North America Mortgage Banking 2020

“Convergent Disruption in the Credit Industry: A Roadmap to Achieving Sustainable Competitive Advantage by 2020”
Executive Summary

**Current Situation: Convergent Disruption**

- Today’s Lenders are still challenged to rebuild growth, profitability and efficiency following the recent credit crisis.
- To further compound lenders’ challenges, convergent disruption is leading to a structural change in the industry; Multiple disruptive forces are converging on the Credit Industry at the same time, both from inside and from outside the Credit Industry, creating an increasingly complex and highly dynamic future environment.


- To avoid being marginalized as the future evolves, traditional lenders must become agile and innovative; this will help Lenders adjust to industry changes and even help them define the industry’s future.
- Three building blocks are essential for achieving sustainable competitive advantage in the “Era of Convergent Disruption”:
  1. **Optimization & Simplification** are today’s table stakes and are the essential foundation for 2020; this building block is required to survive.
  2. **Agility** is the new table stakes for 2020; this building block will allow lenders to succeed.
  3. **Continuous Innovation** will separate the leaders in 2020; this building block defines high performers.
- Lenders that become more agile and innovative will be future high performers, potentially realizing a sustainable >3.5% Gain on Sale Margin in 2020; this is far better than the ~2.3% margin expected for lenders that simply continue optimizing and simplifying the current model.

**Successful Business Models in the “Era of Convergent Disruption”: New business models will take market share from today’s Lenders**

- Agility and product commoditization expand the business models for success in the future.
- Today’s traditional Lenders could collectively lose about 35% market share by 2020 to new entrants and current players who adopt new business models.
- While traditional business models can succeed in 2020, new business models could emerge and be highly successful.

**Roadmap: Today’s Lenders can choose several different paths**

- The choice of business model need not be a “one-size-fits-all” decision; Different business models can be adopted for different business units.
- Each business model can also deploy innovative go-to-market strategies to further increase returns.
- The Table Stakes will be much higher in the Year 2020 no matter what business model is pursued; Lenders must start building the groundwork today.
Current Situation
Market Environment and Outlook

### Mortgage Originations and Housing
- Changes in interest rates drive outlook for mortgage origination market; $1.3 trillion in originations forecast for 2014, >60% expected to be purchase money\(^1\)
- Home purchase demand is anticipated to remain robust, though some seasonal slowing is expected
- Slow economic growth and fiscal uncertainty have modestly tempered the outlook for future price appreciation

### Distressed Whole Loans
- Pipeline of distressed whole loan opportunities remains strong with additional sellers emerging – expected to remain strong through 2014
- Home prices impact returns; expectation of continued price appreciation at a more moderate pace
- Alternatives to property resolution (e.g., modification, refinance) are increasingly important strategies to maximize returns

### Correspondent Lending Competition
- Contracting origination market has led to tighter margins
- A smaller market results in higher barriers to entry for new entrants
- Emphasis on disciplined pricing, execution and service to maintain profitability

### Jumbo Private-Label Securitization
- Agencies dominate the high-balance loan market; conforming loan limits likely to remain until mid-2014
- Limited depth of market for private-label securities – significant near-term challenge

### Mortgage Regulation
- In the past, regulator efforts to protect consumers were prioritized by the risks consumers could pose to the safety and soundness of the institution if they took action, such as filing a class action lawsuit
- Under new regulatory scheme, the CFBP will judge compliance by the extent to which consumers have access to financial products and services and that such offerings are fair, transparent, and competitive. Today, it’s the consumer the government is out to protect, not the institution it regulates

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\(^1\)Source: Average of the Mortgage Bankers Association, Fannie Mae and Freddie Mac mortgage market forecasts as of October 2013
The benchmark 30-year FRM interest rate is projected to continue to rise over the next two years, according to the MBA.

The increase in mortgage rates has pushed refinance application volume down to levels we have not seen since early 2011. Given the expectation for rates to remain at current levels or potentially move higher, the refinance boom we experienced over the past 12 years has...ended”

– Compass Point analyst Kevin Barker, 2013

Recent Highlights:
- An increased in mortgage interest rates – such as conforming, 30-year fixed rate mortgages – has caused a drop in refinance applications
- Purchase volumes have remained more resilient to higher rates and continue their upward trend

Source: [www.mortgagebankers.org/NewsandMedia/PressCenter/86645.htm](http://www.mortgagebankers.org/NewsandMedia/PressCenter/86645.htm)
Today’s lenders are still challenged to rebuild growth, profitability and efficiency following the receding credit crisis in today’s low risk/low reward environment.

Moving Forward

Manageable Risk/Higher Reward
- Balance rapidly increasing investments in regulatory compliance with investments to build the business
- Focus on the Customer: Invest in product and customer experience structural innovations that capture market share and proactively respond to changing customer needs, including use of digital

Low Risk/High Reward
- Extreme focus on regulatory compliance
- Limited work done to sustain competitive advantages in future
- Rebuild lender reputations

High Risk/High Reward
- Underwriting guidelines loosened
- High volume
- Record introduction of new businesses and products
- Government guarantee of mortgages
- Too big to fail mentality

Lenders are still struggling in today’s low risk/low reward environment
The net cost to originate a residential mortgage has increased dramatically since year-end 2009, including seeing a steady rise over the past five quarters.

**Total Net Cost to Originate Residential Mortgage Loans**

- **Net Loan Production Operating Cost ($)**
- **Period Average**

<table>
<thead>
<tr>
<th>Period</th>
<th>Net Cost to Originate</th>
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</thead>
<tbody>
<tr>
<td>2008 Q4</td>
<td>$2,324</td>
</tr>
<tr>
<td>2009 Q4</td>
<td>$2,345</td>
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<tr>
<td>2010 Q1</td>
<td>$2,945</td>
</tr>
<tr>
<td>2010 Q2</td>
<td>$2,722</td>
</tr>
<tr>
<td>2010 Q3</td>
<td>$2,827</td>
</tr>
<tr>
<td>2010 Q4</td>
<td>$3,539</td>
</tr>
<tr>
<td>2011 Q1</td>
<td>$3,513</td>
</tr>
<tr>
<td>2011 Q2</td>
<td>$3,601</td>
</tr>
<tr>
<td>2011 Q3</td>
<td>$3,324</td>
</tr>
<tr>
<td>2011 Q4</td>
<td>$3,413</td>
</tr>
<tr>
<td>2012 Q1</td>
<td>$3,224</td>
</tr>
<tr>
<td>2012 Q2</td>
<td>$3,353</td>
</tr>
<tr>
<td>2012 Q3</td>
<td>$3,813</td>
</tr>
<tr>
<td>2012 Q4</td>
<td>$4,182</td>
</tr>
<tr>
<td>2013 Q1</td>
<td>$4,207</td>
</tr>
<tr>
<td>2013 Q2</td>
<td>$4,573</td>
</tr>
<tr>
<td>2013 Q3</td>
<td>$3,310</td>
</tr>
</tbody>
</table>

+97% Net Loan Production Operating Cost $2,324 to $3,310
+36% Period Average $2,345 to $3,310

**Key Points:**
- A re-engineered lending “factory” could cut cost of originating a mortgage by ~25%, reversing a trend that has seen origination costs rise by 79% since year-end 2009.
- Companies need to reduce sales/servicing costs via reduction of redundancy and automation.
- Increasing attention on technology applications: To improve efficiency and reduce costs, but also to help re-allocate resources based on shifting demand as well as adding necessary customer/credit analytics.
- Rising costs with decline of mortgage brokers, which has had a profound effect on loan origination system providers with their customer bases shifting dramatically from broker to lender since 2008.

