

Going Dutch RMBS

High Leverage Masks Sector Value

- **Originators Will Crumble Maturity Wall** — Despite worsening macro fundamentals, originators' reliance on an attractive mortgage lending and a RMBS funding environment would motivate them to call their deals in a timely fashion.
- **Homeowners Able to Go Dutch with Government** — New laws reducing mortgage subsidies will not have a significant impact on pool losses. Full recourse to an asset-rich population mitigates the risk of high LTV lending.
- **Extension Not Always a Risk** — Attractive step-up coupons and high-coupon no call deals are appealing for investors. Deals without calls will suit more bank originators and could gain traction among investors needing longer dated exposure.
- **Cheap to Unsecured and Covered Bonds** — RMBS offers attractive pickup over covered bonds. Moreover, it looks cheap to unsecured bonds of many high-quality originators and provides collateral security for less pristine originators.
- **Expensive to Comparable Securitized Assets** — Dutch RMBS looks expensive to many other core European securitized sectors and is vulnerable to unwinding of government policy that has kept competing UK RMBS issuance subdued.

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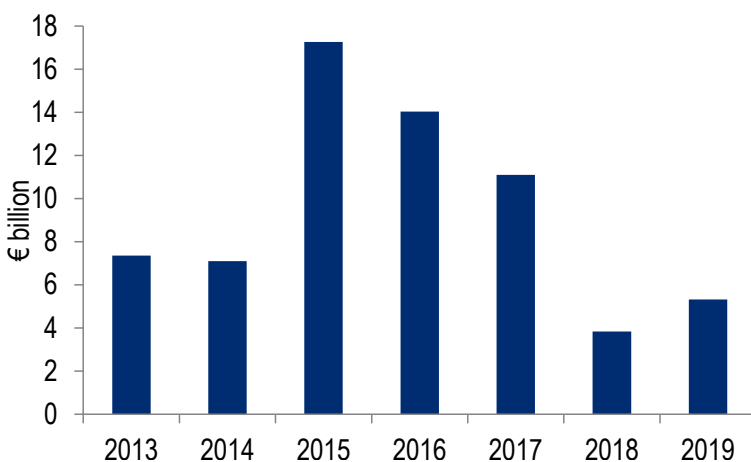
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Figure 1. Call Dates of Placed Dutch RMBS, 2013 – 2019 (€ billion)



Source: Bloomberg, Concept ABS, Investor Reports and Citi Research

See Appendix A-1 for Analyst Certification, Important Disclosures and non-US research analyst disclosures.

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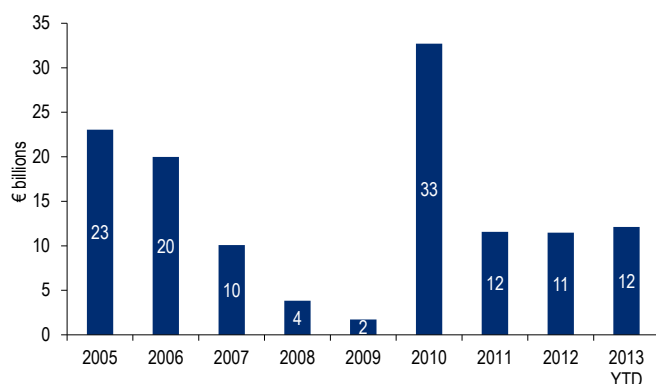
A Tale of Two Cities

Dutch RMBS has become synonymous with high LTV lending and attracts a good deal of scepticism from many European ABS investors. And yet the asset class has experienced negligible credit losses and remained more resilient than most other medium-to-longer dated ABS after comments from the US Fed about the tapering of the QE program led to widespread market volatility. In our minds, the asset class spans two very conflicting investment themes. Housing fundamentals are deteriorating, and mortgages have poor asset coverage relative to most European core and periphery countries. Long-dated mortgages and little turnover in the property market, moreover, could lead to high average lives for the securities. On the other hand, RMBS is technically supported by being a core holding of most ABS funds, by the historical practice of Dutch mortgage originators, despite their worsening financial health, to honor the calls on the RMBS, and by the promise of a higher coupon if the issuer call is not exercised. Full recourse to an asset-rich population also mitigates the high LTV picture. On balance, we believe that Dutch RMBS is fairly priced and benefits from substantial credit protection but does not offer relative value versus many other European securitized assets.

So Far a Good Story...

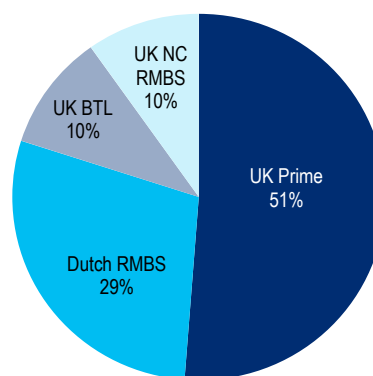
Dutch RMBS has had a good run to-date in terms of issuance and prices. The asset forms a significant part of the European securitized products sector; it is also one of the few sectors that has seen healthy issuance after the 2008 financial crisis. With a placed issuance of approximately €11 billion in 2012 (and forecast to be around €17 billion in 2013) and a total outstanding volume of €68 billion, the sector offers opportunities to participate in the new-issue as well as secondary markets (Figure 2 and Figure 3). Supply too has not been a source of pressure because net issuance in core country RMBS markets in Europe is still flat to negative as UK prime RMBS issuance has virtually come to a halt because of Bank of England's ongoing Funding for Lending Scheme (FLS).

