's also has to be assured that the programme would not accelerate if certain tests, such as the Amortisation Test, are breached if the level of the assets were to fall below the level of the liabilities. In the case Dutch CPTCB, a failure of the Amortisation Test would not result in an acceleration of payments. Also additional transaction risks need to be sufficiently covered. Also here Dutch conditional pass-through covered bond programmes seem well positioned to fulfil Moody's requirements: cash-flow disruptions are tackled via the liquidity reserve account, there is no swap counterparty risk to the programmes and one programmes has already provided for a back-up administrator. There are replacement rating triggers for the account bank and, in the case of NIBC Bank, commingling risk is addressed via a collection foundation account. The programmes also account for set off risks under the Asset Cover Test or Amortisation Test, commit to an overcollateralization of at least 15% or 10% and apply strict asset eligibility criteria, protecting the programmes against the introduction of new credit risk.

Moody's strong collateral scores contrast with high LTV ratios for Dutch pools

According to Moody's most recent global covered bonds monitoring overview (Q2 2015), Dutch covered bonds have, of the core European jurisdictions, one of the highest **cover pool loss** rate with an average of 20.9%. However, despite the relatively high LTV characteristics of Dutch mortgage assets, the average *collateral score* and *collateral risk* of Dutch pools is among the lowest at 5.5% and 3.7% respectively. Only Finnish and Canadian covered bonds score better in terms of collateral risk.[44] Relatively favourable borrower default characteristics for the Netherlands contribute positively to these scores.

Fig 28 Dutch covered bonds have weaker cover pool loss characteristics



Source: Moody's, ING

Market risk is high due to the maturity mismatch between the assets and the bonds

Dutch covered bonds have a relatively high *market risk* of 17.2%. Only Italian, Austrian, Spanish and Portuguese programmes run more market risk. The market risk reflects Moody's estimated cover pool losses post issuer default as a result of refinancing risks, currency and interest rate mismatches and certain collateral related legal risks such as deposit set-off risks. The high market risk score for Dutch covered bonds reflects the

[44] Collateral risk is derived from Moody's collateral score and combines the collateral score post haircut for eligible and ineligible assets in the cover pool. The collateral score in turn reflects the amount of risk-free enhancement needed to protect a Aaa rating from otherwise unsupported assets. The collateral score only looks at the credit risk of the assets and does not incorporate refinancing and market risks or certain legal risks such as set-off risks.

higher potential interest rate risks post issuer default according to Moody's, due to the relatively high percentage of fixed rate mortgages in the cover pool.

ABN AMRO Bank has a better collateral score (excluding systemic risk) than the other Dutch covered bond programmes. The issuer's average indexed LTV ratios are lower than for other Dutch issuers and the dispersion of the loans across the different LTV buckets is more favourable. SNS Bank runs most market risk, despite the soft bullet nature of all covered bonds issued by the bank and the novation agreement with back-up total return swap providers. In Moody's expected loss assessment, covered bonds are presumed to be more exposed to refinancing risks if the issuer's credit rating is weaker.

Fig 29 Rating agency assessment of Dutch covered bonds

	ABN AMRO Bank	ING Bank	SNS Bank	NIBC Bank	Van Lanschot	Aegon Bank
	Soft/hard bullet	Soft/hard bullet	Soft bullet	CPT	CPT	CPT
Moody's	**Aaa**	**Aaa**	**Aaa**			
Senior unsecured rating	A2	A1	Baa2			
Bank deposit rating	A2	A1	Baa1			
Adjusted BCA	baa2	baa1	Baa3			
CR Assessment	A1(cr)	Aa3(cr)	A2(cr)			
CB Anchor	CRA+1 notch	CRA+1 notch	CRA+1 notch			
TPI	Probable	Probable	Probable			
TPI Leeway	3 notches	4 notches	1 notch			
Cover pool losses	20.4%	20.6%	21.6%			
Market risk	17.1%	16.7%	18.2%			
Collateral risk	3.4%	3.8%	3.4%			
Collateral score	5.0%	5.7%	5.0%			
Collateral score (excl. Systemic risk)	3.6%					
Committed OC	33.2%	29.9%	31.6%			
Required Overcollateralization	6.5%	1.0%	13.0%			
Fitch	**AAA**	**AAA**	**AAA**	**AAA**	**AAA**	**AAA**
Long term IDR	A	A	BBB	BBB-	BBB+	A-
Uplift from IDR	2 notches	2 notches	2 notches	1 notch	1 notch	0 notches
D-Cap	4	4	4	8	8	8
Uplift on a stressed recovery basis	2 notches	2 notches	2 notches	2 notches	2 notches	2 notches
Cushion to IDR downgrade	3 notches	3 notches	0 notches	2 notches	5 notches	4 notches
Risk Assessment	Moderate	Moderate	Moderate	Min Discont	Min Discont	Min Discont
Asset Segregation	Moderate	Moderate	Moderate	Very Low	Moderate	Moderate
Liquidity Gap & Systemic Risk	Moderate	Moderate	Moderate	Min Discont	Min Discont	Min Discont
Systemic Alternative Management	Low	Low	Low	Low	Low	Low
Cover Pool Specific Alt. Management	Moderate	Low	Moderate	Moderate	Moderate	Moderate
Privileged Derivatives	Moderate	Moderate	Low	Very Low	Very Low	Very Low
Stressed expected loss	6.8%	5.6%	8.7%	6.7%	9.4%	2.2%
Break-even Asset Percentage	80.0%	79.5%	76.5%	95.0%	92.5%	95.0%
Break-even overcollateralization	25.0%	25.8%	30.7%	5.3%	8.1%	5.3%
S&P	**AAA**	**AAA**		**AAA**	**AAA**	**AAA**
Long term ICR	A	A		BBB-	BBB+	A+
Adjusted ICR	a	a		bbb-	bbb+	
Reference rating level (RRL)	aa-	aa-		bbb+	a	a+
Jurisdiction supported rating level (JRL)	aa+	aa+		a	aa-	aa
Jurisdictional support assessment	Strong	Strong		Strong	Strong	Strong
Legal framework	Very Strong	Very Strong		Very Strong	Very Strong	Very Strong
Systemic importance	Strong	Strong		Strong	Strong	Strong
Sovereign credit capacity	Very Strong	Very Strong		Very Strong	Very Strong	Very Strong
Achievable collateral support uplift	4 notches	4 notches		Unlimited	Unlimited	Unlimited
Unused notches of uplift	3 notches	3 notches		Delinked	Delinked	Delinked
WAFF*WALS	6.28%	3.28%		3.63%	6.95%	1.83%
Target credit enhancement*	25.42%	31.89%		2.50%	5.70%	2.50%

* Based upon S&P's Global Covered Bonds Characteristics and Rating Summary Q4 2015. Where not available S&P's new issue reports are used.
Source: Moody's, Fitch, S&P, ING

Fitch

Most Dutch issuers receive a two notch IDR uplift at Fitch

With the revisions made by Fitch to its rating methodology in 2014, also this rating agency gives recognition to the going-concern advantages of the bail-in tool for covered bonds. For covered bonds from jurisdictions with an advanced resolution regime, such as the EU, that includes a bail-in tool exempting covered bonds, Fitch may apply an uplift above the Issuer Default Rating (IDR) of up to two notches for programmes of issuers rated in the BB category and above. The IDR uplift depends on three factors: a) the relative ease and motivation for resolution methods other than liquidation, b) the importance of covered bonds to financial markets in a jurisdiction, and c) the level of an issuer's senior unsecured debt available for bail-in. A two notch uplift will be granted if at least two of the aforementioned factors are present, while a one notch uplift will be granted if one of the three factors is present. ABN AMRO Bank, ING Bank and SNS Bank all benefit from an IDR uplift of two notches. All three banks are a) systemically important institutions in the Netherlands and b) fulfil 5% hurdle requirement for senior debt (excl. debt held by retail investors) as percentage of the assets adjusted for insurance assets and derivatives. The latter requirement is also met by NIBC Bank and Van Lanschot, which consequently benefits from a one notch IDR uplift under Fitch's methodology. Aegon Bank has no additional IDR uplift at Fitch.

The D-Cap for Dutch bullet covered bonds is 4,…

…but the maximum of 8 for Dutch conditional pass-through covered bonds

Fitch furthermore assigns a Discontinuity (D)-Cap of 4 to all Dutch bullet covered bond programmes, reflecting the rating agency's "Moderate" discontinuity risk assessment for these programmes or likelihood that the covered bonds will default following an issuer default. This risk assessment is based upon the weakest component out of five discontinuity risk components under Fitch's rating methodology, i.e. 1) asset segregation, 2) liquidity gap and systemic risk, 3) systemic alternative management, 4) cover pool-specific alternative management and 5) privileged derivatives. The risk assessment for Dutch conditional pass-through covered bond programmes is "Minimal Discontinuity", allowing for a maximum D-Cap of 8, representing the potential of maximum eight notches uplift versus the, IDR uplift adjusted, issuer default rating on a probability of default basis. This compares to four notches for the Dutch bullet covered bond programmes.

