SPRING 2017
A NEW AGE IN MORTGAGE
SELECTED OLIVER WYMAN MORTGAGE INSIGHTS

CONTENTS

1. SHIFTING SANDS AND CRUMBLING TOWERS
   Competitive Dynamics in Mortgage Originations

2. DIFFERENT STROKES FOR DIFFERENT FOLKS
   The Buying Habits and Preferences of Mortgage Borrowers

3. DIGITAL MORTGAGE NIRVANA
   Cheaper, Better, Faster

4. THE FUTURE OF TECHNOLOGY IN MORTGAGE ORIGINATIONS

5. A MODEL FOR EFFICIENT MORTGAGE SERVICING
INTRODUCTION

The US mortgage market has changed dramatically since the global financial crisis. While much of banking has continued its decades-long consolidation – the top 10 banks have increased their deposit market share from 40 percent pre-crisis to 53 percent today1 – the mortgage industry has moved in the opposite direction. Instead of consolidating, the post-crisis origination market has been characterized by the resurrection of nonbank lenders and increased fragmentation. As the industry moves forward, players must consider strategic positioning in an environment marked by an accelerating pace of change. With more demanding and tech-savvy borrowers, continued FinTech interest across the value chain, and a pronounced rise in technology investment from incumbents, tomorrow’s mortgage market is sure to look vastly different than today’s.

The five pieces included here aim to help make sense of recent trends as well as outline future developments likely to take place in our industry. We draw on research from a number of sources, including consumer survey work, numerous interviews with industry experts and executives, mystery shopping, site walk-arounds, and plenty of healthy debate with colleagues and clients. Each piece offers perspectives on a distinct aspect of this dynamic market:

• The drivers of the decline in large banks’ origination dominance and competitive dynamics to consider in developing future strategy.

• Customers’ mortgage shopping behavior and implications for smarter customer acquisition strategies.

• The role that recently introduced digital mortgage capabilities can play in improving the origination experience, as well as likely candidates for further digitization.

• Review of a broader range of technology investments beyond digital mortgages to identify distinctive capabilities yielding the greatest impact.

• The path to a more sustainable, cost-controlled servicing model that can improve efficiency and free up resources to invest in origination growth.

Please enjoy this collection and look for additional thought pieces based on new research coming soon.

–the Oliver Wyman mortgage team

1 SNL Financial, an offering of S&P Global Market Intelligence.
# TABLE OF CONTENTS

1. **SHIFTING SANDS AND CRUMBLING TOWERS**  
   Competitive Dynamics in Mortgage Originations  
   Where exactly has large bank market share for mortgage origination gone in the wake of the dramatic market change since the financial crisis? What are the drivers underlying the shift? And where will the future competitive advantage for large banks come from?  
   
2. **DIFFERENT STROKES FOR DIFFERENT FOLKS**  
   The Buying Habits and Preferences of Mortgage Borrowers  
   What matters most to customers when choosing a mortgage lender? How do prospective homeowners cut through the clutter to pick their lender? And how do they make one of the most important financial decisions of their lives?  
   
3. **DIGITAL MORTGAGE NIRVANA**  
   Cheaper, Better, Faster  
   Why do mortgage lenders think that customers are willing to wait patiently for a month or more to learn whether they will be able to finance perhaps the most significant purchase of their lives? We believe certain digital capabilities will quickly become table stakes for mortgage lenders, especially as third-party providers emerge to offer solutions for the required capabilities and as investors and guarantors accept and encourage their use. Given today’s increasing level of competition, we anticipate that digital offerings will quickly evolve to take advantage of already-available technologies in addressing hassles in the application process.  
   
4. **THE FUTURE OF TECHNOLOGY IN MORTGAGE ORIGINATIONS**  
   What should mortgage institutions focus on in this new technology-enabled environment? What are the benefits that really matter? And what technological capabilities should they pursue? We interviewed more than 30 mortgage originators to answer these questions and found that while technology can be employed at many points along the mortgage origination customer journey, a few distinctive capabilities emerge from the pack.  
   
5. **A MODEL FOR EFFICIENT MORTGAGE SERVICING**  
   How can mortgage servicing lenders reduce servicing expenses without jeopardizing stability? The journey begins with the development of a cost fact base that allows servicing lenders to tackle their largest cost types — workforce and technology — and improve their performance in critical servicing activities that tend to be cost hot spots — quality assurance and customer service. The payoff for servicers? A sustainable model for mortgage servicing that frees resources for other investments including origination growth.
Since the financial crisis of 2007–08 the US mortgage market has changed dramatically. While most of the banking industry has continued its decades-long consolidation—with the top 10 banks increasing their share of deposits from 40 percent pre-crisis to 53 percent today—1—the mortgage industry has moved in exactly the opposite direction. Instead of consolidating, the post-crisis origination market has been characterized by the resurrection of independent mortgage lenders, the emergence of modularity, and overall fragmentation.

---

1 SNL Financial, an offering of S&P Global Market Intelligence.

CRUMBLING TOWERS

The shift (illustrated in Exhibit 1) has been sweeping.

- Over the past five years, the top five deposit-taking banks in the league table rankings have seen their share of mortgage origination fall from 64 percent in 2010 to 25 percent in 2016. In other words, ~$500 billion in originations has shifted away from the top five bank originators.

- Independent mortgage lenders (also referred to as “nonbanks”) among the top 40 overall originators have increased their market share from 8 percent to 32 percent over the past six years. Strikingly, over
that period 20 nonbanks\(^2\) have entered the top 40 mortgage lenders. Collectively, these nonbanks originated approximately $656 billion in 2016 versus $128 billion in 2010. The top five banks, meanwhile, originated $999 billion in 2010 versus only $515 billion in 2016 (see Exhibit 2).

- Smaller lenders (including banks and nonbanks) outside of the top 40, which controlled only 7 percent of originations in 2010, now control 35 percent of the market, a fact that calls into question the conventional wisdom that blames nonbanks with little regulatory constraint for the growing fragmentation in the market.

These trends are consistent across both the purchase and refinance markets, though they are less pronounced in the jumbo market. And these trends may very well continue.

---

\(^2\) Twenty is the net number of nonbanks entering the top 40 Inside Mortgage Finance origination rankings since 2010. Twenty-one entered while Mortgage Investors Corporation exited.

---

**Exhibit 1: Market share by size and types**

<table>
<thead>
<tr>
<th>FOR ALL ORIGINATIONS</th>
<th>FOR PURCHASE LOANS</th>
</tr>
</thead>
<tbody>
<tr>
<td>$BN IN ORIGATIONS</td>
<td>$BN IN ORIGATIONS</td>
</tr>
<tr>
<td>$1,570 BN</td>
<td>$535 BN</td>
</tr>
<tr>
<td>7%</td>
<td>19%</td>
</tr>
<tr>
<td>8%</td>
<td>6%</td>
</tr>
<tr>
<td>21%</td>
<td>15%</td>
</tr>
<tr>
<td>64%</td>
<td>32%</td>
</tr>
<tr>
<td>35%</td>
<td>60%</td>
</tr>
<tr>
<td>Top 5 banks</td>
<td>Top 5 banks</td>
</tr>
<tr>
<td>25%</td>
<td>25%</td>
</tr>
<tr>
<td>Top nonbanks</td>
<td>Top nonbanks</td>
</tr>
<tr>
<td>6%</td>
<td>5%</td>
</tr>
<tr>
<td>Other top banks</td>
<td>Other top banks</td>
</tr>
<tr>
<td>8%</td>
<td>7%</td>
</tr>
<tr>
<td>25%</td>
<td>25%</td>
</tr>
<tr>
<td>Smaller lenders</td>
<td>Smaller lenders</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FOR REFINANCING LOANS</th>
<th>FOR JUMBO LOANS</th>
</tr>
</thead>
<tbody>
<tr>
<td>$BN IN ORIGATIONS</td>
<td>$BN IN ORIGATIONS</td>
</tr>
<tr>
<td>$1,095 BN</td>
<td>$104 BN</td>
</tr>
<tr>
<td>15%</td>
<td>29%</td>
</tr>
<tr>
<td>8%</td>
<td>8%</td>
</tr>
<tr>
<td>15%</td>
<td>14%</td>
</tr>
<tr>
<td>62%</td>
<td>27%</td>
</tr>
<tr>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>25%</td>
<td>49%</td>
</tr>
<tr>
<td>Top 5 banks</td>
<td>Top 5 banks</td>
</tr>
<tr>
<td>Top nonbanks</td>
<td>Top nonbanks</td>
</tr>
<tr>
<td>Other top banks</td>
<td>Other top banks</td>
</tr>
</tbody>
</table>

**Source:** Inside Mortgage Finance. Threshold for “top” lenders analyzed across loan purposes/products varies due to number of lenders listed in annual Inside Mortgage Finance league tables. Sum of IMF estimates of overall purchase and refi loans does not match IMF’s estimate of total overall originations for 2010.
SHIFTING SANDS

What is driving this decline of large bank dominance of mortgage originations? Many people theorize that larger banks themselves have caused the change by abandoning certain segments of the market. They point to several specific areas:

- **Broker channel:** Banks have all but abandoned brokers, which accounted for 30 percent of originations before the crisis but only 10 percent in 2016. The volume of loan originations coming through the broker channel remains at an all-time low and close to where it was during the crisis.

- **Correspondent channel:** A few institutions have also pulled back from correspondent lending. This channel is not as attractive as it used to be, due to relatively punitive MSR risk weighting from Basel III, the MSR cap relative to Tier 1 Capital, and the reduced financing advantage vis-à-vis GSEs due to g-fee parity. Nonetheless, most large banks continue to actively pursue correspondent lending.

- **FHA lending:** The threat of lawsuits launched by the Department of Justice has caused most banks to pull back significantly from government-insured loans. But government-insured lending accounts for a relatively small share of the overall market, $545 billion in 2016, or only 26 percent of the market—not nearly enough to explain the overall market’s much larger swing.

Other shifts in the landscape have not had as pronounced an impact on bank market share:

- **Subprime lending:** A corollary to the above is the claim that the mortgage market has returned to the go-go days of weak credit. While it may be true that some lower-credit borrowers have shifted away from banks, every measure of credit suggests that there has been no material change in the quality of credit being originated in aggregate across the industry since 2010.

- **Consumer shift from refinance to purchase:** Such a shift can’t explain banks’ loss of share—which is being seen across both the purchase and the refi market.
None of these explanations, alone or in aggregate, can fully explain why big banks have lost so much market share over the past five years. Given how large the shift is—$500 billion in origination volume—there has to be more to the story than banks simply deciding to abandon sub-segments of the market.