**Footnote 1** The net cost to originate includes all origination operating expenses and commissions, including corporate allocated expenses, minus fee income, but excludes secondary marketing gains, capitalized servicing, servicing released premiums and warehouse interest spread.

Note: Tracked by MBA’s Quarterly Mortgage Bankers Performance Report through 3Q12.

Since FY08, originators as a group have raised dramatically their spending on (in order of magnitude): Outsourcing & Professional Fees, Personnel-related expenses and IT.

Expenses of US Originators Decomposed Through 3Q13 (vs. 4Q08)

Radius = Relative Contribution to Expenses

Source: MBA Performance Report, 3Q13

Based on Un-weighted Averages For Non-Depository US Companies
Symbolizing the volatility in managing FTE capacity in the industry, Wells Fargo and other large bank providers are projecting large cutbacks in the foreseeable future.

Source: Compass Point Research & Trading LLC analyst Kevin Barker, 11 July 2013
Compared to other product/services customers purchase, Mortgage Servicing and Origination are ranked near the bottom in terms of satisfaction.

Relative JD Power Consumer Satisfaction Scores

Latest Annual US Customer Satisfaction Index Score by Category (Based on a 1,000 point scale)

Source: J.D. Power and Associates, 2014
However Mortgage Originators have seen a rebound in their customer satisfaction and though Servicers have also seen a steady improvement, it is not as dramatic.

Relative JD Power Consumer Satisfaction Scores

Trending Annual US Customer Satisfaction Index Score by Mortgage Category (Based on 1,000 Point Scale)

Key Origination Points:
The use of electronic closing documents improves customer closing satisfaction. Closing satisfaction among the 8 percent of customers who closed their mortgage using electronic documents in person averages 830, while satisfaction among the 84 percent of those who closed with paper documents in person is 772.

Key Servicing Points:
Leveling result of increase in new clients combined with new set of rules released by the CFPB – effective January 2014 – where under new rules, servicers are required to have systems, policies and procedures in place to ensure customers receive the appropriate information and support from servicers.

Sources:
Proactively responding to changing customer values and needs is critical for Lenders moving forward.

<table>
<thead>
<tr>
<th>Today’s Customer Segments*</th>
<th>Customer Trends</th>
<th>Challenges for Traditional Providers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Consumer Lending</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unbanked &amp; Underbanked</td>
<td>• Looking for low-cost FS alternatives, especially through digital channels</td>
<td>• Pitched marketing batted underway with low-cost delivery emerging disruptive providers</td>
</tr>
<tr>
<td>Youth</td>
<td>• Frequent users of digital channels &amp; wallets</td>
<td>• Attract and position young customers through lifecycle</td>
</tr>
<tr>
<td></td>
<td>• Many are delaying homeownership or opting to rent vs. buy</td>
<td>• Gear mortgage and other credit products to shifting needs of this segment</td>
</tr>
<tr>
<td>Mass Consumer</td>
<td>• Customers are willing to switch from their primary-banking provider to find a lender with the best rates</td>
<td>• A number of emerging disruptive providers emerging, focused on customer-led, socially conscious innovation</td>
</tr>
<tr>
<td></td>
<td>• Overall customer satisfaction with mortgage lenders reaches a seven-year high, with satisfaction among first-time home buyers improving considerably from 2012,</td>
<td>• Gear mortgage and other credit products to shifting needs of this segment</td>
</tr>
<tr>
<td></td>
<td>• Many are still delaying homeownership or opting to rent vs. buy</td>
<td>• Despite improvements, customers purchasing a home, particularly 1st-time home buyers, continue to experience difficulties understanding the loan options available to them</td>
</tr>
<tr>
<td>Mass Affluent / HNWI / Private Banking</td>
<td>• Increasingly looking for high-value, customized wealth advice through digital channels</td>
<td>• The market opportunity for HNW customers is huge</td>
</tr>
<tr>
<td></td>
<td>• HNW customers will not reliant on online applications; rather, they will want a financial manager who knows of their entire financial situation</td>
<td>• High touch service will be critical with digital making fulfillment process more convenient.</td>
</tr>
<tr>
<td></td>
<td>• Banks focused on high net worth customers are competing for market share that was left by large lenders who got out of jumbo lending to focus on their conforming business. As a result, a gap exists in the market for serving these HNW customers when it comes to mortgage</td>
<td></td>
</tr>
</tbody>
</table>

Customer segments are evolving into lifestyle/behavior segments
To further compound lenders’ challenges, convergent disruption is leading to a structural change in the industry.

- **Becoming Digital** on the inside of lenders and on the outside with customers and suppliers is rapidly redefining interactions, information flows and data transparency.

- **Ongoing industry convergence** is opening the door to new competition, new ways of doing business and new revenue opportunities.

- **Emerging new entrants** are joining the market (in many cases from different industries); they are competing in innovative ways for customers and profitably serving traditionally unprofitable segments.

- **Customers are more empowered** through social media and the prevalence of information and giving them an information edge over lender employees. Transparency will drive improved customer trust.

- **Rapid consolidation** continues; 20%-30% of today’s lenders will be gone by the year 2020.

- **A subdued economic outlook** is forecast through the next 3 years as the Fed will leave targeted federal funds rate at between 0% and 0.25% in the foreseeable future and interest rates will rise.

**Expanded regulations may** cost largest US banks a further $104bn to resolve mortgage-related legal issues as they try to put the costs of the subprime crisis behind them. Also, the second largest civil settlement ever obtained by the state attorneys general will cost the nation’s 5 largest mortgage servicers, which control about 60% of a servicing market, an ~$25bn to $32b.

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**Convergent Disruption**

Multiple disruptive forces are converging on the Banking Industry at the same time, both from inside and from outside the Banking Industry, creating an increasingly complex and highly dynamic future environment with “permanent volatility.”