Asset segregation risk is *Very Low* for NIBC Bank's CPTCB programme…

- Fitch assigns a *"Moderate"* risk assessment to the **asset segregation** component for all Dutch bullet covered bond programmes. This reflects the risk that limited set-off claims may arise in the future. Also the conditional pass-through covered bond programmes of Van Lanschot and Aegon Bank have *"Moderate"* asset segregation risk. The asset segregation risk component for NIBC Bank's conditional pass-through covered bond programme on the other hand, is *"Very Low"* due to the collection foundation account structure in place for this programme, with the collection foundation account (in contrast with SNS Bank's covered bond programme) held by a third party bank. The rating agency therefore is of the opinion that commingling risk is sufficiently mitigated and considers it unlikely that claims would reduce the assets available to investors following a default of this issuer.

…and the liquidity gap and systemic risk is *Minimal*

- This assessment of the **liquidity gap and systemic risk** component is *"Moderate"* for all Dutch bullet covered bond programmes, due to the protection offered by the 12 month pre-maturity test in the case of the hard bullet covered bonds still outstanding and the 12 month maturity extension in the case of the soft bullet covered bonds. The sovereign rating is also not a constraining factor here. The liquidity gap and systemic risk for the conditional pass-through programmes is *"Minimal"* as the conditional pass-through feature allows for a maturity extension of 32 years if a covered bond is not redeemed at its intended maturity date or in the case that the Amortisation Test is breached. Dutch programmes furthermore have mitigants in place such as three month interest reserve funds or reserve accounts.

The systemic alternative management risk is *Low* for all Dutch programmes…

- The **systemic alternative management risk** assessment for Dutch covered bond programmes is *"Low"* for all Dutch covered bond programmes reflecting the significant role post issuer default of the administrator of the Covered Bond Company. We understand from Fitch that NIBC Bank does get extra credit for the fact that it has a back-up administrator as well, but this is not sufficient to lift the systemic alternative management risk assessment for this programme from "Low" to "Very Low". The "Low" assessment also reflects the regular and active oversight by the Dutch Central Bank with respect to regulated Dutch covered bond programmes.

…and the cover pool specific alternative management risk is *Moderate* for most programmes

- The cover pool specific alternative management assessment for Dutch covered bond programmes is *"Moderate"* for most Dutch covered bond programmes. This reflects the fact that Dutch cover pools only include residential mortgage loans. It also reflects Fitch's view that processes, data delivery and the adequacy of the IT systems in place with the issuers are good. The *"Low"* risk assessment for ING Bank's programme is driven by the quality of data provided by this issuer to the rating agency.

NIBC Bank, Van Lanschot and Aegon Bank run *Very Low* risk related to privileged derivatives

- The risk assessment for **privileged derivatives** for the Dutch covered bond programmes of ABN AMRO Bank and ING Bank is *"Moderate",* reflecting the potential difficulties in replacing a derivative counterparty where the derivative counterparty is within the same group as the issuer. In particular total return swaps on the cover pools are difficult to replace due to the tailored nature of these swaps. In the case of SNS Bank the risk assessment for privileged derivatives is *"Low"* due to the issuer's standby total return swap agreement with RBS and Rabobank. The issuer also has multiple interest rate swap counterparties. There are no derivative agreements in place under NIBC Bank's, Van Lanschot's and Aegon Bank's conditional pass-through covered bond programmes. This explains the *"Very Low"* risk assessment for privileged derivatives for these programmes.

Dutch covered bonds receive a two notch additional uplift on a stressed recovery basis

In order to determine whether the maximum notches of uplift versus the IDR, formed by the sum of the IDR uplift and D-Cap, can be achieved on a probability of default basis, Fitch also tests whether the overcollateralization is sufficient to assure that the cover pool can withstand the highest level of stress post issuer default. As a final step Fitch tests the recoveries from the residual pool in case a covered bond defaults post issuer insolvency. If these recoveries are 91% or higher an additional uplift of 2 notches is achievable if the covered bonds rating on a PD basis is in the investment grade area, which is the case for Dutch covered bonds.

We note that Fitch finally decided to upgrade the covered bonds of SNS Bank to AAA in June 2015, based upon the issuer's BBB long-term IDR, the IDR uplift of 2, the unchanged D-Cap of 4 and the applicable asset percentage Fitch's takes into account in its rating analysis. The upgrade took place after Fitch obtained confirmation from SNS Bank that the account bank's remedial period of 30 *business* days was going to be changed to 30 *calendar* days under the updated GIC agreement. Herewith, SNS Bank managed to avoid a potential tightening in the D-Cap at Fitch. The soft-bullet programme has up until now also not been classified as "dormant" despite the fact that the SNS Bank has not issued any covered bonds for more than three years as the issuer, according to Fitch, is expected to issue covered bonds out of the programme in the future.

S&P

S&P currently rates the covered bond programmes of ABN AMRO Bank, ING Bank and NIBC Bank, Van Lanschot and Aegon Bank. SNS Bank asked the rating agency to withdraw the ratings on its covered bonds in February 2010, after the implementation of S&P's revised covered bonds rating criteria in December 2009.[45]

[45] S&P, *Revised Methodology and Assumptions for Assessing Asset-Liability Mismatch Risk in Covered Bonds*, 16 December 2009

Dutch covered bonds are protected by the BRRD…

However, the most recent revisions to S&P's covered bonds rating criteria date from 9 December 2014, when the rating agency amended its criteria to give recognition to the favourable treatment of covered bonds under resolution regimes.[46] Under the revised criteria, S&P takes a **reference rating level (RRL)** as a starting point for uplifting the covered bond rating. For jurisdictions subject to the BRRD such as the Netherlands, the RRL is determined as follows:

RRL = Max [ICR, adjusted ICR plus one or two notches],

where the adjusted issuer credit rating (ICR) is the ICR of the bank minus the notches of rating uplift reflecting extraordinary government support or intervention to the issuer. In the case of ABN AMRO Bank, this rating uplift for extraordinary support is two notches. For ING Bank the extraordinary support uplift is one notch.

…and have a reference rating level (RRL) of two notches above the adjusted ICR

The one or two notches uplift versus the adjusted ICR depends on the systemic importance of the covered bond programmes, with the notching recognizing the increased likelihood that, under resolution regimes, an issuer could still service covered bond liabilities without a sale of cover assets even after writing down senior debt. Dutch covered bond programmes benefit from a two notches uplift versus the adjusted ICR. Aegon Bank has no adjusted ICR at S&P. The RRL is consequently the ICR of the bank. For jurisdictions without resolution regimes, the RRL is also the ICR on the bank.

The maximum achievable covered bond rating is subsequently determined via:

1) A jurisdictional support analysis
2) A collateral support analysis

The **jurisdictional support analysis** comprises of a four point classification:

- "very strong"
- "strong"
- "moderately strong"
- "weak"

The ultimate classification is based upon the weakest link under S&P's analysis of

1) The strength of the legal framework
2) The systemic importance of covered bonds in a jurisdiction
3) The credit capacity of the sovereign to support the covered bond

The jurisdictional support assessment for Dutch covered bonds is "Strong"…

S&P views both the Dutch *legislative framework* as well as the sovereign's *credit capacity* to support covered bonds as "Very Strong". The systemic importance of covered bonds in the Netherlands is considered to be "Strong". By the end of 2013, the ratio of mortgage covered bonds to outstanding mortgages was 9.7%, i.e. below 10%, but S&P expected this ratio to exceed this threshold going forward.[47]

…resulting in a JRL of two notches above the RRL

S&P gives no benefit to jurisdictional support where the RRL is at or above the level of the sovereign rating, which is not the case in the Netherlands, where the sovereign has an unsolicited AAA rating at S&P again since November 2015. Hence, Dutch covered bonds benefit from the maximum additional two notches uplift above the RRL based upon S&P's jurisdictional support assessment of "Strong" for Dutch covered bonds.

