

March 31, 2016

## Signature Bank

### Fasten Your Seat Belts; It's Going to Be a Bumpy Taxi Ride ... but Worth It

|                                 |                                   |                                 |
|---------------------------------|-----------------------------------|---------------------------------|
| Industry View<br><b>In-Line</b> | Stock Rating<br><b>Overweight</b> | Price Target<br><b>\$163.00</b> |
|---------------------------------|-----------------------------------|---------------------------------|

The negative impact of ride-sharing on the taxi industry should not be underestimated, and could drive sharply higher credit losses in SBNY's taxi portfolio (we estimate a 25% cumulative loss). We explore both the risks and offsets to taxi lending, and why SBNY remains a key Overweight.

**Ride-sharing companies pose a significant threat to the taxi industry** and, by default, to the creditworthiness of taxi medallion borrowers. Our work with our Autos and Shared Mobility colleague Adam Jonas highlights how rapidly ride-sharing companies have overtaken taxis in less dense urban markets, with more drivers who also broadly earn more per hour than their taxi counterparts. This has led to sharply lower medallion values in NYC, down roughly 35% since 2014, and despite increasing efforts by the NYC Taxi and Limousine Commission (TLC) to put ride-share and taxi on more equal footing, we would expect further downward pressure on medallion values.

**Our scenario analysis suggests the worst-case taxi credit losses** (a 50% charge-off over four years) **could reduce SBNY EPS by 6-10%** vs. our new estimates, although the more likely earnings impact is far less. Signature has \$815 mil of total taxi exposure (3.4% of total loans), split largely between NYC (\$618 mil) and Chicago (\$168 mil). In our revised EPS estimates, we are modeling a 25% lifetime loss on its taxi exposure, with 17% in the next four years as the company continues to restructure loans to delay ultimate losses. Using a 25% four-year charge-off rate (instead of our 17% estimate) would reduce our EPS by 1-2%, and a near 40% loss would reduce our EPS by 4-6%.

**Regulation is a positive for medallion values in New York City**, but it will only delay the eventual credit losses, in our view. The TLC has eliminated the "owner must drive" rule, giving more flexibility to medallion owners; has created a universal license that allows Uber drivers also to drive taxis part-time; and is considering imposing consistent licencing standards for all drivers and applying handicap accessibility standards to ride-share companies (requiring 50% of the fleet to be handicap accessible by 2020).

**Despite real concerns over taxi losses, Signature remains one of our top picks.** At just 3.4% of total loans, taxi lending poses only a small risk to Signature's earnings, even in our worst case scenario. We expect Signature's loan and EPS growth to outpace peers (19% average loan growth and 14% EPS growth from 2015-19e vs. 7% and 11%, respectively, for peers), it has an ROE of 13.5% that is 400 bps better than peers, strong credit quality, and has beaten EPS estimates for the last 21 consecutive quarters.

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#### Signature Bank ( SBNY.O, SBNY US )

Midcap Banks / United States of America

|                                 |                   |
|---------------------------------|-------------------|
| <b>Stock Rating</b>             | <b>Overweight</b> |
| <b>Industry View</b>            | <b>In-Line</b>    |
| <b>Price target</b>             | <b>\$163.00</b>   |
| Shr price, close (Mar 30, 2016) | \$138.26          |
| Mkt cap, curr (mm)              | \$7,038           |
| 52-Week Range                   | \$163.15-119.60   |

| Fiscal Year Ending              | 12/15       | 12/16e      | 12/17e      | 12/18e       |
|---------------------------------|-------------|-------------|-------------|--------------|
| <b>ModelWare EPS (\$)</b>       | <b>7.30</b> | <b>8.17</b> | <b>9.36</b> | <b>10.86</b> |
| Prior ModelWare EPS (\$)        | -           | 8.27        | 9.42        | 10.60        |
| Consensus EPS (\$) <sup>§</sup> | 7.21        | 8.29        | 9.50        | 11.00        |
| P/E                             | 21.0        | 16.9        | 14.8        | 12.7         |
| BV/shr (\$)                     | 56.81       | 69.08       | 78.64       | 89.72        |
| P/BV                            | 2.7         | 2.0         | 1.8         | 1.5          |
| Tang BVPS (\$)                  | 56.81       | 69.08       | 78.64       | 89.72        |
| P/tang BV                       | 2.7         | 2.0         | 1.8         | 1.5          |
| Div yld (%)                     | 0.0         | 0.0         | 0.0         | 0.0          |

Unless otherwise noted, all metrics are based on Morgan Stanley ModelWare framework  
<sup>§</sup> = Consensus data is provided by Thomson Reuters Estimates  
 e = Morgan Stanley Research estimates

#### QUARTERLY MODELWARE EPS (\$)

| Quarter | 2016e |       | 2017e   |       | 2017e   |         |
|---------|-------|-------|---------|-------|---------|---------|
|         | 2015  | Prior | Current | Prior | Current | Current |
| Q1      | 1.64  | 1.94  | 1.94    | -     | -       | -       |
| Q2      | 1.77  | 2.01  | 2.00    | -     | -       | -       |
| Q3      | 1.88  | 2.11  | 2.08    | -     | -       | -       |
| Q4      | 2.01  | 2.21  | 2.15    | -     | -       | -       |

e = Morgan Stanley Research estimates

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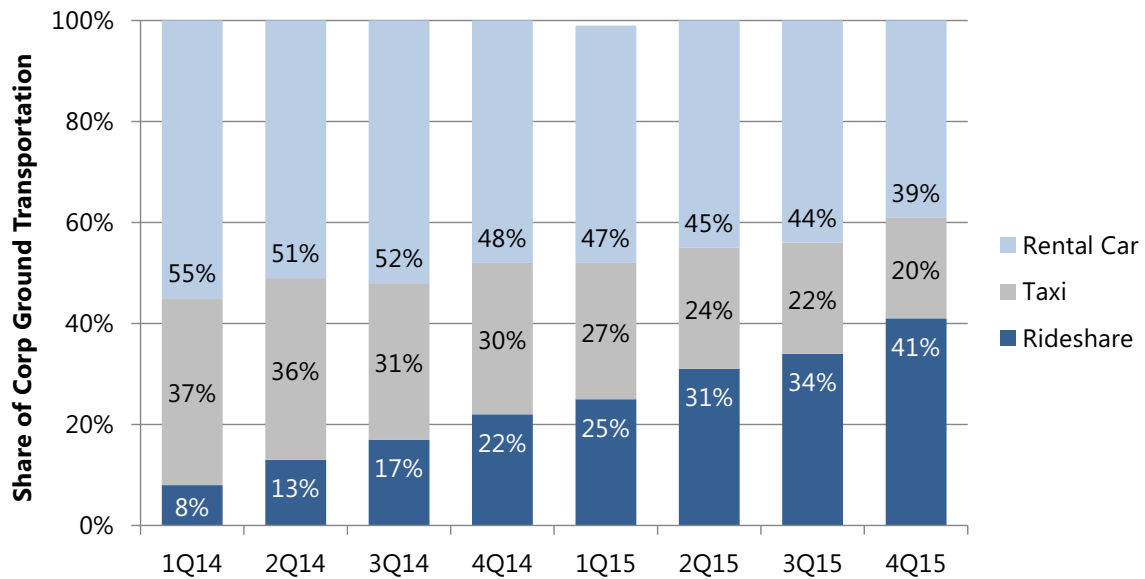
**For analyst certification and other important disclosures, refer to the Disclosure Section, located at the end of this report.**

## Ride-Sharing Is Heavily Affecting the Taxi Industry

### Taxi's Share of Transportation Is Dwarfed by Ride-Sharing

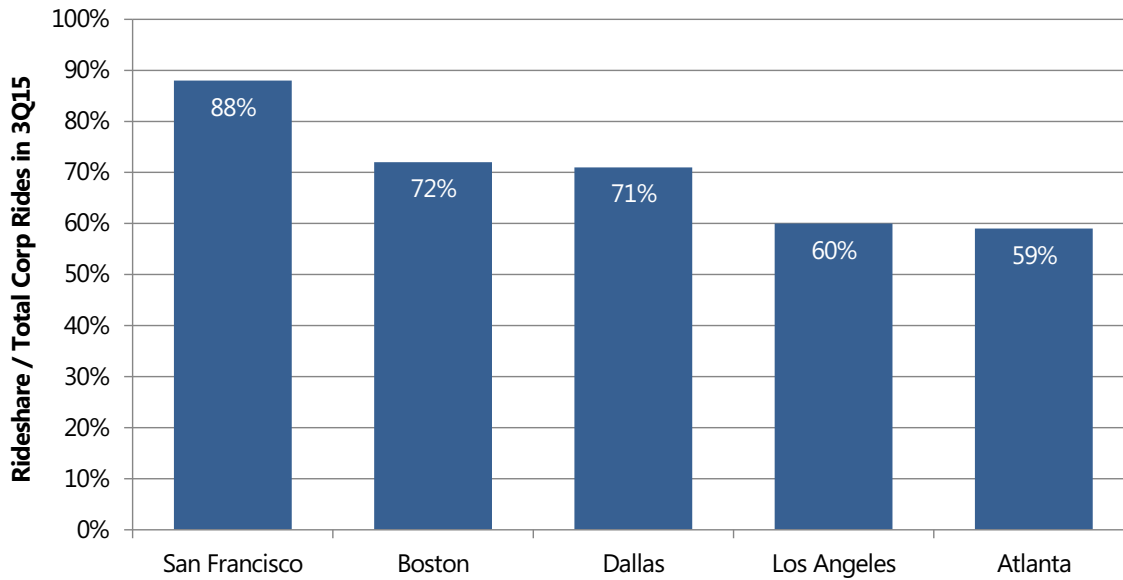
Over the last two years, ride-sharing companies, including Uber and Lyft, have seen exceptional growth in market share of the US transportation industry, accounting for over 40% of the corporate transportation market as of 4Q15, as shown in Exhibit 1 (for lack of better data, we believe corporate segment data can be used as a reasonable proxy for total rides). This is up from just 8% market share in 1Q14, with more than half of the market share gain coming from taxis. While the lower cost of ride-shares has been a boon from a consumer perspective, it has put considerable downward pressure on the earning potential of a licenced taxi driver, and thus, on the value of the taxi medallion and the credit quality of the loans using medallions as collateral.

**Exhibit 1:** Share of Total US Corporate Ground Transportation, 1Q14-4Q15



Source: Certify

**Exhibit 2:** Ride-share as a Percentage of Total Corporate Rides, 3Q15



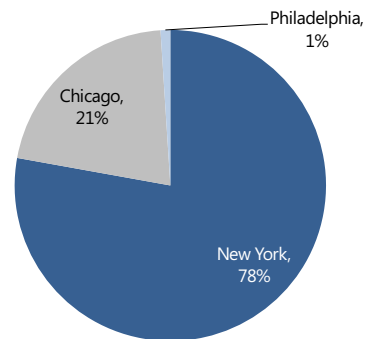
Source: Certify

**Ride-share already exceeds 50% of total corporate rides in a number of major urban markets**, including San Francisco, Boston, and Dallas, according to Certify, using data as of 3Q15 (most recent available). We would expect that share to have grown in the last six months (Exhibit 2). However, the most widely published data on the growth of ride-shares also tends either to ignore or fail to reliably quantify the changes in market share for the two most relevant markets for Signature – New York and Chicago. As a result, the market needs to substitute anecdotal data and commentary for hard evidence of the change in market dynamics on these markets.

As shown in Exhibit 3, 78% of Signature's taxi medallion portfolio is in New York, with another 21% in Chicago. Based solely on personal experience, there is a huge difference between being able easily to catch a taxi from any given corner in New York City versus trying to hail a taxi while standing in the middle of Los Angeles or Atlanta (where it is nearly impossible). This kind of nuance is important because some cities have stronger taxi industries than others, and in assessing the potential impact of ride-share companies we need to consider these differences, including issues such as whether a city is a "hail" city like New York (consumer flags cab from the side of the road) or a "dispatch" city (consumer calls dispatch to send a taxi to pick them up, which is more similar to hailing an Uber).

**In our view, the New York taxi industry is less susceptible to disruption than other markets.** *Why?* First, because it's heavily engrained in the fabric of the city's transportation system as a reliable mode of transportation, and has a strong Taxi and Limousine Commission (TLC) that is actively looking to protect the interests of the taxi operators (unlike other cities). Second, because New York is the largest urban market in the US and, while it is not immune to disruption from ride-sharing, it likely has the greatest chance of providing sufficient demand to support the existence of both taxi and ride-share companies.

