Global Marketplace Lending
Disruptive Innovation in Financials

Marketplace lending is in liftoff and is a challenging new paradigm for unsecured consumer lending. Our proprietary AlphaWise survey underscores the appeal for Millennials, who favor fast, convenient, and cheaper credit. While marketplace lending is still ~1% of unsecured consumer and SME lending in the US, we think it can reach ~10% by 2020 — and we expect China, the UK, and Australia to follow. We forecast the global market to grow to $150-490 billion by 2020.

“Peer-to-peer” is a misnomer as conventional wisdom underestimates the importance of institutional funding, including banks; this is turbocharging originations. By harnessing institutional funds in addition to retail, marketplaces can broaden their portfolios to a broader range of borrowers and sustain significant growth for years.

Marketplace lending is driving incumbents to reinvent their offerings on price, service, and strategy. Banks are concerned that new players, not facing the same capital requirements as regulated incumbents, can “skim the cream” by offering lower rates.

Winners should take most. We think scale and customer-acquisition efficiency — particularly through strategic alliances — will be critical differentiators among platforms. Credit scoring should be decisive longer term, but it remains to be seen if marketplace lenders have an edge in credit scoring vs. best-in-class incumbent lenders.

The US, the UK, and China stand out as the best markets. Investment opportunities include LendingClub (OW), On Deck Capital (OW), banks that respond vigorously on costs and service (in less than 6 clicks), and private opportunities to fund growth.
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We estimate global marketplace lending can reach $290 billion by 2020 (base case)

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Our AlphaWise survey shows Millennials have high awareness of P2P and favor fast, convenient, and low rate consumer credit solutions

Exhibit 6
Marketplace lending not just a US phenomenon; China and the UK also stand out as key markets
Executive Summary

8 Things to Know About Marketplace Lending and How Banks Could Respond

1. Marketplace lending is in liftoff in the US, challenging the paradigm for unsecured consumer credit.
2. Outside of the US, the standout countries are China, UK, and at some point Australia. For developed markets, the keys are unsecured credit penetration, mobile banking adoption, and benign regulation. China leads the way in Asia due to unfulfilled demand for consumer and business lending and high cost of alternatives.
3. Millennials (the population aged ~18-34) favor fast, convenient consumer credit solutions, as underscored by our proprietary AlphaWise survey. Marketplace lending will get even more of a boost from this.
4. “Peer-to-peer” is a misnomer. Conventional wisdom underestimates the importance of institutional funding, which is turbocharging originations and broadening the target market.
5. Partnerships likely will be the key battleground for marketplace lenders to drive down the cost of customer acquisition and expanding distribution, just as they have been for credit card companies. Partnerships with US regional banks are an intriguing avenue for growth.
6. Scale will be crucial in marketplace lending. Credit scoring has yet to be proven as a differentiator, but is likely to be essential to the long-term success of the model.
7. Regulation is a key enabler, but it creates multiple risks. Today, nonbank lenders have a large capital advantage, and our base case assumes that headwinds will prove tougher for banks than for marketplace lenders.
8. Marketplace lending is challenging traditional lenders on price, service offering, and convenience. Watch for the banks that can respond in “6 clicks” (i.e. launch efficient front-end platforms) and address costs in earnest.

Why Read This Report

Marketplace lenders are already having an impact on incumbents. Our interviews with banks suggest that this trend, more than any other, is forcing a reappraisal by lenders.

Incumbents are starting to respond by investing in technology to win Millennials.

We undertook a proprietary AlphaWise survey of 3,000 consumers to determine what they value in marketplace lenders. We met with most of the major institutional investors channeling funds through online platforms to understand their views of winning models. We offer a global framework to assess the size, growth, and risks in the US, the UK, Europe, China, Australia, and Asia.

We met with management teams of 40+ marketplace and P2P lenders across the US, Europe, Asia, and Australia along with leading VCs backing the leading private companies in the space.

What Surprised Us

It appears that 80-85% of consumer loan issuance by marketplace lenders in the US is debt consolidation. Platforms see an opportunity to skim the cream.

Millennials are more likely to use traditional banks to borrow than are other generations, but they also care deeply about rates and fees… setting up incumbents for a race to invest in their technology and service to become the “go-to” financial provider as they can’t be best-in-class on price alone.

Online lenders depend heavily on offline channel to find customers. Direct mail has been one of the primary ways to originate assets.

How large and vibrant the Chinese market is.

How much of a global vision and swapping of international best practices the marketplace firms have, as compared to incumbents.

The fastest growing marketplace platforms are not really peer-to-peer but institutional investors partnering with tech platforms to cherry-pick borrowers, often with offline marketing.

A multi-year track record is no longer necessary to attract institutional capital to P2P platforms.

Many banks are working with P2P players (signing framework agreements to buy loans or market/originate loans) and are using P2P players to help meet regulatory requirements (Citi/LendingClub) with some taking equity stakes (SunTrust/Prosper).

A note on terminology: Throughout this report we use the terms marketplace lender, P2P lender, and online lender to broadly encompass a new wave of non-bank, tech-focused, typically web-based loan originators. We recognize some of these lenders/originators would fail to meet the strict definition of a marketplace – e.g., some hold loans on balance sheet, so might be more aptly defined as non-bank or alternative lenders – but we expect one or both of these terms will continue to be used in the industry as a catch-all. We use the terms interchangeably but prefer the term marketplace lender or online lender in our US sections and P2P lender in our other sections to align with prevailing terminology in these respective regions.
1. Marketplace lending in the US is in liftoff

Marketplace lender origination in the US has doubled every year since 2010 to ~$12 billion in 2014. Even so, we estimate it represented a relatively small 1.1% of total 2014 US consumer unsecured loan originations and 2.1% of US SME loan issuance (1.3% combined).

Exhibit 7
Marketplace lending growth has surged in the US, led by consumer unsecured and SME lending

<table>
<thead>
<tr>
<th>Year</th>
<th>Unsecured Consumer</th>
<th>SME</th>
<th>Student Loan</th>
<th>Mortgage</th>
<th>Auto</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>2011</td>
<td></td>
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<td>2012</td>
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<td>2013</td>
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<tr>
<td>2014</td>
<td></td>
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Source: Company data, Morgan Stanley Research estimates

Several drivers have aligned over the past few years and led to significant growth in marketplace lending in the US:

- The global financial crisis has led banks to pull back from consumer and small business lending after suffering heavy credit losses.
- Increased regulatory oversight and capital requirements have made certain loan types unattractive to banks.
- The increased availability of data sources and improvement in data analytics technology is helping marketplace lenders develop underwriting models that they believe have better predictive ability than FICO.
- Consumers (especially millennials) and small businesses are increasingly comfortable performing transactions online and through mobile channels.
- The general credit environment has been benign, which has helped marketplace platforms establish credibility with potential investors in loans.
- Record low interest rates across multiple asset classes have led to an increased appetite for alternative assets that can deliver attractive yields.

The majority of originations are currently in the unsecured consumer credit and SME segment... The US unsecured consumer lending marketplace is dominated by early entrants LendingClub and Prosper — which had ~80% market share of originations in 2014. However, there has been a proliferation of new marketplace lenders, generally focusing on different segments of the credit spectrum (e.g., Avant, LendUp) or leveraging unique data points to underwrite credit (e.g., Upstart). Companies like OnDeck and Kabbage have also accelerated activity in the SME segment, utilizing non-traditional data to provide credit to SMEs that have limited access to bank loans.

...with new verticals developing. New players are rapidly emerging to apply the marketplace model to other credit markets, such as student loan refinancing, education and healthcare financing, mortgages, and auto loans, although origination volumes have been limited.

We expect healthy growth in both consumer and SME lending to continue in coming years. And although we estimate that marketplace lenders can demonstrate a 47% CAGR in US volumes through 2020, even at that rate we expect only 6% of bank consumer unsecured loan issuance and 5% of US SME loan issuance would shift to P2P lenders by 2020. Because we expect marketplace lenders can reach a customer base that was previously underserved by banks, we expect some market expansion: By 2020, we estimate expansion of 2% ($19 billion) in consumer unsecured lending and 14% ($35 billion) in SME lending, and expect marketplace lenders to comprise 8% of total consumer unsecured loan issuance and 16% of SME loans.

Exhibit 8
US Base Case: Marketplace consumer lending grows rapidly, mostly at expense of bank volumes

Source: Federal Reserve, Morgan Stanley Research estimates
MORGAN STANLEY RESEARCH
May 19, 2015
Global Marketplace Lending

US Base Case: SME lending growth driven primarily by market expansion

Source: US Federal Reserve, Morgan Stanley Research estimates

2. Outside the US, standout countries are China, the UK, and Australia

For developed markets, the keys are unsecured credit penetration, mobile banking adoption, and benign regulation. China leads the way in Asia due to unfulfilled demand for consumer and business lending and high cost of alternatives.

Beyond the US, China and the UK have so far proved to be the most compelling markets for marketplace lending, with more than $8.9 billion of origination in China alone in 2014 (albeit through a combination of online and offline channels, rather than purely online). We expect the US and the UK to continue to grow strongly, while we see Australia as a nascent market that shows promise given its shared characteristics with the UK. European markets outside of the UK have proven tough so far, with limited origination despite numerous platforms. We think this will continue given a combination of lower existing penetration of unsecured credit, limited credit information, and/or mobile/online banking penetration vs. the UK and Australia.

We forecast $164 billion of annual origination by marketplace lenders in China, Australia, and the UK by 2020, representing a 55% CAGR from 2014.

What makes a market ripe for marketplace lending?

Based on our analysis and discussions with marketplace platforms, we see the following factors as key to success in a developed market:

- strong adoption of online/mobile banking,
- a benign regulatory framework for marketplace lending,
- low customer satisfaction with incumbent financial institutions, and
- high existing penetration of unsecured credit (as in the US, where refinancing credit card debt has helped establish the likes of LendingClub).

We would also look for easy availability of credit information (e.g., through a central credit bureau) to facilitate an automated approach to credit scoring, although the example of China shows this isn’t a necessary condition in emerging markets, and indeed that marketplace platforms can play a part in developing underwriting processes that leverage data from multiple sources.

In China, we believe 1,500+ P2P lending platforms have made certain types of shadow banking and underground lending more transparent, increased financial service to borrowers with limited access to bank credit, and improved credit underwriting capability for certain types of consumer credit. This has contributed to enhancing the overall credit database in China and enhancing returns for some investors and lenders. We would note that P2P in China has distinct characteristics vs. the US and the UK as most P2P platforms there operate both online and offline channels, with no real pure online business model today due to challenges in risk management and borrower and lender acquisition. We expect loan originations in China can grow from $9 billion in 2014 to $128 billion in 2020.

We see the UK as the most compelling marketplace lending opportunity in Europe, with small business and consumer lending together representing a total addressable market of ~£100 billion. We expect increasing institutional flows and supportive government and regulatory policies to supercharge growth in the coming years toward ~£15 billion of annual origination by 2020 vs. ~£1.3 billion in 2014.
We believe there is an opportunity for P2P lending to establish a meaningful presence in Australia due to high online/mobile banking penetration, growing margins and high returns in unsecured lending and a highly concentrated banking industry focused on mortgages and deposits rather than on consumer unsecured. The P2P lending market is very much in its infancy in Australia, despite the attractive characteristics of the market and the presence of some of the large global P2P players. Consequently, we see scope for rapid growth in the coming years to $12.3 billion by 2020.

### Exhibit 11

**Which markets are ripe for marketplace lending?**

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<th>Mobile banking use</th>
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<tbody>
<tr>
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<td>20%</td>
<td>60%</td>
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Note: Mobile banking use defined as % of respondents to survey who used mobile banking in the last quarter. Source: Bain and Company, Euromonitor, Central Banks, Morgan Stanley Research estimates

### Exhibit 12

**We expect a 51% base case global marketplace loan origination CAGR through 2020**

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<td>51%</td>
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Source: Morgan Stanley Research estimates

### Exhibit 13

**Millennials use their existing banks more than older generations do...**

**Lending Institution by Age: Borrowers vs. Intenders**

- **Other**
- **Non-bank online peer-to-peer (P2P) lender**
- **Bank I don’t have relationship with**
- **Bank I already have relationship with**

Source: Morgan Stanley Research, AlphaWise

3. Millennials favor fast, convenient consumer credit solutions; marketplace lending will get even more of a boost from this

**Millennials could make or break the incumbents.** They want more, namely 1) speed and 2) acknowledgement, both of which are well served by the online lending platforms. Our AlphaWise survey of 3,000+ consumers in the US suggests that the opportunity for new customer share will depend on investing in speed, faster/broader decision-making, and leveraging social media.

The key question is, As Millennials age into higher earning years, will they move away from the incumbents for their financial needs or toward them? Will this generation value the incumbents that their parents and grandparents have relied on, or new entrants that have been around for only a few years? Millennials have already proven more brand agnostic. Some of the commonly cited benefits of using a bank — safety/security, personal relationships, and convenience of branches — may be less important to Millennials as they have embraced technology and the online world.

**The ball remains in the incumbents’ court for now.** While we expect incumbents to lose modest share of lending over the next several years, we believe this will be relatively modest. In the US, by 2020 we expect marketplace lenders to have 6% market share in the total consumer unsecured loan market and 5% in SME, up from ~1% today, largely owing to regulatory/capital arbitrage. This is a significant share gain for marketplace lenders, but by no means a death knell for incumbents. Our research also indicates that Millennials do not currently display a preference for marketplace lenders over banks. Per our AlphaWise survey, Millennials currently use, and intend to borrow from, their existing bank to a higher degree than do older generations. This tells us that the Millennial “ball” remains firmly in the incumbents’ court, and it is the incumbents’ opportunity to lose.

**But Millennials are also more likely to use marketplace platforms.** Our AlphaWise survey results suggest that
Millennials in the US are more likely to consider marketplace lending compared to older demographics. We expect marketplace lending to benefit as Millennials ramp up consumer spending into their late 20s and 30s. While our survey focused on the US, we would expect similar dynamics in the UK and Australia.

Exhibit 14
...but are also more likely to be aware of, and use, P2P platforms

Rates and fees are key consumer consideration. Our AlphaWise survey also indicates that, in today’s environment, rate is the most important consideration for a borrower in choosing a loan. Given regulatory capital rules, banks are unlikely ever to “win” on rate for the broad market. But they can fight with broader service offerings on deposits, other loans like mortgages, and competitively bundled pricing. Therefore, we think incumbents will need to invest in technology to retain their brand value. They need to be as efficient as possible. We also believe banks can do a better job of leveraging the data they have on existing customers to drive an edge in underwriting.

Exhibit 15
Rate and fees are the most important factor to US consumers in picking a lender

4. “Peer-to-peer” is a misnomer; conventional wisdom underestimates the importance of institutional funding

Institutional investors’ search for yield is turbo-charging growth in marketplace lending. While marketplace lending started off as “peer-to-peer,” with mainly retail lenders making loans to consumers on the platforms, increasingly, funding for the platforms in the US, the UK, China, and Australia is now institutional. We believe the increasing scale and track record of the platforms have enabled institutional capital to flow in, aided by attractive yields (typically 6-9% without leverage) in a low rate environment. After the leading marketplaces had established a 3- to 4-year track record, hedge funds and family offices started to invest in marketplace loans. Larger institutions soon followed, and this has accelerated the pace of industry growth. This trend can be seen in the increase in whole loan originations, which are typically bought by institutions, at the leading marketplace platforms in the US.

Exhibit 16
Publicly disclosed institutional fund flows into marketplace lending have increased significantly...

Exhibit 17
... and whole loans, typically bought by institutions, have become a bigger slice of originations

Source: Morgan Stanley Research, Orchard Platform

Source: Morgan Stanley Research, AlphaWise
Securitization 2.0? In 2014, we saw the first rated marketplace-originated securitizations in the US. Many industry observers were encouraged by the Baa3 rating from Moody’s that BlackRock obtained on a $327 million pool of Prosper-originated loans, given that a rating can help open up marketplace notes as a new investable asset class to a larger group of institutions such as pension funds and insurance companies.

But hurdles remain in some markets given the evolving regulatory landscape and untested nature of most platforms. S&P noted that it was concerned about “the unproven ability and capacity to comply with new and ongoing regulatory and legislative requirements” for the marketplace lending industry. It also expressed concerns about the quality and consistency of the underwriting process, along with the robustness of the underlying data that the platforms collect and maintain.

The emergence of a marketplace ecosystem should accelerate institutional involvement. The emergence of technology platforms such as Orchard, which allow institutional investors to connect to multiple marketplace platforms, along with companies such as PeerIQ, which provide tools to analyze, access, and manage risk in marketplace investments, will continue to increase the level of comfort that large institutions have in marketplace lending, in our view.

A limited track record may also be less of a barrier to entry. Marlette Funding has originated over $700 million in consumer loans since its inception in March 2014, which was surprising to us as it only accepts funding from institutions. By comparison, leading platforms such as LendingClub and Prosper were able to attract institutional funding only after having established a 3- to 4-year track record. Marlette may have been able to attract institutional money relatively quickly as it had a management team with a background in traditional lending — many employees were formerly at Barclaycard. It also retains a portion of the credit risk (currently through an arrangement with Cross River Bank).

5. Partnerships will be the key battleground to drive down the cost of customer acquisition and expanding distribution. Partnerships with smaller banks are an intriguing avenue for growth.

Many marketplace lenders increasingly see banks as partners, a view not always shared by the banks, especially the majors

Given that 80-85% of LendingClub and Prosper’s loans are used to consolidate consumer debt, we might expect that most banks would view the marketplace lenders as a disintermediation threat. The reality is more nuanced. The top 10 banks in the US, which account for 84% of unsecured consumer credit card debt outstanding, have the most to lose. However, mid-sized and small banks, which have been losing market share to large banks over the past decade, are working with leading online lenders in ways that are beneficial to both parties.
In the US, in February 2015, LendingClub announced a partnership agreement with the BancAlliance, a group of 200 community banks, to leverage the company’s technology to screen/pre-approve the alliance’s current customers for consumer loan refinancing. Some weeks later, Prosper signed a similar partnership agreement with the Western Independent Bankers, a group of 160 community banks. In commercial lending, several online lenders have struck partnerships with traditional banks (e.g., OnDeck with BBVA Compass, Funding Circle with Santander and Royal Bank of Scotland) for referrals of SMEs that banks may not find profitable due to the applicants’ small size or low credit quality.

**Banks have also shown growing interest in providing funding to the platforms.** Although marketplace platforms are disintermediating banks in some instances, not all traditional lenders view them as competitors. In the US, many small and regional banks are happy to redeploy their customers’ deposits into a higher-yielding asset (one industrial bank we spoke to had 10% of its assets in marketplace notes). Several banks have also signed framework agreements with leading platforms to buy a significant quantity of the highest-grade notes.

Some examples of cooperation:

- Santander buying loans in the US and referring declined SME customers to P2P lenders in the UK
- RBS referring declined SME customers in UK
- BBVA Compass/OnDeck
- Citi Community lending via LendingClub
- Regional and smaller banks without credit card/consumer lending capacity partnering with marketplace platforms to originate loans

**New relationship model emerging.** Over time, many marketplace lenders might see the relationship between themselves and banks evolving into a lending-as-a-service (LaaS) model, where banks outsource certain functions such as credit underwriting, customer prospecting, and originations to marketplace lenders that can perform these functions more efficiently. In the US, there are over ~5,600 small banks that cannot compete efficiently with the large national banks to acquire loans.

6. **Scale will be crucial in marketplace lending; credit scoring is not yet a differentiator, but will be essential to the long-term success of the model**

New platforms are emerging rapidly with >100 in the US alone as barriers to entry for securing institutional money fall and allow new platforms to reach scale fast. Given the economics of marketplace lending (typically the platform simply takes a fee), we believe building scale will be key to winning in this space and look for consolidation over the coming years.

**Scale will be critical as the industry matures.** Many new entrants are offering the same products and are chasing the same set of customers as the early movers. Larger players should be able to operate at a lower cost than players with smaller scale, and can make life harder for new entrants by continuing to lower interest rates and fees. We have already seen companies such as LendingClub and SoFi, leaders in their respective segments in the US, lower pricing for borrowers over the past year despite experiencing high demand from consumers. Price reduction has the added benefit of driving positive selection, which should lower credit losses and lower customer acquisition costs at the same time. Smart use of data can also be leveraged by platforms to improve customer acquisition costs. OnDeck has successfully leveraged data from various sources to rank prospects based on conversion likelihood. It has then been able to improve customer acquisition costs despite sending more solicitations.