The maximum collateral based uplift is four notches

The **collateral support analysis** determines the maximum notches of uplift ("collateral-based uplift") over the jurisdictional rating level (JRL) based upon the overcollateralization covering *credit risk* (i.e. the expected losses on the cover pool in a stressed scenario) and *refinancing costs* (additional collateral required to raise funds against the assets to repay maturing covered bonds). The maximum collateral-based uplift is:

[46] S&P, *Covered Bonds Criteria*, 9 December 2014

[47] S&P, *Assessments for Jurisdictional Support according to our Covered Bond Criteria*, 22 December 2014

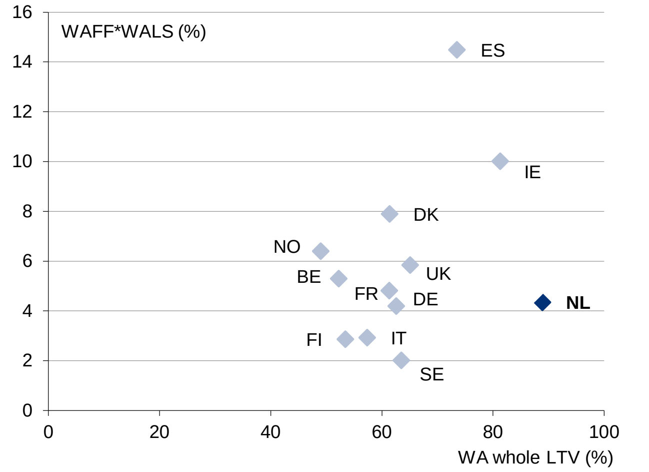
- Up to four notches: active secondary market exists to raise funds against the assets, such as with the Dutch covered bond market.
- Up to two notches: to cover *credit risk only* as no active secondary market exists.

The “target credit enhancement” (TCE) is determined by S&P as the amount of overcollateralization required to achieve the maximum collateral-based uplift. The available collateral is then compared with the overcollateralization required for each further notch of collateral based uplift to determine the “potential collateral-based uplift”.

As a further step, S&P reduces the “potential collateral-based uplift” for liquidity and uncommitted overcollateralization considerations:

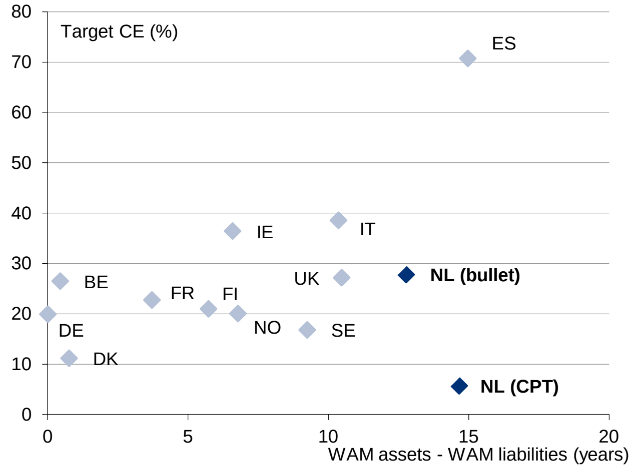
- **Liquidity adjustment**: the “potential collateral-based uplift” is reduced by one notch if a programme does not benefit from at least six months of liquidity.
  - This can be in the form of extendable maturities, liquidity lines or regulatory liquidity coverage requirements. For legislative covered bonds backed by an at least “moderate” legal framework credit is also given by S&P to an issuer’s public statement to maintain sufficient liquid assets to cover at least the next six months of liquidity needs.
  - The liquidity adjustment is not made if a) the “collateral-based uplift only covers credit risk, and b) a covered bond rating is assigned exceeding the sovereign foreign currency rating for a Eurozone issuer.
- **Uncommitted overcollateralization adjustment**:
  - For structured covered bond programmes, or programmes backed by a “weak” legal framework the “potential collateral-based uplift” would be reduced by one notch if a) the overcollateralization is uncommitted or if b) only a public statement by the issuer is made about its intention to maintain a certain level of overcollateralization. Recognition is only given to legally binding overcollateralization commitment.
  - For legislative covered bond programmes with at least a “moderate” legal framework the “collateral-based uplift” is reduced by one notch if the overcollateralization is uncommitted. Recognition is given to a legally binding overcollateralization pledge as well as to the issuer’s public statement to maintain a certain overcollateralization level.

Fig 30 Modest loss expectations despite high LTVs



Source: S&P, ING

Fig 31 Target CE relatively high for bullet bonds



Source: S&P, ING

No liquidity or uncommitted overcollateralization adjustments are made

For Dutch bullet covered bonds, no liquidity or uncommitted overcollateralization adjustments are made from the four potential collateral-based notches of uplift. In the case of the Dutch conditional pass-through covered bond programmes, the potential uplift granted by the collateral support analysis can exceed four notches as structural features, such as the 32-year maturity extension, have removed the asset-liability mismatch risk, allowing for a delinking of the covered bond ratings from the issuer credit rating.

Dutch programmes have high LTVs but relatively modest potential loss expectations

The potential loss associated with Dutch cover pools, as measured by the product of the weighted average foreclosure frequency (WAFF) and the weighted average loss severity (WALS), is relatively low for Dutch covered bonds compared to other jurisdictions, despite the relatively high weighted average whole LTV ratios for Dutch covered bonds (Figure 30). Whole loan-to-value ratios that consider prior-ranking loans on the same property are an important component to S&P's WAFF calculations. The link between whole LTV ratios and WAFF assumptions differs per country. In the case of Dutch covered bonds, the link is weaker than for other jurisdictions as the LTV ratios for Dutch covered bond programmes do not recognize offsetting savings against the high Dutch mortgage loan balances, driven by interest rate tax-deductibility considerations.[48] The LTV ratio is also an important factor for determining the potential loss severity if a borrower defaults.

Target credit enhancement levels are fairly high for Dutch bullet covered bonds

The target credit enhancement required for the Dutch *bullet* covered bonds at S&P to achieve the maximum potential ratings uplift is nevertheless among the highest of all non-distressed European covered bond programmes rated by the rating agency. This reflects the high mismatch between the weighted average maturity of the assets in the cover pool and the weighted average maturity of the bonds issued as a consequence of the low mortgage repayment rate in the Netherlands. By removing the selected asset required amount (SARA) clauses from their hard bullet programmes by the end of 2013 and beginning of 2014 ABN AMRO Bank and ING Bank managed to reduce their target credit enhancement by 10%-points as S&P sets a higher credit enhancement target for programmes with a SARA clause than for programmes without a SARA clause. The credit enhancement impact of the change from hard bullet into soft bullet maturities seems to be limited. A comparison of the data published in S&P's Global Covered Bonds Characteristics and Rating Summary Q1 2015 and Q4 2015 for instance shows that the target credit enhancement for ING Bank's combined soft and hard bullet covered bond programme was only modestly lower post consent solicitation at 29.6% compared to 30.5% before. A comparison between the target credit enhancement for Dutch bullet programmes and conditional pass-through programmes in Figure 29 and Figure 31 on the other hand does confirm the significantly lower overcollateralization requirements for conditional pass-through programmes.

[48] S&P, *Never Underestimate Credit Risk in Mortgage Covered Bonds*, 12 September 2011

Supply and demand dynamics

Supply

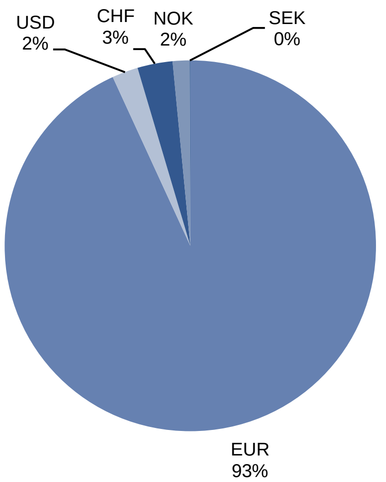
The majority of Dutch covered bonds are issued in € benchmark format

The Dutch covered bond market nowadays has a €61bn size, of which €41bn was issued in benchmark format. Since ABN AMRO Bank printed the first Dutch covered bond in 2005, the Dutch €-benchmark covered bond market has grown to become the sixt largest market in Europe with today €40bn in € benchmark debt outstanding. Only France, Spain, Germany, Italy, and the UK have more €-benchmark bonds outstanding. The majority of the bonds are €-denominated (90%), but some banks have also issued small amounts in CHF, USD, NOK or SEK denominated debt (Figure 32).

The first Dutch covered bonds issued were all structured. However, structured supply was fully replaced by regulatory issuance after the Dutch legal framework for covered bonds came into effect in July 2008. Achmea Hypotheekbank is the only Dutch issuer that was never registered under the Dutch legal framework. This issuer launched its first and last €-benchmark covered bond in 2007 (two benchmark issues in total), of which the last one expired in February 2014. Achmea Hypotheekbank currently has only one small size CHF denominated bond left outstanding that expires in 2017.