Figure 2. Placed Dutch RMBS Issuance, 2005 – 2013 YTD (€ billion)



Source: Concept ABS, IFR and Citi Research

Figure 3. Sector Wise Breakdown of Core Country Placed RMBS (Total €230 billion)



Source: Bloomberg, Concept ABS and Citi Research

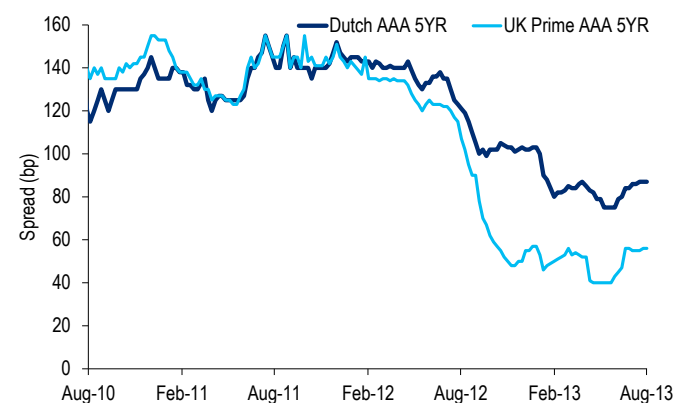
Moreover, the sector has registered good credit performance historically. Average delinquencies are running at low levels below 1% and average cumulative losses according to Moody's data stand at negligible 8bp at roughly 80 months of seasoning (Figure 4). The positive technicals combined with good historical credit performance have coincided with a strong rally in spreads. Particularly impressive was the resilience of Dutch RMBS (albeit with thin trading volumes) following the QE tapering comments from the US Fed. In contrast, comparable UK prime RMBS experienced much greater spread volatility (Figure 5).

Figure 4. Average Dutch RMBS 60D+ Delinquencies, Mar 05 – Mar 13 (%)



Source: Moody's and Citi Research

Figure 5. Triple-A Rated Dutch and UK Prime RMBS Spreads, Aug 10 – Aug 13 (bp)



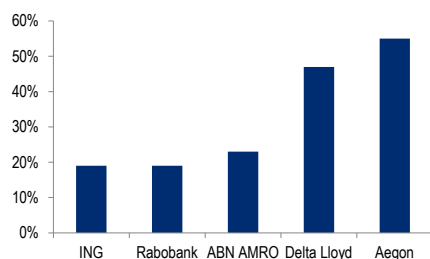
Source: Citi Research

Quite apart from the low collateral losses, investors have also benefited from short average lives of the RMBS despite much longer (30YR) maturities of the underlying mortgages. The RMBS bonds have 3-5 year calls, and most originating banks have diligently honored their calls so far with a few exceptions. Dutch RMBS, therefore, is as much about the health of the residential lending sector as it is that of the financial sector. Both of these sectors, however, are under pressure.

Regulated Origination Practices and Government Support

Part of the low mortgage credit loss story can be tied to a strong regulatory environment. Mortgage origination and underwriting practices in the Netherlands are regulated by a Mortgage Code of Conduct. The code encourages lenders to use conservative lending practices by defining upper limits on permissible loan-to-value (LTV) ratios, mortgage debt to income (DTI) ratios and interest-only portion on the mortgages. The code is implemented on a "comply or explain" basis — the mortgage lender must either comply with the code or provide an adequate explanation for deviation. As per latest RMBS prospectuses, most mainstream lenders are in compliance with the code, resulting in uniform underwriting practices across originators (see Figure 21 in Appendix 1 at the end of this note). Moreover, lenders also use a central credit history register called Bureau Krediet Registratie (BKR) to perform borrower credit checks prior to extending any loan. The code of conduct and credit checks prevent excessive lapses in underwriting and also result in uniform collateral quality across different originators.

Figure 6. Proportion of NHG Guaranteed Loans by Originators (%)



Source: Investor Presentation and Citi Research

Apart from uniform origination practices, the mortgage sector also benefits from generous government policies to promote home ownership. Two state sponsored schemes directly benefit the Dutch housing market — the National Hypotheek Garantie (NHG) scheme and Mortgage Interest Tax Relief (MITR).

The NHG scheme guarantees the residual debt payment to the lender following any forced sale in case of a mortgage default. However, there are stringent conditions for NHG eligibility and borrowers who meet the criteria may purchase the guarantee for an upfront fee. Around 25% of total outstanding Dutch mortgages are NHG guaranteed and the proportion of NHG loans in RMBS pools of mainstream originators range from 19–55% (Figure 6).

The government also subsidizes the cost of mortgage loans by providing tax relief on interest, leading most borrowers to have high LTV mortgages. Although the support is slated to decrease going forward as Dutch government scales down handsome tax benefits on mortgage interest payments, it will take some time before the support is completely taken. Indirect policies such as unemployment and social security benefits provide further support since out-of-work homeowners would have some cushion before being forced to sell their homes to meet mortgage payments.

Though there have been some well-publicized changes in the level of support given by the government to the housing market, we think the overall impact will be muted. In an effort to reduce the cost of the MITR subsidy and discourage high LTV borrowing, the government is trimming the level of tax deduction for new borrowers. The government also has a scheme to try to mobilize a stagnant mortgage market by encouraging downsizing among borrowers with underwater mortgages. The main points of the changes and their possible impact are listed below in Figure 7.

Figure 7. Overview of Recent Policy Changes and Their Impact on the Housing Market

What's changing?	What's the impact?
<ul style="list-style-type: none"> From 1 Jan 2013, all new mortgage loans should be fully amortizing in order to benefit from tax deductibility 	<ul style="list-style-type: none"> Since this change does not apply to existing mortgages, the impact on overall housing market will be gradual Could lead to slowing prepayments in underwater pools because borrowers may wish to retain the tax benefit
<ul style="list-style-type: none"> The maximum tax deductibility rate will be reduced by 0.5% annually from 52% in 2014 to 38% over 28 years Highest income tax bracket is changed from incomes exceeding €56,492 to €62,942 	<ul style="list-style-type: none"> Does not impact low income borrowers because their tax rate is 33.1% Will start impacting mid income borrowers after 20 years when tax deductibility rate falls below 42% High income borrowers will benefit initially because of highest tax bracket widening; tax benefit will decrease gradually after 2019
<ul style="list-style-type: none"> If negative equity is refinanced before 1 Jan 2018, the tax deductibility on interest payments to refinance negative equity remains for 10 years New LTV caps exclude negative equity loans 	<ul style="list-style-type: none"> The idea is to encourage borrowers in negative equity to move to smaller houses, resolving the current gridlock in the property market
<ul style="list-style-type: none"> The maximum LTMV will be reduced from 106% to 100% through 2013 – 2018 	<ul style="list-style-type: none"> Newly originated loans will be less leveraged and fully amortizing.