**There are theoretical benefits of big data and machine learning in credit scoring, but they have yet to be proven through a credit cycle. The benefits are clearer in fraud prevention.** Many platforms claim to be gaining an underwriting edge on traditional lenders through using broader data (including social media) and machine learning techniques to refine and build underwriting accuracy over time. However, we note that the relatively benign credit environment over the past several years has made it difficult to differentiate good underwriting models from bad ones. Although many marketplace platforms have hired people with underwriting experience from traditional financial institutions, many in the global banking industry remain doubtful that start-up platforms are able to outperform (or even match) an established consumer credit lender on underwriting. We do, however, believe that adding incremental data points — e.g., social media — can be valuable in reducing platform fraud.

**Platforms that have the best underwriting record will likely be long-term winners.** When the credit cycle turns and loan losses inevitably pick up, it will become apparent whether certain platforms are better at underwriting than others. Most platforms generate a significant part of their revenues from origination fees, so if potential lenders begin to doubt the underwriting capabilities at a platform and investor capital dries up, such a platform could quickly go under.
With limited track records for now, we would look for the platforms with the most underwriting talent and experience and with the longest records and most cumulative data. We also learned from meeting with institutional investors in marketplace loans that some of these investors specify bespoke credit and underwriting criteria as minimum requirements and/or use their own algorithms to select assets based on expected default and returns.

Due to regulatory restrictions, US marketplace platforms will unlikely be able to leverage “big data” as much as international peers. US fair lending laws prohibit the use of demographic and other forms of data that could reveal age, gender, race, or other protected traits from being used in the credit underwriting process. However, these data are generally permitted in underwriting credit in other countries, which could allow non-US players to make further progress on underwriting and marketing.

In China, the lack of access to the centralized credit system used by banks has made risk control a challenge and led to meaningful divergence among platforms’ credit performance. Even leading platforms have charge-off ratios of 5-10% currently, with a much higher loss ratio at start-ups. The number of newly troubled platforms reached 275 in 2014 vs. 76 in 2013. On average, there were 9.3 new platforms at risk of failing every month in 1H14. That number increased to 92 in December 2014. Fraud and cash flow difficulties remain the top reasons for platforms to fail. We think cash flow problems may be relieved in early 2015 as funds flow back to P2P market after year-end, but we expect the number of new troubled platforms to remain high in 2015 due to the credit cycle China is going through.

7. The regulatory framework for marketplace lending remains in flux in all regions; non-bank lenders have a capital advantage

By far the biggest advantage for marketplace lenders has been the capital rules imposed on incumbents.

The impact of capital rules is quite significant. True marketplace lenders currently benefit from regulatory arbitrage. They can be more competitive on rates as they don’t have the same capital requirements as regulated incumbents. A case in point, as shown in Exhibit 20 below; if banks are able to attain only 10x leverage, then there are significant return advantages for an institutional investor (such as a private equity shop or hedge fund) that can lever up 20x. New marketplace lenders in the US have been able to offer lower rates to borrowers than credit card companies can, and on aggregate have seen originations double every year since 2010.

In the US, incumbent lenders do not market to higher rate borrowers given limited flexibility in managing that portfolio with the CARD Act higher capital requirements for delinquencies, and recent CFPB pressures on deposit advance; non-bank lenders providing funding to marketplace borrowers do not have those restrictions.

Exhibit 20

<table>
<thead>
<tr>
<th></th>
<th>Bank</th>
<th>Non-Bank Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenue Yield</strong></td>
<td>18.0%</td>
<td>17.0%</td>
</tr>
<tr>
<td>Less: Cost of Funds</td>
<td>(1.3%)</td>
<td>(2.5%)</td>
</tr>
<tr>
<td><strong>NIM</strong></td>
<td>16.7%</td>
<td>14.5%</td>
</tr>
<tr>
<td>Less: Net Charge Offs</td>
<td>(4.0%)</td>
<td>(4.0%)</td>
</tr>
<tr>
<td><strong>Risk-adjusted NIM</strong></td>
<td>12.7%</td>
<td>10.5%</td>
</tr>
<tr>
<td>Less: Expensive Ratio</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>Less: Taxes</td>
<td>30%</td>
<td>30%</td>
</tr>
<tr>
<td><strong>Return on Assets</strong></td>
<td>3.0%</td>
<td>2.3%</td>
</tr>
<tr>
<td>X Leverage</td>
<td>10x</td>
<td>20x</td>
</tr>
<tr>
<td><strong>Return on Equity</strong></td>
<td>30.5%</td>
<td>45.5%</td>
</tr>
</tbody>
</table>

Source: Morgan Stanley Research. Note: Revenue = interest income + fees.

We believe regulators worldwide are still studying the pros and cons of the industry. So far, the focus has been on protection for investors along with ensuring that retail lenders on platforms understand the risks of marketplace lending. As the sector starts to see greater institutional involvement (likely accompanied by leverage) and makes up a larger share of lending volumes, we expect greater regulatory focus on the prudential aspects.
US: Regulators taking a wait-and-see approach for the time being, but several issues remain. One risk is the true lender interpretation: Who, in an online lending relationship, is the “true lender” from a regulatory perspective? If online lenders, not issuing banks, are judged to be the true lender, then it could result in unenforceable contracts for US consumer unsecured lenders, along with the lowering of interest rates to limits imposed by each state. The SEC could also start to require ABS issuers to retain 5% of the loan risk when securitizing loans by December 2016, but there is uncertainty about whether marketplace notes will be considered subject to this requirement. From talking to various players, we also understand that the CFPB may start to pay closer attention to the space, although it is too early to tell what action, if any, may arise.

UK: The regulatory and political environment is supportive for challenger lenders in the UK, including P2P lending platforms. The sector has a single regulator, the Financial Conduct Authority (FCA), which provides a relatively simple landscape for marketplace lenders. The recent coalition government has been supportive of P2P, with the British Business Bank channeling funding into SME lending via platforms. We would expect the newly formed government to pursue similar policies. Looking forward, the ongoing Competition and Markets Authority (CMA) investigation into SME banking (scheduled to report in 2016) could also prove supportive for marketplace lending platforms specializing in this area if, for example, banks were required to refer to alternative finance sources any SME borrowers who had been refused a loan.

China: Marketplace lenders are not currently recognized as regular financial institutions, and thus do not have access to the People’s Bank of China (PBOC) credit reference database, which puts them at a disadvantage relative to incumbents. The CBRC is expected to announce a regulatory framework for marketplace lenders in 1H15, and one possible outcome is that the PBOC may grant access to the national credit system in order to manage risk. We think the CBRC will focus on information disclosure and monitoring fund use to protect borrowers on P2P platforms. The PBOC may gradually approve some P2P lenders to access the national credit system, to better manage the risks.

There have also been instances of platform defaults and of management fraud at P2P lenders. We believe regulators will also require proper P2P fund custody, which may increase the cost for P2P lenders.

Australia: The Australian Securities and Investments Commission (ASIC) has warned that “investors should understand and take into account the associated financial risks of these products, which include a lack of liquidity and a difficulty assessing the quality of the borrower.” We expect the ASIC to focus on responsible lending to borrowers and the sale of alternative investment products to retail investors. In our view, regulatory scrutiny could limit the growth prospects for retail funding of marketplace models.

8. Marketplace lending is challenging incumbents to react on price, service offering, and convenience; watch for the banks that can respond in “6 clicks” and address costs in earnest

Incumbents are investing — to keep their share, to improve their brand value, and to win.

Incumbents are a broad group. They are taking action in multiple ways — to enhance web/mobile interfaces, to speed decisioning to 6 clicks, to respond to client questions quickly (if not instantly), and to widen credit scoring inputs — by investing in marketplace lenders and by buying loans from marketplace lenders.

Across the globe incumbents are taking action. The goal is to learn, improve their capabilities and brand, grow the pie, and win business. Higher costs today should drive faster growth tomorrow.

There is work to do. Our AlphaWise consumer preference survey suggests that 1) incumbents' key customers are getting older and 2) the opportunity for new customer share will depend on investing in speed, faster/broader decision-making, and leveraging social media. Incumbents need to improve the customer experience to attract new, younger customers, and to ensure smoother end-to-end experiences for their customers.

Six clicks is the goal. At Barclays in the UK, customers with an existing relationship with the bank can obtain a personal loan with just six clicks on the bank’s mobile app and have funds transferred the same day. This channel not only improves speed and convenience for the customer and increases the likelihood of retaining customer loyalty but also reduces cost, with a cost-income ratio of just ~20%. A similar product has also been launched for business lending, again with a cost-income ratio of ~20%. Some 50% of personal lending was executed through digital channels at Barclays in March 2015, up from one-third in 2014. This suggests that the digital offering is gaining traction and should over time pay off.
in lower costs and stronger customer loyalty, although the direct contribution to the bottom line is limited by the small contribution of personal lending at a group level (<2% group loans). For the sector more broadly, investment in digital offerings is a key part of the strategy with £1 billion of investment earmarked by Lloyds and RBS over the next three years and potentially a similar sum at Barclays (the specific amount has not been disclosed).

**US:** Some banks have begun to respond to changes in the unsecured lending marketplace. SunTrust (STI) is a notable player in the online lending field. The company’s LightStream offering — while not technically P2P lending in that STI is still taking on balance sheet risk instead of allowing individuals to invest in loans — provides unsecured credit to super-prime borrowers (average FICO of 770-775) through an online channel with a fast turnaround time. Discover Financial (DFS), which overlaps with some of the new P2P peers in its personal lending business, currently uses a lower-cost acquisition model that is focused on the solicited/direct-mail targeted channel. We expect DFS’s personal lending business could evolve over time to encompass an unsolicited aspect as well, which would compete more directly with P2P peers. An unsolicited approach would likely require some incremental investment (search engine optimization, social media utilization, etc.) to drive approval rates to an acceptable level for the company, within DFS’s targeted prime-revolver space. Santander Consumer USA (SC) has used the increase in marketplace lending to enter the unsecured consumer market by signing an agreement with LendingClub to buy up to 25% of prime flow (through March 2015) as well as certain amounts of near-prime originations through July 2017 (the lesser of $30 million/month or 75% of originations through July 2015 and the lesser of $30 million/month or 50% of originations through July 2017).

We expect US incumbents will accelerate their responses to the challenge presented by marketplace lenders. Banks in particular need to invest in technology across the front, middle, and back layers. Banks need to make borrowing faster and more intuitive, with quicker feedback for the borrower and integrated with legacy systems. Incumbents also need to invest in IT to move to loan-level analysis and management, as they are still managing smaller corporate, retail, and residential mortgage loans on an aggregate portfolio basis. We expect this will change to more granular loan-level management, in line with what banks are doing for large corporate/CRE loans.

Incumbents investing today should be able to get faster growth payback starting in 2017. Overall, we believe reinvesting in marketing and consumer interface (speed, ease of use, one click) will be a long-term positive for JPM, BAC, C, COF, and DFS. While we have lowered 2016e EPS for these names by 50-200bps from technology investments/lower card yields, we have increased our 2018e EPS by 30-150bps to reflect payoff on front-end applications/loan growth.

**China:** In China, we do not believe the rapid growth in P2P lenders is a threat to the banks yet as 1) P2P lenders are targeting a market currently not served by banks given their high rates to borrowers and 2) they remain very small relative to the large credit market in China (<1% of total outstanding loans). That said, banks are starting to take notice of the power of the internet and technology, and are actively adapting new technologies. Some banks even see an opportunity to set up similar platforms. Ping An Group’s Lufax is an example. We believe the emergence of P2P lenders has served as a big push toward technology innovation at many traditional financial channels, including banks, and has been driving efficiency improvements for the entire financial services sector.

**Australia:** It is too early to tell how banks in Australia will respond given that marketplace lending has only just taken off. However, we note that the major banks have been focused on developing their online and digital offerings, suggesting that they want to match the service proposition and ease of application provided by the marketplace lenders, even if they are unlikely to compete on price. For example, Commonwealth Bank of Australia (CBA) believes it is a leader in digital and online product and service innovation and is improving loan fulfillment (the number of personal loans funded on the same day has increased ~27% in the past 12 months and asset finance credit approval times have fallen by ~67%). Also, one of WBC’s strategic priorities is “digital transformation.” It notes that it has lowered credit card complaints and personal loan complaints by ~33% and ~27%, respectively, in the past year.
Our Bull/Base/Bear Implications for Bank and Consumer Finance Stocks

Coexist? Run over? Or be overrun? These are the Base, Bull, and Bear Cases for incumbents and marketplace lenders.

Exhibit 21
We see a wide range of potential outcomes
Global Unsecured and SME Loan Issuance ($bn)

<table>
<thead>
<tr>
<th>Year</th>
<th>MS Bull Case</th>
<th>MS Base Case</th>
<th>MS Bear Base</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>$491bn</td>
<td>$286bn</td>
<td>$146bn</td>
</tr>
<tr>
<td>2011</td>
<td>$65% CAGR</td>
<td>$51% CAGR</td>
<td>$35% CAGR</td>
</tr>
<tr>
<td>2012</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2013</td>
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<td>2018</td>
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<td></td>
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<tr>
<td>2019</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>2020</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Company Data, Morgan Stanley Research estimates

Base Case: Marketplace lenders continue to surge, but incumbents fight back; near-term bank EPS down 1-2%

True marketplace lenders currently benefit from regulatory arbitrage, and there are no capital requirements for individuals, hedge funds, and corporations that fund marketplace lending. The impact of capital rules is quite significant. This means that for the same credit quality, marketplace lenders are likely to have a significant pricing advantage, and they don’t have to earn the return on regulatory capital required of an incumbent. They can be more competitive on rates as they don’t have the same capital requirements as regulated incumbents.

Case in point, as shown in Exhibit 22; if banks are able to attain only 10x leverage, then there are significant return advantages for an institutional investor (such as a private equity shop or hedge fund) that can lever up 20x. New marketplace lenders in the US have been able to offer lower rates to borrowers than card companies, and on aggregate have seen originations double every year since 2010.

Exhibit 22
Ability of non-banks to lever up offers significant advantage

<table>
<thead>
<tr>
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<tr>
<td>NIM</td>
<td>16.7%</td>
<td>14.5%</td>
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<tr>
<td>Less: Net Charge Offs</td>
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<tr>
<td>Less: Expensive Ratio</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>Less: Taxes</td>
<td>30%</td>
<td>30%</td>
</tr>
<tr>
<td>Return on Assets</td>
<td>3.0%</td>
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</tr>
<tr>
<td>X Leverage</td>
<td>10x</td>
<td>20x</td>
</tr>
<tr>
<td>Return on Equity</td>
<td>30.5%</td>
<td>45.5%</td>
</tr>
</tbody>
</table>

Source: Morgan Stanley Research. Note: Revenue = interest income + fees.

Marketplace lenders also have a pricing advantage given other regulatory restrictions on the incumbents, such as the CARD Act. In the US, incumbent lenders do not market to higher-rate borrowers given limited flexibility in managing that portfolio due to the CARD Act’s higher capital requirements for delinquencies and recent guidance from regulators pressures deposit advance products. Non-bank lenders providing funding to marketplace borrowers do not have those restrictions.

Incumbents are beginning to respond... They are responding either directly to marketplace lending or to the forces that are driving the growth in marketplace lending, from buying pools of loans from platforms to buying online platforms to speeding up and streamlining front-end operations.

...but there is much more to do. Banks need to invest in technology across the front, middle, and back layer. Spending is needed to make borrowing faster and more intuitive, with faster feedback for the borrower and integrated with legacy systems. Banks also need to invest in IT to facilitate loan-level analysis and management. Banks are currently managing smaller corporate, retail, and residential mortgage loans on an aggregate portfolio basis. We expect this will change to more granular loan-level management, in line with what banks are doing for large corporate/CRE loans. Incumbents investing today should be able to get faster growth payback starting in 2017.
In the US, we have lowered our largest consumer lenders’ 2016e EPS by 50-200bps to reflect higher tech spend… This is based on 1-3x the P2P technology spend. We have also reduced card yields by 10bps, based on LendingClub’s yield, which starts 300bps below most lenders’ lowest rate.

Exhibit 23
2016e expense/EPS revisions: lowering estimates for US incumbents

<table>
<thead>
<tr>
<th>Ticker</th>
<th>2016 Expenses ($)</th>
<th>2016 EPS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>New</td>
<td>Old</td>
</tr>
<tr>
<td>BAC</td>
<td>$57.0</td>
<td>$56.8</td>
</tr>
<tr>
<td>C</td>
<td>$43.4</td>
<td>$43.2</td>
</tr>
<tr>
<td>COF</td>
<td>$13.4</td>
<td>$13.3</td>
</tr>
<tr>
<td>DFS</td>
<td>$3.6</td>
<td>$3.6</td>
</tr>
<tr>
<td>JPM</td>
<td>$61.4</td>
<td>$61.2</td>
</tr>
</tbody>
</table>

Source: Morgan Stanley Research estimates

…but we have raised 2018e bank EPS. Yet as a result of the investments we expect consumer lenders to make in marketing and consumer interface (speed, ease of use, one click), we believe the largest incumbents will start to offset the marketplace lenders’ current pace of share gains in 2017. Enhanced front-end technology platforms drive faster approval decision-making and a better overall customer interface and experience, as well as more granular loan level management.

Overall, we expect this will be a long-term positive for our largest consumer lenders, JPM, BAC, C, COF, and DFS, and we have increased 2018e EPS by 30-150bps to reflect payoff from technology investments in front-end applications. We expect COF and DFS to benefit the most from an EPS standpoint, given higher leverage to credit card. For COF, we expect average total loan growth of 5.2% (vs. our prior 4.4%); at DFS we look for 5.3% growth (vs. our prior 4.7%).

Exhibit 24
2018e revenue/EPS: raising estimates for US incumbents

<table>
<thead>
<tr>
<th>Ticker</th>
<th>2018 Revenues ($)</th>
<th>2018 EPS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>New</td>
<td>Old</td>
</tr>
<tr>
<td>BAC</td>
<td>$102.7</td>
<td>$102.6</td>
</tr>
<tr>
<td>C</td>
<td>$86.8</td>
<td>$86.7</td>
</tr>
<tr>
<td>COF</td>
<td>$28.1</td>
<td>$27.6</td>
</tr>
<tr>
<td>DFS</td>
<td>$10.7</td>
<td>$10.6</td>
</tr>
<tr>
<td>JPM</td>
<td>$119.0</td>
<td>$118.8</td>
</tr>
</tbody>
</table>

Source: Morgan Stanley Research estimates

In the UK we have made similar changes to our estimates to Barclays and Lloyds, which have the largest exposure to consumer lending of the UK banks.

Barclays: We have reduced our Barclaycard estimates by 3-5%, reflecting elevated investment spend in 2015e and 2016e to support growth and investment, with an offset from higher loan growth in 2017e. We have left margin estimates unchanged as we already factored in margin compression in the coming years. At a group level, our changes reduce EPS by 1.0-1.5%.

Lloyds: We have adjusted forecasts for the Consumer Finance business by 2%, reflecting a 10bps reduction in margin in 2015e-17e. We have left volume and cost assumptions unchanged as our estimates already reflected the announced £1 billion investment in digital across the bank. Our group estimates have nudged down ~0.3%.

Although banks are responding with their own technology and platform investments, we believe the platforms will see strong volume as they continue to build partnerships to originate loans, increasingly fund through institutional channels, and explore a broader range of lending beyond just consumer loans.

Exhibit 25
We expect a 51% P2P loan origination CAGR through 2020

Source: Company Data, Morgan Stanley Research estimates

Bull Case (banks’ Bear Case): Marketplace lending takes off

In our bull case for marketplace lenders, the upstarts continue to gain share of the $800 billion market (as of 2014) in outstanding credit card loans at the incumbents as younger Millennial customers value brand less and instead go for the lowest rates and quickest loans. Banks and consumer finance companies prove unwilling to pursue the marketplace lender model, taking the view that quick decision-making results in eroded underwriting capability for their balance sheets.

Riskier, higher-rate loans are going to marketplace lenders today. Over time in our bull case, higher-quality prime consumers increasingly value the technology and begin to
choose online platforms over incumbents. The upstarts also potentially take share among these clients by offering a broader set of financial products than the incumbents, gaining share of a prime consumer segment that is essentially 100% owned by the incumbents today.

**Bear Case (banks’ Bull Case): Incumbents thrive and survive**

In our bear case for marketplace lenders, the incumbents ramp up their product offering and technology to compete effectively. While increased spending over two years puts a modest damper on near-term bank profitability, technology enhancements to the bank offering appease tech-savvy consumers/Millennials, driving a surge in revenues. P2P lenders hit a plateau in customer penetration and do not resonate with higher-quality, prime borrowers, who value a broader product set and brand names. Respondents to our AlphaWise survey generally had low awareness of marketplace lenders, with 36% aware of any lender. At the same time, consumers appear to value brand at incumbents: 69% of respondents who are likely to take out a loan in the next 12 months expect to choose a bank with which they have an existing relationship.

