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How Is Banking Disintermediation Re-Wiring The Financial Sector Circuits?

Equities

Global

Financial

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Effect of banking disintermediation is not fully priced in for all products

Although traditional bank stocks are largely pricing in dramatic post-crisis changes, we believe pockets of products still have potential to further negatively impact incumbent players. For instance, the downside risk of commercial mortgages and corporate bonds disintermediation in Europe are not appropriately priced in relevant bank stocks, in our view. In contrast, in credit products, private equity and specific pockets of retail banking, non-bank stocks could have significant upside from current levels.

Banking disintermediation has become much more than just regulatory change

The tidal wave effect of post-crisis regulatory changes, technology advancements, and secular shifting customer preferences, are transforming the financial services landscape. Beyond just banks reducing risk, corporates seek more efficient funding and consumers look for enhanced value added services, so new product and participant linkages in the financial ecosystem are taking shape. Even relatively small new offerings, such as peer-to-peer lending and mobile payments, are impacting how different agents engage.

Incumbents have adapted but entrants solidified their position along the way

Surviving incumbent banks have adapted post crisis and should remain dominant in traditional financial services; but from credit to capital markets, to retail banking, adaptation has created opportunities for new entrants. For instance, FICC related bank balance sheet declined by 50% from the 2009 peak; bank commitment to leveraged loans fell from 70% of the total market in 2004 to 50% in 2014. In contrast, advisory share of M&A boutiques doubled since 2008 to 20% of deal revenues while non-bank share of residential mortgage origination rose from 16% in 2012 to 39% in 2014.

We list who is best placed to further benefit and suffer from disintermediation

While banks should remain dominant in traditional financial services, further opportunities for share gains exist for non-banks: Ares Capital, Golub Capital & Apollo in leveraged loans; Redwood Trust in jumbo mortgages; Nationstar & New Residential in mortgage servicing rights; Apollo, Carlyle, & Partners Group among private equity firms, and Safaricom in mobile payment. In contrast, disintermediation could negatively impact Annaly Capital & American Capital Agency (highly leveraged model), ZION and MTB (in the CRE business), and Commerzbank (credit disintermediation).

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Executive summary

The threat of financial disintermediation for banks is not new but is broadening with changes in regulation, technology and customer behaviour. The risk of disintermediation varies considerably from product to product as well as from country to country, creating opportunities for non-bank financial players to grow and take market share.

In trying to assess where the threat of financial disintermediation is highest for banks, in this report, we looked at three risk areas: 1) credit; 2) capital markets; and 3) retail banking (mobile banking and payments). For each area, we examine industry dynamics, key players, and potential market outlook. We also assess the role played by regulation as well as the potential implications for the banking sector, and conclude by trying to identify which companies are likely to benefit from financial disintermediation.

The table below summarizes our views of the threat level, what is priced in for incumbents and challengers across these three product areas.

Figure 1: The threat of financial disintermediation for banks

Product		Threat level	Priced in for incumbents	Priced in for challengers
Credit disintermediation				
-	Retail (from P2P)	Medium	Yes	n/a
-	Leveraged loans	Medium	Yes	No (Upside risk)
-	Residential mortgages	High	Yes	No (Upside risk)
-	MSRs	High	Yes	No (Upside risk)
-	Commercial & multi-family mortgages	Medium	No (downside risk)	No (Upside risk)
	Corporate bonds			
-	US	Low	Yes	n/a
-	Europe	Medium (long term)	No (upside for IBs, downside for business lenders)	n/a
-	China	Low	Yes	n/a
Capital markets				
-	FICC	High	Yes	n/a
-	Equities	Low	Yes	n/a
-	Advisory	Low	Yes	Yes
-	Private equity	Medium	Yes	No (Upside risk)
Retail banking				
-	mobile payments (developed markets)	Low	Yes	Yes
-	mobile banking (emerging markets)	Low	Yes	No (Upside risk)

Source: UBS estimates

Summary product assessment

Credit products: We have broken down credit into three sub-categories to assess current disintermediation risks facing incumbent banks: peer-to-peer lending, leveraged loans and mortgages, and corporate bonds.

- **Peer-to-peer lending** (a broader crowd-funding movement where small amounts of money obtained from a large number of sources/individuals are used to fund some collective objective) is expected to grow at more than 100% p.a. over the next three years. Despite enjoying spectacular growth, with the biggest markets being in the US, the UK and China, in our view, peer-to-peer lending poses limited risk to banks given their market size. Looking ahead, we forecast P2P loan origination in the US to rise to potentially to US$82bn by the end of 2017. Using a similar model, in the UK, we estimate the market size would grow to around £17bn over the same timeframe. While these growth projections are substantial, in terms of a potential threat to banks they appear to be low. In the US, our market estimate of US$82bn by 2017 would be equivalent to around 0.95% of our estimate of US system-wide bank loans by end-2017, while our £17bn forecast in the UK would only be 1.1% of MFI sterling loans to UK residents

- **Leveraged loans and mortgages markets**, in contrast, are a much bigger threat of disintermediation for incumbent banks and we think this could present valuation upside for non-bank challengers, as they will continue to gain share in the space.

  - **Leveraged loans:** Continued regulatory scrutiny is expected to result in further market share reduction, especially among US banks. We forecast leveraged loans outstanding to rise from US$832bn in 2014, to US$953bn in 2015 and to US$1,201bn by 2017, with non-banks' market share to rise from 90% in 2014 to 92% in 2015 and 95% in 2017.

  - **Residential mortgages:** We forecast residential mortgage originations to grow from US$1,122bn in 2014 to US$1,222bn in 2015, and remaining at this level over the following two years. However, we estimate the share of non-bank originations will rise to 46% in 2015 and 55% by 2017.

  - **Mortgage servicing rights (MSR):** As banks face regulatory pressure to reduce their MSR exposure as well as a more challenging servicing environment, we forecast the non-bank share held by the top 18 servicers to rise from 21% in 2014 to 26% in 2015 and 45% by 2017.

  - **Commercial and multi-family mortgages:** We also expect commercial borrowers to have to increasingly look to non-bank/alternative sources for credit, while banks with reasonably large CRE businesses would lose out.

- **Corporate bonds** acting as a disintermediation product for bank loans is not a new phenomenon.

  - **In the US**, where 68% of corporate funding comes via bond issuances and bank loans only representing 9%, the importance of bank loans for corporates will continue to decline for the short/medium term.

  - **In Europe**, in contrast, 81% of all corporate funding comes from bank loans. Over the past decade, this has come down slightly from an elevated level of 87% in 2003. Going forward, as corporate funding needs rise, we think credit disintermediation could become more apparent. Authorities have already made clear that they want deeper capital markets to help fund corporates.

  - **In China**, corporate bonds formed about 15% of TSF in 2014 and have been growing at a CAGR of 42%, with no sign of slowing. The corporate

bond market is dominated by banks, which are the largest holders of corporate bonds. We do not see growth in issuances in China necessarily as a factor disintermediating banks, however, as corporate bonds provide banks with a spread over regulated deposit rates and provide a use for excess liquidity while at the same time not increasing loan/deposit ratios

Capital markets: As a result of ongoing changes from Basel 3, Dodd-Frank Act, Volcker rule, the disintermediation threat remains high in FICC trading but is less impactful for equities and advisory. We believe most of these effects have been priced in – actually, strong 1Q15 results by US brokers and European investment banks suggest a cyclical upturn for capital markets despite ongoing structural changes and disintermediation risk.

- **FICC trading:** Assuming that the sector has implemented significantly more than 50% of the planned/required balance sheet shrinkage and assuming some cyclical recovery in some credit, rates and FX businesses, we would expect the full impact of disintermediation in industry FICC revenues to trough at the current cUS$76 billion level (2015E), almost 50% below the 2009 peak.
- **Equities business:** We see equities as much less threatened than FICC as equities is less capital-intensive and thus less impacted by the new capital rules. While certainly some parts of the equities business have some capital intensity (e.g. prime brokerage), we have seen bulge bracket firms reduce the capital allocated to those businesses, usually by cutting or reducing repo operations. We do not foresee any further disintermediation threat in equities.
- **Advisory market share:** Since the financial crisis, M&A boutiques have steadily gained market share from bulge bracket players, but we think this is highly constrained by their ability to hire advisory MDs from the larger players. Most boutiques have indicated that the current hiring environment is more competitive, and bulge bracket firms are more actively defending bankers. In the short term, if these trends continue, we see a strong reduction in boutiques' ability to continue to disintermediate the bulge brackets.
- **Private equity firms:** are also very well positioned to capitalize on the regulatory headwinds facing the traditional banking sector and are enjoying numerous tailwinds, including low interest rates, relatively limited regulation and an increasing allocation of capital by investors. Private equity firms are currently sitting on a record US$1.2 trillion in dry powder, with a number of firms focused on expanding in various non-bank lending areas.

Retail banking: We assessed mobile payments and mobile banking as primary threats of disintermediation for retail banking fees. The dynamics in both areas vary significantly between developing and developed markets, however.

- **In developing markets**, the greatest disintermediation threat is associated with consumers using telecom operators for what are essentially traditional banking services in the form of mobile money, rather than building a relationship with an established bank. For the most part, banks remain the funds repository, benefiting from a deposit base they would likely not otherwise reach. However, banks do forgo the transactional commission available on that base, with this instead providing an incremental revenue stream for the mobile operator. The short-term net balance, especially in frontier markets, is still positive for incumbent banks, as they benefit from telecom operator efforts in the rollout of Mobile Money services. The long-term

ability of telecom operators to further monetize their control over customer relationships will depend on how retail banking regulatory framework evolves.

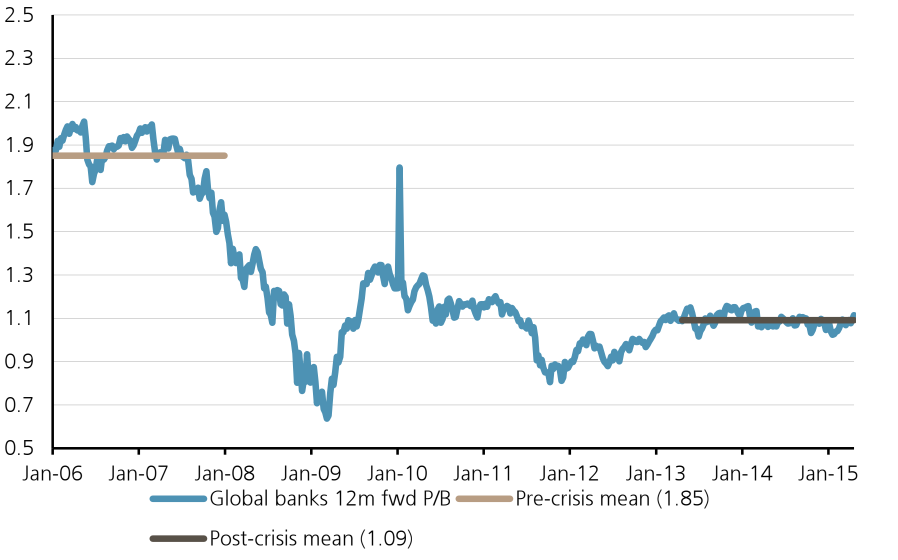
- **In developed markets**, consumers do have established banking relationships, and we see a risk of disintermediation mainly in traditional payment transaction fees as retailers look to lower their cost of electronic payment acceptance. As the payments industry has slowly moved towards enabling consumers to pay for goods in-store with their mobile phone, this also opens the door for a number of disruptive approaches that could take volume away from the traditional payment methods of credit and debit cards. Many of the alternatives still require funding wallets through traditional payment means and so do not really change the potential fee revenue, but the risk in our view remains given that schemes such as MCX, a consortium of retailers in the US, could shift transactions away from the traditional networks. Traditional banking services could be impacted by potential lower interchange fees and lower interest income, but the short term risk is relatively low.

Conclusion

Overall, we consider the threat of financial disintermediation to banks as medium-to-low but with pockets of elevated risk such as in US residential mortgages and FICC trading. While we see evidence of niche players taking market share at the expense of incumbents, the underlying cause of much of this financial disintermediation is the effect of regulatory intervention, especially in developed markets.

From a broad valuation perspective, the impact of changes in regulation have been translated into much lower multiples for incumbent banks already.

Figure 2: Global banks have de-rated since the crisis



Source: Thomson Reuters DataStream, IBES, UBS

At a product level, however, we believe the threat of disintermediation still poses further downside risks to incumbent banks in commercial and multi-family mortgages in the US, and corporate bonds for European lenders over the medium-to-long term. For other product areas, the threats are by and large priced in.

In contrast, for non-bank challengers, we see several areas of upside valuation potential such as leveraged loans and residential mortgages in the US and retail banking/mobile payment fees in emerging markets.

Stocks that are well placed to benefit from financial disintermediation include: **Ares Capital, Golub Capital** and **Apollo** in the leveraged segments; **Redwood Trust** in jumbo mortgages; and **Nationstar Mortgage** and **New Residential** in mortgage servicing rights. In commercial and multi-family mortgages, our top picks to increase market share are **Blackstone Mortgage Trust**, **New York Mortgage Trust** and **NorthStar Realty**. Among private equity firms, beneficiaries of disintermediation also include **Apollo, Carlyle**, and **Partners Group** while on the mobile payment theme, we believe **Safaricom** and **Capital One** are well positioned.

In contrast, we expect disintermediation to negatively impact **Annaly Capital** and **American Capital Agency** that have an agency REIT model predicated on the use of substantial leverage. Banks with reasonably large CRE businesses such as **ZION** and **MTB** could also potentially lose out incrementally while for boutiques such as **Greenhill** and **Evercore**, we think the market has already priced in the potential growth upside. In Europe, **Commerzbank** is one Sell rated European bank that could also face pressure from credit disintermediation, alongside an unfavourable banking environment characterized by excessive fragmentation and a majority share of the market controlled by the public sector.

Figure 3: Key stocks valuation summary

Name	Year end 2014	MV (US$m)	Currency	Price 23-Apr-15	Rating	PT	PT upside	UBS Adj. P/E 14E	15E	16E
Stocks best placed to benefit from disintermediation										
Apollo Investment Corporation	Mar-15	1,873	US$	7.91	Buy	10	26.4%	8.3	8.0	7.8
Ares Capital Corporation	Dec-14	5,403	US$	17.2	Buy	20	16.3%	11.0	9.8	9.1
Blackstone Mortgage Trust	Dec-14	1,822	US$	31.21	Buy	34	8.9%	15.2	13.0	11.4
Capital One Financial	Dec-14	46,898	US$	81.86	Buy	95	14.2%	10.4	10.7	10.0
Carlyle Group LP	Dec-14	2,024	US$	29.87	Buy	34	13.8%	12.0	10.0	8.7
Golub Capital BDC, Inc	Sep-14	843	US$	17.9	Buy	19.5	8.9%	14.1	12.4	11.5
Nationstar Mortgage Holdings	Dec-14	2,305	US$	25.5	Buy	45	76.5%	11.3	5.0	3.4
New Residential Investment Corp	Dec-14	2,400	US$	17.01	Buy	17	-0.1%	8.2	9.9	8.5
New York Mortgage Trust	Dec-14	825	US$	7.85	Buy	10	27.4%	5.2	6.6	6.3
NorthStar Realty Finance	Dec-14	4,107	US$	18.95	Buy	23	21.4%	12.1	9.5	8.8
Partners Group Holding AG	Dec-14	8,268	CHF	301.5	Buy	300	-0.5%	18.3	22.2	18.6
Redwood Trust	Dec-14	1,479	US$	17.93	Buy	24	33.9%	13.6	7.4	5.4
Safaricom	Mar-15	7,319	KSh	17.2	Buy	20.5	19.2%	17.8	21.9	19.0
Stocks potentially affected by disintermediation or where upside is already priced in										
Annaly Capital Management	Dec-14	9,722	US$	10.26	Neutral	10.5	2.3%	9.9	10.0	11.3
American Capital Agency Corp	Dec-14	7,620	US$	21.6	Neutral	22	1.9%	7.5	9.3	12.7
Commerzbank	Dec-14	15,620	€	12.675	Sell	8.8	-30.6%	42.2	13.8	11.9
Evercore Partners Inc	Dec-14	1,844	US$	50.17	Neutral	49	-2.3%	20.6	17.9	15.2
Greenhill & Co	Dec-14	1,240	US$	42.82	Sell	35	-18.3%	34.0	25.2	22.0
Moelis & Company	Dec-14	1,635	US$	29.53	Neutral	34	15.1%	19.0	17.2	15.1
M&T Bank Corp	Dec-14	15,979	US$	120.19	Neutral	130	8.2%	15.9	15.1	12.7
Zions Bancorporation	Dec-14	5,628	US$	27.7	Sell	26	-6.1%	16.0	18.0	15.4

Source: UBS

Product Level Assessment

Credit disintermediation

In this section, we look at the disintermediation of bank credit in three broad areas: (1) peer-to-peer lending; (2) leveraged loans and mortgages; and (3) corporate bonds.

