Bank Of Ireland Group

Underneath the rhetoric, a growth story

Reiterate Rating: BUY | PO: 0.350 EUR | Price: 0.266 EUR

Equity | 27 May 2016

Debate over mortgage pricing limits

A minority coalition government makes for heightened attention to the views of many stakeholders. Both the “Programme for government” and opposition proposals suggest official intervention in the mortgage market. However, we do not see mandatory caps on pricing as likely, with the Central Bank’s reasons not to intervene remaining compelling.

European pricing is a poor comparison

We analyse in this report how comparisons in mortgage pricing with euro area averages are misleading. Ireland has had a severe credit cycle and realising housing collateral has been difficult. As a result, Risk Weights are double euro area averages. Moreover, insufficient profitability in markets including France, Italy, Spain and Germany are driving new banking system financial stability challenges. Pricing limits would likely restrain competition and drive shareholders to demand capital return from the banks

A poorly functioning housing market, gradually better

Housing transactions are low in spite of rising prices and rents; Central Bank macroprudential measures dragged the Dublin mortgage market to a halt in recent months. However, we believe that construction is set to pick up and finance for purchase and rent are gradually improving. We believe the full effect of Central Bank intervention has now been felt. We see BKIR mortgage growth gradually accelerating to 8% by 2020, while continued improvement in arrears drives further recoveries of mortgage provisions. We retain our Buy rating with a slightly lower €0.35 Price Objective

Estimates (Dec)

(EUR)	2014A	2015A	2016E	2017E	2018E
Net Profit (EURm)	608	776	682	871	898
EPS (Reported)	0.02	0.02	0.02	0.03	0.03
Dividend / Share	0	0	0.01	0.01	0.01
Adjusted NAV PS	0.22	0.24	0.24	0.26	0.27

Valuation (Dec)

	2014A	2015A	2016E	2017E	2018E
P/E	14.2	11.1	12.6	9.9	9.6
EPS Change (YoY)	179%	27.6%	-12.1%	27.8%	3.05%
Price / BV	1.15x	1.03x	1.03x	0.97x	0.92x
Price / NAV	1.22x	1.10x	1.09x	1.03x	0.98x
Net Yield	0%	0%	1.98%	4.56%	5.22%
DPS Change (YoY)	NA	NA	NA	130%	14.5%
Price / GOP	6.79x	5.93x	6.99x	6.99x	6.77x

Key Changes

(EUR)	Previous	Current
Price Obj.	0.36	0.35

Alastair Ryan >>
Research Analyst
MLI (UK)
+44 20 7996 4806
alastair.ryan@baml.com

Stock Data

Price	0.266 EUR
Price Objective	0.350 EUR
Date Established	27-May-2016
Investment Opinion	C-1-9
52-Week Range	0.228 EUR-0.394 EUR
Mrkt Val / Shares Out (mn)	8,603 EUR / 32,343.0
Average Daily Value (mn)	35.36 USD
Free Float	86.0%
BofAML Ticker / Exchange	IRLBF / DUB
Bloomberg / Reuters	BKIR ID / BKIR.I
ROE (2016E)	8.1%

>> Employed by a non-US affiliate of MLPF&S and is not registered/qualified as a research analyst under the FINRA rules.

Refer to important disclosures on page 28 to 30. Analyst Certification on page 25. Price Objective Basis/Risk on page 25.

11635558

iQprofile℠ Bank Of Ireland Group

Key Income Statement Data (Dec)	2014A	2015A	2016E	2017E	2018E
(EUR Millions)	IFRS	IFRS	IFRS	IFRS	IFRS
Net Interest Income	**2,268**	**2,361**	**2,365**	**2,453**	**2,511**
Net Fee Income	0	0	0	0	0
Securities Gains / (Losses)	NA	NA	NA	NA	NA
Other Income	704	911	747	693	713
Total Non-Interest Income	**704**	**911**	**747**	**693**	**713**
Total Operating Income	**2,972**	**3,272**	**3,111**	**3,146**	**3,224**
Operating Expenses	(1,705)	(1,821)	(1,880)	(1,915)	(1,954)
Pre-Provision Profit	**1,267**	**1,451**	**1,231**	**1,231**	**1,270**
Provisions Expense	(472)	(296)	(195)	(202)	(211)
Operating Profit	**795**	**1,155**	**1,036**	**1,028**	**1,059**
Non-Operating Items	88.0	46.0	51.2	66.3	66.3
Pre-Tax Income	**883**	**1,201**	**1,087**	**1,095**	**1,126**
Net Income to sh/holders	608	776	682	871	898
Adjusted Cash Earnings	**608**	**776**	**682**	**871**	**898**
Key Balance Sheet Data					
Total Assets	129,800	130,960	130,223	133,200	136,338
Average Interest Earning Assets	111,991	108,991	109,229	110,681	113,186
Weighted Risk Assets	**51,600**	**53,200**	**50,615**	**51,986**	**54,086**
Total Gross Customer Loans	89,541	91,008	89,615	92,033	94,898
Total Customer Deposits	74,837	80,164	82,389	84,876	87,456
Tier 1 Capital	**7,711**	**6,751**	**7,673**	**8,599**	**9,552**
Tangible Equity	7,453	8,373	8,384	8,864	9,312
Common Shareholders' Equity	**7,453**	**8,373**	**8,384**	**8,864**	**9,312**
Key Metrics					
Net Interest Margin	2.08%	2.17%	2.16%	2.19%	2.19%
Tier 1 Ratio	**14.9%**	**12.7%**	**15.2%**	**16.5%**	**17.7%**
Core Tier 1 Ratio	14.8%	13.3%	13.9%	14.2%	14.4%
Basel 3 "fully phased in" Tier 1 Ratio	11.9%	11.3%	12.5%	13.4%	14.0%
Effective Tax Rate	15.2%	23.7%	15.2%	15.4%	15.3%
Loan / Assets Ratio	**63.3%**	**64.7%**	**64.9%**	**66.0%**	**67.1%**
Loan / Deposit Ratio	110%	106%	103%	104%	105%
Oper Leverage (Inc Growth - Cost Growth)	4.48%	3.29%	-8.16%	-0.75%	0.46%
Gearing (Assets / Equity)	17.4x	15.6x	15.5x	15.0x	14.6x
Tangible Equity / Assets	5.74%	6.39%	6.44%	6.65%	6.83%
Tangible Equity / WRAs	14.4%	15.7%	16.6%	17.1%	17.2%
Business Performance					
Revenue Growth	12.3%	10.1%	-4.91%	1.11%	2.49%
Operating Expense Growth	7.84%	6.80%	3.25%	1.86%	2.03%
Provisions Expense Growth	-71.7%	-37.3%	-34.1%	3.71%	4.04%
Operating Revenue / Average Assets	0.61%	0.89%	0.79%	0.78%	0.79%
Operating Expenses / Average Assets	-1.30%	-1.40%	-1.44%	-1.45%	-1.45%
Pre-Provision ROA	**0.97%**	**1.11%**	**0.94%**	**0.93%**	**0.94%**
ROA	0.46%	0.60%	0.52%	0.66%	0.67%
Pre-Provision ROE	**18.1%**	**18.3%**	**14.7%**	**14.3%**	**14.0%**
ROE	8.67%	9.81%	8.14%	10.1%	9.88%
RoTE	9.18%	10.4%	8.69%	10.8%	10.5%
RoWRAs	1.14%	1.48%	1.31%	1.70%	1.69%
Dividend Payout Ratio	0%	0%	25.0%	45.0%	50.0%
Efficiency Ratio (Cost / Income Ratio)	**57.4%**	**55.7%**	**60.4%**	**60.9%**	**60.6%**
Quality of Earnings					
Total Non-Interest Inc / Operating Inc	**23.7%**	**27.8%**	**24.0%**	**22.0%**	**22.1%**
Market-Related Revenue / Total Revenues	0%	0%	0%	0%	0%
Provisioning Burden as % of PPP	37.3%	20.4%	15.9%	16.4%	16.6%
NPLs plus Foreclosed Real Estate / Loans	19.3%	14.1%	11.6%	8.95%	6.96%
Loan Loss Reserves / NPLs	**47.0%**	**52.8%**	**51.8%**	**51.7%**	**53.0%**
Loan Loss Reserves / Total Loans	9.04%	7.46%	5.99%	4.62%	3.69%
Provisions Expense / Average Loans	**0.57%**	**0.35%**	**0.23%**	**0.23%**	**0.23%**

Company Sector

Banks-Retail

Company Description

Bank of Ireland is one of the largest banks in the Republic of Ireland and Northern Ireland with a network of nearly 290 branches in these countries, along with telephone banking and online services. In the UK, the company operates a "challenger" consumer banking franchise with distribution provided via a partnership with the Post Office.

Investment Rationale

BOI is a universal bank operating mostly in the UK and Ireland. The company is in our view a classic banking recovery story. Through the severe Irish downturn, the bank comprehensively scrubbed its loan portfolio, strengthened its funding structure and stripped out costs. Unlike peers in Spain and Italy, many of which still face extended credit challenges and a need to put funding on a firm footing, we see BKIR offering both revenue and credit leverage into an increasingly robust Irish recovery.

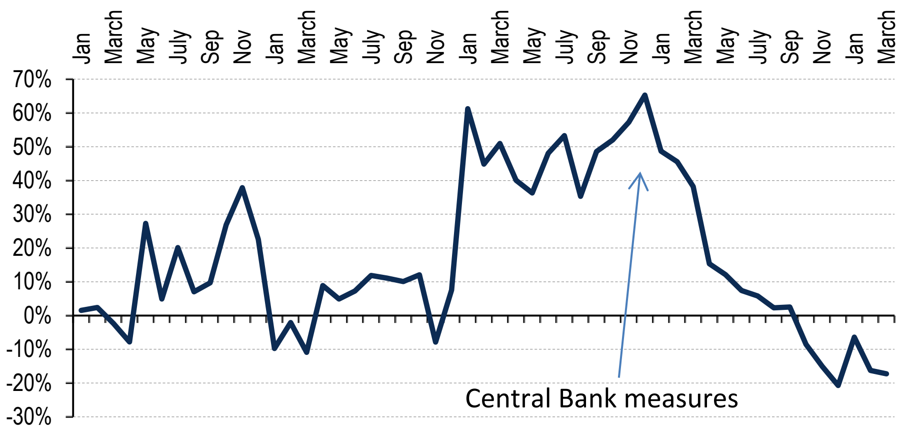
Stock Data

Price to Book Value	1.0x

A growth story, underneath it all

Ireland's property market has been one of the most volatile asset markets in Europe in recent years, in both volume and pricing. Most recently, mortgage approvals have turned sharply negative, from having been rapidly growing in late 2014 – shown in Chart 1.

Chart 1: monthly mortgage approvals, number, % change y/y

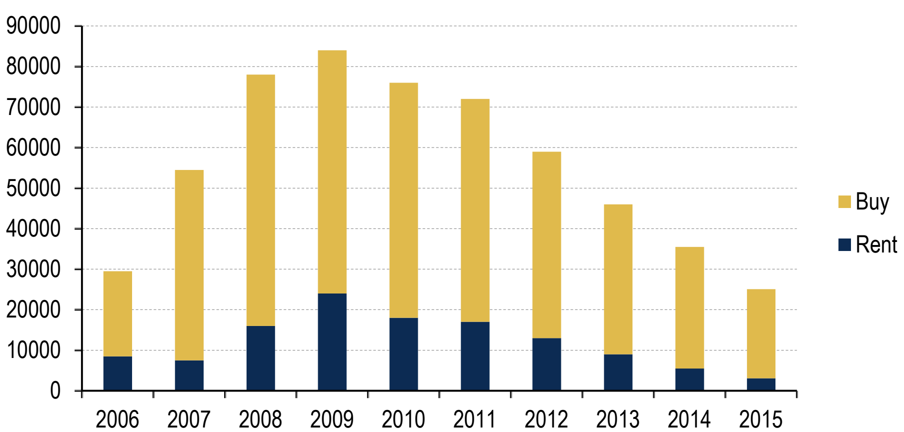


Source: BPFI

There are several drivers to the slowdown. The single biggest was the introduction of macroprudential measures by the Central Bank, which we discuss in depth later in this report. In contrast with other markets such as Sweden, Switzerland and the UK where macroprudential interventions have had little effect, we believe those in Ireland were highly impactful – perhaps more than the authorities had expected. A review is presently underway, with the Central Bank reporting back by November on whether the measures have been proportionate. We do not believe near-term change is likely.

But there are structural contributors as well. Chart 2 shows that the availability of housing has declined sharply, both for rental and purchase.