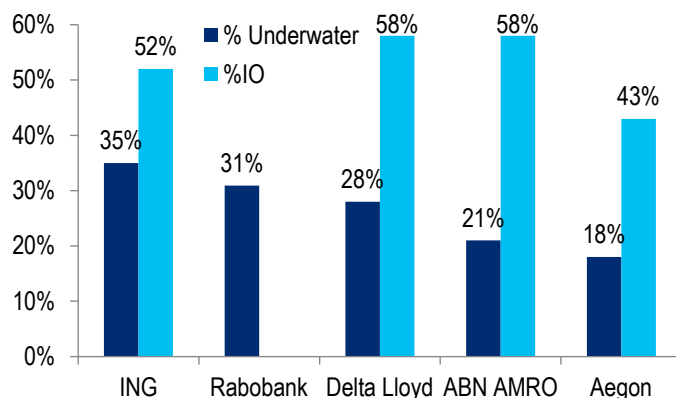
Source: Citi Research

...But Housing and Residential Lending is Under Pressure

The accepted wisdom is that Dutch RMBS is heavily geared with high LTV and interest only mortgages (Figure 8). This means that most Dutch RMBS bonds are not eligible for high quality liquid assets (HQLA) under Basel III Liquidity Coverage Ratio (LCR), reducing their appeal to many banks. Moreover, falling home prices mean that the LTV is getting only higher. According to Citi economists, Dutch house prices will continue to decline until the house price to income ratio reaches 110% of its long term average¹. This translates to a further decline of 10% from current levels (Figure 9).

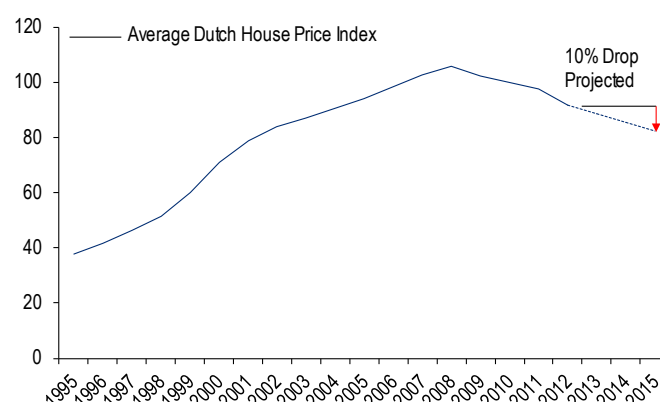
¹ "Netherlands — In the Triple Dip Recession Club", Euro Economics Weekly, 22 Feb 2013

Figure 8. Proportion of Underwater and IO Loans by Originator



Source: Investor Reports, Investor Presentations and Citi Research

Figure 9. Average Dutch House Price Index and Projection, 1995 – 2015



Source: Dutch Statistics Office and Citi Research

The negative housing story has not ended yet. A decrease in tax benefits on mortgages, declining disposable incomes, increasing unemployment and stagnating economic growth has sapped the confidence among first time home buyers. Our premise of a further fall in house prices is based on a number of reasons.

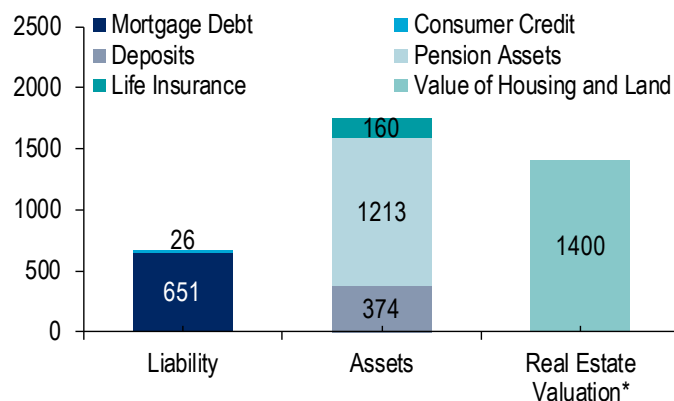
- **Low Confidence Deters New Buyers.** Confidence among first time home buyers has deteriorated due to a change in tax policy (see Figure 7), stagnating GDP growth and deteriorating employment prospects. The perception that house prices have not bottomed is also prompting first time buyers to wait on the sidelines.
- **Falling Disposable Income a Negative.** According to the Economic Developments and Outlook report² by DNB, real disposable income of Dutch households declined 3.0% in 2012 and is projected to slide by 3.8% this year. Dutch consumers are dipping into their savings to sustain consumption levels which could hurt their ability to service mortgages in an adverse economic scenario.
- **Unemployment a Risk but Mitigated.** The unemployment rate, which hit a new high of 8.7% in July 2013, has reduced household earnings and remains a risk to the Dutch housing market. This risk is somewhat mitigated by generous unemployment benefits which continue for one year and can be extended until three years under special circumstances.

There are some important mitigating factors though that will prevent a housing collapse unlike what we saw in the US sub-prime housing market.

- **Full Recourse to an Asset-Rich Population.** Lenders have full recourse to borrower's income and assets in an event of default, creating a disincentive for borrowers to default except under the most unavoidable circumstances. Moreover, consumers are not heavily indebted. Total consumer wealth (excluding real estate) is more than twice the amount of total residential mortgage and consumer debt (Figure 10).
- **Housing in Short Supply.** Housing supply has not kept up with the increase in number of households in Netherlands (Figure 11). Dutch house prices are likely to find a bottom sooner than peripheral countries as there is no supply overhang. Moreover, the private rental sector consists barely 5% of the entire housing market and owning is the preferred option. As confidence builds, the pent-up demand for getting on the housing ladder will support home prices.