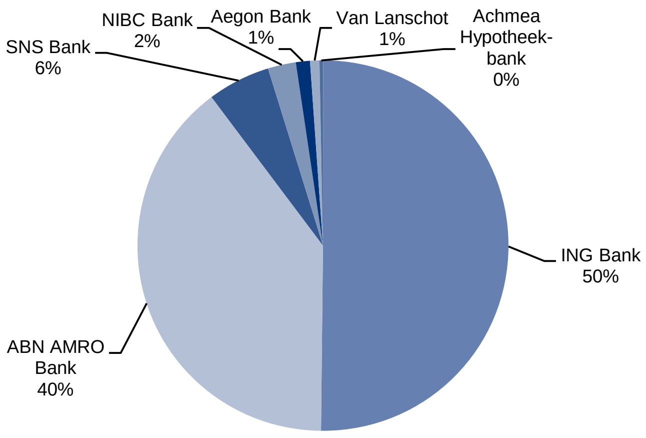
With Van Lanschot and Aegon Bank issuing their first conditional pass-through covered bonds last year, seven Dutch banks currently have covered bond debt outstanding under eight different programmes. ING Bank is the largest issuer with a 50% market share and two different programmes: a combined hard and soft bullet covered bond programme under which both publicly and privately placed debt has been issued, and a smaller size soft bullet covered bond programme that is solely used for private placement purposes. ABN AMRO Bank is the second largest issuer with a 40% share (Figure 33).

Fig 32 Dutch covered bonds by currency type



Source: Issuer investor reports, ING

Fig 33 Market share Dutch covered bond issuers



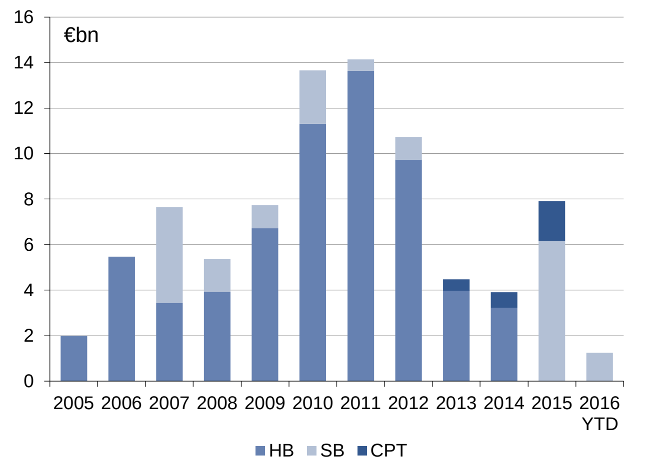
Source: Issuer investor reports, ING

Dutch covered bond supply has slowed down on lower bank funding needs

Following peak year 2011, when Dutch issuers printed €14.1bn equivalent in covered bond debt, supply has slowed down to €3.9bn equivalent in 2014. Supply was somewhat higher again last year, with €7.9bn in covered bond debt issued, of which €1.75bn in conditional pass-through format. The main reason for the slower supply in recent years has been the reduced funding need of Dutch banks. Furthermore, the minimum second best covered bond rating requirement of AA- under the previous covered bond legislation, has in the past temporarily restricted some issuers such as NIBC Bank (under its soft-bullet programme) and SNS Bank to issue further covered bond debt.

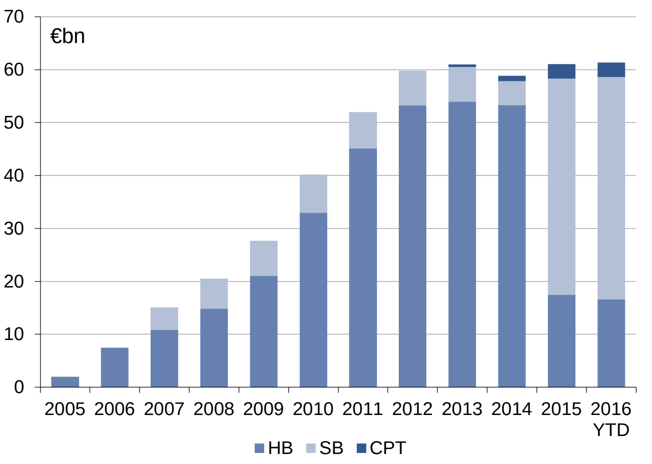
To obtain a more favourable rating agency treatment and support the stability of its covered bond ratings, NIBC Bank decided to issue its first covered bond in conditional pass-through format in 2013. The conditional pass-through programme replaced the bank's soft bullet programme which saw the last bond expire in 2014. Van Lanschot and Aegon Bank issued their first conditional pass-through covered bonds last year. The size of the conditional pass-through market is nevertheless expected to remain small in the Netherlands. From an asset encumbrance perspective, the lower overcollateralization requirements related to conditional pass-through programmes are most beneficial to banks with smaller balance sheet sizes that by definition are less active in the primary market. Comparatively lower rated bank entities furthermore gain more in terms of achieving higher and/or more stable covered bond ratings.

Fig 34 Dutch covered bond supply by year by type



Source: Issuer investor reports, ING

Fig 35 Dutch covered bonds outstanding by type



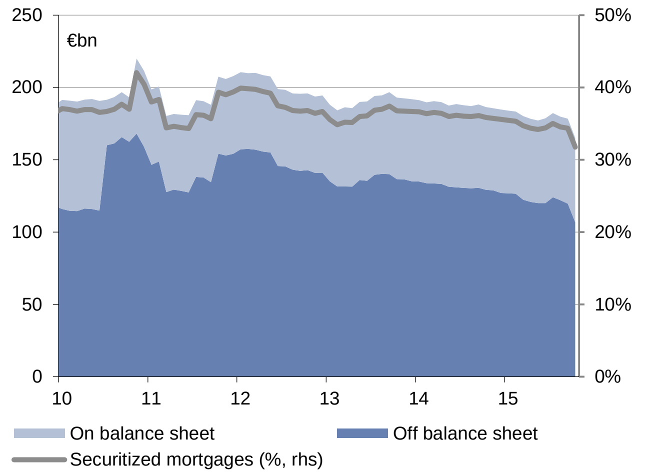
Source: Issuer investor reports, ING

We don't expect the larger registered issuers to set-up conditional pass-through programmes next to their existing active bullet programmes, irrespective of the potential asset encumbrance or rating stability advantages. This could render the existing programmes inactive, which may have negative reputational or rating consequences. Reputational, investor approval and funding cost considerations also make programme amendments from bullet into conditional pass-through format less likely, compared to the more commonly seen changes from hard bullet into soft bullet structures. Bank liquidity considerations for instance, have been an important catalyst for last year's consent solicitations facilitating the modification of the maturity structure of the outstanding Dutch hard bullet € benchmark covered bonds into soft bullet. Figure 34 furthermore shows that all covered bonds issued last year have been in extendable format, i.e. soft bullet or conditional pass-through. As a consequence, 69% of all Dutch covered bonds outstanding nowadays have soft bullet maturities, while 4% of the covered bonds have a conditional pass-through maturity structures. This is up from 8% and 2% respectively in 2014 (see Figure 35). Outside the € benchmark segment, the Netherlands may see the launch of the first Dutch full pass-through covered bond this year however, once Solid Mortgages starts to tap the Dutch covered bond market.

The slow supply conditions are expected to persist

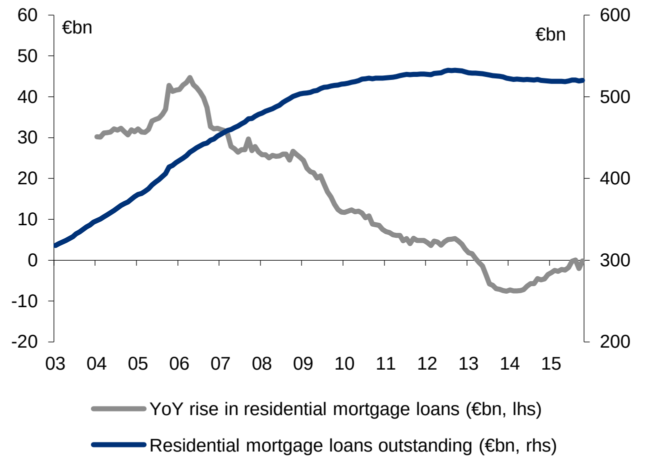
That said, covered bond supply is not expected to rise significantly this year. The general funding need of banks is expected to show a modest rise on the back of improved economic growth and bank lending conditions, against a backdrop of declining saving balances within the current low interest rate environment. Also the rising house prices, the improving loan performance trend and the somewhat lower percentage of mortgage loans securitized (Figure 36), are positives for the amount of eligible collateral available for the issuance of covered bonds. However, the overall amount of mortgage loans outstanding has up until now barely risen, as the increase in mortgage redemption payments due to the low interest rate environment and mortgage market policy measures taken in the past few years outweighs the rise in new mortgage loans originated (Figure 37). Also competition from foreign banks and the increasing share of alternative mortgage loan providers in the Netherlands, offering institutional investors with the opportunity to invest directly in the Dutch mortgage market, have to a certain extent implications for the market share of the traditional heavy weights in the Dutch residential mortgage market.[49] The Bank Recovery and Resolution Directive and the recent final drafting from the FSB regarding the TLAC framework for G-SIBs may also contribute to a stronger focus on subordinated and senior unsecured issuance, particularly in the case that more clarity is obtained regarding the insolvency treatment of senior unsecured bonds.