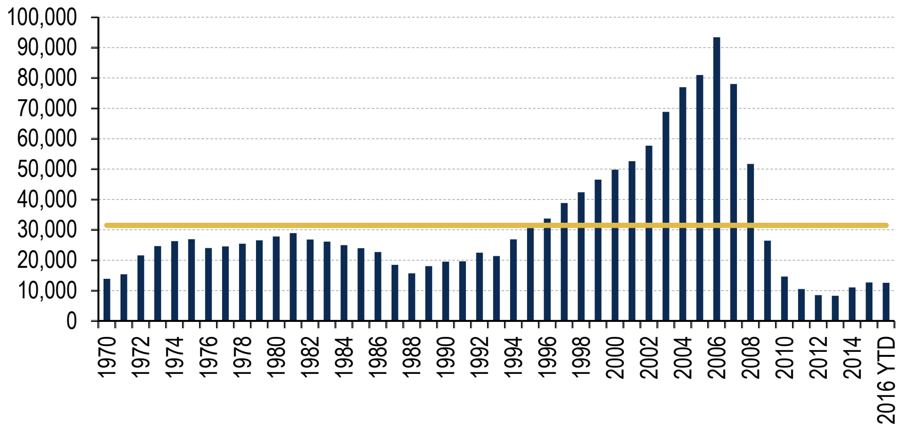
Chart 2: homes listed on daft.ie



Source: daft.ie

Chart 3 shows that construction is not yet filling the gap. The recovery from the housing bust has been anaemic.

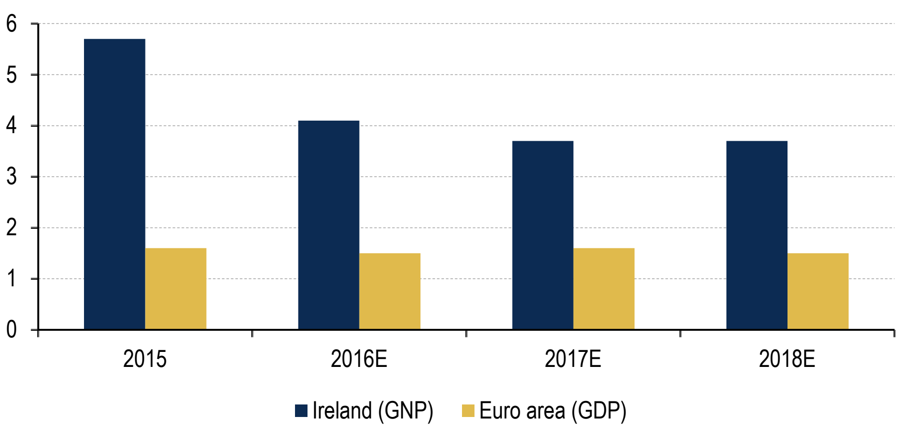
Chart 3: housing completions since 1970



Source: Department of the Environment, Community and Local Government

New supply lags household formation of 25,000 per annum significantly. There are signs of an acceleration in applications for new build and the market for development land in and around Dublin has been active. The recovery in construction has significantly lagged strong economic growth (Chart 4) and also the growth in employment, which is growing close to 3% per annum. We believe that upward pricing pressure on home prices and rentals is currently substantial.

Chart 4: Irish growth and euro area (%)



Source: Finance Ministry, Bloomberg

Political debates have ranged widely

We discuss recent policy proposals in this report. As in other markets, we believe that interventions that limit banks' ability to price credit according to their judgements could reduce credit availability, as investors would reasonably seek capital return instead of reinvestment by the banks. Competition from foreign-owned players such as KBC and RBS could be discouraged. We also look at pricing and see no evidence that spreads are unusually high, adjusted for what is both high capital consumption and high loan-to-value back books. Finally, comparisons with other euro area countries are not especially useful: we lay out in Fragmentation and glue 12 May 2016 how many euro area banking systems are challenged by their inadequate profitability.

Buy re-iterated

We believe that underneath the noise, BKIR is positioned to maintain its margins, with the key drag negative ECB rates and the impact of the corporate bond purchase programme on larger company revenues.

Back to loan growth

Against this, we see the potential for significant growth in lending over the next several years: mean reversion would suggest mortgage lending accelerates to 8% over time. we forecast BKIR can deliver 4% net loan growth per annum while continuing to rapidly run down its problem assets and enjoy very low net impairments..

An 11% ROE and 50% payout

We believe the group can deliver an 11% sustainable ROE and grow income and earnings around 4% pa which paying dividends of 50% annually and potentially making additional capital distributions. This makes it unusual in a European bank context, where many banks fail to cover their cost of capital: the system's 4% ROE is falling. As such, while we have shaved €0.01 off our Price Objective to reflect heightened political risk, we see substantial potential upside in the stock. We retain our Buy rating

The "Programme for a partnership government"

Ireland has a minority government formed on 6 May 2016, which is itself a coalition. The government was formed on the basis of a "Programme for a partnership government" which is a lengthy document including many aspirations. The ability to form the minority government also relied on reaching agreement of how parliament will function with the leading non-government party.

This has led to a complex situation in which the proposals of the major government party; or other members of the coalition; or the leading non-government party; or indeed other parties in the parliament the above may turn into legislation.

In the Programme, both housing and banks were policy aims. Two key statements regarding housing were:

> Our ambitious policy agenda will deal with the shortage of new homes and increase housing construction to create a functioning housing market
>
> We also want to keep families in their homes and avoid repossessions, where possible. To achieve this we will strengthen the existing mortgage arrears framework in a number of significant ways

The latter statement has been interpreted in the media (Irish Independent, Irish Times) as potentially involving the creation of special courts for repossessions. As we discuss in this report, these have been very slow in Ireland, but the concern has been created that a change in the way the courts work could further slow the process.

Further down the programme, the banks feature. The first relevant comment could be regarded as potentially positive for the mortgage market: such a scheme has been successful in the UK:

> Difficulties faced by first time buyers in accessing mortgage finance have placed increased pressure on the rental market and may be hampering the recovery of the residential construction sector. The new Government will work with the Central Bank, as part of its review of its mortgage lending limits, to develop a new "Help to Buy" scheme to ensure availability of adequate, affordable mortgage finance or mortgage insurance for first time buyers as new housing output comes on-stream

However, the second comment was, we believe, a catalyst for the fall in Irish bank shares which followed the formation of the government:

> It is not ethically acceptable for Irish banks to charge excessive interest rates on standard variable rate customers. We will take all necessary action to tackle high variable interest rates
>
> We will also request the Competition and Consumer Protection Commission to work with the Central Bank to set out the options for the Government in terms of market structure, legislation and regulation to lower the cost of secured mortgage lending and improve the degree of competition and consumer protection.

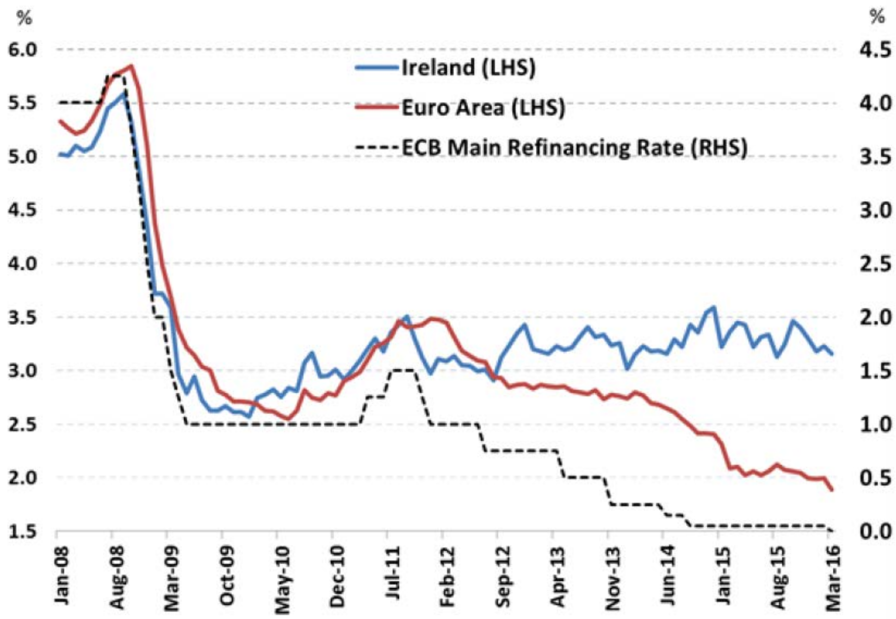
The opposition has also proposed legislation

The largest non-government party has also proposed legislation to change the banking market. The proposal is to give the Central Bank powers to cap mortgage rates. Because the government coalition is a minority and based on the discussions held by the major parties prior to the formation of the government, there is a possibility for non-government legislation to pass into law and the proposal has passed to a second reading, likely to be held in the Autumn.

Perceived risk to commercial pricing raised

As a result, perceived risk to banks' ability to price commercially has risen significantly, driving down share prices. However, we believe that this should not translate into actual limits and turn to why: we do not see Irish loan pricing as outside commercial terms. There are multiple drivers of why rates are higher than in some other euro area countries (Exhibit 1).

Exhibit 1: interest rates on new floating rate loans for house purchase (%)



Source: Central Bank

Key reasons include

1. Ireland has a significantly worse arrears experience in mortgages than other euro area countries

2. The ability to repossess collateral in housing has been very limited in Ireland. in effect, loss-given-default (LGD) has proven higher than almost anywhere else in Europe

3. The backbook of Irish mortgages is at a significantly higher Loan to Value than other countries. This makes it more risky and leaves it consuming more capital

4. Irish mortgages attract significantly higher Risk Weights than those in other countries. To achieve reasonable capital returns, this demands the banks charge higher spreads

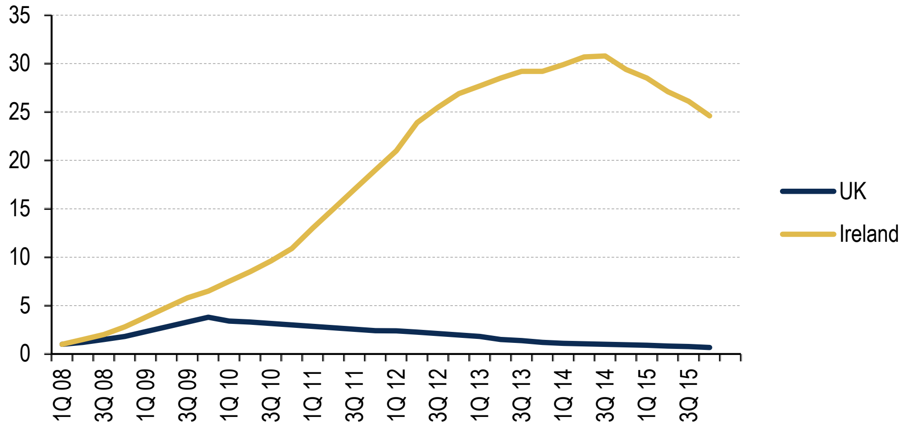
5. Irish banks remain lower-rated than European peers. This raises their cost of funding and limits their access to counterparty funding and wholesale deposits

Taking these in turn:

1. Loss experience

Chart 5 compares 90 day plus arrears on Buy to Let loans in the UK and Ireland since the beginning of the financial crisis. They are very, very different. Irish arrears peaked at a level nine times higher than the UK. More significantly, they have lingered for years longer.

Chart 5: Buy to Let arrears (%) outstanding



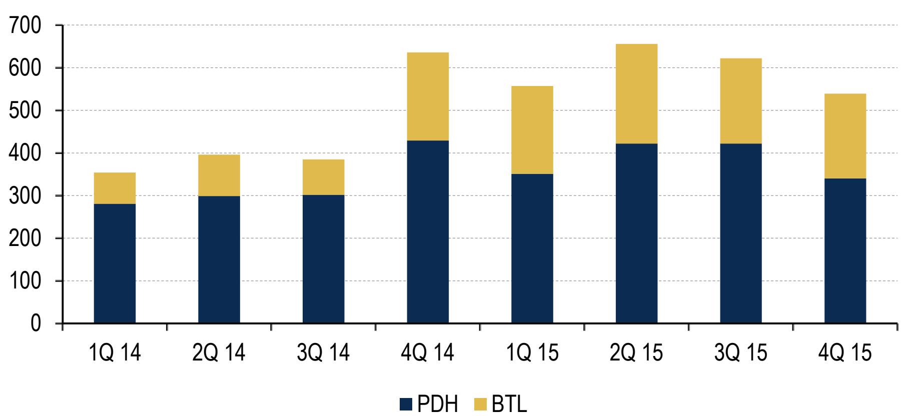
Source: Paragon, Central Bank, Bank of England

It is unusually difficult in Ireland to foreclose on residential property. Banks were slow to put in place the ability to deal with the unexpected spike in problem assets over 2009-12 but in more recent years, the very slow and rather unpredictable court process has dominated. Repossessions and surrenders have remained at low levels, shown in Chart 6. In 2015, less than 4% of BTL properties over 180 days in arrears were repossessed or surrendered; the figure was 2.5% for primary residences.

More like Italy

We estimate the average time to repossess a residential property once foreclosure proceedings have begun is 3-4 years, and that for a Buy to Let property 5 years or more. This contrasts with a few months in the UK and is comparable with the situation in Italy – where the government is currently bringing legislation to seek to accelerate the process.