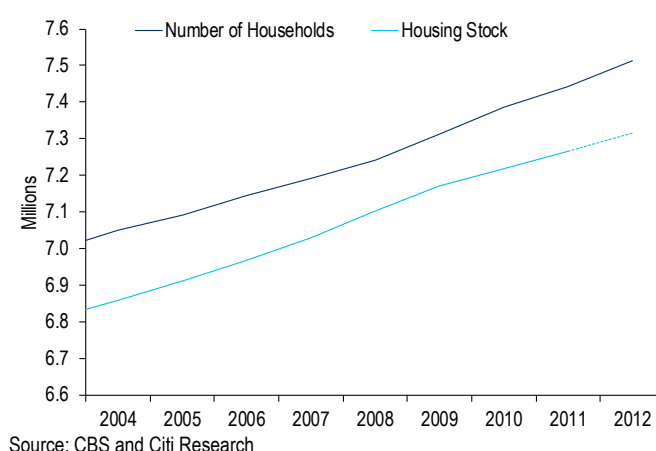
² "Economic Developments and Outlook", DNB, Jun 2013

Figure 10. Dutch Mortgage and Consumer Debt Compared With Consumer Assets, as of 2012 (€ billion)



* Real estate valuation as of 2011 year-end; Wealth shown covers whole population and not just mortgage borrowers
Source: DNB and Citi Research

Figure 11. Number of Households and Total Housing Stock in the Netherlands (Million)



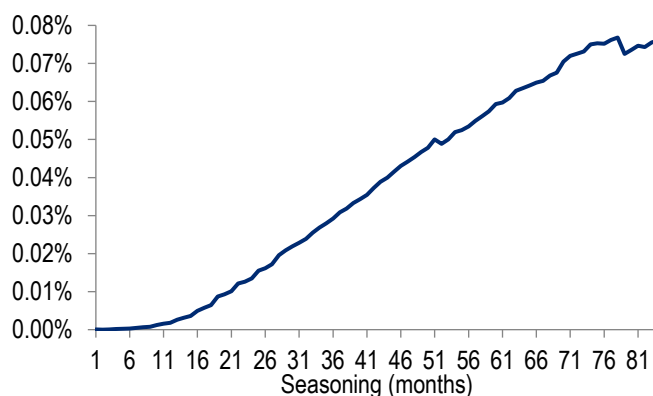
Source: CBS and Citi Research

■ **Unemployment Benefits Prevent Fire Sales.** The support provided by generous unemployment benefits prevents foreclosures and fire sale of homes. These benefits include a payment of 75% of last salary for the first month and 70% of last salary up to a maximum of 38 months.

The fact that realized losses are so low is testament to the fact that borrowers do pay back their loans (Figure 12). It is probable that losses will increase with a worsening economy but should be well below the average 9% subordination on the senior bonds. At a certain time, confidence should return. Post crisis, house price affordability has increased due to a 20% drop in house prices combined with a decline in transfer tax from 6% to 2%. Increasing affordability could bring back buyers as it offsets the negative (less positive) effects of the new tax regime.

For the moment, however, the net result is a stagnated market, rather than a full-blown housing crash. Turnover in homes is very low, and there is little prepayment in mortgages (Figure 13). Were it not for the issuer calls, which have usually been exercised, the bonds would last for a long time.

Figure 12. Dutch RMBS Average Cumulative Losses by Seasoning, as of Mar 2013 (%)



Source: Moody's and Citi Research

Figure 13. Average Dutch RMBS Prepayments, Mar 05 – Mar 13 (% CPR)



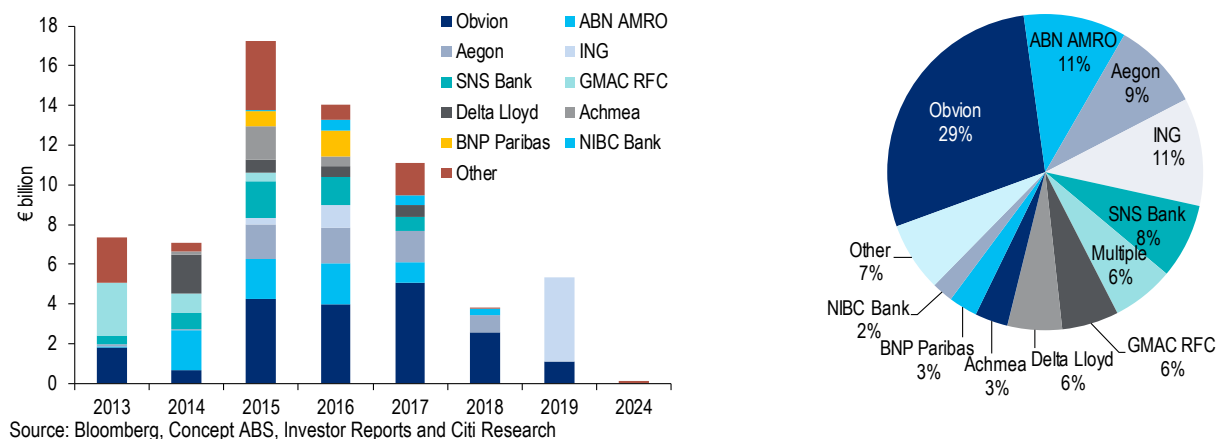
Source: Moody's and Citi Research

Calls Likely Despite Maturity Cliff in 2015–2017

Dutch banks are under pressure, but overall we think they are too reliant on mortgage lending to not honor their calls. The need for bank support for RMBS sector is significant - we reckon that the sector has about €42 billion of bonds that are callable between 2015 and 2017 (Figure 14). Dutch banks will be expected to call these bonds and reissue new ones in the market, which investors will be expected to buy.

And yet, as the Dutch Central Bank wrote in their Overview of Financial Stability in the Netherlands, Dutch banks are under pressure and will meet the higher requirements of Basel III with tight margins. Their credit risk is growing as they face more losses on their loan books. Write-downs on the residential mortgage book are at 0.09%, much lower than 0.50% write-downs on business loans, but are worsened by higher severity than previously because of high LTV loans and falling home prices. Dutch commercial real estate is also causing problems for the banks because of the weak economy leading to a combination of rising vacancy rates and falling property prices.