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A view to the mortgage industry revolution

Market Events

- Subprime Mortgage Crisis (2007)
- Non-agency market collapses (Lehman)
- GSE Conservatorship begins
- GSEs return to profitability
- Original conservatorship timeline ends
- Dodd-Frank Act passes
- Basel 3, QM and QRM rules in place
- US Presidential Election
- GSE 'consolidation' occurs?
- Private-label MBS market running smoothly
- GSE conservatorship ends?
- Begin planning for GSE consolidation
- "NewCo" established to build common "GSE" platform
- GSE platform induced technology changes begin?
- Uniform GSE Guidelines and Tech Standards begin
- Uniform GSE Guidelines and Tech Standards converge
- Common US mortgage secondary market platform goes live?
- Dodd-Frank Act induced technology changes

Technology-Related Events

Source: CEB TowerGroup Retail Banking analyst Craig Focardi, 2013

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Other industries have experienced similar levels of disruption in recent years; many leaders emerged with entirely new business models.

In some cases traditional players completely redefined themselves to remain relevant…

**Redefined Traditional Player**

**From Ma Bell to Global Networking / IP Provider**
- From 1984 until 1996 AT&T was an integrated telecom services and equipment company
- As new entrants eroded traditional profits, AT&T reinvented itself from a telecom and equipment company to a global networking leader to remain relevant
- Excluding its divested Advertising Solutions unit, 81% ($126.4B) of AT&T’s revenues in 2012 came from these growth areas, which grew ~6% YoY

…and in others new entrants are taking dominant roles as they revolutionize the customer experience.

**Emerging Entrants**

**Quicken Loans**
- The #1 online lender and the 3rd largest retail mortgage lender in the US
- Recognized for a 4th consecutive years for its higher customer satisfaction (source: JD Power)
- Time from application to approval averages 17.8 days for Quicken Loans customers, which is 8.5 days shorter than the industry average (26.3 days)

**Google**
- Best available technology/ largest content provider
- Strong brand development
- Optimized user experience
- “Google is about getting the right information to people quickly, easily and cheaply – and for free” (L.Page)

**iTunes**
- World’s largest music platform
- First sustainable alternative to music piracy
- Comprehensive user experience from online music to electronic devices
The telecom industry exemplifies how disruption can quickly and radically alter an entire industry; Lenders must prepare for a similar, sustained era of convergent disruption.

### Lessons Learned from Telecom Industry Disruptions (Credit Industry Parallels):

- The pace of change is much faster when enabled by **agile, digital** technology
- Leaders find innovative ways to **improve the customer experience**, and they **continually redefine** themselves (e.g., AT&T was a telecom services and equipment company in 1983 and is a global networking leader today)
- Those companies that **do not innovate** and adjust to industry disruptions **eventually become obsolete** (e.g., NYNEX)

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### Evolution of the Telecom Industry (a regulated industry like Banking)

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>Traditional Providers</strong></td>
<td>1941: First installation of coaxial cable in the network is placed in service</td>
<td>2005: SBC purchases former parent AT&amp;T Corp. and rebrands AT&amp;T</td>
</tr>
<tr>
<td>1885: AT&amp;T founded</td>
<td>1993: AT&amp;T restructures into 3 separate companies (AT&amp;T, Lucent, NCR)</td>
<td>2003: Skype introduced</td>
</tr>
<tr>
<td>1910: Bell Operating Companies created in AT&amp;T divestiture</td>
<td>1994: AT&amp;T spins off Lucent and NCR</td>
<td>2005: Comcast creates Comcast Interactive Media, a new division focused on online media</td>
</tr>
<tr>
<td>1920: Bell Atlantic merges with NYNEX, another Regional Bell</td>
<td>1997: Bell Atlantic merges with GTE and adopts name “Verizon”</td>
<td>2009: General Electric (GE) and Comcast announce a buyout agreement for NBC Universal</td>
</tr>
<tr>
<td>1994: AT&amp;T spins off Lucent and NCR</td>
<td>2000: Bell Atlantic merges with GTE and adopts name “Verizon”</td>
<td>2011: Microsoft buys Skype to “generate new revenue opportunities”</td>
</tr>
</tbody>
</table>

### Cable Industry Convergence

<table>
<thead>
<tr>
<th>Traditional Telecom Player</th>
<th>Optimize &amp; Simplify</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example: AT&amp;T adopts “one phone system” campaign from 1907-1960s</td>
<td>Example: AT&amp;T restructures into 3 separate companies (AT&amp;T, Lucent and NCR) then spins off Lucent and NCR</td>
<td>Example: AT&amp;T adopts “one phone system” campaign from 1907-1960s</td>
</tr>
</tbody>
</table>

### New Entrant Example

| 2003: Comcast launches Comcast Online, a broadband Internet service | 2009: Skype is largest carrier of Int’l voice traffic |
| 2009: Microsoft buys Skype to “generate new revenue opportunities” | 2011: Microsoft buys Skype to “generate new revenue opportunities” |

Today: AT&T is the largest communications holding company in the world with phone, cable, wire-line data and managed IT services

Today: 33% of world’s voice calls are on Skype

Today: Verizon Wireless to pay $1B to air NFL games over customers’ smartphones

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The NA Lending Industry is already experiencing disruptions of the magnitude seen in the Telecom Industry; disruptions that completely transform an industry.