Beyond the competitive consideration, in our bull case the incumbents ultimately prove more shrewd in their underwriting, and a recession-type event drives many P2P lenders out of business. As credit losses rise, losses also rise sharply for many P2P lenders, causing investment capital to dry up from the large institutional investors funding most of the loans today. A double whammy comes from less liquidity and investment capital sloshing around given 1) an assumed Fed rate raise cycle and 2) tighter credit markets amid a recession, driving less credit supply.
Global Marketplace Lending

AlphaWise
AlphaWise Survey of US Consumer Preferences in Lending

In early March, we conducted an AlphaWise survey of consumer preferences in lending to better understand borrowing behavior, awareness, and use of P2P providers, and factors of importance when choosing lending services. We conducted our survey among 3,000 consumers in the United States.

Key Survey Findings

- Generally low awareness of P2P lenders: 36% of consumers are aware of any P2P lender and just 15% report ever having used the service.
- LendingClub is the leading P2P lender with 24% awareness and 8% usage, followed by Upstart and Prosper.
- Consumers learn about P2P lenders primarily online. LendingClub, however, stands out with higher advertising activity.
- Unsurprisingly, consumers 18-34 years old (Millenials) are more aware of P2P lending. Some 48% of Millennials have used or are aware of P2P lending, above the 35% of consumers 35-54 years old and 25% for those over 55 years old.
- Interestingly, millennials currently use and intend to borrow from their existing bank to a higher degree than older generations. This tells us that the Millennial "ball" remains firmly in the incumbent’s court, and it is the incumbents’ opportunity to lose.

Source: AlphaWise, Morgan Stanley Research
Splitting the data into three generational cohorts — Millennials (18-34 years old), Gen X (35-54 years old), and Boomers (55+ years old) — we find similar results across age groups. Millennials were most likely to have used their existing bank, both for a loan in the past 12 months (58% vs. 53% for Gen X and 50% for Boomers), and for expected loans in the next 12 months (72% vs. 65% and 67%, respectively).

**Lending patterns by generational cohort**

Drilling down into the survey specifics, we examined lending patterns of consumers who either expect to take out a loan in the next 12 months or have taken one out in the past 12 months. A significant majority (69%) of those who said they expect to take out a loan in the next 12 months indicated they would borrow from a bank with which they have an existing relationship. A smaller but still significant majority (55%) of respondents who actually applied for a loan in the past 12 months used their existing bank, with many of the rest (22% of the total) using a P2P lender. In our view, the survey results indicate that banks still have a valued brand to leverage in driving consumer lending growth.
What will drive consumer satisfaction?

From a loan decision perspective, while Millennials have a lower rejection rate (4% vs. 14% for Gen X and 12% for Boomers), they are more likely to receive a lower approval amount than they apply for (34% vs. 25% and 9%, respectively). In our view, this is consistent with our expectation that Millennials tend to be conservative in credit behavior, but don’t yet have the assets or income to support higher borrowing.

Additionally, from a satisfaction perspective, loan process satisfaction ratings for Millennials are generally lower compared with Gen X, and even more so compared to the Boomers cohort. Interestingly, satisfaction rates were higher for Millennials than Gen X in the payment term, rate and fees categories. Speed of application and time to receive funds are critical, but perhaps innovations in credit scoring (Facebook profile, shopping trends, etc.) are more helpful to Millennials than Gen X.
Marketplace Lending

US
Marketplace Lending in the US

Current Marketplace Lenders and Size of the Existing Market

1. Consumer unsecured lending is dominated by LendingClub and Prosper, but others are emerging

We estimate US marketplace platforms originated roughly $7 billion of unsecured consumer loans in 2014, and will reach ~$15 billion in 2015. The US marketplace unsecured consumer lending market is dominated by early entrants LendingClub and Prosper — LendingClub led 2014 issuance with ~60% share, and Prosper was No. 2 with ~20%. Yet, in the last few years, we have observed a proliferation of new entrants either focusing on a different segment of the credit spectrum (e.g., Avant/LendUp are targeting near-prime borrowers or consumers with no FICO scores), leveraging unique data points to underwrite credit (e.g., Upstart is using undergraduate grades), or otherwise offering borrowers or investors additional incentives and lower fees than LendingClub and Prosper.

2. SME market is more fragmented, but OnDeck has established itself as a leader

We estimate US marketplace/online lenders originated ~$5 billion of SME loans in 2014. The SME lending market is slightly more fragmented than the consumer unsecured segment, though OnDeck, CAN Capital, and Kabbage seem to have dominant share. That said, defining the market is difficult, as a number of merchant cash advance lenders have moved from purchasing credit card receivables to issuing unsecured SME term loans.

In aggregate, marketplace/online lenders have seen strong recent momentum. Bank lending to SMEs has not recovered following the recession, and even in the best of times we note that banks find it difficult to profitably issue small loans (<$100,000). By offering short-duration loans at rates that are more competitive than legacy alternative lending sources, such as merchant cash advance companies and equipment leasing companies, these newer online lenders are able to fill a gap in the market.

3. Student loans, auto financing, and mortgages

Beyond consumer unsecured and SME loans, marketplace lenders have started to enter the student loan (SoFi and CommonBond), mortgage (SoFi, Realty Mogul), and auto loan (DriverUp, LendKey) markets. To date, only student loan refinancing has seen significant traction (over $3 billion issued by SoFi and CommonBond), since it offers compelling rates to a large existing market. While we believe that auto lending and mortgage lending may be harder to disrupt, owing to origination complexity and competitive interest rates, we believe there is an opportunity for marketplace lenders to target these verticals by improving the borrowing process.

Exhibit 38
US marketplace lending has had the most traction in consumer unsecured and SME lending thus far

Source: Company Data, Morgan Stanley Research

How Big Is the US Addressable Market?

We see the US marketplace addressable market as comprised of five loan types: (i) consumer unsecured loans, (ii) SME loans, (iii) student loans, (iv) mortgage loans, and (v) auto loans. We estimate an aggregate total addressable market (TAM) of $1.9 trillion in annual loan issuance, based on 2014 data.

1. Unsecured Consumer loans: $450 billion TAM

Leading online marketplace lenders help lower the cost of borrowing for consumers, and the majority of loans issued so far have been used to refinance existing debt. We therefore look at the outstanding loan volume as the best way to start estimating the TAM. According to data from the Federal Reserve, there was ~$880 billion of US revolving consumer credit outstanding as of 3Q14, consisting primarily of credit card debt. Only a portion of that, however, is truly addressable by marketplace lenders given that many consumers may not hold balances large enough or long enough to warrant refinancing.
We make two adjustments to arrive at an unsecured consumer loan TAM estimate of $450 billion: i) eliminate balance from “transactors” and ii) eliminate small loans (<$1,000).

(i) Separating transactors from revolvers eliminates 41% of loan balance: We try to isolate the portion of the debt outstanding that accrues to transactors (i.e., consumers who pay down their balances in full each month). According to a random sample of credit card accounts in the CFPB Credit Card Database (CCDB), which contains nearly the universe of credit card accounts for 18 large US credit card issuers, 31% of the accounts pay back their balances in full every month. These are transactors. Of the revolvers (those who do not pay their balances every month), half pay close to the minimum and hence carry most of their outstanding as balance, while the other half pay a mixture of full balance, minimum amount, or somewhere in between. According to the CCDB sample survey, for the mixed payers, 70% of all their payments are less than 20% of the balance. In aggregate, ~59% of all credit card accounts pay less than 20% of their balance each month. This represents the addressable market.

(ii) Weeding out small ticket outstanding loan balances eliminates 12.5% of loan balance: We attempt to weed out outstanding balances of <$1,000, as savings on these balances may not be material enough to refinance, and as some lenders, like LendingClub, do not even offer loans below $1,000. The Nilson Report estimates approximately 549 million credit cards outstanding in the US at the end of 2013. According to a Federal Reserve database, 40% of cardholders hold balances less than $1,000. This translates to roughly ~220 million cards. Assuming an average balance of $500 on these cards yields a total balance of $110 billion, or 12.5% of the total market balance, that is under $1,000 and hence not addressable, leaving 87.5% as addressable.

Estimating unsecured consumer loan total addressable market: Aggregating the above analysis, and assuming a uniform portfolio distribution (i.e., transactors and balances under $1,000 are uniformly distributed throughout the portfolio), yields a total addressable market of $454 billion (880*59%*87.5%), which we round to $450 billion.

Estimating unsecured consumer loan market growth: Consumer unsecured marketplace lending represented ~$7.4 billion in 2014 issuance, by our estimate, or 1.1% of the total market. We expect issuance to see 47% CAGR through 2020, primarily by taking share from incumbents (i.e., credit card refinancing) and to a lesser extent by creating/meeting new demand. In 2020, we forecast consumer unsecured loans to reach $75 billion, or 8.4% of total issuance. Of this, we estimate that 6.4% is likely to be share shift from incumbents, while the remaining 2% is likely to be the result of credit expansion.

Source: Federal Reserve, Morgan Stanley Research estimates
2. SME loans: $280 billion TAM

The aggregate value of ($1 million and smaller-sized) commercial and industrial loans outstanding to SMEs from depository lending institutions was $298 billion in September 2014. Consultancy Oliver Wyman estimates that additional SME demand for credit of $80-120 billion is currently not being met by traditional loan providers, as banks in aggregate have been shifting loan activity away from SMEs and toward more profitable avenues.

Yet, banks do selectively compete for SME lending. Since marketplace/online lenders are generally offering interest rates to SMEs that are higher than traditional bank loan rates, we haircut the addressable market to factor in SMEs that have already established banking relationships and are unlikely to switch to an alternative source of funding. Without a precise way to do this, we eliminate 85% of the balance for loans between $250,000 and $1 million and 25% of the balance for loans of $100,000-250,000. After applying this filter, we estimate total addressable market of $184 billion in outstanding loans, plus an additional $100 billion in unmet demand, for a total of $284 billion, which we round to $280 billion.

Exhibit 41

US: We estimate the SME TAM at $284 billion

SMB loan TAM ($bn)

Source: FRB, Company Data, Morgan Stanley Research

Estimating SME origination growth: SME marketplace lenders represented $4.6 billion in 2014 issuance, or 2.1% of the total market, by our estimate. We expect issuance to expand at a 47% CAGR through 2020, primarily through creation of new credit rather than taking share from incumbents. In 2020, we forecast marketplace/online lenders reaching $47 billion, or 16% of total US SME issuance. Of this, we estimate that 13.7% is likely to be driven by credit expansion, while the remaining is likely to be share shift from incumbents (representing ~4.6% share loss for the banks).

3. Student loans: $400 billion TAM

Lenders SoFi and CommonBond have started connecting institutional investors with mispriced student borrowers, taking advantage of the US government’s risk-blind lending approach and cherry picking the highest quality borrowers with strong credit and high income. There is approximately $1.2 trillion in outstanding student loan debt in the US, and this balance continues to grow faster than GDP as tuition costs increase and young employees have trouble paying down loan balances.

Of this $1.2 trillion balance, we note that a substantial portion is unlikely to be addressable by marketplace lenders because the balance is too small. We think $10,000 is a reasonable cutoff, and accordingly we exclude 40% of the outstanding loan balance.

We also note that rates on a portion of outstanding loans are already quite low for a private lender to compete; the vast majority of student loans are issued directly by the federal government (93% in 2014), and different loan types like Stafford Subsidized, Stafford Unsubsidized, and PLUS loans are issued at different rates in different academic years. For example, Stafford Subsidized loans issued from July 2011 to June 2013 had a fixed rate of 3.4%, which cannot be profitably refinanced. However, PLUS loans were issued at a 7.9% fixed rates during 2006-13. By making assumptions about the composition of today’s $1.2 trillion in loans by year and loan type, we estimate that 42% of the loan balance has rates too low to be refinanced.
US: Student loan rates have been in flux, but we eliminate the lowest rate loans from our TAM

<table>
<thead>
<tr>
<th></th>
<th>2006</th>
<th>06-'08</th>
<th>08-'09</th>
<th>09-'10</th>
<th>10-'11</th>
<th>11-'12</th>
<th>12-'13</th>
<th>13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stafford Subsidized</td>
<td>3-mo + 230bps</td>
<td>6.90%</td>
<td>6.80%</td>
<td>5.60%</td>
<td>4.50%</td>
<td>3.50%</td>
<td>3.80%</td>
<td>3.80%</td>
</tr>
<tr>
<td>Stafford Unsubsidized</td>
<td>3-mo + 230bps</td>
<td>6.80%</td>
<td>6.80%</td>
<td>6.80%</td>
<td>6.80%</td>
<td>6.80%</td>
<td>6.80%</td>
<td>6.80%</td>
</tr>
<tr>
<td>PLUS loans</td>
<td>3-mo + 310bps</td>
<td>7.90%</td>
<td>7.90%</td>
<td>7.90%</td>
<td>7.90%</td>
<td>7.90%</td>
<td>7.90%</td>
<td>7.90%</td>
</tr>
</tbody>
</table>

Source: FRB, Company Data, Morgan Stanley Research

Combining these two filters, we estimate the addressable market at $403 billion (1,157*60%*58%), which we round to $400 billion.

Estimating student loan origination growth: We estimate student loan marketplace lenders represented ~$2.2 billion in 2014 issuance, or 2% of the total market originations. We expect issuance to see a 40% CAGR through 2020, primarily on share gain from refinancing federal loan balance. In 2020, we forecast student loans issued by marketplace lenders to reach $16.6 billion, or 13.8% of estimated total US student loan issuance.

Exhibit 44
US: We expect student loan lending to reach 13.8% penetration in 2020, primarily on share gain from federal loans

4. Mortgages: $1 trillion+ annual origination TAM

Mortgage lending is a more nascent vertical for marketplace lenders and has yet to achieve meaningful volume. SoFi has started to expand beyond student loan refinancing to mortgage financing for high credit quality borrowers, and originated $24 million in mortgages in 2014 (vs. its $1.3 billion in student loans). Although, we believe that incumbents already offer competitive interest rates on mortgages, yet there appears to be an opportunity to create value, primarily by simplifying the process or offering favorable terms (e.g., faster processing times, ease of application, lower down payment, lower origination fees, etc.).

Broadly, we expect the marketplace mortgage lending opportunity will be a function of process improvement and cost of origination; the consumer experience in mortgage lending is notoriously long and cost (for underwriters) is high, and SoFi expects that by improving the process, a lender could potentially lower the origination cost from ~150bps to 25bp. This value proposition seems to extend to all consumer mortgages, so in theory the TAM is the $1 trillion+ in annual origination volume.

With barely any market volume today, mortgage lending on marketplace platforms is still more theoretical than proven. However, the value proposition makes sense to us, and we conservatively assume the total marketplace industry could achieve $14 billion by 2020 (still <1% of industry originations).

5. Autos: $250 billion TAM

Auto lending is highly competitive and primarily facilitated by dealerships (i.e., indirect loans), but early entrant LightStream has successfully lent to super prime borrowers, and other online lenders (e.g., LendKey) have started to enter the market as well. There is little existing volume, but we expect the biggest opportunity is to reprice consumers who directly borrow from financing companies, which comprise ~15% of outstanding loans, or $250 billion. Yet the ability for marketplace lenders to offer lower rates is yet to be proven and at this point we model practically no volume by 2020 ($1.6 billion, or ~30bps of total issuance).
Value Proposition of Marketplace Lending to US Consumers and SMEs

Lower APR to borrowers, higher returns for investors:
Based on a survey of 21,000 borrowers, interest rates paid on loans availed through the LendingClub platform are on average 680bps below the rate on their outstanding debt. Meanwhile, lenders on the LendingClub platform have been able to earn a median loss-adjusted return of 8.6% on a three-year loan, which is meaningfully more attractive than the 1.0% APR that the depositors who keep their funds in a three-year certificate of deposit account are currently able to obtain.

Exhibit 45
LendingClub's advantage vs. banks based on survey results

<table>
<thead>
<tr>
<th>Traditional Banks</th>
<th>Lending Club</th>
</tr>
</thead>
<tbody>
<tr>
<td>Borrowers pay:</td>
<td></td>
</tr>
<tr>
<td>21.64%</td>
<td></td>
</tr>
<tr>
<td>Spread reduced:</td>
<td>14.1%</td>
</tr>
<tr>
<td>Lenders get:</td>
<td>8.6%</td>
</tr>
<tr>
<td>1.00%</td>
<td></td>
</tr>
</tbody>
</table>

Source: Company Data, Morgan Stanley Research

We believe a key reason marketplace lenders are able to operate with a smaller spread is due to technology-driven cost advantages vs. banks, including a purpose-built platform, online only application process, data-driven automated underwriting, scalable origination and servicing platforms, and lack of overhead related to a branch infrastructure. Moreover, capital reserve requirements further elevate the operating costs for banks.

Put together, LendingClub believes that it has a 3-5% operating expense advantage as a percentage of outstanding loan balance vs. tradition lenders, which we think is likely representative of the broader industry.

Convenience of application process is an additional advantage: The ease of the online application process has been cited as a key reason in various surveys for consumers to choose a marketplace lender over a more traditional lender. While lower interest rates are an important driver for the growth in LendingClub’s origination volumes, UK-based lenders such as Zopa and RateSetter have experienced significant rates of growth despite offering only marginally lower rates than traditional lenders, underscoring the importance of the convenience aspect.

OnDeck notes that 60% of its customers considered applying for loans from traditional financial institutions, but the majority did not apply due to the perceived length of the overall process. According to the Federal Reserve Bank of New York's Spring 2014 Small Business Credit Survey, SMEs spent an average of 33 hours applying for a loan, contacting and submitting applications to 2.7 financial institutions.

Rising Interest Rates and NCOs Could Moderate Value Proposition to an Extent

LendingClub conducted a 2014 survey that shows borrowers saved 680bps when refinancing through its platform, and that investors earned 8.6% net of credit losses, far more than the current 1% (risk-free) return on a three-year CD. While LendingClub’s cost advantage vs. traditional lenders and proprietary credit decision-making/risk pricing models are important drivers, we think at least part of the reason this disintermediation opportunity exists is that credit losses and underlying interest rates are at historic lows, while credit card rates charged to borrowers have not decreased commensurately. In other words, there is more “fat to cut” today than in a typical environment.

In evaluating the potential impact to volume growth, we think in terms of the “spread” opportunity between what borrowers are charged by banks and what an investor, at a bare minimum, would charge that borrower (see Exhibit 46). It is this spread that marketplace lenders can capture and divide among borrowers (lower rates), investors (positive loss-adjusted returns), and itself (origination and servicing fees). In the current environment, it is clear that the average US credit card rate is far in excess of the minimum required return, making it easier for marketplace lenders to target this disintermediation opportunity.
Interest rates might prove to drive demand cyclicality:
Banks often price credit card rates at prime plus a spread, but historically the prime rate had only been partially predictive of average credit card rates — a regression of semiannual data suggests a coefficient of 0.6 and an R² of 57%. Based on this pattern, one could infer that a 1% rise in the yield curve might hypothetically drive up credit card rates by only 0.6%, and therefore the spread marketplace lenders capture might be compressed by 0.4%. However, we note that changes from the 2009 CARD Act may drive a closer correlation between credit card rates and underlying interest rates going forward, as bank rate changes are now more restricted, so more rates may be more directly tied to prime rates than in the past. The net result is that we expect some compression to the spread, but not to the full extent we illustrated.

We also note that borrower demand could decline in a higher rate environment. Higher nominal rates could, on the margin, discourage some borrowers from taking on a loan to undertake a major expense (home improvement, vacation) or otherwise reduce the amount borrowed.

But rising NCOs will likely prove to be a bigger cyclical driver to marketplace lending growth: Investors in marketplace platforms will demand, at a minimum, a rate equivalent to the risk-free rate plus expected NCOs (and of course some profit to compensate for taking risk). Therefore, as NCOs rise, platforms need to offer them higher returns, and would therefore need to charge borrowers more. The headwind we anticipate is that banks will not raise their rates by as much when this happens due to competition. For example, platforms may raise rates to borrowers 2% to compensate investors for rising NCOs, but if banks only raise rates by 1% then the value proposition to borrowers is diminished. The 2009 CARD Act is the key culprit.

Banks generally charge borrowers a spread above the prime rate, and would adjust this spread based on the credit environment. Thus, if credit deteriorated, banks would widen this spread and raise their rates to borrowers, even if the prime rate was unchanged. However, following the 2009 CARD Act, banks can no longer easily adjust that spread as NCOs move, so the reasonable alternative for banks is to charge a more stable rate spread to accommodate both good times and bad. The ramification is that this spread may appear to be too wide (and ripe for disintermediation) when NCOs are low, and too narrow when NCOs are high. We expect this pattern will drive some cyclicity to marketplace lending growth going forward, as a headwind while NCOs are rising and a tailwind while NCOs fall.