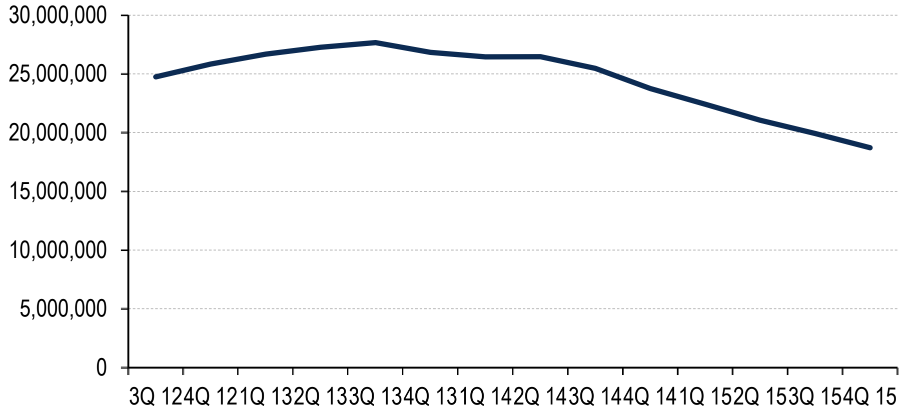
Chart 6: repossessions are very low relative to defaulted assets (number, quarterly)



Source: Central Bank

The banks are working through the stack of bad debt at pace now (Chart 7) and particularly within the regulated banking sector (Table 1). However, the exceptional length of time taken to work through problem loans and the difficulty in using repossession as a tool raises the cost of loan impairment materially. This must be reflected in the pricing of loans, we believe.

Chart 7: Irish mortgage balances >90 days in arrears (€ mn)



Source: BofA Merrill Lynch Global Research estimates, Central Bank

Table 1: mortgages % >90d in arrears

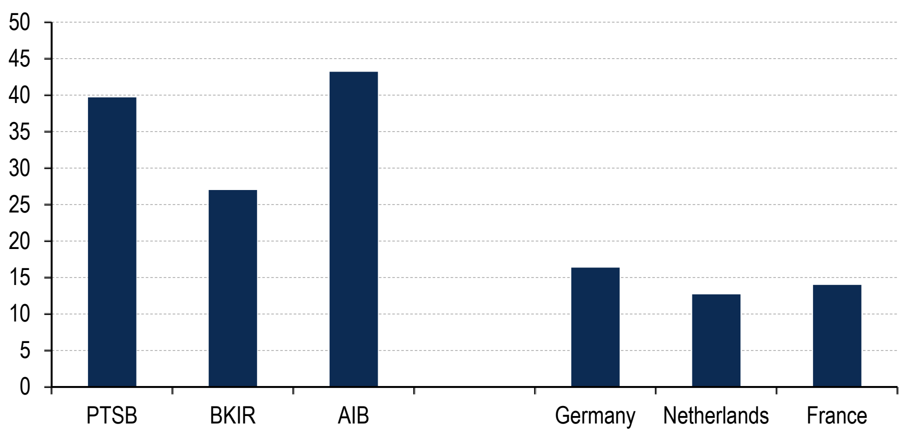
All mortgages	15%
Non-bank	54%
Bank	12%

Source: BofA Merrill Lynch Global Research estimates, Central Bank

2. A higher capital requirement for mortgage lending

Risk Weights are strongly influenced by historical loss levels and the loan to value of the loans being made. As a result, Irish mortgage Risk Weights are double those in other countries, shown in Chart 8. This in itself demands a significantly higher spread on loans to meet reasonable investor expectations for a return on capital: twice the risk weight means the bank needs twice the profit to generate the same return.

Chart 8: mortgage Risk Weights: Irish banks and other euro area countries (2015)

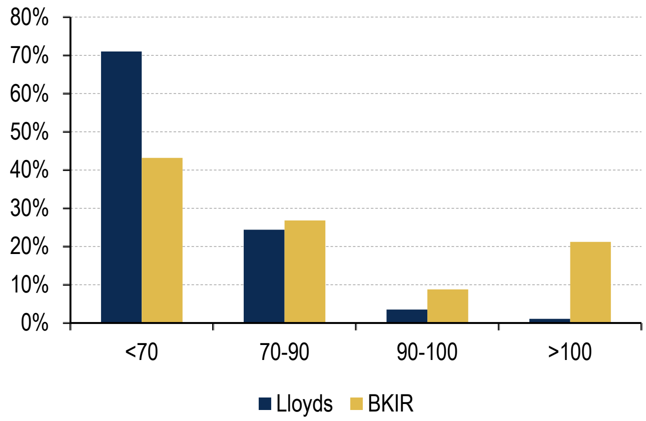


Source: BofA Merrill Lynch Global Research estimates, companies. Germany: Deutsche Bank. Netherlands: ABN Amro. France: BNP Paribas

3. Higher LTV loans are six times as high in Ireland

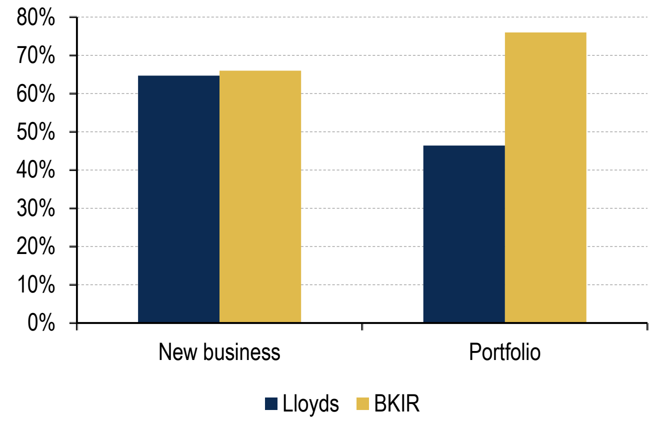
Risk Weights are driven by models. But the models do represent real risk, in our view. And Irish Loan to values are high: Chart 9 compares the mortgage portfolios of the leading UK and Irish banks. The difference is striking: Lloyds in the UK has only 5% of its book at above a 90% LTV. Bank of Ireland's book, which is better than the average Irish book, has six times as much high LTV loans, at 30%.

Chart 9: mortgage book Loan to Value (%): Lloyds in the UK, BKIR in Ireland



Source: BofA Merrill Lynch Global Research estimates, company report

Chart 10: Irish backbook LTV is materially higher than that in the UK, implying significantly higher capital needs (%)



Source: BofA Merrill Lynch Global Research estimates, company report

4. Irish banks have lower ratings

Table 2 shows that the Irish banks are lower-rated than leading mortgage lenders in other euro area countries. This limits their access to unsecured finance and raises the cost of debt for them.

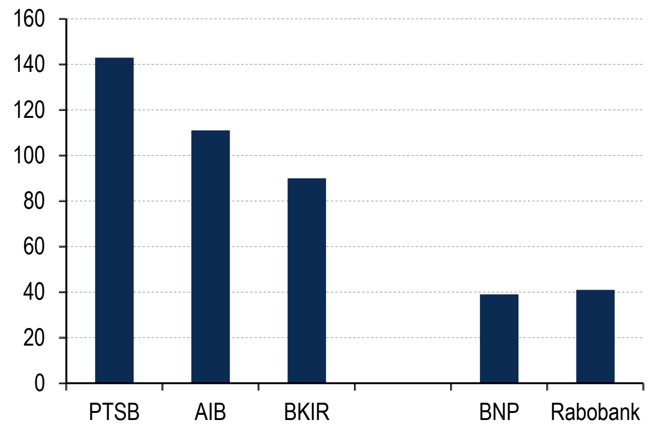
Table 2: Ratings of leading mortgage lenders

	S&P	Moody's	Fitch
BKIR	BBB-	Baa2	BBB-
AIB	BB+	Baa3	BB+
PTSB	Not rated	Not rated	Not rated
BNP Paribas	A	A1	A+
Santander	A-	A3	A-
Sparkasse Hamburg	Not rated	Not rated	A+
Nordea Finland	AA-	Aa3	AA-
Rabobank	A+	Aa2	AA-

Source: Bloomberg

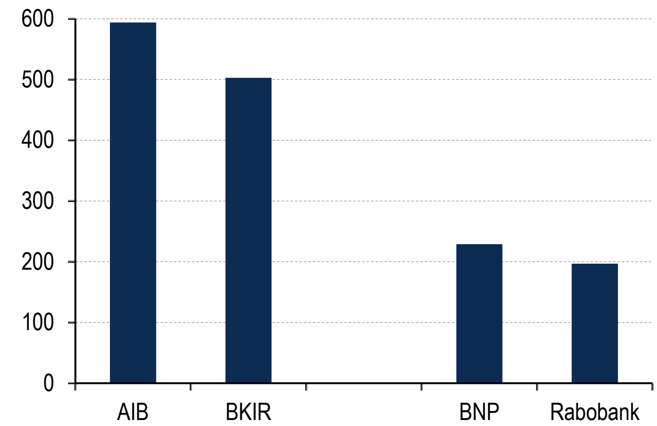
Marginal costs of funding have fallen sharply for the banks, but legacy costs such as those of subordinated debt raised in prior years remain onerous. And the cost of new debt remains outside of that for competitors.

Chart 11: senior debt spreads (bp)



Source: BofA Merrill Lynch Global Research estimates

Chart 12: Tier 2 spreads (bp)



Source: BofA Merrill Lynch Global Research estimates. PTSB does not have Tier 2 outstanding

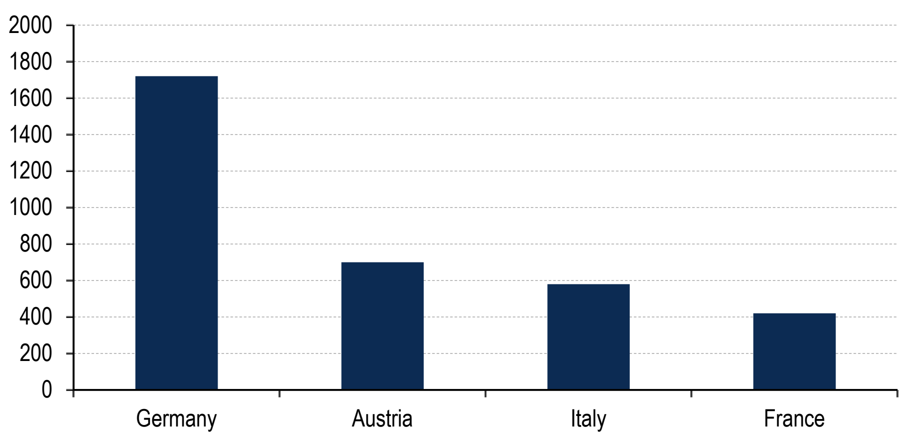
5. Euro area banks make an inadequate ROE

Essentially, there are multiple drivers to why Irish loans should be higher than those in the euro area. The last we list is from a recent speech by the chair of the bank supervisor, the Single Supervisory Mechanism:

> Looking at the large banks in the euro area… The average return on equity rose from 2.8% in 2014 to 4.5% in 2015… However, while profitability improved last year, it did so from a very low level. Moreover, the observed increase in profits was partly driven by non-recurring revenues

A reasonable "favourable case" for the system's Cost of Equity is 10%. Thus in what the supervisor sees as having been a good year, the system made only half the return that it needs. We have discussed in European Banks Strategy: Fragmentation and glue 12 May 2016 and European Banks Strategy: Boxed in 22 March 2016 how the result is set to be continued restructuring, shrinkage and instability. The problems of other over-competitive markets such as Germany, with 1,700 banks or Italy with almost 600 are in our view the sort of outcome to be avoided, not benchmarked.

Chart 13: MFI credit institutions (number)



Source: ECB

Central Bank has also laid out why not

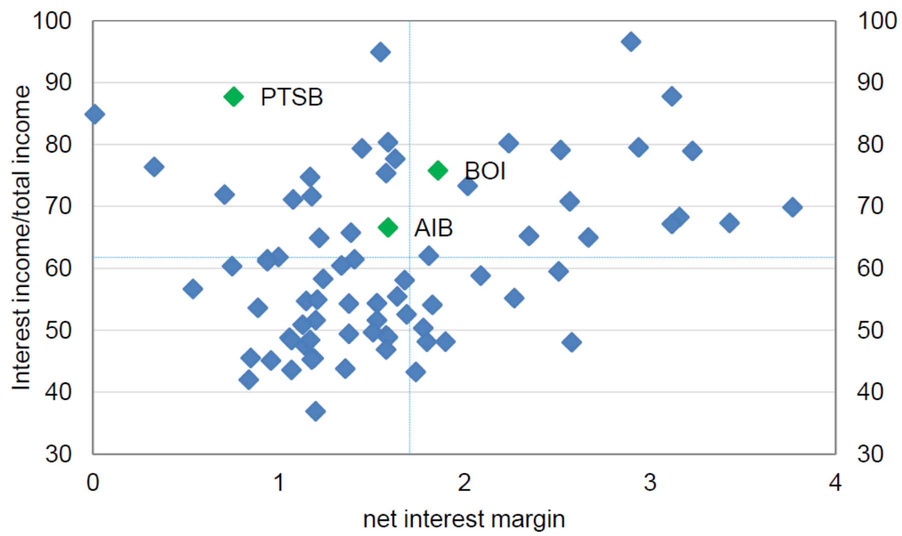
There has been significant *political* debate over whether the state should cap mortgage pricing, front or backbook. However, the Central Bank was very clear a year ago on its view. In its publication, "Influences on Standard Variable Mortgage Pricing in Ireland" from May 2015, the Central bank stated that

Three factors are important determinants of this margin. First, the pricing of loans needs to reflect credit risks. In Ireland these risks are elevated due to high levels of non-performing loans and the lengthy and uncertain process around collateral recovery. Second, competition is weak. This is not unrelated to credit risks since high credit risk deters new players from entering the market. Third, bank profitability is still constrained by legacy issues. Profitability is essential to ensure banks build up adequate capital buffers to meet increasing regulatory requirements and to withstand future adverse shocks.