Figure 14. Placed Dutch RMBS Call Dates (Left) and Market Share (Right) by Originators (Total €68 billion)

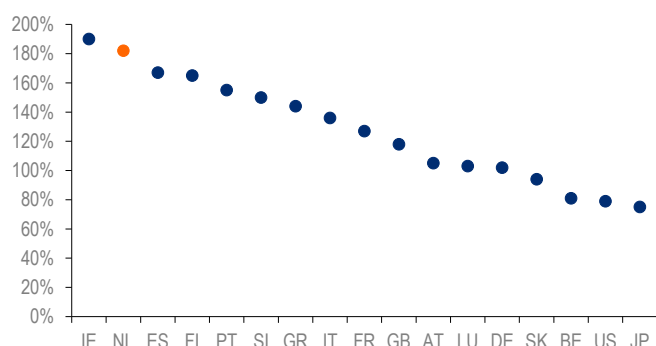


Moreover, most RMBS originators are also involved in insurance sector, which too is under pressure. The industry is currently grappling with anticipated compensation claims that have to be paid to customers on the back of the Supreme Court ruling that policies were mis-sold. The ongoing debate on the extent of compensation for unit linked policyholders could raise questions on the need for additional provisioning, impacting the profitability of many insurers. The weakness in Dutch economy is likely to further erode the insurance sector revenues and solvency numbers.

As if a weak asset portfolio and challenges associated with the insurance business were not enough problems for originators, Dutch banks are especially vulnerable to volatility in the funding markets. Dutch banks have a large gap between the size of their loan portfolios and their savings deposit base. Within the euro area, only Ireland has a higher loan-to-deposit ratio than the Netherlands (Figure 15). The attractive margins on mortgage lending coupled with generous government support for the housing sector motivated Dutch banks to expand their mortgage lending (Figure 16). Mortgage lending by Dutch banks accounts for roughly 90% of Dutch GDP, double the euro-area average.

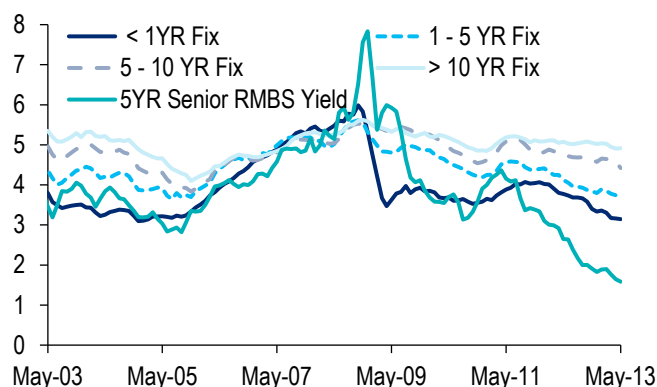
A combination of reliance on wholesale funding and attractive margins in mortgage lending will likely make Dutch banks continue to support the RMBS markets. This lowers the probability of a bond not being called. So important, moreover, is the expectation that originators will call their RMBS deals that even RMBS originated by SNS Bank, which was nationalized after commercial real estate losses led to its near-demise, is trading with a high implied likelihood of being called.

Figure 15. Bank Loan-to-Deposit Ratios from Different Countries



Source: DNB, BIS, ECB and Citi Research

Figure 16. Mortgage Rates versus RMBS Yield, May 03 – May 13 (%)



Source: DNB and Citi Research

Is Non-Call Really Bad? Not If Step-up is Attractive

Figure 17. Senior Tranche Step-up Coupons for Select On-the-Run Issuers

Issuer	Deal	Current Coupon	Post Step-up	Step-up Date
Obvion	STORM 2013-3	83bp	166bp	22-Feb-19
Aegon	SAEC 13	82bp	164bp	28-Feb-18
Delta Lloyd	ARENA 2012-1	115bp	230bp	17-Nov-17
Achmea	DMPL XI	90bp	180bp	26-May-19
SNS Bank	HERME 18	130bp	260bp	18-Sep-17
ING	ORANL 2013-9	85bp	170bp	25-Mar-19
	ORANL 2013-10	150bp	None	None
ABN AMRO	DOLPH 2012-2	120bp	240bp	28-Sep-17

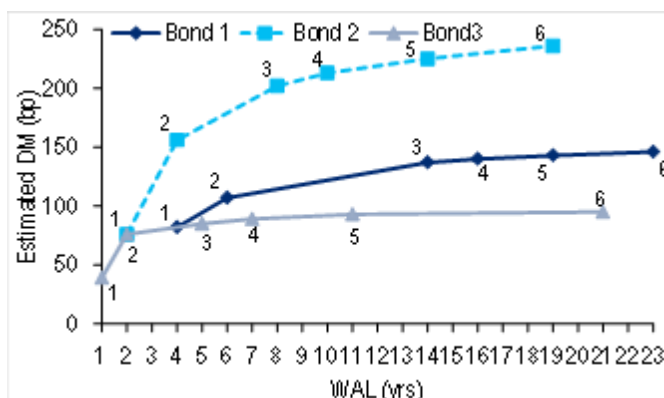
Source: Bloomberg, Investor Reports and Citi Research

The non-call of a RMBS bond is generally perceived negatively by the market because it reflects the issuer's unwillingness or inability to support the securitization program and may lead to significant extension risk. However, coupons on many Dutch RMBS bonds step up if the bond is not called and many recently issued deals offer attractive step-ups to compensate for the non-call event. As long as the bond receives all its principal, the extension would benefit investors if step-up is attractive. Conversely, certain outstanding bonds particularly from 2006–2007 vintages have modest step-ups and do not compensate adequately for the extension. Moreover, some non-conforming deals have the extension margin subordinated in the waterfall and may result in both extension and non-payment on additional margin. Fortunately, such non-conforming deals comprise only a small fraction of the Dutch RMBS universe and most on-the-run issuers offer attractive step-ups (Figure 17).

To illustrate the effect of coupon step-up on bond's return, we pick three bonds with different step-up coupons and estimate their discount margin (at current Market prices) in six different call and extension scenarios (left chart of Figure 18). The estimated discount margins of all the three bonds increase if bonds are not called, which indicates that a non-call event could be a source of positive optionality (right chart of Figure 18). Not surprisingly, the pickup is greater for bonds with higher step-up coupons such as DMPL IX A2 (Bond 2) in the figure.