Combining the impact of interest rates and NCOs, we see substantial historical variability in this total "spread" disintermediation opportunity over the past 25 years (see Exhibit 47), suggesting to us that the platform’s value proposition might exhibit some cyclicality going forward. Underlying investor demand for unsecured loans could also prove to be cyclical: At a basic level, investor demand for unsecured consumer credit loans may fall if macro and credit conditions start to turn. Further exacerbating this impact is that some hedge fund investors have reportedly been levering investments in marketplace loans, amplifying their exposure and also increasing platforms’ funding concentration to these investors. The risk to platforms is that levered lenders may be quick to withdraw funding as NCOs trend higher, and that the impact would be outsized given their leveraged positions. We note that platforms that have more diversified funding are likely to be more resilient through such a scenario.

Exhibit 47
US: Combining the impact of interest rates and NCOs, we see the disintermediation opportunity fluctuates and seems to be near a 25-year high

Source: CFPB, Federal Reserve, Morgan Stanley Research
Impact on US Incumbents, and the Potential Response

How will banks and consumer finance companies respond?

We do not believe that banks view the marketplace lending phenomenon as much of a threat as yet, given the infancy of the market (~1% of total outstanding loans). That said, banks are starting to take notice and, in fact, some scale-constrained banks see an opportunity to marry their low cost of funding with a marketplace platform’s low cost of operations by becoming investors on the platform. Titan Bank and Congressional Bank are examples of community banks that are buying loans through the LendingClub platform. Santander Consumer USA has disclosed an agreement to purchase up to 25% of LendingClub’s total origination for a period of three years, including the right to purchase non-prime loans. LendingClub has also noted interest from several other community banks that don’t have the risk appetite to make unsecured consumer loans themselves, but view LendingClub as a platform to offer loan access to their consumers (perhaps under a co-branded agreement) as they try to stay competitive with the larger national banks. LC’s partnership with BankAlliance is one such example.

Large banks/lenders, on the other hand, are keeping an eye on new disruptive technologies and continue to make their own investments. For instance, American Express recently opened a technology hub in Silicon Valley to focus on innovation in big data, cloud computing, and mobile payments; Citigroup operates a venture capital division to invest in companies that have potential to disrupt and transform financial services; and Wells Fargo recently launched a start-up accelerator to invest in companies that are focused in the financial industry. In terms of a more direct response to the marketplace model, we have also seen initiatives from banks like SunTrust that bought and leveraged LightStream to offer unsecured personal loans of up to $100,000 through an online/mobile interface with same day funding. JPM has stated its intention to invest to keep Silicon Valley at bay.

Will banks respond by slashing credit card interest rates? No, but near-term we do expect pruning of yields in the higher quality portions of the portfolio. Longer term, large banks could become more competitive with relationship based pricing, faster decision-making, increased scale efficiencies. They could also lobby federal and state regulators to increase oversight of the marketplace lending space, which will likely lead to higher operating costs for the industry and be disruptive to overall industry growth.

Securitization and Private Equity as Enabler of Rapid Growth in the US

The securitization market could emerge as an important funding source for marketplace lenders. This structure allows some lenders, such as pensions and insurance companies that have been held back due to the small size and lack of liquidity in the asset class, to increase their investments. Additionally, as the major rating agencies have begun to rate these deals, it further increases investor confidence in the market.

History of marketplace lending securitization

The first ABS backed by peer-to-peer loans was an unrated $53 million deal created by a hedge fund in late 2013. Since then, the securitization market for these loans has grown to a $1 billion+ market, and has begun to attract the leading rating agencies. Notable deals over this timeframe include the following:

Exhibit 48

<table>
<thead>
<tr>
<th>Date</th>
<th>Amount</th>
<th>P2P</th>
<th>Rating Agency</th>
<th>Senior Tranche Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>12/23/13</td>
<td>152mn</td>
<td>SoFi</td>
<td>DBRS</td>
<td>A</td>
</tr>
<tr>
<td>4/30/14</td>
<td>175mn</td>
<td>OnDeck</td>
<td>DBRS</td>
<td>BBB</td>
</tr>
<tr>
<td>7/14/14</td>
<td>251mn</td>
<td>SoFi</td>
<td>S&amp;P and DBRS</td>
<td>A</td>
</tr>
<tr>
<td>10/20/14</td>
<td>200mn</td>
<td>CAF Capital</td>
<td>S&amp;P and DBRS</td>
<td>A</td>
</tr>
<tr>
<td>11/10/14</td>
<td>303mn</td>
<td>SoFi</td>
<td>S&amp;P, Moody’s</td>
<td>A (S&amp;P), A2 (Moody’s), and AA (DBRS)</td>
</tr>
<tr>
<td>2/6/15</td>
<td>327mn</td>
<td>Prosper</td>
<td>Moody’s</td>
<td>Baa3</td>
</tr>
</tbody>
</table>

Source: Company data, Morgan Stanley Research

Issues in rating and structuring these deals. As with any innovation, marketplace lending securitization will entail experimentation. In this case, the experimentation will involve 1) the structure of deals and 2) the ratings methodology. Because the marketplace lending securitization industry is still in its infancy, there are a number of issues that agencies must consider when applying a rating to these deals.

1) Short track record: There is limited historical data to determine how marketplace loans will perform during an economic downturn, making it difficult to forecast potential loan losses. During a downturn, there will also be increased costs for the servicers of these loans to manage defaulted and delinquent loans, which they have yet to prove they can do effectively.

2) Lack of collateral: Many marketplace loans are not backed by a collateral. In these situations, ratings will likely rely on the history of unsecured consumer lending such as credit card receivables or installment loans.
3) Regulatory issues: As of now, the ultimate regulatory environment is uncertain for marketplace lending. If stringent requirements are imposed, it could prove difficult for marketplace lenders to comply with new regulations such as operational or capital requirements.

4) Due diligence: Because marketplace loans are generally made over the internet, there is a greater potential for fraud than in traditional loans. Also, because many marketplace lenders act in a conduit role and do not retain risk, there remain questions about the underwriting process and the quality of these loans that act as the collateral for the marketplace ABS. These questions remind many of the housing bubble.

5) Servicing: An experienced loan servicer is a key driver in the rating of an ABS as these servicers are ultimately responsible for collecting and processing payments from borrowers. In its recent rating of Prosper’s securitized deal, Moody’s cited Prosper’s selection of First Associates as its servicer as a key reason it rated the deal in the first place.

Near-term growth of the market

Historically, once the market accepts a new product, it can achieve high rates of growth. For example, in their first five years of issuance, auto ABS had a 66% CAGR, credit card ABS a 50% CAGR, and student loan ABS a 98% CAGR. In the long run, if regulatory, servicing, and other questions are resolved favorably, we could see marketplace ABS driving a similar level of issuance growth.

Exhibit 49

US: New securitization products have historically seen rapid growth in their first 5 years of issuance

If marketplace loans become collateral for structured products and become a catalyst for growth, it could benefit the ratings agencies, or banks that are able to win share of this structured product market.

Given the small size of the P2P market today, Moody’s would likely see more of a revenue benefit from growth than McGraw Hill Financial, since it is more of a rating agency pure play. Nevertheless, it will be many years before P2P securitizations move the needle for either company.

Private equity as an enabler

Online and marketplace lending could be an attractive deployment opportunity for private equity in a number of ways. They could provide growth capital to firms that have a proven concept but are seeking capital for marketing and scaling operations. A recent example is KKR’s primary investment in Avant, on online lending platform.

Private equity firms, through their credit funds, could also provide a source of funding by purchasing and holding, until maturity, loans originated via online platforms. Recent examples include: KKR’s $400 million commitment to purchase newly originated loans from Avant, and the commitment of Apollo Global Management’s midcap finance unit to purchase $1 billion in newly consolidated student loans originated on LendKey’s platform. To the extent the online lending market place grows significantly from here, this could yield attractive and potentially meaningful deployment opportunities for alternative asset managers.

Deep Dive into Potential Risks to Marketplace Lending from US Perspective

The marketplace lending industry is not without risks. The two most meaningful risks, in our view, are the possibility of increased competition and the indirect impact of rising credit losses. There is also risk that supply or demand fall as interest rates begin to rise, and that increased regulation or legal scrutiny of the business models harm growth and margins.

Potential for increased competition

There are two primary sources of potential competition to the existing marketplace lenders: a) traditional bank lenders and b) other marketplace platforms.

a. Competition from traditional bank lenders

The traditional bank lenders could represent a meaningful threat to marketplace lending industry growth, in our view. The banks have clearly taken notice and some have even started purchasing pools of these loans for their own portfolios. But so far, the overlap between the platforms and
the banks has been fairly minor, suggesting the marketplace platforms are not yet viewed as meaningful competitors.

Exhibit 50

**US: Total marketplace originations are a small fraction of outstanding bank loans**

<table>
<thead>
<tr>
<th>Total Loans ($bn)</th>
<th>8,100</th>
</tr>
</thead>
<tbody>
<tr>
<td>8,000</td>
<td></td>
</tr>
<tr>
<td>7,000</td>
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<tr>
<td>6,000</td>
<td></td>
</tr>
<tr>
<td>5,000</td>
<td></td>
</tr>
<tr>
<td>4,000</td>
<td></td>
</tr>
<tr>
<td>3,000</td>
<td></td>
</tr>
<tr>
<td>2,000</td>
<td></td>
</tr>
<tr>
<td>1,000</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total P2P Originations</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>US Commercial Banks Loans Outstanding</td>
<td></td>
</tr>
</tbody>
</table>

Source: LendingClub and Prosper Company Reports, Federal Reserve, Morgan Stanley Research. Prosper originations as of 3/31/15; all other data as of 1Q15

Marketplace lending today is primarily focused on unsecured consumer credit, and following the financial crisis we have seen little interest among the banks in building out capabilities to add more unsecured consumer loans to their portfolios.

Exhibit 51

**US: Unsecured consumer represents just 10% of commercial banks’ loans**

Unsecured Consumer Loans at US Banks, as of 4/29/15

Unsecured Consumer: $845 bil, or 10% of total loans

All Other Loans: $7,340 bil, or 90% of total loans

Source: Federal Reserve

**But could this change? Yes** — from two perspectives: 1) generating a new source of fee income and 2) leveraging technology to improve lending process.

1) **Banks are attracted to fee-based models:** One of the most attractive aspects of the LendingClub model is that it is largely fee-based. From a bank perspective, the ability to generate fees without associated credit risk is a valid and highly compelling reason to enter the marketplace lending space. Currently banks generate roughly 30% of their total revenues from fee sources, and with increasing regulatory scrutiny on their lending practices and capital levels, fee income is becoming an ever more attractive source of revenue growth.

2) **Banks can adapt their lending process:** One of the driving factors behind the growth of online lenders is better customer satisfaction due to faster response times, quicker loan approval times, and faster funding. To prevent significant share loss, banks will eventually be forced to provide a similar level of service if they hope to compete and stay relevant to their customers. However, we think the banks are less likely to aggressively compete in the unsecured consumer space, given high loss rates, but more likely to aggressively defend their position in the lower loss-content secured consumer or commercial space. Banks are already pushing toward greater use of technology, particularly in terms of how they interact with their depositors (smaller branches, online and mobile platforms, video ATMs, etc.), but they have not yet made meaningful progress in addressing the technological needs of the asset side of the balance sheet.

Banks also have meaningful expertise in loan originations, credit underwriting, ability to absorb losses, and securitizations, which should also give them a leg up if they choose to pursue a more technology-focused origination approach. Their existing low-cost funding sources also provide a meaningful advantage in providing warehouse lines for securitization of either their own loans or those of others.

However, banks will be unlikely to reproduce the entrepreneurial spirit that small, motivated, and highly innovative startups (like LendingClub, among others) have leveraged to build out their platforms. Many of the marketplace lenders highlight their agility and flexibility when it comes to making decisions and building out their platforms to better accommodate customer needs, and we fully agree with this thesis. Banks will either need to purchase their way into the marketplace lending space, or will need to completely rethink how they approach the technology needs of their customers. In addition, this investment, both in terms of time and money, will not likely be small, which could further delay banks’ willingness to aggressively enter the marketplace lending space.
Exhibit 52

US: Ways banks could compete with marketplace lenders

<table>
<thead>
<tr>
<th>P2P Advantage</th>
<th>How Might Banks &amp; Other Financial Institutions Compete?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operates in an online marketplace</td>
<td>1. Build their own online marketplace</td>
</tr>
<tr>
<td>Offer competitively priced loans (in lines such as Personal, SMB, Student Loans, etc.)</td>
<td>2. Build their own online marketplace</td>
</tr>
<tr>
<td>Fast &quot;time to funding&quot;</td>
<td>Invest in speeding up funding process</td>
</tr>
<tr>
<td>New proprietary credit scoring models using big data</td>
<td>Develop/buy &quot;real time&quot; credit analytics beyond traditional metrics</td>
</tr>
<tr>
<td>Easy access to funding for loans/notes from retail investors &amp; institutions</td>
<td>1. Exit funding agreements with P2P companies</td>
</tr>
<tr>
<td></td>
<td>2. Offer bank-run online marketplace as investment product</td>
</tr>
<tr>
<td></td>
<td>3. Lend directly to borrowers in their own marketplace</td>
</tr>
</tbody>
</table>

Source: Morgan Stanley Research

b. Competition from new online entrants likely in near term: The process to start up a marketplace platform appears to have few barriers to entry besides finding seed capital, a team that understands credit risk and underwriting, and a tech team to build out a platform. Attracting borrowers likewise has few hurdles besides marketing, since loans are a commoditized product, although doing so profitably might be a challenge. However, attracting investors is a key barrier to entry, as investors are conscious of platform track record and brand when deciding where to invest.

We think that over the longer term, marketplace lending will end up with relatively high industry concentration due to the network effects to investors and borrowers for using the same platform. In the near term, however, we anticipate competition could be fierce as early-stage investors back platforms with both operational funding and with investment funding to help develop a track record. In other words, the lucrative payoff for having one of the few large successful platforms may drive early-stage equity investors to provide loan financing as well, potentially for several years. ONDK, for example, issued loans using its own balance sheet for seven years before also introducing a marketplace model, and noted that it was necessary to build a track record before doing so.

Deteriorating credit is a material risk to the viability of the marketplace lending models

Perhaps more than anything else, rising credit losses pose the biggest threat to the marketplace business model. The marketplace lending business model depends on the willingness of institutional and retail investors to take on the credit risk of an unsecured consumer borrower. As we are currently in the middle of a benign stage of the credit cycle, credit losses are very low and loss adjusted returns are high. Credit cards represent the most similar loan class to marketplace lending’s consumer unsecured loans, and US credit card losses peaked at roughly 14% during the financial crisis, more than double the ~5% typical and 3% current loss rates. A key question is whether retail investors (and other investors new to unsecured consumer lending) will have the emotional and financial fortitude to withstand higher credit losses in their portfolio that will accompany a financial downturn.

Exhibit 53

US: Historical NCO ratios of consumer and C&I loans

Net Charge-Off Rate

Loan losses in a downturn may prove to be worse than expected: Marketplace lending models either did not exist in the most recent financial crisis, or were in early stages of developing their credit models. Thus even though platforms often mention that their models are an improvement on traditional predictive models, the lack of detail around how their processes work means it will likely be a “show-me” story in the next cycle. Further, the much stronger credit quality seen over the last couple of years makes it difficult to even differentiate platforms from each other on this basis.

Even Institutional investors have proven loss-averse in previous downturns: Although retail investor behavior in the next downturn represents an uncertainty, even institutional investors have shown an aversion to lower credit-quality debt during a downturn. The total amount of asset-backed securitization volume, for example, fell 63% from 2007 to 2010, during the worst of the financial crisis — and these are assets secured by collateral. It is conceivable that a similar decline in demand, if not greater, could occur during the next economic recession.

Originations may slow as marketplace lenders focus on higher credit in a downturn: The marketplace lender response to an economic downturn is likely going to be
tightening of their underwriting model. And given the heavy technology focus and exceptional flexibility relative to the more traditional lenders, the marketplace lending industry can likely execute on this credit tightening fairly quickly in response to changing market conditions. However, this will result in a smaller potential borrower base as new loans are provided only to higher-quality clients. In turn, this will likely serve as a headwind to new origination volumes.

Higher interest rates could negatively affect loan demand and supply of funding

We see two primary risks in a rising rate environment: 1) a decline in consumer demand and 2) a decline in investor appetite for unsecured consumer credit given better investment returns elsewhere.

Decline in consumer demand: Currently, the US marketplace lenders are charging customers generally between 5.5% and 30% for consumer credit. For borrowers, these rates are more attractive than comparable rates under their existing credit card debt, for example. But as rates rise, will consumers — particularly those higher-quality borrowers — still be as willing to borrow money at 13% as they were at 10% when rates were unusually low? The risk is that they are not. Because they are higher quality, it implies that they may have better alternative funding sources (or the ability to delever) and might be less likely to refinance their existing debt irrespective of yield.

We are less concerned about the lower-quality borrowers leaving the platform, given fewer financing alternatives, but note that loans used for vacations, home upgrades, and other discretionary items would likely see some decline.

Decline in the supply of funding: Institutional investors are becoming an increasingly large percentage of the buyers of online lending debt. The debate is whether or not institutional buyers will still consider online lending as having an attractive risk-adjusted return when rates begin to rise. Right now, with limited alternatives for earning reasonable yield, marketplace lending provides very attractive risk-adjusted return to institutional investors. But does this risk-reward trade-off still make sense when higher-quality corporate debt is yielding 8% and the loss content on that corporate debt is both well-defined and meaningfully lower than unsecured consumer debt? Our view is that, even if loss adjusted returns for marketplace loans rise commensurately with interest rates on an absolute basis, there is likely to be some impact to investor demand (e.g., 6% loss adjusted marketplace loans are much better than 2% bond yields, but are 11% loss-adjusted marketplace loans as attractive vs. 7% bond yields).

Exhibit 54
US: Historical BBB bond yields

<table>
<thead>
<tr>
<th>Year</th>
<th>Yield (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td></td>
</tr>
<tr>
<td>1999</td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td></td>
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<tr>
<td>2005</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>3.78%</td>
</tr>
<tr>
<td>2013</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td></td>
</tr>
</tbody>
</table>

Source: Federal Reserve Bank of St. Louis

Regulatory and legal risks

Traditional credit lending (i.e., the banking industry) is highly regulated. One major advantage marketplace lenders have over banks and other lenders is the sheer amount of regulatory oversight that they avoid, allowing them to operate with lower operational and regulatory costs than traditional bank lenders. The risk is that as this industry matures and becomes a more meaningful part of the financial system, heightened regulatory scrutiny could become inevitable, and some of this cost-advantage is diminished.

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We relied heavily on the work of the law firm Chapman and Cutler to supplement our view of the potential regulatory and legal risks. We do not attempt to highlight all of the potential regulatory and legal risks; instead, we highlight several of the more important risks below, including 1) greater scrutiny around the selling of securities and the securitization process, 2) risk retention, and 3) stricter oversight of lending practices.
Greater scrutiny around existing securities laws

A couple of scenarios we consider are 1) if interpretations of existing securities laws were changed in a way that would require compliance from the marketplace lending industry or 2) if the expansion of product offerings and services for the marketplace lending industry were to come with prohibitive costs or operational restrictions given current securities laws.

First, let’s look at the issue of shifting legal interpretations. Because this is a relatively new industry, federal and state securities laws that exist today were not designed with marketplace lending in mind. As such, it’s not entirely clear which laws will or will not apply to marketplace lenders, or more specifically, which laws are not currently interpreted to apply to marketplace lenders today, but could in the future. Some examples include coverage under broker-dealer laws, qualifications for state law exemptions given compliance with federal laws, or coverage under securitization laws. Marketplace lenders are subject to many laws already, but both company disclosures and legal experts have indicated it’s possible that the industry could be subject to more existing laws given broader interpretations.

Risk retention could redefine the marketplace model: In addition to existing financial regulation, marketplace lenders also face the risk of being affected by evolving regulatory requirements — specifically risk retention requirements. In the wake of the financial crisis, regulators have developed rules requiring institutions who sell securitized products to investors to retain some of the risk in order to curb irresponsible “originate to distribute” models. The rules, which would require no less than 5% risk retention on non-qualifying loans for the selling institution, have been finalized and are expected to be fully implemented by the end of 2016. But it remains to be seen whether these rules will apply to the marketplace lending industry, where securitizations are emerging as a growing component of the industry.