Any policy aimed to address the level of SVR rates must take these factors into account if it is to be effective and constructive. Hasty policy measures to administratively determine interest rates would be likely to have damaging side-effects. By discouraging entry, innovation and competition, such measures could result in higher spreads and higher exchequer costs over the longer term.

The Central bank also noted that while SVR rates are relatively high, overall margins for the Irish banks are not – shown in Exhibit 2.

Exhibit 2: share of Net Interest Income and average NIM, European banks



Source: Central Bank

We believe the market is discounting significant risk of these policies structurally impairing the banks' earnings and growth potential. We believe the details of why it would not work and the Central Bank's reluctance will prove the more powerful argument.

As a result, while we have reduced our PO for Bank of Ireland modestly to reflect heighted political risk, we are not changing our earnings forecasts. We now turn to focus on what has ailed the banks beyond the political discussion.

Bank of America Merrill Lynch

A shock to demand

In 2015, the Central Bank introduced several restrictions on new mortgage lending, limiting both higher loan to value and higher loan to income ratios. The rules were onerous:

Loan to Value (LTV) for principal dwelling houses (PDH)

- PDH mortgages for non-first time buyers are subject to a limit of 80 per cent LTV.
- For first time buyers of properties valued up to €220,000, a maximum LTV of 90 per cent will apply. For first time buyers of properties over €220,000 a 90 per cent limit will apply on the first €220,000 value of a property and an 80 per cent limit will apply on any excess value over this amount.
- The cumulative monetary value of loans for principal dwelling purposes which breach either of these limits should not exceed 15 per cent of the euro value of all PDH loans on an annual basis.

Loan to Income (LTI) for PDH mortgages

- PDH mortgage loans are subject to a limit of 3.5 times loan to gross income.
- This limit should not be exceeded by more than 20 per cent of the euro value of all housing loans for PDH purposes during an annual period.

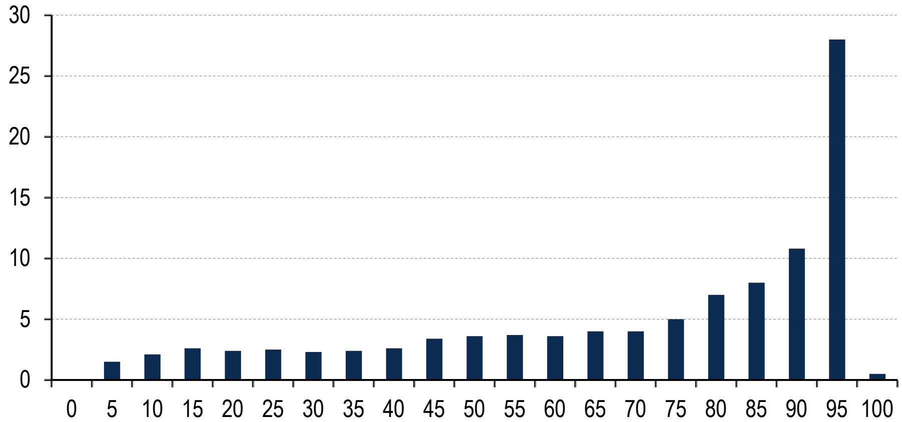
A number of countries have introduced macroprudential constraints on banks, including the Netherlands, Sweden, Switzerland and the UK. Of these markets, the UK is the most comparable in the way that mortgages are structured. It is important in this light to compare the Irish rules with those introduced around the same time by the Bank of England for the UK:

- Mortgage lenders [should] not extend more than 15% of their total number of new residential mortgages at loan to income ratios at or greater than 4.5.
- When assessing affordability, mortgage lenders should apply an interest rate stress test that assesses whether borrowers could still afford their mortgages if, at any point over the first five years of the loan, Bank Rate were to be 3 percentage points higher than the prevailing rate at origination.

Irish rules have bitten hard

The Irish rules have bitten particularly hard, because of the skew of borrowing to higher LTV and higher LTI loans: Chart 14 shows that in the period immediately around the Central Bank restrictions, the typical LTV of borrowing was well above the 80% limit.

Chart 14: new lending by Loan to Value (%), December 2014 to June 2015



Source: Central Bank

Table 3 shows that this means that a very high proportion of loans are affected by the central bank LTV limits.

Table 3: Originating LTV distribution of Irish mortgages, early 2015

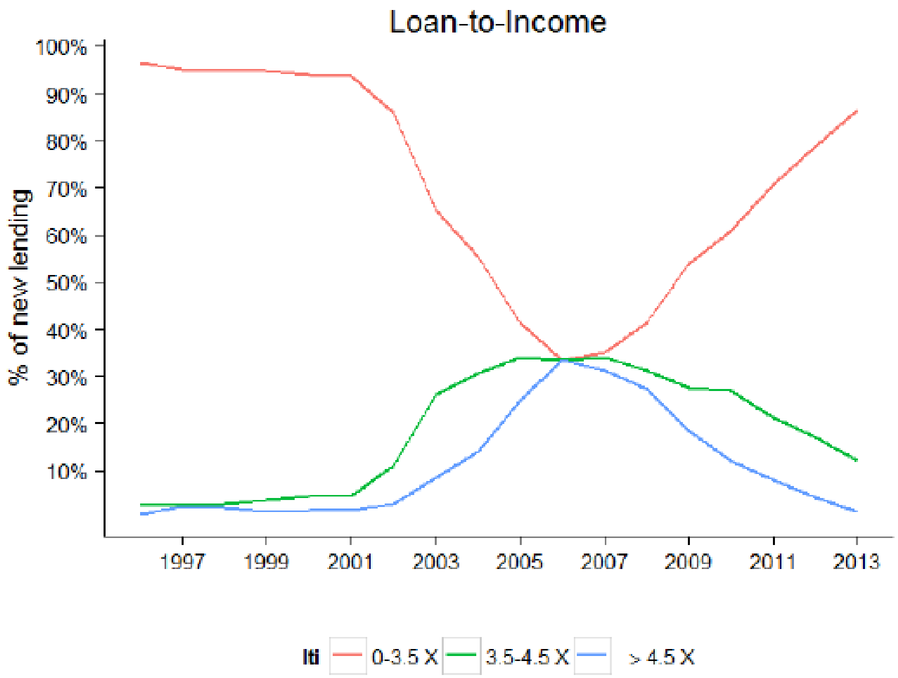
60th percentile	85
70th percentile	90
80th percentile	90
90th percentile	92

Source: Central Bank

Similarly, the loan to income limits have impacted the ability of consumers to borrow. In the UK less than 15% of loans were being made at a LTI of 4.5x or above when the Bank of England introduced its limits of no more than 15% of loans being made at 4.5x LTI or above. By design therefore, the market felt almost no short term effect: the BOE was focused on maintaining underwriting standards around their current levels in future periods rather than seeking to impact the market today.

In Ireland, the LTI limit was set at a substantially lower 3.5x. Exhibit 3 shows that this was a level which would not have bound the market in 2013, but that 2013 was a significant outlier in the previous decade.

Exhibit 3: loan to income distribution, new lending in Ireland



Source: Central Bank

With the average Irish salary at €35,000, the 3.5x multiple leaves most of the capital outside the limit: Dublin home prices average €260,000.

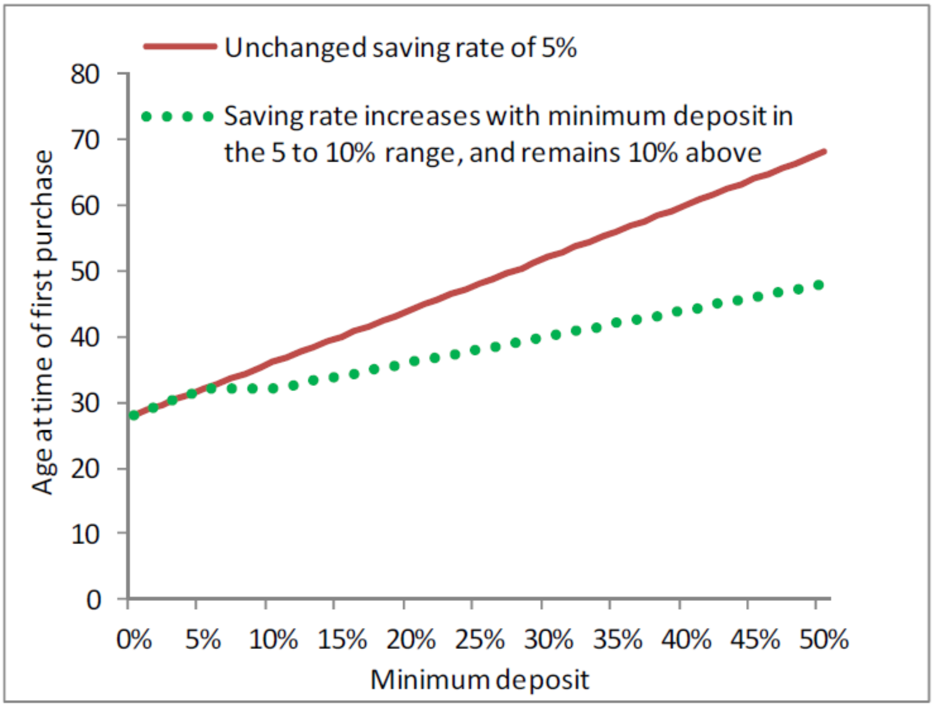
There is of course the 20% of loans that can be made at above this level but in practice there is relatively little demand for lower-LTV borrowing in Ireland. This reflects the low level of housing equity most existing borrowers have, as house prices are still well below their peak levels. And as shown in Chart 24, most lending took place when house prices were high. Therefore, unlike in markets such as the UK where second-time buyers have built up significant equity in their homes with which to place the deposit, few Irish households are in the same situation. So in effect the "20%" is limited by the lack of demand for the "80%". A form of credit rationing was in effect introduced.

Four more years

From a 2011 speech by then-MPC member David Miles of the Bank of England, regarding the shock to the UK of a rise in required deposits

> Suppose prospective homeowners typically start saving for the deposit on their first property when they are 28 years old, that they save 5% of their annual income and that the average price of properties bought by first time buyers is four times their annual income at the point they buy. Then it takes four years for prospective buyers to accumulate a deposit of 5% of the average house price. In this example, the average age of first time buyers is 32 years... Now think what happens when banks require a deposit of 20%. Assuming no change in saving behaviour, it takes four times as long to save the deposit (16 years).
>
> ...It is more likely that those wishing to buy try to save more. The dotted line in [] shows what would happen to the age at which people buy if they increase their saving rate from 5% as the required deposit The dotted line shows what happens if having doubled the saving rate potential home-owners cannot save any more. This would mean that it takes eight years for the average first-time buyer to save 20% deposit and so the average age at the time of first purchase is 36 years.

Exhibit 4: impact of higher required deposits on age of first time buyer



Source: Bank of England

Review underway, change unlikely

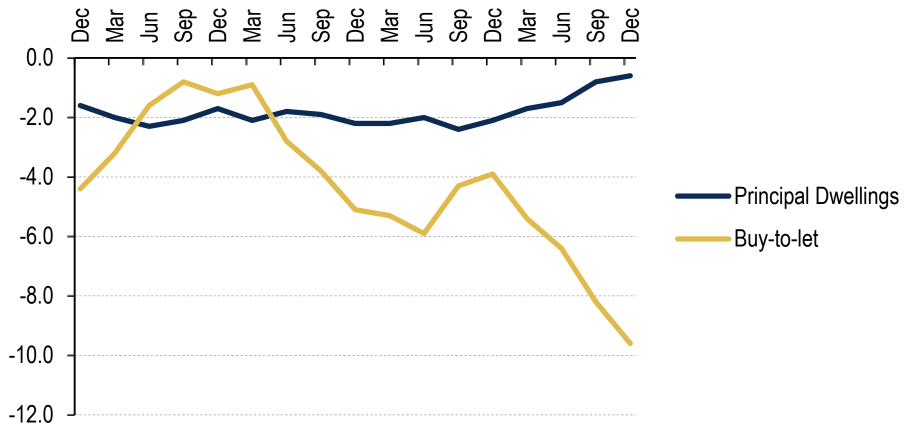
Without an easing of the macroprudential constraints, the same is likely to apply in Ireland, in our view. The Central Bank is undertaking a review of its macroprudential measures with the result to be announced in November. We do not expect any material changes as the policies were characterised as focused on long-term affordability rather than the impact on the market in the near term. Any loosening would however likely rapidly translate into higher levels of lending.