Peer-to-peer lending

Peer-to-peer lending is a new phenomenon enabled by internet technology

Peer-to-peer (P2P) lending is a relatively new phenomenon, enabled by the use of internet technology and part of a broader crowd-funding movement where small amounts of money obtained from a large number of sources (usually individuals) are used to fund some collective objective. In the case of P2P lending, a large number of lenders offer loans to borrowers through an internet-based platform (usually a website).

P2P lending tends to offer relatively high returns to investors (i.e. lenders) when compared to current developed-market bank deposits, in return for taking on additional risks, e.g. Funding Circle (one of the larger UK P2P lenders) is estimating a 6.3% return after fees and bad debts, while offering loans starting at an interest rate of 6.0% for its highest-rated borrowers (see Figure 1).

Figure 1: Best loan rates and typical returns for UK P2P lenders

Name	Best loan rate	Typical return
Funding Circle	6.0%	6.3%
Zopa	4.8% (5yr)	5.1% (5yr)
RateSetter	5.4%	6.2%

Source: Company websites

Potential risks

On most P2P platforms lenders are reliant on the platforms' own credit rating systems

On most P2P platforms, borrowers are not known to lenders, so lenders are reliant on the proprietary credit rating systems provided by the P2P platform to assess risk. As would be expected, the higher-risk loans usually provide the highest interest rates to lenders. The actual rates paid are usually decided by some sort of auction process.

Most P2P platforms do not take on any credit risk themselves, but in effect act as brokers between lenders and borrowers. Lenders are also subject to other risks associated with credit provision, such as fraud. It can be argued that the anonymity offered by most platforms makes any rigorous due diligence by the lender impossible – trust has to be placed in the platforms' ratings.

Illiquidity is another risk, as lenders cannot withdraw their loans and in general have to wait for the term of the loan before retrieving their principal. Some platforms offer a trading service to allow lenders to sell their loans, but these are in general very illiquid markets and discounts tend to be high. Some platforms require, and most encourage, portfolio diversification from lenders to diversify risk.

Another risk is that of platform collapse: although a loan is between individual lenders and borrowers (therefore the contract is between lenders and borrowers and not the P2P lender), according to an IOSCO report on crowd-funding there has been at least one case of a P2P lender collapsing with insufficient records to allow recovery of the loans.

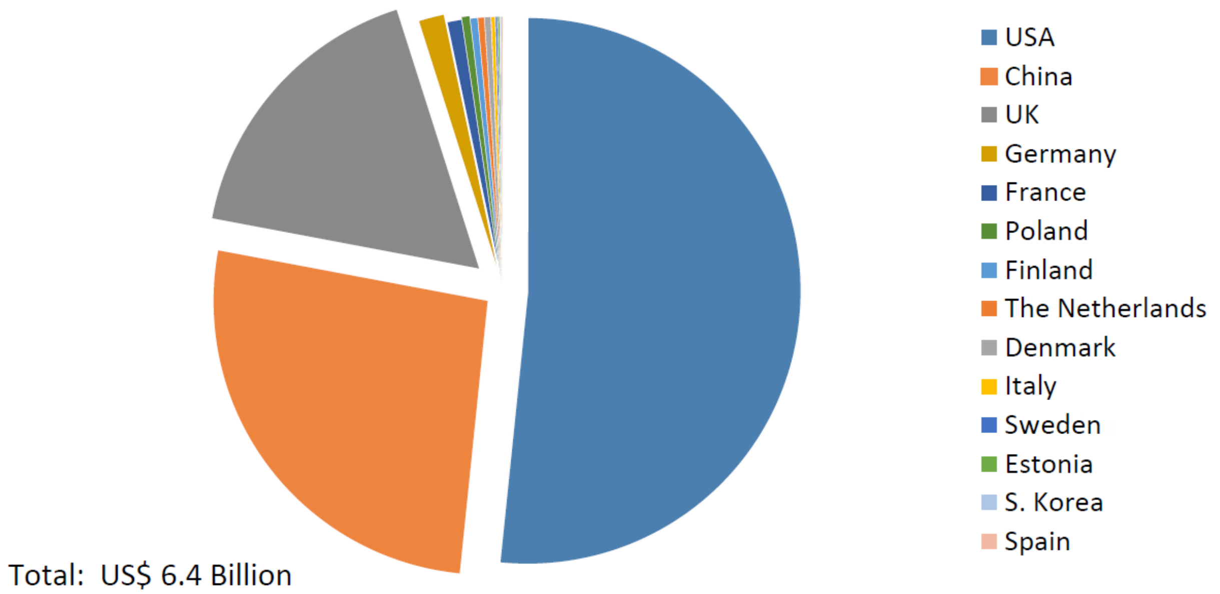
Lastly, we would consider the risk of cyber-attack. The online nature of P2P lending platforms makes them vulnerable to external network-based attacks which might include destruction of records, theft of funds and denial-of-service attacks. We are inclined to believe that this risk is rather on the low side but nonetheless represents an important tail risk, as the failure of a major player for such a reason could have a significant negative effect on other players in the industry, and might well attract unwelcome regulatory oversight.

Size of market and growth

P2P lending is low volume as a fraction of system lending, but growing fast

Internationally the crowd-funding market appears to be dominated by the US, UK and China, with other countries significantly less important. According to IOSCO data collected as at September 2013 (see Figure 2), P2P loans originated totalled US$6.4bn, of which we would estimate around US$3.3bn were in the US, US$1.7bn in China and US$1.1bn (c£690m) in the UK. This would equate to around 1.6bp of US private sector debt, 3.0bp of UK private sector lending, and around 1.5bp of Chinese government and private sector credit, respectively.

Figure 2: P2P and equity crowd-funding market by country at September 2013



Source: IOSCO: Crowd-funding: An Infant Industry Growing Fast. Note: This data was collected by examining the websites of the largest P2P lenders and, as such, provides a lower bound of the industry size as estimated by IOSCO

Possibly because of this low base, growth rates in the industry are very high and according to IOSCO are growing on average at 100% p.a. in aggregate, so even though current markets are very small they have the potential to increase significantly in size if current growth rates are maintained. We note that the growth rate of loans originated, as estimated by IOSCO, is broadly in line with the growth of loan originations in 2014 of Funding Circle (115%) and Lending Club (112%), so we believe these can be used as reasonable proxies for the whole industry.

Obviously, these growth rates require significant increases in funding. There is evidence that in the US and the UK at least, professional investors (e.g. hedge funds) are becoming significant sources of funding: Lending Club, one of the largest US P2P lenders, has a fully documented application programming interface (API) which is, in our opinion, most likely to be exploited by professional lenders who, according to the company, "*have sophisticated programming skills that allow*

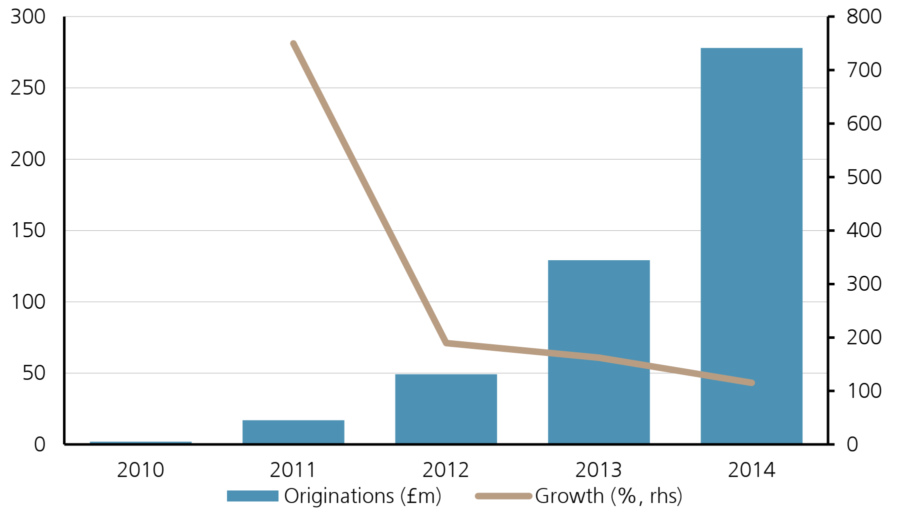
them to execute their individual investment strategy by building customized software", thus enabling applications to directly connect to Lending Club systems without manually logging onto the website. Funding Circle has no documented public API at present, although its website indicates that an API is likely to be released in 2015. However, we understand that Funding Circle has already made its API privately available to certain professional market participants, providing significant access to flows.

The stratospheric growth rates of P2P lending appear to be slowing

There is evidence that the very high growth rates of the P2P lenders are beginning to decelerate somewhat (see Figure 3 and Figure 4). Funding Circle's stratospheric growth rate of its early years slowed to 115% in 2014, in a year when it received £40m of funding for loans from the UK government. It is unclear whether this deceleration will continue further and whether it is a function of slowing demand or supply or other factors (e.g. limits on the number of loans that can be rated).

RBS has also recently reached an agreement with Funding Circle and another P2P lender (Assetz Capital) for RBS to refer customers to them when it is unable to offer loans to customers. We understand from press reports that there is no fee-sharing arrangement[1], but this has likely been driven by political pressure to refer customers, particularly small business customers, to alternative sources of funding when banks are unable to offer loans. This arrangement mirrors a similar arrangement that Santander UK made with Funding Circle last year.

Figure 3: Funding Circle loans originated and growth



Source: Company website, UBS estimates

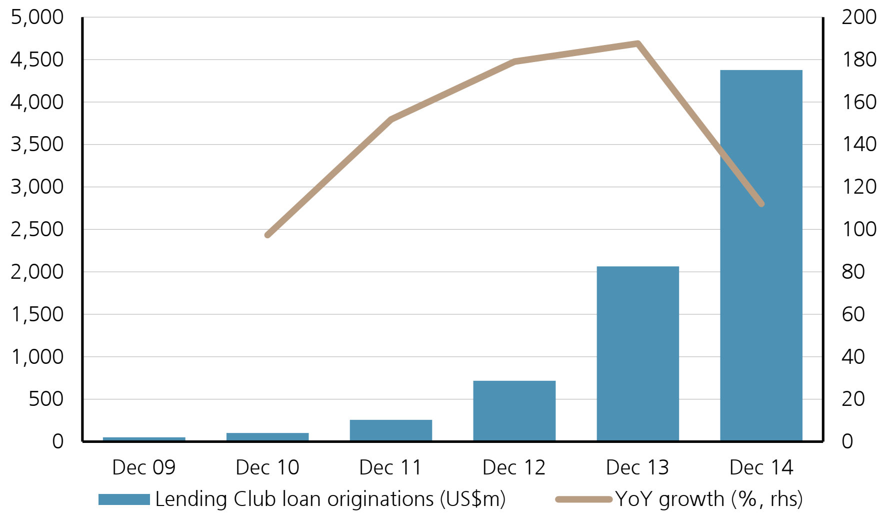
It is possible that proposed changes in the UK personal tax regime, allowing ISA account holders to include P2P loans in their ISAs, may provide an additional source of funding which may ease funding constraints, if these exist.

In the US, growth rates of the P2P lenders are also high but also appear to be trending downwards (see Figure 4) despite Lending Club having multiple strategies for boosting growth, including an acquisition in April 2014, partnering with community banks for referrals and providing loans directly to some consumer banks, as well as selling loans directly to professional investors and also packaging

[1] http://www.ft.com/cms/s/0/58af3792-a20f-11e4-aba2-00144feab7de.html

loans into securities. More recently, according to press reports, Citigroup has also agreed a lending arrangement for its customers with Lending Club.[2]

Figure 4: Lending Club loan originations and growth



Source: Company regulatory filings, UBS estimates

How big a threat to the banks are P2P lenders?

We estimate that P2P lending will remain a small fraction of system lending in the medium term

Using our estimates (from IOSCO data) of US$3.3bn of loans originated in the US as at September 2013, growth rates of 100% p.a. (as estimated by IOSCO) and a simple loan amortisation model, we estimate that at the end of 2017 there could be around US$82bn of P2P loans outstanding in the US. This would be equivalent to around 0.95% of our estimate of US system-wide bank loans by end-2017. As an additional reference point we also note that the projected US$82bn of P2P loans is only 0.40% of US non-financial corporate and household debt as at September 2014.

For the UK, using a similar model, we would estimate that by end-2017 P2P loans outstanding would be around £17bn, or 1.1% of MFI sterling loans to UK residents.

Regulatory pressures are forcing banks to not compete

Looking at the size of the credit markets and the penetration of the P2P lenders, it appears to us that the P2P lenders represent only a minor threat to the banks at present. Admittedly, they are disintermediating the banks in some niche markets, but it appears to us that at least some of that credit disintermediation is happening as a result of the banks not wanting to compete, or being unable to compete because of other reasons such as regulatory pressures. In that sense, the banks are being forced to cede some ground to the P2P lenders because of regulation, not directly because of P2P lenders directly out-competing the banks.

In some cases, banks are mitigating the effect of this competition by choosing to form relationships with P2P lenders and, as a result, are sharing some of the value chain with the P2P lenders in areas where they are unable to compete for other reasons. Lastly, in our view, P2P lenders are currently offering only niche products and, as a result, represent little threat to retail customers' main banking and financial services relationships with their banks.