As with other laws, it’s not entirely clear whether the risk retention rules being put in place should apply to marketplace lenders. One argument is that because marketplace lenders aren’t creating the same kinds of securitizations as traditional lenders (marketplace lenders sell pieces of individual loans to investors and whole loans to institutional investors), their securitizations shouldn’t qualify as traditional asset-backed securities. On the other hand, since the securities that marketplace lenders are selling are backed by the cash flows of the loan, there’s an argument to be made that these are just a new class of ABS products that should qualify for risk retention requirements. The risk is that marketplace lenders would need to take on balance sheet risk if they do indeed need to comply with new risk retention rules, and would cease to be pure marketplace operators. It also means they would need to take on the incremental and necessary expenses to comply with the new requirements.

Increased oversight on lending practices

Another major component of the post-crisis regulatory overhaul has been the crackdown on lending practices. Given the inevitability of greater oversight for the marketplace lending industry, a couple of areas regulators could look into are the marketplace lending industry’s innovative underwriting practices, including the use of social media in making underwriting decisions. Another regulator concern could be the industry’s use of “rent-a-charter” relationships with banks as a means of lowering operating costs associated with lending. Both LendingClub and Prosper generate most of their origination through WebBank, which manages the bank requirements of the lending process. Yet, if “rent-a-charter” relationships were to be viewed by regulators as a method for circumventing direct regulatory oversight, it’s possible that they could challenge the legality of these relationships or seek to expand their authority to more directly oversee the marketplace lending industry.

How US Banks & Other Financial Institutions May Compete with Marketplace Lenders

1. Build or buy an online marketplace lender

Lend directly to borrowers in their own marketplaces. We are beginning to see banks form online interfaces similar to those of LendingClub, Prosper, etc., notably through SunTrust’s LightStream offering. These platforms would not necessarily need to be marketplace; in fact, we think banks will likely want to retain the loans given the relatively higher risk-adjusted margins in consumer lending. What is critical, however, is having the online flexibility, the technology to speed application through funding, and a competitive rate.

Offer bank-run online marketplace as investment. Of course, banks — particularly smaller banks with less consumer lending exposure — could also replicate the marketplace platforms and create their own online marketplaces, funded via retail and institutional investors, to generate strong fee income streams. This could also be an opportunity for specific players who focus on wealth management, providing an alternative investment for clients. The risk is that individual investors are unlikely to be as disciplined at credit underwriting as banks, and this model has
not yet undergone a true credit cycle. A significant rise in charge-offs due to a change in the credit cycle could be detrimental to the reputation and brand of a banking franchise, particularly among valued clients.

2. Focus on unsecured consumer growth; re-enter these verticals

Consumer lending remains rather muted post-financial crisis; however, there are recent signs of acceleration, and we expect consumers will continue to re-lever as the macro backdrop improves and financial balance sheets strengthen. As a result, we expect banks and consumer finance companies to devote increasing resources to unsecured lending. With increased marketing around unsecured consumer offerings, we believe traditional lenders will be able to maintain or grow share, particularly as consumers tend to want to borrow with their existing financial institution, according to the evidence of our AlphaWise survey (see Exhibit 33).

3. Invest in speeding up funding

One of the bigger areas of opportunity for the banks lies in the process behind applications, particularly the technology. Online/marketplace lenders have state-of-the-art technology when it comes to the loan application and approval process, enabling consumers to obtain speedy decisions without having to visit a physical branch. It would likely be a sizable investment for financial institutions to revamp their processes. That said, our AlphaWise survey work makes it clear that consumers are largely dissatisfied with the speed of the loan process, application, and funding (Exhibit 36 and Exhibit 37). Speeding up the process is particularly important for the Millennial generation, the future growth driver of the banking system.

4. Develop or buy “real time” credit analytics beyond traditional credit metrics

A number of marketplace lenders have developed non-traditional means of assessing consumer credit. Instead of relying only on FICO scores, debt-to-income, etc., marketplace lenders are using online data from sources such as Facebook, Google, and shopping trends on various websites.

From a competitive perspective, we believe increased build-out or acquisition of “real time” credit analytics that incorporate innovative approaches to credit decision-making would help the banks to win customers who, based on our AlphaWise survey, already have a strong preference to borrow with them (see Exhibit 33).

5. Invest in social media to leverage their consumer base as a marketing tool

We believe banks and consumer finance companies could also invest in social media and leverage it as a marketing tool. The most logical approach could include partnerships with social media companies (Facebook, Twitter, Google, Yahoo, etc.) for the marketing and account acquisition function, with financial institutions owning the core client relationship (checking, mortgage, card, etc.).

US Marketplace Lender Profiles

Lending Club (LC) was founded in 2007 and initially launched as an app on Facebook. It is the largest unsecured consumer lending marketplace in the US in 2014 with ~60% market share. The company’s core focus is its unsecured consumer loan product, but in 2014 it expanded into education and healthcare financing through the acquisition of Springstone and also launched a SME product. Management expects to introduce 1-2 new products per year going forward. In 2014, the company originated $4.4 billion of loans, which we expect to increase to $7.9bn in 2015.

Prosper (private) was founded in 2006. Prosper was the first marketplace platform lender in the US, originating its first loan a year before LendingClub. However, Prosper encountered two key setbacks which allowed LendingClub to take the lead: 1) Prosper was forced to shut down its marketplace platform for 9 months in 2008 to complete its registration process with the SEC (LendingClub preemptively shut down its platform for six months); 2) Prosper’s credit losses in 2010-12 were higher than investors’ expectations, which led to investors pulling money from the marketplace. After a change in management in early 2013 and a change in strategy that shifted away from riskier borrowers, the company has rebuilt its reputation and has been able to attract institutional capital from sources such as BlackRock (which is also an equity investor) in its platform. Prosper acquired American Health Lending in January 2015, giving it exposure to the healthcare financing market. In 2014, Prosper originated $1.6 billion of loans, with plans to do $3 billion+ in 2015 originations, according to management.

SoFi (private) was founded in 2011 and initially focused on refinancing student loans from consumers with degrees from the top-ranked universities in the US: 80%+ of its customers had an advanced degree and 75% lived in the 15 largest US urban areas. Recently it has introduced new product offerings such as mortgages and unsecured consumer loans to its
customer base. Out of 25,000 loans originated, SoFi has experienced only two defaults (both due to the death of the borrower). In 2014, SoFi originated $1.4 billion of loans, with plans to do $4.0-4.5 billion in 2015, according to management.

Avant (private) was co-founded in 2012 by Al Goldstein, who formerly headed Enova, a payday lender to consumers with low credit scores. Avant currently focuses on “middle income” consumer lending. In 2014, it originated $500 million of loans, with plans to originate $1.5-2.0 billion+ in 2015, according to management.

OnDeck (ONDK) was founded in 2007 and became the leading online lender to SMEs in 2014. As of the end of 2014, OnDeck had originated an aggregate of $2 billion+ in loans. It currently has two products: a term loan product and a revolving line of credit product, and lends in the US and Canada (and is adding Australia in 2015). OnDeck started out making loans using its balance sheet for funding, but recently has funded more of its loan book through securitization and over the past year has become more active with the marketplace model (selling whole loans), and targets funding up to 30% of its originsations through the marketplace model. The company originated $1.1 billion in loans in 2014 and we expect origination volume to increase to $1.9bn in 2015.

CAN Capital (private) was founded in 1998 and has been active in the merchant cash advance market. It is one of the leading alternative lenders to SMEs with $5 billion in cumulative originations through May 2015. The company was a pioneer in utilizing the daily remittance system.

Kabbage (private) was founded in 2010 and initially focused on providing a revolving line of credit to online SMEs by utilizing UPS and Fedex shipping data. At the end of 2014, the company launched a consumer unsecured offering, Karrot, after noticing that ~30% of applicants on Kabbage were consumers. In 2014, Kabbage originated $400 million of loans, with plans to do ~$1 billion in 2015, according to management.

Square Capital (private) is the merchant cash advance division of Square, which was started as payments processor in 2009. Square Capital analyzes the credit card sales data of Square clients to determine how much credit to extend to the merchant. Repayments from the merchants are collected via receivables from credit card sales.

### Actionable Calls for US Stocks

**LendingClub (LC.N, Overweight):** LC is the most direct way to play the online lending opportunity for consumer loans. The company has leveraged technology to redefine the borrower and lender experience and establish itself as the leading marketplace lending platform, and we see a significant runway for growth given a large addressable market. Please see our May 19, 2015, upgrade note for details of our Overweight thesis.

**OnDeck (ONDK.N, Overweight):** Using technology and data analytics, OnDeck is transforming the lending process for SMEs and has become a leading provider in a rapidly growing market. Given the significant $280 billion+ addressable market and OnDeck’s competitive edge, we see attractive risk/reward and expect OnDeck to be a key beneficiary in the global marketplace lending growth story. Please see our January 12, 2015, [initiation note](#) for details of our Overweight thesis.
Global Marketplace Lending

Europe
Marketplace Lending in Europe

Current Online Lenders and Size of the Existing Market

Outside of the UK, marketplace lending has gained limited traction to date in Europe, with the UK contributing more than 80% of European marketplace origination in 2014. This is despite the large number of platforms in non-UK markets (>30 in each of France, Germany, Spain alone vs. ~60 in the UK) and suggests that structural factors are impeding the growth of non-UK lending. We expect this to persist medium term given our analysis of factors we see as key drivers of marketplace lending adoption:

**Consumer credit penetration.** The UK benefits from a large and relatively highly penetrated consumer credit market, implying that even incremental gains in share can result in a compelling opportunity. Elsewhere in Europe, credit card penetration is generally lower.

**Mobile banking/internet usage.** Mobile banking has gained strong traction in Europe broadly. According to a recent study by Bain, adoption is highest in the UK (49%) and Spain (45%), with lower adoption in Italy (36%) and France (40%). The Nordic region also has strong adoption of mobile banking, but the absolute size of the market is small. In emerging European markets (in Turkey, for instance), a shift toward mobile channels also offers opportunities for new entrants as well as incumbents (see **Insight – Too fragmented, scope for ~90bps ROAE uplift?).**

**Availability of credit information.** The UK benefits from easy availability of in-depth credit information (similar to the US). Elsewhere in Europe, the comprehensiveness and coverage of credit information is more varied, and in some markets we believe this is likely to result in high barriers to entry for new marketplaces (e.g., Spain, France, Switzerland).

**Regulatory approach.** In the UK, the regulatory approach has been codified (partly due to the proactive approach of the P2P Industry Association in the UK). Elsewhere, the regulatory approach is far from established, with marketplace lending platforms regulated as banks in several European jurisdictions (e.g., France, Germany, and Italy).

**Customer satisfaction with incumbents is low across the region,** suggesting a broad opportunity for both incumbents and new entrants to differentiate through a better client service offering.
UK: A fast-growing market set for the supercharge of institutional money

We see the UK as the most compelling marketplace lending opportunity in Europe, with small business and consumer lending together representing a total addressable market of ~£100 billion.

We expect increasing institutional flows and supportive policies to supercharge growth in the coming years toward ~£15 billion of annual origination by 2020 vs. ~£1.3 billion in 2014.

In 2014, marketplace lenders provided ~£1.3 billion of new lending to businesses and consumers, more than double the volume originated in 2013. Although this represents less than 0.5% of total system lending balances, as a share of new lending this represented >1% in both SME and consumer lending. Growth in 2015 has been strong, with 1Q15 new lending running at +88% y/y and +33% q/q and SME volumes tracking ahead of consumer. The UK has lagged US volumes and growth rates to date, likely due to a combination of a smaller market, a slower start from institutional funding (retail funding tends to come with a lower risk appetite), and a more limited opportunity for refinancing credit card balances due to greater availability of 0% APR financing from banks.

The UK platforms are currently skewed toward retail funding (our sense is that ~75% of funding is retail at this stage), but we expect this to shift toward institutional funding over time as the UK platforms look to grow volumes more rapidly than a fully retail-funded model allows for.

Institutional funding started to flow into UK platforms in 2014, with the British Business Bank channeling funding into SME lending in early 2014. In mid-2014, Marshall Wace raised a £200 million UK-listed P2P investment fund (P2PGi), which has since deployed 35% of the fund in Europe (likely predominantly in the UK); a follow-on offer in January raised another ~£250 million, to be deployed through 2015. We believe the arrival of institutional funding is starting to supercharge growth. Data from Funding Circle suggests that incremental growth in 2014 on the platform was funded largely through institutional money, with retail flows broadly stable. We expect this supercharge to continue given further deployment from P2P Global Investments and others in 2015 and growing acceptance of P2P as an institutional asset class.

Just as in the US, we are increasingly seeing UK marketplace lenders announce partnerships, including a referral agreement for SME loans from the RBS and Santander UK (Funding Circle), handset financing for a mobile phone operator (RateSetter), and an auto financing partnership with Uber (Zopa). Combined with institutional funding, this should prove supportive for continued strong growth. Small banks in the UK could also prove a source of institutional funding for platforms with the first such partnership announced by Zopa today. For these banks marketplace platforms offer a quick way to build a personal loan book beyond their existing customer base.
The regulatory and political environment is supportive of challenger lenders in the UK, including marketplace lending platforms. The marketplace lending sector has a single regulator, the Financial Conduct Authority (FCA), which provides a relatively simple landscape for marketplace lenders compared to the patchwork of regulation in the US. P2P platforms in the UK are required to meet minimum operating capital requirements, observe client money requirements, and follow a disclosure-based regime.

The recent coalition government has been supportive of P2P, with the British Business Bank channeling funding into SME lending via platforms. We would expect the newly formed government to pursue similar policies. The government has also taken steps to extend tax-free allowances to P2P loans through ISA eligibility. A consultation was carried out in 2014, with the results due to be published in summer 2015. We believe this could provide a substantial source of retail funding (total ISAs outstanding of >£400 billion in 2013), although this could prove to be a mixed blessing given the potential size of inflows and potential expectations of secondary liquidity that could come with ISA eligibility.

Looking forward, the ongoing Competition and Markets Authority (CMA) investigation into SME banking (scheduled to report in 2016) could prove supportive of marketplace lending platforms specializing in this area if, for example, market share caps were applied to incumbents and banks were required to refer to alternative finance sources any SME borrowers who had been refused a loan.

Three platforms currently dominate marketplace lending in the UK, together originating ~70% of new lending in 2014 and a similar proportion in 2015 YTD.

RateSetter (~26% market share of new lending in 1Q15) was founded in 2010 and has grown rapidly to become the largest UK platform, with £293 million of new lending in 2014 and £120 million loaned in 1Q15. RateSetter offers both consumer and SME loans of £1,000-£25,000 over terms of 0.5-5.0 years. The platform uses a pooled provision fund to which borrowers contribute based on their risk profile to provide protection for lenders against default. The concept, designed with a retail investor in mind, allows lenders on the platform to price based on maturity rather than credit risk. RateSetter has also pioneered a partnership approach, working with mobile phone network giffgaff (owned by Telefonica) since late 2013 to provide flexible funding for handset purchases. The platform is funded mainly by retail, but it is increasingly attracting institutional funding.
Funding Circle (26% market share of new lending in 1Q15) was also founded in 2010 and is active in both the UK and the US. The platform specializes in SME lending and is the largest SME lending platform in the UK, with £110 million of origination in 1Q15 (40% market share of SME origination) and £277 million in 2014. Funding Circle facilitates loans of £5,000 to £1 million for 0.5-5.0 years across a range of lending types (including working capital, asset finance, and commercial mortgages). It has partnerships with Santander UK and RBS. The platform has a higher proportion of institutional funding than its UK peers, with ~30% institutional funding, including from the British Business Bank. Like other UK platforms, Funding Circle is privately held; according to an article in The Financial Times, a recent $150 million round of fundraising valued the business at ~$1 billion.

Zopa (18% market share of new lending in 1Q15), founded in 2005, was the UK’s first P2P lender. The platform focuses exclusively on consumer lending and has historically targeted super-prime borrowers through low rates and flexible terms, resulting in relatively slow growth but with very low bad debts (0.25% since 2010). Since 2005, Zopa has facilitated £787 million of lending, of which £264 million was originated in 2014. Zopa operates a pooled provision fund model similar to RateSetter’s, and the platform is largely retail funded. Zopa recently announced a partnership with Uber to provide secured auto financing up to £22,000 for UK-based Uber drivers, funded by an (unnamed) institutional lender.

Framing the Opportunity
We see consumer and SME as distinct segments with different market dynamics and largely different players.

Consumer opportunity: £8 billion by 2020
According to a 2014 survey by Nesta/University of Cambridge, the typical borrower on a P2P platform in the UK is a man in his mid-30s to mid-50s. Typically, he has already been approved by a bank to borrow, but turns to a P2P platform for a better rate and fast execution as well as flexibility around repayment. The most likely use of his loan is buying a car, home improvement, or debt consolidation.

Historically, P2P platforms in the UK have been very cautious about credit risk. The same study found that 90% of applicants on P2P platforms are rejected, while our analysis of advertised rates also shows a bias toward prime lending. Zopa and RateSetter are currently the dominant players in consumer lending, with >95% market share.

Source: The UK Alternative Finance Industry Report (Nesta 2014), Morgan Stanley Research

Source: HMRC, Morgan Stanley Research
May 19, 2015
Global Marketplace Lending

Exhibit 66
UK: P2P platforms are seen as good value and easy to use vs. banks, but less secure and higher risk

Public Perception: P2P versus Banks

Source: The UK Alternative Finance Industry Report (Nesta 2014), Morgan Stanley Research

Going forward, we expect P2P consumer lending to shift away from direct loan origination and into point-of-sale, auto finance, and other aggregating channels; this should allow for rapid customer acquisition, likely funded by institutional flows. Institutional funding may also support a shift toward a broader range of borrowers beyond the prime segment currently targeted.

Base Case: £8 billion market by 2020. We estimate a total addressable market of £62 billion today, composed of UK consumer lending adjusted for <5 years duration and removing zero interest-bearing credit card balances. We assume the TAM shows a ~3.5% CAGR and penetration of TAM grows from ~1% today to ~10% by 2020, implying ~£8 billion in outstanding loans and a ~60% CAGR for marketplace lending in 2014-20e. This is a similar rate to the US, albeit from a lower starting point. Key upside risks to our view include ISA eligibility driving greater retail demand for notes, while a rising rate environment from 2016 may drive increased credit costs and curtail volumes.

Exhibit 67
UK: Most consumer borrowers successfully secured an offer of credit from a bank

Consumer Borrowers attempted fund raising

Source: The UK Alternative Finance Industry Report (Nesta 2014), Morgan Stanley Research

Exhibit 68
UK: Advertised rates indicate a skew toward prime borrowers, competing with incumbent banks

Unsecured personal loan advertised APR (3yr £5,000)

Source: Comparethemarket.com, Morgan Stanley Research

Exhibit 69
UK: Car finance, along with home improvement and debt consolidation, are key uses of P2P funds

Reason for Consumer P2P borrowing

Source: Nesta, Morgan Stanley Research

Exhibit 70
UK: We estimate a total addressable market of ~£62 billion today, rising to £83 billion by 2020

Consumer loans outstanding (£bn)

Source: Bank of England, BBA, Company Data, Morgan Stanley Research estimates
SME opportunity: £9 billion by 2020

A typical SME borrower on a P2P platform is a small business that is unable to obtain, or finds it difficult to obtain, financing from its bank, and so seeks alternative sources of financing. Typically, these are relatively small-ticket loans (Funding Circle has an average loan size of ~£50,000), although commercial real estate platforms are usually more active in larger-ticket lending. APRs are usually substantially higher than those offered by incumbents (Funding Circle’s average APR is ~10% vs. banks at ~4.5%), further suggesting the segment is servicing borrowers with higher (perceived) risk. However, APRs are lower than those seen in the US for the likes of OnDeck; we attribute that to a focus on longer-term and large-ticket loans.

We believe the opportunity for marketplace lenders centers on meeting the unmet needs of underbanked small businesses as well as faster underwriting for customers already served by one of the major banks. A recent UK survey indicated that 80% of P2P SME borrowers had attempted to obtain funding from a bank, but only 20% had received an offer of funding. In the past year, both RBS and Santander UK have signed agreements with UK platforms to refer business when they decide not to provide a loan; this highlights the potential of platforms to work with banks. Funding Circle is by some distance the largest SME-only platform, but a plethora of other players are entering the market, with several growing quickly due to a focus on real estate lending, allowing for large-ticket lending (for example, Lendinvest, a real estate platform, has an average loan size of ~£370,000).