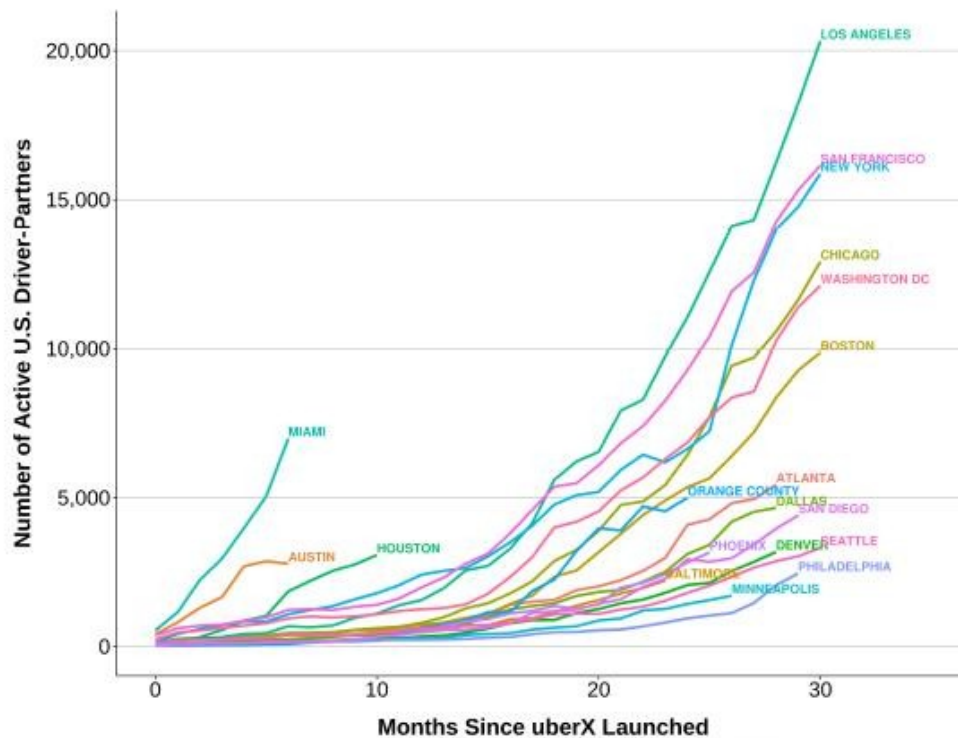
**Exhibit 3:** Geographic Breakdown of SBNY's \$815 mil Taxi Medallion Portfolio



Source: Company data, Morgan Stanley Research

New York may be more resilient than other markets, **but it is not immune to the pressures of the growing ride-share industry.** As seen in the image below from an Uber-released report in early 2015, *when Uber establishes a presence in a US city, the number of its affiliated drivers in that market increases significantly, if not exponentially, for the first two or three years.* This was the case with most of the largest urban markets in the US, including both New York and Chicago, and neither appears to have slowed down given reports of over 30,000 Uber-affiliated drivers currently in the New York metro area.

Active Uber U.S. Driver-Partners Over Time, by City



Note: Figure reports the number of U.S. UberBLACK and uberX driver-partners making at least one trip in the specified month, indexed to the number of months since Uber began in the city or June 2012, whichever came later.

Source: Uber report: "An Analysis of the Labor Market for Uber's Driver-Partners in the United States"

**So what is the end game for the ground transportation industry?** Our Autos and Shared Mobility analyst, Adam Jonas, provides commentary below on the state and direction of these industries:

Ride-sharing models like Uber, Lyft, etc. are attempting to solve one of the biggest problems in transportation today – the fact that the automobile is one of the most underutilized machines in the world, in operation just one hour per day on average. By leveraging an underutilized global car parc of over 1 bil cars (~250 mil in the US), an increasingly tech-savvy population looking for cheaper, more convenient mobility options, and ordinary people looking for flexible employment opportunities, these *ride-sharing models have witnessed an explosion in growth over a very short period.* Today, Uber claims its network consists of millions of drivers around the world versus tens of thousands in 2013. Approximately 70% of the US population can now get an Uber in 10 minutes or less.

In addition to the overall ease of use and convenience, **ride-sharing has emerged as a cheaper alternative to taxis in many cities.** Offerings, including UberPool and Lyft Line, which seek to match riders with other riders heading in the same direction, have the potential to reduce the cost of a trip by up to 50%. Today, 50% of Uber rides in San Francisco are UberPool versus 0% a year and a half ago. What's more, there is now a plethora of options beyond just Uber and Lyft, potentially driving down the cost of mobility further. In New York and other cities, consumers can also use ride-share apps such as Gett or Via, to name a couple. And, according to several news reports, more ride-sharing apps are poised to join the mix, including Juno, which is expected to launch in New York City this spring.

A January 2015 paper published by Uber in conjunction with the Department of Economics at the Woodrow Wilson School, Princeton University, suggests that **Uber's platform has grown immensely in large part due to the flexibility and compensation afforded to drivers.** In 16 out of the 18 markets analyzed in the report, the median earnings per hour of Uber driver-partners exceeded the average hourly wage of taxi drivers and chauffeurs (>50% on average). Flexibility was cited as one of the main reasons for signing up with Uber. Over 50% of driver-partners are active fewer than 15 hours a week suggesting that Uber is an extra source of income for many. Our conversations with several Uber drivers over the course of the last two years suggest that the ride-sharing business has positively affected their lives. See our November 13, 2014, note: [Confessions of an Uber Driver: Rollin' in the 'D'](#).

**Exhibit 4:** Hours Worked/Week: Uber Driver-Partners vs. Taxi/Chauffeur Drivers

| Hours/Wk | Uber driver-partners | Taxi Drivers and Chauffeurs |
|----------|----------------------|-----------------------------|
| 1-15     | 51%                  | 4%                          |
| 16-34    | 30%                  | 15%                         |
| 35-49    | 12%                  | 46%                         |
| 50+      | 7%                   | 35%                         |

Source: An Analysis of the Labor Market for Uber's Driver-Partners in the United States (Jonathan Hall / Alan Krueger) - January 2015

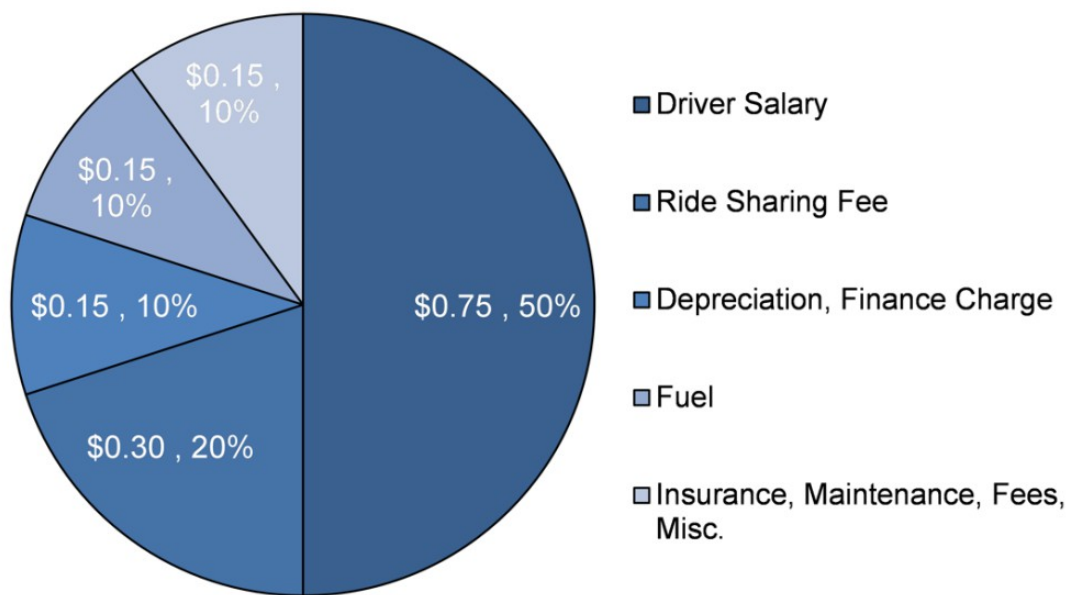
**Exhibit 5:** Median Hourly Earnings: Uber Driver-Partners vs. Taxi/Chauffeur Drivers

| City        | Hourly Earnings      |                             |
|-------------|----------------------|-----------------------------|
|             | Uber Driver-Partners | Taxi Drivers and Chauffeurs |
| BOS         | \$20.29              | \$12.92                     |
| CHI         | \$16.20              | \$11.87                     |
| DC          | \$17.19              | \$13.10                     |
| LA          | \$17.11              | \$13.12                     |
| NY          | \$30.35              | \$15.17                     |
| SF          | \$25.77              | \$13.72                     |
| <b>AVG.</b> | <b>\$19.19</b>       | <b>\$12.90</b>              |

Source: An Analysis of the Labor Market for Uber's Driver-Partners in the United States (Jonathan Hall / Alan Krueger) - January 2015

**Shared + autonomy = deflation.** We believe the long-term game for ride-sharing and tech firms alike is to offer autonomous, on-demand mobility services to the masses at a low cost – low enough to make it worthwhile for consumers to give up car ownership altogether. Today, the cost per of mile of a shared car is much higher than for an owned car, without taking into consideration the value of time. Almost all of the difference between a shared mile versus an owned mile can be explained by the salary of a human driver. For this reason, we believe the two most powerful trends in autos right now are the shared economy and autonomous driving, or "shared autonomy." Sharing expensive assets increases utilization, liberating scale economies, reducing the unit cost of the utility performed by the asset. Automation enables further increases in utilization, replacing the human with a system that can work harder, more consistently, predictably, reliably, safely... fast and very cheap. **As these trends take hold of mobility in the US and around the world, they do so at the detriment of institutions such as the conventional taxi service.**

**Exhibit 6:** Estimated Per Mile Cost Breakdown of a Shared Mile (Based on US market)



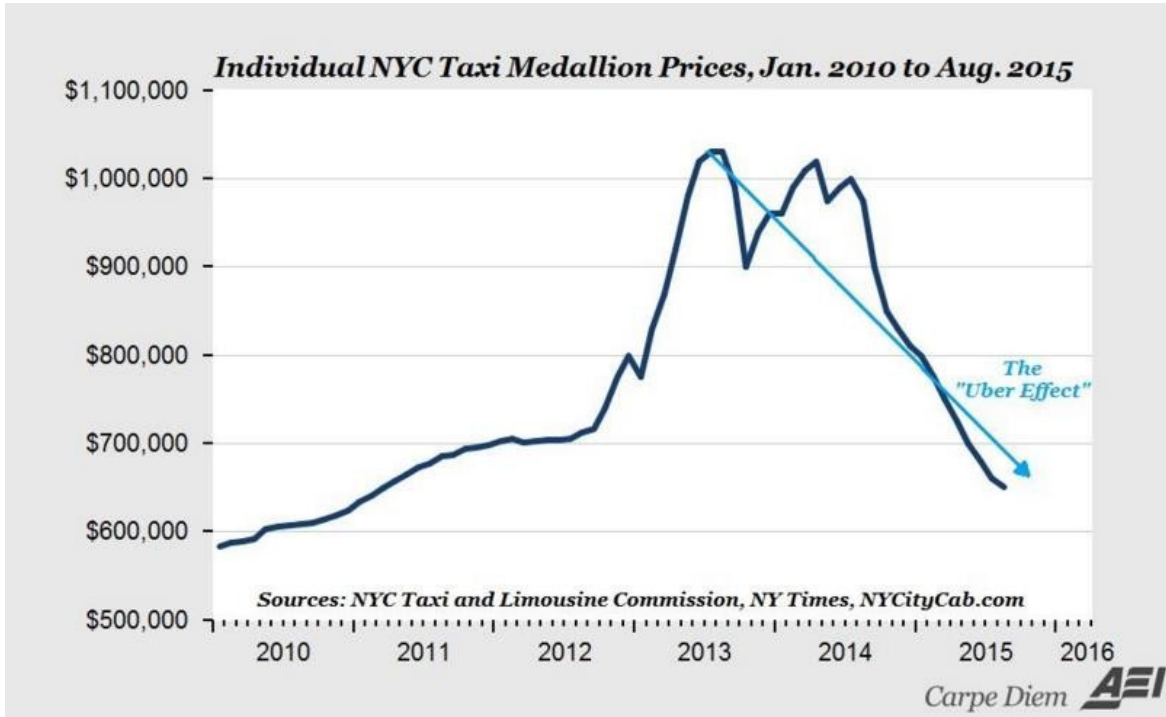
Source: Morgan Stanley Research

### Declining Market Share Leading to Downward Pressure on Taxi Medallion Values

The impact on taxi medallion prices has been very significant. As shown below, individual taxi medallion prices peaked at just over \$1 million in 2013-14, but have since fallen by 35%, according to data aggregated by American Enterprise Institute. However, over the last two quarters, medallion values appear to have broadly stabilized around the \$650,000 to \$700,000 range, according to reported sales data, although we still expect downward pressure on values over time. *What does that mean for taxi operators?* Two things: 1) The market for medallions is saying its outlook for the profitability of the taxi industry is far less today than it was just 18 months ago; and 2) If medallion owners try to sell now, they risk taking a significant loss on their original investment, which for some individual medallion owners means less retirement income.

It also clearly reflects the view that individuals believe that the value generated from the stream of revenues related to owning a taxi medallion is far less than it once was. According to management of Signature, however, the average annual income that a taxi driver generates has declined a more modest 13.5% peak to current, from \$52K to \$45K.

Exhibit 7: New York City Taxi Medallion Prices



Source: The American Enterprise Institute, NYC Taxi and Limousine Commission, New York Times, NYCityCab.com

**Could medallion prices fall further? Of course.** Especially as the number of Uber and Lyft drivers in NYC continues to increase. Multiple news sources have reported that Uber already has more than twice as many Uber-affiliated drivers in NYC (roughly 30,000) than there are medallion taxis (just under 14,000). Separately, Signature's management team has noted that the market for taxi medallion transactions has slowed significantly, with quarterly transactions dropping from 20-40 at the peak to closer to 10 per quarter – an indication of lack of buyers, which bodes poorly for future values. Ride-sharing has clearly changed the dynamics of the travel industry, so the real question that needs to be addressed is – **what does this mean for Signature?**

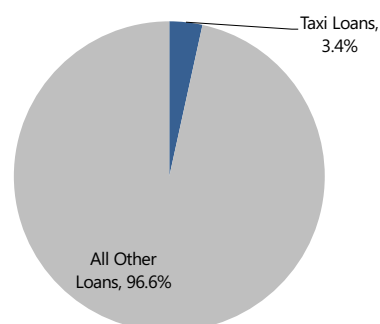
## Sizing Signature's Exposure and State of the Taxi Portfolio

*Taxi Medallion Loans Account for 3.4% of Signature's Total Loans*

**Signature's taxi medallion loans totaled \$815 mil** at year-end 2015, representing just 3.4% of its total loan portfolio (Exhibit 8).