Figure 18. Estimated Discount Margins of Select Bonds in Timely and Delayed Call Scenarios as well as Four Extension Scenarios

Scenario 1	Timely call
Scenario 2	Call delayed by 2 years
Scenario 3	Full extension with 3X prepayments post step-up date
Scenario 4	Full extension with 2X prepayments post step-up date
Scenario 5	Full extension with status quo prepayments post step-up date
Scenario 6	Full extension with zero prepayments post step-up date
Bond 1	STORM 2013-1 A1 Spread: 85bp; Post step-up (Jan 2018): 170bp
Bond 2	DMPL IX A2 Spread: 140bp; Post step-up (Jun 2016): 280bp
Bond 3	ARENA 2007-1 A Spread: 50bp; Post step-up (Oct 2014): 100bp



Source: INTEx, Markit and Citi Research

More Deals Without Calls? Mind Originator and Collateral

We think more Dutch RMBS deals without step-ups and calls are probable in the future because of mounting pressures on Dutch banks to shrink their balance sheets. A simple standalone RMBS structure without calls would help originators in transferring mortgage loans off their balance sheet and could become a convenient tool for deleveraging. Investors too are getting used to longer dated bonds that offer attractive spread pickup to more conventional callable bonds having shorter maturity. In such cases the relative value between callable and non-callable bonds should be a point for investors to focus.

ING Bank, through its originator WestlandUtrecht Bank, recently securitized a cash portfolio of mortgage loans with no calls and step-ups (Orange Lion 2013-10). The triple-As, with a WAL of about ten years, priced at 150bps which is about 65bps wider to a deal with a traditional five-year call. In our mind, though the deal does not immunize investors from the originator's risk (through multiple roles as collateral servicer, swap counterparty, and issuer account bank) it does compel investors to rely totally on the underlying collateral performance for their principal repayment.

Though such non-callable bonds are rare in the Dutch RMBS universe, they can offer value for investors. In our analysis in Figure 18 of the total returns for investors if Dutch RMBS is not called, only DMPL IX A2 (Bond 2) offers a discount margin higher than the Orange Lion 2013-10 first-pay coupon of 150bp at a comparable 10YR WAL. Both STORM 2013-1 A1 (Bond 1) and ARENA 2007-1 A (Bond 3) offer lower discount margins.

Since some Dutch RMBS bonds may offer unattractive returns in extension scenarios as our analysis shows, investors should consider the risk of non-call. We think a combination of low step-up and weak originator (that is, with a higher probability of not calling their deal) should be avoided. This is all the more important since proposed legislation dealing with ailing financial institutions can give regulators resolution powers which may, at the very least, create concern among securitized products investors in the case such resolution powers are exercised.

As more deals without calls gain acceptance in the market, differences in arrears management and recovery procedures across originators should become more relevant (see Figure 22 and Figure 23 in Appendix 1 at the end of this note). Certain originators are more proactive in offering short-term solutions to cure early stage

arrears while others employ a more standardized approach. For instance, Obvion may allow a delinquent borrower to temporarily skip monthly payable interest or to let the mortgage property, and may involve a budget planner. Delta Lloyd and Achmea also consider some work out solutions with delinquent borrowers. Such workout solutions, if effective, could help in containing the overall losses on the collateral. Moreover, originators use different strategies to dispose off properties after borrowers default. Most originators prefer private sale to a public auction and encourage borrowers to voluntarily sell the property in the market. However, some originators like ING, Aegon and Obvion have separate property management divisions that purchase foreclosed properties with the intention to sell later at a better price if a reasonable price is not attained in the market.

Assessing Relative Value in Dutch RMBS

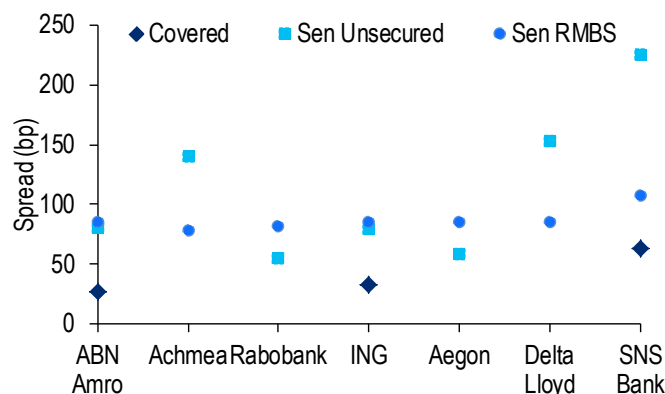
We recommend investors to evaluate returns on Dutch RMBS bonds both in call and non-call scenarios and compare the relative value with other relevant investments. We believe Dutch RMBS offers value versus many other Dutch financial assets, but are less compelling within the broader securitized products universe.

Buyers assuming a high probability of call should consider the RMBS in the light of other investments which have a high reliance on originators for their principal payment. These include unsecured financial (bank or insurance) bonds and covered bonds. While there are not many covered bond issuers in the Netherlands, first-pay RMBS look cheap compared to similar maturity covered bonds from the same originator. There are other factors such as regulatory capital, liquidity or ease of obtaining repo-financing that may put RMBS at a disadvantage for investors such as banks, but the nominal spread is attractive in light of the structural strength of a securitization.

The relative value between RMBS and bank unsecured bonds of similar maturity as the RMBS call date is more mixed. Unsecured bonds from weaker originators trade wide to the secured RMBS, reflecting the value of collateral security (Figure 19). In other cases such as ING and Aegon the RMBS trades wider despite the secured nature of first-pay RMBS. We ascribe the tighter spreads of the unsecured debt to a larger investor pool for higher-quality investment grade bank debt. Though the reasons are different, investors looking for Dutch exposure should see value in Dutch RMBS at either end of the originator credit spectrum.