Base Case: £9 billion market by 2020. We estimate the TAM today is £22.5 billion, taking as our starting point small business lending (defined by the British Banking Association as businesses with <£1-2 million turnover). We adjust for duration and credit quality using bank risk disclosures as a proxy. We add ~15% to the base volume of loans to account for unmet credit demand based on an analysis in a 2013 report by Sir Andrew Large (RBS Independent Lending Review), which posited that for the overall SME market UK SME debt capacity exceeded existing lending by ~15%. This results in a TAM of £40 billion; we assume this shows a 7% CAGR to £60 billion in 2020, capturing our expectation that the underlying market will grow at 3-4% and marketplaces will be able to increase the size of business they service over time.

In our base case we assume penetration grows from ~2% of TAM to 40% by 2020, implying P2P market size of ~£10 billion in outstanding loans and a CAGR of ~55%. Upside can be driven by larger unmet demand than we anticipate. Execution of successful credit underwriting is a key downside risk.
UK: We estimate a TAM of ~£40 bn in small business lending

Exhibit 73

UK: SME base case: £9 bn by 2020

UK P2P SME Loan Balance, £bn

Exhibit 74

UK: Consumer loan volumes have picked up strongly in 2014 and early 2015

UK System Balances Growth (y/y)

Exhibit 75

UK: Rising volume of non-interest-bearing credit card balances driving down credit card yields

Credit card balances bearing interest % total

Exhibit 77

UK: Bank penetration of consumer lending is relatively low, likely due to captives’ presence in auto finance

Market share, UK loans outstanding, and 2014
Implications for Incumbents

We think marketplace lending currently poses a limited threat to incumbents in the UK. Platforms are not competing in mortgage lending, which makes up the majority of UK bank lending and is the key driver of profitability. However, we believe UK banks will need to up their game to avoid seeing P2P “skim the cream” off consumer unsecured lending through lower rates and speedier and smoother customer interactions.

We expect P2P platforms in the SME space to help expand the availability of credit to smaller businesses, and not necessarily compete directly with the major banks, which can price loans based on profitability of the overall relationship rather than just the loan facility. The partnerships announced by RBS and Santander UK to refer potential borrowers to the platforms give a sense of how P2P lenders and banks could prove complementary rather than competitive. However, as in the consumer space, we expect banks to need to invest in improving customer experience and use of data to avoid disruption of their core customer base.

There is already evidence of incumbents’ increased focus on harnessing technology to improve customer experience and retention, reduce conduct risk, and improve underwriting. At Barclays, existing bank customers can now obtain a personal loan with just six taps on the bank’s mobile app, and funds are transferred the same day. This channel not only improves speed and convenience for the customer, thereby increasing the likelihood of retaining customer loyalty, but also reduces costs, with a cost-income ratio of just ~20%. More broadly, digital channels are becoming increasingly important for UK banks, with Barclays for example originating 50% of new personal lending via digital channels in March, up from one-third in 2014. Barclays is also taking a lead in the UK fintech space more broadly, through both its Accelerator programme to drive innovation outside of its own ecosystem and in-house development of new technology, including the mobile payments service Pingit.

We expect banks to continue to focus on digital. Lloyds announced a £1 billion investment in digital in last year’s strategic plan, following a £750 million investment in the prior three years. Investment in digital also forms a key part of strategic plans at both Barclays and RBS as part of broader cost-saving and simplification efforts.

We would expect many of the risks outlined in the US section of this report to apply to UK platforms (e.g., credit risk, risk of fraud, etc.). More specifically to the UK, we would highlight:

- regulatory environment so far supportive, but subject to ongoing review; and

- ISA eligibility could prove a mixed blessing, with substantial inflows in a concentrated period of the year not necessarily matching the availability of borrower demand and resulting in price distortion.
Barclays (BARCL, Overweight). Barclays has a relatively high contribution from personal lending due to its Barclaycard business (24% of group pretax profit in 2014). We have reduced our Barclaycard estimates by 3-5%, reflecting elevated investment spend in 2015e and 2016e to support growth and investment, with an offset from higher loan growth in 2017e. We leave margin estimates unchanged as we already factor in margin compression in the coming years. At the group level, our changes reduce EPS by 1.0-1.5%.

We are Overweight Barclays as we expect the quality of assets in the company’s noncore business is underappreciated and that over time the market will focus on the positive NPV of capital released as the unit unwinds rather than capitalizing the earnings drag (see Barclays Bank: Insight – How are you modelling non-core? We see 45p hidden value – OW, February 3, 2015). We expect capital concerns will increasingly fade as noncore capital is released and legacy conduct issues are resolved. We model a build to 13% CET1 ratio by 2017e despite assuming substantial conduct costs and continued dividend distributions. We also expect discipline to be exercised in the amount of capital allocated to the core investment bank given subpar returns vs. the strongly performing UK personal and corporate and Barclaycard divisions. The stock trades at 8.0x 2017e core EPS, and we expect value to be unlocked from the noncore business.

Lloyds (LLOY.L, Overweight). Lloyds has a lower contribution from personal finance than Barclays (6% of group loans, 12% of PBT in 2014), but we expect the contribution to grow given management’s strategy to increase penetration in asset finance and credit cards. We have lowered forecasts for the Consumer Finance business by 2-6%, reflecting a 10bps reduction in margin in 2015-17e. We also increase the allocation of cost to personal finance to reflect our expectation of ongoing investment in this part of the group. Our group estimates are nudged down by <1% due to the relatively small contribution of personal finance to the broader group.

We remain positive on Lloyds post the resumption of dividends. We expect the dividend to progress as capital builds from the current strong position. We model ~6% 2017e dividend yield, assuming the payout ratio builds to 65%. Valuation at 11x 2016e EPS is in line with the industry, while we see potential for Lloyds to trade at a premium to the industry given the less volatile retail and commercial business model and high payout potential.

How to Play the Marketplace Lending Theme

Direct exposure: In the UK, all of the P2P platforms are privately held. A number of closed end funds invested in marketplace loans and equity have been listed on the London Stock Exchange.

Indirect exposure: Rocket Internet (RKET.DE, Overweight) has launched two online lending marketplaces:

- Zencap is an online marketplace for loans to SMEs. It launched in Germany in March 2014, in Spain in July 2014, and in the Netherlands in February 2015. The volume of issued loans was only €13 million at the end of March, but the platform had been active for only a year at that point. Rocket owns 74% of the business, which was valued at €86 million in its June 2014 funding round.

- Lendico is a P2P marketplace for personal loans. It launched in December 2013 in Germany; since then, it has entered Spain, Poland, Austria, the Netherlands, and South Africa. It issued 1,126 loans in 2014. It appears to have faced more challenges than its sister company, Zencap, as it had to stop lending temporarily in Spain in March 2015 (as of publication in May, new loans were still not available). Lendico said that the quality of loan applications was below the expected standards and that it was rethinking its product offer. Rocket owns 55.5% of the business, which was valued at €120 million in its July 2014 funding round.

Zencap is young but well positioned to succeed. While the scale of the markets in which Zencap operates are smaller than the UK, it has a first mover advantage in the SME space. It also benefits from ease of funding through its relationship with Rocket Internet, which put aside €300 million of its equity raise at IPO for its fintech initiatives.

Rocket is the only listed company in Continental Europe that offers exposure to P2P lending, although P2P is currently a very small portion of its valuation. Rocket has founded over 100 companies in its young life. Its market capitalization is currently €6.3 billion; its stakes in Lendico and Zencap are worth a combined €130 million (based on their last funding round), or less than 2% of the current valuation. Although P2P lending makes up a small part of Rocket’s current valuation, if it reaches scale in Continental Europe, then we think Rocket is well placed to win with an increasingly meaningful contribution from P2P. We are Overweight Rocket. We like its well-diversified exposure to fast-growing online businesses globally.
Global Marketplace Lending

China
Marketplace Lending in China

Size of the Existing Market and Key Industry Trends

1. Significant potential opportunities for P2P lending, but market fragmented with over 1,500 competitors

China is a natural fertile ground for P2P lending due to:

1) high cost in alternative financing channels;
2) large unfulfilled credit needs in SME and retail segments;
3) lack of bank focus on such areas, despite some improvement recently; and
4) high penetration of internet and mobile internet

China's first P2P lending platform was established in 2007; by the end of 2014, there were 1,575 P2P platforms in operation and 367 more that had failed. Total transaction value increased to RMB276 billion in 2014, with P2P loan balance of RMB104 billion, according to Wangdaizhijia.com. We note the true P2P loan balance is likely even higher than this figure.

Exhibit 81

China: The number of P2P platforms is growing fast

P2P monthly loan balance increased by 12% month-over-month, on average, throughout 2014. Total transaction value was RMB252.8 billion, or 2.4x the value in 2013, and the balance was RMB104 billion, or 3.9x the balance in 2013.

Exhibit 82

China: Monthly P2P loan balance change

In 2014, over 900 new P2P lending platforms were established. The average register capital of them was RMB27.8 million in 2014 vs. RMB13.6 million in 2013, likely suggesting the competition was getting tougher and entry barriers had become higher.

Exhibit 83

China: The number of P2P borrowers and investors increased by more than four-fold in 2014
How Big Is China’s Addressable Market?

Despite banks’ increased attention on consumer and SME loans, China’s credit markets are still dominated by banks focused on large corporate loans. As a result, many alternative financing channels have surfaced in recent years, including many P2P platforms. We believe underserviced consumer and SME credit markets and certain mezzanine financing opportunities currently serviced by other high-yield financing channels could be addressable markets for P2P lending platforms. We believe certain P2P lending platforms have developed competitive advantages over banks and other alternative financing in consumer lending, but so far not in SME and mezzanine financing.

1. Immediately addressable consumer loans: RMB2-3 trillion

China consumer credit balance totaled RMB15 trillion, or 23% of China GDP, at the end of 2014, vs. 72% for the US. Among China consumer credit by banks, 75% is housing mortgage, and unsecured consumer credit accounts for just over 10%. In light of banks’ relatively conservative stance toward credit card risk and uncollateralized personal credit (credit card NPL is just over 1% currently in China), we see sizable unfilled consumer credit demand in China.

We think credit card loan growth is a good indicator of individual revolving credit demand. The annual increase ranged from RMB0.3 trillion to RMB0.7 trillion in the past three years, and we believe credit demand could be several times the annual increase in credit card loans if credit risk tolerance could be increased a bit. While it is hard to pinpoint an exact number, we believe the immediately addressable market could easily be RMB2-3 trillion.

Exhibit 84
China: Credit card loan balance had 57% CAGR in past 5 years; it weighs more in consumer loans now

<table>
<thead>
<tr>
<th>RMB bn</th>
<th>Consumer Loan</th>
<th>Auto Loan</th>
<th>Credit Card</th>
<th>Housing Mortgage</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>7,511</td>
<td>197</td>
<td>449</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>2011</td>
<td>8,878</td>
<td>264</td>
<td>813</td>
<td>6,643</td>
<td>1,158</td>
</tr>
<tr>
<td>2012</td>
<td>10,444</td>
<td>262</td>
<td>1,137</td>
<td>7,357</td>
<td>1,688</td>
</tr>
<tr>
<td>2013</td>
<td>12,982</td>
<td>331</td>
<td>1,846</td>
<td>9,014</td>
<td>1,791</td>
</tr>
<tr>
<td>2014</td>
<td>15,376</td>
<td>NA</td>
<td>2,340</td>
<td>10,600</td>
<td>NA</td>
</tr>
</tbody>
</table>

Mix

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mix</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: CEIC, Morgan Stanley Research

Exhibit 85
China: Consumer finance industry 2014

<table>
<thead>
<tr>
<th></th>
<th>Loan balance</th>
<th>Lending rate</th>
<th>Duration</th>
<th>NPL ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit cards</td>
<td>2,340,000</td>
<td>-</td>
<td>20-56m</td>
<td>1.53%</td>
</tr>
<tr>
<td>Auto finance</td>
<td>320,437</td>
<td>14%-15%</td>
<td>3Y</td>
<td>0.38%</td>
</tr>
<tr>
<td>P2P</td>
<td>103,600</td>
<td>14.89%</td>
<td>8.31m</td>
<td>17.86%</td>
</tr>
<tr>
<td>Micro lending companies</td>
<td>942,038</td>
<td>15%-20%</td>
<td>1m-1Y</td>
<td>16%*</td>
</tr>
</tbody>
</table>

*Jiangsu Province
Source: CBRC, Wangdaizhijia.com, Morgan Stanley Research

Exhibit 86
China’s consumer credit-to-GDP has grown gradually but remains low vs. more developed countries

Source: CEIC, Morgan Stanley Research

Exhibit 87
In 2014, China’s consumer leverage was 23%

Source: CEIC, Morgan Stanley Research
2. Immediately addressable SMB loans: RMB3 trillion

While some China banks have increased their focus on credits to small and micro-enterprises, a large amount of SME credit demand is filled by very high-cost channels such as micro-finance companies (annual interest rates at around 20%) and underground lending channels (annual interest rates at around 40%), and a significant unmet demand. Notably, credit by micro-loan companies has exceeded RMB900 billion in the five years ended in 2014, with an additional RMB2 trillion of SME credit filled by underground lending channels.

We therefore use the current SME credits from micro-loan companies and the underground lending market as a proxy for the potential P2P SMB market. We estimate the immediately addressable market for P2P firms is around RMB3 trillion, with more potential unfilled demand, which is hard to estimate.

We believe P2P platforms will have difficulty competing with banks on SME loan market given much lower yields on loans from banks (around 10-12% if all fees and costs are included), which we believe is not profitable for P2P platforms currently.

Exhibit 88

China: SMB loans from banking

<table>
<thead>
<tr>
<th>Loans Outstanding 2014</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Microfinance company</td>
<td>942</td>
</tr>
<tr>
<td>Personal business loan by bank</td>
<td>7,775</td>
</tr>
<tr>
<td>Small &amp; micro-enterprise loan by bank</td>
<td>15,460</td>
</tr>
<tr>
<td>Subtotal</td>
<td>24,177</td>
</tr>
<tr>
<td>Total bank loans</td>
<td>86,787</td>
</tr>
</tbody>
</table>

Source: CEIC, Morgan Stanley Research

Exhibit 89

China: Estimated alternative financing channels and borrowing cost, 2014

<table>
<thead>
<tr>
<th>RMB bn</th>
<th>Balance</th>
<th>Interest rate %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust loans</td>
<td>8,605</td>
<td>12.40</td>
</tr>
<tr>
<td>Entrust loans</td>
<td>8,502</td>
<td>13.76</td>
</tr>
<tr>
<td>Interbank entrusted payment</td>
<td>100</td>
<td>4.41</td>
</tr>
<tr>
<td>Undiscounted bank acceptance</td>
<td>7,238</td>
<td>4.41</td>
</tr>
<tr>
<td>Asset cross sale via fin asset exchange</td>
<td>1,000</td>
<td>12.38</td>
</tr>
<tr>
<td>Pawnshop loans</td>
<td>85</td>
<td>19.54</td>
</tr>
<tr>
<td>Financial leasing</td>
<td>2,800</td>
<td>10.35</td>
</tr>
<tr>
<td>Micro lending</td>
<td>900</td>
<td>19.54</td>
</tr>
<tr>
<td>Asset management companies</td>
<td>1,600</td>
<td>12.00</td>
</tr>
<tr>
<td>P2P</td>
<td>100</td>
<td>13.76</td>
</tr>
<tr>
<td>Stock pledged loans</td>
<td>40</td>
<td>8.26</td>
</tr>
<tr>
<td>Underground lending</td>
<td>3,389</td>
<td>19.54</td>
</tr>
<tr>
<td>Total alternative financing</td>
<td>34,360</td>
<td>11.75</td>
</tr>
</tbody>
</table>

Source: WIND, CEIC, Leasing Association, ChinaBond.com, Morgan Stanley Research estimates

Exhibit 90

China: We think P2P lenders may gain share from current high-cost non-bank financing channels...

Exhibit 91

... and underground lending has been shrinking following high SME bankruptcy rates in 2012

Currently there are meaningful amounts of mezzanine financing opportunities serviced by other high-yield financing channels, which could be serviced by P2P platforms (see Exhibit 89). Excluding credit filled by other low-cost channels and personal and SME demand that we discuss above, we see another RMB10-15 trillion potential addressable market for P2P platforms. While many P2P platforms in China have started to service this part of the credit demand, we struggle to find a competitive advantage for P2P vs. other existing channels.
Key Players and P2P Business Models in China

Exhibit 92
China: Typical business models by investments in underlying assets

<table>
<thead>
<tr>
<th>Typical business model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi asset class model</td>
<td>The fund of one lender is allocated to different loans. Risk is diversified and thus greatly reduced as the overdue of one loan will not have much impact as long as other loans perform well. Dianrong.com has this kind of model and has accumulated RMB384 million to 5,892 projects by the end of 2014.</td>
</tr>
<tr>
<td>More dedicated business model</td>
<td>Most P2Ps adopt this model. The lender chooses the loans based on the usage of fund, the revenue source, the financial position and performance of the borrowers and usually go for several projects at most. Therefore, risk and yield are both generally higher.</td>
</tr>
</tbody>
</table>

Source: Morgan Stanley Research

Exhibit 93
China: Four risk remittance/guarantee models for P2P platforms

<table>
<thead>
<tr>
<th>Risk remittance/guarantee model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guarantee model</td>
<td>The principal or even interest is insured by P2P or another company under the same group. For example, the loans of Lufax are guaranteed by Ping An Financing Guarantee Co., Ltd.</td>
</tr>
<tr>
<td>Risk reserve model</td>
<td>The lender bears the risk of projects as there is no guarantee by P2Ps or collateral from borrowers.</td>
</tr>
<tr>
<td>Third party guarantee model</td>
<td>Some platforms cooperate with third party guarantee companies and some will charge additional guarantee fees from lenders.</td>
</tr>
<tr>
<td>Collateral model</td>
<td>Land, property, equipment, or account receivables are collateralized to enhance credit and can be disposed to repay principal when default occurs.</td>
</tr>
</tbody>
</table>

Source: Morgan Stanley Research

Most P2P platforms are conducted through both online and offline channels, with no real pure online business model at the moment due to the challenges in risk management and borrower and lender acquisition. We also observed a large divergence among different platforms in their focus on types of borrowers, risk control models, and types of credit. We list the popular business models by types of credit and risk remittance/guarantee methods in the exhibit above.

We profile leading P2P lenders that represent the typical P2P business model in China.

LUFA

Exhibit 94
Key business summary of Lufax

<table>
<thead>
<tr>
<th>Type of credit assets</th>
<th>SMB and retail loans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>Guarantee</td>
</tr>
<tr>
<td>Transaction volume (mn)*</td>
<td>1,589.19</td>
</tr>
<tr>
<td>Interest rate*</td>
<td>8.14%</td>
</tr>
<tr>
<td>Duration (m)*</td>
<td>29.87</td>
</tr>
<tr>
<td>Tranche available for investors</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: wangdaizhijia.com, Morgan Stanley Research, *last 30 days data

Lufax, an online financial asset exchange platform under Ping An, was launched in March 2013 as an investment and borrowing platform for SMEs and individuals. Some of its products are guaranteed by Ping An Financing Guarantee, a guarantee to be lifted gradually as Lufax adjusts its strategy.

This indicates that Lufax, China’s largest P2P platform, is transforming into a comprehensive financial assets exchange.

The cost of asset is 0.5-0.6%, or 2 percentage points lower than that of commercial banks or trusts. Thus, the high return appears sustainable. NPL is stable at the 1.5% experienced in recent years, but given the lower cost, the risk still appears manageable.

DIANRONG

Exhibit 95
Key business summary of Dianrong

<table>
<thead>
<tr>
<th>Type of credit assets</th>
<th>SMB and retail loans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>Guarantee</td>
</tr>
<tr>
<td>Transaction volume (mn)*</td>
<td>NA</td>
</tr>
<tr>
<td>Interest rate*</td>
<td>NA</td>
</tr>
<tr>
<td>Duration (m)*</td>
<td>NA</td>
</tr>
<tr>
<td>Tranche available for investors</td>
<td>6 tranches with interest rate from 5.5%-16.0%</td>
</tr>
</tbody>
</table>

Source: wangdaizhijia.com, Morgan Stanley Research, *last 30 days data

Dianrong.com was founded in 2012 by former LendingClub employee Soul Htite and Guo Yuhang, a Chinese finance lawyer, with RMB2.5 million in venture funding. China Orient Asset Management Corp., a Chinese state bank that services bad debt, is a partial owner of Dianrong. In January 2014, the founders raised an additional RMB12 million from Northern Light Venture Capital.
JIMUBOX

Exhibit 96
Key business summary of Jimubox

<table>
<thead>
<tr>
<th>Type of credit assets</th>
<th>SMB and retail loans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>Third party guarantee</td>
</tr>
<tr>
<td>Transaction volume (mn)*</td>
<td>582.16</td>
</tr>
<tr>
<td>Interest rate*</td>
<td>9.34%</td>
</tr>
<tr>
<td>Duration (m)*</td>
<td>5.65</td>
</tr>
<tr>
<td>Tranche available for investors</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: wangdaizhijia.com, Morgan Stanley Research, *last 30 days data

Jimubox is a P2P lending platform that provides SME loans and individual consumption loans to underbanked Chinese borrowers. Jimubox was funded by institutional investors including Xiaomi Corp., ShunWei Capital, Matrix Partners China, Ventech China, and Vertex Fund Management.