**Brokers accounted for 30% of originations pre-crisis but only 10% in 2016**

We believe there are other fundamental shifts in the industry that are leading to a more fragmented and competitive marketplace. The evolving industry landscape is characterized by:

- **Disintermediation of client relationships**: Banks no longer have a distinctive advantage in acquiring customers through their retail networks because of the gradual re-emergence of brokers, shifting choices of real estate agents due to regulatory constraints, growth of online shopping, expanded options for correspondents, and the continued growth of direct-to-consumer lending.

- **Ecosystem expansion**: The back office has become fully modular—meaning that different chunks of origination systems and operations are being delivered by different companies. Lenders have their pick of specialty servicers, data aggregation companies, and specialized technology offerings including pricing, closing, and document management. Meanwhile, companies such as Quicken and PHH continue to push white-labeling and platform renting.

- **Better, cheaper and more accessible technology**: In many areas of consumer banking, rapidly advancing technology has made fulfillment operations more effective and efficient — inadvertently throwing a spotlight on just how slowly the customer experience has been evolving in mortgage banking. In recent years, this has led customers to demand a more seamless experience, leading to the rise of nonbanks (such as Quicken) that offer a digitally driven fulfillment experience.

**KEEPING SCORE**

As the landscape grows more competitive, there are factors that hurt large banks, others that favor them, and still others on which the jury is still out.

**38% of purchase borrowers begin their mortgage shopping experience by talking with a real estate agent**

Competitive factors putting downward pressure on large bank market share include:

- **Real estate agents**: The influence of real estate agents on mortgage buying remains very strong—38 percent of purchase borrowers and 21 percent of refinance borrowers begin their mortgage shopping experience by talking with a real estate agent. Just a few years ago, many banks had joint ventures and marketing service agreements (MSAs) with home builders and real estate agents (e.g. paying for a sign or even a desk in the their office). Recent regulatory trends have been running against such deals; the Real Estate Settlement Procedures Act (RESPA) bans kickbacks, while the Consumer Financial Protection Bureau (CFPB) discourages participation in MSAs. Neither explicitly prohibits joint ventures and MSAs, but they have led many large banks to terminate such

---

3 Source: Oliver Wyman Mortgage Consumer Survey 2016.
arrangements. This has eliminated the institutional relationships between real estate agents and banks, and has led to a street battle among sales agents.

- **Digital channels:** The growing importance of digital channels favors nonbank disrupters. One-third of borrowers already begin their application process online, and these shoppers clearly favor digital-savvy providers. For example, 15 percent of borrowers who began the shopping process online chose online-focused mortgage originators such as Quicken, LoanDepot or GuaranteedRate, compared to only 5 percent overall.\(^4\) Third party providers such as Roostify and Blend offer banks a way to catch up without having to build everything in-house or completely revamp their loan origination systems, but until banks are able to provide a seamless digital experience, digital mortgage originators are likely to continue capturing market share.

- **Availability of financing/capital and relationships with government-sponsored enterprises:** Large banks’ large balance sheets used to give them an advantage in the marketplace, but the more intense capital regulation of the past few years has caused it to erode. They are also subject to post-crisis Basel III risk-weighting of MSRs and capitalization relative to Tier 1 capital. Lastly, the guarantee-fee parity that larger banks used to enjoy has all but disappeared.

- **Focus and attention:** Distracted by significant regulatory requirements and burdened by legacy systems and operations, large banks find it difficult to maintain a laser focus on improving their offerings the way nonbank and smaller competitors do. This makes it difficult for traditional banks to build and compete with more distinctive business models.

Competitive factors protecting large bank market share include:

- **Physical distribution:** Bricks and mortar are still important; 26 percent of borrowers ranked having a local branch and being able to apply in person as the most important factor in the mortgage application experience.\(^5\) No other factor was selected as often. Borrowers who chose banks for their mortgage were particularly likely to focus on physical presence. This is an area where most nonbanks—which manage distribution through aggressive call centers, a strong online presence, or third parties—are not challenging banks.

- **Leveraging existing relationships:** Mortgages are not highly cross-sold; only 24 percent of borrowers obtain their mortgage from their primary bank. Nonetheless, 37 percent of borrowers do list “having an existing relationship with the institution” among their top three factors for choosing a lender, and those borrowers overwhelmingly favor banks. Banks also have the potential to provide a superior customer experience by using tools such as predictive analytics to leverage existing relationships—though few banks have done much yet to capitalize on that opportunity.

\(^2\)60% of borrowers ranked having a local branch and being able to apply in person as the most important factor in the mortgage application experience\(^7\)

Factors for which there is no clear winner... yet:

- **Customer experience:** Survey data suggests that Quicken is the only institution truly differentiating on customer experience. Large banks, smaller banks, and nonbanks are considerably behind in this effort (see Exhibit 3).
Customer experience comes in three potential forms: delightful, average, and terrible. A delightful experience is difficult to achieve, and may well not be perceived by customers who have nothing to compare it with. An average experience tends not to attract much attention one way or another. A terrible experience, on the other hand, gets talked about, and important influencers such as friends, family, and real estate agents are likely to hear about it and remember. If we take CFPB complaint data as a proxy, nonbanks are much better than banks at avoiding terrible experiences (see Exhibit 4). They may not deliver a superior experience across the board, but they have learned how to deliver a hassle-free one.

- **Price:** Consumers believe price is important; 36 percent of consumers list “reputation for competitive pricing” as the top factor they look at in choosing lenders to eventually apply to. But price is rarely the deciding factor. They “window shop”—asking around and looking at headline rates to assess who has the most competitive price. But after that initial scan, price no longer affects decision making. Even though advertised prices vary significantly from true APRs specific to a given borrower, 71 percent of consumers apply to only one lender. That may reflect the fact that prices currently do not vary significantly between banks and nonbanks, or small and large lenders. In a different rate environment with greater differentiation, price may become a more important factor.

Based on all of the above, competitive advantages in mortgage originations can come from three potential sources:

1. Customer access (real estate agent relationships, brand, sales force effectiveness).
2. Factory fulfilment and distinctive processing operations (digital fulfilment, process excellence, automation).
3. Financing scale and the associated pricing advantage (balance sheet, guarantee-fee discounts).
Exhibit 4: Number of CFPB origination-related complaints per $ BN originations in 2015

COMPLAINTS FILED IN 2015 FOR TOP 20 ORIGINATORS

<table>
<thead>
<tr>
<th>Bank</th>
<th>Nonbank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank 1</td>
<td>Nonbank 1</td>
</tr>
<tr>
<td>Bank 2</td>
<td>Nonbank 2</td>
</tr>
<tr>
<td>Bank 3</td>
<td>Nonbank 3</td>
</tr>
<tr>
<td>Bank 4</td>
<td>Nonbank 4</td>
</tr>
<tr>
<td>Bank 5</td>
<td>Nonbank 5</td>
</tr>
<tr>
<td>Bank 6</td>
<td>Nonbank 6</td>
</tr>
<tr>
<td>Bank 7</td>
<td>Nonbank 7</td>
</tr>
<tr>
<td>Bank 8</td>
<td>Nonbank 8</td>
</tr>
<tr>
<td>Bank 9</td>
<td>Nonbank 9</td>
</tr>
<tr>
<td>Bank 10</td>
<td>Nonbank 10</td>
</tr>
<tr>
<td>Bank 11</td>
<td>Nonbank 11</td>
</tr>
<tr>
<td>Bank 12</td>
<td>Nonbank 12</td>
</tr>
</tbody>
</table>

Source: CFPB complaints database. Based on complaints under mortgage product category with issue related to either “application, originator, mortgage broker,” “credit decision/underwriting,” or “settlement process and costs.” Excludes complaints related to HELs, HELOCs, and reverse mortgages. The averages are weighted averages within each group, e.g. total # of complaints for banks divided by the total origination volume for banks.

Before the financial crisis, larger banks maintained a clear upper hand relying primarily on the third source of advantage. They had the balance sheet capacity that conferred numerous benefits (cheaper funding costs, higher leverage, capacity for mortgage servicing rights), GSE partnership deals that gave them lower guarantee-fees, the scale and money to build institutional relationships with influencers, etc. Many of those benefits are now gone, forcing banks to have to compete more aggressively on customer access and factory delivery. And these are clearly much harder to get right. What’s next?

The last significant origination share increase for larger banks came about largely as a result of the global financial crisis, which saw many nonbanks (and banks) implode. Some will argue that the current trends are simply a manifestation of the credit cycle; that many of these institutions will once again collapse when the credit cycle turns.

Even if that is the case, what is the best bet to make from the perspective of traditional banks?
Do those banks have a desire to stem the tide? And if they do have the desire, will they be able to or are they destined to continue ceding market share? What will the next major shift in mortgage originations look like?

- **The digital revolution**: Will top lenders make major strides in digital capabilities and be able to provide a seamless end-to-end origination experience, transforming the mortgage process from a necessary evil to a pleasant, one-click shopping experience? Will these banks be able to catch up to Quicken?

- **Honesty is the best policy**: Will regulators force more transparent advertised rates, simplifying price comparisons and making price a more prominent competitive angle?

- **Reversion to the mean**: Will newer lenders, or those with short-term memories, venture back into more risky lending and drive another bubble?

Time will tell.
One of the authors of this paper recently did some mortgage shopping. His goal was to test the refinancing process with a few lenders. He is disappointed to report that the entire experience was an utter pain—and that’s being generous. There was much to complain about, but the most vexing experience came in trying to compare one lender versus another.

The process involved countless hours spent scouring lender websites trying to make sense of their claims, dozens of missed calls from 1-800 numbers (which often came at the wrong time of day), and even more calls with Nick and David and Jim and Heather and Todd and their nameless automated voice message systems with their abrupt good-byes.

Throughout, he struggled with some basic questions: How do these prices compare across the different products? How fast will this lender process my loan compared with the other? What if something comes up that this lender doesn’t like after I choose them? Or what if this lender is poor at managing closings?

As these questions and the process exhausted him, he couldn’t help but sigh: Why bother? Why not just go with lender A? None of them are really all that different from each other anyway.

Before the process even really began, he simply wanted to do away with the headache of sifting through so many interactions and so much information.
THE RIDDLE

Ask any prospective or recent borrower what matters most in choosing a lender, they will tell you price—price over all else. And of course customer experience. These are the twin pillars that supposedly, for most borrowers, drive the decision to go with one lender rather than another.