What we believe to be the case is that the full impact of the measures has now hit the market, with the 14% y/y decline in mortgage originations in 1Q 16 the weakest annual progression. The focus should now shift in our view to the improvement in incomes and employment driving more potential borrowers into the more-conservative LTV and LTI buckets.

Capital flowing into the rental sector has been low

The difficulty in realising collateral has had a particularly profound impact on the Buy to let market in Ireland. The product just doesn't work for banks without a smooth and rapid ability to foreclose. As a result, the market is essentially closed now and Chart 15 shows, balances outstanding are declining rapidly. This has rather masked the gradual improvement in y/y comparisons in the owner occupier market.

Chart 15: y/y growth in balances outstanding (€ mn)



Source: Central Bank, BofA Merrill Lynch Global Research estimates

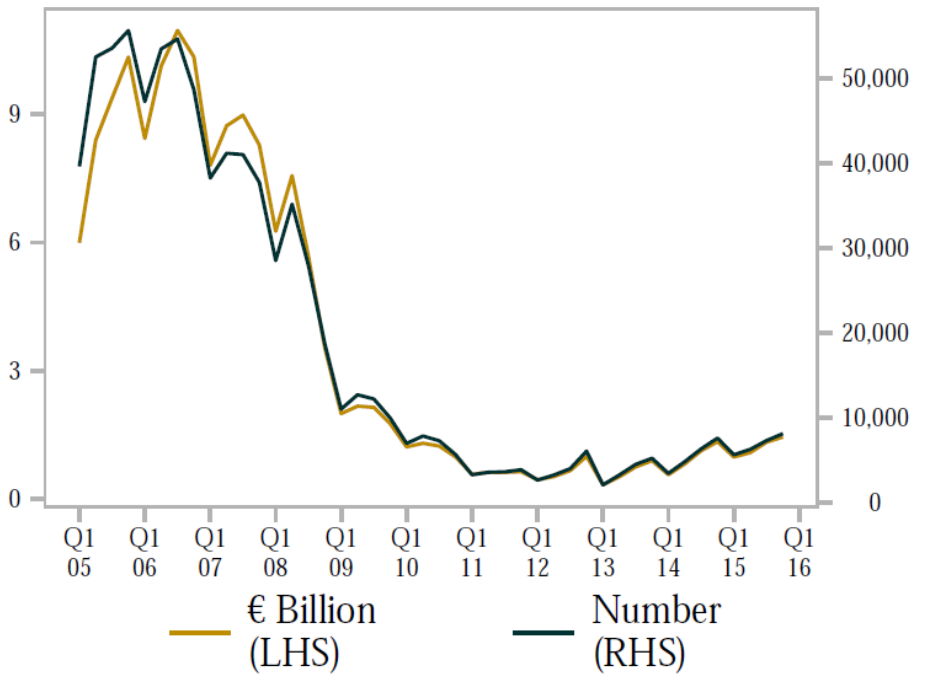
Downside risk: lack of housing limits GDP prospects

There is the potential for the housing shortage to hit Irish GDP growth. However, our assumption is that market forces will prevail and that a combination of rising prices, strong rental returns and rising wages will create greater supply and unfreeze those homes still in negative equity. We now turn to how Bank of Ireland should be positive geared into these improved conditions.

Housing: still close to a low

The lack of available housing and the lack of finance have left borrowing close to its crisis low. Exhibit 5 shows how limited the recovery in mortgage lending has been so far.

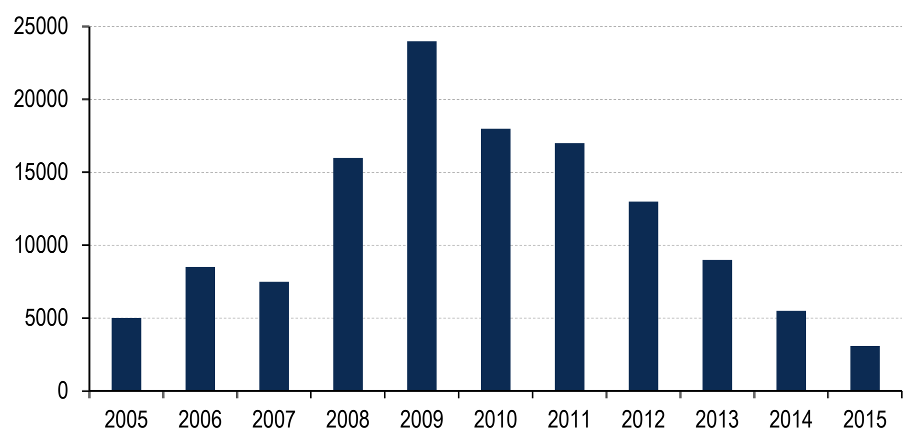
Exhibit 5: new mortgage lending 1Q 05 – 4Q 15



Source: Central Bank

The rental market has taken some of the strain. However, Ireland has now historically low levels of properties to rent, shown in Chart 16.

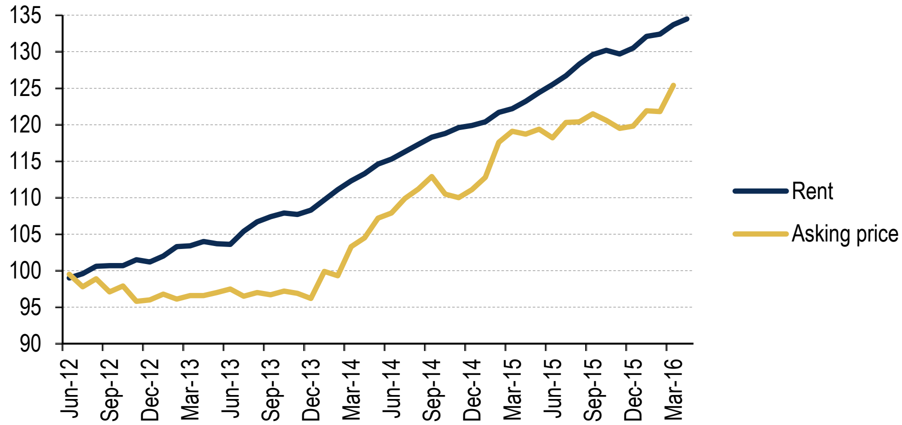
Chart 16: rental properties available in Ireland



Source: daft.ie

Rental growth is strong, shown in Chart 17 and is ahead of the rise in home prices.

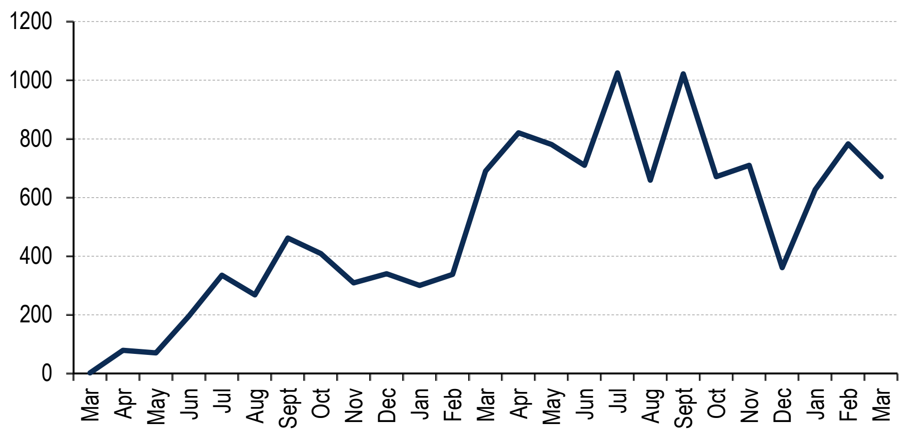
Chart 17: Rents and asking price for houses for sale (index)



Source: daft.ie

The rises in prices and rents have not yet resulted in a more-liquid market or significantly increased supply. But we believe recent buoyant sales of development land, for example the purchase of a €500m portfolio from Ulster Bank by Cairn Homes, with a target of building up to 1,200 homes per annum.

Chart 18: Housing starts, monthly



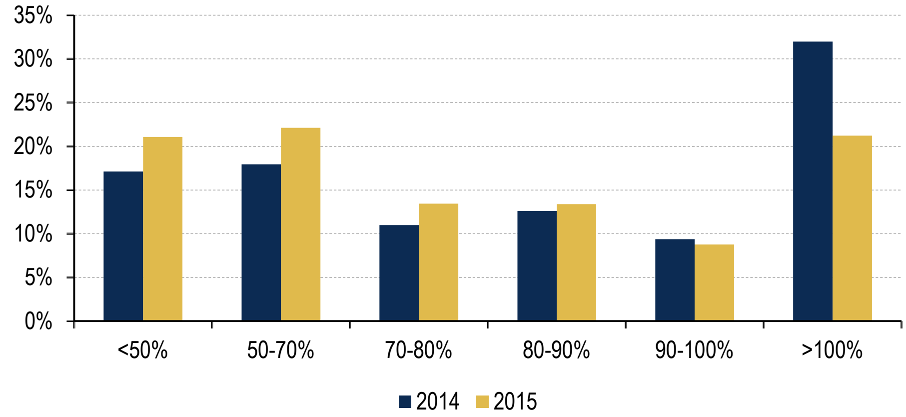
Source: CSO

Improving Loss Given Default and Collateral value

The rise in rents and home prices should support ongoing improvement in the banks' impaired loan positions and reduce the threat posed by any changes to banks' ability to repossess, by bringing more borrowers into positive equity and therefore increasing the incentive for them to enter into long-term arrangements with the banks.

Chart 19 shows that even in the constrained housing price growth year of 2015, the LTV of Bank of Ireland's mortgage book fell substantially, with the over-100% bucket declining by close to one third.

Chart 19: Loan to Value, 2014 and 2015 (%): Bank of Ireland Irish mortgages



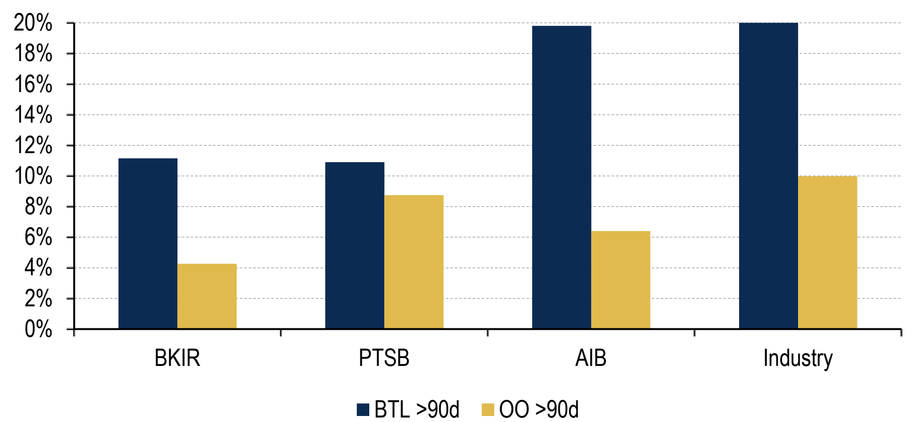
Source: BofA Merrill Lynch Global Research estimates, company data

We believe that this shift should benefit the market, but that Bank of Ireland presents the lowest risk of the banks with regard to potential legislative changes.

Lowest arrears

There is a significant divide in the banks when it comes to arrears, shown in Chart 20. Bank of Ireland has a materially better-than-average position in both owner occupied and BTL arrears.

Chart 20: Buy to Let and Owner Occupier arrears over 90 days, end 2015 (% cases)



Source: companies. BKIR figures for September 2015

The current situation is complex for bank shareholders, as strong GDP is not flowing through to the loan growth with which it would usually be associated. However, a longer-term perspective is we believe potentially helpful, as Ireland should be a market that offers above-average loan growth over the next several years.

Structural growth prospects strong

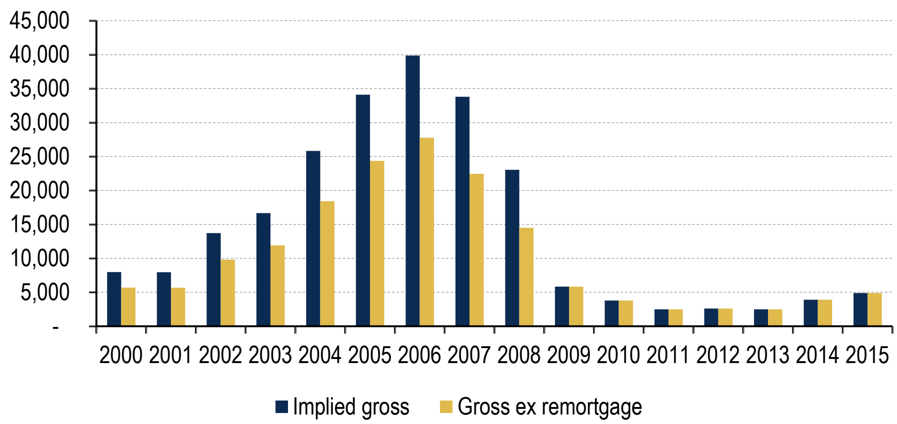
Lending in Ireland has tended to be distant from the mean – either the strongest or the weakest in the euro area, with little in between. But assuming that either situation will persist indefinitely has been flawed and looking at structural growth potential, we see Ireland now having strong prospects, both in residential and commercial lending.

