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Residential mortgages and consumer loans

A new investment avenue for insurers?

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In this paper, we focus on the case for investing in pools of residential mortgages and consumer whole loans and explore the specific benefits available to insurers making a strategic allocation to the asset class over the long term. We also demonstrate how adding residential mortgages to an investment portfolio could help insurers achieve additional portfolio-level diversification benefits and lower the overall solvency capital requirement (SCR) under the Solvency II standard formula.

Past performance is not a guide to future performance. The value of investments will fluctuate, which will cause prices to fall as well as rise and you may not get back the original amount you invested.

What is the opportunity?

We believe there is an opportunity to invest in consumer finance assets, by which we mean loans and credit provided directly to consumers, rather than investing in businesses and companies. These loans can be grouped into two main categories; residential mortgages (both owner-occupied and buy-to-let) and consumer loans (unsecured personal loans, auto loans, credit cards, student loans etc). Investors may have existing exposure to consumer finance, particularly residential mortgages, in the form of securitisations (RMBS), however may be less familiar with the opportunity to invest in these assets directly by acquiring loan portfolios.

Consumer finance is one of the largest and most diverse credit asset classes in Europe, and is particularly attractive for insurers, with a favourable capital treatment under Solvency II, and concurrently high returns on capital. Yet, few insurance investors have any kind of direct exposure to the asset class, with the exception of residential mortgages in the Netherlands in which a number of insurers and asset managers have invested. In the UK and the rest of Europe, consumer lending has historically been dominated by retail banks which is due in particular to high historical barriers to entry, with large parts of the market inaccessible to all but a few institutional investors.

Regulatory change within the banking landscape in Europe is creating opportunities for institutional investors to selectively acquire portfolios of assets from banks. Banks have traditionally been reluctant to sell consumer loan assets to third-party investors, but have had to reconsider their options in order to meet higher regulatory requirements imposed by EU banking regulations (Basel II and III).

As a consequence, European banks have been looking for viable solutions that can help them improve their capital positions, free up capacity to do more lending, but still maintain relationships with end-consumers. By moving consumer loan assets away from the balance sheet and to select institutional investors, they no longer need to hold regulatory capital against them, but can continue to service those loan assets for a fee and continue to interact with the individual borrowers under each loan.

This is an attractive situation for banks selling these loan pools and non-bank investors buying these loan pools. From an investor's perspective, owning low-risk residential mortgages and consumer loans, that on a loss-adjusted basis have consistently outperformed other low-risk investments – corporate bonds, for example – is an attractive proposition. Also exposure to consumers diversifies away from corporate risk, which is usually the largest risk investors are exposed to via their corporate credit and equity portfolios.

As there are a limited number of suitable partners or 'buyers' able to participate in such transactions in Europe, those operating in the market are able to secure access to deals at attractive risk-return levels, often on a bilateral basis. This is because banks selling consumer loan assets want to engage with known and trusted investors to whom they are willing to provide large volumes of confidential data.

There is also the ability to access the market in sufficient quantity and scale. The pipeline of potential investment opportunities in residential mortgages and consumer loans is huge – we estimate that there is about €26 trillion of consumer loan balances globally. In Europe, a steady state annual opportunity set of even 5% of the market size of €7 trillion implies an annual addressable market size of €350 billion for portfolio acquisitions.

To gain a diversified exposure to these assets and overcome the barriers to entry, an institutional investor could make an investment into a fund that is buying multiple pools of residential mortgages or consumer loans, rather than gaining an exposure on a loan-by-loan or even transaction-by-transaction basis.

