Title

Hurdles to Homeownership: Understanding the Barriers

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About the Study

Hurdles to Homeownership: Understanding the Barriers was prepared by Rosen Consulting Group for the National Association of REALTORS® and jointly released by Rosen Consulting Group and the Fisher Center for Real Estate and Urban Economics at the University of California, Berkeley Haas School of Business. This report, the second of three papers to be prepared by Rosen Consulting Group in 2017, examines the ongoing barriers to homeownership, focusing on the hurdles of mortgage credit, the regulatory environment, student loans, perceptions of risk and affordability, as well as the supply-side challenges of homebuilder financing, rising costs and regulatory burdens.

About Rosen Consulting Group

Rosen Consulting Group (RCG) is a leading independent real estate economics consulting firm. Founded in 1990 and with offices in Berkeley and New York, RCG provides strategic consulting and unbiased investment guidance through all market cycles. RCG is a trusted advisor to leading banks, insurance companies, institutional investors, and public and private real estate operators. For more information go to www.rosenconsulting.com.

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Hurdles to Homeownership: Understanding the Barriers

Introduction

U.S. homeownership rates plummeted following the Great Recession, and failed to increase during the past decade, leaving 1 million fewer total homeowners in 2016 than in 2006, despite the addition of approximately 11.8 million new households. As the after effects of the Great Recession wiped out the gains achieved in homeownership during the past three decades, the national homeownership rate fell to the lowest level in more than 50 years, resulting in wide-ranging negative effects for millions of households, particularly young families and minorities, while reducing national economic growth, as highlighted in depth in our previous paper, *Homeownership in Crisis: Where are we now?*

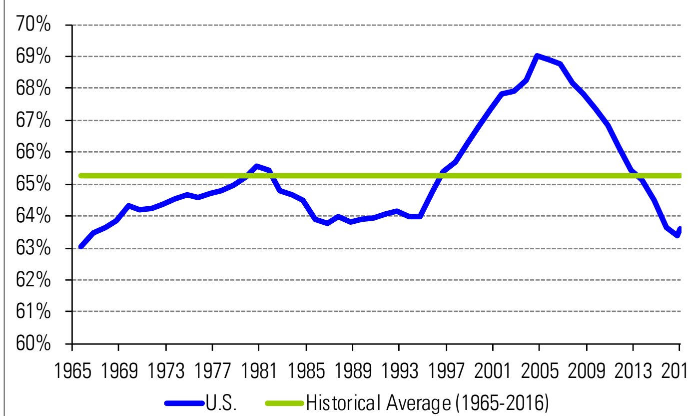
Although homeownership plays an integral role in the national economy, generating large economic and social benefits, and representing the epitome of the American Dream, the many advantages of homeownership are currently unavailable for millions of households. Households who cannot access homeownership, lose the opportunity to accumulate savings and build long-term wealth. Moreover, the impact is substantially more widespread, since homeownership creates positive externalities for the surrounding neighborhood through greater investment in the community and increased civic engagement.

This report, the second in RCG's series on homeownership, is intended to follow-up on our first paper by examining the question: What are the ongoing hurdles to increasing homeownership? This paper provides an overview of the many challenges that continue to keep homeownership rates depressed, despite historically low interest rates and broad growth in other sectors of the economy. Many potential homebuyers in recent years were prevented from making the transition to homeownership because of the current tight mortgage credit environment, the growing burden of student debt, and shifts in the perception of risks associated with buying a home, a concept we term *post-foreclosure stress disorder.* Moreover, these challenges were compounded by the increasingly significant issues of rising rents and increasing cost of living, as well as the lack of new home supply. Building upon this research, our next paper, will outline potential policy responses that combat these numerous hurdles, recommending innovative, yet pragmatic strategies to bolster homeownership safely and responsibly.

National Homeownership Trends

After reaching a 50-year low in the second quarter of 2016, the national homeownership rate trend started to show some small signs of improvement during the past three quarters, increasing to 63.6% as of the first quarter of 2017 (see Figure 1).[1] This may be represent the turning point, with the overall homeownership rate stabilizing and potentially improving going forward. However, there is a long way to go to get back to historical homeownership levels and major demographic trends, particularly the rapid growth in the number of minority and young households, will likely prevent any significant increase in homeownership without a substantial improvement in the many hurdles preventing these households from transitioning to homeownership.

Figure 1: U.S. Homeownership Rate



Note: Data not seasonally-adjusted, latest data as of 1Q17
Source: Census

As of the first quarter of 2017, the homeownership rate for African American households was 42.7%, up from the low-41% range in mid-2016, but still 6.4 percentage points from the pre-recession peak (see Figure 2). Hispanic homeownership increased to 46.6% in the first quarter of 2017, up from a low near 44% in early 2015, but remained down by 3.1% from the pre-recession peak. In comparison, while homeownership among white households remained 4.2% below the prior peak, the current homeownership rate of 71.8% is currently approximately 29 and 25 percentage points higher than African American and Hispanic homeownership, respectively.

Despite modest improvements in recent quarters, homeownership rates for young households in the millennial and Generation X age cohorts were most negatively impacted by the decline over the past decade. Of particularly importance as the large millennial generation continues to reach the ages when people traditionally marry, have

Figure 2: Homeownership Rates by Household Type

Household Type	Peak	Current	Percentage Point Change
Under 25 Years Old	25.7%	22.6%	-3.1%
25 to 29 Years Old	**41.8%**	**30.9%**	**-10.9%**
30 to 34 Years Old	**57.4%**	**44.6%**	**-12.8%**
35 to 44 Years Old	69.2%	59.0%	-10.2%
45 to 54 Years Old	77.2%	69.4%	-7.8%
55 to 64 Years Old	81.7%	75.6%	-6.1%
65 Years and Over	81.0%	78.6%	-2.4%
White	76.0%	71.8%	-4.2%
African American	**49.1%**	**42.7%**	**-6.4%**
Hispanic American	49.7%	46.6%	-3.1%
Other Races	59.9%	53.6%	-6.3%

Note: Peak from 2004 to 2007; Current data as of 1Q17
Source: Census

children and buy homes, the homeownership rate for millennial households remains significantly depressed. As of the first quarter of 2017, the homeownership rate for households aged 25 to 29 was 30.9%, down by 10.9 percentage points compared with the prior peak, while the homeownership rate fell by 12.8 percentage points for households aged 30 to 34 to 44.6%. Given the limited recovery in homeownership rates, it is crucial to understand the key barriers that are preventing renter households from transitioning to homeownership in order to focus on potential policy solutions to help revive the American Dream in this country.

Mortgage Availability

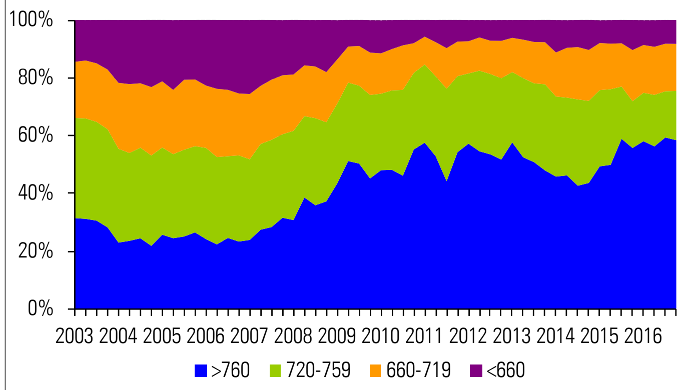
Following the Great Recession, mortgage lending decreased substantially as banks withheld loan approvals from many households, even those with excellent credit scores. The lack of available credit played a significant part in depressing the national homeownership rate, forcing many into renting rather than owning a home. Though credit standards loosened slightly since the end of the Great Recession, and mortgage lending has slowly improved, mortgages remain largely inaccessible to millions of households. Restoring mortgage lending requirements to safe, yet accessible standards, is key to enabling creditworthy households to purchase homes, thereby improving the homeownership rate.