In February 2015, Jimubox signed an agreement with Minsheng Bank to safeguard investors’ funds, another example of P2P lenders cooperating with commercial banks amid tightening regulations on the segment.

HONGLING CHUANGTOU

Exhibit 97
Key business summary of Hongling Chuangtou

<table>
<thead>
<tr>
<th>Type of credit assets</th>
<th>SMB and retail loans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>Principal guarantee for VIP</td>
</tr>
<tr>
<td>Transaction volume (mn)*</td>
<td>8,219.61</td>
</tr>
<tr>
<td>Interest rate*</td>
<td>12.53%</td>
</tr>
<tr>
<td>Duration (m)*</td>
<td>5.08</td>
</tr>
<tr>
<td>Tranche available for investors</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: wangdaizhijia.com, Morgan Stanley Research, *last 30 days data

Hongling Chuangtou was set up in 2010 as an eCommerce company with a P2P platform under it. The company’s P2P lending transactions increased 7.6x to RMB14.7 billion in 2014. In the same year, however, its bad debt totaled RMB100 million, the highest among China’s P2P companies.

RENREN DAI

Exhibit 98
Key business summary of Renren dai

<table>
<thead>
<tr>
<th>Type of credit assets</th>
<th>SMB and retail loans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>Guarantee</td>
</tr>
<tr>
<td>Transaction volume (mn)*</td>
<td>494.60</td>
</tr>
<tr>
<td>Interest rate*</td>
<td>12.10%</td>
</tr>
<tr>
<td>Duration (m)*</td>
<td>29.61</td>
</tr>
<tr>
<td>Tranche available for investors</td>
<td>3 tranches with interest rate from 6%-10% and duration from 3m to 12m</td>
</tr>
</tbody>
</table>

Source: wangdaizhijia.com, Morgan Stanley Research, *last 30 days data

Renren dai is a P2P platform launched in 2010, mainly focused on the online micro-credit business. The company integrated with offline lending service Ucredit in 2012.

Renren dai’s turnover surged 276% yoy in 1H13, hitting RMB1 billion in August 2013. In 2013, its products had annual yields ranging from 12% to 14%.

Value Proposition and Potential Catalysts for China P2P Lending

Consumer loans likely a more sustainable long-term opportunity. We believe P2P lending platforms have made certain types of shadow banking and underground lending more transparent, increased financial service to borrowers with limited access to bank credits, and improved credit underwriting capability for certain consumer credits. This has contributed to enhancing the overall credit database in China and enhancing returns for some investors and lenders.

Key value proposition of P2P lending platforms

1. Convenient platform providing small and flexible-term financing for borrowers

Easy online applications attract individuals and SMBs to P2P as a convenient funding alternative to banks and traditional institutions. In addition, technologies at P2P platforms have reduced the operating costs related to very small loans.

A Wangdaizhijia.com survey shows the average P2P loan size was RMB0.1 million in 2013 vs. China Merchants Bank’s and Minsheng’s average bank-originated micro-enterprise loan size of RMB1.5 million in 1H14.

In December 2014, the weighted average duration was 6.88 months and the average interest rate 16.08% p.a., of which Chinese P2P platforms usually charge 8-10% as commission, based on our research.

Exhibit 99
China: P2P loan duration remains 3-6 months

Source: Wangdaizhijia.com, Morgan Stanley Research
2. Some improvement in credit underwriting capabilities for personal loans and some SME loans

In light of the still developing centralized personal credit database, banks have been conservative in extending non-collateralized personal loans. Some leading P2P platforms in China have developed more comprehensive credit underwriting processes that leverage data across the borrower’s life (e.g., travel patterns, web pages searched, and timing of credit applications) to reduce the chance of fraud, shorten the credit approval process, and control credit risks.

In addition, certain P2P platforms have designed the loan repayment process to reduce credit risks and/or enable early detection of credit risks. For example, some P2P platforms require daily repayments on certain types of loans to take better control of borrowers’ cash flow.

However, at the current stage, P2P companies seem not to have competitive advantages in pricing large corporate and SME credits as their credit approval processes do not appear to be more advanced than other alternative financing channels and also rely heavily on offline network and on-site credit checks. Hence, we believe the consumer loan market is likely to be a more sustainable opportunity for P2P platforms, although those platforms are currently competing with traditional channels in nearly all types of credit.

3. Alternative investment channel offering higher yields to investors

The higher-than-deposit rate return and convenience of the online application process have been cited as key reasons why investors choose P2P lending over bank deposits or even some bank wealth management products (WMP).

Privately held P2P lenders tend to offer higher returns to attract investors despite shorter loan durations. They had a market share of 65% by P2P loan balance in December 2014.

<table>
<thead>
<tr>
<th>P2P Loan Balance (RMB bn)</th>
<th>Share of total balance</th>
<th>Avg. Yield</th>
<th>Avg. duration (months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank affiliated</td>
<td>13.0</td>
<td>13%</td>
<td>8.11%</td>
</tr>
<tr>
<td>SOE affiliated</td>
<td>2.9</td>
<td>3%</td>
<td>10.20%</td>
</tr>
<tr>
<td>Listed companies affiliated</td>
<td>1.6</td>
<td>2%</td>
<td>8.51%</td>
</tr>
<tr>
<td>VC invested</td>
<td>18.9</td>
<td>18%</td>
<td>12.85%</td>
</tr>
<tr>
<td>Private</td>
<td>67.3</td>
<td>65%</td>
<td>18.55%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>103.6</td>
<td>100%</td>
<td>16.08%</td>
</tr>
</tbody>
</table>

While higher yield is a key reason for the growth of P2P investors, the rising number of troubled or failing platforms reminds investors of the potential risks.

More P2P platforms are using banks as custodians of the investment funds to mitigate operation risks. We believe this will be an industry trend that will build stronger cooperation between P2P lenders and banks.

Access to PBOC credit reference database could be a catalyst for P2P development in China

Although it is still under development, we believe the People’s Bank of China (PBOC) credit reference database has by far the most comprehensive information given the contribution by all banks in the past several years. Most P2P platforms currently do not have access to this database, which makes their credit underwriting processes more challenging. Some P2P platforms are focusing on building their own credit record databases and are able to supplement the regular credit information with behavioral data mined from the internet to reduce credit risk; however, we believe access to the PBOC credit reference database can still greatly enhance their credit approval processes. This would allow P2P platforms to reduce interest rates to borrowers and improve their competitiveness against other traditional financial channels.

However, given that P2P platforms are not recognized as regular financial institutions, it is uncertain when — or if — they will have access to the PBOC credit reference database.
Issues, Risks, and Obstacles in China P2P Lending

Less mature risk management for SME and corporate credits, high lender and borrower acquisition costs, and potential rising competition from bank and nonbank financial channels are key risks.

Credit risks remain the biggest challenge for the industry. The lack of access to the centralized credit system used by banks has made risk control a challenge for P2P lenders and led to meaningful divergence among various platforms’ credit performance. Even leading P2P lenders have charge-off ratios of 5-10% currently, with much higher loss ratio at start-ups.

The number of newly troubled platforms reached 275 in 2014 vs. 76 in 2013. On average, there were 9.3 new platforms at risk of failing every month in 1H14. That number increased to 92 in December 2014. Fraud and cash flow difficulties remain the top reasons that platforms fail. We think cash flow problems may be relieved in early 2015 with fund flows back to P2P market after year-end, but we expect the number of new problem platforms to remain high in 2015 due to the credit cycle China is going through.

Expectation for principal guarantee by lenders could lead to liquidity risks at P2P lenders. The current industry practice of effective principal guarantee (through direct guarantee, third-party guarantee, and reserve models) will make P2P lenders vulnerable to credit cycles.

P2P lenders could be more vulnerable to reputational risks than other financial institution given that P2P is still a relatively new concept, with perceived high potential risks. A platform that leads to reduced interest payment and losses for lenders could suffer a large reputational hit and rapid loss of lenders, which could even lead to the closure of the platform.

P2P lenders that are engaging in duration mismatch will face bigger risk of closure due to more severe liquidity risks when lenders lose trust in those platforms, and could even face legal risks.

High acquisition costs for both borrowers and lenders. Since most P2P lenders in China still rely on both online and offline channels, most of them still need to build regional offices, which could be costly. In addition, direct acquisition costs like self-initiated advertisements are quite costly. We currently do not have evidence to suggest that the overall cost structure of most P2P lenders is lower than for the traditional financial channels.

High effective cost for borrowers make them vulnerable to competition. Due to high lender and borrower acquisition costs and high charge-off ratios, the effective interest rates to borrowers are very high. While the reported interest rates to borrowers have fallen to low-teen levels, P2P platforms typically charge very high fees to borrowers. We believe effective interest rates to borrowers tend to be above 30% if the P2P lenders are to break even. This is notably higher than interest rates offered by banks, and even higher than most alternative financing channels.

Banks and other financial channels are shifting their focus to consumer loans and new lending opportunities during the economic structural shift in China, and this could lead to more competition to P2P lenders, particularly as many banks and nonbank financial institutions are adapting new technologies to improve their operating and credit approval efficiencies.

In addition, the declining rate environment in China will put more pressure on P2P lenders that cannot quickly reduce their operating costs.

Future regulatory framework remains uncertain. Regulations on P2P used to be almost nonexistent in China, but the China Banking Regulatory Commission (CBRC) announced in January 2015 that it was setting up a new division responsible for P2P lending. New P2P rules are expected to be released in 2H15.

Exhibit 102
China: P2P yield declined in line with interbank rates and bond yields

Source: Wangdaizhijia.com, Morgan Stanley Research

High acquisition costs for both borrowers and lenders
We think the CBRC will focus on information disclosure and monitoring fund use to protect borrowers on P2P platforms. The PBOC may gradually approve some P2P lenders to access the national credit system to better manage the risks.

There have also been instances of platform defaults and instances where management disappearance at P2P lenders. We believe regulators will also require proper P2P fund custody, which may increase the cost for P2P lenders.

**Impact on China Incumbents, and the Potential Response**

**Not a threat, but an innovation driver for banks.**

We do not believe the rapid growth in P2P lenders is a threat to the banks yet as 1) P2P lenders are targeting a market currently not served by banks given their high rates to borrowers and 2) they remain very small relative to the large credit market in China (<1% of total outstanding loans). That said, banks are starting to take notice the power of the internet and technology, and are actively adapting new technologies. Some banks even see an opportunity to set up similar platforms. Ping An Group’s Lufax is an example. We believe the emergence of P2P lenders have served as a big push to technology innovation at many traditional financial channels, including banks, and have been driving efficiency improvements for the entire financial services industry.

**How will banks and nonbank financial companies respond?**

Banks and many nonbank financial companies have also tried to adapt and develop new technology to improve efficiency in credit risk analysis and the customer experience. Specifically, we have seen the following development trends for banks and nonbank financial firms:

- Improved client experience via enhanced online and mobile banking systems, with easier ways to manage client assets.
- Enhanced data used in the credit approval process and proactive creation of environments in which they can gather data (e.g., E-ICBC initiative by ICBC).
- Many banks have also launched online/P2P lending platforms to improve the efficiency of extending credit and shorten the approval process.
- Some banks have also taken a more proactive approach to source SME credit demand and increase loan products (e.g., more non-collateralized products) and expand their targeted borrower base.

**Competitive advantage of banks vs. P2P platforms**

**Still better credit risk management ability at banks vs. P2P lending platforms.** Due to banks’ large branch networks and on-the-ground lending officers familiar with local economic conditions, banks are still better positioned to assess risks for corporate and SME lending. While some P2P platforms have used more comprehensive risk assessment models for personal loans, the ability to access the PBOC credit database and local knowledge helps banks maintain a much lower charge-off ratio for personal loans as well.

**More comprehensive financial services to borrowers.**

Banks in China currently can also provide much more comprehensive financial services to customers. In addition to deposits, banks now offer a wide range of investment options, ranging from lower-risk wealth management products (a bit higher-yield than deposits) to higher-yielding trust products (similar to P2P lending rates for lenders) and equity-related mutual funds and private funds. Many of the simple financial products are available on mobile banking platforms. In addition, banks offer a variety of loan products, payment services, currency-related services, etc., that typically are not available on P2P platforms.
### China: Banks are entering P2P lending industry as well

<table>
<thead>
<tr>
<th>Bank</th>
<th>P2P</th>
<th>Launch time</th>
<th>Type of credit assets</th>
<th>Model</th>
<th>Interest rate</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDB</td>
<td>Kaixingdai, Jingkaidai</td>
<td>Dec-12</td>
<td>SMB loans</td>
<td>Third-party guarantee, collateral</td>
<td>9.93%</td>
<td>6-9m</td>
</tr>
<tr>
<td>PingAn</td>
<td>Lufax, Lfex</td>
<td>Mar-13</td>
<td>SMB and retail loans</td>
<td>Guarantee, collateral</td>
<td>5.5-8.4%</td>
<td>3-36m</td>
</tr>
<tr>
<td>CMB</td>
<td>e CMB</td>
<td>Sep-13</td>
<td>SMB loans</td>
<td>Collateral</td>
<td>6.19%</td>
<td>61-146d</td>
</tr>
<tr>
<td>Baoshang</td>
<td>Xiaoma Bank</td>
<td>Jun-14</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Minsheng</td>
<td>Yidai, Mindaitianxia</td>
<td>Jul-2014, Dec-14</td>
<td>SMB and retail loans</td>
<td>Collateral</td>
<td>8%-15%</td>
<td>30-365d</td>
</tr>
<tr>
<td>Lanzhou</td>
<td>eRong eDai</td>
<td>Aug-14</td>
<td>SMB and retail loans</td>
<td>Risk reserve</td>
<td>6.80%</td>
<td>365d</td>
</tr>
<tr>
<td>Qishang</td>
<td>Qilerongrong</td>
<td>Nov-14</td>
<td>SMB and retail loans</td>
<td>Risk reserve, third party guarantee</td>
<td>7.6-8.0%</td>
<td>6-12m</td>
</tr>
<tr>
<td>China Resource</td>
<td>Asset exchange</td>
<td>Jan-15</td>
<td>SMB loans</td>
<td>Collateral</td>
<td>5.6-6.7%</td>
<td>32-260d</td>
</tr>
<tr>
<td>ICBC</td>
<td>e ICBC</td>
<td>Mar-15</td>
<td>ICBC is the first bank in China to have an all-round internet service platform, including online shopping, social communication tool, direct banking, online payment and financing and investment tools.</td>
<td>6-12m</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Company Data, Morgan Stanley Research

### Actionable Calls for China Financial Stocks

**China Merchants Bank (3968.HK, Overweight)**

- One of the best mobile banking platforms in China and leading retail banking franchise.

- Deregulation in ABS market will allow CMB to gain market share with development of new technology and more efficient credit approval processes.

- Broad-based investment product offering and convenient online banking platform have helped CMB to gain retail clients and cushioned the impact from competition from non-bank financial firms and P2P lenders.
Global Marketplace Lending

Australia
Marketplace Lending in Australia

Attractive Opportunity

We see an opportunity for P2P lending to establish a meaningful presence in the Australian financial services sector. There are several reasons why P2P lenders would view Australia as an attractive market, and why they could win meaningful share from incumbents:

- **Online penetration:** Internet usage is high in Australia, as evidenced by penetration of broadband (70% of households), mobile phone (~130% of consumers), and smart phones (~70% of mobile users). Internet usage is growing rapidly in financial services. ANZ Bank’s 2014 Adult Financial Literacy Survey found that nearly 75% of people bank online (up from ~63% in 2011), while the use of mobile and tablet devices has almost quadrupled in three years. The survey also found that ~40% of people use a website, online calculator, or mobile app to compare financial products. ANZ CEO Mike Smith said: “The growth of digit is changing the way people do their banking and make payments. Online channels are making it easier for people to access information, shop around and compare financial products.”

- **Concentrated banking industry:** Australia’s banking industry is dominated by four major banks, with a combined market share of 75-85% in the retail banking segments of mortgages, household deposits, credit cards, and other personal lending. We think the major banks and other incumbents place greater emphasis on mortgages and deposits than on consumer unsecured lending given far larger revenue and profit pools in those areas and their importance in entrenching the customer relationship.

- **Growing margins and high returns in unsecured consumer lending:** The spreads between rates on personal loans and credit cards vs. cash rates in Australia are very wide, and have actually expanded over the past 20 years, in contrast to trends in the mortgage market (see Exhibit 104). Furthermore, we believe that margins in consumer unsecured lending have expanded more since the financial crisis than in any other major product segment. For example, based on disclosure from Commonwealth Bank of Australia’s Retail Banking Services (RBS) division, we estimate that the net interest margin on personal loans and credit cards increased from ~9.1% in 2009 to ~11.2% in 2014 (see Exhibit 105), while fee income remained steady. None of the major banks disclose consumer finance earnings separately today, but we estimate that the ROE of CBA’s consumer finance portfolio would be ~35% after allocating an appropriate proportion of the retail bank’s fixed costs.

- **Comprehensive credit reporting:** Lenders in Australia had access to “negative” credit reporting only prior to March 2014. We think this favoured incumbent banks as it discouraged borrowers from seeking alternative funding and made it hard for new entrants to assess borrowers’ creditworthiness. We think the introduction of comprehensive credit reporting (CCR) complements P2P lenders’ credit assessment techniques. While CCR is currently voluntary, the Financial System Inquiry recommended the following in December 2014: “Support industry efforts to expand credit data sharing under the new voluntary comprehensive credit reporting regime. If, over time, participation is inadequate, Government should consider legislating mandatory participation.”
• Lack of innovation and generic pricing in personal lending: There has been significant product innovation in mortgages, deposits, and credit cards in Australia in the past 10-20 years. In contrast, the key features of unsecured personal loans have hardly changed. As a result, we see little reason for customers to choose banks over P2P lenders if they expect a better price and a more convenient or faster application process. We note that the major banks have embraced risk-based pricing in the business and corporate loan portfolios, but not in consumer finance. Customers pay different fees and interest rates for different products (e.g., low rate credit cards, credit cards with loyalty schemes, personal loans), but there is little pricing difference based on risk profile.

• Lack of alternative sources of funding and high borrowing costs for small businesses: A study from the Reserve Bank of Australia (RBA) in 2012 on Small Business Funding in Australia noted that “when small businesses seek external funding they are more likely to be rejected than larger businesses.” More than 15% of firms with fewer than 20 employees stated that they had failed to obtain financing. Recently, the US company OnDeck announced its entry into the Australian market, and CEO Noah Breslow stated that there is a “huge gap between small business financing needs and the availability of capital from traditional sources.” At the same time, data from the RBA and APRA shows that spreads on small business loans in 2012 had returned to late 1990s levels, suggesting that competition in the small business market has dissipated (see Exhibit 106).

Exhibit 106
Australia: Spreads on small business variable rate loans have rebounded to late 1990s levels

Source: RBA May 2012 “Small Business Funding in Australia”

• An alternative asset class in a low rate environment: Australian interest rates are at record low levels (2.00% cash rate), but consumer unsecured borrowers are still paying rates of >14%. This provides significant scope for P2P lenders to offer rates that meaningfully lower borrowers’ interest payments, while still offering attractive returns to investors. Savings in the Australian superannuation market have reached ~A$1.93 trillion, but the Australian fixed income market is relatively small. Australian investors have high exposure to residential property and domestic equities, so there is scope for strong growth in an alternative asset class. MoneyPlace believes that P2P lending is positioned at the top end of the fixed income risk-return profile (see Exhibit 107).

Exhibit 107
Australia: P2P lending gives investors access to unsecured consumer lending, an asset class previously available only to banks


• Support from the Financial System Inquiry (FSI): The recommendation of the FSI suggests that it favours measures that will increase competition in the banking sector. It concluded that action should be taken by government and regulators “to support data driven models” and that “the regulatory framework should facilitate financing via the internet.” However, to date, the federal government has provided no direct financial or regulatory incentives for emerging players in the personal or SME lending markets.
**Disruptors have already been successful in Australian banking:** Disruption from mortgage brokers has had a material impact on the structure of the mortgage market and the margins that major banks earn on their home loan portfolios. Brokers were able to offer lower interest rates, address customer perceptions that the major banks did not provide choice, and access alternative sources of funding to grow their business. They entered the market in 1996 and have ~47% share of in-force loans today. The impact on home loans was significant and immediate, with margins falling ~200bp within two years (see Exhibit 108).