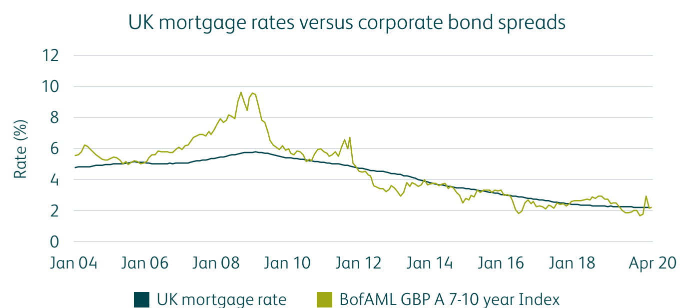
Why invest in residential mortgages and consumer loans?

Consumer finance assets have shown resilience despite headwinds, owing to supportive factors at both a macro level and a micro level. The drivers of credit risk in residential mortgage portfolios and consumer loan portfolios can be different to the drivers of corporate credit and equities – with consumers' ability to service their debts much more reliant on unemployment rates and household income trends rather than GDP growth and corporate profitability.

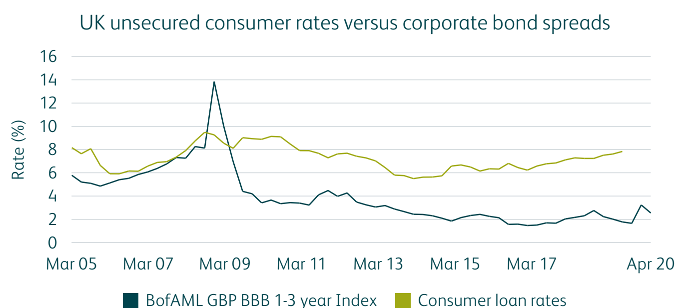
Europe has been severely affected by the COVID-19 'coronavirus' pandemic. A deep recession with sharp increases in unemployment is now the 'base case', while further fiscal and central bank support is expected. Government support to date has been unprecedented and effectively focused on 'backstopping' the consumer through extensive wage and unemployment support measures. Preserving the solvency of consumers and ensuring that they remain central to the functioning of the economy is likely to be the key fiscal policy priority going forward, in our view. Given the level of government intervention in the current crisis, we believe consumer credit performance will be resilient, although the economic impact of changes in consumer spending is very uncertain.

Generally, households in the UK and Europe have deleveraged since the global financial crisis (GFC) and have improved their creditworthiness. Although institutional investors have been largely unable to access mortgage loans and consumer loans directly, the rates of return for both residential mortgages and consumer loans have historically been higher compared to corporate bonds with similar risk, and subject to less volatility as witnessed not only in the GFC, but more recently too through the volatility in capital markets driven by the coronavirus pandemic. Loan margins have also remained broadly stable even as bond yields have fallen in the years since the GFC. This is reflected in the performance of these loans.

Figure 1. UK loan margins are high and stable – residential mortgages and consumer loans

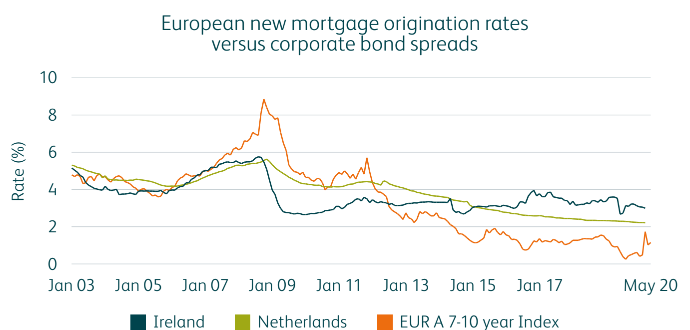


Source: Bank of England, Bloomberg, M&G, as at 30 April 2020.



Source: Bloomberg as at 30 April 2020, Bank of England, M&G, as at 30 September 2019.

Figure 2. European loan margins are high and stable – residential mortgages



Source: Bloomberg as at 30 April 2020, ECB, M&G as at 30 March 2020.