[2] http://www.ft.com/cms/s/0/8602eb62-e29c-11e4-ba33-00144feab7de.html

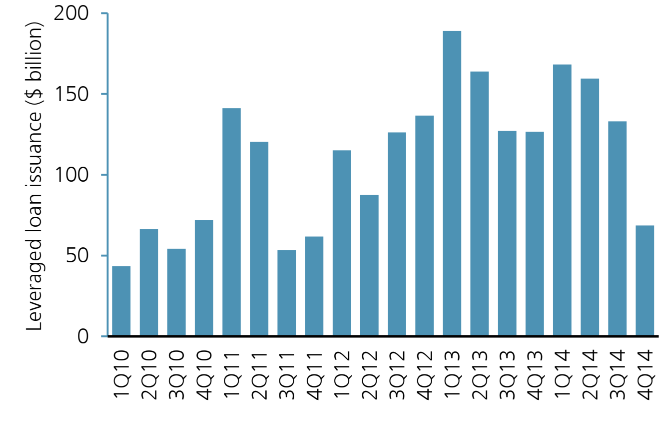
Leveraged loans and mortgages

Leveraged loans

U.S. regulators have continued to express concerns around the underwriting standards of leveraged loans. The Federal Reserve, OCC (Office of the Comptroller of the Currency) and Federal Deposit Insurance Corporation (FDIC) issued a joint report in early November pointing to serious deficiencies in about one-third of the loans that they had examined in their latest review. Until recently, the reaction to the regulators' warnings in terms of issuance has been rather muted. However, after several quarters of solid volumes, leveraged loan issuance declined meaningfully in the back half of last year

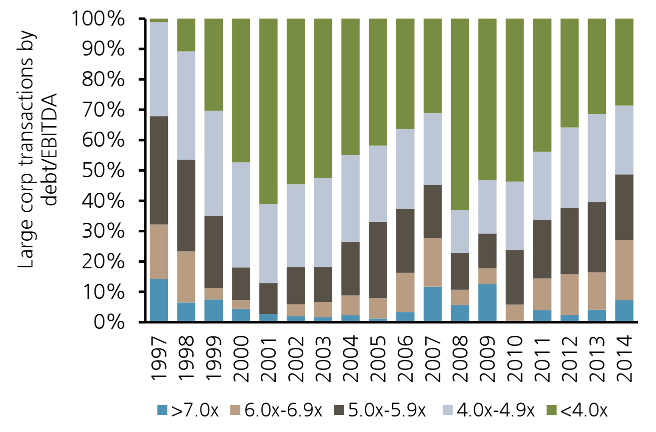
Banks' issuance of leveraged loans fell significantly towards the end of 2014...

Figure 5: Leveraged loan issuance has been trending lower...



Source: S&P Capital IQ, UBS estimates.

Figure 6: ...as the percentage of deals with debt/EBITDA multiples greater than 6x has drawn increased regulatory scrutiny



Source: S&P Capital IQ, UBS estimates.

While the U.S. money center banks have reduced their market share meaningfully over the past several years, they continue to be some of the most dominant players in the market. However, the regulatory scrutiny could result in continued pressure on leveraged loan issuance even if the regulatory guidelines do not include "bright-line rules", as we understand is the case.

...while regulatory scrutiny is rising

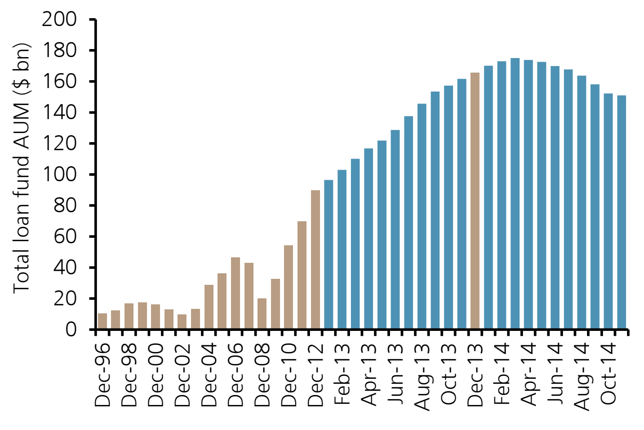
Figure 7: The money center banks have reduced their share of the leveraged loan market over the past few years, but they still remain dominant players

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2004-14 average
JPMorgan	16.82%	14.65%	15.13%	15.09%	11.31%	11.75%	12.30%	13.66%	10.78%	10.11%	9.83%	12.86%
Bank of America	16.47%	13.54%	14.69%	11.81%	13.40%	15.12%	15.46%	13.46%	9.69%	9.65%	9.30%	12.96%
Wells Fargo	6.57%	4.87%	4.71%	3.86%	6.57%	8.51%	6.99%	7.71%	6.41%	6.10%	6.53%	6.26%
Deutsche Bank	7.10%	5.91%	5.58%	5.35%	3.48%	4.32%	5.29%	4.66%	4.05%	4.82%	4.82%	5.03%
Citi	8.99%	9.38%	7.91%	8.03%	5.17%	5.55%	4.12%	4.46%	4.31%	4.49%	4.05%	6.04%
Credit Suisse	5.64%	4.44%	5.11%	5.67%	2.56%	2.68%	4.91%	4.67%	3.90%	4.70%	3.97%	4.39%
Barclays	4.30%	5.00%	4.42%	5.87%	1.97%	2.86%	4.69%	3.73%	3.37%	3.99%	3.64%	3.99%
Goldman Sachs	2.69%	2.97%	4.62%	5.29%	2.78%	1.06%	3.17%	3.08%	2.92%	3.87%	2.91%	3.22%
RBC	0.21%	0.60%	0.41%	0.67%	1.14%	2.68%	2.29%	2.27%	2.72%	2.75%	2.76%	1.68%
Morgan Stanley	1.12%	2.37%	3.11%	2.51%	2.11%	0.94%	2.35%	3.36%	2.87%	3.12%	2.70%	2.41%

Source: Dealogic, UBS estimates. Note: Percentage represents deal value apportioned to the bookrunner over the total leveraged loan issuance for each respective period.

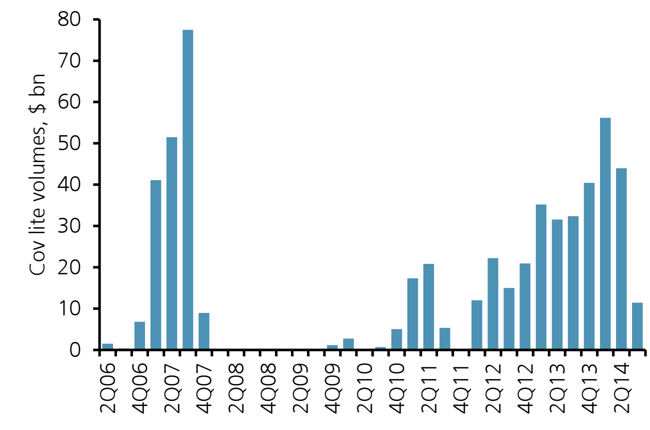
In addition to regulatory scrutiny as a potential headwind to leveraged loan issuance, it seems to us that investor demand for loan funds is moderating as flows into these products have softened.

Figure 8: Investor demand for loan mutual funds is declining following robust growth throughout 2013 and early 2014…



Source: Lipper FMI, S&P Capital IQ and UBS estimates. Note: Tan shaded bars represent year-end AUM, while blue shaded bars represent month-end AUM.

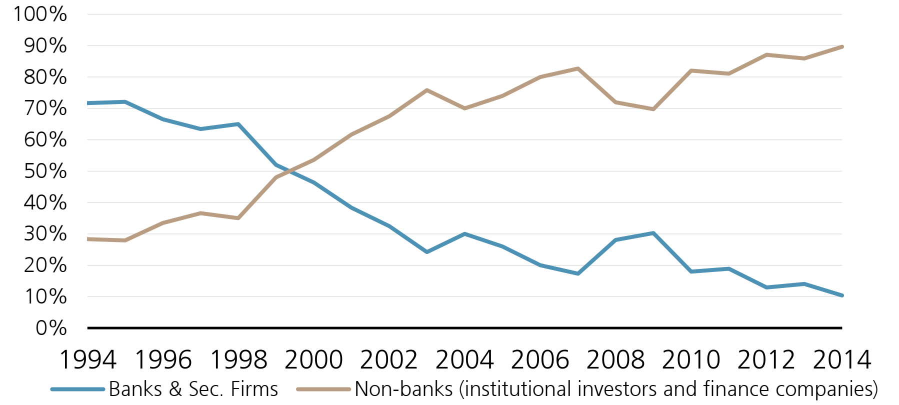
Figure 9: …with both lower demand and regulatory pressure likely leading to a decrease in covenant-lite deals after reaching a peak in 1Q14



Source: Dealogic, UBS estimates

Looking ahead, we forecast leveraged loans outstanding to rise from US$832bn in 2014 to US$953bn in 2015, or at an annual growth rate of 14.5%. Taking a three-year view, we estimate the leveraged loans market to grow to US$1,075bn by 2016 and US$1,201bn by 2017.

Figure 10: Primary market for highly leverage loans – banks vs non-banks

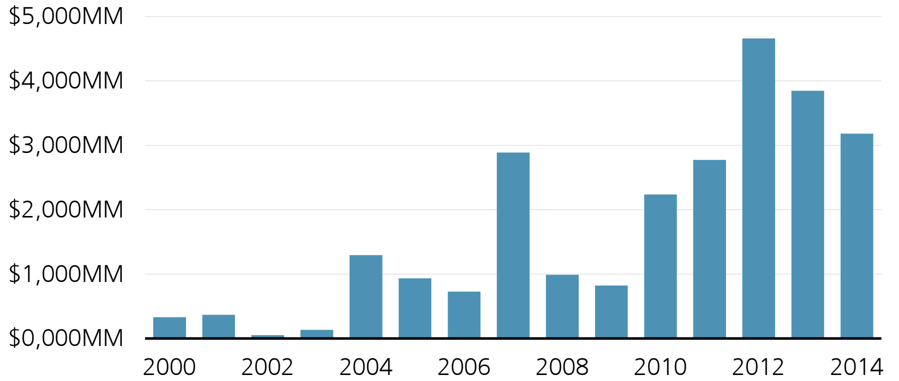


Source: S&P Capital IQ LCD

Further regulatory scrutiny and higher capital headwinds ahead for leveraged lending

We expect bank underwriting and ownership of leveraged loans to continue to decline, as regulatory scrutiny intensifies and the capital requirements of holding these risky assets become more onerous, as US banks faced increasing scrutiny of leveraged lending practices in 2014 – pressure we do not expect to abate in 2015 and beyond. As such, we forecast non-banks' market share to rise from 90% in 2014 to 92% in 2015 and 95% in 2016 – a level that we think will stabilise in 2017.

Figure 11: Business development companies (BDCs) equity issuance 2000-14



Source: Dealogic

The BDC sector has raised US$17.5bn of capital to take advantage of these headwinds for the banks

In our view, these forces have combined to force leveraged lending away from banks and to a broader base of smaller, less systemically important financing entities, including asset managers, pension funds, insurance companies and business development companies (BDCs). The BDC sector has raised approximately US$17.5bn of equity capital since the financial crisis to take advantage of less leveraged lending activity at banks.

Within our coverage universe of BDCs, Ares Capital Corporation (ARCC), Golub Capital (GBDC) and Apollo Investment Corporation (AINV) are best capitalised with first-class origination platforms and are in the strongest position to outperform in an environment of continued disintermediation of leveraged lending from banks. Our Buy rating and $20 price target on ARCC is based on a blend of an 8.5% yield requirement applied to our 2015 dividend estimate of $1.70 per share and a 1.1x P/BV multiple, based on our 2015 book value estimate of $17.49 per share. In addition, we estimate 14% earnings growth at ARCC in 2015. We are projecting 15% EPS growth at GBDC in 2015, and have a Buy rating and $19.50 price target,

based on a blend of a 7.6% yield requirement on our dividend estimate and a 1.2x P/BV multiple applied to our book value estimate. At AINV, we are expecting flat earnings, but a rising dividend in 2015. We have a Buy rating on AINV with a $10 price target, based on a blend of a 9% yield requirement on our 2015 dividend estimate of $0.91 per share and a 1.1x P/BV multiple applied to our 2015 book value estimate of $9.11 per share.

Residential mortgage

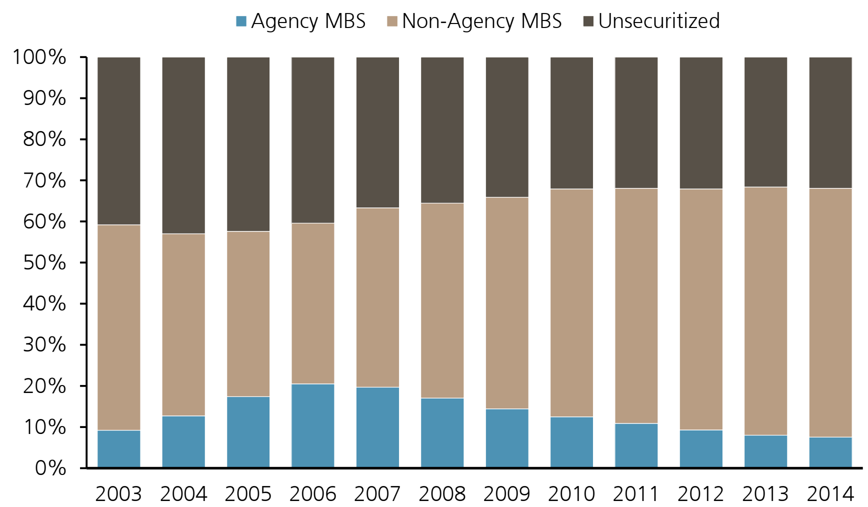
Non-bank originations of mortgages are rising, as regulatory pressures on banks increase

We expect residential mortgages and related assets, a core bank asset class, to be disintermediated by the non-banking sector, as regulatory pressures drive the shifting of this asset class away from bank balance sheets and onto non-bank balance sheets. We expect these regulatory pressures to emerge in a number of ways: higher capital requirements, higher costs, and restrictions on underwriting. In addition, the future reform of the GSEs will likely reduce mortgage origination volumes, given the reduced role these enterprises will likely have in the mortgage market. We have already started to see non-bank originations steadily take share in the origination market, rising to 39% in 2014 from 16% in 2012.

REITs and hedge funds are expected to be aggressive bidders for mortgage assets

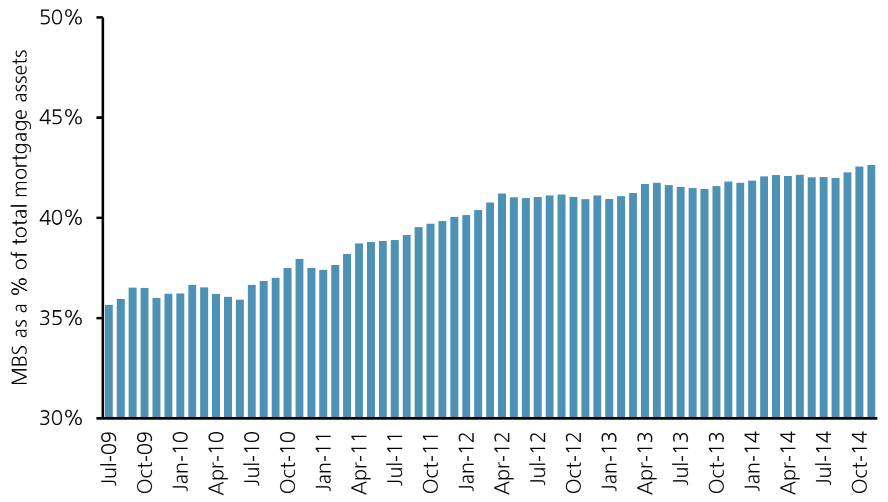
Higher capital requirements on residential mortgage whole loans should continue to pressure banks to sell rather than retain the vast majority of their residential loan production. Under the new Basel 3 regulations, capital risk weighting for residential whole loans is 50%. With this elevated capital requirement, we expect banks to focus on higher quality mortgages or the super prime segment of the market. With no such capital requirements, we expect REITs and hedge funds to be aggressive bidders for mortgage assets. In addition, the establishment of the Qualified Mortgage (QM) definition should restrain mortgage production. Tied to the QM definition is the ability -to-repay rule, which has tight parameters in terms of underwriting characteristics. Loans that fall out of the QM definition could be subject to litigation, as they are outside the safe harbour. As a result, we think it is highly unlikely that banks will have a significant presence in the non-QRM market – a market we expect to grow rapidly over the next several years.