A 160% growth potential in gross lending

Starting with mortgages, we estimate that the long-term gross market for purchase and homes-to-rent should be in the region of €13bn per annum. This compares with less than €5bn in 2015. The long term average is around €19bn, inflated by peak volumes of almost €40bn

A historical data series is shown in Chart 21. We have estimated the market excluding remortgage lending to avoid double counting and even including recent depressed figures, the average since 2000 is over €10bn per year.

Chart 21: Irish mortgage lending, gross: including and excluding remortgaging (€ mn)



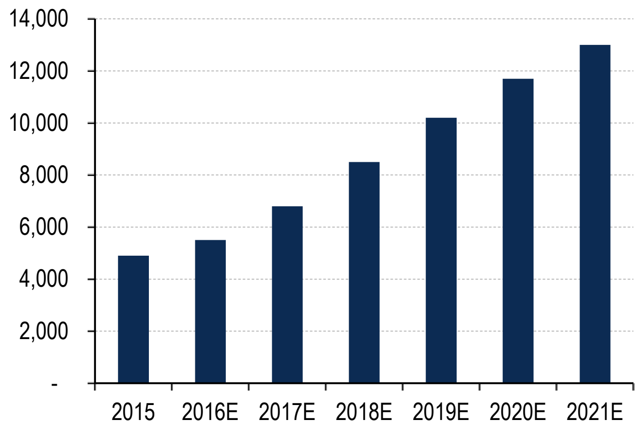
Source: BofA Merrill Lynch Global Research estimates, BPFI, Central Bank

We also consider our "normalised" market of €13bn with reference to the UK. While this is a very different market at present, we believe there are structural similarities in household structure and underlying demand for property.

- The UK has 25m homes, of which a little over 7m are owned outright. The balance are financed, either for owner occupation or rental
- Since 1986, average mortgage approvals for house purchase each year have been 4.1% of homes
- Ireland has 2m homes
- The average home price is €210,000
- A typical mortgage is around 75%
- Assuming the 4.1% approvals/stock ratio, this suggests 4.1% * 2m * €210,000 * 75%, which is €13bn

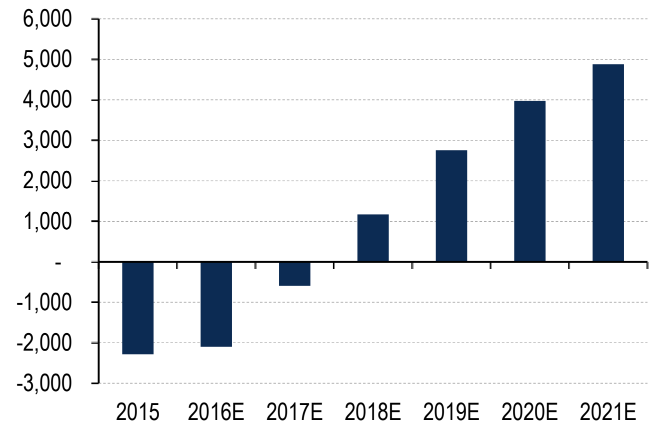
If we progress smoothly (admittedly unlikely, but bear with us) from the present level to the €13bn gross in 2021 while keeping annual redemptions at around the 10% historical level, we would see the gross and net mortgage markets progress as shown in Chart 22 and Chart 23.

Chart 22: potential Irish gross mortgage market (€ mn)



Source: BofA Merrill Lynch Global Research estimates

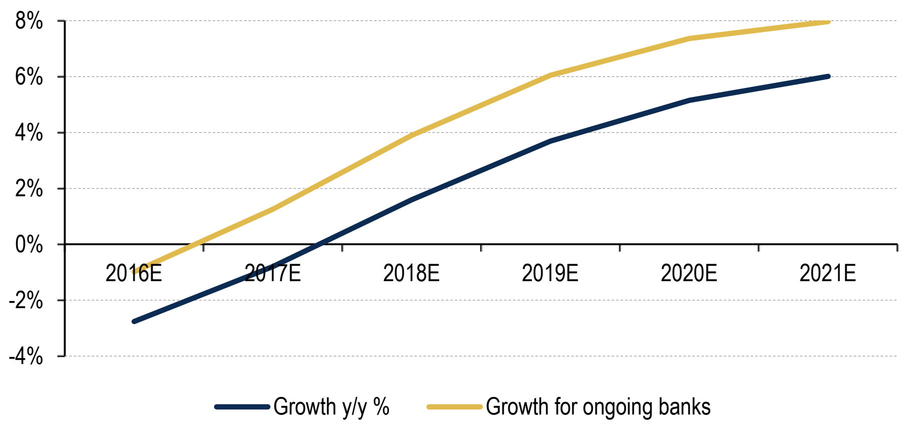
Chart 23: potential Irish net mortgage market (€ mn)



Source: BofA Merrill Lynch Global Research estimates

This would translate into growth rising to 8% pa for the banks that remain open, as €15bn of the market is in the hands of funds running off backbooks. We believe that unless the state intervenes in the market, BKIR will likely maintain its 30% share in new lending, leaving its growth prospects those of the yellow line in Chart 24.

Chart 24: growth in mortgage balances outstanding (% y/y)



Source: BofA Merrill Lynch Global Research estimates

Home price appreciation would accelerate growth further

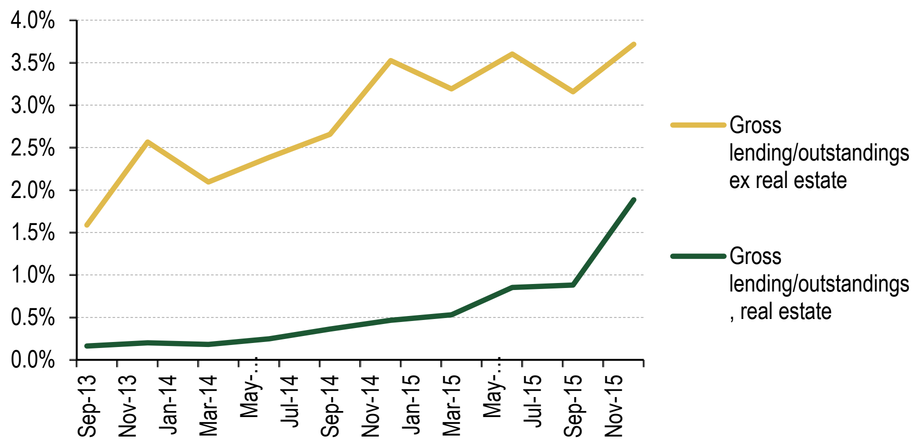
The pace of growth could be more rapid, if home price appreciation is added in to the equation: a 5% CAGR in home prices would suggest a gross market of €16.6bn by 2021

Next we turn to the SME market, which has been similarly depressed and where there are real signs of life.

SME gross lending recovering

Chart 25 shows that gross lending as a proportion of the outstanding stock has been accelerating recently. This is particularly noticeable in property lending, which had remained at vanishingly low levels until the last two quarters.

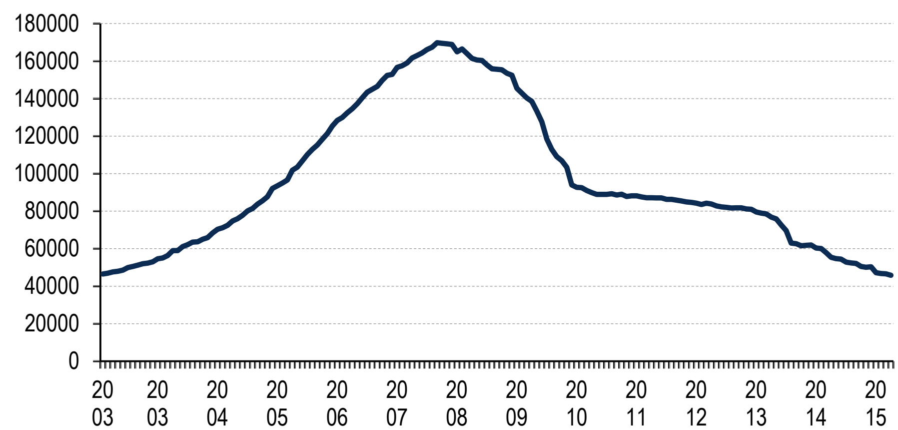
Chart 25: SME lending, quarterly, % outstanding balances



Source: BofA Merrill Lynch Global Research estimates, Central Bank

This has still not translated into net lending, but we believe the remarkable deleveraging of the corporate sector has largely run its course. Chart 26 shows the pace of decline has slowed with total loans back to the level of 2003.

Chart 26: Ireland: non-financial company loans (€ mn)



Source: BofA Merrill Lynch Global Research estimates, Central Bank

Flat overall this year, rising to 4% per annum

Our forecasts see Bank of Ireland with a flat loan book this year, held back by weak sterling. But we believe 4% pa growth is possible beyond 2016, shown in Table 4.

Table 4: Bank of Ireland loan book, € mn

	2015	2016E	2017E	2018E
Loans	84,689	84,551	87,967	91,521
		0%	4%	4%

Source: BofA Merrill Lynch Global Research estimates

Turning growth into valuation

When translating the growth potential into our valuation, we assume 2018 returns are sustainable, at modestly above the cost of capital. This is in contrast to some of the political debate currently ongoing, which implies banks are making substantial excess returns.

We use a 4% potential growth rate, above that for most banks in the euro area. However, this could prove conservative if the Irish economy continues its 5%+ nominal growth. Table 5 shows how we value Bank of Ireland: assuming an 11% sustainable return.

Table 5: Bank of Ireland valuation: Gordon growth model (€ mn)

Theoretical Group P/B model - 2018	
2018E TNAV (€mn)	8,786
Number of shares outstanding (mn)	32,343
TNAV / share (p)	0.27
Net profit	953
RoTBV	11%
Long term growth assumption	4%
COE	10%
Implied P/B	1.1x
Implied value per share	0.31
Value discounted @10%	0.27
Dividends paid	0.03
Excess capital above 11% CET1	0.05
Implied value per share	0.35
Price objective	**0.35**

Source: BofA Merrill Lynch Global Research estimates

Excess capital, or reinvestment

A significant contributor to our total valuation is the build-up of excess capital: we see €0.05 per share, or €1.6bn by the end of 2018. Unlike many European banks, it is possible that Bank of Ireland could find profitable reinvestment opportunities for this capital, in the domestic or UK markets. Policy stability would enable the group to see its way to accelerating loan growth, rather than distributing the capital to its owners. With the shares at current depressed levels, we believe either would represent significant upside.

Price objective basis & risk

Bank Of Ireland Group (IRLBF)

We value Bank of Ireland using a Gordon growth model. Assuming a 10pc CoE and 4pc growth rate, our theoretical P/B model based on our 2018 earnings estimates indicates a valuation of EUR0.35 per share.

Risks: macro and capital
Top-down risks are those typical for a retail and commercial bank - credit quality, asset quality, competitive pressures on margins. All are moving in the right direction, but we note the Irish state's high debt to GDP level is elevated. On capital, BKIR now has a Basel III fully-phased 11.2% CET1. Because of its strong capital generation, this should build further, but regulatory uncertainties around required capital remain.

Analyst Certification

I, Alastair Ryan, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or view expressed in this research report.