The loss rates on prime mortgages in the UK and Europe (UK and Dutch mortgage interest rates and default rates are shown in Figure 3 and 4 for illustration) remained very low even during the GFC (with some limited exceptions). For other types of consumer loans, while there was an increase in 'charge-off' rates on credit card loans (value of loans removed from the books and charged against loss reserves) and loan delinquencies (when a borrower is late or overdue on a loan payment) as UK and European economies fell into recession, these rates have since fallen back significantly and stabilised, as can be seen in Figures 3 and 4, respectively.

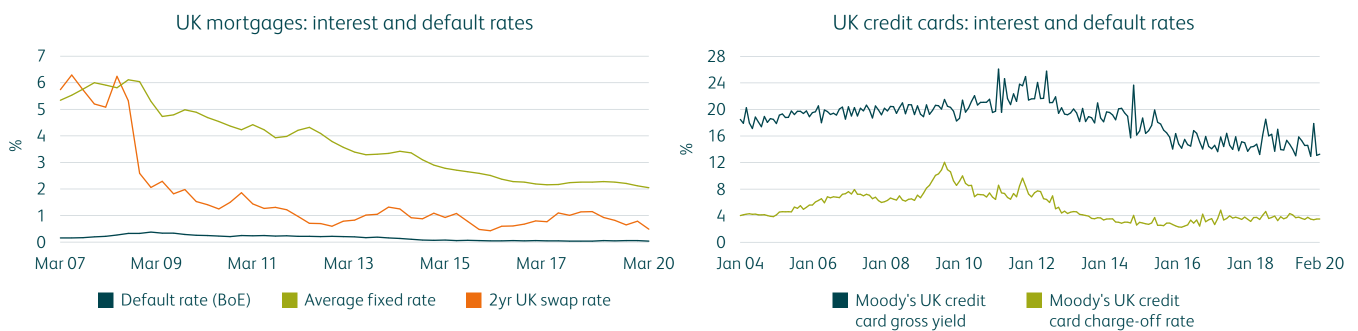
Over the years regulators in Europe have made residential mortgages and other consumer loans safer and stronger by imposing new rules on bank lenders regarding borrower due diligence, effectively attempting to prevent consumers from borrowing at unsustainable levels.

Headline consumer loan rates and delinquencies help inform the overall assessment of the asset class, however residential mortgages and consumer loans have different risk-return characteristics.

Direct residential mortgages are a very high quality investment, and could deliver positive returns even under the highest, AAA stress scenarios. Consumer loans are considered to be comparable to 'crossover' risk. These loans typically offer higher expected returns to compensate for the additional risk, but could start to suffer minor negative performance under the higher, BBB and above, stress scenarios. Overall, the risk-return profile for consumer finance investments is unique to each pool and overall returns are dependent on the purchase price of the pool. Scenario analysis involves stress-testing the performance of the underlying loans in a pool, for example increasing default rates and losses in the pool, and determining the impact on overall returns.

In the following examples, we have run scenario analysis to determine what the expected cashflows of each loan pool would look like if we assumed different degrees of credit deterioration. The credit rating scenarios presented herein ie 'the M&G base case', 'BBB stress' scenario and 'A stress' scenario in the case of residential mortgages, represent the ability of the loan pool to withstand losses. From a rating agency perspective a higher rating means a higher ability to withstand losses, so a single-A stress is more severe than a BBB one.