Fig 36 Securitizations of Dutch residential mortgages



Source: DNB, ING

Fig 37 Dutch residential mortgage market barely rises



Source: DNB, ING

Furthermore any potential future revisions made to bank capital requirement regimes in terms of the calculations of risk weighted assets are likely to support a further focus on the issuance of bank capital products. Linking risk weights of residential mortgage loans to the level of the loan-to-value ratios of mortgage loans under the Standardised Approach (as per the Basel Committee's proposals), may also prompt a reduction in the size of the residential mortgage lending books of banks. This will come at the detriment of covered bond issuance although we do note that covered bonds remain a low funding cost instrument and as such are likely to serve a purpose to counterbalance higher funding costs related to the issuance of capital and loss absorbing paper. Furthermore, the increased focus on private placements also has come at the expense of public supply. Up until two years ago around 24% of the funding in covered bonds was done via private placements. This percentage increased to 49% in 2014. Last year 56% of the covered bonds printed were privately placed (see Figure 38).

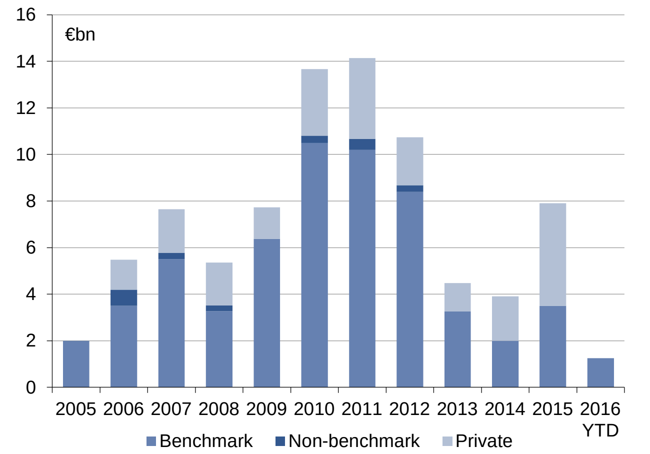
The negative net flow of funds equation is less supportive in 2016

Redemptions in Dutch € benchmark covered bonds will decline to €3.5bn this year, down from €6bn last year. Of this amount, a US$1bn benchmark bond was already repaid in January, while another €2bn in € benchmark covered bond debt falls due in the first quarter of this year. Figure 39 confirms that 2016 is one of the least supportive years for Dutch covered bonds from a flow of funds perspective, including and excluding privately placed bonds. Our € benchmark Dutch covered bond supply estimate for 2016 is €4.5bn, modestly higher than the €3.5bn in benchmark debt printed last year, as we do expect to

[49] According to IG&H Consulting & Interim the market share of insurance companies and pension funds in new mortgage loans originated in the third quarter of 2015 was 36%, mainly due to the rapidly growing alternative mortgage loan providers in the Netherlands such as Munt Hypotheken. These alternative mortgage loan providers offer institutional investors the opportunity to invest directly in the Dutch mortgage market. The three largest banks remain the dominant mortgage loan providers in the Netherlands however, although they did see their market share decline to below 50% in 3Q15 from a market share above 70% in 2008

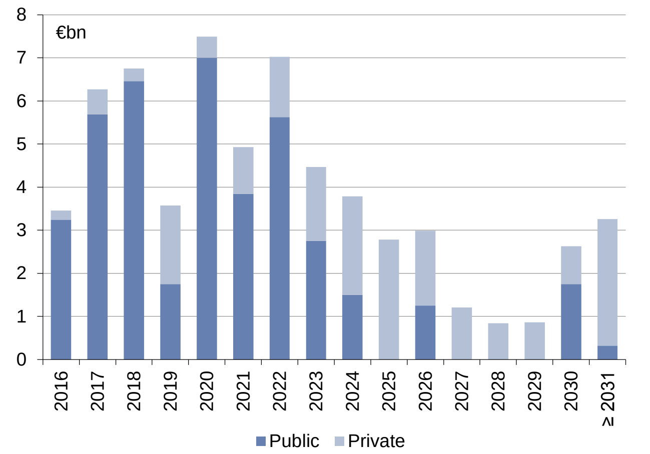
see some prefunding of the €6.3bn redemption payments due in 2017. One €1.25bn benchmark covered bond was already printed in January this year.

Fig 38 Dutch covered bond supply by year



Source: Issuer investor reports, ING

Fig 39 Dutch covered bond redemption profile



Source: Issuer investor reports, ING

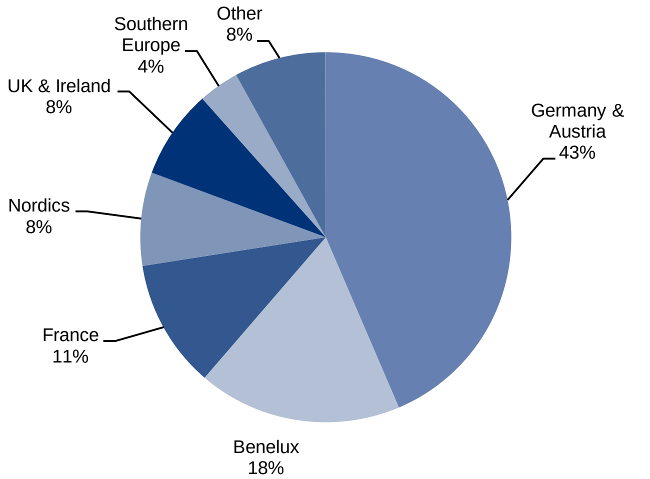
Demand

German/bank investors are the largest participants in Dutch covered bond deals

Dutch covered bonds in general see good interest from the European investor base. Placement statistics show that German & Austrian investors are the largest participants in Dutch covered bond transactions with a share of 43%. The search for alternatives for the shrinking German Pfandbriefe issuance forms an important explanation.

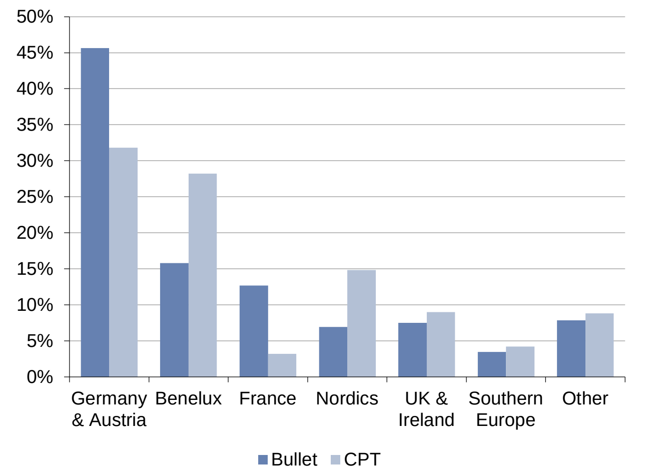
Benelux investors participate for 18% in Dutch covered bond transactions, indicating a decent home country demand, in part due to the reduced significance of the Dutch RMBS market (see Figure 40). Figure 41 furthermore confirms that investors more familiar with RMBS and pass-through covered bond structures, such as the Dutch, Nordic and UK investor base, also take up a larger share of the Dutch conditional pass-through covered bonds. The participation of German and French investors in conditional pass-through covered bonds is lower than in the traditional Dutch hard and soft bullet covered bonds.