The majority of its medallion loans, or 78%, are to medallion owners in New York City. Another 21% are based in Chicago with the remaining 1% (or just \$8 mil) in Philadelphia. Its NYC loans tend to be largely owner-operated medallions (i.e. an individual finances the purchase of the medallion through SBNY and then drives the taxi for his/her livelihood), with management noting just 18% of the loans are to fleets. Chicago taxi loans, on the other hand, are mostly to fleet owners.

**Exhibit 8:** Taxi Medallion Lending Totals 3.4% of Loans at Signature



Source: Company data, Morgan Stanley Research

**Exhibit 9:** Breakdown of Signature's Taxi Portfolio

| Metrics                      | Exposure by City   |                         |              |
|------------------------------|--|-------------------------|--------------|
|                              | New York   | Chicago                 | Philadelphia |
| Loans (\$ mil)               | 618  | 168                     | 8            |
| % of Taxi Loans              | 78%  | 21%                     | 1%           |
| Corporate vs. Owner-Operated | Mostly Owner-Operated                                      | Mostly Fleet            | NA           |
| Loan-to-Value Ratio          | 86%  | 95%                     | NA           |
| Debt Service Coverage        | 1.15x  | 1.28x                   | NA           |
| Restructured Loans (\$ mil)  | 22.6   | 117                     | 7.8          |
| NCOs (\$ mil)                | 1.0  | 2.9                     | NA           |
| Reserve Ratio                | 2.5%   | 5%                      | NA           |
| Medallion Prices             | \$675k-\$725K for individuals; \$800k-\$875k for corporate | Low to mid \$200k range | NA           |

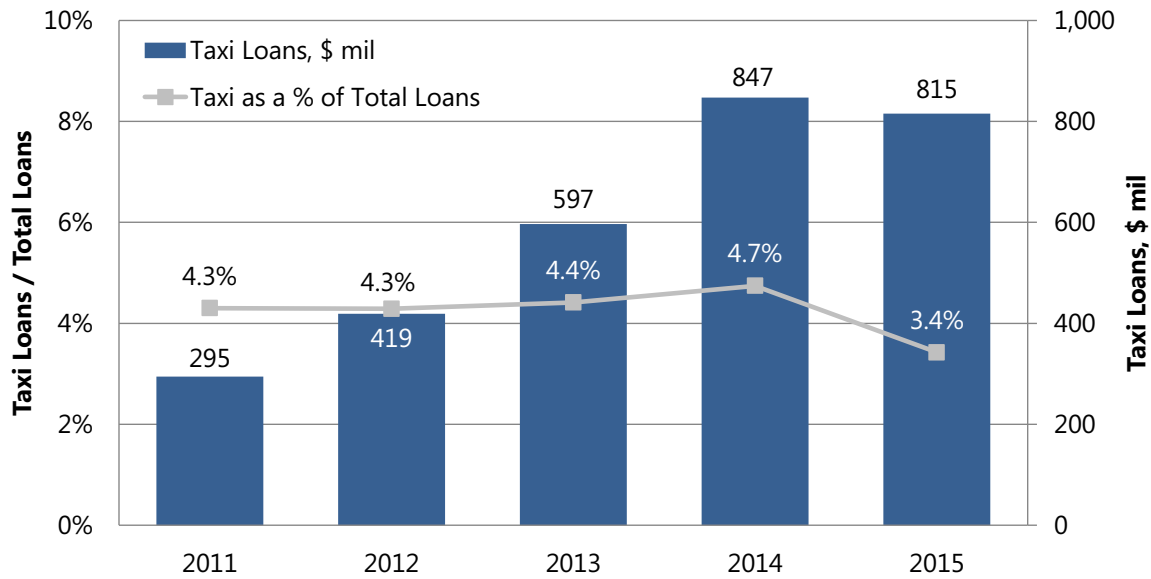
Source: Company data, Morgan Stanley Research

Signature has been in the taxi medallion lending business since 2011, and has grown the portfolio quite rapidly, although admittedly its timing wasn't great given that ride-sharing services started to take off just a few years later.

As shown in Exhibit 10, loan balances nearly tripled between 2011 and 2014 (\$295 mil to \$847 mil), yet as a percentage of total loans, remained relatively stable at 4-5% given strong growth in the rest of its product lines. However, growth in medallion balanced reversed in 2015, falling 4% Y/Y (accounting for just 3.4% of total loans) – and we expect balances will continue to decline as Signature slowly runs off this portfolio.



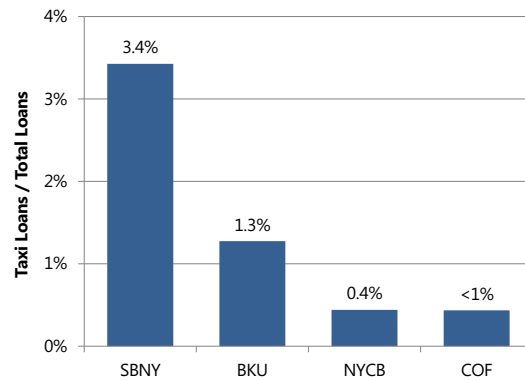
**Exhibit 10:** Signature's Taxi Medallion Portfolio Has Declined to 3.4% of Total Loans (from Its 4-5% Range Over the Past Few years)



Source: Company data, Morgan Stanley Research

**Other banks also participated in taxi medallion lending**, although Signature was by far the largest on a percentage basis. BankUnited has \$212 mil of taxi medallion loans (1.3% of total loans), New York Community has \$158 mil (0.4% of total), and Capital One has less than \$1 bil, according to management (or at most 0.4%, covered by our large-cap banks analyst, Betsy Graseck).

**Exhibit 11:** Taxi Medallion Exposure – SBNY Versus Peers



Note: We base our estimate for COF's taxi exposure on management's comments that its taxi portfolio is "less than \$1 bil" in size.

Source: Company data, Morgan Stanley Research

*Medallion Loans Face a Challenging Outlook, No Matter How You Look At It*

Even after discussing its taxi portfolio at length with the management of Signature, **we have little hope for its ability to get out of its taxi loan portfolio without taking increasing losses over time.**

The problem is that these taxi loans were made under the assumption that there would be at least some reasonably stable level of collateral that would backstop loan repayment. However, with medallion values down 35% or more from their peak just a couple years ago (recall Exhibit 7), and falling taxi owner incomes, what was once deemed adequate underwriting has proven to be anything but.

Originally, Signature was writing these loans with relatively high loan-to-value ratios (i.e., with little down payment from the borrowers), on an interest-only basis, and low debt service coverage ratios of just over 1.0–1.5x. Medallion credit quality had at one time been pristine, driving tight new loan spreads, with yields on these loans in the low-to-mid-3's%, implying little cushion to absorb rising credit losses.

**Signature is being as active as it can to minimize losses...**The company has already restructured \$120 mil out of its \$168 mil of exposure in Chicago, and is beginning to work through its \$618 mil of New York taxi loans. In restructuring the loans, SBNY has written new three-year duration loans to replace the old loans, added modest amounts of principal amortization to the loan payments (using a 25-year amortization schedule), and lowered customers' interest rates on their loans such that the yields are now in the 2.5–3.0% range (down from the low-to-mid-3's% range).

**...but that isn't enough, in our view.** Signature is demonstrating an ability to delay elevated taxi losses, but *kicking the can down the road will not help them avoid losses in the future if the fundamentals of the taxi industry are permanently impaired.* Management has acknowledged it could need to perform additional loan restructurings going forward given continued stress on the portfolio. Further, Signature noted that cash flows from its New York drivers have been affected by 10–15%, with drivers that previously made roughly \$52K per year now making closer to \$45K per year. While restructuring the loans and getting a small amount of principal amortization could help on the margin, if borrowers lack the income stream to pay back the loans, then losses will eventually emerge.

**There are also efforts underway at the industry level that may indirectly help mitigate medallion losses.** From what we understand, unlike in other cities, the New York Taxi and Limousine Commission (TLC) has been one of the biggest supporters of the taxi industry, coming to its defense against ride-sharing competition. For example, the TLC and New York City government have developed a universal license, which is now in effect, allowing drivers to work for both ride-share companies and drive a taxi. This allows many of the second-shift taxi drivers who left to drive for Uber to return to the second-shift (supporting the medallion loan payments as they "rent" a medallion that would otherwise have been idle). Additionally, the TLC is also examining the possibility of removing the distinction between fleet and individual medallions, which would expand the market of potential buyers for both types of medallions. These initiatives could alleviate some of the pressures that the industry is facing in attracting drivers to operate taxis over Uber or Lyft cars, including the flagging potential profits of operating a medallion taxi.

Below is a list of some of the **other initiatives that both New York and Chicago have taken** or are considering to help cushion the ride-share impact on taxi operators, per various news sources, the TLC website, and Signature's management:

- *Eliminating the "owner must drive" rule:*The TLC repealed a rule requiring owners of individual medallions to drive their taxis a certain number of hours per year.
- *Raising fines for illegal street hails or pick-ups:* New York City is considering proposals to raise fines for vehicles caught illegally picking up customers.
- *Handicap accessibility standards:*Both the New York City TLC and the City Council are considering proposals to require *all* transportation fleets to meet handicap accessibility requirements (50% of the fleet by 2020), effectively raising the barriers to entry, and the cost to operate, in the NYC transportation services market.
- *Creating standards for taxi operating licenses:*Both New York state and Chicago are considering imposing minimum standards for licensed transportation network companies (TNCs), including background checks, screenings, and commercial insurance requirements, which would then be applied to ride-share drivers.

**Separately, the taxi industry is evolving to meet the higher tech demands of its consumers,** which could prove helpful as taxi drivers fight to keep their position in the New York market. One example of this change is Arro, a ride hailing app that lets riders get a taxi the same way they would get an Uber or Lyft and it even allows riders to pay using their phones – adding similar convenience features as ride-share apps. Also, there have been news reports that Karhoo, a London-based app that acts as a search engine for transportation options in real time (including both taxis and other licensed/regulated drivers), plans to launch in New York in the coming months, immediately offering access to all medallion taxis and a significant number of other licensed vehicles. The emergence of these apps doesn't mean taxis will be able to eliminate the threat of ride-share, but it might help level the playing field.

## Quantifying Taxi Losses: Even Bad Isn't Too Bad

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### Taxi Loss Scenarios Appear Manageable at 10% of EPS or Less

The main questions investors are asking about Signature's taxi portfolio are how much can it actually lose and does this derail the investment story? We explore different credit loss scenarios, assessing the impact that various levels of cumulative losses could have on Signature's EPS, relative to our current expectations. **The overall message is clear – rising taxi losses are only a modest headwind to overall earnings**, despite how much press they get relative to the rest of Signature's business.

**Our base case assumption is that Signature writes off 17% of its taxi medallion loans** by 2019, or roughly \$141 mil (or 5.2%) per year, with a total cumulative loss assumption of 25%.

In the three scenarios shown in Exhibit 12, we stress test Signature's taxi portfolio using credit losses (through 2019) of 25%, 38%, and 50%. Our most severe scenario of 50% charge-offs in four years is equal to a 74% cumulative write-off of the current period balance of \$815 mil (because losses could still materialize after 2019). While our assumed losses may appear a bit arbitrary, it is worth recognizing that *Signature gets personal guarantees* on almost all of its medallion loans, in both New York and Chicago, which may help lessen the losses in the event of default.

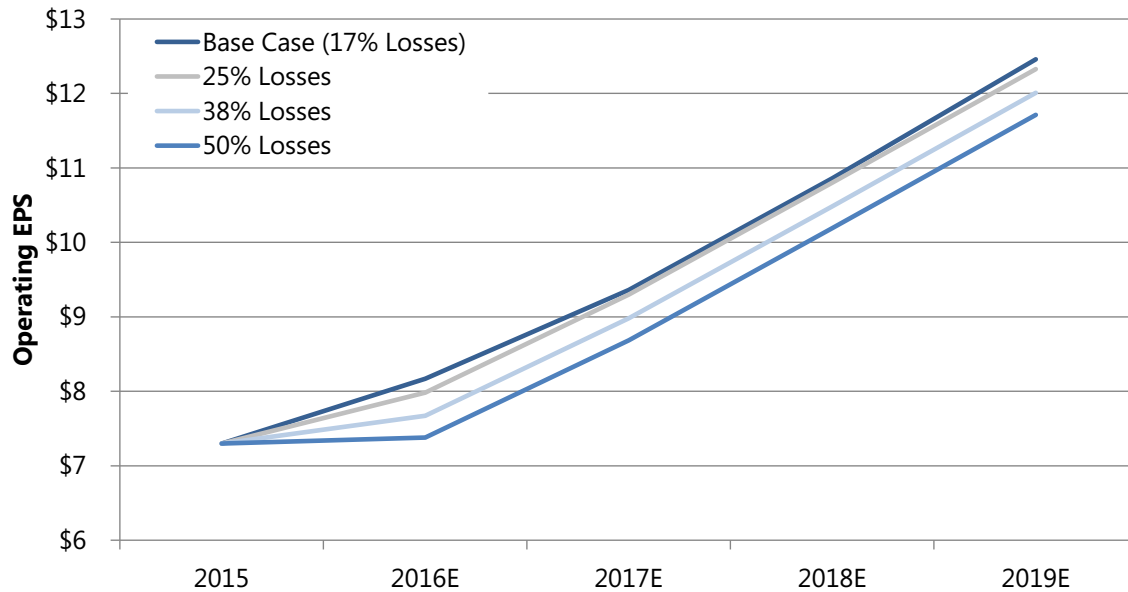
The takeaway from Exhibit 12 is that **even under the more severe loss scenario of a 50% write-off, the hit to our annual EPS estimate is 6-10%**, relative to our current EPS estimates based on a 17% write-off. The **more likely scenario**, in our view (assuming, of course, that our base case is wrong), is losses of around 25%, which implies a much smaller **1-2% reduction to our EPS estimate**. Given that Signature has been actively restructuring its medallion loans (71% of its Chicago loans were restructured last year), it greatly reduces the probability of the spike in losses we outline in our scenarios.