Evolution of the NA Banking / Lending Industry

<table>
<thead>
<tr>
<th>Glass Steagall Era</th>
<th>Universal Banking Era</th>
<th>Post Credit Crisis Era</th>
</tr>
</thead>
<tbody>
<tr>
<td>Build Specialization</td>
<td>Scale</td>
<td>Optimize &amp; Simplify</td>
</tr>
<tr>
<td>1933 – Late 1990s (first ~65 years)</td>
<td>Late 1990s – 2008 (~ 10 Years)</td>
<td>Agility &amp; Innovation On Horizon</td>
</tr>
<tr>
<td>Traditional Providers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>commercial and investment banking</td>
<td>Bank)</td>
<td>• Bank of America acquires Countrywide</td>
</tr>
<tr>
<td>1938: Fannie Mae created; Freddie</td>
<td>1995: First large bank offers online</td>
<td>• Wells Fargo acquires Wachovia</td>
</tr>
<tr>
<td>Mac created in 1970</td>
<td>services (Wells Fargo)</td>
<td>• JPMC acquires most of</td>
</tr>
<tr>
<td>1985: Quicken Loans, originally</td>
<td>1998: LendingTree created to provide</td>
<td>Washington Mutual from FDIC’s receivership</td>
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<tr>
<td>Rock Financial Mortgage, founded</td>
<td>consumers a centralized location to</td>
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<tr>
<td>1999: goodmortgage.com founded</td>
<td>receive multiple loan offers</td>
<td></td>
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<tr>
<td>1998: Citibank merges with</td>
<td>2007: Wells Fargo reintroduces mobile</td>
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<tr>
<td>Travelers to form Citicorp</td>
<td>banking</td>
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<tr>
<td>combining banking, securities</td>
<td></td>
<td></td>
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<tr>
<td>and insurance services</td>
<td></td>
<td>2010: GSE conservatorship begins</td>
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<tr>
<td>1999: Gramm–Leach–Billey Act:</td>
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<tr>
<td>allows commercial banks, investment</td>
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<td>banks, securities firms, and</td>
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<td>insurance companies to consolidate</td>
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<td>2012: Simple (Bank) launched – 1</td>
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<td>2012:</td>
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<tr>
<td>online bank</td>
<td></td>
<td>• Simple (Bank) launched – 1 online bank</td>
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<tr>
<td>2008: PennyMac founded by</td>
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<td>• American Ex and WalMart</td>
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<tr>
<td>seasoned lending executives who</td>
<td></td>
<td>launch Bluebird, a prepay debit card</td>
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<tr>
<td>have focused on originating</td>
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<td>HARPs-based loans</td>
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<tr>
<td>2010: Capital One acquires ING</td>
<td></td>
<td>2010:</td>
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<td>DIRECT in the US and rebrands its</td>
<td></td>
<td>• Scotiabank acquires ING Direct Canada</td>
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<tr>
<td>retail unit CapitalOne 360</td>
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<td>2013+: S&amp;P reports that the biggest</td>
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<td>US banks may have to spend a further</td>
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<td>$104bn to resolve mortgage-related</td>
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<td>legal issues as they try to put the</td>
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<td>costs of the subprime crisis behind</td>
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<td>them.</td>
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Lessons Learned from Evolution of the Banking Industry

- After a decade of focusing on building scale in the 1990s, the dominance of the universal banking model is being questioned, including by regulators who are examining “Too Big to Fail” and possible scenarios to carve up failed large full-service banks.
- In the post credit crisis, banks – traditional and emerging – are focused on strategies to boost customer centricity (e.g., social media/Big Data).
Building Blocks for Success in 2020
To avoid being marginalized as the future evolves, traditional Lenders must become agile and innovative; this will help Lenders adjust to industry changes and even help them define the industry’s future.

- No longer will traditional practices of optimizing and simplifying the existing infrastructure and business for improved efficiency and effectiveness yield a competitive advantage; this simply allows lenders to survive.
- Rather, adoption of a new, broader mindset focused on managing change quickly and effectively is critical to compete in the increasingly complex and highly dynamic banking industry of the future.
  - Agility is table stakes for the Year 2020
  - Continuous Innovation is what will separate the leaders in the Year 2020
- The “Era of Convergent Disruption” has begun

### Journey to Sustainable Competitive Advantage

<table>
<thead>
<tr>
<th>optimization &amp; Simplification (Today’s Table Stakes)</th>
<th>Agility (Year 2020 Table Stakes)</th>
<th>Continuous Innovation (Year 2020 Leaders)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Today’s Penetration Average Time to Sustainable Benefit</td>
<td>93% of lenders are here 3-5+ years</td>
<td>5% of lenders are here 2-4+ years &lt;2% of lenders are here 2-5+ years</td>
</tr>
<tr>
<td>Business Performance</td>
<td>Era of Survival</td>
<td>Era of Convergent Disruption</td>
</tr>
</tbody>
</table>

**Lender Industry Examples of Agility & Innovation**

- **Quicken Loans**
  - Online-only originator
  - Quicken Loans bolsters its growing servicing portfolio

- **goodmortgage.com**
  - Leveraging virtualization and data mining tools

**Examples of Agility & Innovation**

- **Quicken Loans**
  - Leverage a proprietary analytics system that integrates into its servicing system of record.
  - The system is used to predict loans in danger of delinquency and generate automated decisions to determine the best possible loss mitigation option.

- **goodmortgage.com**
  - Recently completed a server / desktop virtualization initiative that improves data security and integrity and enhances employees’ access to systems by providing remote access.
  - Also uses robust data mining tools to improve quality control, customer service and compliance.
As the production side of the business rebounds, lender margins continue their steady decline – so future winners will have to focus on boosting not only their efficiency but their agility and continuous processes to innovate.

US Mortgage Volumes & Margin Trending

Quarterly Averages of US Industry's Gain on Sale

Rising interest rates have reduced mortgage re-financings and income from the sale, securitization and servicing of retail mortgage loans by $4bn among the largest bank lenders.

Footnote 1): Gain on Sale as reported by Compass Point Research & Trading

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Three building blocks are essential for achieving sustainable competitive advantage in the increasingly complex “Era of Convergent Disruption.”

3. Building Blocks for Sustainable Competitive Advantage in the “Era of Convergent Disruption”

1. Optimization and simplification
   Be as efficient and effective as possible in current structure

2. Agility
   Be able to seize opportunities in times of change

3. Continuous innovation
   Have the ideas, vision and leadership to proactively stay ahead of the market

2. Year 2020 Table Stakes
   - Become Digital: Transform IT platform to overcome rigid legacy technology in back office and enable analytical-driven front office
   - Be Customer-Driven: Make all decisions to improve the customer experience and proactively meet customer needs
   - Fulfill Self-Service vs. Channel Potential (including social media): Maximize channel management per broker, loan officer and consumer direct to best engage customers in sales and fulfillment using their preferred methods (e.g., mobility, social media and online)
   - Manage the New Talent Dynamic: Re-engineer human capital platform/program to leverage best available talent internally and externally on demand
   - Employ Optimal and Flexible Financial Strategies: Adaptable portfolio and product strategy

1. Today’s Table Stakes
   - Channel Fulfillment: Provide capability in all channels to serve target customers most effectively
   - Streamline and Simplify The Business: Remove redundancies and improve processes and technologies to become lean and rationalize business, products, technology and operations
   - Manage Regulatory Requirements: Handle increasing regulation as a competitive advantage
   - Manage Enterprise Risk Management Regime: Provide early-warning to emerging risk threats in possible siloes of business
   - Create Capital and Funding Strategies: Optimize to meet business opportunities/challenges as they arise
The building blocks are enabled by technology; lender leaders need to balance innovation demands of the business with ongoing scale and efficiency needs of the corporation.