Returning to Safe and Accessible Lending

The Impact of Credit Scores

As one of the first factors that originators consider when evaluating whether to approve a mortgage, credit scores are an important part of the mortgage approval process. However, credit scores actually relay very little information relevant to evaluating credit-worthiness. A credit score does not take into consideration income and employment, assets or net worth. Ultimately, underwriters consider other documentation and information when deciding the actual terms of a mortgage. However, despite providing very limited information, a credit score is the de facto gate-keeping factor that determines whether an applicant's file is even considered by an originator. As of 2003, prior to the period of excessively lax lending standards that led to the subprime housing crisis, approximately 70% of total mortgage originations were from borrowers with credit scores less than 760 (see Figure 3).[2] Those with a credit score between 720 and 759 represented the largest share of these with more than 34% of the total origination volume, including refinances. Borrowers with a credit score between 660 and 720 represented approximately 20% of the total origination volume, whereas households with scores less than 660 represented only 15% of those obtaining mortgages. In contrast, in the current credit-constrained environment, households with credit scores of 760 or greater represented 58% of total mortgage originations including refinances, as of year-end 2016, far exceeding the 30% share in 2003. Additionally the share of originations to those with good to excellent credit scores, between 720 and 759, dropped to less than 17% of the total mortgage origination volume, representing only half of the 2003 share. Following a similar pattern, those with credit scores between 660 and 720 dipped to 16% of total origination, and those with credit scores of less than 660 dropped to 9% of total origination. Enabling mortgage access and approvals, particularly to those with good credit scores and stable income should be a priority for both lending institutions and policy-makers. An increase in lending to potential homebuyers with good to excellent credit could have a substantial impact on home sales and support an improvement in the overall homeownership rate.

Figure 3: Share of Total Mortgage Origination by Credit Score

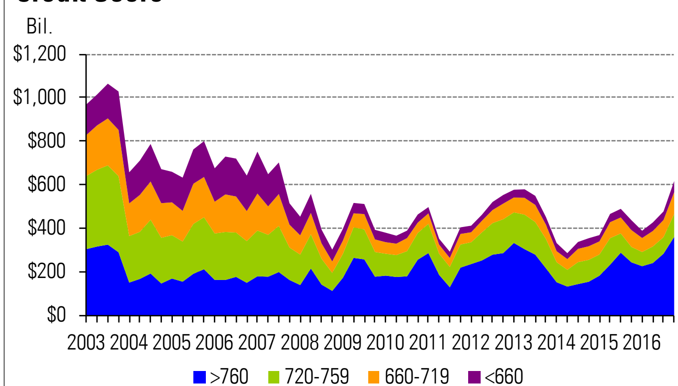


Sources: Federal Reserve Board of New York, RCG

Missing Loans

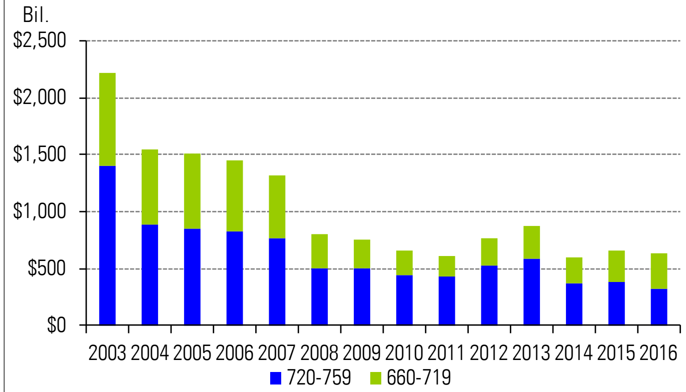
As credit standards for borrowers increased substantially, the dollar volume of lending to consumers of all credit scores contracted significantly. Across all types of borrowers, total origination dropped 50% from $3.8 trillion in 2003 to $1.9 trillion in 2016 (see Figure 4). However, this decrease was particularly dramatic among those with good to excellent credit scores. While total lending including refinances to borrowers with credit scores of 760 or more decreased to $1.1 trillion in 2016, down by approximately 10% compared with 2003 (the earliest data available). Mortgage originations to those with credit scores between 720 and 759 decreased by 77% from $1.4

Figure 4: Quarterly Mortgage Origination by Credit Score



Source: Federal Reserve Board of New York trillion in 2003 to $323 billion in 2016 (see Figure 5). Lending to those with a credit score of 660-720 also decreased sharply, but not as dramatically as the decline in lending for those with credit scores between 720 and 759, dipping by 62% from $820 billion to $315 billion.

Figure 5: Annual Mortgage Origination by Credit Score (660-760)



Source: Federal Reserve Board of New York

However, it is important to consider that the 2003 totals included a large share of refinance activity. Excluding refinances, the decline in total mortgage lending was less extreme, but still very substantial. Total purchase lending declined by 22.7% between 2003 and 2016, falling by approximately $290 billion to slightly less than $1 trillion in home purchase mortgage originations and representing a large number of missing mortgages. In fact, given the average mortgage loan amount of $320,000, if the lending environment returned to more normal credit conditions, RCG estimates that more than 900,000 additional home purchase mortgages would have been issued in 2016, representing a large increase in the number of home sales and a dramatic potential for expanding homeownership (see Figure 6).[3] Furthermore, what is notable is that fewer mortgage originations occurred during a period when mortgage rates declined significantly from the high-5% range to the mid-3% range.

Figure 6: Additional Purchase Mortgage Originations (2003-2016)

	Purchase Mortgage Originations
Volume in 2003	$1.28 Trillion
Volume in 2016	$990 Billion
% Decline	22.7%
$ Difference	$290 Billion
Additional Purchase Mortgages	906,000

Sources: Federal Reserve Board of New York, FHFA, RCG

Alternatively, research by the Urban Institute estimated the number of missing mortgages, based on loan origination in the early stages of the recovery period compared with the number of loans that would have been issued in a normal credit environment. The Urban Institute concluded that the number of missing loans grew from 500,000 originations in 2009, to 1.25 million in 2013, amounting to a total of more than 4 million missing mortgages during the five year period.[4] Regardless of the precise scale of the credit gap, the solutions to repairing the disconnect between credit scores and loan approvals are an integral part of solving the national crisis in homeownership rates. Reducing even a portion of the missing mortgages would substantially increase the number of households approved for mortgages, thereby allowing millions of potential additional home purchases and homeowners.

Regulatory Environment

Following the end of the Great Recession, new rules and standards on lenders contributed to the constrained credit environment and substantially inhibited lending even to the most creditworthy households. If the regulatory environment remains unchanged, loan standards will likely remain tight, preventing many more households from purchasing homes in the future.

Regulations resulting from the Dodd-Frank act and Basel III were designed to promote stability through raising capital reserve requirements and implementing regular stress tests. While some of these requirements are critically important and necessary for the stability of the banking system, in practice these regulations also necessitate strict underwriting standards, and often prevent access to mortgages to all but the households with the most exceptional credit. Moreover, in the wake of the recession and foreclosure crisis, many of the new rules created included punitive clauses that expose lenders to a great deal of uncertainty in terms of legal and financial risks in the event that loans default, effectively discouraging overall lending.

Though each individual provision included in the new regulations that banks must adhere to may not cause much burden for lenders in isolation, the combined impact of the numerous regulatory changes generated a multiplicative effect that is contributing to an environment of extreme caution among mortgage lenders. One such regulation that contributes a number of strenuous lender requirements is the ability-to-repay rule, detailed in the Dodd Frank Act and enforced by the Consumer Financial Protection Bureau (CFPB). The rule stipulates that lenders must ensure that borrowers are able to make timely monthly payments. While the intention behind the rule is to ensure borrower credit-worthiness and avoid the worst abuses that led to the housing bubble, the rule essentially requires lenders to document every potential element of borrower risk, no matter how small. Effectively, many lenders are forced to document issues that have little to do with lending risk, simply to remain in compliance. Additionally, the rule makes the lender liable for issues that may cause a borrower to not repay a mortgage in the future, exposing lenders to potential future litigation, the risk, scale and cost of which are largely unknown. Moreover, the new Qualified Mortgage rules make it more difficult for loans to qualify under the safe harbor presumption, a legal clause that protects lenders from legal challenges related to the ability to repay obligations. Further exacerbating the challenges surrounding the current regulatory environment, the CFPB approach to enforcing compliance relies on punitive fines, often coupled with a great deal of negative public attention for lenders, rather than a more collaborative process that would allow lenders to obtain prior approvals for new products or processes in order to proactively ensure compliance. This combination of legal and compliance risk, on top of new, tighter underwriting standards, has caused mortgage lenders to be very wary of extending loans to many potentially creditworthy borrowers, particularly households with good to excellent, rather than outstanding credit.