Fig 40 Dutch covered bond distribution by geography



Source: IGM, CBR, ING

Fig 41 Geographical distribution by bond structure

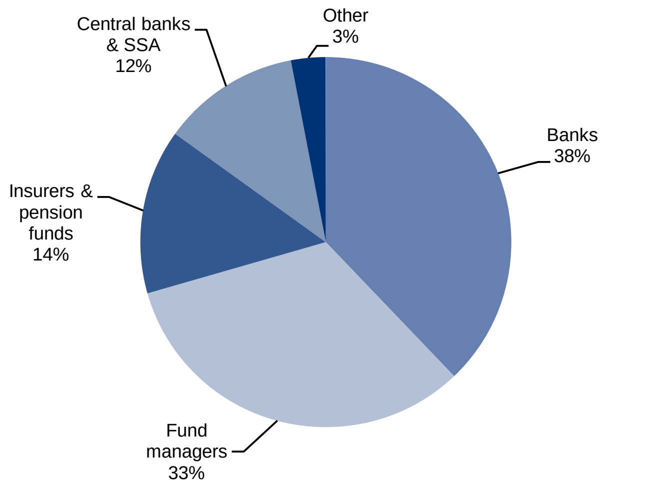


Source: ING, CBR, ING

The high central bank and SSA participation in CPT covered bonds…

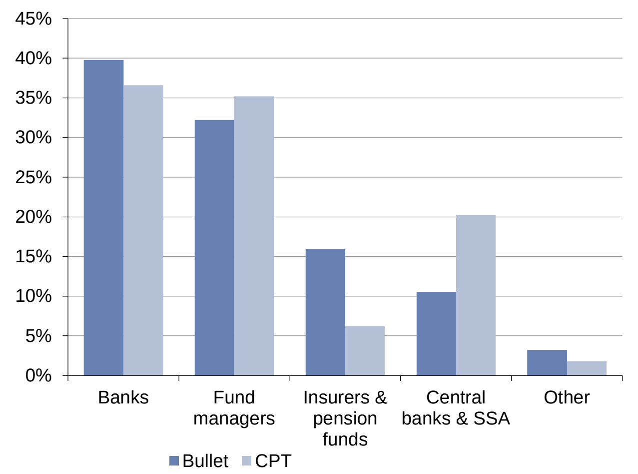
Figure 42 shows that banks are the largest group of investors in Dutch covered bonds with a share of 38%, followed by fund managers with 33% and pension funds and insurers with 14%. Insurers and pension funds participate less in conditional pass-through covered bonds, while central banks and SSA on the other hand take more conditional pass-through covered bonds than bullet covered bonds (Figure 43). The latter can partly be explained by the rise in central bank demand under CBPP3. Since the start of CBPP3 the majority of the bonds issued have been in conditional pass-through format, with central banks and SSAs taking 32% of the bonds versus 3% ahead of CBPP3.

Fig 42 Dutch covered bond distribution by investor type



Source: IGM, CBR, ING

Fig 43 Investor distribution by maturity type

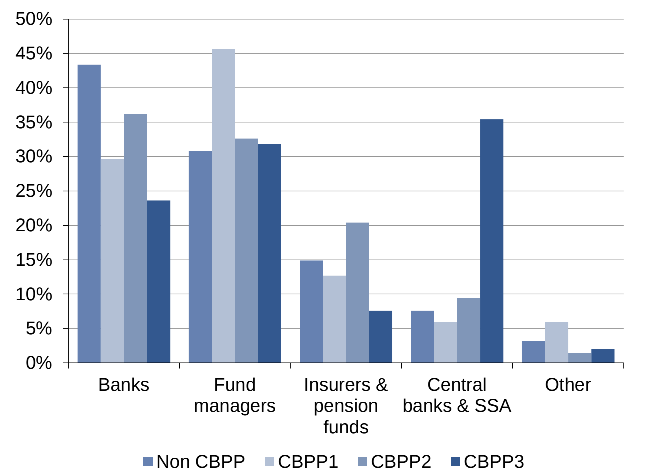


Source: IGM, CBR, ING

...can mainly be explained by CBPP3

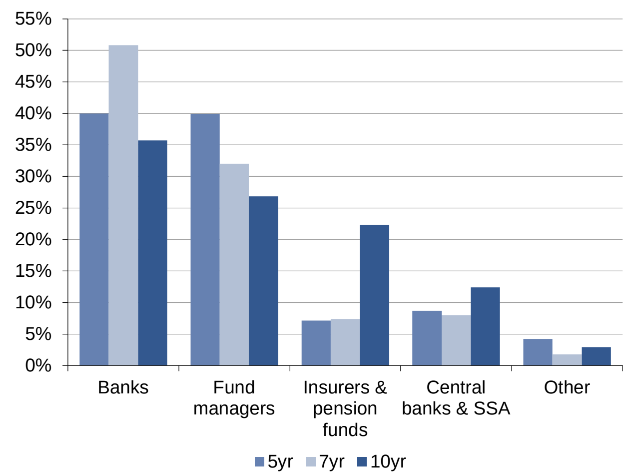
Furthermore, Figure 44 illustrates that central bank participation in Dutch covered bond deals saw a significantly stronger rise during CBPP3 compared to the previous two ECB covered bond purchase programmes. 35% of the Dutch covered bonds issued since the start of CBPP3 were sold to the central bank and SSA investor base. This rise came mainly at the expense of allocations to the bank investor base and the insurer and pension fund investor base, which saw their share in new Dutch covered bond deals decline to 24% and 8% respectively. The participation of insurers and pension funds in conditional pass-through covered bonds issued ahead of CBPP3 was 10% however, which is still below their 16% participation in Dutch bullet structures.

Fig 44 Central bank participation rises under CBPP3



Source: IGM, CBR, ING

Fig 45 Investor participation per maturity bucket



Source: IGM, CBR, ING

Pension funds and insurers participate more in longer maturity covered bonds

The participation of insurers and pension funds significantly increases in the longer maturities. These investors participated for 22% in 10yr Dutch covered bond transactions, while their participation in 5yr and 7yr deals was 7% on average. Fund managers buy more of the shorter maturity bonds, taking a share of 40% in the 5yr issuance compared to 27% in the 10yr maturity covered bonds. Also banks take less longer maturity bonds, with a 36% participation in the 10yr deals versus 40% and 51% in the 5yr and 7yr deals.

Secondary performance

Performance considerations

Dutch covered bonds trade at tight spread levels

Despite their impressive outperformance in 2014 Dutch covered bonds remained among the average performing core European covered bond markets last year. Due to the spread re-widening seen since the end of May, the iBoxx € Netherlands Covered index ended last year 6bp wider compared to the end of 2014. The bonds continued to perform better than CBPP3 supported Finnish, Belgian or Austrian alternatives, but underperformed versus German and French covered bonds. Several factors contribute to the relative performance resilience of Dutch covered bonds:

The amendments to the Dutch covered bond legislation enhanced investor comfort

- The strengthening of the regulatory framework for the issuance of covered bonds in the Netherlands has been supportive to Dutch covered bonds. By aligning the Dutch covered bond rules with the EBA's best practice proposals, via the introduction of a minimum regulatory overcollateralization level of 5%, a 180 days liquidity test and stronger guidelines on asset eligibility among others, the amendments contributed to an improvement in investor comfort with the Dutch covered bond product. Furthermore, Dutch € benchmark covered bonds benefit from preferential risk weight treatment under the CRR and Solvency II. They qualify as LCR level 1 assets, are eligible for ECB refinancing purposes and fall under the scope of CBPP3.

The Dutch housing market and unemployment rates have made a turn for the better

- Since the final quarter of 2013, the Dutch housing market has been showing more sustainable signs that it is bottoming out. In December last year house prices advanced by 3.2% YoY, up from 2.0% YoY in December 2014. This has further eased concerns with respect to the Dutch mortgage market. Furthermore, the policy measures taken in the past number of years regarding the Dutch housing market support mortgage book fundamentals longer term. The low interest rate environment, the declining trend in the Dutch unemployment rate since 1Q14, the improvement in consumer confidence and resumed positive economic growth also support a stronger loan performance.

Rating cushion against potential issuer downgrades has improved after the BRRD

- The revised rating methodologies on the back of the Bank Recovery and Resolution Directive (BRRD), have been beneficial to covered bond ratings and the cushion against potential issuer downgrades:

  - In June 2015, Fitch decided to upgrade SNS Bank's covered bonds to AAA after the rating agency affirmed the issuer's BBB rating. Also Moody's upgraded SNS Bank's covered bonds in May 2015 from Aa2 to Aaa after assigning a CR Assessment of A3 to SNS Bank and a CB anchor of CRA plus one notch. However, the most important gains in terms of risk weight and LCR treatment were already made in 2014 when the bonds returned to the credit quality step 1 rating bucket from a second best rating's perspective with the upgrade of the bonds from A1 to Aa2 at Moody's.

  - ING Bank was upgraded by one notch at Moody's to A1 in May last year and received a CR Assessment of Aa3. Hence at a CB anchor of CRA plus one notch for this particular covered bond programme, the TPI Leeway improved by two notches and is currently four notches. ABN AMRO Bank's TPI Leeway also improved by one notch at Moody's to three notches. Both ING Bank and ABN AMRO Bank currently benefit from three notches of unused uplift under S&P's revised rating methodology. This used to be one notch.

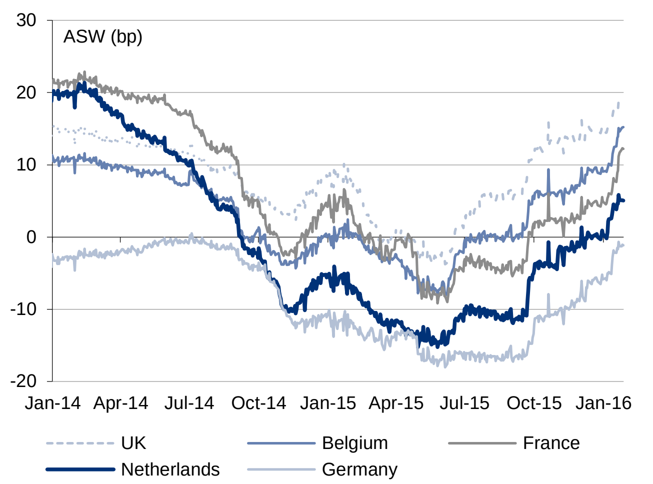
The negative flow of funds equation offered support to Dutch covered bond

- The moderate funding need of Dutch issuers remains supportive to Dutch covered bonds. In 2015 Dutch € benchmark covered bonds supply aggregated €3.5bn just modestly up versus the €2bn issued in 2014. Redemption payments summed to €5bn last year. Hence, the net flow of funds equation remained supportive to Dutch covered bond spreads, although we expect supply to exceed redemption payments this year.