Enabling Technology in the “Era of Convergent Disruption”

3. Enabling Technology

Year 2020 Lender Leaders
Technology As Continuous Provider of Innovation

2. Agility

Be able to seize opportunities in times of change

2. Year 2020 Table Stakes

Agile Information Technology
- Mobility: Extending mobility across the distribution spectrum
- Analytics and Data Velocity: Using business intelligence, data analytics and big data to access the right data at the right time by creating a data supply chain
- Social Collaboration: Combining customer oriented service and a highly effective capability – Social Enterprise
- IT Infrastructure: Could include a private cloud for its loan origination system, a VoIP phone system and paperless underwriting
- Electronic Closing Documents: improves customer closing satisfaction

1. Today’s Table Stakes

Optimizing & Simplifying Technology
- Digital HR & Finance: Workplace Collaboration, Hyper Change Management and Virtual Learning, Financial Performance Analytics, and Real-time operations performance and cost to serve monitoring
- Digital Logistics & Operations: Electronic document management system and a Web-based LOS that includes a module for borrowers to initiate loan applications
- Cyber Security & Fraud Management: Data privacy management platform including enhanced email security tools and digital file upload portals.
- eCustomer Interface: Loan onboarding processes with automated workflows that collect, compare, and route mortgage file data and documents as well as real-time status alerts that give borrowers and their real estate agents real-time status updates on their loans
- Imaging Technology: Allows for document collaboration across all departments

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Emerging Lender Business Models
## Changing Large US Lender Landscape – 2008 vs. The Present

### % Declines in Origination

### New Entrant Since 2008

<table>
<thead>
<tr>
<th>Total Number of Lenders</th>
<th>-4.6%</th>
<th>2.5%</th>
<th>484</th>
<th>472</th>
<th>611</th>
<th>-4.9%</th>
<th>1.5%</th>
<th>461</th>
<th>454</th>
<th>594</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>All Companies</strong></td>
<td>6.4%</td>
<td>20.6%</td>
<td>1,941,536</td>
<td>1,424,581</td>
<td>13.0%</td>
<td>28.1%</td>
<td>1,158,456</td>
<td>904,165</td>
<td>627,666</td>
<td></td>
</tr>
<tr>
<td><strong>Big 4 Market Share</strong></td>
<td>0.5%</td>
<td>-4.9%</td>
<td>45%</td>
<td>50%</td>
<td>44%</td>
<td>0.0%</td>
<td>-3.7%</td>
<td>45%</td>
<td>49%</td>
<td>45%</td>
</tr>
<tr>
<td><strong>Emerging Providers Market Share</strong></td>
<td>10.2%</td>
<td>5.0%</td>
<td>11%</td>
<td>6%</td>
<td>1%</td>
<td>12.2%</td>
<td>4.4%</td>
<td>13%</td>
<td>9%</td>
<td>1%</td>
</tr>
</tbody>
</table>

### Company Name:

- **% 5-Yr CAGR**
- **% 1-Yr CAGR**

<table>
<thead>
<tr>
<th><strong>LTM 2010Q2</strong></th>
<th><strong>LTM 2012Q2</strong></th>
<th><strong>LTM 2008Q2</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Wells Fargo &amp; Co.</strong></td>
<td>12.3%</td>
<td>3.8%</td>
</tr>
<tr>
<td><strong>Chase</strong></td>
<td>12.0%</td>
<td>26.6%</td>
</tr>
<tr>
<td><strong>Bank of America</strong></td>
<td>4.2%</td>
<td>4.8%</td>
</tr>
<tr>
<td><strong>Quicken Loans Inc.</strong></td>
<td>68.7%</td>
<td>114.4%</td>
</tr>
<tr>
<td><strong>US Bank Home Mortgage</strong></td>
<td>21.1%</td>
<td>18.5%</td>
</tr>
<tr>
<td><strong>Citigroup, Inc.</strong></td>
<td>-3.2%</td>
<td>4.3%</td>
</tr>
<tr>
<td><strong>PHH Mortgage</strong></td>
<td>22.4%</td>
<td>3.2%</td>
</tr>
<tr>
<td><strong>Flagstar</strong></td>
<td>27.4%</td>
<td>30.2%</td>
</tr>
<tr>
<td><strong>BB&amp;T</strong></td>
<td>17.9%</td>
<td>14.7%</td>
</tr>
<tr>
<td><strong>SunTrust Bank</strong></td>
<td>9.5%</td>
<td>19.3%</td>
</tr>
<tr>
<td><strong>PennyMac</strong></td>
<td>--</td>
<td>540.4%</td>
</tr>
<tr>
<td><strong>Provident Funding Associates</strong></td>
<td>30.6%</td>
<td>1.9%</td>
</tr>
<tr>
<td><strong>Fifth Third Bank</strong></td>
<td>28.1%</td>
<td>8.2%</td>
</tr>
<tr>
<td><strong>Alliance Bank/ResCap (GMAC)</strong></td>
<td>-9.2%</td>
<td>-48.6%</td>
</tr>
<tr>
<td><strong>Franklin American Mortgage Co.</strong></td>
<td>20.4%</td>
<td>38.8%</td>
</tr>
<tr>
<td><strong>Guaranteed Rate Inc.</strong></td>
<td>--</td>
<td>86.2%</td>
</tr>
<tr>
<td><strong>USAA Federal Savings Bank</strong></td>
<td>20.1%</td>
<td>18.4%</td>
</tr>
<tr>
<td><strong>PNC Mortgage</strong></td>
<td>6.2%</td>
<td>35.0%</td>
</tr>
<tr>
<td><strong>Nationstar Mortgage</strong></td>
<td>--</td>
<td>206.4%</td>
</tr>
<tr>
<td><strong>PrimeLending</strong></td>
<td>51.4%</td>
<td>29.7%</td>
</tr>
<tr>
<td><strong>Searns Lending</strong></td>
<td>72.8%</td>
<td>65.1%</td>
</tr>
<tr>
<td><strong>Navy FCU</strong></td>
<td>28.9%</td>
<td>54.1%</td>
</tr>
<tr>
<td><strong>Everbank</strong></td>
<td>33.1%</td>
<td>50.8%</td>
</tr>
<tr>
<td><strong>United Wholesale Mortgage</strong></td>
<td>--</td>
<td>234.6%</td>
</tr>
<tr>
<td><strong>NYCB Mortgage</strong></td>
<td>--</td>
<td>5.9%</td>
</tr>
<tr>
<td><strong>Amesiva Mortgage Corp.</strong></td>
<td>42.9%</td>
<td>10,062</td>
</tr>
<tr>
<td><strong>M&amp;T Mortgage</strong></td>
<td>27.1%</td>
<td>41.2%</td>
</tr>
<tr>
<td><strong>Union Bank</strong></td>
<td>31.1%</td>
<td>8.2%</td>
</tr>
<tr>
<td><strong>Prospect Mortgage</strong></td>
<td>--</td>
<td>20.2%</td>
</tr>
<tr>
<td><strong>Sierra Pacific Mortgage</strong></td>
<td>23.8%</td>
<td>33.9%</td>
</tr>
<tr>
<td><strong>TD Bank NA</strong></td>
<td>75.2%</td>
<td>27.4%</td>
</tr>
<tr>
<td><strong>Regions Mortgage</strong></td>
<td>20.8%</td>
<td>15.8%</td>
</tr>
<tr>
<td><strong>Manufacturers &amp; Traders Trust Co.</strong></td>
<td>8.7%</td>
<td>310.6%</td>
</tr>
<tr>
<td><strong>LoanDepot.com</strong></td>
<td>--</td>
<td>99.3%</td>
</tr>
<tr>
<td><strong>RBS Citizens, NA</strong></td>
<td>40.0%</td>
<td>3.8%</td>
</tr>
<tr>
<td><strong>Fremont Bank</strong></td>
<td>55.0%</td>
<td>60.0%</td>
</tr>
<tr>
<td><strong>Cole Taylor Mortgage</strong></td>
<td>--</td>
<td>125.2%</td>
</tr>
</tbody>
</table>