But how do prospective borrowers know which lender has the best prices or provides superior customer experience or the speediest approval or the most reliable closing?

Human beings can consume and process only so much information in a given span of time, and the amount and complexity of information that must be processed to choose a mortgage lender is extraordinary: hundreds of lenders to choose from, complex bond math to work through, numerous customer service variables to analyze—and what is an APR versus a rate versus points anyway? Comparison sites that aggregate rate information can help but are often confusing in and of themselves, and posted terms often differ from the rates and fees customers eventually pay.

Even if one assumes that mortgage borrowers are actually able to process all this information, the choices they make are often inconsistent with the opinions they express. For example, while most borrowers state that price is critical to their decision, a recent Oliver Wyman survey found that 71 percent of borrowers apply to only one lender and 63 percent consult just one type of information source before making their decision on where to apply. Many go on to select a lender that they perceive to be less expensive when the facts say otherwise.

Given all this, how do prospective homeowners cut through the clutter to pick their lender? How do they make one of the most important financial decisions of their lives?

Exhibit 1: Factors most important in choice of mortgage lenders to apply to

<table>
<thead>
<tr>
<th>% OF RESPONDENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reputation for competitive pricing</td>
</tr>
<tr>
<td>Reputation for good customer service</td>
</tr>
<tr>
<td>Having an existing relationship with the institution</td>
</tr>
<tr>
<td>Receiving a referral from a realtor, developer, or agent</td>
</tr>
<tr>
<td>Strength of brand</td>
</tr>
<tr>
<td>Receiving a referral from a friend, colleague, or family</td>
</tr>
<tr>
<td>Convenience of branch location</td>
</tr>
<tr>
<td>Quality of the website and literature</td>
</tr>
<tr>
<td>Other</td>
</tr>
<tr>
<td>Refinance borrowers</td>
</tr>
<tr>
<td>Purchase borrowers</td>
</tr>
</tbody>
</table>

Source: Oliver Wyman Mortgage Consumer Survey 2016.
DIFFERENT STROKES FOR DIFFERENT FOLKS

Different people approach life’s choices in different ways. Some rely on instinct, others on the advice of institutions. Some trust only family and friends and view the rest of the world with hostility. Others, wary of any single resource, dig and dig until they are satisfied that they’ve exhausted all available sources of information.

To see how this dynamic plays out in mortgage shopping, Oliver Wyman surveyed nearly 1,000 recent borrowers, asking, among other questions, what sources of information they used when deciding where to apply for a mortgage and how many lenders they applied to. We put the responses through a statistical clustering analysis to see what patterns emerged among both purchase and refinance borrowers (see Exhibits 2 and 3).

Exhibit 2: Cluster analysis for purchase borrowers

PURCHASE ONLY

<table>
<thead>
<tr>
<th>Description of cluster</th>
<th>PURCHASE ONLY</th>
<th>PURCHASE ONLY</th>
<th>PURCHASE ONLY</th>
<th>PURCHASE ONLY</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHOPPER</td>
<td>Pursue multiple sources and apply to</td>
<td>28%</td>
<td>2.7</td>
<td>48%</td>
</tr>
<tr>
<td>REAL ESTATE AGENT’S BFF</td>
<td>rely on advice from real estate agents</td>
<td>26%</td>
<td>1.0</td>
<td>27%</td>
</tr>
<tr>
<td>BANK LOYALIST</td>
<td>rely on advice from their bank, apply</td>
<td>12%</td>
<td>1.0</td>
<td>13%</td>
</tr>
<tr>
<td>VILLAGER</td>
<td>talk to friends, relatives, co-workers, apply</td>
<td>12%</td>
<td>1.4</td>
<td>7%</td>
</tr>
<tr>
<td>OVERALL</td>
<td>one place</td>
<td></td>
<td></td>
<td>29%</td>
</tr>
</tbody>
</table>

Share of survey population:
- 28% SHOPER
- 26% REAL ESTATE AGENT’S BFF
- 12% BANK LOYALIST
- 12% VILLAGER

Share of respondents using various information sources in deciding where to apply:
- Real estate agent: 67%
- Primary bank: 68%
- Friend, relative or co-worker: 55%
- Previous mortgage lender: 31%
- Online search engine: 36%
- Other: 13%

Average number of sources used:
- 2.7 SHOPER
- 1.0 REAL ESTATE AGENT’S BFF
- 1.0 BANK LOYALIST
- 1.4 VILLAGER
- 1.6 OVERALL

Share of survey respondents applying to more than one lender:
- 48% SHOPER
- 27% REAL ESTATE AGENT’S BFF
- 13% BANK LOYALIST
- 7% VILLAGER
- 29% OVERALL

Percent with mortgage from primary bank:
- 28% SHOPER
- 17% REAL ESTATE AGENT’S BFF
- 66% BANK LOYALIST
- 16% VILLAGER
- 25% OVERALL

*1 A fifth cluster contained those borrowers not otherwise classified.
*2 Other than primary bank.
*3 Other includes link to lender from online real estate database company (e.g., Zillow or Trulia), other websites and other non-websites.

Source: Oliver Wyman Mortgage Consumer Survey 2016.

Copyright © 2017 Oliver Wyman
At first blush, the average purchase borrower seeks information from one or two sources and applies to one lender. On deeper examination, however, there is much more going on below the surface. Specifically, four primary types of borrowers emerge:

- **Shoppers** (28 percent of respondents) on average consulted about three sources of information before making a decision. These sources typically included a realtor, their primary bank, and family and friends. Only half of these borrowers applied for a loan with just one lender.

- **Real Estate Agent’s BFF** (26 percent) relied exclusively on real estate agents and cited no other sources of information in making their decision. Almost three-quarters of these borrowers applied to only one lender.

- **Bank Loyalists** (12 percent) relied solely on the advice of the bank where they had their primary banking relationship. And 87 percent of these borrowers applied only to that lender.
• **Villagers** (12 percent) relied mostly on the advice of friends, relatives, and co-workers (though some also sought additional information from their realtors). More than 90 percent of these borrowers applied to only one lender.

Refinance borrowers initially seem quite similar to purchase borrowers. About 73 percent seek information from one or two sources and apply to only one lender.¹ Three clusters we saw among purchase borrowers (Bank Loyalists, Shoppers, and Real Estate Agent’s BFF) were also found among refinance borrowers. But there were some important differences. There was no significant Villager cluster among refinance borrowers; instead, there were two new clusters: Couch Potatoes and Technophiles.

• **Bank Loyalists** (29 percent of respondents in the refinance category) relied almost exclusively on information from their existing primary bank when preparing to refinance their mortgage. 80 percent of these borrowers applied to only one lender.

• **Couch Potatoes** (24 percent) did not shop at all. While a minority of these borrowers sought information from friends or other sources, they were likely to refinance with their existing lender, and more than 80 percent applied to only that lender.

• **Shoppers** (18 percent) consulted a wide variety of information sources—three on average—and nearly 40 percent applied to more than one lender.

• **Technophiles** (15 percent) relied almost exclusively on the Internet for information. These borrowers were also fairly aggressive applicants, with 42 percent applying to more than one lender.

• **Real Estate Agent’s BFF** (14 percent) relied on information from their real estate agent when making a decision. This category probably includes both borrowers sticking with advice they originally received when applying for their purchase loan and borrowers returning to their original realtor for fresh advice. Almost three-quarters of these borrowers applied to only one lender.

**TOWARD SMARTER CUSTOMER ACQUISITION**

Most lenders with a retail footprint tend to take a simple view of mortgage borrowers. Some view their customers through either a purchase or refinance lens. Others take a government-insured versus jumbo versus GSE lens. Yet others like to distinguish between existing bank customers and other potential borrowers. While these characteristics are important, the distinctions are too coarse to drive an effective sales strategy in today’s mortgage market.

For example, let’s assume you are a bank that has little interest in a broad mortgage market footprint. You are interested in capturing 70 percent of your existing primary bank customers (those with checking and/or savings accounts at your institution) who will get a mortgage in the next 12 months. You are likely to assume that the way to get to these borrowers is through some direct outreach through your branch or direct mail or outbound calls with a unique offer—better pricing, distinctive processing, easy application process, etc. But in this pursuit you will forget that when most borrowers make their decision, they either rely entirely on advice from real estate agents or friends or they shop aggressively because they simply don’t trust you—or anyone else. Your efforts of direct appeal are unlikely to work with many potential borrowers who bank with you.

¹ Oliver Wyman Mortgage Consumer Survey 2016.
Or let’s assume you are a lender that wants to pursue a strategy of aggressive direct-to-consumer sales. If you’re trying to reach purchase borrowers, you could build a world-class call center supported by a distinctive fulfillment operation and a one-of-a-kind digital presence. But how will you win over Shoppers, who won’t trust much of what you say? What about borrowers who rely solely on real estate agents or friends? And if you want refinance borrowers, online-focused non-bank lenders have already beaten you to the punch—can you offer a better hassle-free buying experience for Couch Potatoes and/or more intriguing whiz-bang digital tools for the Technophiles?

A lender that wants to directly influence buying choices clearly needs to understand borrowers’ preferences and habits. The clusters of buying habits described above are one way to get finer and deeper insight into a more efficient and precise customer acquisition strategy. For example:

- A lender’s reputation is clearly significant to borrowers—not just as they perceive it directly, but as it percolates to them through real estate agents as well as the borrowers’ friends and family. In addition to providing a great customer experience that will leave a positive impression and lead to future referrals, what else can lenders do to improve their brand and drive more referrals from influencers?

- Can marketing spend be optimized to target borrowers who are true shoppers? And what type of messaging is likely to influence them? Could a bank report competitors’ rates the way Progressive does with auto insurance?

- For bank lenders, Bank Loyalists require much less effort to acquire than borrowers who find their lender through other routes. Are there opportunities to identify these customers ahead of time and direct the efforts of high-cost sales staff to other prospects?

- More generally, given the different types of buying habits, is there room for sales model differentiation (for example, highly skilled sales agents covering realtors, an aggressive family and friends referral program for Villagers, call-center-based sales model for Bank Loyalists)? Can lenders accurately predict what type of mortgage customer people will be?

- Are buying behaviors correlated with profitability? Will Shoppers’ applications be more expensive to process because they likely have unique needs?

These are just a few of the questions lenders should consider to inform a smarter customer acquisition strategy.
POSTSCRIPT: THE MILLENNIAL QUESTION

In the above analysis, we did not say much about Millennials. We are generally skeptical about the hype that surrounds this topic and the stereotypes we so often see in headlines. While each new generation may display tastes and preferences that differ from the prior generation’s, there is little to suggest that the fundamental psychology of American consumers has changed.