Figure 12: Agency MBS as a percentage of the total mortgage market



Source: Inside Mortgage Finance and UBS estimates. Note: 2014 figures represent 2Q14 data

Figure 13: Agency and non-agency MBS as a percentage of total mortgage assets on bank balance sheets has continued to increase moderately



Source: FRB H8 data and UBS estimates. MBS includes agency and non-agency.

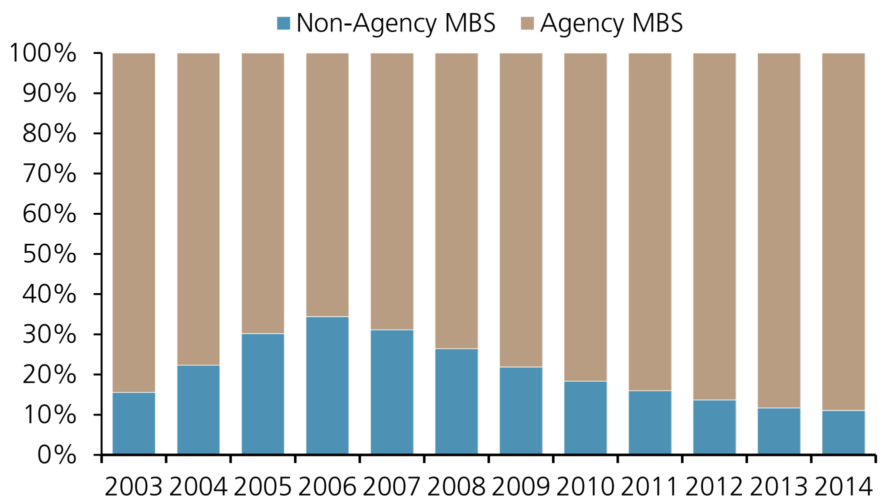
Banks are at a disadvantage in securitisations, as they are forced to have a higher retained interest

In addition, in conjunction with GSE reform, we expect bank loan sales to the GSEs/FHA to decline, due to higher g-fees and the eventual privatisation of Fannie and Freddie. Private-label securitisation will likely make up the shortfall and banks are at a disadvantage in securitisations, due to capital requirements that force ownership of the retained interest. Over time, we expect nearly 50% of GSE/FHA loan sales to switch to private-label MBS executions (down from about 80% today).

The proportion of non-bank originations of residential mortgages is set to rise

In 2014, residential mortgage originations totalled US$1,122bn. We forecast this to rise to US$1,222bn in 2015, but remaining more or less at this level over the following two years. However, given regulatory constraints on banks, we estimate the share of non-bank originations to rise to 46% in 2015 and 55% by 2017.

Figure 14: The supply of non-agency MBS outstanding continues to decline after peaking in 2006



Source: Inside Mortgage Finance and UBS estimates. Note: 2014 figures represent 2Q14 data.

We expect **Redwood Trust** (RWT) to benefit, given the company's jumbo mortgage origination platform, low cost of capital and industry-leading securitisation channel. We are estimating approximately 70% EPS growth in 2015 at RWT, and have a Buy rating with a $24 price target, based on a 10.0x PE multiple on our 2015 EPS estimate of $2.41.

Redwood Trust is a likely beneficiary of this process

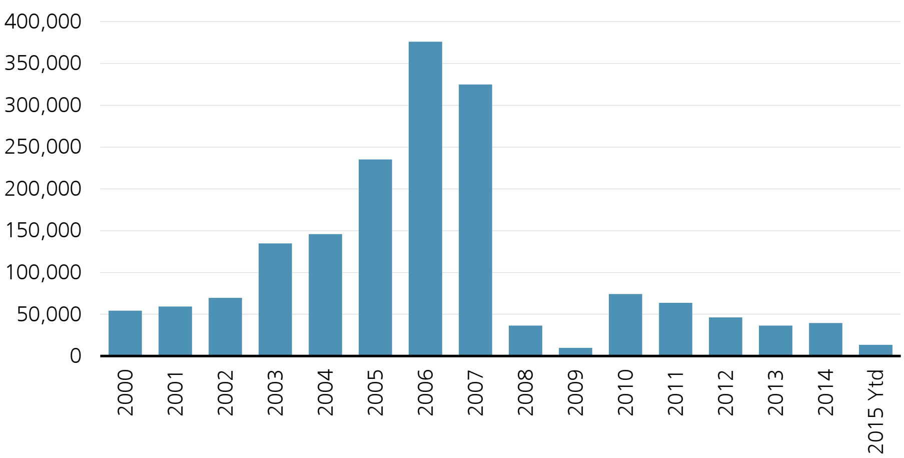
At the opposite end, we expect financial disintermediation to most negatively impact the agency REIT model. The two largest mortgage REITs are **Annaly Capital Management** (NLY – Neutral rating with a $10.50 price target) and **American Capital Agency** (AGNC – Neutral rating with a $22 price target). This model is predicated on the use of substantial leverage, which is achieved through broker-dealer provided repurchase agreement (repo) financing. The deep availability of financing that is required to drive acceptable ROEs in this business is driven by the pristine nature of the underlying collateral (i.e., agency MBS securities) and the cheap financing rates charged by banks.

Agency REITs under pressure

We have mentioned in this report that the new capital and liquidity standards required by the new Basel and Fed rules are restrictive to traditional bank business. We expect that the new liquidity rules (i.e. liquid coverage ratio (LCR)) proposed by the Fed to substantially reduce returns in the repo business will likely result in increased repo rates or complete exits of the business from bank trading desks. In addition, the reduction of agency MBS over time (granted we believe this will be a multi-year process) will likely put upward pressure on pricing, which could hurt yield-oriented investors. Overall, investment spreads and leverage could ultimately reduce ROEs, and put negative pressure on dividend rates and thus capital raising.

The LCR could substantially reduce returns in banks' repo businesses

Figure 15: Europe – mortgage-backed security (MBS) issuance – deal value ($m)



Source: Dealogic

In Europe, mortgage-backed security issuance has declined dramatically since 2007. The boom that took place a decade ago, notably in Spain and Italy, was driven by steeply increasing property prices and infrastructure investments that led to large real estate developments. Demand for highly-rated fixed income investments also supported massive MBS origination. Spain, Ireland, the UK (many of the City's landmark buildings are actually financed through CMBS), the Netherlands, Germany and, to a lesser extent, Italy were the hotspots.

In Europe, MBS issuance has declined dramatically since the crisis…

The rapidly increasing number of defaults in the underlying loans and weakening demand (after the collapse of the US securitised mortgage market) resulted in a collapse in the MBS market that remains considerably smaller than pre-crisis levels. New issuance levels are recovering slowly with European authorities already making clear that they want issuance levels back at much higher levels.

…but levels are slowly recovering and regulators are supportive of the market…

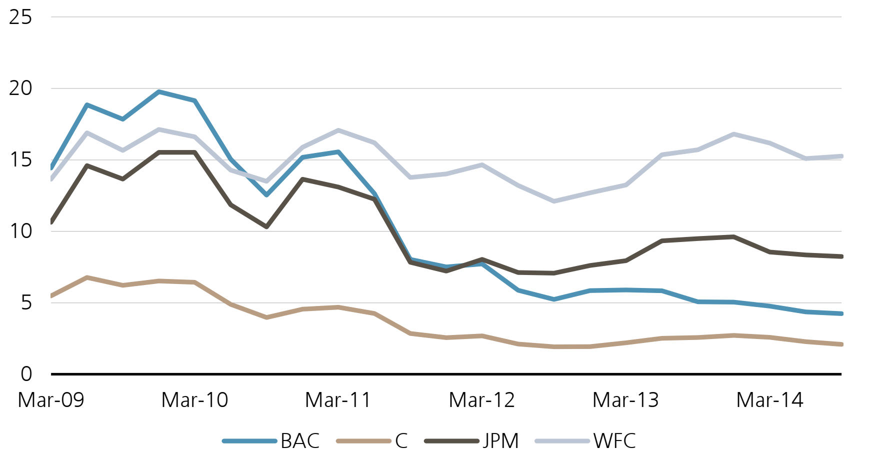
Hedge funds, asset managers and private equity firms are buying up MBS from banks (both from the IBs, and German, Dutch and other peripheral banks) at the moment. Given punitive capital requirements, banks are unlikely to be active investors in this area in the future, but could still play a role in issuance and servicing.

…while, at the same time, encouraging banks to divest MBS assets

Mortgage Servicing Rights (MSRs)

Tougher capital requirements do not just pertain to residential loans, as residential mortgage servicing has also come into the cross hairs of the regulators. Historically, mortgage servicing has been a core bank function. However, since the end of the financial crisis, banks have sold or are committed to sell MSRs totalling more than $1tn of the approximately $10tn mortgage market. As of 30 June 2014, approximately 80-85% of MSRs were still owned by banks.

Figure 16: Sell-off – bank mortgage servicing rights held ($bn)



Source: Company reports

We expect this number to decline, as banks face pressure to reduce their MSR exposure, due to heightened capital reserve requirements under Basel 3, regulatory scrutiny, and a more challenging servicing environment; we forecast the non-bank share held by the top 18 servicers to rise from 21% in 2014 to 26% in 2015 and 45% by 2017.

Higher capital requirements and regulatory scrutiny are driving banks to reduce MSR exposure

Servicing rights have been one of the assets that have been given the harsher capital treatment that will be applied to the asset class under Basel 3. Under Basel 3 rules, not more than 10% of any U.S. banks' common equity Tier 1 capital can be comprised of MSRs. Furthermore, banks' deferred tax assets and MSR holdings cannot represent more than 15% of common equity Tier 1 capital. In addition, the risk weights on mortgage servicing rights that are not deducted have risen from 100% (under current Basel 1 rules) to 250% under the new Basel 3 rules. Over the past several quarters, returns on MSRs have suffered, as a result of high expenses associated with credit costs, due to high delinquencies, and litigation arising from foreclosure moratoriums. Furthermore, banks have been less focused on their non-

core customer base, and, therefore, less willing to service borrowers that fall outside of their core customer base.

In the future, loan originators might start to sell MSRs on a recurring basis, but, at present, MSRs are being sold at a discount to historical pricing levels

For a sense of the potential opportunity, the forward bulk servicing pipeline has been estimated to be anywhere between $300 billion and $1 trillion – a forecast the management teams of the three largest specialty servicers have provided over the past several years. We estimate that MSRs on approximately $300bn of mortgages are currently for sale, requiring a capital investment of approximately $2-3bn, based on current pricing dynamics. We believe many non-bank servicers will continue to sell a portion of their excess MSRs, due to capital constraints. Approximately $1-2tn of MSRs could be sold over the next several years, based on our estimates. In addition, we expect approximately $1-2tn of new loans to be created annually. We believe this creates an opportunity to enter into "flow arrangements," whereby loan originators agree to sell excess MSRs on a recurring basis, often monthly or quarterly, on newly originated loans. We believe that MSRs are being sold at a material discount to historical pricing levels, although increased competition for these assets has driven prices higher.

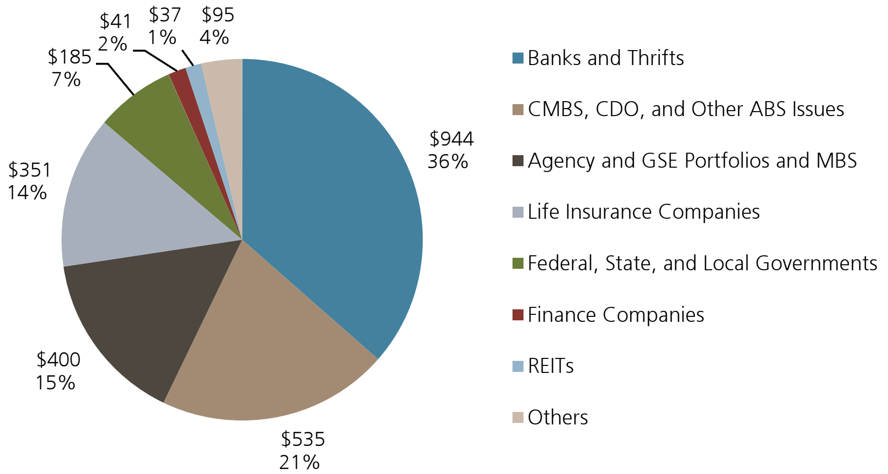
Within our coverage universe, we believe Nationstar Mortgage Holdings (NSM) and New Residential Investment Corp (NRZ) are positioned to be winners, as mortgage servicing rights and excess servicing rights continue to flee banks. We are estimating approximately 50% earnings growth in 2015 at NSM, on which we have a Buy rating with a $45 price target, based on an 8.0x PE multiple applied to our 2015 EPS estimate of $5.62. At NRZ, we estimate 11% EPS growth in 2015, and we have a Buy rating with a $17 price target, based on a 10% yield requirement applied to our 2015 dividend estimate of $1.60 per share.

Commercial and multi-family mortgages

CRE loans have high risk weights, encouraging banks to reduce exposure

We also expect commercial borrowers to have to increasingly look to non-bank/alternative sources for credit. With increased regulation and high levered balance sheets, we project reduced relative commercial and multi-family mortgage lending from banks. Basel 3 requirements assign a 100% risk weight (twice the residential whole loan 50% weight) to commercial real estate loans – a significant disincentive for banks. Given the substantial size of bank commercial mortgage holdings (~36% of total outstanding debt), a mere 20% decrease in bank commercial mortgage holdings would represent a significant dislocation toward non-bank lenders. We have also seen the FHFA gradually reduce its participation in the space, particularly in multi-family, which would likely continue as a part of comprehensive GSE reform. Lastly, while insurer lending has increased since the 2009 lows, given that their levels are above their 2007 peak, we do not see their share of loans increasing significantly.

Figure 17: Commercial and multi-family mortgage debt outstanding (3Q14, $bn)



Source: Mortgage Bankers Association

Some non-bank lenders are expected to grow fast

Our top picks to increase their market share of commercial and multi-family mortgages are **Blackstone Mortgage Trust (BXMT)** and **New York Mortgage Trust (NYMT)**. We are estimating 23% earnings growth at BXMT in 2015, and have a Buy rating on the stock with a $34 price target. It is based on a blend of a 7% dividend yield requirement on our 4Q15 annualised dividend estimate of $2.72 per share and a 1.1x P/BV multiple applied to our 2015 book value estimate of $27.20. The company has been effective at sourcing originations in both the US and Western Europe through Blackstone Real Estate Debt Strategies (BREDS), Blackstone's (ticker: BX – not rated) commercial real estate lending platform recently purchased a $4.6bn commercial loan portfolio from GE Capital, related to GE's exit from real estate and desire to wind down banking activity. NYMT has partnered with external manager RiverBanc to originate multi-family investments and has been effective at raising capital to pursue opportunities, most recently by becoming a member of the Federal Home Loan Bank of Indianapolis. We have a Buy rating on NYMT with a $10 price target, based on an 11% dividend yield requirement applied to our $1.08 annualised dividend estimate.

In addition, we expect **Northstar Realty Finance** (NRF – Buy rating with a $23 price target) to benefit from ongoing financial disintermediation in the commercial real estate market. Over the past year, NRF has been one of the fastest acquirers of commercial real estate, building a $12bn portfolio of senior living, lodging and multi-family/manufactured housing assets.