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Sources: Accenture Research analysis using MortgageData.com, 2013
Over the past five years, emerging Online and Independent lenders, many of whom did not exist during the depths of the Credit Crisis, have stolen market share away from primarily the midsize / regional banks in the US.

Mortgage Origination Market Share Change Among US Lender Types

Wholesale and Retail Origination Combined

<table>
<thead>
<tr>
<th>Lender Type</th>
<th>2008</th>
<th>2012</th>
<th>2013</th>
<th>% Market Share Change 2008-13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online</td>
<td>0%</td>
<td>6%</td>
<td>6%</td>
<td>+5.3%</td>
</tr>
<tr>
<td>Small Banks</td>
<td>9%</td>
<td>9%</td>
<td>12%</td>
<td>+3.7%</td>
</tr>
<tr>
<td>Independents</td>
<td>17%</td>
<td>23%</td>
<td>23%</td>
<td>+12.1%</td>
</tr>
<tr>
<td>Midsize Banks</td>
<td>-21.6%</td>
<td>23%</td>
<td>23%</td>
<td></td>
</tr>
<tr>
<td>Big 4</td>
<td>45%</td>
<td>45%</td>
<td>45%</td>
<td>+0.5%</td>
</tr>
</tbody>
</table>

Sources: Accenture Research analysis using MortgageData.com, December 2013
Footnote 1): Market share data comparing each time period at the 2nd Quarter on a trailing 12-month basis

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Over the past five years, emerging Online and Independent lenders, many of whom did not exist during the depths of the Credit Crisis, have stolen market share away from primarily the midsize / regional banks in the US.

Mortgage Origination Market Share Change Among US Lender Types

Sources: Accenture Research analysis using MortgageData.com, December 2013
Footnote 1): Market share data comparing each time period at the 2nd Quarter on a trailing 12-month basis
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Agility and product commoditization expand the business models for success in the future of the mortgage origination industry.

Current Lender Landscape – 2014

Highly Agile
- Most business generated through online/digital channels
- Highly nimble
- Flexible infrastructure
- Social media an integral part of strategy
- Optimized and simplified
- Customer-centric

Less Agile
- Most business generated through traditional, physical channels
- Less nimble
- Heavy infrastructure
- Less optimized and simplified

C. Emerging Digital Lenders
6% MS
- Small Bank Lenders
360+ players
~9% market share*
- Mid-Size Banks
60+ players
~23% market share*

B. Independent Lenders
~17% market share*
(A. Traditional Lenders
~425 Lenders
~77% market share*
(US Bank Home Mortgage, BB&T, SunTrust, USAA)

50+ Players
~45% market share*
(B. Independent Lenders
(Wells Fargo, Chase, BoA, CitiMortgage)

Large-Scale, Commodity Products
- Commodity products (mass market focus)
- Product and customer centric
- Low price
- Low amount of advice
- Not very nimble
- Large, often legacy infrastructure
- Larger foreign entrants, but mostly traditional players
- Compete largely on price

Specialized
- Focused products or limited geographic focus
- Highly customer-centric
- Higher priced
- Advice-driven
- Highly nimble
- Simplified/optimized infrastructure
- New entrants
- Compete largely on advice and product depth/differentiation

Emerging Entrants and Adopters (Current Players who Adopt new Business Models)

* Market shares are based on enterprise-level revenues
Sources: Accenture Research analysis using MortgageData.com, 2013

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Today’s bank lenders could collectively lose ~20% market share by 2020 to new entrants and current independent lenders who adopt new business models.

### Potential Lender Landscape – 2020 (Status Quo Scenario)

<table>
<thead>
<tr>
<th>Category</th>
<th>Market Share Today</th>
<th>2020</th>
<th># of Players Today</th>
<th>2020</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Big 4 Lenders</strong></td>
<td>~45%</td>
<td>~30%</td>
<td>4+</td>
<td>4+</td>
<td>• The Big 4 Lenders will continue to manage through the complexity of increasing regulatory requirements and will be motivated to battle for lower risk / higher margin markets (HNW)</td>
</tr>
<tr>
<td><strong>Mid-Size Lenders</strong></td>
<td>~23%</td>
<td>~17%</td>
<td>60+</td>
<td>45+</td>
<td>• Midsize / regional leaders have lost the most market share since the credit crisis and will continue to see runoff as they look to reposition their business models to be more competitive and unique in an increasingly fragmented credit market</td>
</tr>
<tr>
<td><strong>Small Bank Lenders</strong></td>
<td>~17%</td>
<td>~26%</td>
<td>360+</td>
<td>250+</td>
<td>• Though the number of small banks will continue to consolidate, the survivors (including innovate credit unions) will continue to capture market share for customers seeking high-touch customer service</td>
</tr>
<tr>
<td><strong>Online</strong></td>
<td>~6%</td>
<td>~15%</td>
<td>&lt;5</td>
<td>10+</td>
<td>• With Quicken dominating the space, new entrants will emerge, especially from the ranks for independent lenders</td>
</tr>
<tr>
<td><strong>Independents</strong></td>
<td>~17%</td>
<td>~26%</td>
<td>50+</td>
<td>95+</td>
<td>• The independent lender model appears to be gaining mind/market share very rapidly</td>
</tr>
</tbody>
</table>

### Emerging Lenders and Adopters (Current Players who Adopt new Business Models)

- ~100 players
- ~40% market share

Examples of who could steal market share from Traditional Lenders:

- A handful more pure play online lenders will look to take advantage of Quicken Loan’s market dynamics
- Small/community banks that become highly agile and can now compete with larger banks (e.g., innovative credit unions)
- Agile / innovate independent lenders
- Retailers that continue to move into the lending space
Through the rest of the decade, traditional lenders will increasingly need to respond to emerging lending disruptors like Quicken, Guaranteed Rate and Goodmortgage.com, which will look to continue to build scale.