The most important differentiator among Millennials is that most tend to be purchase borrowers, which should not be a surprise. In our research, purchase borrowers under the age of 34 exhibited more or less the same patterns of shopping behavior as those in older age brackets, with a few minor differences.

And when it comes to technology, the difference between Millennials and the broader population is not significant. For purchase loans, Millennials were only slightly more likely than the broader population to begin the mortgage shopping process online (11 percent versus 7 percent) and start the application process online (42 percent versus 36 percent).

Exhibit 4: Cluster analysis for Millennials vs. General population

PURCHASE BORROWERS ONLY

<table>
<thead>
<tr>
<th>Group</th>
<th>Overall Population</th>
<th>Millennials</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHOPPER</td>
<td>35%</td>
<td>28%</td>
</tr>
<tr>
<td>REAL ESTATE AGENT’S BFF</td>
<td>23%</td>
<td>26%</td>
</tr>
<tr>
<td>BANK LOYALIST</td>
<td>9%</td>
<td>12%</td>
</tr>
<tr>
<td>VILLAGER</td>
<td>16%</td>
<td>12%</td>
</tr>
</tbody>
</table>

Note: Clusters do not sum to 100%. Fifth cluster not displayed contains borrowers not otherwise classified.
Source: Oliver Wyman Mortgage Consumer Survey 2016.
Mobile food-delivery apps offer multiple status alerts when we order a $10 pizza. Shipping companies let us not only see every step in a $40 package’s journey but reschedule delivery or redirect the package mid-route. Amazon’s “Mayday” button lets us instantly connect with a live support agent when we can’t figure out how to rent a $2.99 movie. So why do mortgage lenders think that customers are willing to wait patiently for a month or more to learn whether they will be able to finance perhaps the most significant purchase of their lives? Shouldn’t borrowers expect the same level of ease, empowerment, and transparency they enjoy in their more trivial purchases?

Until recently, lenders could plausibly argue that the question was unfair – they couldn’t offer better consumer experience because of the regulations that govern them, the documents they must review, the complexity of the decisions they make, and the thin profit margins they earn. Today, however, customers have had a taste of the digital mortgage experience through providers such as Quicken.

Before the financial crisis, lenders could compete based on their willingness to do riskier loans, fund growth through the private-label securitization market, and aim for efficiency through greater scale. Today, thanks to uncompromising regulation and risk-averse investors, the focus of competition is moving to sales effectiveness, customer experience, and efficiency through better technology and operations. But the steps lenders have taken so far haven’t worked: mortgages are still a people-
intensive business, and its people – specifically sales and fulfillment employees – are less and less productive. Cost per loan continues to rise. Digital capabilities can help reverse this trend by improving productivity and management of operational risk.

We believe digital capabilities will quickly become table stakes for mortgage lenders, especially as third-party providers emerge to offer solutions for the required capabilities, and as investors and guarantors, led by Fannie Mae and Freddie Mac, accept and encourage their use. Given today’s increasing level of competition, we anticipate that digital offerings will quickly evolve to take advantage of already-available technologies in addressing hassles in the application process. (See Exhibit 2.)

**Exhibit 1: Mortgages are a people-intensive business, and the people are becoming less productive**

<table>
<thead>
<tr>
<th>Loan Production Costs</th>
<th>People Related Costs</th>
<th>Decreasing Productivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIGH EXPENSE</td>
<td>RELIANCE ON PEOPLE</td>
<td>DECREASING PRODUCTIVITY</td>
</tr>
<tr>
<td>Loan production costs are high and have been rising.</td>
<td>Majority of production expenses continue to be people-related. Adoption of self service and automation has been limited to-date.</td>
<td>Productivity of employees in the process has been declining.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Expenses</th>
<th>Production Support Employee</th>
<th>Fulfillment Employee</th>
<th>Sales Employee</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>$7,046</td>
<td>15.5</td>
<td>9.6</td>
<td>5.9</td>
</tr>
<tr>
<td>2012</td>
<td>$5,137</td>
<td>22.1</td>
<td>9.9</td>
<td>9.9</td>
</tr>
</tbody>
</table>

Source: Mortgage Bankers Association.

**Exhibit 2: What is the digital mortgage experience like?**

Digital mortgage customers are in for a reasonably painless and quick mortgage buying experience across six key steps:

1. SIMPLIFIED APPLICATION
   - No need to waste hours filling applications and collecting documents

2. PRODUCT SELECTION
   - Knowledge that the right product is chosen for the customer

3. INSTANT CONDITIONAL APPROVAL
   - Increased confidence for home buyers, sellers, and real estate agents

4. TRANSPARENT QUICK JOURNEY
   - Awareness of what is going on and feeling of control

5. HUMAN SUPPORT WHEN NEEDED
   - Support when needed, in the channel of customer’s choosing

6. ELECTRONIC CLOSING
   - Freedom to digest and sign when convenient
1. SIMPLIFIED APPLICATION INTAKE

Gone are the days when the only way to properly underwrite a mortgage was with long application forms and tall stacks of documents. The digital mortgage application doesn’t require much effort on the part of customers; lenders can now obtain most of the information they need through third-party data providers and aggregators. (See Exhibit 3.) For customers who want a mortgage from their principal financial institution, the data contained in customer records should make the process even simpler. In addition to increased customer convenience, lenders get to enjoy lower processing costs, higher data accuracy, and lower operational and fraud risks. Is it any surprise that both Fannie Mae and Freddie Mac accept the use of approaches that offer such an array of benefits? While this paper was being written, Fannie Mae went further with its Day One Certainty program, encouraging the use of trusted-source data by providing representation and warranty relief for the accuracy of such data and calculations made using it by their automated underwriting engine Desktop Underwriter.

When customers do need to provide information, they are presented not with unwieldy forms, but with friendly user interfaces, applications broken up into digestible chunks, and status tracking capabilities to help orient customers and encourage progress. Leading lenders are continuously testing tweaks to their application interfaces to improve customer experience and pull-through.

Exhibit 3: Illustrative diagram of data sources and aggregators in the US (not complete)
2. PRODUCT RECOMMENDATION AND SELECTION ENGINE

Customers can use product recommendation and selection tools to choose the best loan option for their needs, means, and preferences. After answering a series of simple questions (loan purpose, property type, expected timeframe to keep the property, funds for down payment), they are presented with tailored options. Customers can continue down a self-directed path, or generate comparison sheets for discussion with their advisers. The benefits of these tools for lenders include increased customer confidence and a more efficient sales process.

3. INSTANT CONDITIONAL APPROVAL

The moment the customer submits the application, an automated engine can take over and

- aggregate, verify, and analyze information elements across the application and other online data sources;
- identify conditions that may need to be cleared before or after approval;
- provide relevant disclosures;
- conditionally approve the application and lock the rate; and
- set customer expectations about next steps and timelines.

This level of automation is possible mainly for two reasons: machine-readable income and asset data can be obtained from third-party providers and fed into automated decision engines. And current automated valuation models, though not perfect, provide a good enough estimate of property value to enable automated conditional approvals, thereby separating customer underwriting from property underwriting.

Automated approvals give customers a high degree of confidence that they can afford the property they are interested in, and a third-party “seal of approval” that they can show to home sellers and realtors. Unlike the prequalifications and preapprovals of the past, these automated approvals are based on fully validated customer financials. Surprises are uncommon, and there is less anxiety for everyone involved. Some lenders are able to complete the process within mere minutes as opposed to the days and weeks it used to take.

4. TRANSPARENT AND QUICK JOURNEY FROM APPROVAL TO CLOSING

After the mortgage is approved, the digital mortgage customer has a relatively brief to-do list: review the relevant disclosures, conduct an inspection, get insurance on the property, review the lender’s appraisal, pay the application fee, and e-sign relevant documents. The lender, on the other hand, has plenty to do, and the process can take a few weeks. Digital lenders address customer anxiety and frustration during this period by providing transparency. This often takes the form of digital tracking tools that notify customers about progress and any steps they need to take – much the way familiar mobile apps provide updates on a package shipment or pizza delivery. The best tracking tools allow customers to get updates and respond via the channels of their choice, and even allow other anxious parties in the transaction (such as realtors) to monitor status. In providing this level of transparency and communication, lenders typically face two roadblocks:
• The principle of “garbage in, garbage out” applies here: tracking tools frustrate rather than reassure if the underlying workflow information is not reliable. And customers and loan officers are unlikely to adopt new tools if the information they provide conflicts with the information provided directly by loan processors. It may be necessary to update workflow engines before launching a tracking tool.

• Consistency of information across communication channels is key. Otherwise customers are left wondering if the left hand knows what the right hand is doing.

5. HUMAN SUPPORT WHEN NEEDED

Support from live agents is available for customers who would benefit from it. In addition to reacting to customer inquiries, they also reach out proactively to nudge customers forward in the process and maintain momentum. Chat and call-me buttons allow for seamless transitions from the automated process to personal support and then back. Through multichannel communications and co-browsing capabilities, the customer is left with the impression that help is always there when needed and there is no room for procrastination.

6. ELECTRONIC CLOSING

The process concludes with an e-closing, which saves borrowers the trouble of having to meet a closing agent in person, empowers them to review the closing documentation on their own time and address any concerns, and reduces the chances of delays caused by a last-minute error in documentation. Lenders benefit from simplified workflow, reduced costs, improved data quality, and fewer physical documents to manage and store.

WAIT, THERE’S MORE

Aside from questionable experiments with low- and no-doc loans before the financial crisis of 2008, the mortgage experience didn’t change much for a very long time. As recently as mid-2015, processors felt they were cutting-edge if they accepted a scanned attachment in an e-mail. It was a sudden leap from there to a world with digital mortgage offerings from multiple lenders. What will happen next and how quickly?

As we see it, neither the remaining hassles in the mortgage process nor the emerging technologies to address them are mysteries. We see multiple areas where innovation could take place quickly:

Copyright © 2017 Oliver Wyman
1. INCREASED AUTOMATION OF FULFILLMENT

Mortgage fulfillment consists mostly of rule-driven tasks dictated by internal and external policies (such as the rules issued by the Consumer Financial Protection Bureau); most require no application of human judgment. The typical pattern for this work is

- acquire data (for example, gather detailed income information from external data sources, customer submitted documents, IRS tax transcripts, etc.); and
- analyze the data to inform a decision (for example, calculate an income figure based on requirements around how each income component needs to be treated and then calculate a debt-to-income ratio).