This is not a US-only phenomenon

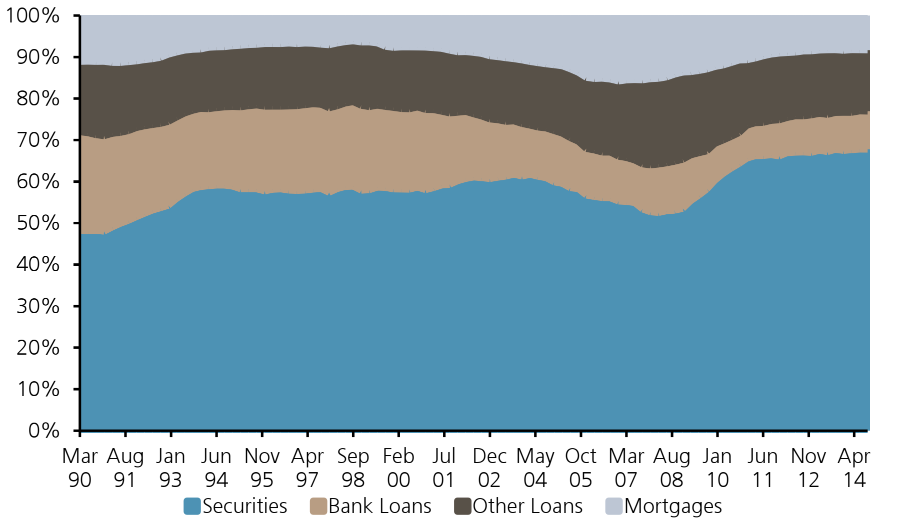
In addition, this growth has spread to Europe where the company announced the formation of a European REIT, which will be spun out of the company in 2H15. In Europe, the company has made several large acquisitions from banks experiencing capital issues. The asset size of the European REIT is expected to surpass $2bn by the time of the spin-off.

In contrast, **ZION** (Sell) and **MTB** (Neutral), two regional banks with reasonably large CRE businesses, could potentially lose out incrementally if we see increasing non-bank involvement in that market. We are already seeing smaller banks and non-banks (primarily insurance companies) involved in these markets, adding to competition on both pricing and terms.

Corporate bonds

Another area of credit disintermediation, notably for corporates, is via bond markets. This is not a new phenomenon, and the development of which varies considerably by region and country.

Figure 18: US – corporate funding sources



Source: Thomson Datastream, UBS

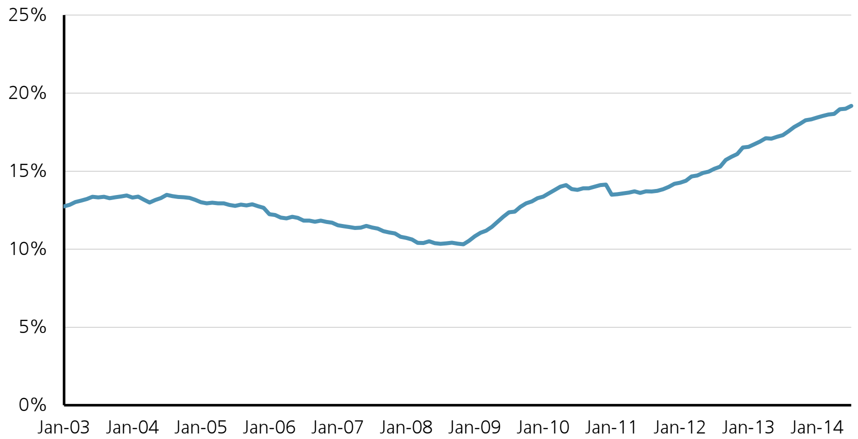
The most developed bond market is in the US where 68% of corporate funding comes via bond issuances (including commercial paper). In contrast, corporate funding via bank loans only represents 9% with other funding sources coming from other loans (15%) and mortgages (8%).

In the US, bank loans to corporates have been falling for a long time

The importance of bank loans for corporates has been in decline for some time, as cheaper alternative funding sources became available: the proportion of funding via bank loans stood at 24% in 1990, while a decade later, it fell to 19%. In contrast, over the same time period, the proportion of corporate funding via bond markets rose steadily from 48% to 58%.

Going forward, we expect loan growth to be 3.4% in 2015, before falling to 2.9% in 2016 and 2.7% in 2017. Although the Fed Fund rate is expected to rise later this year, the flattening of the yield curve suggests longer-term corporate funding via bond markets will remain competitive. As such, we expect capital markets to remain a dominant source of corporate funding over the next three years.

Figure 19: Eurozone – debt securities/total corporate debt



Source: ECB, UBS

In Europe, corporate funding is predominantly provided by bank loans

In Europe, corporate funding has been predominantly based on bank loans with capital market funding for corporates remaining under-developed by US standards. Currently, 81% of all corporate funding in the eurozone comes from bank loans. Over the past decade, this has fallen slightly from an elevated level of 87% in 2003.

However, going forward, as corporate funding needs rise, we think credit disintermediation could be more apparent in Europe. European authorities have already made clear that they want deeper capital markets to help fund corporates. Recent statements and initiatives (e.g. QE) from the ECB to boost (SME) securitisation are meant to develop the securitisation market in Europe. We see a significant opportunity for capital market banks, like Deutsche Bank or Credit Suisse as well as BNP, over the medium to longer term. However, in the context of the overall investment case, we do not see this (yet) as a key driver over the coming 12 to 18 months.

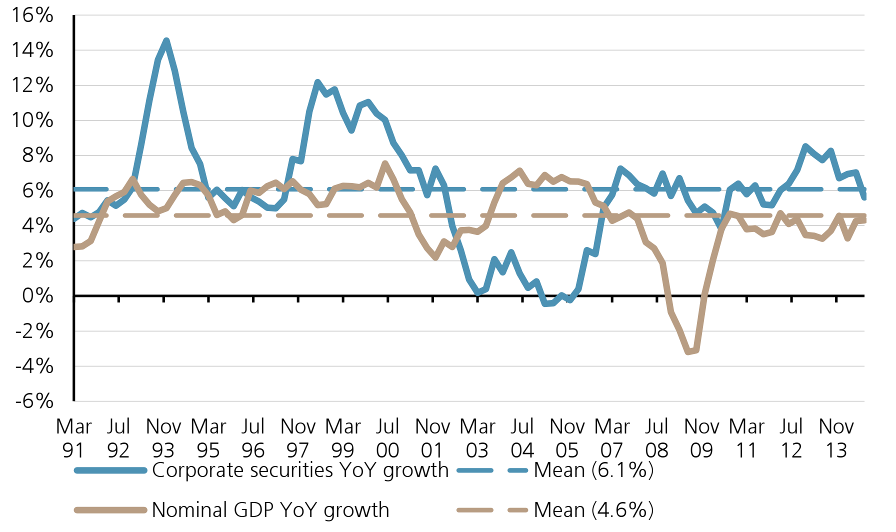
China's total social financing

China has a significant shadow banking market, which has grown rapidly over the past decade. Reflecting this, the proportion of credit provided by banks within the system, best measured by looking at the Total Social Financing (TSF) data, has declined from 98.6% in 2002 to 69.8% in 2014.

Corporate bonds are growing rapidly in China, but the market is heavily distorted by regulation

Corporate bonds formed 14.9% of TSF in 2014 and have been growing at a CAGR of 41.6%, with no sign of slowing. The corporate bond market is dominated by banks, which are the largest holders of corporate bonds. We do not see growth in issuances necessarily as a factor disintermediating the banks, as corporate bonds provide banks with a spread over regulated deposit rates, providing a use for excess liquidity, while, at the same time, not increasing loan/deposit ratios.

Figure 20: US long-run corporate securities growth vs. nominal GDP growth



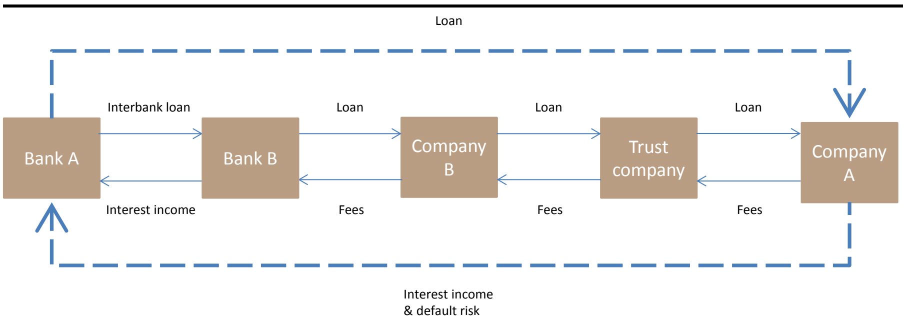
Source: Haver, UBS

Besides corporate bonds, there have been three other key sources of credit disintermediation in China:

- **Entrusted loans** have been another key source of credit disintermediation, having grown significantly from a very low level in 2002 to 15.7% of TSF in 2014. The original concept of an entrusted loan is a corporate-to-corporate loan that is "intermediated" by a bank or finance company. While entrusted loans have served as an alternative source of credit, banks have also benefitted from arrangement fees (around 10-15bp) that have boosted commission income with no credit risk to the bank.

- **Trust beneficiary products** (TBR) are another type of entrusted loan that appeared in 2012. TBRs simply operate as a way for a bank to make a loan to a borrower in a capital efficient manner with no impact to loan-to-deposit ratios and little to no provisioning. The default risk of the loan almost always sits with the originating bank, with other participants receiving fee and commission income that cumulatively rarely exceeds 100 bps. Total outstanding TBR and DAMP issuance as at year-end 2013 was estimated at Rmb6.3tn.

Figure 21: TBR structure



Source: UBS

- **Trust loans** are loans provided by trust companies, i.e., companies that have no retail deposit base and are not subject to interest rate regulation in the same way as the banks. Trust loans have also grown significantly since they first appeared in 2006. In 2013, trust loans represented 10.8% of TSF, having

grown at a CAGR of 55.9% from 2006 to 2013, although there has been significant volatility in the growth from year to year: the peak annual growth rate was 532% in 2012 but 43% in 2013.

Future trends

Chinese regulators are concerned about the growth of TBRs…

Chinese regulators are concerned about the rapid growth of TBRs and similar structures for several reasons, including: (1) under-provisioning (because TBRs appear in investment portfolios, they are not subject to collective provisioning); (2) significantly understating true loan/deposit ratios; and, most importantly, (3) potential concerns over the levels of capital supporting these structures (i.e. excessive leverage); and (4) the effect this form of regulatory arbitrage is having on the effectiveness of monetary policy.

…and are starting to intervene

In May 2014, regulators issued Circular No. 127 followed by Circular No. 140, introducing strict regulation over the interbank market. The lending by banks facilitated by TBRs was a key target of this legislation. This had the effect of reversing the growth of TBRs, and in Q3 2014, the first reduction in TBRs was observed in data released by the China Trustee Association. We believe this trend is likely to continue.

It should be noted that we do not see the TBR structures as a form of bank disintermediation (rather as a form of regulatory arbitrage). Thus, it follows that the unwinding of these structures over time is not an indication of re-intermediation of the banks. Rather, we see this as an application of regulatory pressure and a consequent reduction in regulatory arbitrage that is intended to reduce the risk of bank failures at the cost of lower profitability for some banks (those with capital and/or loan/deposit ratio constraints).

We would expect any unwinding to take some considerable time, as the full imposition of tighter regulations implies a form of credit tightening at a time when the monetary authorities are currently in an easing mode. We would also note that the Chinese financial system has been remarkably inventive in creating financial structures to work around "excessive" regulation. Consequently, we would not rule out the possibility of new financial products being created to work around financial regulation, perhaps with the participation of the regulatory bodies.

Capital markets disintermediation

Disintermediation of universal banks, investment banks and brokers

Is the universal banking model dead? Many commentators would give a nod of approval to this statement. Others, including Deutsche Bank and JP Morgan, will argue that large global customers will always need large global banks for both on- and off-balance-sheet business. We will only know who is right in 10 years' time or so, but in the meantime we think the disintermediation of the investment/universal banking sector is ongoing – but driven by regulatory tightening.

Is the universal banking model dead?

In simple terms, financial intermediation done by banks has been about borrowing short term and lending long term using a significant amount of balance-sheet leverage. Basel 3 and other regulatory developments could reduce the attractiveness (read: ROEs) of financial intermediation, given lower balance-sheet leverage and higher capital requirements for the same underlying revenue-producing positions.

Trading desks

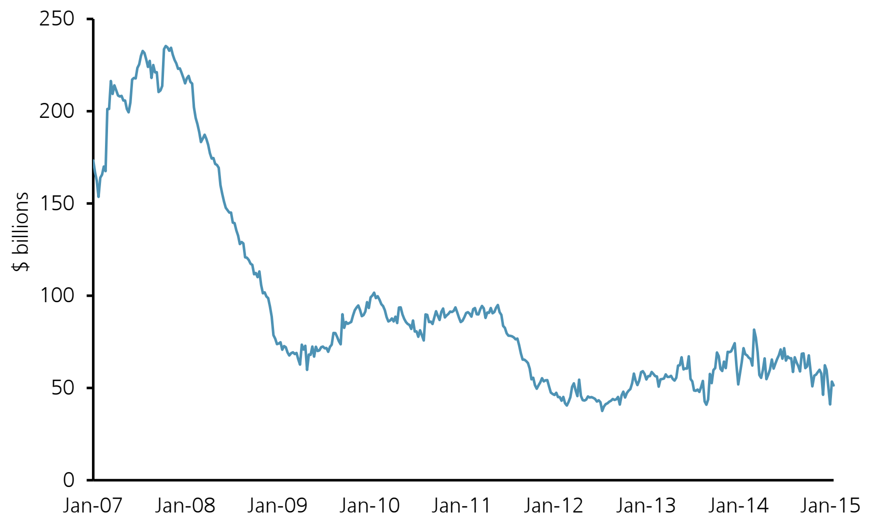
In the US, the Dodd-Frank Act and Basel III capital rules have led banks to hold significantly fewer inventories of credit securities. This reduced support by dealers creates opportunities for other players to enter the market (and could support higher levels of volatility through less liquid markets). For example, many banks have exited the collateralized loan obligation (CLO) business in the past few years, while Apollo acquired CLO managers and grew its AUM in that business dramatically.

Dodd-Frank and Basel III are forcing banks to reduce credit securities inventories…

FICC revenues at the bulge bracket banks in the US remain under pressure. We estimate that total FY2014 FICC revenues for those firms were more than 30% lower in aggregate than in FY2010.

…putting FICC revenues under pressure…

Figure 22: Dealer inventory of corporate bonds remains low



Source: NY Fed and UBS estimates. Note: Dealer inventory for corporate securities with maturities greater than one year. Data for the period from April 2013 onward is based on the Fed's revised disclosures and has been indexed to the data as of March 2013.