Dutch banks made good progress in terms of improving their capital ratios

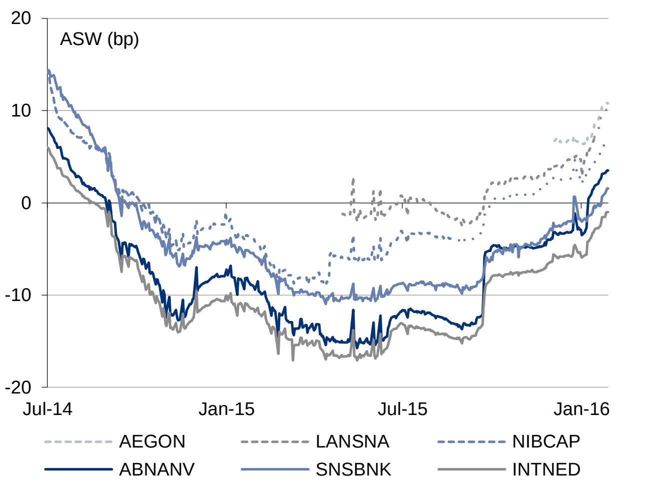
- Dutch banks have made good progress in terms of improving their capital ratios and reducing their balance sheet risk in the past number of years, although capital ratio developments remain exposed to potential regulatory or supervisory changes in terms of measuring risk weighted assets (see our ING initiation of coverage report: *Dutch banks/Transformers*, 25 June 2015).

Fig 46 Performance Dutch covered vs. other countries



Source: Markit iBoxx, ING

Fig 47 Performance Dutch covered bonds by name



Source: Markit iBoxx, ING

Figure 47 plots the performance of Dutch covered bonds on a name-by-name basis. The figure confirms that the weaker covered bond performance conditions since the second half of 2015 were felt by all Dutch issuers. The figure furthermore shows how both supply and rating events occasionally resulted in name-by-name performance differences. Towards the end of April the new conditional pass-through covered bond deals of NIBC bank and Van Lanschot contributed to some widening pressure in the conditional pass-through space. In June last year the covered bonds of SNS Bank showed performance resilience despite the weaker market conditions in that month as the bonds returned to the AAA rating bucket. Towards the end of September and at the beginning of this year covered bond supply by ABN AMRO Bank led to some underperformance in Dutch covered bonds, primarily on the ABN AMRO Bank and ING Bank hard/soft bullet curves.

Figure 48 gives an overview of all Dutch € benchmark covered bonds outstanding. ABN AMRO Bank and ING Bank covered bonds trade tighter than covered bond comparables from SNS Bank, Van Lanschot and NIBC Bank. The only exception is the expensive 4yr covered bond of SNS Bank which is quoted approximately flat on the ABN AMRO Bank curve. Furthermore, the chart confirms the steepness of ABN AMRO Bank's covered bond curve compared to the NIBC Bank's and ING Bank's covered bond curves over the 3yr to 7yr area, as the bank's more recent longer maturity bonds reset the 7yr area wider.

Conditional pass-through covered bonds trade wide from an issuer rating perspective

The conditional pass-through covered bonds of Aegon Bank, Van Lanschot and NIBC Bank trade relatively wide versus bullet covered bond alternatives from an issuer rating credit risk perspective. Figure 49 illustrates that the 5yr equivalent asset swap spread difference between ABN AMRO Bank and NIBC Bank is worth almost 2bp per notch average credit rating difference between these two issuers, approximately similar to the spread give up per notch between the two tighter trading Belgian covered bond issuers. This illustrates the expensiveness of the longest dated bond on the SNS Bank curve (which is taken as a reference for the 5yr equivalent spread of this issuer). At the same time it shows that NIBC Bank's 5yr equivalent curve is approximately quoted around a level where one would expect the issuer to be quoted from an issuer credit risk perspective, in principle arguing against the existence of an extension risk premium for the conditional pass-through covered bonds of this issuer. That said, the conditional pass-through covered bonds of Aegon Bank and Van Lanschot remain relatively cheap from an issuer credit risk perspective. We see a few reasons for this:

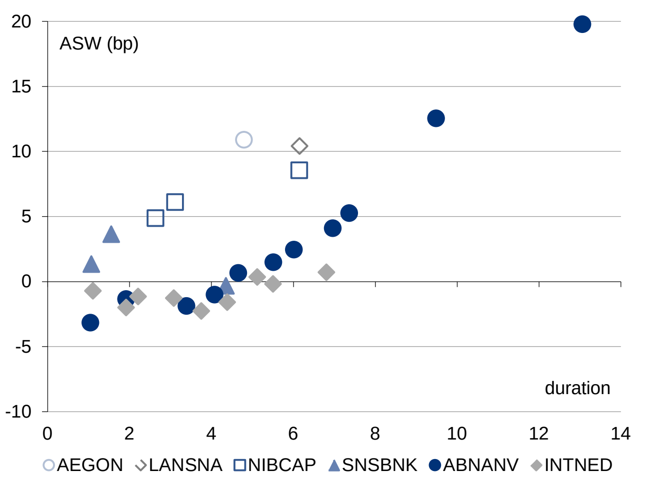
Van Lanschot and Aegon Bank are conditional pass-through newcomers

- Both Van Lanschot and Aegon Bank are smaller size newcomers in the Dutch conditional pass-through covered bond space, while NIBC Bank is already a better known and more established name within the Dutch covered bond segment. We furthermore note that although investors have become more comfortable with conditional pass-through structures in the past number of years, part of the investor base is still reluctant to invest in these covered bonds due to their extension risk.

NIBC Bank's CPT programme has some additional structural strengths

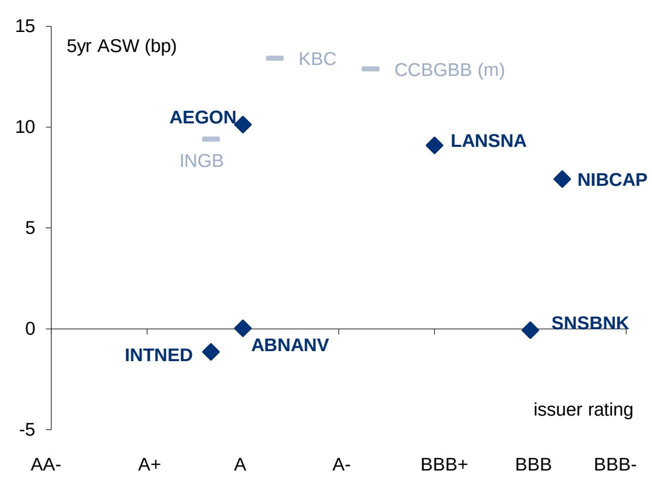
- NIBC Bank's conditional pass-through covered bond programme has some specific programme features that make the programme comparatively stronger compared to the other conditional pass-through programmes. These include for instance the presence of a collection foundation account to address commingling risks, the application of a 3% rather than a 1.5% or 1% minimum mortgage interest rate for the loans included in its collateral pool and the bank's commitment to pledge additional collateral under the ACT if mortgage interest rates were to be reset below this level.
- A further structural explanation for the tad wider trading level of Aegon Bank is the fact that in the case of NIBC Bank and Van Lanschot there is an actual *sale* of the mortgage receivables to the Covered Bond Company. The purchase of the cover assets is funded by means of a subordinated loan granted to the Covered Bond Company. These two programmes also commit to 15% overcollateralization level, while Aegon Bank commits to a 10% overcollateralization level.

Fig 48 Dutch covered bond trading levels



Source: Markit iBoxx, ING

Fig 49 5yr equivalent covered spread vs. issuer rating



Source: Markit iBoxx, ING

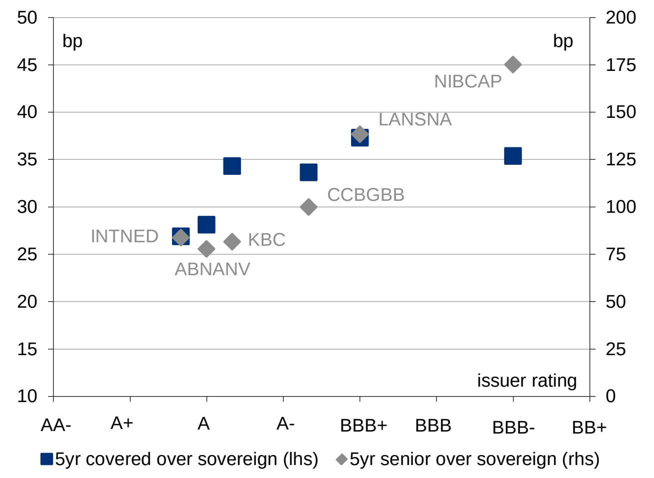
- The Dutch € benchmark covered bond debt issued last year was for 54% in conditional pass-through format, while the Dutch bullet issuers, i.e. SNS Bank, ABN AMRO Bank and ING Bank were the only three issuers benefitting from € benchmark covered bond redemption payments. This year only ING Bank has €2bn in € benchmark redemption payments falling due.