Precisely describable, repeatable tasks of this sort are typically easiest to automate.

DATA ACQUISITION TASKS

Use of third-party providers makes it simple to acquire many types of customer data, but most lenders will continue to work with customer-submitted documents either because some information (such as records of some forms of income or explanation letters from customers) are not available from third-party sources or because customers are uncomfortable providing the required permissions and credentials. “Snap and send” capabilities have helped reduce the use of paper in document management by enabling imaged workflows, but typically human processors are required to extract the relevant information from these documents and feed it into databases and workflow tools. Thanks to advances in machine learning techniques and applications (including visual document classification and attribute identification, character recognition, and adaptive learning to replicate tasks currently handled by humans), lenders will be able to use increasingly powerful algorithms in several significant ways:

- Index documents to make it easier to find the right document and know in advance what information it contains (for example, document X is a paystub and should contain data fields related to income).
- Highlight the parts of the document most relevant to the processor (for example, overlay a box to point the user to the salary number on the paystub).
- Eventually, just extract the relevant information and populate the right database and tools through straight-through processing.
- Bring in human processors as needed to deal with cases where algorithms have low confidence (new or unusual document types, extracted values outside expected norms, poorly scanned documents) and to continuously monitor and improve the algorithm.

These technologies are already available from a variety of providers and we expect adoption to increase, possibly once lenders implement third party data ingestion technologies and look for the next big improvement.

The challenge for lenders will be orchestrating processing across three main paths:

- Ingestion of third-party data where possible and allowed by customers.
- Automated extraction and verification of data from remaining paper or scanned documents where possible and cost effective.
- Human processing for the rest.
The missing pieces of the puzzle are to be found in the delivery and analysis of third-party tasks such as appraisals and title checks. Many loan origination system providers and third-party service providers already allow automation of at least some of these tasks. Further automation will likely be enabled as information is standardized across the industry and API usage continues to expand.

**DATA ANALYSIS TASKS**

Data analysis is further along the path to automation than data acquisition, thanks in part to advancements in tools provided by the GSEs (for automated underwriting, collateral underwriting, data verification, etc.) and rules-based workflow capabilities offered by vendors of loan origination systems. At least for conventional lending, most calculations and comparisons are currently handled automatically, and underwriters and processors typically address red flags and additional tasks highlighted by these tools and also rely on their judgment to either conduct additional assessments or to allow exceptions warranted by compensatory factors.

The next step is to aggressively review existing manual tasks to determine why they haven’t been automated already, and whether they can be automated soon given available technologies and emerging possibilities created by new data acquisition methods. (For example, it is possible to automatically review the transactions in machine-readable checking account records to identify unusually large deposits and ask the customer to explain the source of funds.)

It is worth noting that as early as 1988, researchers were experimenting with use of neural network learning systems in underwriting. They reached several significant conclusions:

- After being trained on prior underwriting decisions, the systems could reach a high degree of agreement with human underwriters when analyzing previously unseen examples.
- Where there were disagreements, the system classifications were more consistent with guidelines than the underwriter’s judgment.
- Underwriters in many cases disagreed with one another and even themselves (when presented with the same file twice), and they were inconsistent in their use of guidelines.

A crude but helpful explanation for this performance difference is that systems like this rely not on a single expert, but on consensus among a panel of networks – an approach that would be costly to replicate with panels of human underwriters. These systems are also easier to build than rules-based systems. There is no need to code the thousands of rules involved in underwriting; one merely needs a rich dataset of prior loan files and underwriting decisions for the machine to learn from. Unfortunately, there are also two main challenges:

- It is not easy to precisely explain and justify decisions made on each loan without the ability to point to specific rules in the system.
- As underwriting requirements change and new requirements are introduced (for example, by internal credit policy teams, investors, insurers, and guarantors), the data used for system training becomes obsolete, and further training will be needed.
Given the challenges, these systems are unlikely to completely replace human underwriters anytime soon, and rule-based tools may have long lives ahead of them. Nevertheless, there are opportunities to enhance the use of human underwriters with machine learning systems, using them, for example, to classify loan files for skill-based routing, stress-test rule-based systems, or build automated second-look processes that look for disagreements between the system and human underwriters.

2. ARTIFICIALLY ENHANCED FRONT END FOR SALES AND SERVICE

We recognize the value of human cognition, empathy, and communication abilities across the marketing, sales, and service process, even for digital mortgages in “self-service” channels. Technology and analytics can help maximize that value by augmenting human talent, improving employee productivity and effectiveness, and directing employees to activities where they can add the most value.

If you have experimented with digital assistants on your mobile phone, you’re already familiar with some of the advances being made in natural-language customer communication. Speech recognition capabilities have come a long way, and some machines now nearly equal humans in transcription accuracy. Text-to-speech systems are sounding more natural. Providers are working with talented communicators from places like Pixar and The Onion to inject a little color in conversations and make them sound less robotic. Given how dry and scripted many call center conversations are even when conducted live, it will perhaps not be too difficult for bots to provide similar or better experiences in some conversations.

These developments suggest additional opportunities to artificially enhance the sales and service front end:

• Develop more impactful outbound marketing and service communications.
• Rely on text and voice bots to address simple customer queries, freeing employees to address more complex issues – improving the experience for customers and employees alike.
• Develop communication support tools and training to help employees follow identified best practices and have more impactful conversations.
• Flag and escalate conversations that follow unfavorable patterns.
• With additional learnings over time, start to personalize automated conversations, proactively engage customers when appropriate (for example with tailored reminders through the right time and channel, preemptive notification, and recommendations about upcoming issues).

3. RISK AND CUSTOMER-CENTRIC WORK

Lenders’ work is already marked by a myriad of variations based on such factors as customer situation and needs, property characteristics, employee skill levels, differences in investor requirements, and local and state-level rules. As the use of software robotics increases, we see opportunities for lenders to employ smarter workflow management engines to better align their work with the risks they face. Some examples:

• Deploy different tiers of fulfillment and underwriting scrutiny based on level of risk as judged by GSE tools or internal risk assessment engines.
• Route riskier and more challenging loans to more skilled employees.
• Schedule and sequence work based on risk of missing regulatory deadlines or failing to meet customer expectations.

• Support quality control and skill assessment by dual-routing work and comparing the results produced by employees of different skill levels and software bots.

We would also expect the industry to develop creative ways to combine technology and humans to define new, intermediate levels of scrutiny in activities such as appraisals: why shouldn't some combination of satellite images, valuation algorithms, and lower-cost home inspectors equipped with smart tools replace expensive and hard-to-find appraisers when risks are low?

Customer choice also has a role in determining work that needs to be done by lenders. Self-service options are already starting to replace some sales and processing tasks, such as document gathering, product selection, and status tracking. We expect this trend to continue. Furthermore, expect the industry to offer customers choice in what type of support they need and how much they are willing to pay for it (for example, speak with a bot now or wait 10 minutes for a representative, pay additional fees for two-week premium processing).

4. EXPANSION BEYOND THE MORTGAGE TRANSACTION

As customers and their influencers come to rely more on self-service tools and learn to trust automated recommendation algorithms, lenders are likely to move beyond the mortgage transaction in their quest to deliver and generate value in the home-buying journey. This may take many forms:

• Home investment advisory tools will provide not only affordability calculations, but calculations and automated advice to help assess the home purchase as an investment, looking at factors such as the customer’s broader investment profile and risk appetite, home price expectations, and ownership timeline.

• Real estate broker and home builder tools will enable customers to get instant preapprovals at an open house, start an application that they can complete later, and provide permission for a third party to receive updates during the process.

• Recommendation engines will suggest and even preapprove complementary financial services products during or after the mortgage process, taking advantage of the information about the customer revealed during the application process. The engine might recommend a checking account to take advantage of branches and ATMs near the new property, a home equity line to finance renovations, or credit cards to finance smaller purchases.

Many of these ideas, which are being tested by various institutions, require changes in customer and influencer behavior, and some require closer scrutiny from a compliance perspective, so we view these as small bets that lenders could place to differentiate themselves.
AVOIDING FAILURE

Many lenders recognize the importance of building digital mortgage capabilities into their business. However, most of those lenders also appear to be struggling for a number of reasons. Some have launched initiatives to build a front-end customer facing portal but it is entirely disconnected from legacy technology. Some have launched wholesale LOS replacement efforts but have ignored the newest technology focused on giving customers a great experience. And some lenders are excited about the new whiz-bang technology, investing millions, but have completely ignored a critical fact: the technology must fit hand-in-glove with a better process that’s operated by people.

Those lenders who seem to be deploying digital technology effectively are doing several things right. First, they are abandoning the rudimentary idea and false choice of buy versus build. The more successful lenders have the in-house capabilities to piece together technologies from niche providers as well as their own technology. Second, these lenders have shifted towards a modular IT architecture with key attributes that include API-based connectivity, service oriented architecture, cloud-hosted platforms and configurable business rules. These attributes allow lenders to reuse solution components, accelerate new capabilities, and reduce overall cost. Third, the more successful lenders use “test and learn” through agile delivery. Successful case studies of agile development hinge on breaking down product and technology silos, rapidly building and launching minimally viable products and evolving them continuously. Lastly, the more successful lenders have pursued holistic and integrated transformations that tightly integrate digital enablement with changes to process design, process management, and culture.

Who will be the future leaders? How long will it take the rest of the industry to catch up? What new opportunities will lenders discover to improve the efficiency, security, and profitability of their business, while meeting new and ever higher customer expectations?

Exciting times await!
Just like the sci-fi enthusiasts who for years have dreamed of levitating skateboards, jetpacks, and “Beam me up, Scotty,” mortgage executives have long had their own futuristic vision: the e-mortgage. Since the early 1990s, voices in the industry have proclaimed that the paperless mortgage was just around the corner. And yet more than 20 years later, many mortgage institutions still rely on paper and green screens.

Today, thanks to new technology, the emergence of FinTechs, and the competitive origination market, a breakthrough finally seems imminent. Mortgage applications are becoming paperless, underwriting is increasingly automated via data-rich rules engines, and electronic closing has become a reality.¹

What should mortgage institutions focus on in this new technology-enabled environment? What are the benefits that really matter? What technological capabilities should they pursue? We interviewed more than 30 mortgage originators to answer these questions. We found that while technology can be employed at many points along the mortgage origination customer journey, a few distinctive capabilities emerge from the pack.

¹ Source: Fannie Mae, Mortgage Lender Sentiment Survey, Mortgage Technology Innovation, 26 July 2016.
1. WHY TRANSFORM TECHNOLOGY IN MORTGAGE?