Given how competitive Uber and Lyft have become in the New York market, and their continued expansion, we fully expect medallion values will continue to fall, and that will result in credit losses in Signature's taxi portfolio. Yet given our expectation for 17% losses through 2019, and the scenarios outlined below, we believe **even a very significant 50% level of losses would be, at most, a speed bump for Signature's long-term earnings**.

Exhibit 12: Hypothetical EPS Using Various Levels of Severe Tax Credit Costs

| Taxi Loss Sensitivity Analysis            | 2016E       | 2017E      | 2018E      | 2019E      |
|---|-------------|------------|------------|------------|
| <b>Base Case Assumptions (17% Losses)</b> |             |            |            |            |
| PPE                                       | 828         | 961        | 1,106      | 1,256      |
| MSe Provision                             | 82          | 101        | 107        | 108        |
| <i>Taxi-Specific Provision</i>            | 32          | 45         | 45         | 38         |
| <b>25% Losses</b>                         |             |            |            |            |
| Lost NII                                  | 4           | 6          | 6          | 6          |
| Incremental Credit Costs                  | 13          | 0          | 0          | 7          |
| Implied EPS                               | \$7.98      | \$9.30     | \$10.80    | \$12.33    |
| <b>25% Loss EPS vs. MS Base Case</b>      | <b>-2%</b>  | <b>-1%</b> | <b>-1%</b> | <b>-1%</b> |
| <b>38% Losses</b>                         |             |            |            |            |
| Lost NII                                  | 6           | 8          | 8          | 8          |
| Incremental Credit Costs                  | 39          | 26         | 26         | 33         |
| Implied EPS                               | \$7.67      | \$8.98     | \$10.48    | \$12.01    |
| <b>38% Loss EPS vs. MS Base Case</b>      | <b>-6%</b>  | <b>-4%</b> | <b>-3%</b> | <b>-4%</b> |
| <b>50% Losses</b>                         |             |            |            |            |
| Lost NII                                  | 8           | 11         | 11         | 11         |
| Incremental Credit Costs                  | 64          | 51         | 51         | 58         |
| Implied EPS                               | \$7.38      | \$8.68     | \$10.19    | \$11.71    |
| <b>50% Loss EPS vs. MS Base Case</b>      | <b>-10%</b> | <b>-7%</b> | <b>-6%</b> | <b>-6%</b> |

Source: Company data, Morgan Stanley Research estimates

**Exhibit 13: EPS Trajectory – Base Case Versus Hypothetical Loss Scenarios**

Source: Company data, Morgan Stanley Research estimates

**Remember, credit losses will take time to be realized – or the loans could be sold.** It is important for investors to keep in mind that banks cannot simply charge-off the entire amount of likely losses in a given period. Broadly speaking, banks can only build a reserve for losses as they see deterioration in the portfolio, which means it could take several years for Signature to recognize the majority of its tax losses, even if medallion values were to stabilize at current or lower levels. What this means is that the likelihood of a single large loss in any given quarter is relatively small, in our view, particularly given the large number of taxi loans in its portfolio.

What could drive a large immediate loss is if Signature were to sell the portfolio – although we don't view this as likely given **there seem to be no buyers for a deteriorating taxi portfolio right now.** If Signature were to sell the portfolio, even taking a very large loss (several hundred million dollars), we would view it as a positive for our investment thesis in that it would remove a sizable overhang on the shares, allowing investors to focus much more on its core fundamentals rather than a tiny piece of its much healthier and faster growing portfolio.

## Sizable Upside in Signature

**Even given sizable tax losses, we still see significant upside in the SBNY shares over the next twelve months.** SBNY has historically traded at a P/E multiple in the high-teens to low-twenties on expected 1-year forward EPS. Our 12-month price target of \$163 assumes a 17.4x multiple on our revised-lower 2017e EPS of \$9.36, which implies 18% upside to the current price.

In Exhibit 14, we show how our price target would change given our different taxi credit loss scenarios. In essence, not only would the multiple on the stock need to contract to between 14-15x, but taxi write-offs would need to exceed 38% before we see a step-down function in SBNY's valuation. If we apply our base case 17x multiple to the 2017e EPS under the three different scenarios, we would still see 7-14% of upside to the SBNY shares over the next 12 months.

**Exhibit 14:** Implied 12-Month Fair Values – Using Hypothetical Tax Loss Rates and Implied 2017E EPS

|                     |            | <b>Implied NTM Fair Value Using Scenario 2017E EPS</b> |                   |                   |                   |
|---------------------|------------|--|-------------------|-------------------|-------------------|
|                     |            | <b>Base Case</b>                                       | <b>25% Losses</b> | <b>38% Losses</b> | <b>50% Losses</b> |
|                     |            | <b>\$9.36</b>  | <b>\$9.30</b>     | <b>\$8.98</b>     | <b>\$8.68</b>     |
| <b>P/E Multiple</b> | <b>14x</b> | 131  | 130               | 126               | 122               |
|                     | <b>15x</b> | 140  | 139               | 135               | 130               |
|                     | <b>16x</b> | 150  | 149               | 144               | 139               |
|                     | <b>17x</b> | 159  | 158               | 153               | 148               |
|                     | <b>18x</b> | 168  | 167               | 162               | 156               |

Source: Company data, Morgan Stanley Research estimates

## We See Plenty of Reasons to Own SBNY Shares; Overweight

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### Signature's Strong Growth and Distinctive Business Model Warrant a Significant Premium Valuation

As you can see from the past several pages, the fundamental outlook for taxi medallion loans isn't great no matter how you look at it. Our estimates assume a 17% loss rate on current taxi balances through 2019, with an overall loss assumption of 25% by the time all the taxi headwinds have passed. But **we still expect Signature to post well-above-peer loan and EPS growth, profitability, and good credit quality** (outside of taxi credit) **over the next several years** – and that is the main reason we remain comfortably Overweight the shares. We expect SBNY to post an EPS CAGR of 14% (versus peers at 11%) from 2015-19e, and we believe this above-peer earnings growth warrants a significant premium valuation versus peers.

#### *Loan Growth*

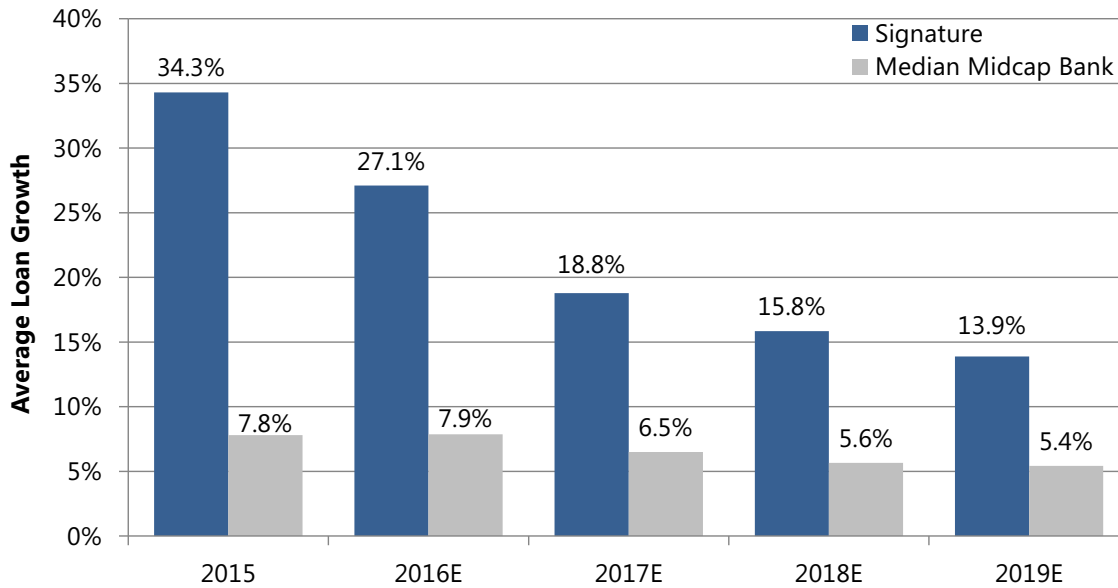
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**Signature delivers strong loan growth from its unique business model and commercial focus.** SBNY has been able to post some of the best loan growth in our midcap banks coverage over the last several years, delivering average annual loan growth of 35% loan growth from 2011-15, versus the median midcap bank averaging just 6.4%. It is able to grow so quickly for two key reasons. *First, it focuses on high growth verticals of lending such as multifamily and CRE in New York, and other niche commercial verticals such as marine, franchise and equipment financing.* This focus allows it to establish an expertise that it can utilize in serving customers and winning business. *Second, it hires very experienced, profitable banking teams,* allowing them to manage the entirety of the relationships they bring to Signature, and pays them more competitively than other banks to deliver strong and profitable loan growth. This one-stop shop approach has been positively accepted by both bankers and borrowers, allowing Signature to retain teams and clients, as well as grow quickly despite typically offering loans at premium pricing.

**Taxi headwinds or not, we see no signs of loan growth slowing in the near term.** For 2016, management has guided for \$4-6 bil of EOP loan growth, implying average loan growth of roughly 25-30% on an average basis. We model 27.1% average loan growth in 2016, well above peers at 7.9%, even as we bake in roughly 8% run-off of its \$815 mil taxi portfolio by the end of 2016. Even beyond 2016, we expect SBNY will grow its loans by roughly \$5 bil per year, implying slower growth on a percentage basis (19% CAGR from 2015-19E), but would still be nearly 3x faster than peers. How can it achieve this kind of growth? At \$33 bil in assets, Signature is now is large enough to compete for credits that were too large for it to underwrite just a short time ago. This means it can achieve the same dollar amount of loan growth with fewer loans and without adding as many teams.



**Exhibit 15: Signature versus Peers: Average Loan Growth**

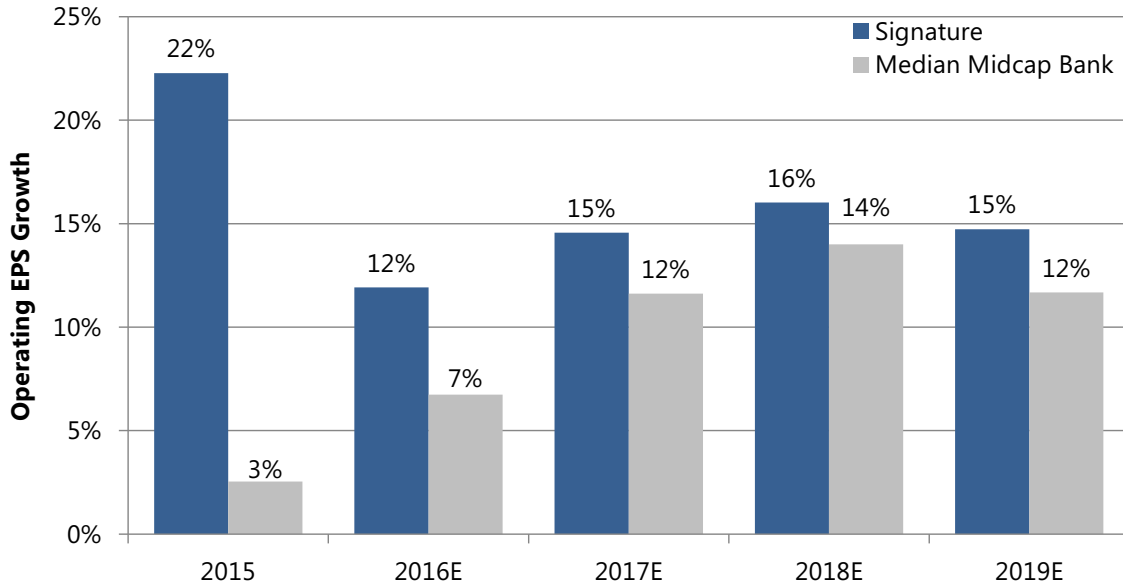


Source: Company data, Morgan Stanley Research estimates

*Above-Peer EPS Growth and Profitability*

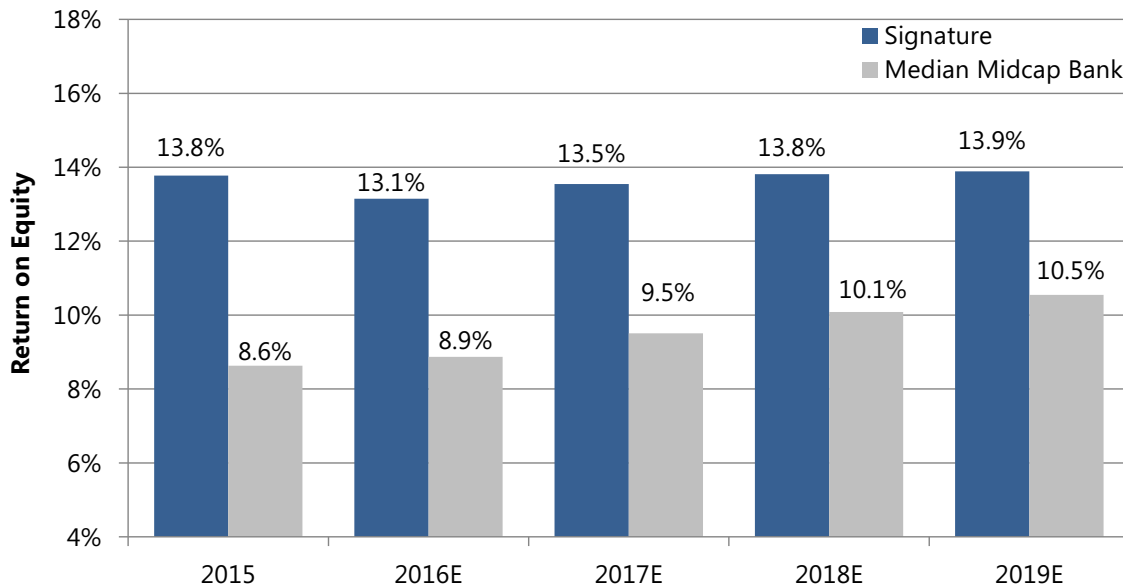
**Strong loan growth translates to above-peer EPS growth and profitability.** In addition to delivering strong loan growth over the next several years, we expect Signature will deliver above-peer EPS growth, with an EPS CAGR of 14% from 2015-19e, versus peers at 11% (Exhibit 16). Signature is not only a best-in-class growth bank, it also has a peer-low efficiency ratio in the low-thirties percent (the lowest of any bank we cover, by far), which we expect will continue (MSe = 32% in 2016), and strong underwriting outside of taxi. All this should help it turn continued healthy loan growth into above-peer earnings growth, despite the headwinds from both taxi-related credit costs and its lack of interest rate sensitivity – which will benefit many of its peers more so than SBNY as interest rates slowly rise over the next several years. Further, we believe its strong growth, efficient model, and relatively low non-taxi credit costs, paired with its solid capital position (MSe 1Q16 CET1 ratio of 12.2% post the Jan 2016 common equity offering) will support its above-peer ROE of 13-14% for the next several years (versus peers at just over 10% by 2018).