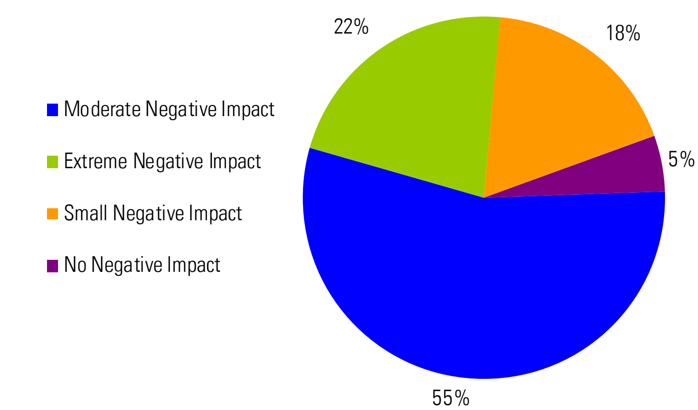
Another issue that adds to the multiplicative effect is the use of the False Claim Act by the Justice Department and the Federal Housing Administration (FHA). The act allows the Justice Department to prosecute banks that issue FHA-insured mortgages to individuals who subsequently default on the loan. While designed to guard against fraudulent lending practices and mortgage insurance fraud, this enforcement approach has the unintended consequence of making lenders potentially liable for almost or all instances of borrower default, again creating substantial uncertainty around the possibility of future litigation. Currently, an increasing number of banks are withdrawing from FHA-insured lending because of the risk of being sued under the False Claims Act, as well as the complexity and the extremely high cost of servicing delinquent FHA loans. In fact, the share of FHA lending by banks decreased by nearly two-thirds in only three years, dipping from 60% to 20%, according to the Urban Institute.[5] The FHA could significantly alleviate these hurdles by simplifying the process of servicing delinquent loans and developing a clearly delineated hierarchy of penalties, so that minor infractions do not receive the same treatment as egregious errors or fraudulent behavior. However, currently, even the smallest oversights can lead to harsh penalties for lenders. This further discourages banks from lending to creditworthy potential homeowners, especially if the borrower lacks pristine documentation. As lenders restrict the flow of mortgage capital, particularly to households on the margin of approval, or even close to the margin, more and more households are shut out of the for-sale housing market. The impact is particularly significant for low and moderate income households, first-time buyers and minority households, all groups that are crucial for the future of homeownership nationwide.

Improved access to credit will require regulators to consider alternative options for ensuring that creditworthy households are not excluded from the mortgage market as lending institutions attempt to comply with stringent regulations. In particular, the CFPB should more clearly define expectations for risk management with lenders, finding a middle ground that makes it possible to continue to provide necessary regulatory oversight while minimizing uncertainty for retail lenders.

The Cost of Regulation

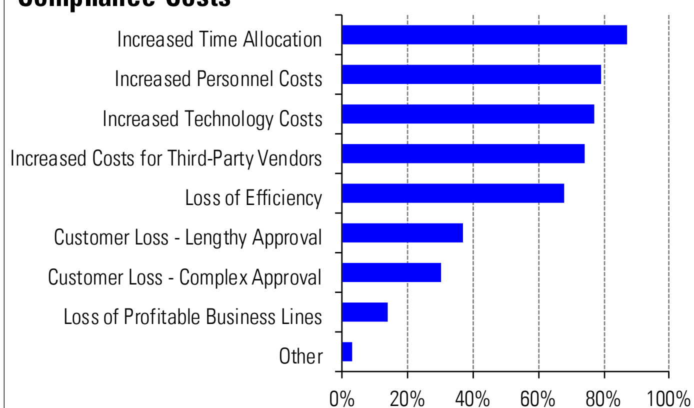
According to the 2017 Real Estate Lending Survey conducted by the American Bankers Association, 95% of surveyed banks responded that business was negatively impacted by the new regulations (see Figure 7).[6] Some 77% of surveyed banks claimed that the regulation had a moderate to extremely negative impact on business (see Figure 8). Additionally, 97% of surveyed mortgage lenders claimed that compliance costs had increased in light of recent regulatory reforms. Of these new costs, 87% answered that increased time allocation was a primary driver of increased compliance costs, and 68% of mortgage lenders stated that business was less efficient with the added regulations. Though large mortgage lenders are negatively affected by these regulations, smaller community banks are even more disproportionately harmed. As an example, many regulations from Dodd-Frank encourage or insist on the standardization of bank products and services. Large banks may find it profitable to offer standardized products, but community banks tend to serve unique markets and can only succeed by changing their products to the economic contours of the local community. According to the Mercatus Center at George Mason University, the regulations under Dodd-Frank caused 6% of community banks to discontinue offering residential mortgages or HELOCs.[7] An additional 10% of community banks expect to discontinue offering residential mortgages or HELOCs. These high fixed costs fueled by increased regulation also reduce the likelihood that smaller mortgages will be profitable to originate, particularly those generally borrowed by first-time homebuyers. The decrease in community bank lending is particularly concerning in terms of the availability of credit for minority households. In general, these banks are more likely to reflect the diversity of their local community and are often perceived as being able to provide a more personalized level of care, both factors that could make it

Figure 7: Impact of Regulation on Banks



Note: Data based on a 2017 survey of 159 banks
Source: American Banker's Association

Figure 8: Primary Drivers of Increased Compliance Costs



Note: Data based on a 2017 survey of 159 banks
Source: American Banker's Association

easier for well-qualified minority households to access credit, thereby expanding homeownership among many of the households who are most critical to the future of homeownership in America. However, because of the complex and costly nature of the current regulatory environment, community banks are playing a shrinking role in mortgage lending, effectively limiting the availability of credit to minority households.

Post-Foreclosure Lending Aversion

Following the Great-Recession, banking institutions sustained heavy financial and job losses, which were compounded by large fines imposed by the government and mortgage put-back settlements required by the Government Sponsored Enterprises (GSEs), Fannie Mae and Freddie Mac. In fact, fines issued in the wake of the foreclosure crisis were some of the highest ever charged to financial institutions. Bank of America, for instance, settled a $16.7 billion fine in 2014, while JP Morgan settled a $13 billion fine in 2013 (see Figure 9).[8] Other financial institutions, such as Goldman Sachs and Citigroup were also fined heavy amounts, settling for a total of more than $12.3 billion. Such punitive actions were, and continue to be, highly publicized, drawing a lot of negative attention towards lending institutions. In addition, many banks were also significantly affected by mortgage put-backs. More specifically, following the foreclosure crisis, the GSEs filed billions in mortgage repurchase claims against retail lenders. Examples of the large costs associated with put-backs include Bank of America, which reached a $3.6 billion settlement with Fannie Mae for loan repurchases, and Citigroup, which paid a nearly $1 billion settlement (see Figure 10). In total, Fannie Mae reached settlements worth $6.5 billion in loan put-backs with eight major banks in 2013.[9] [10]

Figure 9: Largest Foreclosure Crisis Settlements

Banking Institution	Settlement Amount
Bank of America	$16.7 Billion
JP Morgan	$13.0 Billion
Citigroup	$7.0 Billion
Credit Suisse	$5.3 Billion
Goldman Sachs	$5.1 Billion
Morgan Stanley	$3.2 Billion
Deutsche Bank	$1.2 Billion

Source: CNN Money

Figure 10: Mortgage Repurchase Settlements

Banking Institution	Repurchase Amount
Bank of America	$3.6 Billion
Citigroup	$1.0 Billion
JP Morgan Chase	$670 Million
Wells Fargo	$591 Million
SunTrust Financial	$373 Million

Sources: Reuters, Fannie Mae

In the aftermath of the foreclosure crisis, the recent experience of large fines and put-backs, the new restrictive and uncertain regulatory environment, and ongoing concerns about the future risk of enforcement actions are combining to discourage banks from expanding mortgage lending. This is a phenomenon that we refer to as *post-foreclosure lending aversion*, which is leading many banks to question whether mortgage lending, particularly FHA lending, is still a viable business.

Of course, some of the aversion to mortgage lending reflects an overreaction on the part of retail lenders. Even though the capital reserves of many banks are sufficient, fear of repeating the mistakes from the boom and bust cycle already caused many mortgage lenders to withhold loans from otherwise creditworthy potential homebuyers. However, as described above, these existing concerns are significantly magnified by the current regulatory environment. While mortgage lending has certainly eased somewhat in the past few years and will likely continue to gradually improve, we expect the recent post-foreclosure lending aversion to continue to suppress the homeownership rate, with many households prevented from obtaining mortgages unless focused efforts are taken to encourage common sense reforms and more reasonable lending standards.

Priorities for the Future of Mortgage Credit

Credit availability continues to hinder the ability of millions of households to purchase homes. Solutions for the future must focus on several key factors if the housing finance system is to once again enable safe and sound homeownership. Only with change on both the legislative and retail lending levels can creditworthy households begin to obtain approvals for the mortgages necessary for restoring the homeownership rate to more normalized levels.

Addressing Regulation

While certain parts of the current regulations for retail lenders are necessary to protect borrowers and to preserve the stability of the housing finance system, many of the requirements remain unclear and the current enforcement process leaves banks open to the potential for harsh punishment and a great deal of uncertainty, which together significantly limit lenders' willingness to lend beyond borrowers with pristine credit. Clarification of the rules and requirements relating to risk management is an important step that could significantly alleviate the adversity to lending. Banks that meet acceptable reserve requirements and lending standards should be encouraged to originate safe and sound mortgage debt, instead of dissuaded from lending to even those with good to excellent credit because of the risk of fines or litigation. Given the many challenges lenders and borrowers face, RCG believes that the current lending environment calls for a comprehensive and collaborative approach to regulatory reform, focused on simplifying the process and the cost of compliance, while maintaining fundamental protections for consumers and the broader housing finance system.