EMEA - Banks Coverage Cluster

Investment rating	Company	BofA Merrill Lynch ticker	Bloomberg symbol	Analyst
BUY				
	ABN AMRO	ABN	ABN NA	Tarik El Mejjad
	Bank Of Ireland Group	IRLBF	BKIR ID	Alastair Ryan
	Barclays	BCLYF	BARC LN	Michael Helsby
	Barclays	BCS	BCS US	Michael Helsby
	BNP Paribas	BNPQF	BNP FP	Tarik El Mejjad
	BNP Paribas	BNPQY	BNPQY US	Tarik El Mejjad
	Commerzbank	CRZBF	CBK GR	Johan Ekblom, CFA
	Danske Bank	DNSKF	DANSKE DC	Johan Ekblom, CFA
	Erste Bank	EBKOF	EBS AV	Johan Ekblom, CFA
	Erste Bank	EBKDY	EBKDY US	Johan Ekblom, CFA
	ING Group	ING	ING US	Tarik El Mejjad
	ING Group	INGVF	INGA NA	Tarik El Mejjad
	Intesa Sanpaolo	IITSF	ISP IM	Alberto Cordara
	Lloyds Banking Group	LLDTF	LLOY LN	Michael Helsby
	Lloyds Banking Group	LYG	LYG US	Michael Helsby
	Mediobanca	MDIBF	MB IM	Alberto Cordara
	Nordea	NRDDF	NDA1V FH	Johan Ekblom, CFA
	Nordea	NRDEF	NDA SS	Johan Ekblom, CFA
	Permanent TSB	ILPMF	IL0A ID	Alastair Ryan
	S E B	SVKEF	SEBA SS	Johan Ekblom, CFA
	Societe Generale	SCGLF	GLE FP	Tarik El Mejjad
	Societe Generale	SCGLY	SCGLY US	Tarik El Mejjad
	Virgin Money	VRGDF	VM/ LN	Michael Helsby
NEUTRAL				
	Bankinter	BKIMF	BKT SM	Marta Sanchez Romero
	Bankinter	BKNIY	BKNIY US	Marta Sanchez Romero
	CaixaBank	CIXPF	CABK SM	Marta Sanchez Romero
	Credit Suisse Group	CSGKF	CSGN VX	Andrew Stimpson
	Credit Suisse Group	CS	CS US	Andrew Stimpson
	Deutsche Bank	DB	DB US	Andrew Stimpson
	Deutsche Bank	XDUSF	DBK GR	Andrew Stimpson
	KBC Group	KBCSF	KBC BB	Tarik El Mejjad
	Monte Dei Paschi	BMDPF	BMPS IM	Alberto Cordara
	Raiffeisen Bank International	RAIFF	RBI AV	Johan Ekblom, CFA
	Royal Bk of Scot	RBSPF	RBS LN	Michael Helsby
	Santander	SAN	SAN US	Marta Sanchez Romero
	Santander	BCDRF	SAN SM	Marta Sanchez Romero
	Shawbrook Group	XHSSF	SHAW LN	Michael Helsby
	StanChart	SCBFF	STAN LN	Alastair Ryan
	Swedbank	SWDBF	SWEDA SS	Johan Ekblom, CFA
	Unicredit	UNCFF	UCG IM	Alberto Cordara
UNDERPERFORM				
	Aldermore Group PLC	XMQRF	ALD LN	Michael Helsby
	Banco Bilbao Vizcaya Argentaria	BBVA	BBVA US	Marta Sanchez Romero
	Banco Bilbao Vizcaya Argentaria	BBVXF	BBVA SM	Marta Sanchez Romero
	Banco Popular	BPESF	POP SM	Marta Sanchez Romero
	Banco Sabadell	BNDSF	SAB SM	Marta Sanchez Romero
	Bankia	BNKXF	BKIA SM	Marta Sanchez Romero
	Cembra Money Bank	XMUHF	CMBN SE	Tarik El Mejjad
	Credit Agricole	CRARF	ACA FP	Tarik El Mejjad
	CYBG Plc	XCYZF	CYBG LN	Michael Helsby
	CYBG Plc	XGFZF	CYB AU	Michael Helsby
	DNB	DNBHF	DNB NO	Johan Ekblom, CFA
	Handelsbanken	SVNLF	SHBA SS	Johan Ekblom, CFA
	HSBC	HBCYF	HSBA LN	Alastair Ryan
	Paragon Group	PARGF	PAG LN	Michael Helsby
	UBI	BPPUF	UBI IM	Alberto Cordara
	UBS	XUHJF	UBSG VX	Andrew Stimpson
	UBS	UBS	UBS US	Andrew Stimpson
RSTR				
	Banco Popolare	BPSAF	BP IM	Alberto Cordara
	BPM	BPMLF	PMI IM	Alberto Cordara

iQmethod SM Measures Definitions

Business Performance	Numerator	Denominator
Return On Capital Employed	NOPAT = (EBIT + Interest Income) * (1 - Tax Rate) + Goodwill Amortization	Total Assets – Current Liabilities + ST Debt + Accumulated Goodwill Amortization
Return On Equity	Net Income	Shareholders' Equity
Operating Margin	Operating Profit	Sales
Earnings Growth	Expected 5-Year CAGR From Latest Actual	N/A
Free Cash Flow	Cash Flow From Operations – Total Capex	N/A
Quality of Earnings		
Cash Realization Ratio	Cash Flow From Operations	Net Income
Asset Replacement Ratio	Capex	Depreciation
Tax Rate	Tax Charge	Pre-Tax Income
Net Debt-To-Equity Ratio	Net Debt = Total Debt, Less Cash & Equivalents	Total Equity
Interest Cover	EBIT	Interest Expense
Valuation Toolkit		
Price / Earnings Ratio	Current Share Price	Diluted Earnings Per Share (Basis As Specified)
Price / Book Value	Current Share Price	Shareholders' Equity / Current Basic Shares
Dividend Yield	Annualised Declared Cash Dividend	Current Share Price
Free Cash Flow Yield	Cash Flow From Operations – Total Capex	Market Cap. = Current Share Price * Current Basic Shares
Enterprise Value / Sales	EV = Current Share Price * Current Shares + Minority Equity + Net Debt + Other LT Liabilities	Sales
EV / EBITDA	Enterprise Value	Basic EBIT + Depreciation + Amortization

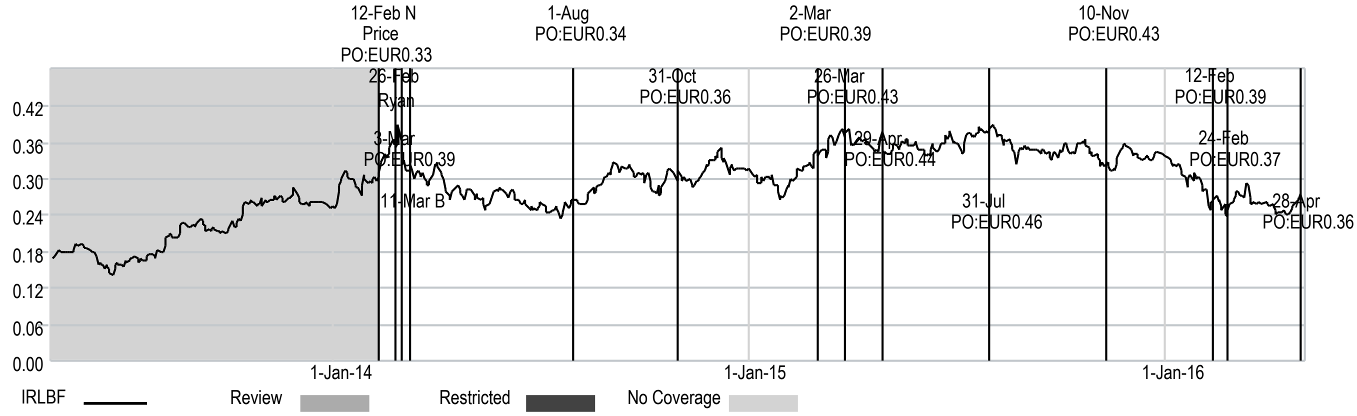
iQmethod SM is the set of BofA Merrill Lynch standard measures that serve to maintain global consistency under three broad headings: Business Performance, Quality of Earnings, and validations. The key features of iQmethod are: A consistently structured, detailed, and transparent methodology. Guidelines to maximize the effectiveness of the comparative valuation process, and to identify some common pitfalls.

iQdatabase ® is our real-time global research database that is sourced directly from our equity analysts' earnings models and includes forecasted as well as historical data for income statements, balance sheets, and cash flow statements for companies covered by BofA Merrill Lynch.

Disclosures

Important Disclosures

IRLBF Price Chart



B: Buy, N: Neutral, U: Underperform, PO: Price Objective, NA: No longer valid, NR: No Rating

The Investment Opinion System is contained at the end of the report under the heading "Fundamental Equity Opinion Key". Dark grey shading indicates the security is restricted with the opinion suspended. Medium grey shading indicates the security is under review with the opinion withdrawn. Light grey shading indicates the security is not covered. Chart is current as of April 30, 2016 or such later date as indicated.

Equity Investment Rating Distribution: Banks Group (as of 31 Mar 2016)

Coverage Universe	Count	Percent	Inv. Banking Relationships*	Count	Percent
Buy	83	48.26%	Buy	76	91.57%
Hold	36	20.93%	Hold	33	91.67%
Sell	53	30.81%	Sell	47	88.68%

Equity Investment Rating Distribution: Global Group (as of 31 Mar 2016)

Coverage Universe	Count	Percent	Inv. Banking Relationships*	Count	Percent
Buy	1602	49.61%	Buy	1195	74.59%
Hold	754	23.35%	Hold	563	74.67%
Sell	873	27.04%	Sell	552	63.23%

* Issuers that were investment banking clients of BofA Merrill Lynch or one of its affiliates within the past 12 months. For purposes of this Investment Rating Distribution, the coverage universe includes only stocks. A stock rated Neutral is included as a Hold, and a stock rated Underperform is included as a Sell.

FUNDAMENTAL EQUITY OPINION KEY: Opinions include a Volatility Risk Rating, an Investment Rating and an Income Rating. *VOLATILITY RISK RATINGS*, indicators of potential price fluctuation, are: A - Low, B - Medium and C - High. *INVESTMENT RATINGS* reflect the analyst's assessment of a stock's: (i) absolute total return potential and (ii) attractiveness for investment relative to other stocks within its *Coverage Cluster* (defined below). There are three investment ratings: 1 - Buy stocks are expected to have a total return of at least 10% and are the most attractive stocks in the coverage cluster; 2 - Neutral stocks are expected to remain flat or increase in value and are less attractive than Buy rated stocks and 3 - Underperform stocks are the least attractive stocks in a coverage cluster. Analysts assign investment ratings considering, among other things, the 0-12 month total return expectation for a stock and the firm's guidelines for ratings dispersions (shown in the table below). The current price objective for a stock should be referenced to better understand the total return expectation at any given time. The price objective reflects the analyst's view of the potential price appreciation (depreciation).

Investment rating	Total return expectation (within 12-month period of date of initial rating)	Ratings dispersion guidelines for coverage cluster*
Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

* Ratings dispersions may vary from time to time where BofA Merrill Lynch Research believes it better reflects the investment prospects of stocks in a Coverage Cluster.

***INCOME RATINGS*, indicators of potential cash dividends, are: 7 - same/higher (dividend considered to be secure), 8 - same/lower (dividend not considered to be secure) and 9 - pays no cash dividend.** *Coverage Cluster* is comprised of stocks covered by a single analyst or two or more analysts sharing a common industry, sector, region or other classification(s). A stock's coverage cluster is included in the most recent BofA Merrill Lynch report referencing the stock.

Price charts for the securities referenced in this research report are available at http://pricecharts.baml.com, or call 1-800-MERRILL to have them mailed.
MLPF&S or an affiliate was a manager of a public offering of securities of this issuer within the last 12 months: Bank Of Ireland.
The issuer is or was, within the last 12 months, an investment banking client of MLPF&S and/or one or more of its affiliates: Bank Of Ireland.
MLPF&S or an affiliate has received compensation from the issuer for non-investment banking services or products within the past 12 months: Bank Of Ireland.
The issuer is or was, within the last 12 months, a non-securities business client of MLPF&S and/or one or more of its affiliates: Bank Of Ireland.
In the US, retail sales and/or distribution of this report may be made only in states where these securities are exempt from registration or have been qualified for sale: Bank Of Ireland.
MLPF&S or an affiliate has received compensation for investment banking services from this issuer within the past 12 months: Bank Of Ireland.
MLPF&S or an affiliate expects to receive or intends to seek compensation for investment banking services from this issuer or an affiliate of the issuer within the next three months: Bank Of Ireland.
The issuer is or was, within the last 12 months, a securities business client (non-investment banking) of MLPF&S and/or one or more of its affiliates: Bank Of Ireland.
BofA Merrill Lynch Research Personnel (including the analyst(s) responsible for this report) receive compensation based upon, among other factors, the overall profitability of Bank of America Corporation, including profits derived from investment banking. The analyst(s) responsible for this report may also receive compensation based upon, among other factors, the overall profitability of the Bank's sales and trading businesses relating to the class of securities or financial instruments for which such analyst is responsible.

Other Important Disclosures

Officers of MLPF&S or one or more of its affiliates (other than research analysts) may have a financial interest in securities of the issuer(s) or in related investments.
From time to time research analysts conduct site visits of covered issuers. BofA Merrill Lynch policies prohibit research analysts from accepting payment or reimbursement for travel expenses from the issuer for such visits.

BofA Merrill Lynch Global Research policies relating to conflicts of interest are described at http://go.bofa.com/coi.

"BofA Merrill Lynch" includes Merrill Lynch, Pierce, Fenner & Smith Incorporated ("MLPF&S") and its affiliates. Investors should contact their BofA Merrill Lynch representative or Merrill Lynch Global Wealth Management financial advisor if they have questions concerning this report. "BofA Merrill Lynch" and "Merrill Lynch" are each global brands for BofA Merrill Lynch Global Research.