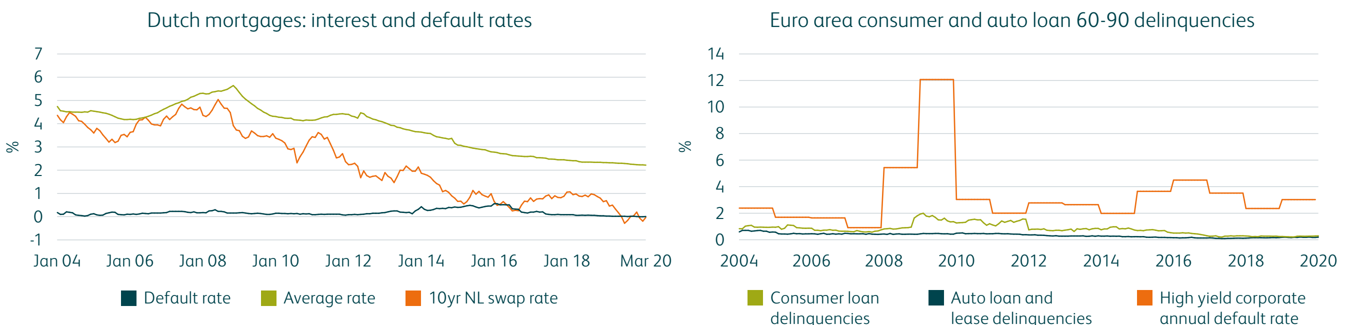
Figure 3. UK loan losses have historically been very low – residential mortgages and consumer loans



Source: Bank of England, Moody's, as at 31 March 2020.

Source: Bank of England, Moody's, as at 29 February 2020.

Figure 4. European loan losses have historically been very low – residential mortgages and consumer loans



Source: ECB, Moody's, as at 31 March 2020.

Source: Moody's, S&P and M&G, as at 31 January 2020.

The M&G base case scenario for each loan transaction is the expected return based on our prudent outlook for defaults.

Figure 5. UK and European residential mortgage loan returns – spreads to swaps[1]

	Base case	'BBB stress' scenario[2]	'A stress' scenario[2]
UK mortgage loan pool	2.5%	2.3%	1.75%
Euro mortgage loan pool	2.0%	1.5%	1.2%

Source: M&G, as at June 2020.

These mortgage loan stresses compare very favourably to, both in the base case and stress cases, for example, the yield (after deducting long-run average losses) on the BofAML GBP 'A' 7-10 year Corporate Bond Index which is currently swaps +1.4% and the Euro 'A' 7-10 year Corporate Bond index which is currently swaps +0.8%.

Figure 6. UK consumer loan returns – spreads to swaps[1]

	Base case	'BB stress' scenario	'BBB stress' scenario
UK consumer loan pool	4.5%	2.9%	-0.2%

Source: M&G, as at June 2020.

These consumer loan stresses again compare favourably to, for example, the yield (after deducting long-run average losses) on the BofAML GBP 'BBB' 1-3 year Corporate Bond Index which is currently swaps +1.6%.

As shown, direct mortgage and consumer loan investments can perform well versus corporate bonds, not only bringing additional diversification to a portfolio and giving significant upside in more benign environments, but also potentially delivering reasonable returns in stress scenarios under which equivalently-rated corporate bonds would be defaulting[3].

Why are these assets particularly attractive for insurers?

For insurers, there are several additional advantages of investing in residential mortgages and consumer loans in terms of regulatory capital requirements and related diversification under the standard formula of Solvency II.

If insurers adjust their portfolios and make even a small allocation to residential mortgages or consumer loans, the potential benefits could be significant for both life and general insurers.

Our analysis shows that an allocation from corporate bonds into **residential mortgages** can lower the overall SCR due to the diversification potential of these assets in the standard formula SCR calculation under Solvency II.

Under the standard formula, the standalone capital requirement for mortgages with certain characteristics is a function solely of its loan-to-value (LTV) ratio[4] – for example, mortgages with an LTV of 60% or lower, the capital requirement is zero, rising to approximately 5.4% for mortgages with an LTV of 100%. The capital requirement of corporate bonds, in comparison, is a function of duration and credit rating. The combination of higher returns and lower capital charges leads to a much higher expected return on capital for mortgage investments than for, for example, investment grade corporate bonds, as is shown in Figure 7.