To begin, regulation should be made more efficient, so that lenders do not have to spend as much time or money on compliance. The cost of complying with some of the more extensive rules often makes it unprofitable for banks to originate smaller mortgages that could be utilized by first-time homebuyers or lower income households. In general, most lenders only reach a breakeven point on issuance and servicing costs for mortgages between $150,000 and $200,000, with loans below these thresholds unlikely to prove profitable. Streamlining the regulatory environment so that compliance is more efficient is one way that regulators can help banks cut costs and make lending for smaller mortgages profitable, thereby encouraging lenders to provide access to capital for lower income or first-time homebuyers. Additionally, eliminating unnecessary restrictions, such as simplifying the excessive documentation process created by the ability-to-repay rule, could also make it easier for regional and community banks to continue to operate, and perhaps even prevent smaller institutions from pursuing plans to discontinue mortgage lending or home equity products. Additionally, expanding safe harbor provisions to provide a broader protection against future litigation would further help to limit lender uncertainty and expand credit availability. While regulations are necessary for the stability of the mortgage finance system and the protection of the consumer, rules should be clearly defined and banks that demonstrate full compliance should be assured protection with iron-clad safe harbor provisions. This would help to address lender concerns over the risk of litigation, enforcement fines and put-backs, helping to decrease the post-foreclosure lending aversion that is hindering the flow of mortgage capital to credit-worthy households. Ultimately, reforming the requirements that currently restrict mortgage lending, and encouraging both lenders and borrowers to better understand the risks and benefits of pursuing mortgage financing, is a crucial step in addressing the national crisis in homeownership rate.

Addressing Retail Lenders

Mortgage credit accessibility remains severely limited by the overreaction from banks in the wake of the foreclosure crisis. Even lenders with sufficient capital reserves are averse to lending to households with very limited levels of risk, as indicated by the large drop in lending to those with good to excellent credit scores. In fact, bank capital reserves have improved greatly during recent years, even as lending volume remained far below levels during the previous period of normal lending standards. While part of this is due to the ill-defined aspects and compounding effects of the new regulatory environment, part of the adversity to lending is nothing more than a natural reaction to the experience of the last decade. Indeed, banks lost enormous sums of money, many finance professionals lost their jobs, and billions in fines were levied on lenders. Financial institutions are understandably hesitant to reenter the private mortgage market with the same spirit as before the recession. Yet, at the same time, encouraging banks to lend to creditworthy families with safe loan products and sound underwriting is a crucial goal that will be absolutely necessary in order to revive homeownership and restore the possibility of the American Dream for millions of households. This is particularly important for first-time homebuyers and minority households, who tend to have lower incomes than the limited group of households currently able to obtain affordable mortgage credit. Ultimately, improving the credit environment will require a shift in policy and approach to the regulatory environment and a return to previous underwriting fundamentals, with banks focusing on the individual borrower credit risk rather than compliance. Only when banks and regulators have similar incentives and are focused on the goal of improving the flow of credit to potential homebuyers in a safe and sound way, can the mortgage system once again encourage homeownership.

The Role of the GSEs

The Government Sponsored Enterprises (GSEs), Fannie Mae and Freddie Mac, play a crucial role in providing the liquidity for lenders in the primary market and promoting the overall stability of the housing finance system. In particular, the GSEs support a sustained flow of capital that enables lenders to provide potential homebuyers with the mortgages necessary to purchase a home. In periods of normalized credit conditions, liquidity for banking institutions, generally translates into a greater availability of credit for households seeking mortgages and decreases the costs and approval requirements around securing home financing, thereby supporting greater homeownership.

However, during the Great Recession, Fannie and Freddie suffered heavy losses, which ultimately led the U.S. Treasury to grant a $200 billion line of credit in order to keep Fannie and Freddie functioning. At the same time, the government placed both GSEs into the conservatorship of the Federal Housing Finance Agency (FHFA), created to oversee and manage the operation and risk of the GSEs. Since then, Fannie and Freddie recovered, along with the economy and home prices, and continue to securitize mortgages, as well as make a significant profit. Under new management and with the overall economy improving, the GSEs were able to generate significant profits for the Treasury in the form of dividends. However, several risks continue to persist, threatening the existence of the GSEs, and making the future of the current housing finance system uncertain. In order to preserve the liquidity, stability, accessibility and affordability that the securitization process provides, it is important to take steps to ensure that the housing finance system can withstand future recessions.

Liquidity and Stability

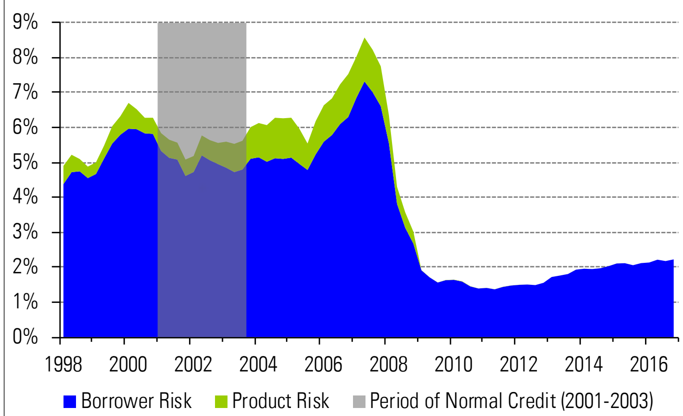
The GSEs improve liquidity in the housing finance system through the purchase and securitization of 30-year fixed rate mortgages. Through improving access to mortgage credit, households who would not otherwise have been able to buy a home, might be able to secure a 30-year mortgage and purchase a home. The GSEs play a vital function in increasing the homeownership rate in this manner. The process involves Fannie Mae and Freddie Mac purchasing outstanding mortgages from retail lenders, grouping these mortgages together, and then selling the securitized loans as Mortgage Backed Securities (MBS). The securities are then purchased by investors in the secondary market. This effectively allows lenders to offload credit and interest rate risk, thereby increasing liquidity for lending institutions and making it possible for lenders to issue additional mortgages to potential homebuyers.

In addition to increasing the ability for banks to lend to homeowners, the GSEs are also intended to provide stability to the housing finance system. In particular, the GSEs guarantee the timely payment of principle and interest to MBS investors. In order to offset this credit risk, the GSEs charge retail lenders a guarantee fee, which is intended to cover the cost of borrowers failing to make payments, the capital needed to protect against large losses in the event of a severe downturn, as well as the necessary GSE administrative costs.[11] The guarantee fee is determined by the level of risk associated with the borrower and type of loan. Retail lenders typically incorporated these fees into the mortgage interest rates, passing along costs of the guarantee to the borrower. Through the existence of a federal guarantee and the clear channel of capital between private investors and homeowners, the GSEs provide much needed liquidity and stability to the housing finance system.

Accessibility and Affordability

Capital availability is necessary to ensure that loans are accessible and that the fees, interest and other conditions surrounding them are affordable to moderate and lower-income potential homebuyers. In a normal credit environment, the federal guarantee provided by the GSEs typically makes lending more readily available to low and moderate-income households. However, since the Great Recession, the availability of mortgage credit has contracted significantly. The GSEs have continued to bolster mortgage originations by backing additional mortgages. In fact, the Urban Institute estimates that following the Great Recession, in the first quarter of 2011, total risk taken by the GSEs, which is the percentage of home purchase loans that go unpaid for more than 90 days past their due date, shrank to a cyclical low of 1.4% (see Figure 11). Since then, the total default risk taken by the GSEs increased by 80 basis points to 2.2% in 2016.[12] Furthermore, even though the volume of total mortgages outstanding has decreased substantially since the Great Recession, the GSE share of these mortgages has increased steadily by more than 5 percentage points during the previous five years to 61.6% of the mortgages outstanding, thereby supporting the total amount of outstanding loans.[13] However, as discussed above, stringent requirements set by the Dodd-Frank act and an overcorrection from the lax lending standards that led to the Great Recession to overly tight underwriting, continue to restrict mortgage availability for many potential homeowners. Without the GSEs taking additional default risk over the past few years, there is a possibility that credit availability would be much lower than it is currently, or largely inaccessible altogether.