**Exhibit 16:** Signature versus Peers: Operating EPS Growth



Source: Company data, Morgan Stanley Research estimates

**Exhibit 17:** Signature versus Peers: Return on Equity

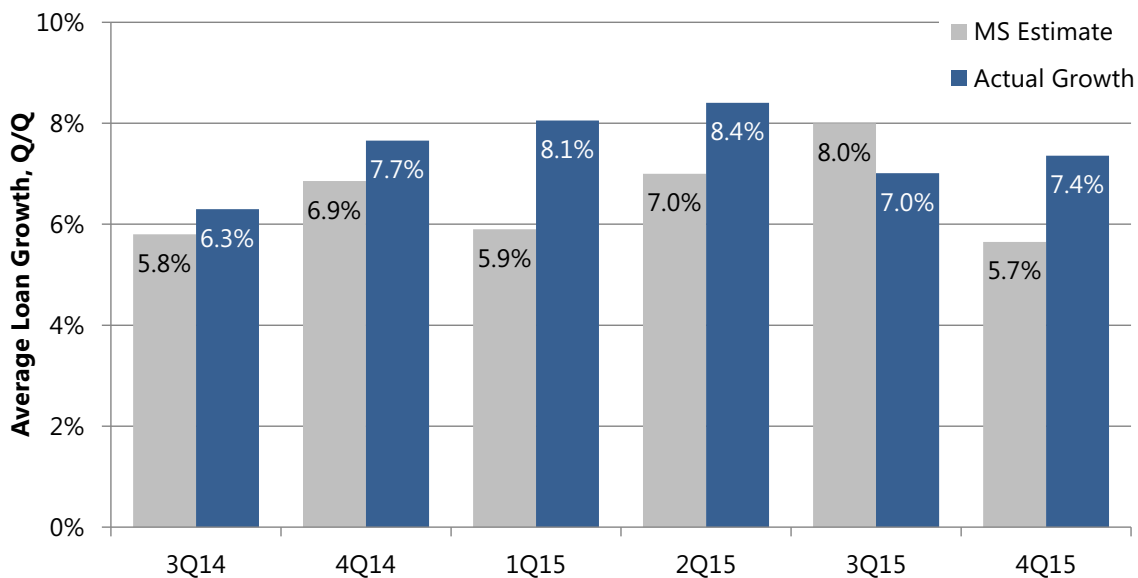


Source: Company data, Morgan Stanley Research estimates

**Signature Has a History of Beating Expectations; Upside to EPS Estimates**

One of the key selling points of SBNY is that Street forecasts have consistently underestimated the Signature growth engine. We frequently hear from investors that SBNY's stock price appears expensive on forward estimates. That's not untrue, given SBNY trades at a roughly 3x premium to peers on both our 2016e and 2017e EPS. But one aspect of both our estimates and consensus forecasts that investors tend to overlook is that **Signature has delivered 21 consecutive quarters of EPS beats, typically due to better than expected loan growth**. Indeed, Signature's loan growth came in above our estimates in five of the last six quarters (Exhibit 18) and the company was able to deliver 7%+ quarterly average loan growth for the last five quarters, well above the pace implied by our estimates in 2016 and beyond. If anything, given its track record, our forward EPS estimates could be too low.

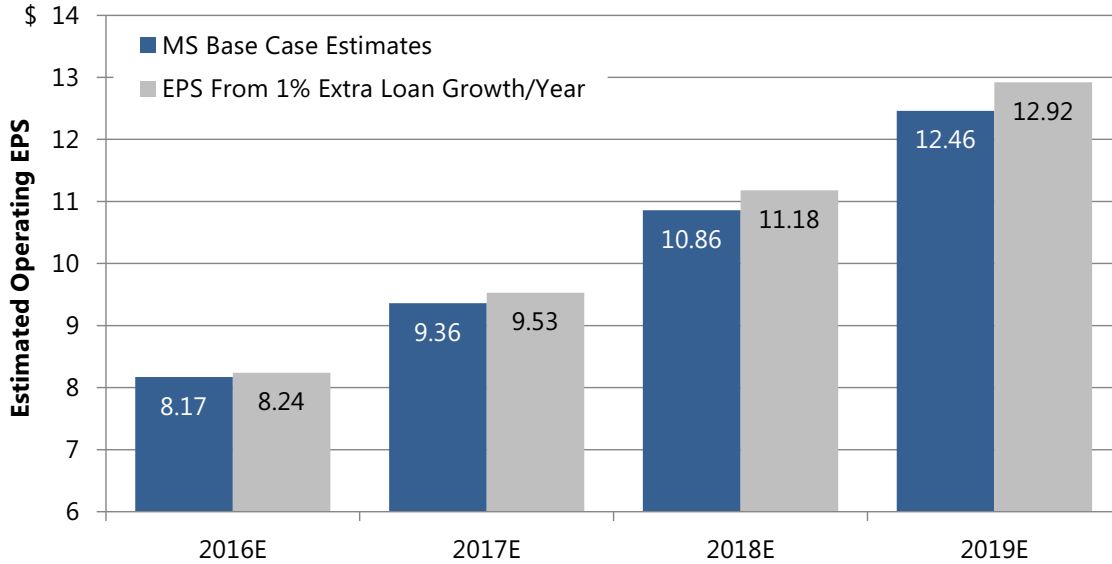
**Exhibit 18:** SBNY Has Beaten Our Quarterly Loan Growth Estimates Significantly in Five of the Last Six Quarters



Source: Company data, Morgan Stanley Research estimates

**Small differences in loan growth can have a big impact on forward EPS estimates.** Every one percentage point of higher-than-expected average annual loan growth adds \$0.07 to EPS (using 2016 as the base). If it were to continue to beat expectations by just 1% per year, EPS would be \$0.46 higher than our current forecasts by 2019 (or 4% additive to our 2019e EPS of \$12.46). Okay – so 4% EPS accretion doesn't seem like much, but consider this – in just the last year alone, Signature beat our original loan growth forecasts by 7.2 percentage points. If we apply the same thought process, however unlikely, it implies a hypothetical increase to 2019 EPS of 31% above our current estimate. This analysis serves to illustrate just how much EPS expectations for Signature could vary as a result of just a small improvement in the loan growth versus our relatively conservative expectations.

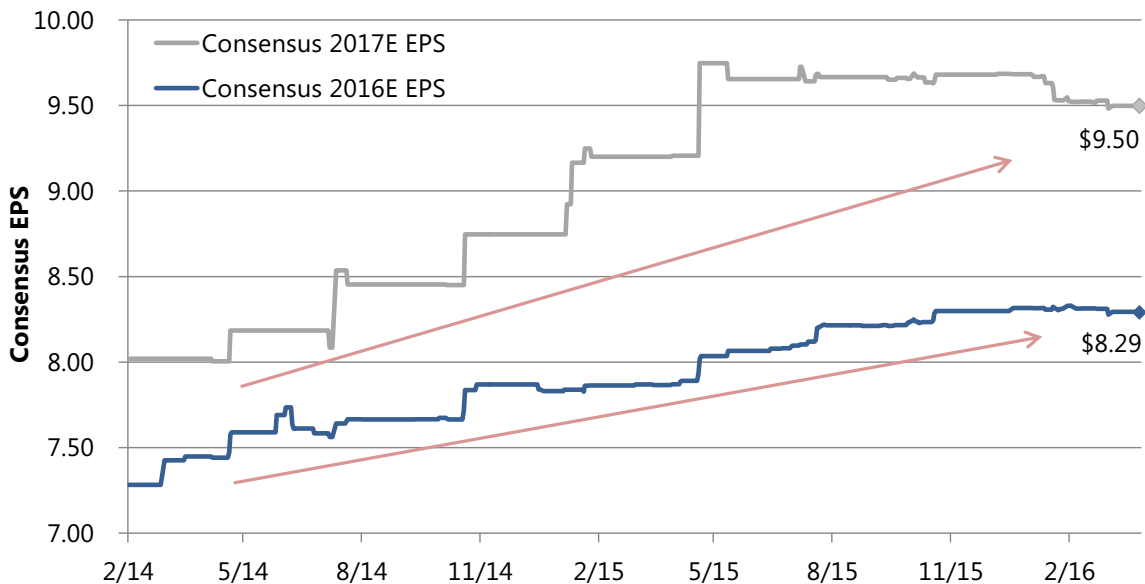
**Exhibit 19:** MSe Base Case EPS Estimates vs. Implied EPS From Adding 1% of Extra Loan Growth Per Year



Source: Company data, Morgan Stanley Research estimates

**Signature has seen considerable positive EPS estimate revisions.** As we show in Exhibit 20, Signature's ability to consistently beat loan growth expectations has led to meaningfully higher consensus EPS forecasts over time. Since the beginning of 2014, both 2016e and 2017e consensus forecasts for SBNY have increased 14% and 18%, respectively – although this is not just a recent phenomena. We have looked at this upward EPS bias several times over the last couple years (see our recent note: [Strong Loan Growth Today Keeps Negative EPS Revisions Away - Revisited](#)). The market generally tends to apply a reversion to the mean expectation for loan growth at most banks which has not materialized, leading to downward EPS revisions at slow growth banks and upward EPS revisions at faster growth banks, including Signature. If Signature can continue to beat EPS expectations, which appears likely, it goes a long way toward justifying a higher stock price for the SBNY shares.

**Exhibit 20:** Consensus Has Consistently Underestimated SBNY's Earnings Growth Potential

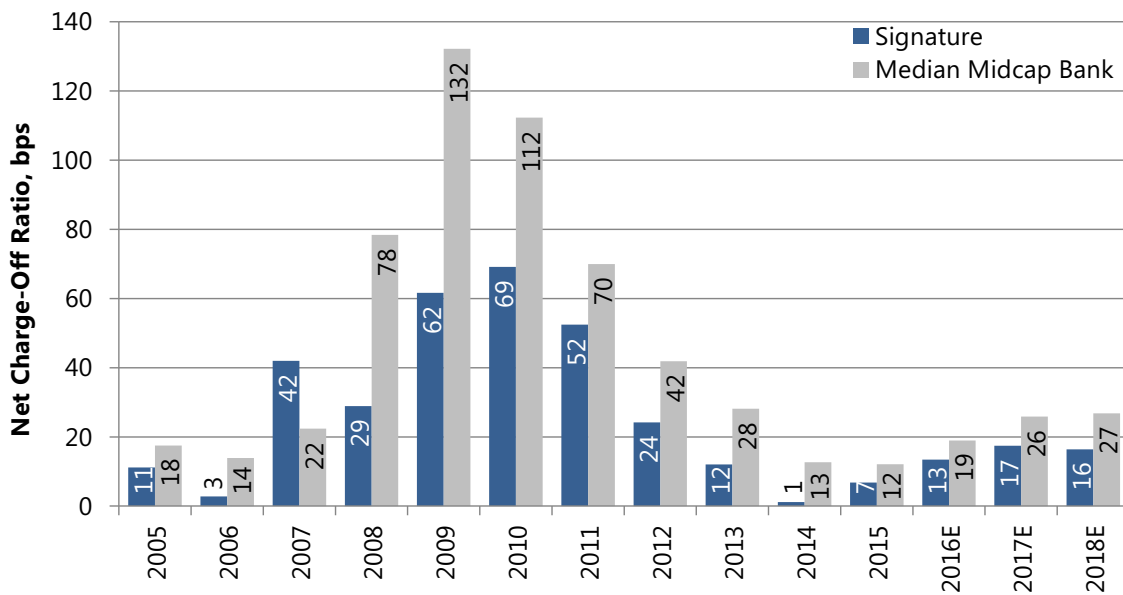


Source: Thomson Reuters

Solid Credit Quality

**Signature has generally proven itself to be a strong underwriter.** Despite its taxi exposure, we think it's important to point out that Signature has been one of the better underwriters in the midcap bank coverage. Not the best, but easily in the top quartile. Its through-the-cycle average NCO ratio (from 2005-15) was 25 bps, well below peers at 53 bps. Signature has been able to effectively leverage its expertise in niche commercial lines to write profitable, safe loans that generally repay with few credit losses. Its compensation model also promotes writing loans with good credit quality, as bankers face clawbacks on their personal "P&L" if they write loans that go bad. We agree that the taxi medallion portfolio is a valid concern for investors, but outside of the 3.4% of loans investors are most concerned about, Signature's portfolio has demonstrated above-peer credit quality which is a positive for our fundamental investment thesis on the stock.