Figure 7. SCR analysis: UK residential mortgage portfolio capital requirement and return on capital

Investment	Return (spread to swaps, bps)*	Capital requirement (SCR)	Return on capital (ROC)
UK mortgage new origination (75% LTV)	250	2.2%	113.6%
'A' GBP 7-10 year Corporate Bond Index	140	10.4%	13.5%
'BBB' GBP 7-10 year Corporate Bond Index	210	17.8%	11.8%

Source: M&G, as at June 2020. *Headline returns adjusted for expected losses based on historical average.

[1] At the investment level, would be gross of management fees and any fund costs.
[2] 'A stress' is the scenario at which an A bond would default, 'BBB stress' is the scenario at which a BBB bond would default.
[3] M&G internal cashflow stresses.
[4] Subject to the characteristics set out in Article 191 of EU 2015/35.

We have applied the same risk-based capital framework to calculate the SCR and return on capital for Euro-denominated residential mortgage pools – an Irish residential mortgage pool and a Dutch residential mortgage pool (see Figure 8).

Figure 8. SCR analysis: European residential mortgage portfolios capital requirement and return on capital

Investment	Return (spread to swaps, bps)*	Capital requirement (SCR)	Return on capital (ROC)
Dutch mortgage new origination (95% LTV)	150	4.9%	30.7%
Irish mortgage new origination (75% LTV)	250	2.2%	113.6%
'A' EUR 7-10 year Corporate Bond Index	80	10.9%	7.3%
'BBB' EUR 7-10 year Corporate Bond Index	130	19.0%	6.8%

Source: M&G, as at June 2020. *Headline returns adjusted for expected losses based on historical average.

Residential mortgages, unlike investment grade corporate bonds and most other asset classes, sit under the counterparty default risk module under Solvency II standard formula[5]. Adding residential mortgages to an investment portfolio can be a valuable diversifier, not just from a risk perspective but also from an SCR calculation perspective.

Almost all investment assets typically sit in the market risk module (see Figure 9), and the assumed correlation between the other main risk modules is low, ie 25% (with the exception of the correlation between the non-life underwriting risk module and the counterparty default risk module). Therefore, diversifying between risk modules can greatly reduce the overall SCR.

Figure 9: Risk module correlation matrix

Parameters					
$Corr_{ij}$	Market	Default	Life	Health	Non-life
Market	100%	25%	25%	25%	25%
Default	25%	100%	25%	25%	50%
Life	25%	25%	100%	25%	0%
Health	25%	25%	25%	100%	0%
Non-life	25%	50%	0%	0%	100%

Source: EIOPA.

For insurers that have existing allocations to (equity release, commercial) mortgage loans, further diversifying into residential mortgage loans could result in significant additional portfolio-level diversification benefits.

Capital efficiency of allocation to residential mortgages – a worked example

To illustrate, consider a European insurer with an asset mix of 50% government bonds, 30% corporate bonds, 10% equity and 10% property, operating under the standard formula with a desire to improve return on capital while limiting volatility.

We illustrate two potential options:

1. Move 10% of the portfolio from government bonds to corporate bonds
   - This would increase the capital requirements by 14%
   - Increase returns by 1.2%
2. Or move 10% to residential mortgages
   - This would increase the capital requirements by 1%
   - Increase returns by 2%
   - Achieve greater diversification benefits

We estimate the return on incremental capital, including the effect of diversification for an allocation to residential mortgages is >100%.

Source: M&G, February 2020.

For **consumer loans**, in contrast to residential mortgages, the Solvency II SCR is the same as for an unrated corporate bond. As the return on the unsecured personal loan pool is substantially higher, and the capital requirement is at least equivalent to BBB-rated corporate bonds for similar duration assets, the return on capital for unsecured personal loans is potentially much higher than for A and BBB-rated corporate bonds, as is shown in Figure 10.

[5] Subject to the characteristics set out in Article 191 of EU 2015/35.