Figure 11: GSE Default Risk



Source: Urban Institute

In addition to increasing accessibility and affordability through injecting capital into the retail lending market, the GSEs also strive to meet goals set by the HUD and the FHFA designed to specifically improve access to moderate-income households, defined by the FHFA as borrowers with incomes of 80% or less of the area median income. During the past few years, the FHFA set a target for the GSEs, requiring that 24% of single family home mortgage purchases in each year should be mortgages from low-income borrowers. Fannie Mae and Freddie Mac met this goal in 2013 and 2014, but fell short in 2015.[14] In 2016, Freddie Mac was much closer to meeting this goal, allocating 23.8% of mortgage purchases to low-income borrowers.[15] However, Fannie Mae fell about 1% short of the goal, purchasing 22.9% of mortgages from low-income borrowers.[16] If the GSEs fail to meet the targets, the FHFA requires both agencies to submit plans for purchasing more low-income borrower mortgages in the subsequent years. These goals, which are designed to improve accessibility to mortgages for lower income families, are key to supporting the American dream of homeownership. Further increasing access to capital for minority households and younger families would be one of the most effective ways to restore the homeownership rate, since these demographic groups have low homeownership rates and were disproportionately affected by the Great Recession.[17] A far larger percentage of these households were unable to reenter the for-sale housing market compared with white, middle-income households, therefore accounting for a significant portion of the “missing” homeowners necessary to restore the homeownership rate to previous normal levels.[18]

Existing Threats to the GSEs

Though the GSEs play a necessary role in preserving the liquidity of the housing finance system and keeping the 30-year mortgage largely accessible to many households, several issues persist, threatening the future of both Fannie and Freddie. Currently, per the conditions of the conservatorship, any profit that the GSEs make goes directly to the U.S. Treasury in the form of dividends. The enterprises are unable to build their capital reserves, or pay off any of their outstanding $187.5 billion loan drawn from the Treasury in the aftermath of the Great Recession. This is a critical concern because the reserves held by the GSEs are currently insufficient in the event of a major housing market downturn. In August 2016, the FHFA conducted a stress test required by the Dodd-Frank act designed to measure how well the enterprises could weather a "severely adverse scenario." The test measured what would to happen to the GSEs if the national real GDP began to decline immediately and the unemployment rate increased to 10%.[19] The results of the test revealed that Fannie and Freddie would not have enough capital reserves to survive a severe economic contraction, and would require an additional bailout of between $49.2 billion and $125.8 billion. During the Great Recession, insufficient capital threatened to render the GSEs insolvent and necessitated a massive bailout from the taxpayers. Despite the conservatorship, this situation could occur again in future downturns without substantial reforms.

Even though the Federal guarantee provides additional stability to the system, it is still important that both retail lenders and the GSEs are well-capitalized, and able to operate even in an adverse economic environment. Capital reserves should be sufficient to ensure that the housing finance system is solvent at all periods of time and never reaches the point that a bailout from the taxpayers is necessary, unlike during the Great Recession.

Goals for the Future

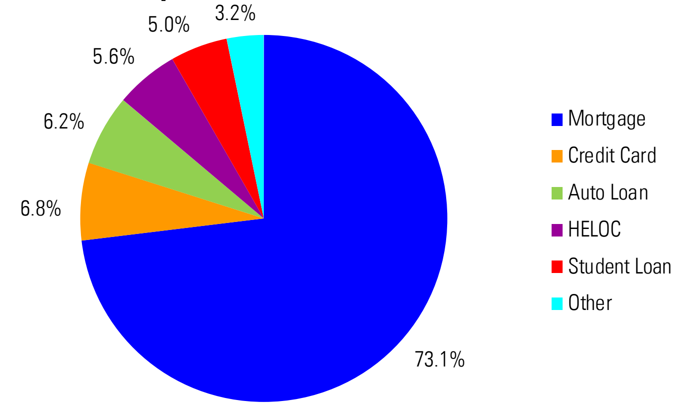
Eliminating the GSEs without a proper replacement could be catastrophic, potentially leading to the collapse of the entire housing finance system. The contraction in liquidity for primary lenders would freeze the amount of mortgage capital available to borrowers and cause a sharp decline in mortgage lending and a further collapse in homeownership. To the extent that private securitizers stepped in to fill the void, guarantee fees would likely increase substantially in the absence of Federal backing, with the costs passed along to potential borrowers. Moreover, removing the GSEs would also lead to a lack of oversight in the securitization market and likely result in a proliferation of new alternative loan products, a return to high-risk or predatory lending to consumers, and perhaps even lead to the elimination of the traditional 30-year mortgage.

As such, any potential solutions to the issues of the weak capital reserves and the risk of taxpayer bailouts, must focus on sustaining the liquidity and stability of the housing finance system. Whether by focusing on resolving the current issues with the GSEs and sustaining Fannie and Freddie for the long term, or by replacing the GSEs with a new system, the government should continue to play a visible and well-defined role in supporting the critical functions of ensuring liquidity and stability, while promoting safe, accessible and affordable mortgages to households across the United States. While it may take time to determine the ideal long term answer, or to transition to a new system, in the interim is it crucial to ensure that Fannie and Freddie have sufficient capital reserves to weather adverse economic headwinds when they next arrive. Furthermore, the enterprises must continue to work towards a platform that increases capital availability and affordability to low and moderate-income households through promoting equality in lending and programs that incentivize lending to a broad range of potential homebuyers. This is key to increasing the current homeownership rate and bolstering national economic growth, as low and moderate-income households and minority households were the groups most heavily affected by the Great Recession. The GSEs should also continue to securitize stable and well-underwritten loans, though with standards that are more in line with the normal credit periods such as the early 2000s, rather than unreasonably high standards that limit homeownership to only those with high incomes and near-perfect credit. It is important that the FHFA and the GSEs continue to facilitate a system of transparent oversight and movement of capital within the housing finance system, from secondary mortgage investors to retail borrowers. Clearly defined roles, readily available liquidity among retail lenders, programs to improve mortgage accessibility for lower-income borrowers and well capitalized and liquid GSEs with a path forward, should together increase lending to potential homeowners, in a safe and sound way. This, in turn, should make homeownership a more accessible goal for many and increase the overall homeownership rate.

Student Debt Burden

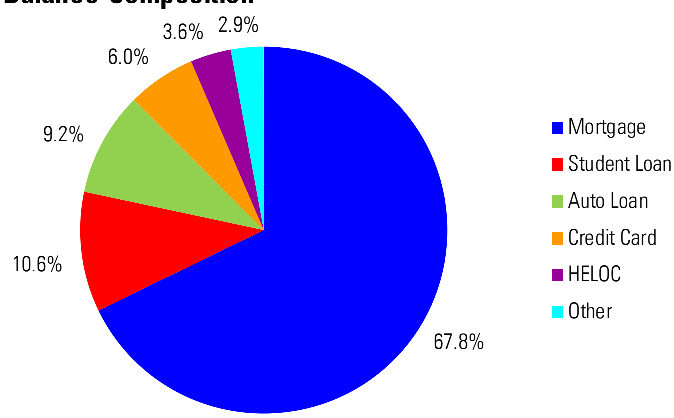
U.S. households are taking on more debt in order to pay for higher education and afford the rising costs of living. As a result, savings rates decreased in the last few years, making it challenging to save for future goals, such as a down payment on a home. Total U.S. household debt just surpassed the previous peak in 2008 by 0.4%, reaching $12.73 trillion as of the first quarter of 2017, up by 3.9% compared with the first quarter of 2016 (see Figures 12 and 13).[20] However, unlike prior to the recession when housing-secured debt including mortgage and HELOC (Home Equity Lines of Credit) debt drove the expansion, most of the rebound in household debt since 2009 was driven by student and auto loan debt. In particular, student loans increased substantially as a share of total household debt, rising by more than five percentage points since 2008 to 10.6%. Auto loans as a share of total household debt increased by nearly three percentage points in the last eight years to 9.2%. Credit card debt, which steadily fell as a share of total household debt since 2008, increased last year and then dipped slightly reaching 6.0% as of the first quarter, or only 0.8 percentage points below the share in 2008. The aggregate credit card limit also continued to rise for the 17th consecutive quarter. However, housing debt, including mortgages and HELOC loans fell substantially since 2008 to 67.8% and 3.6%, respectively, reflecting both the lack of mortgage credit availability and the increase in other types of household debt. With rising debt making it increasingly difficult for households to save, the personal savings rate as a percentage of disposable personal income dropped substantially from a high of 7.6% in 2012 to an annual average of 5.6% from 2013 through 2016 (see Figure 14).[21] Less slack in household budgets places pressure on households' financial security and economic mobility in the long run because there is less money to devote to savings and other wealth-building investments. Taking on additional debt, in particular student debt, together with the failure to save adequately, directly inhibits the ability of households to even consider buying a home.