**Exhibit 21:** Signature versus Peers: NCO Ratio



Source: SNL Financial, Company data, Morgan Stanley Research estimates

Risk Reward View

Exhibit 22: Signature Bank (SBNY. O): Overweight, Price Target \$163



Source: Thomson Reuters, Morgan Stanley Research

Exhibit 23: Key Scenario Metrics

|                            |  |                                 |
|----------------------------|--|---------------------------------|
| <b>Price Target: \$163</b> | Our price target is based on the residual income model.<br>For SBNY we assume a 9% cost of equity and a beta of 1.2. |                                 |
| <b>Bull Case: \$185</b>    | 2016e EPS: \$9.37  | Net Interest Income: \$1278 mil |
| <b>Sharp Recovery</b>      | NCO Ratio: 13 bps  | Expense Ratio: 29.6%            |
|                            | Provision Expense: \$75 mil  | P/2016e EPS: 19.7x              |
| <b>Base Case: \$163</b>    | 2016e EPS: \$8.17  | Net Interest Income: \$1179 mil |
| <b>Slow Recovery</b>       | NCO Ratio: 13 bps  | Expense Ratio: 32.1%            |
|                            | Provision Expense: \$82 mil  | P/2016e EPS: 20.0x              |
| <b>Bear Case: \$110</b>    | 2016e EPS: \$7.55  | Net Interest Income: \$1152 mil |
| <b>W-Shaped Recov.</b>     | NCO Ratio: 15 bps  | Expense Ratio: 33.1%            |
|                            | Provision Expense: \$109 mil   | P/2016e EPS: 14.6x              |

Source: Company data, Morgan Stanley Research

**Investment Thesis:** Signature is one of the few organic growth stories in the midcap bank space, with rapid, sustainable loan growth coming from a differentiated business model, including its focus on customer service and hiring experienced banking teams (helping it grow average loans in excess of 30% per year for the past four years). We believe its premium valuation is sustainable due to a combination of very strong loan growth and its ability to frequently surprise to the upside with both loan growth and earnings, resulting in upward EPS revisions, which in turn, drive a higher stock price.

## Midcap Banks Comps Table

Exhibit 24: Midcap Banks Comps Table

| Company                   | Ticker | Rating | Price Target | Pricing       |            |         |        |         |             | Earnings & Book Value |           |           |       |            | Valuation (Price to) |              |              |              |              | Capital Ratios |              | Profitability |             |
|---------------------------|--------|--------|--------------|---------------|------------|---------|--------|---------|-------------|-----------------------|-----------|-----------|-------|------------|----------------------|--------------|--------------|--------------|--------------|----------------|--------------|---------------|-------------|
|                           |        |        |              | Price 3/30/16 | % Upside   | 52-Week |        | Mkt Cap | Div Yield   | 2015 EPS              | 2016E EPS | 2017E EPS | BVPS  | Tang. BVPS | 2015 EPS             | 2016E EPS    | 2017E EPS    | BVPS         | Tang. BVPS   | TCE Ratio      | Tier 1 Comm  | 2016E ROTCE   | 2016E ROA   |
|                           |        |        |              |               |            | High    | Low    |         |             |                       |           |           |       |            |                      |              |              |              |              |                |              |               |             |
| Associated Banc-Corp      | ASB    | EW     | 19.50        | 18.09         | 8%         | 20.95   | 15.45  | 2,736   | 2.4%        | 1.19                  | 1.26      | 1.40      | 18.62 | 12.10      | 15.2x                | 14.4x        | 12.9x        | 0.97x        | 1.49x        | 6.8%           | 9.5%         | 10.4%         | 0.7%        |
| BancorpSouth              | BXS    | EW     | 23           | 21.40         | 7%         | 27.23   | 18.69  | 2,015   | 1.9%        | 1.43                  | 1.59      | 1.75      | 17.58 | 14.27      | 15.0x                | 13.5x        | 12.2x        | 1.22x        | 1.50x        | 10.0%          | 12.1%        | 11.3%         | 1.0%        |
| Bank of Hawaii            | BOH    | UW     | 62           | 68.73         | -10%       | 70.07   | 54.55  | 2,975   | 2.7%        | 3.85                  | 4.02      | 4.24      | 25.79 | 25.06      | 17.9x                | 17.1x        | 16.2x        | 2.66x        | 2.74x        | 7.0%           | 14.0%        | 15.2%         | 1.1%        |
| BankUnited                | BKU    | OW     | 45           | 34.70         | 30%        | 39.97   | 29.72  | 3,596   | 2.4%        | 1.89                  | 2.36      | 2.94      | 21.65 | 20.90      | 18.4x                | 14.7x        | 11.8x        | 1.60x        | 1.66x        | 9.1%           | 12.6%        | 10.9%         | 1.0%        |
| BOK Financial             | BOKF   | EW     | 65           | 55.90         | 16%        | 75.18   | 44.13  | 3,683   | 3.0%        | 4.22                  | 4.37      | 4.90      | 49.03 | 42.51      | 13.3x                | 12.8x        | 11.4x        | 1.14x        | 1.31x        | 9.0%           | 12.1%        | 10.2%         | 0.9%        |
| Citizens Financial Group  | CFG    | OW     | 27           | 21.25         | 27%        | 28.71   | 18.04  | 11,215  | 1.9%        | 1.61                  | 1.82      | 2.16      | 36.76 | 24.63      | 13.2x                | 11.7x        | 9.8x         | 0.58x        | 0.86x        | 9.9%           | 11.7%        | 7.4%          | 0.7%        |
| Comerica                  | CMA    | EW     | 46           | 38.23         | 20%        | 53.45   | 30.48  | 6,728   | 2.2%        | 2.84                  | 2.88      | 3.47      | 42.95 | 39.27      | 13.5x                | 13.3x        | 11.0x        | 0.89x        | 0.97x        | 9.7%           | 10.5%        | 7.2%          | 0.7%        |
| Commerce Bancshares       | CBSH   | EW     | 44           | 45.51         | -3%        | 47.10   | 37.44  | 4,425   | 2.0%        | 2.56                  | 2.76      | 3.01      | 22.80 | 21.31      | 17.8x                | 16.5x        | 15.1x        | 2.00x        | 2.14x        | 8.5%           | 11.5%        | 12.7%         | 1.1%        |
| Cullen/Frost Bankers      | CFR    | EW     | 65           | 55.71         | 17%        | 80.23   | 42.41  | 3,453   | 3.7%        | 4.27                  | 4.58      | 4.98      | 44.30 | 33.60      | 13.0x                | 12.2x        | 11.2x        | 1.26x        | 1.66x        | 7.5%           | 11.4%        | 13.4%         | 1.0%        |
| East West Bancorp         | EWBC   | EW     | 43           | 32.57         | 32%        | 46.50   | 27.25  | 4,687   | 2.5%        | 2.66                  | 2.83      | 3.12      | 21.70 | 18.15      | 12.3x                | 11.5x        | 10.4x        | 1.50x        | 1.79x        | 8.2%           | 10.5%        | 16.9%         | 1.2%        |
| Fifth Third Bancorp       | FITB   | OW     | 21           | 16.87         | 24%        | 21.93   | 13.84  | 13,244  | 3.0%        | 1.65                  | 1.61      | 1.83      | 18.48 | 15.39      | 10.2x                | 10.5x        | 9.2x         | 0.91x        | 1.10x        | 8.7%           | 9.8%         | 10.4%         | 0.9%        |
| First Horizon National    | FHN    | EW     | 14           | 13.19         | 6%         | 16.35   | 11.51  | 3,147   | 2.1%        | 0.89                  | 0.94      | 1.06      | 9.42  | 8.51       | 14.8x                | 14.0x        | 12.4x        | 1.40x        | 1.55x        | 7.8%           | 10.5%        | 9.5%          | 0.9%        |
| First Republic Bank       | FRC    | OW     | 73           | 67.02         | 9%         | 69.76   | 56.22  | 9,792   | 0.9%        | 3.17                  | 3.65      | 4.53      | 32.28 | 30.16      | 21.1x                | 18.4x        | 14.8x        | 2.08x        | 2.22x        | 7.5%           | 10.8%        | 11.8%         | 1.0%        |
| Hancock Holdings          | HBHC   | EW     | 29           | 22.87         | 27%        | 32.98   | 20.01  | 1,772   | 4.0%        | 1.77                  | 2.08      | 2.31      | 31.14 | 21.74      | 12.9x                | 11.0x        | 9.9x         | 0.73x        | 1.05x        | 7.6%           | 10.0%        | 10.0%         | 0.7%        |
| Huntington Bancshares     | HBAN   | EW     | 12           | 9.59          | 25%        | 11.90   | 7.83   | 7,623   | 2.9%        | 0.81                  | 0.84      | 1.00      | 7.81  | 6.91       | 11.8x                | 11.4x        | 9.6x         | 1.23x        | 1.39x        | 7.8%           | 9.8%         | 12.3%         | 1.0%        |
| KeyCorp                   | KEY    | ++     | ++           | 11.15         | ++         | 15.70   | 9.88   | 9,319   | 2.7%        | 1.06                  | ++        | ++        | 12.51 | 11.22      | 10.5x                | ++           | ++           | 0.89x        | 0.99x        | 9.9%           | 11.0%        | ++            | ++          |
| M&T Bank Corp             | MTB    | EW     | 124          | 111.97        | 11%        | 134.00  | 100.08 | 17,870  | 2.5%        | 7.21                  | 8.61      | 9.45      | 93.62 | 63.96      | 15.5x                | 13.0x        | 11.8x        | 1.20x        | 1.75x        | 8.6%           | 11.1%        | 13.4%         | 1.2%        |
| New York Comm Bancorp     | NYCB   | OW     | 19           | 15.96         | 19%        | 19.18   | 14.26  | 7,740   | 4.3%        | 1.12                  | 1.18      | 1.33      | 12.24 | 7.21       | 14.3x                | 13.5x        | 12.0x        | 1.30x        | 2.21x        | 7.3%           | 10.5%        | 16.4%         | 1.1%        |
| People's United Financial | PBCT   | EW     | 14.50        | 16.09         | -10%       | 16.95   | 13.62  | 4,873   | 4.2%        | 0.87                  | 0.93      | 1.01      | 15.62 | 8.73       | 18.5x                | 17.3x        | 15.9x        | 1.03x        | 1.84x        | 7.2%           | 10.2%        | 12.1%         | 0.7%        |
| Popular                   | BPOP   | EW     | 32           | 28.56         | 12%        | 35.81   | 22.40  | 2,959   | 2.1%        | 2.92                  | 3.33      | 3.53      | 48.79 | 42.18      | 9.8x                 | 8.6x         | 8.1x         | 0.59x        | 0.68x        | 12.5%          | 16.2%        | 7.9%          | 1.0%        |
| Prosperity Bancshares     | PB     | EW     | 52           | 46.49         | 12%        | 59.97   | 33.57  | 3,255   | 2.6%        | 4.10                  | 4.10      | 4.35      | 49.45 | 22.06      | 11.3x                | 11.3x        | 10.7x        | 0.94x        | 2.11x        | 7.7%           | 13.6%        | 19.0%         | 1.2%        |
| Signature Bank            | SBNY   | OW     | 163          | 138.26        | 18%        | 163.15  | 119.60 | 7,038   | 0.0%        | 7.30                  | 8.17      | 9.36      | 56.81 | 56.81      | 18.9x                | 16.9x        | 14.8x        | 2.43x        | 2.43x        | 8.6%           | 11.3%        | 13.1%         | 1.2%        |
| SVB Financial Group       | SIVB   | OW     | 140          | 103.29        | 36%        | 152.99  | 77.87  | 5,331   | 0.0%        | 6.62                  | 7.39      | 8.70      | 61.97 | 61.97      | 15.6x                | 14.0x        | 11.9x        | 1.67x        | 1.67x        | 7.2%           | 12.3%        | 11.7%         | 0.8%        |
| Synovus Financial Corp    | SNV    | UW     | 29           | 29.21         | -1%        | 33.80   | 25.48  | 3,784   | 1.7%        | 1.63                  | 1.93      | 2.12      | 22.19 | 21.99      | 17.9x                | 15.1x        | 13.8x        | 1.32x        | 1.33x        | 9.9%           | 10.4%        | 8.5%          | 0.9%        |
| TCF Financial             | TCB    | EW     | 15.50        | 12.27         | 26%        | 17.29   | 10.37  | 2,084   | 2.4%        | 1.08                  | 1.15      | 1.32      | 11.94 | 10.61      | 11.4x                | 10.7x        | 9.3x         | 1.03x        | 1.16x        | 8.8%           | 10.0%        | 11.3%         | 1.0%        |
| Valley National Bancorp   | VLY    | EW     | 10           | 9.62          | 4%         | 11.24   | 8.31   | 2,441   | 4.7%        | 0.57                  | 0.69      | 0.79      | 8.26  | 5.36       | 16.9x                | 13.9x        | 12.2x        | 1.17x        | 1.79x        | 6.5%           | 9.0%         | 13.0%         | 0.8%        |
| Washington Federal        | WAFD   | EW     | 24           | 22.80         | 5%         | 26.34   | 19.10  | 2,119   | 2.5%        | 1.67                  | 1.65      | 1.79      | 21.20 | 17.99      | 13.7x                | 13.8x        | 12.7x        | 1.08x        | 1.27x        | 11.6%          | 18.5%        | 9.2%          | 1.0%        |
| Webster Financial         | WBS    | UW     | 35           | 36.07         | -3%        | 41.34   | 30.09  | 3,307   | 2.6%        | 2.16                  | 2.30      | 2.60      | 25.01 | 18.71      | 16.7x                | 15.7x        | 13.9x        | 1.44x        | 1.93x        | 7.1%           | 10.7%        | 12.0%         | 0.9%        |
| Westamerica Bancorp       | WABC   | UW     | 40           | 49.63         | -19%       | 52.40   | 40.52  | 1,267   | 3.2%        | 2.30                  | 2.33      | 2.48      | 20.85 | 15.67      | 21.6x                | 21.3x        | 20.0x        | 2.38x        | 3.17x        | 7.9%           | 12.8%        | 15.2%         | 1.1%        |
| Zions Bancorp             | ZION   | OW     | 31           | 24.63         | 26%        | 33.03   | 19.65  | 5,035   | 1.0%        | 1.62                  | 1.92      | 2.34      | 32.67 | 27.63      | 15.2x                | 12.8x        | 10.5x        | 0.75x        | 0.89x        | 9.6%           | 12.2%        | 6.9%          | 0.7%        |
| <b>Median</b>             |        |        |              |               | <b>12%</b> |         |        |         | <b>2.5%</b> |                       |           |           |       |            | <b>14.9x</b>         | <b>13.5x</b> | <b>11.9x</b> | <b>1.21x</b> | <b>1.60x</b> | <b>8.3%</b>    | <b>11.0%</b> | <b>11.7%</b>  | <b>1.0%</b> |