The mortgage industry feels ripe for disruption. On the one hand, the environment has become increasingly challenging for lenders, with low interest rates, projected decreases in volume, rapidly evolving client needs, and increased regulation. On the other hand, the mortgage origination process hasn’t fundamentally changed in decades. Recent entrants like Quicken have taken share quickly with their new capabilities and focus on client experience. New players are looking to enter, and incumbents are rapidly changing their technology stacks, hoping to protect their turf. In our research, technology was viewed by mortgage institutions as the foremost enabler of change for four important reasons:

1. **Client experience:** Clients increasingly demand a mobile-centric, omni-channel mortgage origination experience. And even institutions with a high-touch relationship-based approach are finding they need to provide relationship managers with better tools and technology while also offering customers more choices in how they interact with lenders.

2. **Regulatory compliance:** Mortgage institutions must comply with several new regulations, the most recent being the TILA/RESPA Integrated Disclosure rule (TRID) and the Qualified Mortgage rules (QM). TRID, in particular, is viewed as highly invasive and costly for lenders to comply with. Lenders know that new regulations will continue to be a burden, and the only way to comply quickly and efficiently is to have technology that can easily be configured to comply with new regulatory needs.

3. **Efficiency:** The current environment of low interest rates, coupled with an anticipated decline in mortgage volume over the next couple of years is making it difficult to lend profitably. With limited opportunity to raise prices, lenders are being forced to cut costs. Automation and straight-through processing are the keys to enabling the next wave of improved efficiency.

4. **Cycle time:** Clients increasingly want a faster mortgage application process, faster decision making, faster commitments, and faster time to close. With most of the low hanging fruit already picked, technology is now the most promising path for the next wave of cycle time improvement.

New technology has the power to transform mortgage origination. But where and how are mortgage originators using it?

**Exhibit 1: Desired attributes and technology-enabled capabilities**

<table>
<thead>
<tr>
<th>Desired attributes</th>
<th>Technology-enabled capabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digitally centric (for some borrowers)</td>
<td>Digital portals</td>
</tr>
<tr>
<td>Minimal information from client</td>
<td>Direct data aggregation</td>
</tr>
<tr>
<td>Omni-channel convenience</td>
<td>Mobile image capture</td>
</tr>
<tr>
<td>Instant (or near instant) decision at POS</td>
<td>Cross-channel data synchronization</td>
</tr>
<tr>
<td>Superior risk selection</td>
<td>Digital document management</td>
</tr>
<tr>
<td>Faster closing</td>
<td>Automated rules engine</td>
</tr>
<tr>
<td>Minimal hassles</td>
<td>Automated valuation models</td>
</tr>
<tr>
<td>Paperless</td>
<td>Auto clearing of loan conditions</td>
</tr>
<tr>
<td>Robust trails and controls</td>
<td>eClosing</td>
</tr>
<tr>
<td>Digital portals</td>
<td>Loan tracker</td>
</tr>
<tr>
<td>Direct data aggregation</td>
<td>Contextual alerts and notifications</td>
</tr>
<tr>
<td>Mobile image capture</td>
<td>Advanced workflow</td>
</tr>
</tbody>
</table>

*Source: Oliver Wyman research and analysis.*
2. THE EMERGING FUTURE OF MORTGAGE ORIGINATION

Our research pointed to a few specific areas where technology can help create a distinctive client experience, while also helping lenders with other important priorities such as regulatory compliance, efficiency, and cycle time.

A. APPLICATION INTAKE

Clients want the application process to be easy. “Ask me for as little information as possible,” they say. “Don’t ask me for the same information more than once.” And, “Make it easy for me to provide what you need.” To meet this demand, mortgage institutions are turning to four key technology-enabled capabilities:

- Web portals and mobile apps make it convenient for clients to provide information. If the client already has a relationship with the lender, the portal can automatically populate the application with basic demographic information. In addition, applicants can securely upload documents digitally.

- Direct data aggregation, a recent development, enables lenders to pull client data such as income, taxes, and property information from verified third parties, significantly reducing the borrower’s effort in assembling documentation, while also improving the quality of data.

- Mobile image capture allows clients to take a smart-phone photo of required borrower documentation and transmit it easily and securely to their lender.

- Cross-channel data synchronization allows clients to start the application process on one channel and complete it on another.

These capabilities vastly simplify the mortgage application process. Borrowers provide minimal required information, either digitally or via a quick conversation with their relationship manager. Lenders pull data on income, taxes, property information, etc. directly from verified sources. If further documentation is needed, the borrower can easily and securely transmit an existing digital document using an intuitive digital portal, or take a picture of a physical document and upload it securely from a mobile device. And if clients need to temporarily suspend their application before completion, they can resume it on a channel of their choice.

B. DECISION MAKING

Clients want the decision making process to be fast. Lenders want speed but they also want to truly understand the underlying risk of the applicant in as automated a fashion as possible, and price the loan optimally. And, of course, lenders want efficiency and automated compliance. To accomplish these goals, they are turning to three key technology-enabled capabilities:

- Digital document management allows lenders to automatically digitize paper documents (if any), use pattern recognition software to automatically recognize the document type, use OCR to intelligently extract and deliver data to the underwriter to enable easy verification or decision making, and automatically flag missing or inconsistent data. Storage of documents and extracted data meets the latest Mortgage Industry Standards Maintenance Organization (MISMO) and other industry standards, aligns with future investor and secondary marketing requirements, and enables regulatory compliance.
• **Automated rules engines** compare borrower information to criteria in a pre-architected decision engine and if conditions match those in the engine, provide an automated instant (or near instant) decision. Exceptions are flagged for underwriters to easily review and decide on.

• **Automated valuation models** enable lenders to estimate factors such as property value without waiting for an official appraisal or inspection. Because appraisals can take up to a week to process, and that’s only after an appointment has been scheduled, valuation estimates based on advanced algorithms and proprietary property value databases can help provide a conditional underwriting decision and significantly reduce cycle time.

These capabilities dramatically reduce the need for lenders to manually verify data back to source documents and enable automated decisions for a potentially large portion of the portfolio. Borrowers get an instant or near-instant conditional decision. Codified elements of decision-making are fully automated, enabling underwriters to focus on confirming decisions and reviewing exceptions.

---

**Exhibit 2: Benefits of new mortgage technology capabilities**

<table>
<thead>
<tr>
<th>ORIGINATION STEP</th>
<th>CAPABILITY</th>
<th>CLIENT EXPERIENCE</th>
<th>REGULATORY COMPLIANCE</th>
<th>EFFICIENCY</th>
<th>CYCLETIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Application intake</td>
<td>Digital portals</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Direct data aggregation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mobile image capture</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cross-channel data synchronization</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B Decision making</td>
<td>Digital document management</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Automated rules engine</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Automated valuation models</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C Processing and closing</td>
<td>Auto clearing of loan conditions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>eClosing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Loantracker</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Contextual alerts and notifications</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Advanced workflow</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Oliver Wyman research and analysis.

Copyright © 2017 Oliver Wyman
C. PROCESSING AND CLOSING

Clients want no surprises between decision and closing. They also want fast closing and clear visibility into the status of their mortgage. Lenders want speed, efficiency, and automated compliance. Mortgage institutions are accelerating processing and closing with five key technology-enabled capabilities:

- **Auto clearing of loan conditions** allows lenders to automatically clear conditions for the borrower by using data directly from source, for example, checking the borrower’s bank balance (with the borrower’s permission) to ensure that there is adequate balance to cover closing requirements. This reduces borrower effort while accelerating time to close.

- **eClosing** allows borrowers to close a mortgage virtually using a web-based closing and title processing suite. eClosing infrastructure includes a secure digital portal for documents, eSignatures that allow all parties to virtually sign documents, and robust security and audit trails that are admissible in a court of law.

- **Digital loan trackers**, much like the famous “FedEx tracker,” allow borrowers to track the loan through its life cycle, so that they know exactly where they are in the process and have predictability and visibility into closing dates. While this capability is typically used throughout the loan life cycle, it is particularly valuable during this stage because of borrower sensitivity to timely closing.

- **Contextual alerts and notifications**, in coordination with the loan tracker, trigger messages to the borrower via a channel of their choice, letting them know when the status of their loan changes or if something is needed from the borrower. The borrower can choose the types of alerts they want to receive to suit their preferences.

- **Advanced workflows**, driven by data and analytics, are designed to flag important information to be reviewed or processed and minimize effort on the part of processors. New workflows are highly adaptive, allowing lenders to respond quickly to new processes or procedures mandated by regulators. Again, this capability is used throughout the loan life cycle but is particularly valuable at this stage given the various moving pieces that need to come together to enable timely and successful closing.

Processing and closing a mortgage using these capabilities leads to a faster, simpler, and more transparent process. Borrowers expend less effort because conditions are cleared on their behalf and contextual information is sent to them on a real-time or near-real-time basis. eClosing significantly reduces the effort to close a loan, eliminating the need to schedule and conduct a multi-hour, multiparty in-person mortgage closing. And robust workflow leads to higher efficiency while making it easier for lenders to comply with existing and upcoming regulation.