Figure 12: 4Q 2008 Total Household Debt Balance Composition



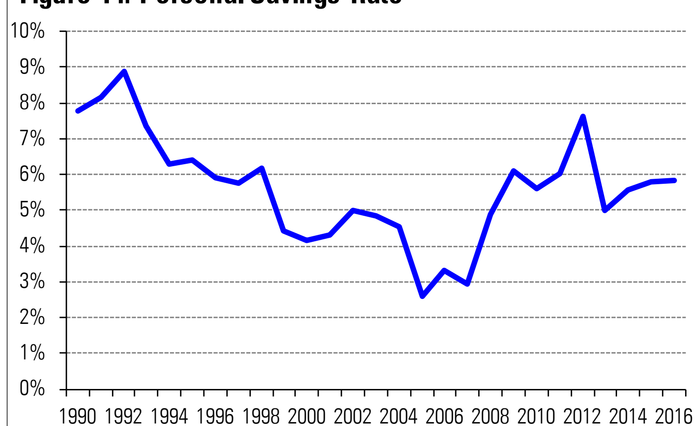
Source: Federal Reserve New York Consumer Credit Panel

Figure 13: 1Q 2017 Total Household Debt Balance Composition



Source: Federal Reserve New York Consumer Credit Panel

Figure 14: Personal Savings Rate

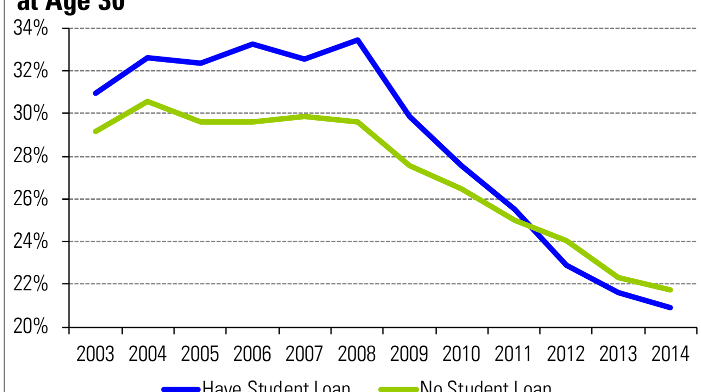


Note: Personal savings as a percentage of disposable personal income
Source: Bureau of Economic Analysis

Impact of Student Debt on Homeownership

In many ways educational attainment is becoming an increasingly important step toward achieving the American Dream of owning a home. Education generally increases both job opportunities and income. In fact, the average earnings premium of a college degree, the percentage by which wages of college graduates exceed those of otherwise comparable high school graduates, rose substantially by approximately 25 percentage points for both women and men to 50.8% and 47.1%, respectively, between 1980 and 2015, reflecting both rising opportunities for those with degrees and a decline in real average earnings for those without a degree.[22] In general, increased earnings potential from additional education makes saving for a down payment, qualifying for a mortgage and affording monthly mortgage payments easier, particularly in an environment of rising home prices and still tight credit standards. In fact, compared with not having a high school diploma, a bachelor's degree increased homeownership by 17.5 percentage points for young adults as of 2013, according to a study by Fannie Mae.[23] Additional education can also reduce racial and economic disparities in access to homeownership. The same study found that the positive education effect was largest among African-American households, where a college degree was associated with an increase of 9.7 percentage points in homeownership compared with African-American households with less than a high school diploma. College degrees also seem to level the playing field among students from different socioeconomic backgrounds, as students coming from areas with average incomes above $55,000 versus below have similar homeownership rates.[24] However, for many people, taking on student debt is often necessary in order to obtain a higher level of education. Although college attendance is associated with higher homeownership rates regardless of debt status, research by the Federal Reserve Bank of New York demonstrates that student debt reduces homeownership rates among those with the same level of education.[25] In fact, since the recession, mortgage borrowing fell dramatically for 30-year olds (see Figure 15).[26] However, the proportion of 30-year olds with both student loans and home-secured debt dropped by more than 12 percentage points between 2008 and 2014, compared with a decline of approximately eight percentage points for those without student loans.

Figure 15: Proportion with Home-Secured Debt at Age 30



Note: Represents data for 27-30 year olds
Source: Federal Reserve Bank of New York Consumer Credit Panel

Although education generally increases future earnings and in turn boosts the future likelihood of buying a home, student loan debt is delaying homebuying for households. Many young adults are opting to live with their parents or remain in shared living situations because of the financial burdens caused by student debt, thereby postponing the formation of additional households. The traditional first steps for young adults after graduating college is to find a job and form their own household, well before purchasing a home. However, in a recent 2016 study conducted by the National Association of Realtors (NAR) and American Student Assistance, 42% of student loan borrowers reported delaying moving out of a family member's home after college, with 24% delaying for at least two years.[27] However, since many young adults use this living situation as a way to pay down debt and save, further increases in student debt loads would likely extend the amount of time individuals live at home, thereby postponing the formation of households. In fact, approximately half of all borrowers in the NAR survey believed that student loan debt inhibited their ability to rent alone.

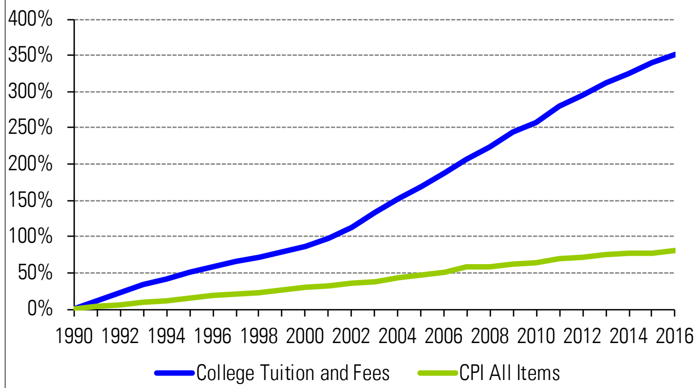
The strain of student debt impacts the perceptions and beliefs of households regarding their ability to purchase a home. Approximately 71% of non-homeowners in a 2016 study believed that their student loan debt delayed them from buying a home.[28] Non-homeowners with more than $50,000 in student debt were the most likely to feel that their debt delayed them from buying a home, with approximately eight out of ten feeling this way. Approximately 78% of the non-homeowners who believed student debt was a roadblock to homeownership thought that the central problem was the inability to save for a down payment as a result of their debt. The millennial generation was also more likely to suffer from this problem, whereas the Generation X and baby boomer respondents felt their inability to own a home because of student debt was attributed to high debt-to-income ratios.

Rising Student Debt Loads

Nationally, student debt expanded rapidly in recent years reflecting demographic trends, increased enrollment and rising education costs. The total number of 18 to 24 year olds in the U.S. increased by 5.3%, or 1.5 million people, between 2004 and 2016.[29] Enrollment also increased, with the percentage of people in this age group enrolled in postsecondary institutions rising from 38% in 2004 to 40% in 2014.[30] Between 2004 and 2015, the cost of undergraduate tuition, fees, room and board increased by 33% at public institutions and 26% at private nonprofit institutions. Overall costs increased by 74%, while overall inflation increased by only 24% (see Figure 16). This is in part because of declining state funding over the last two decades, coinciding with significant increases in tuition.[31] The resulting impact on household finances was significant, in fact, college expenses were ranked as the fourth most important financial problem for families, according to an April 2016 Gallup poll.[32]

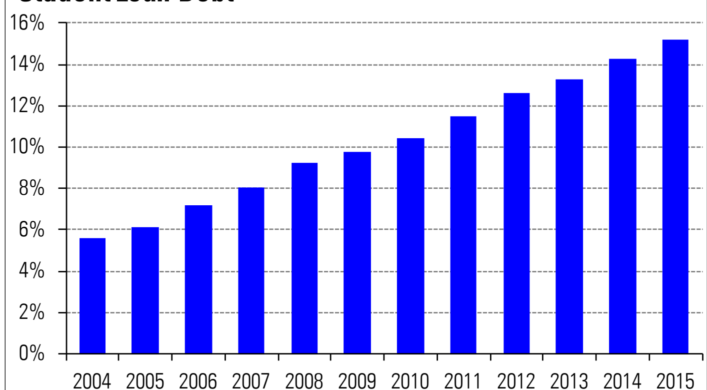
Largely as a result of these rising costs, as of 2015, approximately 68% of bachelor degree graduates nationwide had student loan debt, with an average debt of $30,100.[33] The average student loan payment per month in 2015 was estimated at $300, assuming fixed-rate loans based on the current interest rate of 3.76% for undergraduate Stafford loans and the standard ten-year repayment plan, although costs could be significantly higher for private or graduate school debt. Over the course of the loan this would equate to paying roughly $36,000 including principal and interest.[34] Considering these ongoing monthly outlays, paying off student loans can make it substantially more difficult for many households to save for a down payment on a home. In comparison, a 20% down payment for the national median existing home price would be $49,220 as of April 2017, approximately $13,000 more than the 10-year repayment total for the average student borrower.