Source: Company data, Thomson Reuters, Morgan Stanley Research e = Morgan Stanley Research estimates Stock Ratings: OW = Overweight EW = Equal-weight UW = Underweight NR = Not-Rated NA = Not available

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## Earnings Model

**Exhibit 25: Signature Bank – Earnings Model**

|  | 1Q15        | 2Q15        | 3Q15        | 4Q15        | 1Q16E       | 2Q16E       | 3Q16E       | 4Q16E       | 2014        | 2015         | 2016E        | 2017E        | 2018E        | 2019E        | 2020E        |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <b>REVENUES</b>                          |             |             |             |             |             |             |             |             |             |              |              |              |              |              |              |
| Interest income                          | 254         | 268         | 283         | 302         | 313         | 328         | 345         | 361         | 924         | 1,107        | 1,347        | 1,578        | 1,834        | 2,098        | 2,360        |
| Interest expense                         | 31          | 31          | 33          | 34          | 37          | 40          | 44          | 48          | 123         | 130          | 168          | 221          | 279          | 335          | 389          |
| Net interest income                      | 222         | 236         | 250         | 268         | 276         | 288         | 301         | 313         | 801         | 977          | 1,179        | 1,357        | 1,555        | 1,763        | 1,971        |
| Commissions                              | 3           | 3           | 3           | 3           | 3           | 3           | 3           | 3           | 11          | 11           | 11           | 12           | 13           | 14           | 15           |
| Fees and service charges                 | 5           | 6           | 5           | 5           | 5           | 5           | 6           | 6           | 19          | 22           | 22           | 24           | 25           | 27           | 28           |
| Net gains on securities and loans        | 4           | 2           | 1           | 1           | 2           | 2           | 2           | 2           | 10          | 7            | 8            | 8            | 9            | 9            | 9            |
| Other                                    | (1)         | (1)         | (1)         | (0)         | (1)         | (1)         | -           | -           | (5)         | (3)          | (1)          | -            | -            | -            | -            |
| Total non-interest income                | 10          | 10          | 8           | 9           | 10          | 10          | 10          | 11          | 35          | 37           | 40           | 44           | 47           | 50           | 53           |
| <b>Total revenues</b>                    | <b>233</b>  | <b>246</b>  | <b>258</b>  | <b>278</b>  | <b>286</b>  | <b>298</b>  | <b>312</b>  | <b>324</b>  | <b>836</b>  | <b>1,014</b> | <b>1,219</b> | <b>1,401</b> | <b>1,602</b> | <b>1,813</b> | <b>2,024</b> |
| <b>EXPENSES</b>                          |             |             |             |             |             |             |             |             |             |              |              |              |              |              |              |
| Compensation and benefits                | 55          | 58          | 59          | 59          | 63          | 64          | 66          | 68          | 197         | 230          | 260          | 294          | 332          | 375          | 424          |
| Amortization                             | -           | -           | -           | -           | -           | -           | -           | -           | -           | -            | -            | -            | -            | -            | -            |
| Other expenses                           | 27          | 27          | 27          | 30          | 31          | 32          | 33          | 34          | 97          | 111          | 131          | 147          | 164          | 182          | 202          |
| Total non-interest expense               | 82          | 85          | 86          | 88          | 94          | 96          | 99          | 102         | 293         | 341          | 391          | 441          | 496          | 557          | 626          |
| Pretax, pre-provision income             | 151         | 161         | 172         | 189         | 192         | 201         | 213         | 222         | 543         | 673          | 828          | 961          | 1,106        | 1,256        | 1,398        |
| Provision                                | 8           | 9           | 11          | 17          | 17          | 19          | 23          | 24          | 31          | 45           | 82           | 101          | 107          | 108          | 113          |
| Pretax income                            | 143         | 152         | 160         | 173         | 175         | 183         | 190         | 198         | 512         | 628          | 745          | 860          | 999          | 1,148        | 1,285        |
| Tax rate                                 | 41.7%       | 40.6%       | 40.0%       | 40.3%       | 41.0%       | 41.0%       | 41.0%       | 41.0%       | 42.0%       | 40.6%        | 41.0%        | 41.0%        | 41.0%        | 41.0%        | 41.0%        |
| <b>Operating income</b>                  | <b>83</b>   | <b>90</b>   | <b>96</b>   | <b>103</b>  | <b>103</b>  | <b>108</b>  | <b>112</b>  | <b>117</b>  | <b>297</b>  | <b>373</b>   | <b>440</b>   | <b>507</b>   | <b>590</b>   | <b>678</b>   | <b>758</b>   |
| Extraordinary item                       | -           | -           | -           | -           | -           | -           | -           | -           | -           | -            | -            | -            | -            | -            | -            |
| <b>Net income</b>                        | <b>83</b>   | <b>90</b>   | <b>96</b>   | <b>103</b>  | <b>103</b>  | <b>108</b>  | <b>112</b>  | <b>117</b>  | <b>297</b>  | <b>373</b>   | <b>440</b>   | <b>507</b>   | <b>590</b>   | <b>678</b>   | <b>758</b>   |
| <b>Operating EPS</b>                     | <b>1.64</b> | <b>1.77</b> | <b>1.88</b> | <b>2.01</b> | <b>1.94</b> | <b>2.00</b> | <b>2.08</b> | <b>2.15</b> | <b>5.97</b> | <b>7.30</b>  | <b>8.17</b>  | <b>9.36</b>  | <b>10.86</b> | <b>12.46</b> | <b>13.93</b> |
| Reported EPS                             | 1.64        | 1.77        | 1.88        | 2.01        | 1.94        | 2.00        | 2.08        | 2.15        | 5.97        | 7.30         | 8.17         | 9.36         | 10.86        | 12.46        | 13.93        |
| Average diluted shares                   | 50.9        | 51.2        | 51.3        | 51.3        | 53.2        | 53.9        | 54.0        | 54.1        | 49.7        | 51.1         | 53.8         | 54.2         | 54.3         | 54.4         | 54.4         |
| Common shares outstanding                | 50.7        | 50.9        | 50.9        | 50.9        | 53.4        | 53.5        | 53.6        | 53.7        | 50.3        | 50.9         | 53.7         | 53.7         | 53.8         | 53.9         | 54.0         |
| Book value / share                       | 51.71       | 53.06       | 55.43       | 56.81       | 62.38       | 64.54       | 66.77       | 69.08       | 49.61       | 56.81        | 69.08        | 78.64        | 89.72        | 102.41       | 116.58       |
| Tangible book value / share              | 51.71       | 53.06       | 55.43       | 56.81       | 62.38       | 64.54       | 66.77       | 69.08       | 49.61       | 56.81        | 69.08        | 78.64        | 89.72        | 102.41       | 116.58       |
| Dividends per share                      | -           | -           | -           | -           | -           | -           | -           | -           | -           | -            | -            | -            | -            | -            | -            |
| Dividend payout ratio                    | 0%          | 0%          | 0%          | 0%          | 0%          | 0%          | 0%          | 0%          | 0%          | 0%           | 0%           | 0%           | 0%           | 0%           | 0%           |
| Return on assets                         | 1.21%       | 1.24%       | 1.22%       | 1.25%       | 1.21%       | 1.21%       | 1.20%       | 1.19%       | 1.20%       | 1.23%        | 1.20%        | 1.20%        | 1.24%        | 1.27%        | 1.29%        |
| Return on equity                         | 13.2%       | 13.6%       | 13.8%       | 14.3%       | 14.2%       | 12.9%       | 12.8%       | 12.8%       | 13.6%       | 13.8%        | 13.1%        | 13.5%        | 13.8%        | 13.9%        | 13.6%        |
| Return on tangible equity                | 13.2%       | 13.6%       | 13.8%       | 14.3%       | 14.2%       | 12.9%       | 12.8%       | 12.8%       | 13.6%       | 13.8%        | 13.1%        | 13.5%        | 13.8%        | 13.9%        | 13.6%        |
| Net charge-offs / average loans          | 0.03%       | 0.05%       | 0.10%       | 0.08%       | 0.10%       | 0.14%       | 0.15%       | 0.15%       | 0.01%       | 0.07%        | 0.13%        | 0.17%        | 0.16%        | 0.15%        | 0.15%        |
| Provision / average loans                | 0.17%       | 0.18%       | 0.21%       | 0.29%       | 0.28%       | 0.29%       | 0.33%       | 0.34%       | 0.20%       | 0.22%        | 0.31%        | 0.32%        | 0.29%        | 0.26%        | 0.25%        |
| Nonperforming assets / loans & OREO      | 0.14%       | 0.20%       | 0.27%       | 0.30%       | NF          | NF          | NF          | NF          | 0.12%       | 0.30%        | NF           | NF           | NF           | NF           | NF           |
| Tier 1 common ratio                      | 12.3%       | 11.8%       | 11.6%       | 11.3%       | 12.2%       | 12.0%       | 11.8%       | 11.6%       | 13.5%       | 11.3%        | 11.6%        | 11.0%        | 10.7%        | 10.6%        | 10.7%        |
| Tangible common equity / tangible assets | 9.16%       | 9.01%       | 8.84%       | 8.65%       | 9.45%       | 9.37%       | 9.34%       | 9.28%       | 9.14%       | 8.65%        | 9.28%        | 9.16%        | 9.24%        | 9.44%        | 9.75%        |