Differences in the systemic importance of the issuer is a driver to spreads

- The issuer credit risk priced in for conditional pass-through issuers such as Van Lanschot and NIBC Bank is also higher in the senior unsecured market than it is for banks with comparable ratings, suggesting an additional risk premium versus globally or domestically systemically important peers (Figure 50). The 5yr equivalent senior over covered spread for instance is almost 40bp wider for Van Lanschot than it is for

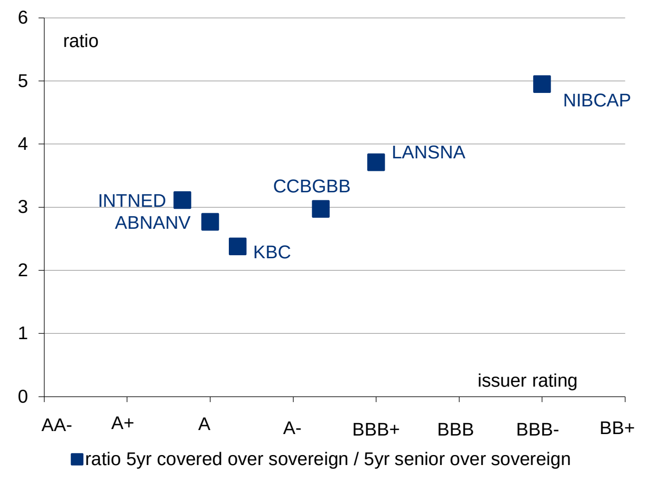
Belfius Bank. However, from a ratio perspective, the ratio of the 5yr equivalent senior spread versus Belgian sovereign over the 5yr equivalent covered bond spread versus Belgian sovereign for Belfius Bank, is only a tad lower than the ratio of the 5yr equivalent senior versus Dutch sovereign spread over the 5yr equivalent covered bond versus Dutch sovereign spread for Van Lanschot, reflecting the tad better average issuer credit ratings set of Belfius Bank (Figure 51).

Fig 50 5yr senior and covered curves over sovereign



Source: Markit iBoxx, ING

Fig 51 Ratio 5yr senior over covered bonds



Source: Markit iBoxx, ING

Hence in our view, differences in systemically importance of the issuing entities are also an explanation for the relatively wider trading levels of the conditional pass-through covered bonds. If the current volatile market conditions subside somewhat, we do expect the additional premium for the covered bond bonds of the systemically less important institutions to narrow a tad. The upward sloping ratio profile of senior unsecured over covered bond spreads (measured versus sovereign alternatives) in Figure 51, in our view does not necessarily indicate that there is better value in the covered bonds of the better rated issuers than in the covered bonds of the wider trading lower rated issuers. Differences in the potential bail-in risks related to the senior unsecured bonds of the different issuers warrant wider senior over covered bond ratios further down the issuer rating scale. The chart does underscore however, that an improving risk perception in the senior unsecured market will prove important for a further spread convergence of the conditional pass-through covered bonds versus the bullet covered bonds of Dutch peers.

Dutch covered bonds remain among the more expensive core Eurozone alternatives

That said, at the same time the remaining relatively tight trading levels of Dutch covered bonds versus comparables from non CBPP3 supported jurisdictions will restrict their potential to perform this year, as it will for other CBPP3 supported core Eurozone jurisdictions. Within the core Eurozone market Dutch covered bonds remain a tad more expensive than for instance Belgian covered bonds from a senior unsecured risk as well as from a sovereign risk perspective. German and French covered bonds, also look a touch richer than Dutch covered bonds on these the senior (German covered bonds) and sovereign spread (French covered bonds) metrics. We do note however, that support from a flow of funds perspective is rather limited this year for Dutch covered bonds.

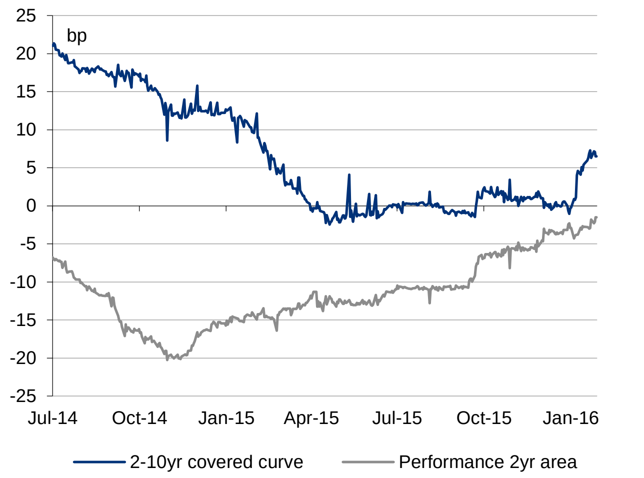
Curve considerations

Dutch covered bond curves are still relatively flat…

Dutch covered bond curves remained very flat last year. Despite the re-widening in 2yr covered bond spreads since November 2014, the 2-10yr covered curve continued to offer approximately zero value in asset swap terms, until more recently ABN AMRO Bank extended its curve with a 15yr and 10yr covered bond (see Figure 52). Several factors played a role here:

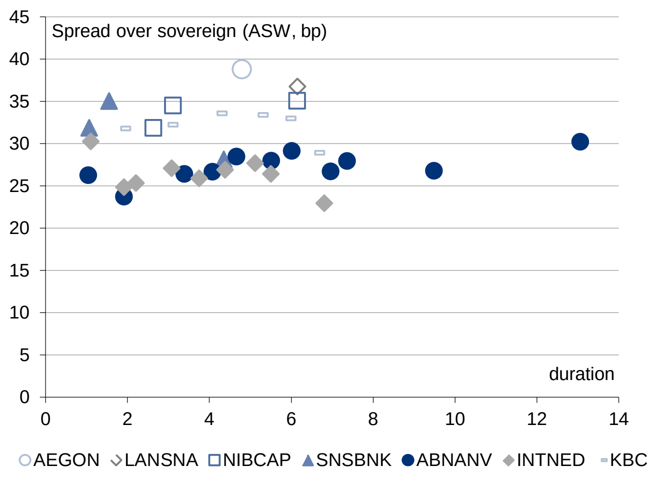
- The search for yield and the negative yield levels at the front end of the curve,
- Expectations of a persistently low yield environment enhances the comfort to buy duration,
- Support from central bank buying under CBPP3,
- The limited supply pressure and, up until recently, the absence of supply in the 10yr area, which offset the impact of the typically more front-end supportive redemptions.

Fig 52 Curve re-steepens as back-end underperforms



Source: Markit iBoxx, *includes only ING Bank & ABN AMRO Bank

Fig 53 Covered curve versus govies



Source: Markit iBoxx

…but are expected to show some further steepening

However, at this stage we see good grounds for some more re-steepening of Dutch covered bond curves:

- Up until the 9yr area of the curve, Dutch covered bonds are a tad more expensive versus sovereign bond alternatives further out the curve, making the longer maturities a somewhat less interesting option versus sovereigns,
- Against a backdrop of the search for yield, senior unsecured bank debt offers a more attractive pickup over covered bonds further out the curve than at the front end,
- The relative attractiveness of covered bonds that are not under the scope of CBPP3 increases further out the curve,
- The reduced secondary support from central bank demand for CBPP3 eligible paper will be felt stronger further out the curve as the longer maturity buckets have benefited relatively more from the CBPP3 related rise in central bank demand.
- Bank demand for covered bonds remains more supportive to the front end,
- Dutch covered bond curves remain close to the flattest levels since beginning of 2010, while other bond segments, including senior unsecured, have steepened markedly.

We favour the 5-6yr area of the curve

Hence we have a preference for covered bonds in the 5-6yr area due to the positive yield they generate compared to shorter maturity covered bonds that are quoted at negative yield levels. They also still offer a modestly more decent pickup versus sovereign bond alternatives compared to covered bonds a tad further out the curve (Figure 53). Since last year supply in Dutch covered bonds has primarily focused on the 7yr maturity bucket and beyond. We also note that this is approximately the crossover area where the covered bond asset swap profile turns positive again.

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Disclosures Appendix

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