Figure 10: SCR analysis: UK consumer loan portfolio capital requirement and return on capital

Investment	Return (spread to swaps, bps)*	Capital requirement (SCR)	Return on capital (ROC)
UK unsecured consumer loans new origination	450	5.3%	85.7%
'A' GBP 1-3 year Corporate Bond Index	90	2.7%	33.8%
'BBB' GBP 1-3 year Corporate Bond Index	160	4.8%	33.7%

Source: M&G, as at June 2020. *Headline returns adjusted for expected losses based on historical average.

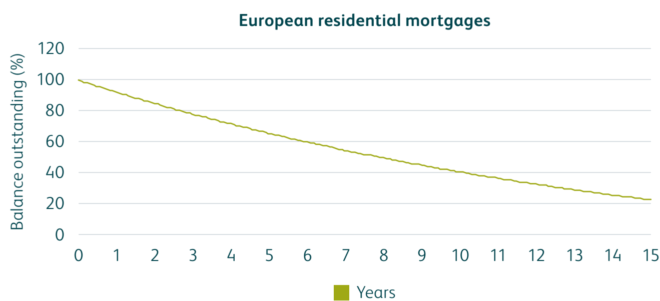
Internal model considerations

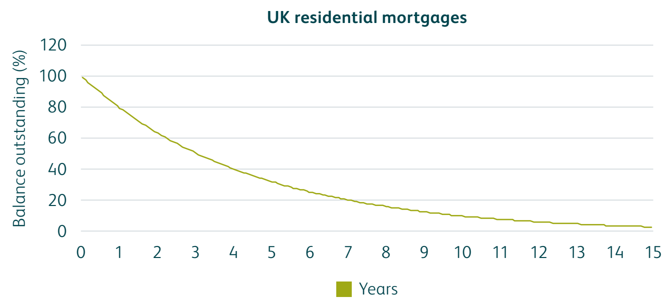
We are happy to work with our insurer clients to provide additional data for the development or adaptation of their internal model and to help work through and understand any modelling considerations.

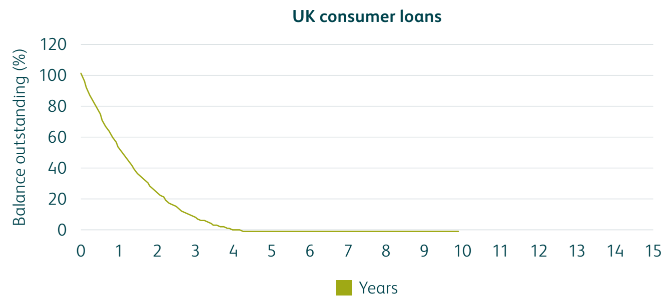
How liquid are residential mortgage and consumer loan pools?

Investing in residential mortgage portfolios and consumer loan portfolios offers investors the opportunity to earn an illiquidity premium relative to corporate bonds for similar duration. It should be noted that although the underlying assets of these pools are generally thought to be illiquid and cannot be sold quickly on an individual basis, the underlying assets tend to self-amortise quite quickly, generating liquidity for the overall investment. Consumer loans, such as credit card receivables or auto loans, are quicker to amortise than residential mortgages, but even then mortgages tend to pre-pay much ahead of their scheduled amortisation profile on average, providing liquidity.

Figure 11. 'Base case' amortisation profiles







Source: M&G, as at June 2020.

Conclusion

To conclude, we believe there is a great opportunity to invest in residential mortgages and consumer loan pools due to relatively high and stable spreads, historically lower volatility and an illiquidity premium versus corporate bonds, and can provide investors with a scalable opportunity to diversify the core portion of the investment portfolio that is relatively unique.

We have been operating in the market and investing in residential mortgages and consumer loan pools for a number of years, and have demonstrated the ability to secure access to opportunities at attractive risk-return levels.

Even a small allocation to this asset class can result in additional diversification benefits and typically higher returns relative to corporate bond holdings without having to significantly compromise on liquidity. Furthermore, for insurance investors, the capital treatment under the standard formula for investing in these assets is extremely favourable, which as a result could drive exceptional return on capital metrics.

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