Emerging Disruptors

- **Banks**
  - Market nimble
  - Circa 2013

- **Disruptors**
  - Market entry
  - Circa 2013
  - Scale
  - Circa 2020

**Common Characteristics of the Emerging Disruptors**
- Emphasize social responsibility
- Focus on customer centricity and empowerment
- Present simpler fee structure to customers
- Provide personal financial management tools and access to other accounts
- Embedded with social media, especially Facebook
- Leverage Big Data and analytics
- Willingness to leverage Cloud and Virtualization

**Innovation**
1. Optimization and Simplification
2. Agility
3. Innovation

**Circa 2020**
- Emphasize social responsibility
- Focus on customer centricity and empowerment
- Present simpler fee structure to customers
- Provide personal financial management tools and access to other accounts
- Embedded with social media, especially Facebook
- Leverage Big Data and analytics
- Willingness to leverage Cloud and Virtualization

**Circa 2013**
- Emphasize social responsibility
- Focus on customer centricity and empowerment
- Present simpler fee structure to customers
- Provide personal financial management tools and access to other accounts
- Embedded with social media, especially Facebook
- Leverage Big Data and analytics
- Willingness to leverage Cloud and Virtualization
Courting customers who are fed up with their banks, Costco continue to build out its financial services offering, after first offering mortgages in late 2010.

Costco’s Emerging FS/Credit Business

- **Key Membership Metrics:**
  - 39m households
  - 71.2m cardholders
  - 90% renewal rate (for US and Canada)
  - $2.3bn+ in cash fees for LTM

- **Financial Services Proposition:**
  - Began making mortgages in late 2010
  - Sells auto and homeowners’ insurance
  - Offers credit card processing for small businesses
  - Provides financial planning

- **Credit Value Proposition:** Costco does not make money on mortgages, but instead uses it as another incentive to get people to renew their store memberships, where Costco makes a large chunk of its profit.

- **History of Innovation:**
  - First with its membership-fee structure
  - Move into selling gasoline

Sources:
While traditional business models can succeed in 2020, two new lender business models could emerge and be highly successful.

Potential Landscape – 2020 (Emerging Model Scenario)

Highly Agile
- Most business generated through online/digital channels
- Highly nimble
- Flexible infrastructure
- Social media an integral part of strategy
- Optimized and simplified
- Customer-centric

C. Emerging Digital Lenders
20+ Players
~5% market share

D. Digital Hybrids
90+ Players
~15% market share*

B. Independent Lenders
~40 players
~15% market share

A. Big 2 Lenders
2 players
~25% market share

E. Retail Correspondents
5-8 players
(Lenders + Large Retailers)
~10% market share (Example: Costco partnering with one of the Big 4)

A. Small Bank Lenders
~240 players
~10% market share

A. Midsize Lenders
~40 players
~15% market share

Possibly Today's Largest Digital Lenders, 1 of the Big 4 Lenders, and Large Indies and Midsize Banks Focus on Evolving to a Digital Model With Scale

Best positioned for global expansion

Industries Outside Lending

Possibly a handful of small banks (~10) decide they will be more competitive by assuming a pure play digital approach; might be conducive for credit unions
- Traditionally customer facing
- Most business generated through traditional, physical channels
- Less nimble
- Heavy infrastructure
- Less optimized and simplified

Specialized
- Focused products or limited geographic focus
- Highly customer-centric
- Higher priced
- Advice-driven
- Highly nimble
- Simplified/optimized infrastructure
- New entrants
- Compete largely on advice and product depth/differentiation

Large-Scale, Commodity Products
- Commodity products (mass market focus)
- Product and customer centric
- Low price
- Low amount of advice
- Not very nimble
- Large, often legacy infrastructure
- Larger foreign entrants, but mostly traditional players
- Compete largely on price

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These new business models have the potential to be highly disruptive to the banking industry.

Potential Landscape – 2020 (Emerging Model Scenario)

1. Emerging Digital Scenario:
   - **Example:** Some small banks and independents see a competitive advantage in becoming as a digital pure play
   - **Market Edge:** Gaining cost efficiencies and expanding beyond legacy physical footprint

2. Hybrid Digital Bank Scenario:
   - **Example:** One of the Big 4 banks and a few of the Midsize banks focus on going digital with scale
   - **Market Edge:** Gaining cost and process efficiencies vis-a-vis traditional lenders

3. Digital Hybrid Independents:
   - **Example:** A few of the largest indies will see advantage of focusing on a digital value proposition
   - **Market Edge:** Could have competitive advantage over most lenders, especially in adjusting to market demand

4. Retail Correspondent Bank Scenario:
   - **Example:** One of the Big 4 banks or midsize banks will provide the lending engine behind one of the big retailers
   - **Market Edge:** Immediate market share and low pricing across a broad range of products appealing to existing customers

5. Retail Correspondent Indie Scenario:
   - **Example:** Large retailers partner with a few of the large independent lenders
   - **Market Edge:** The independent lenders who partner with retailers will gain an additional distribution channel and higher customer brand awareness

High Performers will be OUTSIDE this box (more agile)
High Performing Lenders Banks will transform themselves by 2020 to become:

1. **More Digital** – Focus of applying digital capabilities will be on the sales process/rate shopping and consumer finance education. When it comes to needs analysis and product fit, it will be a very customer / loan officer centric interaction. Digital capabilities can also be used in the back office to exchange data/information and provide transparency into the life of the loan

2. **Truly Customer-Driven** – All decisions will be made to satisfy customer needs: this requires offering more transparency, ease of doing business, having to request assistance once and setting and meeting expectations

3. **Omni-Channel** – Over half of business will be conducted through digital channels; although physical channels will still play a very important part in the business, these banks will not rely on them for survival

4. **Innovative at the Core** – Innovation will be embedded in all levels of the organization to proactively stay ahead of the market; do not settle for anything less than being a leader

5. **Partnering With Leaders in Other Industries** – Witnessed by the recent moves of top builder-oriented retailers, opportunities will continue exist for lenders to partner with companies in other industries

6. **OR Large-Scale** – Deliver products to the mass market at lower margins (number of products sold makes up for lower margins); costs must be substantially reduced through reduced product complexity and streamlined technology and operations to make this work
The Table Stakes will be much higher in the Year 2020 no matter what business model is pursued; Lenders must start building the groundwork today.