As indicated in the above table, these new technology capabilities drive improvements across the competitive dimensions viewed as most important by mortgage institutions. By leveraging these capabilities, lenders have been able to drive down decision cycle times from days to minutes, and have been able to shave several days off decision-to-close cycle time. Mortgage unit costs can be driven down by double-digit percentage points. Regulatory compliance becomes vastly more efficient. And most important, clients are more satisfied, increasing pull-through rates and improving the odds of future cross-sell.
Exhibit 3: Target state mortgage technology architecture schematic

### NEW CAPABILITIES

<table>
<thead>
<tr>
<th>A</th>
<th>Application intake</th>
<th>B</th>
<th>Decision making</th>
<th>C</th>
<th>Processing and closing</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>Digital portals</td>
<td>B1</td>
<td>Digital document management</td>
<td>C1</td>
<td>Auto clearing of loan conditions</td>
</tr>
<tr>
<td>A2</td>
<td>Direct data aggregation</td>
<td>B2</td>
<td>Automated rules engine</td>
<td>C2</td>
<td>eClosing</td>
</tr>
<tr>
<td>A3</td>
<td>Mobile image capture</td>
<td>B3</td>
<td>Automated valuation models</td>
<td>C3</td>
<td>Loan tracker</td>
</tr>
<tr>
<td>A4</td>
<td>Cross-channel data sync</td>
<td>B4</td>
<td></td>
<td>C4</td>
<td>Contextual alerts and notifications</td>
</tr>
</tbody>
</table>

#### MORTGAGE REFERENCE BUSINESS ARCHITECTURE (ILLUSTRATIVE)

**Presentation layer**
- **Online portal**
- **Mobile/tablet**
- **Borrower**
- **Authorization and Security**
- **Loan manager**
- **Content management service**
- **Reporting service**
- **Guideline templates**
- **Alerts and notifications**
- **Workflow management**
- **Enterprise service bus**
- **Data warehouse**
- **Operational data store**
- **Enterprise image archive/repository**

**Common tools**
- **User, Security role provisioning**
- **Authorization and Security**
- **Lead management and CRM service**
- **Pricing and eligibility engine**
- **Automated Underwriting system**
- **Queue and task routing manager**
- **Alerts and notifications**
- **Workflow management**
- **Enterprise service bus**

**Core Enterprise Lending System components**
- **Income/credit service**
- **Appraisal service**
- **Title service**
- **Flood/insurance service**
- **Condition behavior, routing templates**
- **Legal and compliance service**
- **Document management, generation, and imaging service**
- **Vendor management and vendor integration platform**

**External partners**
- **Appraisal vendors**
- **Credit vendors**
- **Flood vendors**
- **Title vendors**
- **Fraud vendors**
- **Compliance vendors**
- **Income data vendors**
- **AVM vendors**
- **Loan prospectors**
- **Desktop underwriters**
- **Due diligence**

**Source:** Oliver Wyman research and analysis.
3. THE TECHNOLOGY TRANSFORMATION PATH

Most mortgage institutions face a few fundamental challenges in building out the technological capabilities described above. They are often saddled with legacy platforms that make technology change hard and expensive. In our interviews with mortgage originators, we heard some common themes:

- About 40 percent of the mortgage originators we interviewed have changed their loan origination system (LOS) recently or are considering doing so. Their primary reasons are to reduce the cost of technology while improving the agility of the platform, making it cheaper and faster to keep up with changing client expectations and regulatory requirements.

- Almost 60 percent do not use the built-in borrower portal capability in their LOS, opting instead for a best-in-breed provider or building a portal themselves.

- Similarly, about 55 percent do not use the built-in document management capability in their LOS, opting instead for specialist solutions.

So, yes, LOS replacements will continue to be in the cards, particularly for mortgage originators with legacy platforms. But most of the emerging mortgage capabilities we described earlier are best situated outside the traditional LOS. The exhibit below shows how mortgage architecture needs to evolve to accommodate these new capabilities.

What’s the best path to the new set of mortgage capabilities? In our discussions with mortgage originators, here is what we heard:

- **Buy and build:** Rather than a buy-versus-build decision, future mortgage technology capabilities will require institutions to buy and build solutions. Third parties beyond the traditional LOS vendors have developed niche solutions in areas like digital portals, direct data aggregation, and document management. These vendor-provided solutions can reduce cost and time to market. But to derive the most value from them, mortgage institutions will need to focus build efforts on (a) configuring the various pieces of the solution to deliver differentiation to the client, aligned with the lender’s target client segment and value proposition; (b) integrating these solutions to various internal and external systems to deliver a seamless client experience journey; and (c) configuring, customizing, or building client-facing digital interfaces where opportunity for differentiation is most pronounced.

- **Modular IT architecture:** For mortgage institutions to drive down the cost of technology while making it more adaptive, architecture evolution is a must. Key attributes of a good target state architecture include API-based connectivity, service-based architecture, cloud-hosted platforms, configurable business rules, and robust data architecture that brings together the full set of “golden” information into a single, unified data view. This type of architecture enables lenders to reuse solution components, accelerate the build or addition of new capabilities, and reduce the overall cost of technology.

- **Test and learn:** A number of mortgage institutions we talked to have achieved strong results by employing agile development methodologies, breaking down product and technology silos, rapidly building and launching minimally viable products (such as borrower portals) and continuously improving them based on client feedback. This approach allows the mortgage institution to develop new capabilities more rapidly and to bring them into closer alignment with client needs. Agile development requires new skills in both product and technology, plus a nimble approach to decision making that puts more accountability on the delivery team.
Mortgage institutions that have pursued these practices increase the odds of achieving a successful technology transformation, accelerate the introduction of new capabilities, and reduce the overall cost of technology by as much as 20 to 30 percent.

**CONCLUSION**

The use of technology in mortgage origination is at an important inflection point. Technology capabilities are available to transform the client experience, but they have not yet been developed into off-the-shelf, end-to-end solutions. It is an ideal time for mortgage institutions to create a distinctive way of interacting with their customers, differentiating themselves from their competitors, while also making their internal operations more efficient and adaptable to changing regulation. With the appropriate use of technology, a “wow” experience for consumers doesn’t have to be incompatible with reduced costs, accelerated processing, and improved compliance. The winners in the current environment will be the ones that leverage technology to work both sides of the equation—consumer-facing and internal operations—to stand out from the crowd.
After nearly a decade of Herculean efforts and difficult decisions, mortgage servicing leaders are reaping their reward: another round of hard decisions. This time the battle is for efficiency. On the one hand, it is clear that the industry cannot afford to support the servicing model it put in place to respond to the financial crisis. On the other hand, almost no one likes the idea of cutting back processes, standards, and controls—basically re-creating the dangerous status quo of 2007. What is a servicer supposed to do?

The mortgage servicing industry has changed tremendously over the past decade. While delinquency rates have steadily decreased since the height of the financial crisis, direct mortgage servicing costs have risen at a compound annual growth rate of 14 percent from 2009 to 2014, according to data from the Mortgage Bankers Association. Federal, state, and local government regulation have increased, regulatory scrutiny and enforcement have intensified, and compliance has become a major priority. As a result, the average annual direct cost to service a loan has ballooned from $55 in 2007—pre-crisis—to more than $170 in 2014.1

Now, as the housing market and the regulatory environment stabilize, the industry is emerging into a new steady state. A spate of transactions have also rebalanced servicing portfolios, with nonbanks’ share more than tripling from 7 percent in 2012 to 24 percent in 2015.²

In this environment, servicing leaders have a new concern. Where just a few years ago, the priority was compliance at all costs, today the focus is on profitability as well. The environment, however, doesn’t give servicers many tools to affect profitability. Servicing fee revenue schedules are stable, gains and losses on the valuation of mortgage servicing rights are difficult to manage (particularly in volatile market conditions), and the current interest rate environment keeps interest income low. The cost of servicing did decline for many participants in recent periods primarily because delinquency rates have fallen to less than half of peak rates.³ (Delinquent loans cost more than ten times as much to service than regular loans.⁴) But additional reductions in cost are necessary to achieve profitability goals and create a sustainable model.

This paper shows how to reduce servicing expenses without jeopardizing stability. The journey begins with the development of a cost fact base that allows servicing leaders to tackle their largest cost types—workforce and technology—and improve their performance in critical servicing activities that tend to be cost hot spots—quality assurance and customer service.⁵ The payoff for servicers? A sustainable model for mortgage servicing that frees resources for other investments including origination growth.

DEVELOPING AN ACTION-ORIENTED VIEW OF COSTS

Developing and maintaining a detailed view of costs is a crucial step in reducing servicing expenses. Cost transparency highlights opportunities for greater efficiency—what costs should change, how they should change, and how the changes will affect the rest of the business.

To make cost data truly actionable, servicing leaders need to know:

• Who owns which costs?
• What drives specific costs?
• How long it will take to bring about change?

Many servicers will find it useful to invest in a new cost framework, separating servicing costs by type, then categorizing them according to a plain language taxonomy of servicing activities. A framework of this sort enables a clearer understanding of overall servicing costs and allows cost owners to drill down into each servicing activity to better understand the composition of its costs. Whenever possible, the cost framework should draw on existing information sources such as human resource databases and technology application logs. By linking the cost framework to the general ledger, it can be monitored and updated over time.

² U.S. GAO. “Nonbank Mortgage Servicers,” March 2016. (Percentage is of unpaid principal balance).
³ Delinquency Rate on Single-Family Residential Mortgages, Federal Reserve Bank of St. Louis; 11.26% in Q1 2010 and 5.17% in Q4 2015.
⁵ We do not focus on costs related to default servicing in this paper. Although they remain a major driver of the overall cost base at most institutions, they have been heavily scrutinized since the crisis.
Exhibit 1: Effective servicing cost framework example

<table>
<thead>
<tr>
<th>COST TYPES</th>
<th>EXAMPLES</th>
<th>CATEGORIZATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel-related</td>
<td>Salary, benefits for servicing employees</td>
<td>• Map to servicing activities (e.g. customer service, quality assurance) to expose redundancies or overlaps across roles</td>
</tr>
<tr>
<td>Ancillary</td>
<td>Equipment, professional fees, vendor payments</td>
<td>• Map to servicing activities when possible (e.g. most outsourcing-related costs)</td>
</tr>
<tr>
<td>Technology</td>
<td>Hardware, software, employee tech</td>
<td>• Categorize in appropriate account groups</td>
</tr>
<tr>
<td>Support costs</td>
<td>Risk, finance, compliance, human resources</td>
<td>• Categorize by whether the cost is servicing-specific or shared by other owners (e.g. some servicing applications at banks)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Map costs to a taxonomy of activities provided by support functions</td>
</tr>
<tr>
<td>Centrally managed</td>
<td>Occupancy, special initiatives, office of the CEO</td>
<td>• Segment by account</td>
</tr>
<tr>
<td>costs and true overhead</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*1 Cost ownership and characteristics are not shown on the framework due to space limitations, but they are vital for cost management efforts.

Exhibit 2: Customer service breakdown cost reporting example

Illustrative

Breakdown of costs by activity
- Respond to customer contact center inquiries
- Investigate escalations
- Update customer records

Cost per loan
- Current loan loan
- Delinquent loan loan
- Average
- Industry benchmark

Characteristics
- Timeframe to change cost
  - Under 1 year: 75%, 1 year or more: 25%
- Relationship to loan vol.
  - High: 60%, Med: 15%, Low: 25%
Effective cost reporting avoids both paralyzing granularity—costs do not need to be accurate to the tenth of a penny to inform decision-making—and prevents overly simplistic conclusions. For example, we have seen servicers try to shrink their loan portfolios to lower costs without taking into consideration how significant fixed costs are in mortgage servicing.