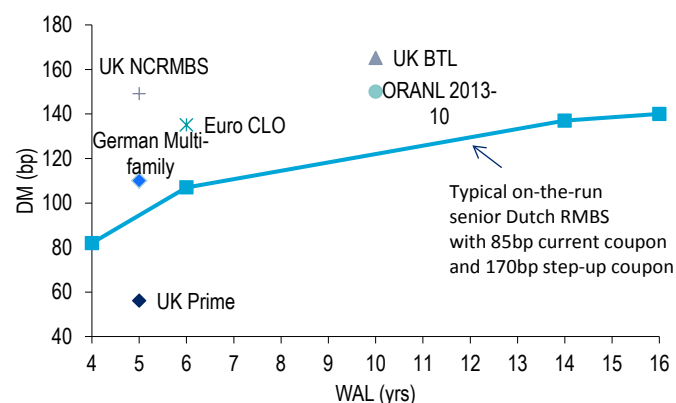
However, European securitized products investors may find better yield opportunities in products outside the callable Dutch RMBS space. Figure 20 shows the discount margin of a typical senior Dutch RMBS bond in the first four scenarios that we discussed in Figure 18. This bond has a current coupon of 85bp and a step-up coupon of 170bp and is callable after roughly five years. We estimate that the bond will offer 82–140bp discount margin depending on whether it is called and on realized CPRs in extension scenarios. Non-callable ING's recent ORANL 2013-10 offers 150bp while UK BTL seniors offer 165bp, both for 10YR WAL. In the scenario where Dutch RMBS is not called, these two alternatives offer higher returns. Similarly, German multi-family CMBS, UK non-conforming RMBS and Euro CLOs offer better return on duration compared to Dutch RMBS in a scenario when calls are exercised in a timely fashion. UK prime is the only sector that trades tighter than Dutch RMBS.

Figure 19. Spread Comparison of 4–6 YR Maturity* Senior RMBS, Covered and Unsecured Bonds by Originators



* We use call date as maturity for RMBS bonds
Source: Bloomberg, Markit, INTEX and Citi Research

Figure 20. Relative Value Comparison of Senior Dutch RMBS with First-Pay Notes of Other Core Country Securitized Sectors



* Dutch RMBS pricing scenarios explained in Figure 18
Source: INTEX, Markit and Citi Research

Conclusion

The Dutch RMBS market is in a state of transition with many negative headlines about consumer fundamentals and a falling property market. However, a combination of national wealth, social protection schemes and personal bankruptcy law is likely to keep pool losses low and make Dutch prime RMBS resilient to credit losses. Likewise, the sector offers shorter dated investment opportunities by virtue of originators diligently honoring their issuer calls, and an attractive step-up coupon should the call not get exercised. To protect against the non-call risk, though, investors should focus on the size of the step-up coupon and the originators' credit quality. Based on the importance of securitization funding for these mortgage originators, we think, however, such calls will continue to be exercised despite the worsening financial health of many of these bank and insurance companies. We do believe, however, that a few originators will look to issue non-call longer-dated bonds to benefit from greater balance-sheet and regulatory capital relief in light of new regulations. The sector benefits from strongly regulated mortgage underwriting criteria but investors should pay attention to differences in arrears and foreclosure management processes in the absence of an issuer call.

Dutch RMBS has benefited from a dearth of competing prime RMBS issuance, especially in the UK, and, as such, is vulnerable to the withdrawal of such supply technicals. On relative value grounds, moreover, we consider Dutch RMBS is attractive to many competing secured and unsecured Dutch financial risk but the story is less compelling within the broader European securitized products universe.

Appendix 1 — Summary of Underwriting, Arrears Management and Foreclosure Procedures of Top Originators

Figure 21. Underwriting Procedures of Major Originators in the Netherlands

	ABN AMRO	ING	Aegon	Achmea	Delta Lloyd	SNS Bank	Obvion
Mortgage Code of Conduct Compliance	Yes	Yes	Yes		Yes		Yes
Checks Performed	- Credit history checks through the BKR	- Credit history checks through the BKR - Check whether the borrower has been registered on a fraud list	- Credit history checks through the BKR - Check Fraud Register	- Credit history checks through the BKR - Perform income checks taking into account borrower's income, loan costs, real estate taxes and income tax	- Credit history check through the BKR - Fraud detection check - Check for stolen or missing identity	- Credit assessment of the borrower is carried out	- Credit history checks through the BKR - Fraud detection checks - Land registry is checked for borrower's recent credit payment problems
Mortgage Loan Amount	- Maximum mortgage amount calculated using income ratio	- Maximum mortgage amount calculated using income ratio		- Conform to standards set by NIBUD	- Max €320,000 for NHG loans - For non NHG, higher amounts are possible but need additional approvals	- Maximum mortgage amount calculated using income ratio	- Calculated based on 'income-ratio' established by NIBUD - Max €750,000 - Higher mortgages required Underwriting Committee approval
Documents Required	- Valuation report for existing buildings by an independent appraiser or a WOZ* value statement - Employer's declaration and recent pay slip as income proof - For self-employed, full annual accounts and income tax returns for previous three years	- Valuation report, a WOZ* value statement or a purchase and acceptance agreement depending on the type of property - Employer's declaration and recent pay slip as income proof - Self-employed borrowers should comply with predefined ratings from an internal rating model or present full annual accounts for previous three years	- Valuation report by a qualified appraiser or WOZ* Value Statement or building and purchase agreement (for new build) - Proof of employment and salary information - Proof of ownership	- Valuation report by a certified valuer except for new builds where value is based on building contract or when the loan has <90% LTV where value is based on real estate taxes - Proof of income and insurance policies	- Valuation report by an external valuer or a WOZ* statement if LTV < 100% - No valuation report required for new build unless mortgage loan > 104% of the purchase and construction cost or mortgage > €500,000 - Verification of salary, employment and property details	- Additional income tests for self-employed and contractors - Insurance against risk of fire and other accidental damage of property required	- Valuation report by a certified appraiser unless the mortgage is on a new-build or LTFV <= 75% - Income data - Copy of sale contract - Other documents to explain non-compliance with Code of Conduct (if applicable)