Figure 16: Cumulative Increase in College Tuition Costs vs. Overall Inflation



Notes: December year-over-year change in seasonally-adjusted indices; normalized to Dec. 1990
Source: Bureau of Labor Statistics

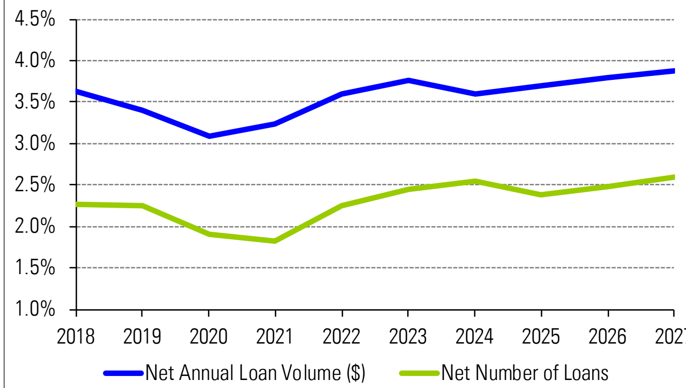
Figure 17: Share of Borrowers with $50,000+ in Student Loan Debt



Source: Federal Reserve Bank of New York Consumer Credit Panel

Higher student loan debt levels can also delay the purchase of a home because it is harder to afford the monthly mortgage payments while paying off student debt. Accumulating a high student debt load still remains relatively rare. However, the share of high-debt student borrowers, those borrowing more than $50,000, grew by almost ten percentage points between 2004 and 2015 to approximately 15.2% in 2015 (see Figure 17).[35] This rising share of large debt loads is particularly concerning because a $50,000 student loan equates to a payment of about $500 per month and, over the course of the loan, a total repayment of approximately $60,000. The total repayment amount of $60,000 in student debt is not only approximately 20% more than the amount needed for a 20% down payment based on the national median existing home price, but the monthly student loan payments also represent 34% of the $1,460 mortgage payment for a home of the same price. Even more concerning, the composition of high-debt student borrowers is shifting to degree levels with less earnings potential, further hampering the ability of young households to afford homeownership. Graduate education borrowers with more than $50,000 in student loan debt represented 80% of all high-debt student borrowers in 2000 and fell to 62% in 2014.[36] Moreover, the share of undergraduates with debt above $50,000 increased particularly for those attending for-profit schools, rising from 2% in 2000 to 11% in 2014. This trend is not only problematic because it constrains the ability of younger households to afford homeownership, but it may also inhibit those with only undergraduate education from seeking higher forms of education because of already high student debt loads.

Figure 18: Annual Growth Projections in Net New Federal Loans

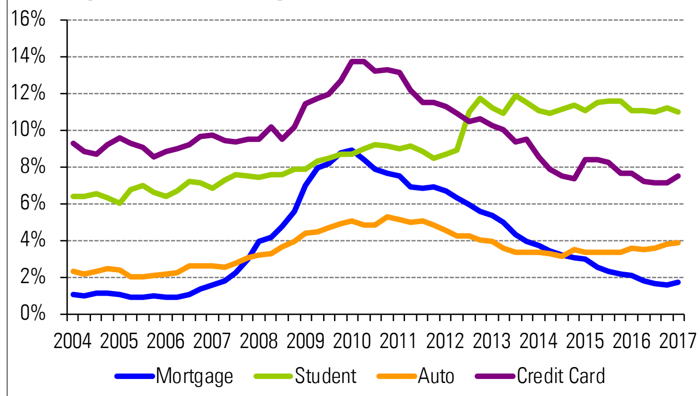


Notes: Loans include subsidized, unsubsidized (graduate and undergraduate), GradPLUS and Parent Loans
Source: Congressional Budget Office

Although the total population of 18 to 24 year olds is projected to remain relatively stable following the rapid growth in recent years, this group will continue to represent a large number of college-aged people. In fact, during the next ten years, an average of 4.3 million people are projected to turn 18 years old each year, according to the Census.[37] Unless enrollment rates or the cost of education decreases dramatically, student loan debt is likely to continue to climb. The Congressional Budget Office (CBO) projects that the net new federal student loan volume per year will increase from the January 2017 baseline of $97 billion to $138 billion by 2027, representing more than a 40% increase (see Figure 18). In addition, the annual number of net new federal student loans are expected to increase by more than 20% to 21 million by 2027.[38] The utilization of nonfederal private undergraduate loans steadily increased since 2011 reaching a total debt level of approximately $7.8 billion in private undergraduate loans in 2015.[39] Moreover, a large portion of graduate students turn to private student loans, with approximately 19% of graduate debt comprised of non-federal education loans.[40] When people use private student loans instead of federal loans, the costs associated with the debt may be more since interest rates can be substantially higher and are often variable, rather than the fixed rates provided by federal loans. Many families and students rely on private student loans after exhausting other federal aid options. More people over time will likely turn to private loans out of necessity because federal loans are becoming increasingly insufficient to cover rising costs of living and school expenses.

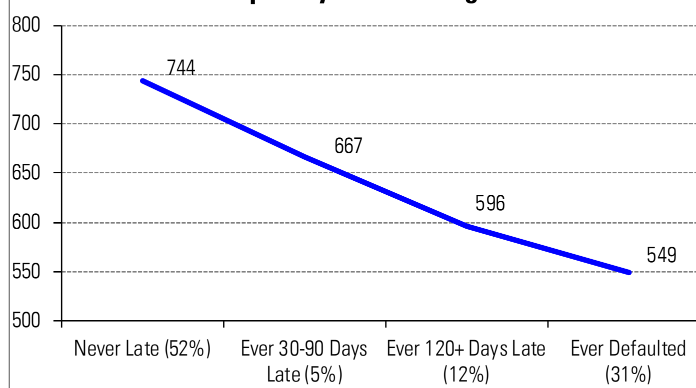
Student debt delinquencies remain elevated in comparison with other debt types. The share of student loan borrowers who are delinquent by more than 90 days, also known as seriously delinquent, climbed steadily between 2004 and 2011, followed by a large jump from 8.5% at the end of 2011 to 11.7% at the end of 2012 (see Figure 19).[41] Since then, the 90 day delinquency rate remained in the high-10% to high-11% range and was 11% as of the first quarter of 2017. Compared with other types of consumer debt, the current delinquency rate is substantially higher than credit card debt at 7.5%, auto loan debt at 3.8%, HELOCs at 2.1% and mortgage debt at 1.7% as of the first quarter. In addition, approximately half of the student loans used to calculate the delinquency rate are in a formal deferment stage where the loan is temporarily not in a repayment cycle, and after excluding those loans, the delinquency rate for loans in active repayment approximately doubles, according to the Federal Reserve Bank of New York. Defaulting on student loans negatively impacts credit history and makes it more difficult for those borrowers to qualify for a home mortgage in the future. In fact, as of 2016, about 30% of borrowers aged 30 years who graduated between 2006 and 2011 defaulted on student loans, and of those borrowers the median credit score was very low at 549 with an associated homeownership rate of only 3% (see Figures 20 and 21).[42]

Figure 19: Percent of Balance 90+ Days Delinquent by Loan Type



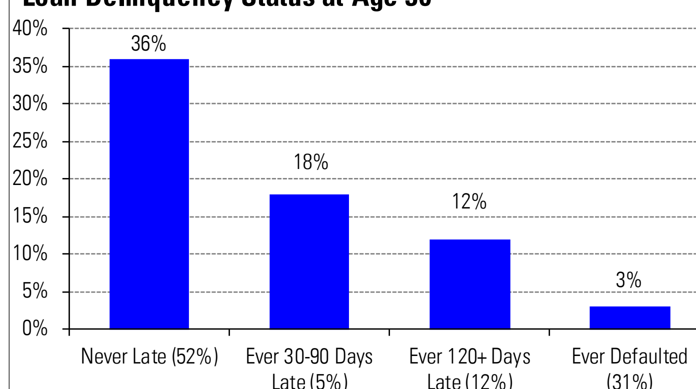
Note: Delinquent by 90 or more days is considered seriously delinquent
Source: Federal Reserve New York Fed Consumer Credit Panel

Figure 20: Median Credit Score in 2016 by Student Loan Delinquency Status at Age 30



Note: Among borrowers who were 30 years old in 2016 and left school between 2006-2011
Source: Federal Reserve Bank of New York Consumer Credit Panel