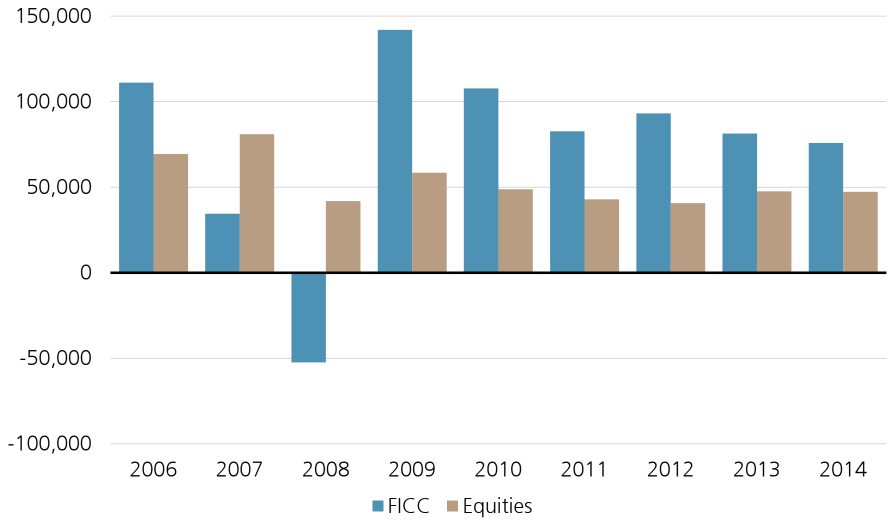
In the US, the new regulatory environment has created opportunities for smaller firms. Specifically, **Jefferies** has used the opportunity to poach talent from big firms and work to build or acquire capabilities. Also, **Stifel Financial** has acquired several firms in the last few years, in an attempt to add capabilities and scale as 'Systemically Important Financial Institution' (SIFI) banks are prevented from bidding on assets. The interesting thing about these developments is that the growing firms are structurally limited in how large they can get by the Dodd-Frank Act, so while it may create an opportunity for smaller firms to gain some share, we doubt the growing firms will be able to fill the void left by the bulge bracket firms' pullback.

…creating opportunities for some smaller firms

We see FICC revenues as a much more likely a target of disintermediation than equities revenues, as FICC is far more capital intensive and therefore more impacted by the new Basel 3 capital rules. Also, the fact that most FICC businesses operate in dealer markets means they are at greater risk of scrutiny under the Volcker Rule – and the margins of these dealer markets will likely be more negatively impacted by a shift to exchange trading and central clearing. While some parts of the equities business do have some capital intensity (e.g. prime brokerage), we have seen bulge-bracket firms reduce the capital allocated to those businesses, usually by cutting or reducing repo operations.

Equities businesses are less capital intensive than FICC

Figure 23: Total FICC revenues (US$m) across US bulge-bracket firms have declined meaningfully, but equity revenues have rebounded in recent years



Source: Company reports, UBS estimates. Note: Includes revenues for the nine bulge-bracket firms. Revenues for FY2014 are estimated based on the firms that have reported results.

In Europe, most investment banks' balance sheets are dominated by fixed-income positions. Assuming that the sector has done significantly more than 50% of the planned/required balance-sheet shrinkage, and assuming some cyclical recovery in some credit, rates and FX businesses, we would expect industry FICC revenues to trough at the current cUS$75 billion level (2015E) – almost 50% below the 2009 peak.

In Europe, most IBs' balance sheets are dominated by FICC positions

Figure 24: FICC revenues over time

FICC (w/adjustments)												
US$mn	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015E**	**2016E**	**2017E**
JP Morgan	8,369	5,881	1,154	18,680	14,702	14,784	15,412	15,468	13,354	13,100	13,493	12,754
Citigroup	9,468	11,785	13,606	23,283	14,263	11,323	14,361	13,322	11,802	12,800	13,120	13,038
Deutsche Bank	13,063	11,913	459	13,690	13,130	11,873	11,331	9,037	9,075	7,234	7,379	7,615
Goldman Sachs	14,262	16,165	2,982	22,851	13,572	8,618	10,329	8,871	8,891	9,400	9,682	10,282
Barclays	8,832	9,004	13,565	20,244	13,414	9,722	7,863	5,999	4,929	3,796	3,910	3,975
Bank of America	4,428	-3,602	-7,603	12,724	12,891	8,107	11,007	9,659	9,013	9,350	9,631	9,919
Credit Suisse	8,375	4,064	-9,400	9,664	6,138	3,764	5,707	5,205	5,428	4,632	4,937	5,144
Morgan Stanley	9,291	250	-1,487	8,315	6,589	4,423	5,630	4,197	4,261	4,200	4,368	4,608
BNP Paribas	4,220	3,965	3,424	11,436	7,169	4,994	5,854	4,799	4,707	4,065	4,268	4,481
Société Générale	3,263	-1,255	-2,193	1,508	3,474	2,451	3,586	3,120	2,974	2,544	2,620	2,751
UBS	7,277	-14,530	-29,468	-504	2,380	2,582	2,005	1,839	1,576	1,344	1,343	1,367
Merril Lynch	7,552	-15,873	37,423	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bear Stearns	4,190	685	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Lehman Brothers	8,447	5,977	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total	**111,036**	**34,430**	**22,461**	**141,892**	**107,722**	**82,642**	**93,084**	**81,517**	**76,010**	**72,465**	**74,750**	**75,935**

Source: UBS research / banks

Advisory

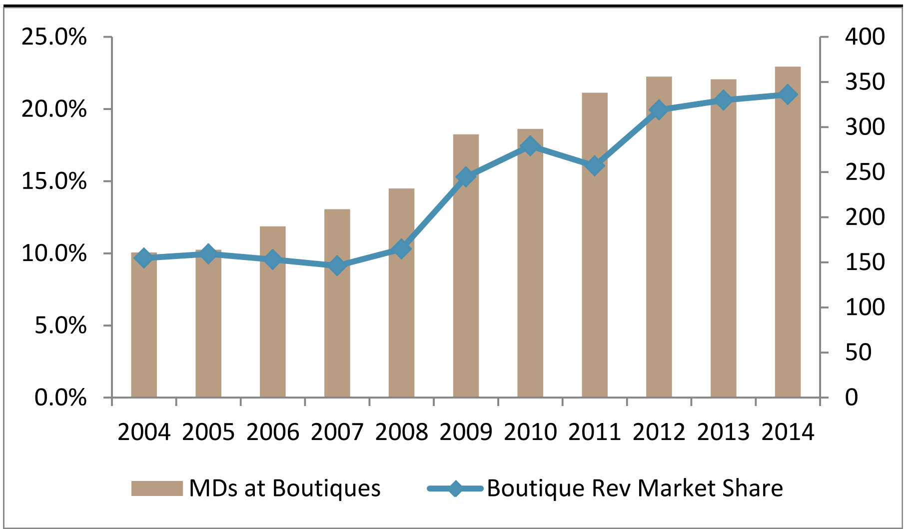
M&A boutiques have been gaining market share

Since the financial crisis, the M&A boutiques have steadily gained market share. The narrative around these share gains has been attributed to the demand for independent advice.

However, we believe there has been a far more important and direct driver of these share shifts. Specifically, the boutiques have been able to hire MDs away from bulge-bracket firms, particularly immediately after the financial crisis, mainly driven by the following factors, in our view.

- The changed structure of bulge-bracket compensation has been viewed as less attractive, particularly in light of deteriorating bulge-bracket firm share prices (in 2007, 2008 and 2011).
- Losses or soft results in other parts of the bulge-bracket investment banks (i.e. FICC trading) led to a shrinking comp pool, even though advisory revenues were holding up better.
- A desire for a more narrowly focused platform that made it easier to sell to clients and allowed bankers to be paid more directly for the revenue that they generate.

Figure 25: The boutiques have gained market share since the financial crisis, but only to the extent that they can hire advisory MDs from the bulge brackets



Source: Company data, UBS estimates. Advisory revenues for MC, EVR, GHL and LAZ as a percentage of total advisory fee pool (includes boutiques, JPM, C, BAC, GS, MS, CS, DBK and UBS, as well as predecessor firms). Percentage for 2014 based on 3Q14 YTD advisory revenues.

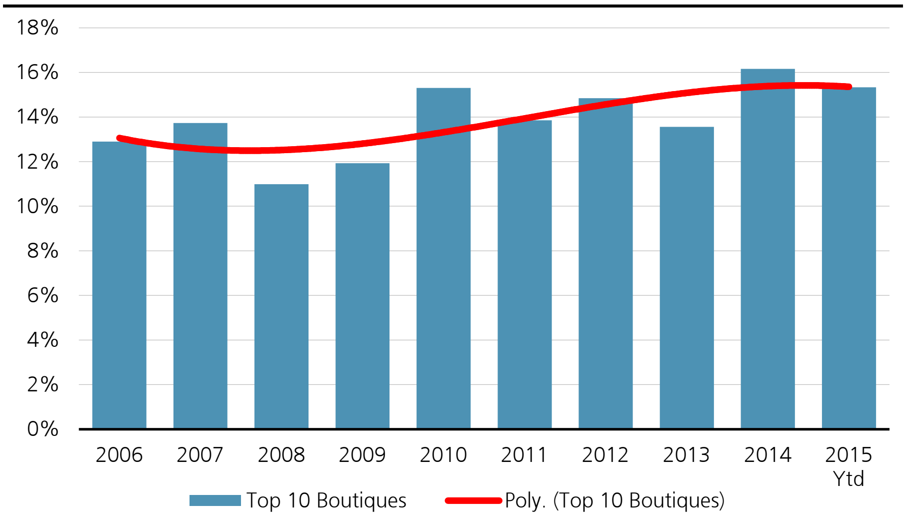
But the hiring environment for boutiques is becoming more competitive

At this point though, most boutiques have indicated that the hiring environment is more competitive, and bulge bracket firms are more actively defending bankers. Therefore, we are not optimistic about the opportunity for boutiques to continue to hire MDs and, as such, continue to gain share.

In Europe, advisory remains dominated by the large players

In Europe, advisory remains dominated by the large players: Goldman Sachs, JP Morgan, Deutsche Bank, Morgan Stanley and UBS are leading the cumulative EMEA league table since 2006 based on net revenues. Smaller boutiques have increased their market share by c300bp to around 15% over the past 10 years. The increase was spearheaded by Lazard and Evercore. The "Big 4" (PwC, Deloitte, E&Y and KPMG) are hovering around a market share of just 1.5-2%. For the time being, we do not foresee materially changing industry dynamics in EMEA.

Figure 26: EMEA completed M&A: Market share of top 10 boutiques (based on net revenues)



Source: Dealogic

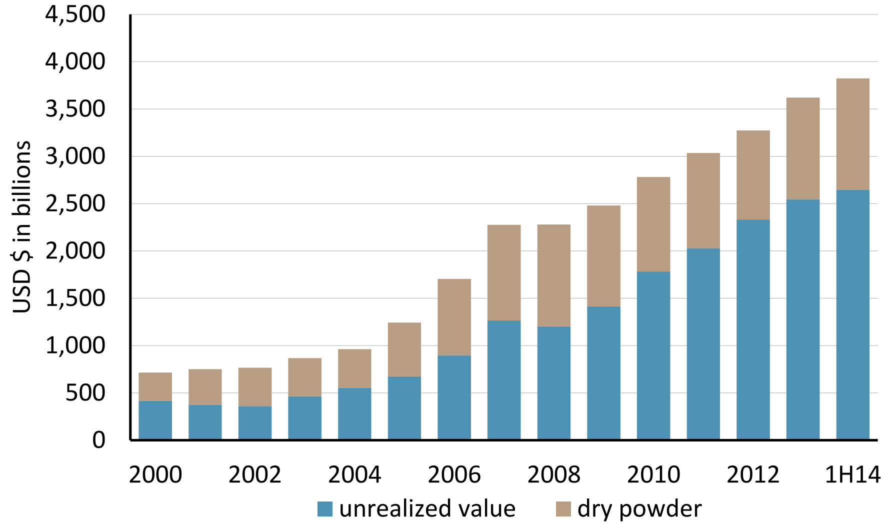
Emergence of venture capital/private equity firms

Private equity AUM has grown rapidly since 2000 and has continued since the crisis

One segment of the financial markets that appears very well positioned to capitalize on the regulatory headwinds facing the traditional banking sector is the alternative asset management segment. Often considered a form of "shadow banking", private equity firms have grown rapidly in the wake of the financial crisis and enjoy numerous tailwinds, including low interest rates, relatively limited regulation (as compared to traditional banks), and an increasing allocation of capital by investors (partially driven by a search for higher yields). As a result of this dynamic, PE firms have been able to take advantage of the challenges facing the banking sector and are increasingly filling the void in areas ranging from leveraged lending to money markets to payday loans.

Looking at the growth of non-bank lending during this secular shift, AUM and dry powder levels at private equity managers since 2000 illustrate the strong tailwinds that these firms have enjoyed. Private equity firms are currently sitting on a record $1.2 trillion in dry powder, with a number of firms focused on expanding in various non-bank lending areas. Within our coverage, both Buy-rated **Apollo (APO)** and **Carlyle (CG)** have benefited from the general industry trends discussed above and have from a trend towards Limited Partners (LPs) consolidating their relationships, which has resulted in much stronger fundraising growth at larger PE firms than at their smaller peers.

Figure 27: Global AUM at PE firms has grown rapidly since 2000



Source: Preqin, UBS

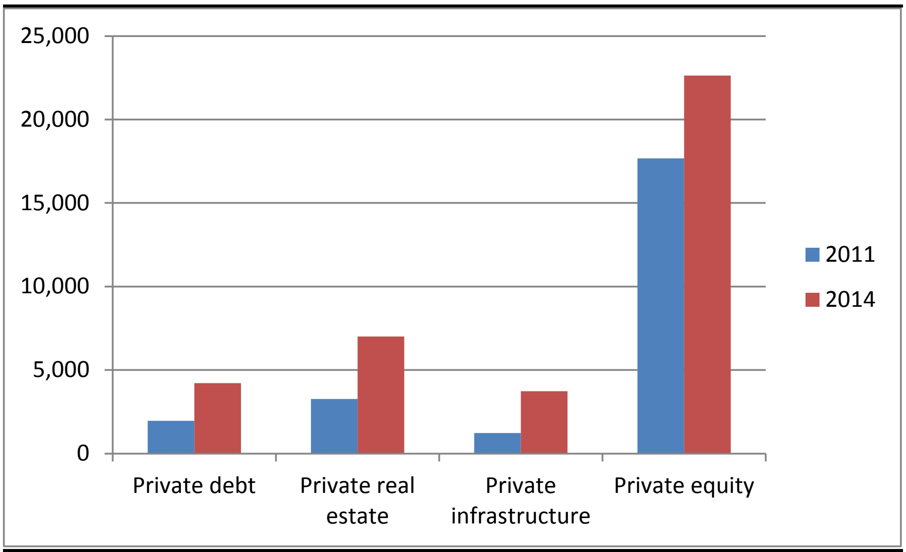
At Apollo, the firm's traditional buyout business has seen AUM largely unchanged in recent years as fundraising has largely been offset by realizations, while its Credit AUM has continued to surge. We view this growth as secular and do not anticipate a slip anytime soon. Apollo is targeting to grow AUM from $160 billion at the end of 2014 to $250 billion or more in the next three to five years, largely driven by growth in Credit.

Likewise, Carlyle has been actively moving into areas where there is a high return and a performance fee characteristic. These include mezzanine lending in energy products, a BDC that does direct lending in middle markets, and CLOs.

In Europe, we have also seen the rise of private equity firms as non-bank providers of financing, as a direct consequence of regulatory tightening. In this area, private equity firms are providing more mezzanine and other forms of private financing as financial disintermediation gathers pace. One example of a beneficiary in this area could be Buy-rated **Partners Group Holding**, which more than doubled its private debt stock of business from less than CHF2 billion in 2011 to more than CHF4 billion in 2014.