* WOZ statement is a valuation assessment by Dutch tax authorities

Source: Prospectus, Investor Presentations and Citi Research

Figure 22. Arrears Management Procedures of Major Originators in the Netherlands

	ABN AMRO	ING	Aegon	Achmea	Delta Lloyd	SNS Bank	Obvion
Early Stage	<ul style="list-style-type: none"> - Generate automatic reminder - Send further reminder if settlement from other accounts not possible - Account manager contact by phone - Any repayment arrangement with borrower is recorded and monitored - Finally, send a letter of demand and start late arrears process 	<ul style="list-style-type: none"> - Contact borrower and explain consequences of non-payment - Check for borrower's other outstanding debts in BKR - After 60 days, the file is transferred to central arrears management department - Contact the borrower and possibly borrower's employer - The goal is to cure the mortgage loan and retain the customer 	<ul style="list-style-type: none"> - Send automatic reminders 15 days after the missed payment - Telephone contact made after 30 days - A formal warning is sent after 45 days - After 60 days, the borrower is placed on "telephone collections list" 	<ul style="list-style-type: none"> - Send automatic reminders 15 days after the first missed payment - If BKR check reveals problems with the borrower elsewhere, the file is transferred immediately to Default Management - Otherwise, Arrears Management works with borrower to work out a solution to his/her payment problem - Settlement plans typically last for 3 months or up to 6 months in exceptional cases - If borrower deviates from the agreed plan, the file is transferred to Default Management 	<ul style="list-style-type: none"> - Send reminder to the borrower - Collect information about borrower's background and situation - Pay a visit if contact not possible - Make payment arrangement for maximum timeframe of 6 months 	<ul style="list-style-type: none"> - Send reminder letters to the borrower ten days after the first missed payment - The client may be contacted by phone by the bank or the intermediary 	<ul style="list-style-type: none"> - Send automatic reminders 7 days after the missed payment - After 21 days, inform the intermediary and contact the borrower to investigate possibilities of making repayment arrangements - Obvion may in some cases change the type of loan - Obvion may pay the accrual to bank savings account for six months to ensure the savings value - Consider involving an independent budget planner - Obvion may allow the borrower to pay no or only part on the monthly payable interest for a limited period of time - May allow the borrower to let the mortgaged property for a limited period of time - If suitable, instruct a bailiff to establish an attachment on part of the borrower's income
Late Stage	<p>Outsourced to Lindorff or Hypocasso</p> <p>Lindorff</p> <ul style="list-style-type: none"> - Last effort to cure the loan, might propose a revised loan contract <p>Hypocasso</p> <ul style="list-style-type: none"> - Notify the BKR - Start the legal collections measures and order for borrowers assets, if possible <p>If recovery is unsuccessful, start the foreclosure process</p>	<ul style="list-style-type: none"> - After 120 days, the borrower is reported to the BKR - After 127 days, further attempts made to cure the loan - After 150 days, arrears management department requests for a valuation report - The file is transferred to senior arrears management employee and the emphasis shifts to minimizing the credit losses 	<ul style="list-style-type: none"> - After 90 days, the borrower is placed on the "urgent arrears list" and the borrower will regularly be contacted by phone and/or email - Consider attachment of earnings - After 120 days, send BKR registration warning to the borrower and subsequently make registration application - If no payment is received, an additional letter is sent to the borrower announcing that a notary will be appointed to start the foreclosure process 	<ul style="list-style-type: none"> - If no contact can be made, a reminder is sent by registered post - After three months, the file is transferred to Default Management - Default Management department can obtain a letter of lien of salary and/or getting a third party guarantor to assist in payment and guaranteeing future payment - A joint effort to sell the property is made with the borrower 	<ul style="list-style-type: none"> - A separate team investigates chances of recovery - Possible options include restructuring, budget coaching and payment arrangements for longer term - If recovery impossible, different options to sell the property are considered 	<ul style="list-style-type: none"> - Attempt to come to an agreement with the borrower for a private sale of the property - If all negotiations fail, notary will be instructed to organize a forced sale by way of public auction 	<ul style="list-style-type: none"> - After 75 days, estimate the minimum selling price of the mortgage property - After 105-155 days, seek approval from the Credit Management Committee to demand full loan repayment and if necessary to foreclose the loan - After the approval is granted, the borrower is required to pay the entire outstanding debt including penalties - The customer is requested to intensify the efforts of voluntary sale or a notary is instructed to prepare the auction of the property

Source: Prospectus, Investor Presentations and Citi Research

Figure 23. Foreclosure Procedures of Major Originators in the Netherlands

	ABN AMRO	ING	Aegon	Achmea	Delta Lloyd	SNS Bank	Obvion
Private vs Public Sale	Private sale preferred	Private sales are more frequent	Private sale preferred	Private sales are more frequent	Private sale preferred	Private sale preferred	Private sale preferred
Originator's Comment About Public Auction	Only in cases when clients are not cooperating or when fraud has occurred the house is put on for a forced auction sale.	A private sale can, and often does, replace a public auction, provided that the legal requirements are fulfilled	Private sale is considered in 90% of the cases and public auction in 10% of the cases	A private sale can, and often does, precede a public auction	Delta Lloyd is very reserved on proceeding to sale by public auction	If there are limited possibilities of the borrower becoming current an attempt is made to come to an agreement for a private sale of the property	If the borrower does not repay the loan within seven (7) days after the last request for payment, either the customer will be requested to intensify his effort to sell the property or a notary will be instructed to prepare the auction of the mortgaged property
Time After First Arrear to Decide on Foreclosing	7 Months	8 Months	4 Months	More than 3 Months	2-6 Months	-	105-155 days
Time to Liquidate Property Post Foreclosure Decision	Average: 2-3 months	Average: 2 to 4, Maximum Allowed: 8 Months	-	Average: 4 to 10 weeks	Average: 3-4 months	-	Average: 2 months
Action taken if No Bids are Received Above a Minimum Selling Price	No pre decided minimum selling price-bids may be made up to a certain percentage of the value at execution	Entity owned by ING purchases the property to sell within 12 months	A division of Aegon, BBH division purchases the property	-	-	-	Entity appointed by Obvion purchases the property at the minimum price to sell later
Post Foreclosure Procedures	-	New payment scheme is arranged for the residual debt	The process is outsourced to another company which attempts to negotiate a repayment agreement	The mortgage file is handed over to a bailiff who continues to seek payment	Delta Lloyd Bank continues to exert pressure on the borrower for any losses that remain after foreclosure	-	Unless the borrower pays or makes arrangements with Obvion a bailiff or a firm specialized in collecting this kind of debt is called in

Source: Prospectus, Investor Presentations and Citi Research

Appendix A-1

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