Source: Company data, Morgan Stanley Research estimates



**Exhibit 26: Signature Bank – Model Drivers**

|   | 1Q15          | 2Q15          | 3Q15          | 4Q15          | 1Q16E         | 2Q16E         | 3Q16E         | 4Q16E         | 2014          | 2015          | 2016E         | 2017E         | 2018E         | 2019E         | 2020E         |
|---|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| <i>Average Balance Sheet</i>              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Total loans                               | 18,434        | 19,983        | 21,384        | 22,958        | 24,313        | 25,629        | 26,894        | 28,355        | 15,404        | 20,690        | 26,298        | 31,237        | 36,187        | 41,213        | 46,123        |
| Other earning assets                      | 9,043         | 8,803         | 8,998         | 8,894         | 9,250         | 9,435         | 9,577         | 9,720         | 8,583         | 8,935         | 9,496         | 10,065        | 10,569        | 11,097        | 11,652        |
| <b>Total earning assets</b>               | <b>27,683</b> | <b>28,991</b> | <b>30,809</b> | <b>32,306</b> | <b>34,024</b> | <b>35,535</b> | <b>36,950</b> | <b>38,565</b> | <b>24,327</b> | <b>29,947</b> | <b>36,268</b> | <b>41,787</b> | <b>47,250</b> | <b>52,814</b> | <b>58,289</b> |
| Other assets                              | 295           | 368           | 384           | 418           | 340           | 356           | 369           | 381           | 365           | 366           | 361           | 413           | 462           | 514           | 568           |
| <b>Total assets</b>                       | <b>27,978</b> | <b>29,359</b> | <b>31,193</b> | <b>32,724</b> | <b>34,364</b> | <b>35,891</b> | <b>37,319</b> | <b>38,946</b> | <b>24,693</b> | <b>30,313</b> | <b>36,630</b> | <b>42,199</b> | <b>47,713</b> | <b>53,327</b> | <b>58,856</b> |
| <i>Avg. Loan Growth (sequential)</i>      |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Commercial loans, mortgages, and leases   | 8.2%          | 8.6%          | 7.1%          | 7.5%          | 6.0%          | 5.5%          | 5.0%          | 5.5%          | 38.2%         | 35.2%         | 27.6%         | 19.0%         | 16.0%         | 14.0%         | 12.0%         |
| Residential mortgages and consumer loans  | -1.5%         | -1.8%         | -0.8%         | -2.3%         | -1.0%         | -1.0%         | -0.5%         | -0.1%         | -8.2%         | -5.0%         | -4.6%         | 0.5%          | 1.0%          | 1.0%          | 1.0%          |
| <b>Total loans</b>                        | <b>8.1%</b>   | <b>8.4%</b>   | <b>7.0%</b>   | <b>7.4%</b>   | <b>5.9%</b>   | <b>5.4%</b>   | <b>4.9%</b>   | <b>5.4%</b>   | <b>36.6%</b>  | <b>34.3%</b>  | <b>27.1%</b>  | <b>18.8%</b>  | <b>15.8%</b>  | <b>13.9%</b>  | <b>11.9%</b>  |
| Other earning assets                      | 0.2%          | -2.7%         | 2.2%          | -1.1%         | 4.0%          | 2.0%          | 1.5%          | 1.5%          | 11.9%         | 4.1%          | 6.3%          | 6.0%          | 5.0%          | 5.0%          | 5.0%          |
| <b>Total earning assets</b>               | <b>4.5%</b>   | <b>4.7%</b>   | <b>6.3%</b>   | <b>4.9%</b>   | <b>5.3%</b>   | <b>4.4%</b>   | <b>4.0%</b>   | <b>4.4%</b>   | <b>26.0%</b>  | <b>23.1%</b>  | <b>21.1%</b>  | <b>15.2%</b>  | <b>13.1%</b>  | <b>11.8%</b>  | <b>10.4%</b>  |
| <i>Yields &amp; Net Interest Margin</i>   |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Yield on earning assets                   | 3.72%         | 3.70%         | 3.64%         | 3.71%         | 3.70%         | 3.71%         | 3.71%         | 3.72%         | 3.80%         | 3.70%         | 3.71%         | 3.78%         | 3.88%         | 3.97%         | 4.05%         |
| Cost of interest bearing liabilities      | 0.71%         | 0.67%         | 0.66%         | 0.65%         | 0.67%         | 0.70%         | 0.72%         | 0.75%         | 0.75%         | 0.67%         | 0.71%         | 0.80%         | 0.87%         | 0.92%         | 0.96%         |
| Net interest spread                       | 3.02%         | 3.03%         | 2.98%         | 3.07%         | 3.03%         | 3.01%         | 2.99%         | 2.97%         | 3.05%         | 3.03%         | 3.00%         | 2.98%         | 3.01%         | 3.05%         | 3.09%         |
| Benefit from free funding                 | 0.24%         | 0.24%         | 0.23%         | 0.23%         | 0.24%         | 0.25%         | 0.25%         | 0.26%         | 0.24%         | 0.24%         | 0.25%         | 0.27%         | 0.28%         | 0.28%         | 0.29%         |
| <b>Net interest margin</b>                | <b>3.26%</b>  | <b>3.27%</b>  | <b>3.22%</b>  | <b>3.30%</b>  | <b>3.26%</b>  | <b>3.26%</b>  | <b>3.25%</b>  | <b>3.23%</b>  | <b>3.29%</b>  | <b>3.26%</b>  | <b>3.25%</b>  | <b>3.25%</b>  | <b>3.29%</b>  | <b>3.34%</b>  | <b>3.38%</b>  |
| NIM excluding prepayment fees             | 3.17%         | 3.17%         | 3.11%         | 3.15%         | 3.15%         | 3.16%         | 3.16%         | 3.15%         | 3.18%         | 3.15%         | 3.16%         | 3.17%         | 3.21%         | 3.26%         | 3.30%         |
| Efficiency ratio                          | 35.1%         | 34.5%         | 33.4%         | 31.8%         | 32.8%         | 32.3%         | 31.8%         | 31.5%         | 35.1%         | 33.6%         | 32.1%         | 31.4%         | 30.9%         | 30.7%         | 30.9%         |
| <i>Credit Quality Metrics</i>             |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Total net charge-offs                     | (2)           | (3)           | (6)           | (5)           | (6)           | (9)           | (10)          | (11)          | (2)           | (14)          | (35)          | (54)          | (59)          | (63)          | (71)          |
| Reserve build / (draw)                    | 6             | 6             | 6             | 12            | 11            | 10            | 13            | 13            | 29            | 31            | 47            | 46            | 47            | 44            | 42            |
| Nonperforming assets                      | 28            | 42            | 60            | 72            | NF            | NF            | NF            | NF            | 21            | 72            | NF            | NF            | NF            | NF            | NF            |
| Nonperforming loans / loans               | 0.14%         | 0.20%         | 0.27%         | 0.30%         | NF            | NF            | NF            | NF            | 0.12%         | 0.30%         | NF            | NF            | NF            | NF            | NF            |
| Reserves / loans receivable               | 0.88%         | 0.86%         | 0.82%         | 0.82%         | 0.82%         | 0.81%         | 0.82%         | 0.82%         | 0.92%         | 0.82%         | 0.82%         | 0.83%         | 0.83%         | 0.83%         | 0.82%         |
| Reserves / NPLs                           | 614%          | 426%          | 307%          | 271%          | NF            | NF            | NF            | NF            | 783%          | 271%          | NF            | NF            | NF            | NF            | NF            |
| Reserves / annualized charge-offs         | 2,841%        | 1,673%        | 829%          | 1,057%        | 882%          | 625%          | 582%          | 548%          | 9,169%        | 1,365%        | 685%          | 530%          | 566%          | 601%          | 598%          |
| <i>Net Charge-off Ratios</i>              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Commercial loans and commercial mortgages | 0.03%         | 0.04%         | 0.08%         | 0.11%         | 0.09%         | 0.13%         | 0.14%         | 0.15%         | 0.00%         | 0.07%         | 0.13%         | 0.17%         | 0.16%         | 0.15%         | 0.15%         |
| Residential mortgage and consumer loans   | 0.38%         | 0.68%         | 1.41%         | -1.95%        | 0.60%         | 0.60%         | 0.60%         | 0.60%         | 0.40%         | 0.14%         | 0.60%         | 0.60%         | 0.60%         | 0.60%         | 0.60%         |
| <b>Total NCO</b>                          | <b>0.03%</b>  | <b>0.05%</b>  | <b>0.10%</b>  | <b>0.08%</b>  | <b>0.10%</b>  | <b>0.14%</b>  | <b>0.15%</b>  | <b>0.15%</b>  | <b>0.01%</b>  | <b>0.07%</b>  | <b>0.13%</b>  | <b>0.17%</b>  | <b>0.16%</b>  | <b>0.15%</b>  | <b>0.15%</b>  |
| <i>Capital Management Ratios</i>          |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Repurchases / total outstanding           | 0.0%          | 0.0%          | 0.0%          | 0.0%          | 0.0%          | 0.0%          | 0.0%          | 0.0%          | 0.0%          | 0.0%          | 0.0%          | 0.0%          | 0.0%          | 0.0%          | 0.0%          |
| Buyback ratio (buybacks / net income)     | 0%            | 0%            | 0%            | 0%            | 0%            | 0%            | 0%            | 0%            | 0%            | 0%            | 0%            | 0%            | 0%            | 0%            | 0%            |

Source: Company data, Morgan Stanley Research estimates

**Valuation Methodology and Risks:** Assumptions for our \$163 price target for SBNY include a cost of equity of 9% and a beta of 1.2. Risks include an increased competition resulting in slower loan growth, stronger NIM compression, more severe-than-expected credit deterioration in its taxi medallion portfolio, and the inability to continue hiring banking teams away from local competitors.

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Adam Jonas, CFA; Neel Mehta; Steven M Wald; Ken A Zerbe, CFA.

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(as of February 29, 2016)

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| STOCK RATING CATEGORY | COVERAGE UNIVERSE |            | INVESTMENT BANKING CLIENTS (IBC) |            |                          |
|-----------------------|-------------------|------------|----------------------------------|------------|--------------------------|
|                       | COUNT             | % OF TOTAL | COUNT                            | % OF TOTAL | % OF RATING IBC CATEGORY |
| Overweight/Buy        | 1216              | 36%        | 320                              | 44%        | 26%                      |
| Equal-weight/Hold     | 1399              | 42%        | 320                              | 44%        | 23%                      |
| Not-Rated/Hold        | 69                | 2%         | 3                                | 0%         | 4%                       |
| Underweight/Sell      | 671               | 20%        | 89                               | 12%        | 13%                      |
| <b>TOTAL</b>          | <b>3,355</b>      |            | <b>732</b>                       |            |                          |

Data include common stock and ADRs currently assigned ratings. Investment Banking Clients are companies from whom Morgan Stanley received investment banking compensation in the last 12 months.

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Overweight (O). The stock's total return is expected to exceed the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

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**Analyst Industry Views**

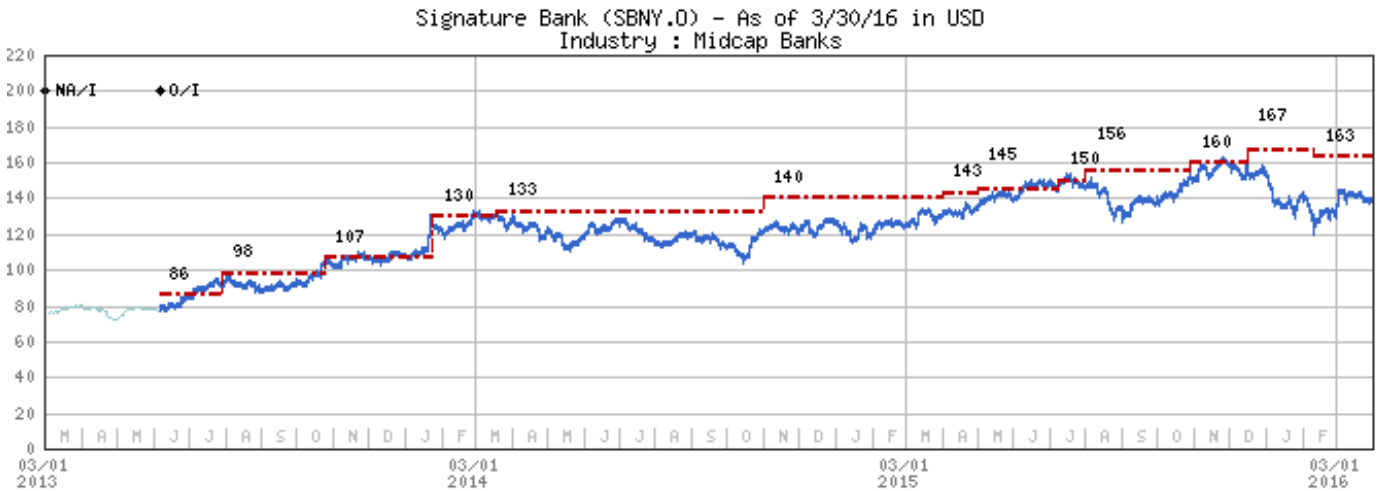
Attractive (A): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be attractive vs. the relevant broad market benchmark, as indicated below.

In-Line (I): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be in line with the relevant broad market benchmark, as indicated below.

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**Stock Price, Price Target and Rating History (See Rating Definitions)**



Price Target History: 6/6/13 : 86; 7/30/13 : 98; 10/24/13 : 107; 1/24/14 : 130; 3/19/14 : 133; 10/31/14 : 140; 4/1/15 : 143; 5/1/15 : 145; 7/9/15 : 150; 7/31/15 : 156; 10/29/15 : 160; 12/16/15 : 167; 2/11/16 : 163

Source: Morgan Stanley Research Date Format: MM/DD/YY Price Target --- No Price Target Assigned (NA)  
 Stock Price (Not Covered by Current Analyst) --- Stock Price (Covered by Current Analyst) ---  
 Stock and Industry Ratings (abbreviations below) appear as + Stock Ratings/Industry View  
 Stock Ratings: Overweight (O) Equal-weight (E) Underweight (U) Not-Rated (NR) No Rating Available (NA)  
 Industry View: Attractive (A) In-line (I) Cautious (C) No Rating (NR)

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#### INDUSTRY COVERAGE: Midcap Banks

| COMPANY (TICKER)                         | RATING (AS OF) | PRICE* (03/30/2016) |
|--|----------------|---------------------|
| <b>Ken A Zerbe, CFA</b>                  |                |                     |
| Associated Banc-Corp (ASB.N)             | E (02/05/2013) | \$18.09             |
| BancorpSouth Inc. (BXS.N)                | E (10/14/2014) | \$21.40             |
| Bank of Hawaii Corp. (BOH.N)             | U (09/14/2010) | \$68.73             |
| BankUnited Inc (BKU.N)                   | O (03/27/2014) | \$34.70             |
| BOK Financial Corp (BOKF.O)              | E (06/20/2011) | \$55.90             |
| Citizens Financial Group, Inc (CFG.N)    | O (11/03/2014) | \$21.25             |
| Comerica Inc (CMA.N)                     | E (08/10/2011) | \$38.23             |
| Commerce Bancshares (CBSH.O)             | E (01/06/2014) | \$45.51             |
| Cullen/Frost Bankers (CFR.N)             | E (12/23/2014) | \$55.71             |
| East West Bancorp, Inc. (EWBC.O)         | E (08/07/2012) | \$32.57             |
| Fifth Third Bancorp (FITB.O)             | O (05/12/2011) | \$16.87             |
| First Horizon National (FHN.N)           | E (06/06/2013) | \$13.19             |
| First Republic Bank (FRC.N)              | O (03/22/2012) | \$67.02             |
| Hancock Holding (HBHC.O)                 | E (08/10/2011) | \$22.87             |
| Huntington Bancshares (HBAN.O)           | E (12/10/2015) | \$9.59              |
| KeyCorp (KEY.N)                          |                | \$11.15             |
| M&T Bank Corp. (MTB.N)                   | E (04/04/2011) | \$111.97            |
| New York Community Bancorp, Inc (NYCB.N) | O (02/05/2013) | \$15.96             |
| People's United Financial, Inc. (PBCT.O) | E (09/26/2011) | \$16.09             |
| Popular, Inc. (BPOP.O)                   | E (06/30/2015) | \$28.56             |
| Prosperity Bancshares Inc (PB.N)         | E (09/01/2010) | \$46.49             |
| Signature Bank (SBNY.O)                  | O (06/06/2013) | \$138.26            |
| SVB Financial Group (SIVB.O)             | O (11/11/2015) | \$103.29            |
| Synovus Financial Corp. (SNV.N)          | U (02/11/2016) | \$29.21             |
| TCF Financial Corp. (TCB.N)              | E (01/31/2012) | \$12.27             |
| Valley National Bancorp (VLY.N)          | E (08/07/2012) | \$9.62              |
| Washington Federal (WAFD.O)              | E (03/31/2008) | \$22.80             |
| Webster Financial Corp (WBS.N)           | U (06/18/2015) | \$36.07             |
| Westamerica Bancorp. (WABC.O)            | U (02/03/2009) | \$49.63             |
| Zions Bancorp (ZION.O)                   | O (05/26/2009) | \$24.63             |

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\* Historical prices are not split adjusted.