Europe has also seen the rise of private equity firms as non-bank providers of financing

Figure 28: Partners Group Holding – assets under management in various business areas (CHF billion)



Source: PGHN

Retail banking disintermediation

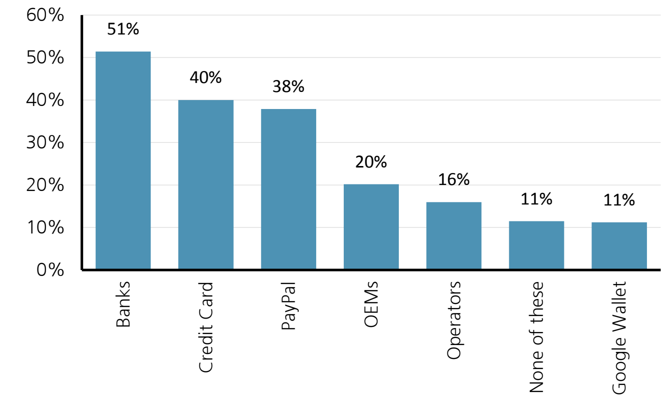
In this section, we focus on disintermediation risk to retail banking in the area of mobile payments. Here, we see two primary areas of disintermediation for banking fees, both of which are enabled by increasing use of mobile devices for financial services and transactions. In developed markets, where consumers do have established banking relationships, we see a risk of disintermediation in traditional payment transaction fees as retailers look to lower their cost of electronic payment acceptance (most evident in the US market). In developing markets, we see disintermediation as consumers take what are essentially traditional banking services from telecom operators in the form of mobile money rather than building a relationship with an established bank – what we term 'Mobile Money'.

Developed markets – retailer disintermediation

In developed markets, banking relationships do not appear under threat…

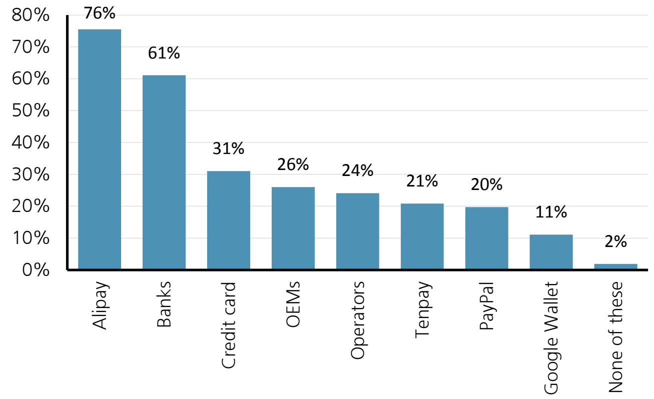
When we look at developed markets, given that the population has a much higher proportion of consumers with banking relationships, there is significantly less risk to banking relationships from telecom operators. Typically, consumers trust their banks much more than they do other companies to provide them with financial services – as can be seen in the consumer survey that we conducted in 4Q14 (see below) on consumers' willingness to trust various participants to provide them with in-store payment solutions.

Figure 29: Most trusted providers of in-store payment solutions (US, UK and Italy only)



Source: UBS Evidence Lab

Figure 30: Most trusted providers of in-store payment solutions (China)

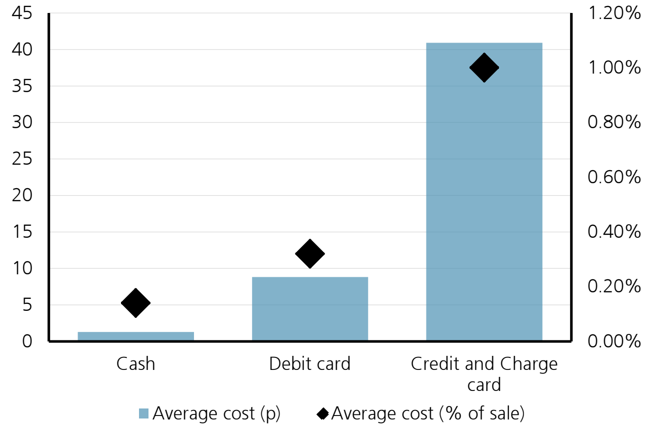


Source: UBS Evidence Lab

… but there is some risk to payment fees

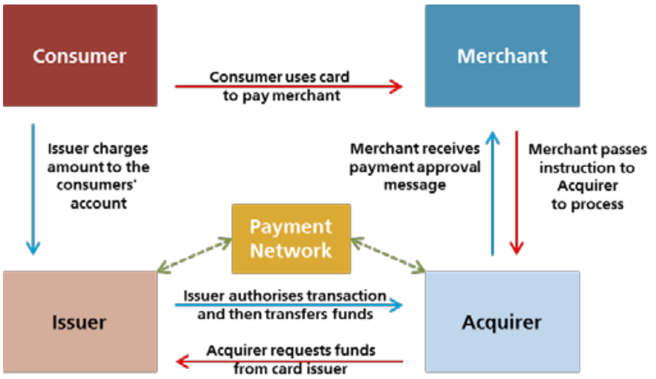
In developed markets, however, there are still risks of disintermediation of banking fees. The most significant risk, in our view, is to the revenue streams that banks now generate from the payments themselves. These transactions have two necessary participants: the consumer (purchaser) and merchant (seller), and then the financial institutions operating on behalf of them – the issuer and acquirer, respectively. Also involved is a payment network that enables the issuer and acquirer to connect to each other without the consumer or merchant needing to provide their actual bank account details – adding security features to the transaction.

Figure 31: Cost to UK retailer of different payment methods



Source: British Retail Consortium - Retail Payments Survey 2013

Figure 32: Four-party payment model

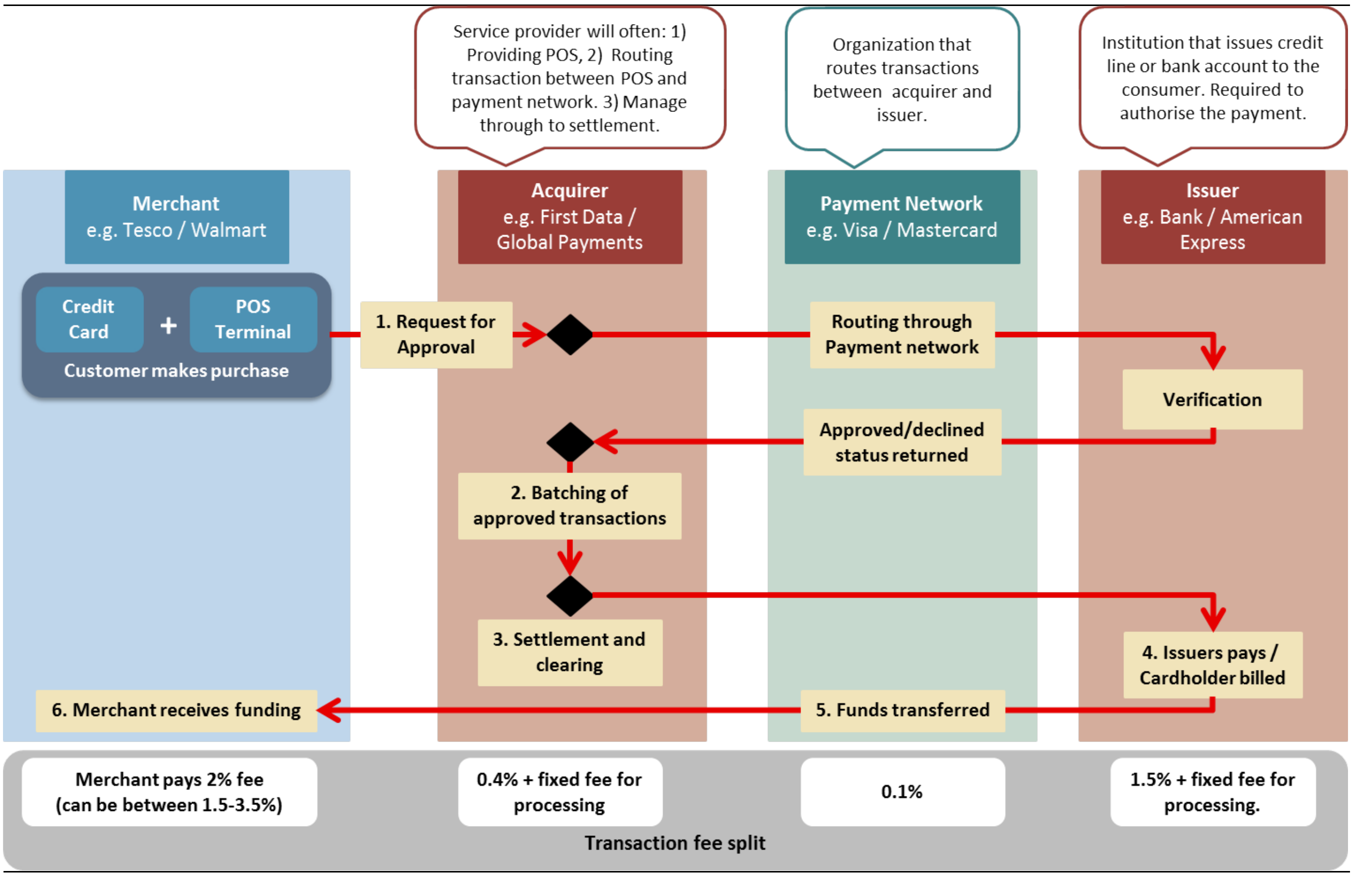


Source: UBS

Some would argue that the increasing use of electronic payment methods such as debit and credit cards has led to significantly higher overheads for retailers in terms of payment acceptance. Even in the UK, where fees are lower than in the US, the British Retail Consortium claims that accepting credit card payments is more than five times more expensive than cash payments.

Before going into detail on the disintermediation risk, we provide below an illustration of a typical electronic transaction and an illustration of how the fee that the merchant pays for the transaction breaks down between the participants.

Figure 33: Transaction flow of a typical electronic merchant payment



Source: UBS, Ingenico, Federal Reserve of Philadelphia. Note: The transaction fee is a mix of a percentage of transaction cost and a fixed fee cost.

The fees in the diagram above are for a credit card transaction, and in some cases can be even higher than this (we see little impact to financial institutions from any disruption to debit card transactions). In the case of debit transactions (Figure 31 above), the fees are significantly lower, so we believe this provides very little in the way of additional revenue to the financial institutions providing the accounts – and they generate profit from these accounts through the other services they provide.

We thus focus our analysis on ways in which credit card revenues could be disrupted by consumers looking at alternative payment methods.

What other methods are available?

As the payments industry has slowly moved towards enabling consumers to pay for goods in-store with their mobile phone, the door has opened for a number of disruptive approaches that could take volume away from the traditional payment methods of credit and debit cards. Many of the alternatives still require funding wallets through traditional payment means, so they do not really change the potential fee revenue. Nevertheless, the risk remains, in our view, given that schemes such as MCX in the US could shift transactions away from the traditional networks.

Initiatives to reduce fees paid by retailers

Direct transfer solutions: In various regions, there are now initiatives to try and disrupt the fees paid by retailers by enabling a direct transfer between the purchaser's bank account and the merchant's bank account. This would essentially involve routing the transfer over the already existing and much lower-cost (in terms of transaction fees) bank-to-bank transfer payment networks. In our view, there are no technical show-stoppers in terms of putting such solutions in place, but there would be significant issues around how fraud is managed in the system, ensuring ubiquity of acceptance (a key advantage of the payment networks) and managing the working capital.

In terms of the solutions that are in the market already, we would highlight the following as those that we need to watch and present a risk to the established market.

- **PayPal** – PayPal has for a number of years been working to build on its highly successful online business to establish a position in enabling in-store payment acceptance for merchants. PayPal's Here mobile payment solution involves a triangle-shaped dongle that serves as a credit card reader which plugs into merchants' smartphones, allowing them to accept payments on the fly. Customers can download and activate a PayPal account via the mobile app over a wireless connection, and the account is then verified by a clerk through an in-store terminal at the merchant. The system requires both merchants and consumers to have the appropriate software to complete a transaction. In the event of a PayPal user who has their bank account linked to their PayPal account carrying out a transaction, that transaction would happen directly from their bank rather than through the traditional payment network. Currently, however, PayPal charges high fees for this per transaction (2.75%), so we do not see it as a significant risk.

- **MCX (CurrentC)** – MCX is a consortium of retailers in the US that is working to bring to market its own mobile payment technology that can operate direct between the merchant and consumer bank accounts, rather than going through the traditional payment networks, and hence could lower cost of acceptance. It remains possible that MCX could eventually support transactions

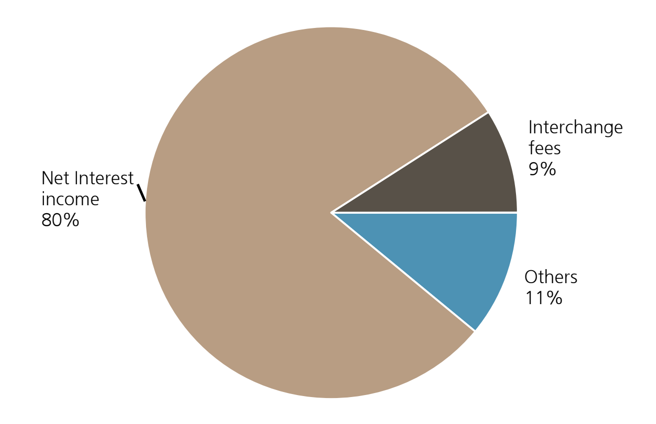
using the traditional payment networks as well. The main benefit of MCX for the consumer is that it would allow the combination of payment and loyalty scheme into a single solution, significantly simplifying things for the consumer. However, the challenges are that the consumer must trust MCX with their bank account details, and that this solution will not have the ubiquity of traditional payment solutions (which have near universal acceptance).

What could the impact of fee disintermediation be?

Interchange fees are a small part of credit card companies' revenue streams

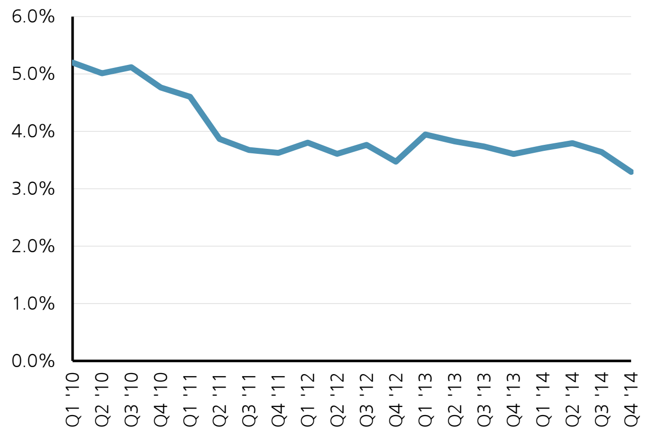
To outline the potential risk, we conduct a case study on Capital One. By a significant margin, the most important revenue stream for a credit card company is interest income – and particularly interest from outstanding loan balances to customers. The interchange fees from the transaction account for only c9% of revenue for Capital One (Figure 34). We have also already seen some pressure on the interchange fee that Capital One generates, although it has not been too significant.

Figure 34: Revenue breakdown for Capital One



Source: Company data

Figure 35: Implied interchange fee rate



Source: Company data, UBS

In terms of the potential impact to the business, there are two main areas of focus:

- **Potential impact on interchange fees:** If retailers are successful in moving transactions away from the traditional payment networks onto direct bank-to-bank transactions, that would reduce the potential interchange fees that companies such as Capital One would generate.
- **Potential impact on interest income:** If transactions are migrated to alternative methods, that would also create a risk to the interest income, as over time it would likely limit the potential for outstanding balance growth for the credit card companies.

Alternative payment methods would have only a limited impact on revenues unless the shift was very substantial, in our view

Even if we saw 10% of transactions shift to alternative methods, that would have a less than 1% impact on the potential revenues for a company such as Capital One – meaning that without significant penetration the risk on this side is limited. The risk to interest income, in our view, is highly dependent on the payment terms being offered by the merchant scheme. Since interest income for Capital One is only earned on consumers who have outstanding balances, we believe that this income would only be at risk if the retailers were to offer longer payment terms. This is something that we have not seen being offered so far, so we expect to see only a muted risk to the business even in the event of some retailer success.