3 Building Blocks for Sustainable Competitive Advantage in the “Era of Convergent Disruption”

1. Today’s Table Stakes
   - Continuous innovation
     - Have the ideas, vision and leadership to proactively stay ahead of the market
   - Agility
     - Be able to seize opportunities in times of change
     - Become More Digital
     - Be Customer-Driven
     - Fulfill Omni-Channel Potential (incl. social media)
     - Manage the New Talent & Regulatory Dynamic
     - Employ Optimal and Flexible Financial Strategies
   - Optimization and simplification
     - Be as efficient and effective as possible in current structure
     - Channel Fulfillment
     - Streamline and Simplify The Business
     - Manage Regulatory Requirements
     - Manage Enterprise Risk Management Regime
     - Create Capital and Funding Strategies

2. Year 2020 Table Stakes
   - Leaders

3. Year 2020 Leaders
   - What Must Lenders Do TODAY to Succeed in the “Era of Convergent Disruption”? 
     - Proactively invest in initiatives that will build the business rather than reactively respond to regulations, competitors and industry changes
     - Fundamentally shift from a product-oriented organization to a customer-driven organization
     - Rebuild bank reputations
     - Embrace and integrate new technologies, channels and strategies

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The US Mortgage Lender industry is managing a $18.5 trillion balance sheet.

### US Household Balance Sheet – $US Billions

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential Real Estate</td>
<td>$18,453</td>
</tr>
<tr>
<td>Mortgage Debt Outstanding</td>
<td>$9,868</td>
</tr>
<tr>
<td>Homeowner’s Equity</td>
<td>$8,585</td>
</tr>
</tbody>
</table>

#### Agency Balance Sheet
- GSE MBS = $4,490
- Ginnie MBS = $1,340
- 1st Lien = $2,051
- 2nd Lien = $748
- Other = $158
- Prime = $188
- Alt A = $288
- Option ARM = $117
- Sub-Prime = $293

#### Bank Balance Sheet
- GSE MBS = $2,957
- Ginnie MBS = $1,340
- 1st Lien = $2,051
- 2nd Lien = $748
- Other = $158
- Prime = $188
- Alt A = $288
- Option ARM = $117
- Sub-Prime = $293

#### Non-Agency MBS
- $886

#### Other
- $195

**Dramatic increases in home equity could support the issuance of HELOCs, increase the amount of loans able to refinance and improve the mobility of homeowners.**

Includes life insurance companies; pension funds, retirement funds, finance companies and REITs.
Sources: Federal Reserve, Amherst Securities, Compass Point Research & Trading LLC analyst Kevin Barker, 11 July 2013

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As customer satisfaction continues to improve steadily, mortgage lenders are still seeing some inconsistent performances year on year with their origination cycle times.

**Trend for Residential Mortgage Origination Cycle Time & Customer Satisfaction**

<table>
<thead>
<tr>
<th>Total Cycle Time in Days</th>
<th>Customer Satisfaction On Scale of 1,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cycle Time</td>
<td>Customer Satisfaction</td>
</tr>
<tr>
<td>2006</td>
<td>30.0</td>
</tr>
<tr>
<td>2007</td>
<td>30.0</td>
</tr>
<tr>
<td>2008</td>
<td>30.0</td>
</tr>
<tr>
<td>2009</td>
<td>46.9</td>
</tr>
<tr>
<td>2010</td>
<td>52.1</td>
</tr>
<tr>
<td>2011</td>
<td>50.0</td>
</tr>
<tr>
<td>2012</td>
<td>61.0</td>
</tr>
<tr>
<td>2013</td>
<td>53.0</td>
</tr>
</tbody>
</table>

- The time from application to approval averages 17.8 days for Quicken Loans customers, which is 8.5 days shorter than the industry average (26.3 days).
- In late 2011, Citimortgage had been adding staff, streamlining its processes in effort to cut its refinance time from 77 days to <50 days.


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Half of the complaints received by the CFPB are related to mortgages.

Consumer Complains Received by the CFPB – Through June 2013

Between July 1, 2012 and June 30, 2013, the CFPB received ~122,000 consumer complaints.

Gain on Sale margin assumes a mortgage is originated at going market rate, a guarantee fee paid to GSEs, servicing fees are paid and a mortgage is sold in the secondary market.

### Gain on Sale Margin Index Decomposed

<table>
<thead>
<tr>
<th>Inputs</th>
<th>4Q12 Average</th>
<th>1Q13 Average</th>
<th>HARP</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration (years)</td>
<td>7</td>
<td>7</td>
<td>8</td>
<td>Assume mortgage duration</td>
</tr>
<tr>
<td>Coupons per yr</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>Monthly mortgage payment</td>
</tr>
<tr>
<td>Mortgage rates</td>
<td>3.43%</td>
<td>3.55%</td>
<td>4.00%</td>
<td>Primary rate</td>
</tr>
<tr>
<td>Guarantee-fee</td>
<td>0.40%</td>
<td>0.48%</td>
<td>0.48%</td>
<td>Paid to GSE</td>
</tr>
<tr>
<td>Servicing fee</td>
<td>0.25%</td>
<td>0.25%</td>
<td>0.25%</td>
<td>Paid to servicer</td>
</tr>
<tr>
<td>Other</td>
<td>0.10%</td>
<td>0.10%</td>
<td>0.10%</td>
<td>Hedging, fall-out, etc.</td>
</tr>
<tr>
<td>Net Yield</td>
<td>2.68%</td>
<td>2.72%</td>
<td>3.17%</td>
<td></td>
</tr>
<tr>
<td>MBS Yield</td>
<td>2.18%</td>
<td>2.46%</td>
<td>2.30%</td>
<td>Yield in MBS market</td>
</tr>
<tr>
<td>Net Spread</td>
<td>0.50%</td>
<td>0.26%</td>
<td>0.87%</td>
<td></td>
</tr>
</tbody>
</table>

| Secondary Market Price          | $1,032.43    | $1,016.70    | $1,063.52| Price of bond in market                |
| Face Value                      | $1,000.00    | $1,000.00    | $1,000.00| Original value of mortgage             |
| Priced-in Margin                | 3.24%        | 1.67%        | 6.35%   | Diff between secondary $ and mortgage balance |
| Capitalization of MSR           | 0.90%        | 0.90%        | 0.90%   | Initial value of MSR created (non-cash) |
### Additional Information about Building Blocks

<table>
<thead>
<tr>
<th>Building Block</th>
<th>Additional Information</th>
<th>Technology</th>
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Reference Links

- www.insidemortgagefinance.com/topics/mortgage_banking_profitability.html
- www.nationalmortgagenews.com/mortgage-technology/25_tech_savvy_lenders.html

JD Power:

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