Exhibit 108
Australia: Mortgage brokers were a key reason for the decline in home loan spreads in the 1990s

**Market Size and Key Industry Trends**

**Consumer total addressable market: ~A$75 billion**
Household debt equates to ~110% of GDP in Australia and household leverage as a percentage of disposable income is now higher than in the other developed markets (the US and UK) where P2P lenders are gaining traction (see Exhibit 109). However, the vast majority of the debt is held via residential mortgages. In fact, unsecured consumer debt accounts for just ~9% of total household borrowing (see Exhibit 110).

Total unsecured consumer debt in Australia was ~A$101 billion (~US$80 billion) as of December 2014, comprising ~A$46 billion in credit cards and ~A$55 billion in other consumer loans. As shown in Exhibit 111, the balances have declined by a compounded rate of ~1% p.a. over the past four years.

**Exhibit 109**
Australian household leverage is high...

**Exhibit 110**
...but the vast majority of household debt is held via residential mortgages

**Exhibit 108**
Australia: Mortgage brokers were a key reason for the decline in home loan spreads in the 1990s
We estimate that the total addressable market for P2P lenders in consumer finance is currently ~A$75 billion and that it will grow to ~A$87 billion by 2020. In determining the addressable market for P2P lenders, we make the following assumptions:

- ~35% of credit card balances (~A$18.1 billion) are excluded because they are transactors who do not need to refinance their debt;
- A$10 billion, or ~10%, of consumer lending is excluded because we assume that it relates to small balances, which means consumers have no incentive to refinance;
- the compound growth rate out to 2020 will be ~3.5% in credit cards and ~2% in other consumer lending.

**SME total addressable market: ~A$72 billion**

Lending to businesses in Australia was ~A$777 billion as of December 2014. Based on RBA data, individual loan balances below A$500,000 account for ~A$120 billion of lending, while balances between A$500,000 and A$2 million make up another ~A$130 billion of loans. The four-year compound growth rate since 2010 has been ~1.9% for the former and ~3.4% for the latter (refer to Exhibit 112).

OnDeck Australia, which recently launched in Australia, has said it is likely to make loans of up to A$250,000. We assume that this will cover ~60% of balances in the ~A$120 billion of lending under A$500,000 and that CAGR out to 2020 will be ~5%. This implies a total addressable market of >A$70 billion today and ~A$95 billion in 2020.

**The P2P lending market is currently very small.**

The P2P lending market is very much in its infancy in Australia, despite the attractive characteristics of the market and the presence of some of the large global P2P players. We highlight the following:

- **SocietyOne is the only P2P lender that started lending before 2014:** There are currently only three P2P lenders operating in Australia (SocietyOne, RateSetter, and ThinCats), while MoneyPlace has plans to launch soon. However, SocietyOne is the only one that started lending before 2014.

- **There is <A$25 million of P2P lending and it is virtually all in consumer lending:** We estimate that P2P lending balances are still <A$25 million. With the exception of ThinCats (~A$1 million of loans), all this lending is in consumer finance.

- **Awareness is starting to grow:** In our view, the profile of P2P lenders has increased significantly in recent months, partly due to the impending launch of MoneyPlace and the Australian market entry of RateSetter, ThinCats, and OnDeck.
We expect P2P consumer lending to grow to ~A$10.4 billion in 2020 (~6% of consumer lending). In our base case, we assume that P2P consumer lending balances grow from <A$25 million (or <0.1% of the TAM) today to ~A$7.5 billion (or ~8.5% of the TAM) in 2020. This implies a compound growth rate of ~160%, or a 300-fold increase in 6 years. We factor in balances of ~A$10.4 billion (~12% of the TAM) under our bull case and ~A$4.3 billion (~5% of the TAM) under the bear case (refer to Exhibit 113).

By way of comparison, we highlight:

- Our US colleagues forecast a compound growth rate of 47% in P2P balances, with P2P share growing from 1.7% of the TAM in 2014 to 13% in 2020 under the base case.

- Our UK colleagues forecast a compound growth rate of ~58% under the base case, with share increasing from ~1% of the TAM to ~10%.

We expect P2P SME lending growth to reach ~A$11.4 billion by 2020. In our base case, we assume that P2P SME lending balances will grow from almost zero today to ~A$11.4 billion (~12% of the TAM) in 2020. We factor in 2020 balances of ~A$15.2bn (~16% of the TAM) under our bull case and ~A$4.8 billion (~5% of the TAM) under the bear case (see Exhibit 114). In our view, SME lending via P2P will grow faster than consumer unsecured lending because access to credit from the banks is more constrained in this segment and we think SME borrowers are more likely to seek alternative sources of credit.

Key P2P Players in Australia

There are only a handful of P2P lenders in Australia. Representatives of 14 Australian P2P lending platforms attended the April 2015 LendIt conference in New York. However, P2P lending is relatively new in Australia, and most of the players either have not yet started lending or just started in 2014. They tend to be subsidiaries of, or to have modelled themselves on, the major UK and US P2P businesses. We describe some of these businesses below:

**SocietyOne**

SocietyOne was launched in August 2012 and was the first P2P lender in Australia. It was co-founded by Matt Symons (current CEO) and Greg Symons, and shareholders include Reinventure Group (the venture capital arm of Westpac Banking Corp., or WBC), News Corp., and companies controlled by James Packer and Kerry Stokes.

SocietyOne’s business model is based on a “Lending Club type of marketplace,” and it currently offers two products (unsecured consumer loans and secured livestock loans for farmers). Lenders are currently required to be institutions or sophisticated investors and its proprietary platform, ClearMatch, uses algorithms to assess credit risk. Borrowers can apply for unsecured loans of up to $30,000 for a period of up to 36 months, and the loans are “fractionalized,” so investors fund a portfolio of loans, rather than being matched to individual borrowers. We believe that SocietyOne has received loan demand of ~A$100 million since launching in 2012, and that loan balances are currently <A$25 million. In time, we expect SocietyOne to raise money from retail investors and expand the products and types of loans available to borrowers.
ThinCats Australia
ThinCats Australia is a subsidiary of the UK-based P2P lender ThinCats. It launched in late 2014 and offers secured business loans of up to A$2 million to SMEs in Australia for periods of up to 5 years, with funding from sophisticated and wholesale investors. CEO Sunil Aranha, who has worked for Citibank, CBA, and the Export Finance Investment Corporation in Australia, believes that the market size is ~A$150 billion and that SMEs borrow ~A$73 billion per year. He believes there is a “well-recognized gap” between the financing needs of SMEs and what they can access from banks. The ThinCats model differs from P2P lenders in that it is primarily a relationship-based model, which evaluates each loan and borrower separately on a loan-by-loan basis. Lenders can decide on individual deals they wish to lend to and can bid multiples of a minimum bid of A$1,000 per loan. We estimate there is currently <A$1 million of loans outstanding on the ThinCats Australia platform.

MoneyPlace
MoneyPlace was founded by several former executives of National Australia Bank (NAB), and it plans to begin offering loans before the end of 2Q15. It intends to operate an online marketplace that will match borrowers and investors using a platform bought in partnership with US-based Daric (see Exhibit 115). It intends to charge a management fee equivalent to 1.5% of the gross return to investors to cover the borrower’s credit assessment, loan origination and distribution, and loan servicing and collections. It intends to use “a wide range of data sources” such as comprehensive credit reporting, the credit bureau, and customers’ bill payment histories and other characteristics to assess borrowers for its primary product: a 3-year loan of A$5,000-35,000. MoneyPlace expects to accept funding from both institutional and retail investors (minimum investment of A$5,000) and to “fractionalize” loans so that investors (who bear the credit risk, but can choose their risk appetite) benefit from diversification across >100 individual loans. CEO Stuart Stoyan believes that P2P lenders in Australia can win a 15-20% share of the ~A$250 billion consumer (~A$100 billion) and SME (~A$150 billion) lending markets within a decade.

Exhibit 115
Australia: P2P lending enables investors to access unsecured consumer lending, an asset class previously only available to the banks

RateSetter
RateSetter Australia has licensed the name of the UK group and was launched in Australia in October 2014 with the support of local and international investors who injected ~A$3 million into the business. CEO Daniel Foggo is a former investment banker with Barclays Capital in Sydney and NM Rothschild in London. RateSetter currently offers personal loans, but not business loans, and is the “first and only company in Australia to provide peer-to-peer lending to retail savers and investors.” Its platform allows the “real time movement of interest rates” to match demand and supply. In March 2014, RateSetter announced that the market leader in online automotive sales, Carsales, had invested A$10 million for a 20% stake, ensuring that its customers seeking car financing would be directed to RateSetter’s online platform.

Borrowers can access unsecured personal loans of $2,000-35,000 for periods of 6 months to 5 years, while lenders can choose both the term and rate of their loans, which is fixed for the duration of the loan. RateSetter offers four lending markets, with each market defined by its lending term (1 month, 1 year, 3 years, or 5 years). Lenders can be an individual, company, or trust (including self-managed super funds). They need to make an “order” with an associated rate before their funds are matched to a borrower. RateSetter uses a provision fund to help protect lenders from late payments of defaults, with money raised via a risk assurance charge for all borrowers.

RateSetter discloses a significant amount of data on its website. As shown in Exhibit 116, rates on a 1-year loan were ~6% at the end of April, which was ~3.75% above the cash
This compares with an indicative rate of ~14% for a 1-year unsecured personal loan from the major banks. The total balance of loans outstanding was only ~A$2.7 million. The balance of the provision fund was ~A$313,000 (~11.5% of loans) and the estimated defaults on the loans was ~A$106,000 (~3.9% of loans).

Exhibit 116
Australia: RateSetter lending rates are ~8% cheaper than an unsecured personal bank loan

Source: Company Data, Morgan Stanley Research

OnDeck
US P2P lender OnDeck announced in April 2015 that it will enter Australia via a ~US$12.5 million investment for 55% interest in a joint venture with local accounting software provider, MYOB. It is expected to commence in 2H15 and will make loans to small businesses of up to A$250,000.

Challenges for P2P Players

We see a number of challenges that will influence the growth of the P2P market in Australia and the likelihood of success for business models in different segments of the market:

- **25 years since the last recession**: Australia has not experienced a recession since the early 1990s. This means that the credit data available for most “creditworthy borrowers” reflects a period when the unemployment rate has been low and income growth has been strong. Unlike the US and UK, there is no real-life scenario that can be used to “stress test” potential credit losses.

- **The strength of the oligopoly**: Four major banks dominate the key lending and deposits markets in Australia, with an estimated market share of 84% in consumer unsecured lending and ~75% in SME lending. While this market structure creates opportunities for P2P lenders, it also underpins the major banks’ profitability and the customer relationships. We believe that the major banks have more than enough financial strength to compete aggressively with P2P lenders or to attempt to replicate their technology and pricing models, if they choose to do so.

- **Cost of customer acquisition**: Despite the attractive characteristics of the Australian industry, the growth of P2P lending in Australia has been modest to date. In our view, this partly reflects the challenge of raising awareness. We understand that much of the growth in borrower demand at SocietyOne has been driven by interest rate comparison sites (e.g., RateCity.com.au), and we note that the conversion rate of lending is relatively low. We expect that the P2P lenders will look to raise awareness and acquire customers through partnerships. However, the size of the smaller financial services providers (e.g., small banks, credit unions, building societies) limits the scope for acquisition. At the same time, the banks have already established relationships for the provision of financial services with some of Australia’s leading consumer-facing companies like Qantas, Woolworths, and Coles.

- **Increased regulatory scrutiny**: P2P lenders are regulated by the Australian Securities and Investments Commission (ASIC), which has warned that “investors should understand and take into account the associated financial risks of these products, which include a lack of liquidity and a difficulty assessing the quality of the borrower.” We expect the ASIC to focus on responsible lending to borrowers and the sale of alternative investment products to retail investors. In our view, regulatory scrutiny could limit the growth prospects for retail funding of P2P models.

- **Gaining an early-mover advantage**: The consumer unsecured lending market is Australia is small relative to the domestic mortgage and deposits markets as well as the US and UK consumer lending markets. This could mean that P2P lenders will need to establish an early-mover advantage to drive the customer awareness and scale necessary for success. Historically, the internet in Australia has been a “winner takes all” market: in online automotive sales, Carsales has ~80% share; in online job advertising/employment, Seek has 90% share. However, there is a duopoly forming in online real estate advertising due to the significantly larger market size. While this suggests to us that there is room for two or more successful players in P2P lending, we believe there will still be some advantage to being an early mover.

...
Response from the Banks

The retail and business banking franchises of the major banks aren’t responding yet

The major banks have yet to outline how they will respond to the emergence of P2P lending in Australia. At this stage, we doubt that the response will be particularly quick or aggressive, and we note the following:

- **The P2P market is still very small:** We doubt that the P2P market has had any impact yet on the growth rates of the major banks’ personal loan and credit card portfolio. In fact, SocietyOne is the only P2P lender that has been operating for more than a year, and it seems to have deliberately constrained its growth ambitions.

- **Retail bankers are primarily focused on the mortgage and deposit markets:** The major banks have Australian home loan and deposit portfolios of ~A$1,126 billion and ~A$1,268 billion, respectively. This compares with a total market of just ~A$101 billion in consumer unsecured lending. CBA’s Retail Banking Services division generates ~A$1,875 million of revenue from mortgages and ~A$1,365 million from deposits, compared with ~A$1,219 million from consumer finance. Furthermore, mortgages and deposits are seen as central to the customer relationship. In contrast, consumer finance (particularly credit cards) is viewed more as an additional product offering and an incremental revenue opportunity. In our view, this will slow the response of the major banks to the growth of P2P lenders in Australia.

- **The major banks downplay the competitive advantage of P2P players, particularly in relation to credit assessment:** Senior executives from the major banks have tended to downplay the threat from P2P lending when they have commented publicly. In particular, they have questioned whether P2P lenders are better able to assess credit quality given the amount of data available to the major banks. For example, both WBC and CBA have some form of relationship with >10 million customers, which equates to >50% of the adult population in Australia. We believe the banks are focused on maximizing the revenue potential (including credit cards and consumer lending) from their existing customers.

- **We doubt the major banks will adopt a risk-based pricing approach for different customers given the risk of cannibalizing back-book profitability:** In our view, the major banks will tolerate some loss of share to P2P lenders, rather than adopt risk based pricing for personal loans and credit cards. The high returns and profitability of their in-force portfolio mean that they are more prepared to sacrifice volume than price. Furthermore, we expect them to rely on customer inertia, broader customer relationships or product features (e.g., credit cards) to limit customer loss.

- **The major banks could look to partner with P2P lenders to provide an alternative offering to their customers:** In our view, the major banks are increasingly open to “partnership” agreements or investments. The best examples are investments in mortgage brokers (e.g., CBA and Aussie Home Loans), investment in fund managers (e.g., nabiInvest), or the sale of white-labelled general insurance products (e.g., WBC and NAB with Allianz). There have also been cases where they build an online offering to compete with disruptors (e.g., NAB’s UBank offering in deposits and then home loans). As such, we think they may ultimately do the same with P2P lending. In fact, WBC’s investment in SocietyOne (see below) gives some insight into its approach. However, the experience of other industries suggests that online players are more likely to succeed if they are “pure plays” (e.g., Carsales or Seek), rather than owned by an incumbent (e.g., drive.com.au or mycareer.com.au).

- **The major banks are aggressively developing their digital offerings and improving loan approval speeds:** While the major banks appear to be downplaying the threat of P2P lenders and look unlikely to adopt “risk-based pricing” for consumer unsecured loans in the near term, they are focused on developing their online and digital offerings. This suggests that they want to match the service proposition and ease of application provided by the P2P platforms, even if they won’t compete on price. For example, CBA believes it is a leader in digital and online product and service innovation (see Exhibit 117) and is improving loan fulfillment (the number of personal loans funded on the same day has increased ~27% in the past 12 months and asset finance credit approval times have fallen by ~67%). Also, one of WBC’s strategic priorities is “digital transformation” (see Exhibit 118) and it notes that it has lowered credit card complaints and personal loan complaints by ~33% and ~27%, respectively, in the past year.
WBC has invested in SocietyOne
WBC took an equity stake in SocietyOne in 2014, via its venture capital fund, Reinventure Group. In a recent interview with the Australian Financial Review, the head of Westpac Retail and Business Banking, Jason Yetton, said that “there may be opportunities for equity-based and peer-to-peer lending to be increased both domestically and globally” (April 1, 2015). In outlining WBC’s approach, he said, “We could fight and defend against these new entrants, but we know partnering will provide insight into the development of financial products and online creditworthiness algorithms that would otherwise be blind to us.” He also highlighted that small businesses in particular could benefit from access to alternative financing.
Global Marketplace Lending

Appendix
Appendix

An overview of marketplace lending

Marketplace lenders/originators directly connect borrowers to lenders without going through a traditional financial intermediary. Marketplace lending started out with consumers lending to consumers; it is sometimes referred to as “peer-to-peer” (P2P) lending, but as more of the funding for loans is coming from institutions, we believe P2P may be misnomer. Marketplace lenders are also referred to as online lenders, technology-enabled lenders, specialty originators, and next generation lenders.

How marketplace lending works:

Marketplace lenders/originators operate platforms that match borrowers who are looking for capital (consumers and businesses) to sources of capital (individual and institutions). Pure marketplace originators do not take any credit risk as they are only an intermediary between borrowers and lenders, although several lenders that we discuss in this report fund a portion of the loans they originate with their own balance sheets, thus taking on varying degrees of credit risk.

Several drivers have aligned over the past several years and led to the explosive growth of marketplace lending globally:

I. The global financial crisis led banks in many countries to pull back on their consumer and small business lending activities after having suffered heavy losses.

II. Increased regulatory oversight, along with capital requirements, has led to certain types of loans becoming relatively unattractive for banks.

III. The increased availability of data sources, along with improvement in data analytics technology, is helping marketplace lenders to develop underwriting models that they believe have better predictive capability than FICO scores.

IV. Consumers (especially Millennials) and small businesses are increasingly comfortable performing transactions online or on their mobile devices, and are demanding fast and convenient solutions.

V. The general credit environment has been benign with low default rates, which may have helped marketplace platforms establish credibility with potential investors in loans.

VI. Record low interest rates across multiple asset classes, which has led to an increased interest in assets such as marketplace loans that can deliver attractive yields.

Marketplace lenders’ key advantages vs. traditional lenders:

I. They typically have lower operating costs than banks due to a lack of physical infrastructure and use of technology to drive process efficiency.

II. They can offer “lenders” (i.e., consumers or institutions who provide funding to lend money to borrowers) a higher net yield than what they can currently earn from banks or government bonds.

III. Lack of capital requirement, as they typically do not hold any residual interest in loans that they originate.

IV. They typically utilize more data points in their credit scoring algorithm, which may allow them to approve loans that traditional lenders do not have the ability to underwrite.

V. A simpler and more efficient application process relative to traditional financial institutions. The whole process takes place online, with minimal human interaction and credit decisioning in minutes. On the SME side, marketplace lenders can save borrowers significant time in the loan application process; in the US, the average SME spends 33 hours applying for a loan, while the application process from a marketplace lender can be as short as 30 minutes.

VI. They can pass along the lower overhead costs to borrowers in the form of lower interest rates, although it should be noted that most marketplace lenders are currently not profitable due to lack of scale.

Marketplace lenders’ key disadvantages vs. traditional lenders:

I. Lack of long-term track record for investors as most platforms have been around for less than 5 years and haven’t been through a credit cycle; those that were around during the last financial crisis were too small to draw any meaningful conclusions.

II. Unclear regulatory framework in many regions given that marketplace lending is a relatively new phenomenon.

III. Pure marketplace lenders do not have a deposit base or committed sources of funding. If loan losses spike during a credit cycle, it could deter investors from lending on the platform and revenues could plummet overnight given the heavy reliance on transaction fees.
Exhibit 119
How Marketplace Lending Works

Investors
- Retail Investors
- High Net Worth
- Institutions

Investment Type
- Public Notes
- Certificates
- Whole Loans
- Line of Credit / Securitization Facility

Platforms
- LendingClub
- OnDeck
- Funding Circle
- SoFi
- Dianrong.com

Borrowers
- Consumers
- SMEs

Source: Morgan Stanley Research
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<tr>
<th>Ticker</th>
<th>Company Name</th>
<th>Close Price (as of 05/18/2015)</th>
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<tr>
<td>BAC.N</td>
<td>Bank of America</td>
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<td>Barclays</td>
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<td>COF.N</td>
<td>Capital One</td>
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<td>3968.HK</td>
<td>China Merchants Bank</td>
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