Is Apple Pay a threat to banks?

One question that we receive frequently is what risk Apple Pay (so far it has only launched in the US but Apple announced it plans to roll out globally) poses to the established payments industry. In essence, with Apple Pay, Apple has created a virtual wallet in the iPhone for a consumer to store their payment cards in and a method by which those cards can then be used for retail and online transactions with additional security features.

Apple Pay adds another brand to payments, but we do not see it as disruptive

While in one respect the entrance of Apple into the payment space does add another brand to an already complex ecosystem of companies, we do not see Apple as disruptive or a threat to the banks because the Apple Pay solution is not trying to disrupt the way the traditional payments chain works. Within Apple Pay, the transaction still occurs over the same payment networks, transacting between the same banks and presenting the credit/debit card providers branding to the consumer when the card is selected. In the short term, there is some value to Apple, as it has been reported to have negotiated a 15bps cut of the fees that would otherwise be received by the issuing bank. However, we will watch how this develops over time, and the added security measures (biometrics and use of tokenisation) could reduce fraud, allowing this cost saving to cover the cost to the issuers of the fee to Apple.

How do you play this theme?

We think fears over transactions shifting are misplaced, and would look to Capital One (Buy, US$95 PT) to play this theme

We think any fears over the shift of transactions towards solutions such as MCX are misplaced, and would look to Capital One (Buy, US$95 PT) as one of the best ways to play this theme. We see only a very limited impact on Capital One even if MCX was to be successful, so we do not believe this potential shift is a valid concern over the company.

Developing markets – operator disintermediation

Mobile Money in EM

Mobile Money is extending the breadth of financial services

An example of financial disintermediation in emerging markets is the rise of Mobile Money. Semantically, this is not in fact disintermediation (in terms of existing players/relationships being supplanted by different players). Rather, it is a case of newer or different services being provided, meaning that what we think of in developed markets as 'traditional' providers of financial services, or indeed traditional channels for the distribution of these services, are rendered irrelevant, even before they are built out/developed.

What is Mobile Money in this context?

For the purposes of this discussion, we define Mobile Money as per the **GSMA**[3]:

"Mobile Money uses the mobile phone to transfer money and make payments". The GSMA has a set of follow-up criteria, including that the service must offer at least one of the following:

- **Person-to-person (P2P) transfer/remittance**, **bill payment**, **bulk payment**, **merchant payment**, or **international remittance**

[3] GSMA "State of the Industry 2013" Mobile Financial Services for the Unbanked, Penicaud and Katakam

The Africa illustration for EM adoption

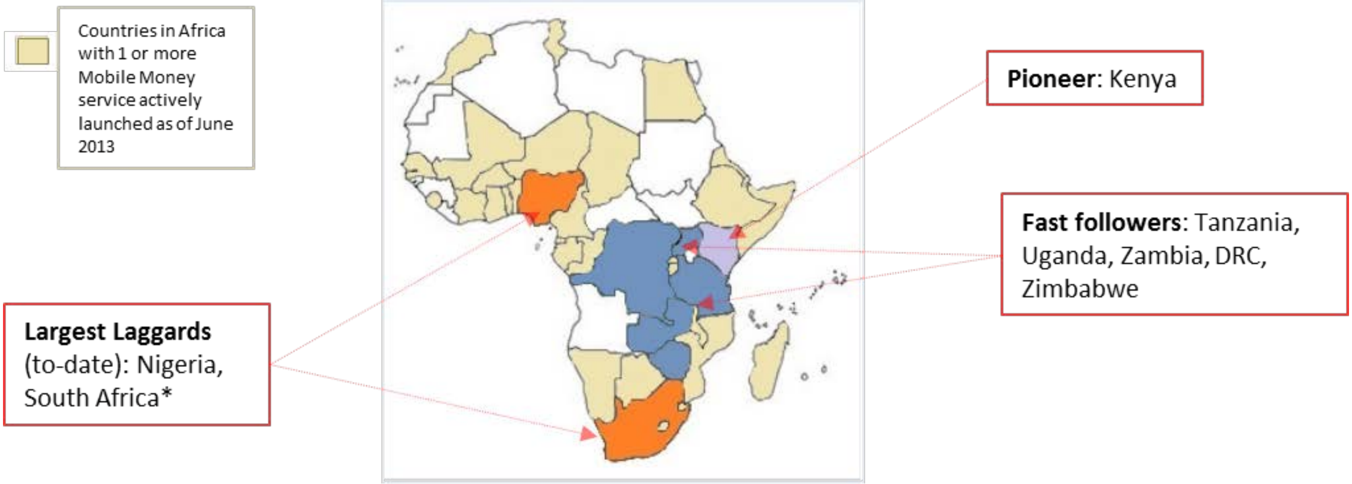
There are now more than 200 active Mobile Money systems globally, almost entirely in emerging markets. Both Latin America and SE Asia are seeing decent growth in Mobile Money implementations, but it is Africa, and specifically East Africa, where the services are most widespread. As such, we focus here mainly on African Mobile Money. For a more in-depth review of the African Mobile Money story, see our report on the subject from last year (*African Telecoms; Mobile Money – is the end nigh for African cash?* – Chris Grundberg).

Figure 36: Selected global Mobile Money (MM) statistics (June 2013)

MM svcs worldwide	**219**
Countries with MM	**84**
Countries with >2 MM svcs	**52**
Countries with >3 MM svcs	**27**
MM svcs with >1m users	**13**
Total MM accounts globally	**200m**
Active MM accounts globally	**60m**
% of global MM svcs in Africa	**52%**

Source: GSMA data

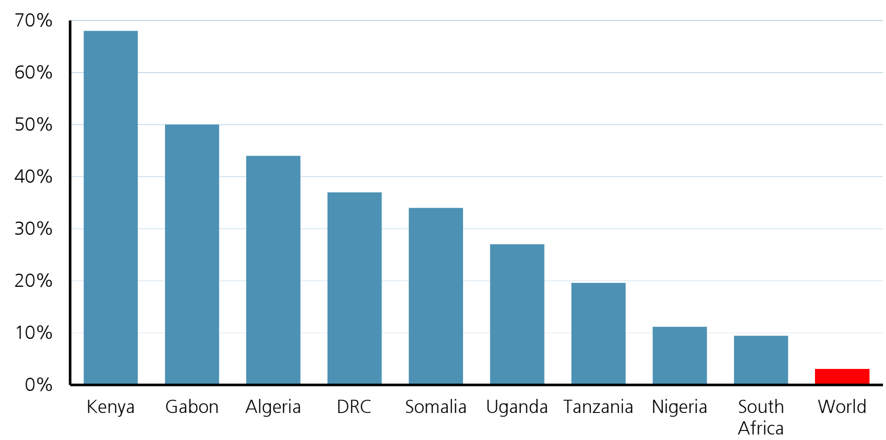
Figure 37: Mobile Money in Africa



Source: UBS estimates

Whilst **Kenya** is the archetype for Mobile Money systems, and the achievements of **Safaricom (Buy, PT KSh20.5)** with M-Pesa are widely reported on and understood, other countries in the region – notably Tanzania, Uganda and Zimbabwe – are seeing more Mobile Money launches, and more widespread subscriber adoption. However, the two largest mobile markets in the region (South Africa and Nigeria) have seen negligible adoption to date. Figure 38 shows that in Kenya 67% of adults have reported using their phone for a Mobile Money transaction of some kind – compared with a global average of 3%.

Figure 38: Percentage of adults who reported having used a mobile phone for some form of Mobile Money transaction



Source: World Bank, Findex data. Note: No adjustment has been made to reflect different levels of mobile penetration across the various markets.

Key points to bear in mind

We highlight three key points to keep in consideration:

1. **African mobile operators have a far wider reach than banks** today in terms of distribution, and as such have the potential to on-board many more customers at the bottom of the pyramid than banks can via branch networks.
2. As a function of this reach, and because it is an incremental service on top of core mobile services, **customer acquisition costs for a mobile operator are lower than for a bank** (certainly versus rolling out a branch network).
3. **Mobile operators are not deposit-taking institutions**, and for the overall good of the industry, it seems to us that more collaboration between banks and operators is needed.

Balance between operator and bank

Mobile operator acquires customer, bank benefits from out-of-reach deposits, and operator benefits from transaction fees

Mobile operators play a highly effective role as the acquirer of the customer, and then manage the ongoing in/outflows of cash from the Mobile Money ecosystem via their distribution networks.

Banks, for the most part, remain the repository, benefiting from a deposit base they would likely not otherwise reach, although forgoing the transactional commission available on that base (this commission instead provides an incremental revenue stream for the operator).

As such, banks across the continent benefit from the rollout of Mobile Money services, since the operators are still required to 'bank' the money paid into the systems, and in most jurisdictions to date this float is deposited with the local banks. In Kenya, this money is held on trust, and as such is useless to the consortium of banks who hold the float (with the interest also having to be used for charitable purposes), whereas in other markets regulators are beginning to consider allowing the banks to lend against the balances deposited, and in others still the operators are allowed to pass interest earned on the float through to the end subscriber. In the latter instance, we see the banks as a clear beneficiary.

The **loser** here, in our view, is neither bank nor operator – both stand to gain from Mobile Money. If any group is missing out, it is arguably the card-issuing/transaction processing sector, which may not in the long term see such a compelling market in Africa if Mobile Money becomes even more prevalent.

How big is the Mobile Money market in Africa?

For the mobile operators, Mobile Money presents a compelling option in their quest to diversify away from 'core voice'

The global Findex database suggests that currently, 54% of adults in Sub-Saharan Africa (SSA) make at least 1 long-distance payment/transfer/remittance per month – which roughly equates to some 5bn transactions annually. Findex further estimates that between 50-60% of the volume of these transactions are cash-based, which may be conservative, and is in any case likely skewed to the larger economies in the region (such as South Africa for instance, where the 'banked' population is much higher).

In Figure 40 we show a simple calculation of what the potential size of the commission pool might be in the event that **ALL** cash remittances in sub-Saharan Africa were to move to electronic (i.e. either bank-based, or more likely at the low end Mobile Money-based). The size of the commission pool varies from **c$7.6bn to $9.1bn.**

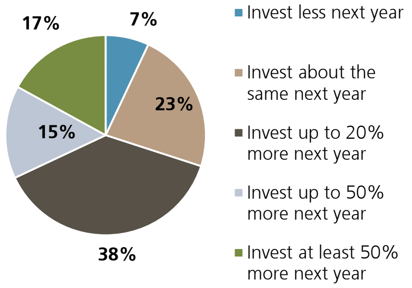
Figure 40: Theoretical commission pool if all SSA cash transfers went electronic

	% of value of SSA transfers cash today		
	50%	55%	60%
Theoretical commission pool on SSA transfers if all went electronic*	$7.6bn	$8.4bn	$9.1bn

Source: UBS estimates, Findex, McKinsey research (*straight commission rate of 2% assumed)

We note that the c$7.6-9.1bn theoretical size of the market today for remittances clearly ignores the upside from merchant payments. Whilst for a mobile operator some of the attraction (certainly in the more developed African markets like South Africa) lies in reduced subscriber churn, and commission saved on airtime distribution, the opportunity from, for instance, convincing Mobile Money subscribers to switch to merchant payments, is compelling. As an example, Safaricom estimates that in Kenya the merchant payments market is worth roughly the same as the remittances market.

Figure 39: Mobile operators' spending plans on Mobile Money: survey detail



Source: GSMA survey data

If we extrapolate this to the remainder of sub-Saharan Africa, it would imply that the total market for sub-Saharan Mobile Money deployments, including mobile payments with merchants, could be worth some **$15.2-18.2bn**. Although not perhaps material in the context of some of the international banks or financial players, this is meaningful to the mobile operators across Africa, where we estimate that the largest mobile telecoms market (South Africa) was worth some **$9.3bn** in 2013.

Combined Mobile Money market (plus merchant payments) could be twice the size of the entire South African mobile market

How do you play the theme?

We continue to recommend **Safaricom** as a **Buy (PT KSh20.5)**, and see it as the purest play on the theme of Mobile Money in Africa, as well as offering a compelling single-market mobile telecoms story in its own right.

We see Safaricom as the purest way to play the theme of Mobile Money in Africa

Conclusion

Overall, we consider the threat of financial disintermediation to banks as medium-to-low but with pockets of elevated risk such as in US residential mortgages and FICC trading. While we see evidence of niche players taking market share at the expense of incumbents, the underlying cause of much of this financial disintermediation is the effect of regulatory intervention, especially in developed markets.

From a broad valuation perspective, the impact of changes in regulation have been translated into much lower multiples for incumbent banks already.

Figure 2: Global banks have de-rated since the crisis

Source: Thomson Reuters DataStream, IBES, UBS

At a product level, however, we believe the threat of disintermediation still poses further downside risks to incumbent banks in commercial and multi-family mortgages in the US, and corporate bonds for European lenders over the medium-to-long term. For other product areas, the threats are by and large priced in.

In contrast, for non-bank challengers, we see several areas of upside valuation potential such as leveraged loans and residential mortgages in the US and retail banking/mobile payment fees in emerging markets.

Statement of Risk

Investing in global equities poses currency, country, industry, and company-specific risks. Valuations can be impacted by company-specific factors, investor risk appetite, as well as changes in the macroeconomic landscape and financial market stability

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Neutral	FSR is between -6% and 6% of the MRA.	43%	33%
Sell	FSR is > 6% below the MRA.	12%	20%
Short-Term Rating	**Definition**	**Coverage**[3]	**IB Services**[4]
Buy	Stock price expected to rise within three months from the time the rating was assigned because of a specific catalyst or event.	less than 1%	less than 1%
Sell	Stock price expected to fall within three months from the time the rating was assigned because of a specific catalyst or event.	less than 1%	less than 1%

Source: UBS. Rating allocations are as of 31 March 2015.
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Commerzbank[4, 5, 14]	CBKG.DE	Sell	N/A	€12.80	24 Apr 2015
Evercore Partners Inc[6b, 7, 16]	EVR.N	Neutral	N/A	US$50.49	24 Apr 2015
Golub Capital BDC, Inc[1, 2, 4, 5, 6b, 7, 13, 16]	GBDC.O	Buy	N/A	US$17.67	24 Apr 2015
Greenhill & Co[6b, 7, 16]	GHL.N	Sell	N/A	US$43.08	24 Apr 2015
M&T Bank Corp[5, 16]	MTB.N	Neutral	N/A	US$119.61	24 Apr 2015
Moelis & Company[2, 4, 6a, 6b, 7, 16]	MC.N	Neutral	N/A	US$29.54	24 Apr 2015
Nationstar Mortgage Holdings[16]	NSM.N	Buy	N/A	US$25.38	24 Apr 2015
New Residential Investment Corp[13, 16]	NRZ.N	Buy	N/A	US$17.16	24 Apr 2015
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NorthStar Realty Finance[2, 3, 4, 5, 6a, 6b, 7, 13, 16]	NRF.N	Buy	N/A	US$18.97	24 Apr 2015
Partners Group Holding AG[5]	PGHN.S	Buy	N/A	CHF305.75	24 Apr 2015
Redwood Trust[6b, 7, 13, 16]	RWT.N	Buy	N/A	US$17.94	24 Apr 2015
Safaricom	SCOM.NR	Buy	N/A	KSh17.30	24 Apr 2015
Zions Bancorporation[6b, 6c, 7, 16]	ZION.O	Sell	N/A	US$27.61	24 Apr 2015

Source: UBS. All prices as of local market close.
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