Information relating to Non-US affiliates of BofA Merrill Lynch and Distribution of Affiliate Research Reports:

MLPF&S distributes, or may in the future distribute, research reports of the following non-US affiliates in the US (short name: legal name): BAMLI Paris: Bank of America Merrill Lynch International Limited, Paris Branch; BAMLI Frankfurt: Bank of America Merrill Lynch International Limited, Frankfurt Branch; Merrill Lynch (South Africa): Merrill Lynch South Africa (Pty) Ltd.; Merrill Lynch (Milan): Merrill Lynch International Bank Limited; MLI (UK): Merrill Lynch International; Merrill Lynch (Australia): Merrill Lynch Equities (Australia) Limited; Merrill Lynch (Hong Kong): Merrill Lynch (Asia Pacific) Limited; Merrill Lynch (Singapore): Merrill Lynch (Singapore) Pte Ltd.; Merrill Lynch (Canada): Merrill Lynch Canada Inc; Merrill Lynch (Mexico): Merrill Lynch Mexico, SA de CV, Casa de Bolsa; Merrill Lynch (Argentina): Merrill Lynch Argentina SA; Merrill Lynch (Japan): Merrill Lynch Japan Securities Co., Ltd.; Merrill Lynch (Seoul): Merrill Lynch International Incorporated (Seoul Branch); Merrill Lynch (Taiwan): Merrill Lynch Securities (Taiwan) Ltd.; DSP Merrill Lynch (India): DSP Merrill Lynch Limited; PT Merrill Lynch (Indonesia): PT Merrill Lynch Indonesia; Merrill Lynch (Israel): Merrill Lynch Israel Limited; Merrill Lynch (Russia): OOO Merrill Lynch Securities, Moscow; Merrill Lynch (Turkey I.B.): Merrill Lynch Yatirim Bank A.S.; Merrill Lynch (Turkey Broker): Merrill Lynch Menkul Değerler A.Ş.; Merrill Lynch (DIFC): Merrill Lynch International (DIFC Branch); MLPF&S (Zurich rep. office): MLPF&S Incorporated Zurich representative office; Merrill Lynch (Spain): Merrill Lynch Capital Markets Espana, S.A.S.V.; Merrill Lynch (Brazil): Bank of America Merrill Lynch Banco Multiplo S.A.; Merrill Lynch KSA Company, Merrill Lynch Kingdom of Saudi Arabia Company.

This research report has been approved for publication and is distributed in the United Kingdom to professional clients and eligible counterparties (as each is defined in the rules of the Financial Conduct Authority and the Prudential Regulation Authority) by Merrill Lynch International and Bank of America Merrill Lynch International Limited, which are authorized by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority, and is distributed in the United Kingdom to retail clients (as defined in the rules of the Financial Conduct Authority and the Prudential Regulation Authority) by Merrill Lynch International Bank Limited, London Branch, which is authorised by the Central Bank of Ireland and subject to limited regulation by the Financial Conduct Authority and Prudential Regulation Authority - details about the extent of our regulation by the Financial Conduct Authority and Prudential Regulation Authority are available from us on request; has been considered and distributed in Japan by Merrill Lynch Japan Securities Co., Ltd., a registered securities dealer under the Financial Instruments and Exchange Act in Japan; is distributed in Hong Kong by Merrill Lynch (Asia Pacific) Limited, which is regulated by the Hong Kong SFC and the Hong Kong Monetary Authority is issued and distributed in Taiwan by Merrill Lynch Securities (Taiwan) Ltd.; is issued and distributed in India by DSP Merrill Lynch Limited; and is issued and distributed in Singapore to institutional investors and/or accredited investors (each as defined under the Financial Advisers Regulations) by Merrill Lynch International Bank Limited (Merchant Bank) and Merrill Lynch (Singapore) Pte Ltd. (Company Registration No.'s F 06872E and 198602883D respectively). Merrill Lynch International Bank Limited (Merchant Bank) and Merrill Lynch (Singapore) Pte Ltd. are regulated by the Monetary Authority of Singapore. Bank of America N.A., Australian Branch (ARBN 064 874 531), AFS License 412901 (BANA Australia) and Merrill Lynch Equities (Australia) Limited (ABN 65 006 276 795), AFS License 235132 (MLEA) distributes this report in Australia only to 'Wholesale' clients as defined by s.761G of the Corporations Act 2001. With the exception of BANA Australia, neither MLEA nor any of its affiliates involved in preparing this research report is an Authorised Deposit-Taking Institution under the Banking Act 1959 nor regulated by the Australian Prudential Regulation Authority. No approval is required for publication or distribution of this report in Brazil and its local distribution is made by Bank of America Merrill Lynch Banco Múltiplo S.A. in accordance with applicable regulations. Merrill Lynch (DIFC) is authorized and regulated by the Dubai Financial Services Authority (DFSA). Research reports prepared and issued by Merrill Lynch (DIFC) are prepared and issued in accordance with the requirements of the DFSA conduct of business rules.

BAMLI Frankfurt distributes this report in Germany. BAMLI Frankfurt is regulated by BaFin.

This research report has been prepared and issued by MLPF&S and/or one or more of its non-US affiliates. MLPF&S is the distributor of this research report in the US and accepts full responsibility for research reports of its non-US affiliates distributed to MLPF&S clients in the US. Any US person receiving this research report and wishing to effect any transaction in any security discussed in the report should do so through MLPF&S and not such foreign affiliates. Hong Kong recipients of this research report should contact Merrill Lynch (Asia Pacific) Limited in respect of any matters relating to dealing in securities or provision of specific advice on securities. Singapore recipients of this research report should contact Merrill Lynch International Bank Limited (Merchant Bank) and/or Merrill Lynch (Singapore) Pte Ltd in respect of any matters arising from, or in connection with, this research report.

General Investment Related Disclosures:

Taiwan Readers: Neither the information nor any opinion expressed herein constitutes an offer or a solicitation of an offer to transact in any securities or other financial instrument. No part of this report may be used or reproduced or quoted in any manner whatsoever in Taiwan by the press or any other person without the express written consent of BofA Merrill Lynch.

This research report provides general information only. Neither the information nor any opinion expressed constitutes an offer or an invitation to make an offer, to buy or sell any securities or other financial instrument or any derivative related to such securities or instruments (e.g., options, futures, warrants, and contracts for differences). This report is not intended to provide personal investment advice and it does not take into account the specific investment objectives, financial situation and the particular needs of any specific person. Investors should seek financial advice regarding the appropriateness of investing in financial instruments and implementing investment strategies discussed or recommended in this report and should understand that statements regarding future prospects may not be realized. Any decision to purchase or subscribe for securities in any offering must be based solely on existing public information on such security or the information in the prospectus or other offering document issued in connection with such offering, and not on this report.

Securities and other financial instruments discussed in this report, or recommended, offered or sold by Merrill Lynch, are not insured by the Federal Deposit Insurance Corporation and are not deposits or other obligations of any insured depository institution (including, Bank of America, N.A.). Investments in general and, derivatives, in particular, involve numerous risks, including, among others, market risk, counterparty default risk and liquidity risk. No security, financial instrument or derivative is suitable for all investors. In some cases, securities and other financial instruments may be difficult to value or sell and reliable information about the value or risks related to the security or financial instrument may be difficult to obtain. Investors should note that income from such securities and other financial instruments, if any, may fluctuate and that price or value of such securities and instruments may rise or fall and, in some cases, investors may lose their entire principal investment. Past performance is not necessarily a guide to future performance. Levels and basis for taxation may change.

This report may contain a short-term trading idea or recommendation, which highlights a specific near-term catalyst or event impacting the issuer or the market that is anticipated to have a short-term price impact on the equity securities of the issuer. Short-term trading ideas and recommendations are different from and do not affect a stock's fundamental equity rating, which reflects both a longer term total return expectation and attractiveness for investment relative to other stocks within its Coverage Cluster. Short-term trading ideas and recommendations may be more or less positive than a stock's fundamental equity rating.

BofA Merrill Lynch is aware that the implementation of the ideas expressed in this report may depend upon an investor's ability to "short" securities or other financial instruments and that such action may be limited by regulations prohibiting or restricting "shortselling" in many jurisdictions. Investors are urged to seek advice regarding the applicability of such regulations prior to executing any short idea contained in this report.

Foreign currency rates of exchange may adversely affect the value, price or income of any security or financial instrument mentioned in this report. Investors in such securities and instruments, including ADRs, effectively assume currency risk.

UK Readers: The protections provided by the U.K. regulatory regime, including the Financial Services Scheme, do not apply in general to business coordinated by BofA Merrill Lynch entities located outside of the United Kingdom. BofA Merrill Lynch Global Research policies relating to conflicts of interest are described at http://go.bofa.com/coi.

Officers of MLPF&S or one or more of its affiliates (other than research analysts) may have a financial interest in securities of the issuer(s) or in related investments.

MLPF&S or one of its affiliates is a regular issuer of traded financial instruments linked to securities that may have been recommended in this report. MLPF&S or one of its affiliates may, at any time, hold a trading position (long or short) in the securities and financial instruments discussed in this report.

BofA Merrill Lynch, through business units other than BofA Merrill Lynch Global Research, may have issued and may in the future issue trading ideas or recommendations that are inconsistent with, and reach different conclusions from, the information presented in this report. Such ideas or recommendations reflect the different time frames, assumptions, views and analytical methods of the persons who prepared them, and BofA Merrill Lynch is under no obligation to ensure that such other trading ideas or recommendations are brought to the attention of any recipient of this report.

In the event that the recipient received this report pursuant to a contract between the recipient and MLPF&S for the provision of research services for a separate fee, and in connection therewith MLPF&S may be deemed to be acting as an investment adviser, such status relates, if at all, solely to the person with whom MLPF&S has contracted directly and does not extend beyond the delivery of this report (unless otherwise agreed specifically in writing by MLPF&S). MLPF&S is and continues to act solely as a broker-dealer in connection with the execution of any transactions, including transactions in any securities mentioned in this report.

Copyright and General Information regarding Research Reports:

Materials prepared by BofA Merrill Lynch Global Research personnel are based on public information. Facts and views presented in this material have not been reviewed by, and may not reflect information known to, professionals in other business areas of BofA Merrill Lynch, including investment banking personnel. BofA Merrill Lynch has established information barriers between BofA Merrill Lynch Global Research and certain business groups. As a result, BofA Merrill Lynch does not disclose certain client relationships with, or compensation received from, such issuers in research reports. To the extent this report discusses any legal proceeding or issues, it has not been prepared as nor is it intended to express any legal conclusion, opinion or advice. Investors should consult their own legal advisers as to issues of law relating to the subject matter of this report. BofA Merrill Lynch Global Research personnel's knowledge of legal proceedings in which any BofA Merrill Lynch entity and/or its directors, officers and employees may be plaintiffs, defendants, co-defendants or co-plaintiffs with or involving issuers mentioned in this report is based on public information. Facts and views presented in this material that relate to any such proceedings have not been reviewed by, discussed with, and may not reflect information known to, professionals in other business areas of BofA Merrill Lynch in connection with the legal proceedings or matters relevant to such proceedings.

This report has been prepared independently of any issuer of securities mentioned herein and not in connection with any proposed offering of securities or as agent of any issuer of any securities. None of MLPF&S, any of its affiliates or their research analysts has any authority whatsoever to make any representation or warranty on behalf of the issuer(s). BofA Merrill Lynch Global Research policy prohibits research personnel from disclosing a recommendation, investment rating, or investment thesis for review by an issuer prior to the publication of a research report containing such rating, recommendation or investment thesis.

Any information relating to the tax status of financial instruments discussed herein is not intended to provide tax advice or to be used by anyone to provide tax advice. Investors are urged to seek tax advice based on their particular circumstances from an independent tax professional.

The information herein (other than disclosure information relating to BofA Merrill Lynch and its affiliates) was obtained from various sources and we do not guarantee its accuracy. This report may contain links to third-party websites. BofA Merrill Lynch is not responsible for the content of any third-party website or any linked content contained in a third-party website. Content contained on such third-party websites is not part of this report and is not incorporated by reference into this report. The inclusion of a link in this report does not imply any endorsement by or any affiliation with BofA Merrill Lynch. Access to any third-party website is at your own risk, and you should always review the terms and privacy policies at third-party websites before submitting any personal information to them. BofA Merrill Lynch is not responsible for such terms and privacy policies and expressly disclaims any liability for them.

Subject to the quiet period applicable under laws of the various jurisdictions in which we distribute research reports and other legal and BofA Merrill Lynch policy-related restrictions on the publication of research reports, fundamental equity reports are produced on a regular basis as necessary to keep the investment recommendation current.

Certain outstanding reports may contain discussions and/or investment opinions relating to securities, financial instruments and/or issuers that are no longer current. Always refer to the most recent research report relating to an issuer prior to making an investment decision.

In some cases, an issuer may be classified as Restricted or may be Under Review or Extended Review. In each case, investors should consider any investment opinion relating to such issuer (or its security and/or financial instruments) to be suspended or withdrawn and should not rely on the analyses and investment opinion(s) pertaining to such issuer (or its securities and/or financial instruments) nor should the analyses or opinion(s) be considered a solicitation of any kind. Sales persons and financial advisors affiliated with MLPF&S or any of its affiliates may not solicit purchases of securities or financial instruments that are Restricted or Under Review and may only solicit securities under Extended Review in accordance with firm policies.

Neither BofA Merrill Lynch nor any officer or employee of BofA Merrill Lynch accepts any liability whatsoever for any direct, indirect or consequential damages or losses arising from any use of this report or its contents.