Armed with an effective cost framework and reporting, cost owners begin to manage costs. They can:

• Compare costs to benchmarks to identify hot spots.
• Identify overlap in activities across servicing team and support functions.
• Identify owners who are empowered to change costs and hold them accountable.
• Assess the costs associated with performing activities in-house and locally versus offshoring or outsourcing.
• Create scenarios to analyze how costs will change in response to changes in portfolio volume or how long they will linger if an activity is terminated.

The remainder of this paper provides starting points and recommendations for common cost issues that servicers may choose to address.

**OPTIMIZE THE WORKFORCE**

Payrolls grew sharply during the financial crisis and the period immediately following it, as companies staffed up with skilled and highly compensated workers to handle skyrocketing delinquency and new regulatory requirements. Although mortgage servicing workforces shrank by 15 percent between 2012 and 2014, these efforts focused mainly on easy-to-cut costs. More challenging areas of spend such as bloated management structures have proven hard to address. As a result, at most companies, personnel cost will represent the single largest opportunity to reduce costs, and the workforce still typically accounts for 30 to 40 percent of total servicing costs today.

The target-state operating model, including the expected size and composition of the portfolio, should guide personnel cost management. Most servicers have (or should have) capacity models to translate this target state into specific role and site requirements. These models should account for fluctuations in staffing needs across days of the week and weeks in the month. In most cases managerial layers can be reduced, roles consolidated, and spans of control expanded. In some cases, companies can reduce overall skill level of the workforce commensurate with the work being performed and reconsider the mix of specialists and generalists. Servicers can increase workforce flexibility by training teams on more than one set of tasks.

Reducing the number of locations can lower costs while increasing efficiency. We have seen servicers whose vacant rent costs amounted to more than 50 percent of their occupied rent costs because they maintained numerous small sites with shrinking numbers of staff. Running subscale operations in numerous locations also impedes knowledge sharing and makes flexible team staffing more challenging.

---

6 At a typical bank servicer, the personnel-related and ancillary costs will be owned by the servicing executive while the remaining costs will be allocated through a corporate allocations process.
7 Mortgage Bankers Association 2015 Servicing Operations Study.

Copyright © 2017 Oliver Wyman
Servicers should be alert for other common issues that require changes to the workforce and operating model:

- Duplicative responsibilities across roles and “shadow functions” in the servicing business that replicate enterprise functions’ responsibilities.
- Underused shared-service capabilities.
- Organizational silos that inhibit beneficial collaboration.
- Activities whose original purpose is no longer required, for example, unnecessary reporting.
- Offshoring and outsourcing opportunities, and conversely, prior offshoring and outsourcing decisions that have failed to deliver expected benefits.
- Excess project management support.

Thoughtful performance management can be a boon to workforce efficiency. Beneficial practices include individual productivity targets and metrics supported by insightful reporting. (See Exhibit 3.) Regular campaigns and competitions with well-defined incentives can improve worker performance. For additional impact, incentive plans can be designed to support servicer goals. Within these plans, agents can be grouped by performance, training plans can be developed to reduce dispersions, and best practices can be shared from top performers. Given complex compliance requirements in some elements of servicing, it is important to include work quality as a performance indicator and avoid misaligned incentives.
EVALUATE TECHNOLOGY NEEDS AND CAPABILITIES

At the typical servicer, about 15 percent of total costs go to direct and allocated technology. One major reason is the array of mortgage servicing software applications that have emerged in the past decade to help servicers do their increasingly complex job. It is possible to find individual companies that employ 200 or more servicing applications at an average cost per application of several hundred thousand dollars. As a result, application consolidation offers a significant opportunity for saving money and increasing efficiency. Process digitization tools are another meaningful opportunity.

Communication between business and technology partners is often difficult, and less-than-successful communication is the root cause behind many failed cost management efforts. To lay the groundwork for technology cost management, servicers can prepare an inventory of applications: their costs, their purpose, and whether they are shared with other users outside of mortgage servicing. By linking applications to a taxonomy of servicing activities, the application inventory uses a shared language for collaboration and empowers business partners to provide guidance to technology partners.

Underused applications should be consolidated or retired to eliminate direct and indirect maintenance costs. Technology solutions put in place during the crisis that continue to play important roles should be evaluated; in many cases they may not be fully integrated with other systems yet and require manual work that should be automated.

Although a primary goal is to streamline and reduce technology complexity, in select areas, investments in new technology can accelerate the process of becoming more efficient. These often include tools that digitize paper-based processes, enable customer self-service, and enhance interactions with customers, such as user interfaces, knowledge management, and automated call-back. Issue logs and quality assurance data can identify the processes that are causing pain points so they can be prioritized for technology investment.

ENSURE QUALITY WITH AN AGILE APPROACH

In the years since the financial crisis, many companies have adopted “belt and suspenders” approaches to servicing mortgages—expanding quality assurance capabilities within the servicing function while also beefing up corporate risk and compliance oversight functions. But doubling up on controls and quality checks is expensive, and it can lead to a false sense of security.

An alternative approach—one already in use at innovative companies—is to manage risk through agile methods that lead to both more effective controls and more efficient operations. Typical opportunities include using electronic checklists to monitor quality at key points; reducing overlap in roles and responsibilities between first and second lines of defense; and creating performance management metrics, targets, and rewards to incentivize quality.

---

10 Oliver Wyman observations.
A more agile approach to manage quality also takes a hard look at controls through a two-part inventory process:

1. Is the control needed?
   - Has an underlying risk been clearly identified and articulated?
   - Is the risk material?
   - Has the option of tolerating the inherent risk been considered and deemed insufficient?
   - Has a risk-management objective been articulated? What would be an acceptable level of residual risk to remain?
   - Have approaches for the risk aside from treatment been exhausted?
   - Have treatments aside from controls been exhausted?

2. Does the control require improvement?
   - Is there a clearly articulated control objective—for example, the impact the control will have in reducing the risk to an acceptable residual level?
   - Has the control been designed to generate artifacts to facilitate testing and assurance by second and third lines of defense?
   - Does the control as designed directly reduce risk to an acceptable residual level, beyond the impact of other treatments already in place?
   - Has the control been assigned a single accountable person who owns the control and is empowered to change it?

Once an agile design for quality is in place and a baseline assessment of controls has been completed, in-process continuous improvement is key to maintaining an effective risk-based compliance and quality assurance program. The process starts with simple, effective reporting to identify issues and skilled analysts to assess root causes. It also requires empowering employees with the tools, capabilities, and authority to address root cases of breakdowns, eliminate rework, and share best practices on an ongoing basis.

TRANSFORM CUSTOMER SERVICE

Customer service is typically one of the highest-cost servicing activities. A core set of best practices can significantly increase servicers’ ability to deliver effective customer service while managing costs. There are two basic objectives: to reduce the need for costly agent-based customer service and to deliver agent-based service more effectively. To support both objectives, customer service issues should be tracked and their root causes identified.

A key tool in reducing the need for agent-based service is to invest in strong self-service tools—then lead customers to use them via incentives or “nudges”. Self-service tools can be modified on an ongoing basis to address root causes of customer issues. For instance, if a new regulator-mandated disclosure is driving call volume, the voice recognition system can start with a related prompt: “Are you calling about the letter you just received? Press one to learn what it means for you.”

Highly effective communication can preempt issues that lead customers to reach out to agents. Common situations such as changes in escrow payments tend to generate significant confusion (unsurprising given many servicers’ unclear escrow statements). The best communication follows simple guiding principles.
BEST PRACTICES  |  EXAMPLE
---|---
Give perspective  |  • “Most homeowners’ insurance premiums change every year based on their insurance companies’ policies”
Keep it clear and simple  |  • “Here’s a calendar with the deadlines for your modification highlighted on it”
Guide to the right next step  |  • “If you would like to learn more about how escrow payments are calculated, please visit this website”
Show partnership  |  • “You’re a great customer, and we want to make sure you know when your payments are due going forward”

Some customer service needs cannot be fully automated. What remains must be dealt with effectively and efficiently to minimize costs. Servicers should aim to resolve as many issues as possible on the first contact. Customer service agents need sufficient training and authority to resolve issues at the first call. First-call resolution rates should be recorded and monitored to ensure ongoing improvement, and root causes of common issues should be eliminated. Many servicing operations already have access to high-quality tools and training in their teams that specialize on delinquent mortgages, where regulatory concerns make efficient, effective service a high priority – access to these tools and trainings can be expanded to improve agent performance overall.

Another powerful tool to increase the effectiveness of customer service is customer segmentation, which is often absent in mortgage servicing, even at institutions that embrace it in other areas. With effective segmentation in place, servicers can tailor their approach to service delivery. For example, one large servicer used predictive modeling to identify “high touch” loan modification applicants who generated twice the normal number of calls and complaints; it then adapted the service model for these customers to pre-empt issues with more proactive outreach. Segmentation can also identify customers for whom it is strategic to provide “white-glove” service, such as customers with significant holdings of other products with a bank servicer. Meeting the needs of these customers effectively preserves valuable relationships.

LOOKING FORWARD: REALLOCATING SPEND TO DELIVER BETTER SERVICE

Servicers benefit from a clear and actionable view of costs. With cost transparency, servicers can identify starting points to address the difficult task of improving efficiency. And for managers keen to reinvent servicing—by delivering distinctive customer experience, for example—better cost management gives them the resources to make those investments. This is especially true for bank servicers who face significant cost pressure in a revenue-challenged environment. When servicing is profitable, servicers can pursue strategic priorities such as improved refinance recapture, digitization, and customer experience enhancements, putting them in a fundamentally better position for the future.

11 Oliver Wyman observation.
CONTACTS

**Biniam Gebre**  
Partner  
biniam.gebre@oliverwyman.com

**Ahmet Hacikura**  
Partner  
ahmet.hacikura@oliverwyman.com

**Vivian Merker**  
Partner  
vivian.merker@oliverwyman.com

**Kenan Rodrigues**  
Partner  
kenan.rodrigues@oliverwyman.com

**Alina Lantsberg**  
Principal  
alina.lantsberg@oliverwyman.com

**Cosimo Schiavone**  
Principal  
cosimo.schiavone@oliverwyman.com

**Tom McAndrews**  
Engagement Manager  
tom.mcandrews@oliverwyman.com

**Sushil Raja**  
Engagement Manager  
sushil.raja@oliverwyman.com
Oliver Wyman is a global leader in management consulting that combines deep industry knowledge with specialised expertise in strategy, operations, risk management, and organisation transformation.

For more information please contact the marketing department by email at info-FS@oliverwyman.com or by phone at one of the following locations:

EMEA
+44 20 7333 8333

AMERICAS
+1 212 541 8100

ASIA PACIFIC
+65 6510 9700