Figure 21: Homeownership in 2016 by Student Loan Delinquency Status at Age 30



Note: Among borrowers who were 30 years old in 2016 and left school between 2006-2011
Source: Federal Reserve Bank of New York Consumer Credit Panel

Reducing the Debt Burden

It is crucial to pay close attention to the continued increase in student debt load because, in combination with other debts and increasing living costs, rising student loan debt is highly detrimental to the future of homeownership for many millions of households, particularly those in the millennial age cohort. Increasing student debt loads inhibits the ability to save for a down payment, afford monthly mortgage payments, and qualify for a mortgage. In order to make homeownership once again an affordable and realistic opportunity for young households, policy changes will be necessary to reduce the growth in tuition costs, minimize borrowing costs, diminish the incidence of delinquency, and make repayment less burdensome. Greater use of income-based repayment programs could be used to assist in reducing defaults and delinquency rates. Ensuring higher rates of college completion may be helpful in mitigating student loan delinquency rates, as financial outcomes are typically worst for individuals who take on student debt, but do not complete their education and receive a degree. Options to consolidate and refinance student debt will also need to be more readily available for borrowers. In particular, options to refinance and lock-in a low fixed interest rates could significantly reduce monthly payments for borrowers with private, variable rate student loans, especially with interest rates poised to continue to rise in the coming years. Ultimately, without a dramatic change to the way that higher education is financed in this country, millions of households will continue to delay or miss out on the opportunity to enter the homeowner market.

Post-Foreclosure Stress Disorder

While the challenges of mortgage availability and the burdens of student debt clearly represent major hurdles for the future of homeownership in America, in the post-recession era housing market, a clear understanding of the barriers to buying a home, requires an understanding of the ways that the recession impacted individuals' sense of the risks involved in homeownership. Numerous studies by Harvard's Joint Center for Housing Studies and the Federal Reserve Bank of Boston have shown that, despite the large drop in home prices and widespread foreclosures, Americans' belief in the benefits of homeownership have not changed significantly in the wake of the Great Recession.[43] In fact, the desire to own a home continues to be the epitome of the American dream. A 2017 survey by Freddie Mac found that, among renters of all ages, nearly 80% aspire to own a home someday.[44] However, what these studies do not explain is that, despite the persistent belief in the benefits of homeownership and the long term homeownership aspirations of most renters, the rate at which people are actually buying homes has not recovered in the wake of the housing bubble and bust. Moreover, according to a report by TransUnion Credit Burueau, upwards of 93% of those who lost their homes due to foreclosure had not yet repurchased a home as of 2014.[45] While this weakness in homebuying is heavily influenced by the aforementioned affordability crisis, the stricter environment of credit availability and the low level of new supply, the slack in the homeownership rate is also deeply rooted in a shift in the perceived risks associated with mortgage debt.

As described in detail in RCG's previous report, approximately nine million homeowners nationwide experienced foreclosure and 8.7 million people lost their jobs, generating wide-ranging negative impacts for most households and the economy at large. In order to describe the "long-lasting damage to individuals' economic situations and the economy more broadly," in the immediate aftermath of the Great Recession, the Economic Policy Institute (EPI) proposed the concept of economic scarring, and identified broad socio-economic trends such as reduced educational achievement, reduced lifetime earnings, higher rates of poverty, reduced investment activity and stunted entrepreneurial activity that have long lasting impacts on economic activity.[46] In addition to these social and economic impacts, several researchers also identified physical and mental health effects resulting from financial distress, the loss of a job, reduced availability of credit, or declines in the value of one's home, personal wealth, financial investments or potential retirement income. However, beyond the prolonged financial impacts, those who directly experienced the trauma of foreclosure also suffered higher rates of hypertension, heart disease, as well as numerous psychological impacts such as depression and substance abuse.[47] Even the close family relatives and friends of those experiencing foreclose suffered similar impacts vicariously. Moreover, many households who did not face foreclosure, still experienced periods of negative equity, with homes valued at less than their outstanding mortgages, as well as significantly devalued retirement and investment portfolios – all situations that generated either direct financial hardship or, at a minimum, an extended period of heightened financial stress. Given these wide-ranging economic, social, and well-being effects, RCG believes that the housing crisis and Great Recession fundamentally altered many individuals' perceptions of financial risks and generated long-lasting psychological changes in financial decision-making, particularly housing tenure choice. We believe that this phenomenon, which we refer to as *post-foreclosure stress disorder*, represents a substantial hurdle in the for-sale market and will prove critical to the future of homeownership nationwide.

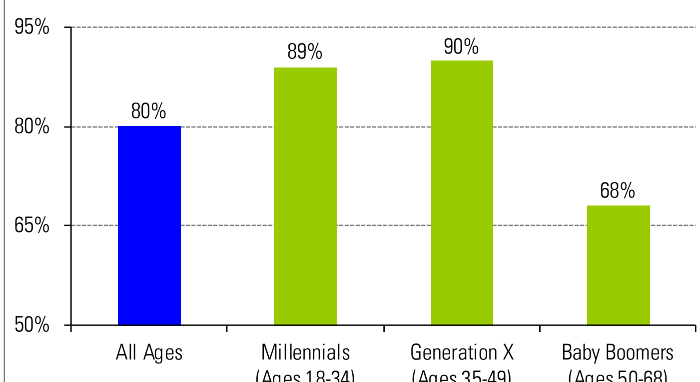
Impact on Decision-Making

Behavioral economics provides useful insights into the many ways that RCG's concept of post-foreclosure stress disorder is likely influencing household tenure choice and the potential future trajectory of homeownership, particularly the ways that decision-making is heavily influenced by personal experiences and values through cognitive biases. With respect to homeownership, we believe that negative socio-economic experiences during the Great Recession and foreclosure crisis are likely influencing the development of several cognitive biases including: the *availability heuristic*, *negativ-*

ity bias, and the concept of *risk compensation*. First, the availability heuristic is the idea that one's current and future decisions are likely to be highly influenced by recent and emotionally significant memories associated with a related activity. As such, households who went through a foreclosure are likely to be particularly hesitant to buy a home and go through the process again given recent memories. Second, the negativity bias is the concept that negative emotional memories are likely to have a greater impact on one's behavior and cognition than positive memories, suggesting that households who experienced financial hardship will remember those hardships more strongly than other periods when times were good. And third, the concept of risk compensation accounts for individuals' changing behavior in response to the perceived level of risk (i.e. the greater the perceived risk, the greater the caution exercised in undertaking the activity). Because of widespread negative impacts of the foreclosure crisis, even those who were not directly affected are highly concerned about the risk associated with buying a home. While all three of these concepts are fairly simple and intuitive, given the traumatic nature of the recent recession, we believe that a combination of these three biases – and potentially numerous others – is at play in explaining the gap between the unchanged aspiration to own a home someday and the substantially lower rate of post-recession homeownership.

In fact, a recent study by the Federal Reserve Bank of Boston found increased perception of risks associated with homeownership among younger households who experienced foreclosure directly or indirectly through someone close to them.[48] In practice, this most likely pertains to both millennial and Generation X cohort households, who have likely developed some combination of the aforementioned cognitive biases about the risk of mortgage debt. According to a recent Freddie Mac survey of renters, 89% of millennials and 90% of Generation X respondents still aspire to own a home someday (see Figure 22).[49] Yet, despite these results, these generations' shifting confidence in the risk of home-ownership due to personal experience may be hindering their willingness to actually buy a home. In fact, nearly one in six respondents aged 18 to 49 claimed that despite being financially able to own a home, renting was a good choice for now (see Figure 23).

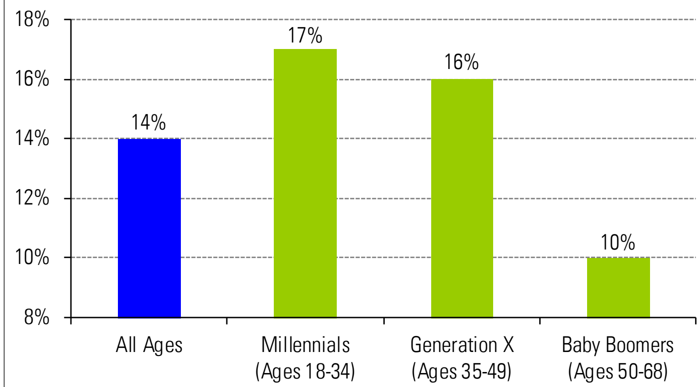
Figure 22: Share of Renters Who Would Like to Own a Home at Some Point



Note: Latest data as of March 2017
Source: Freddie Mac

RCG believes that the catastrophic impact of the Great Recession should be measured not only in the actual number of jobs lost and homes in foreclosure, but also in socioeconomic terms, including higher rates of poverty, reduced lifetime earnings, reduced household investments as well as the prolonged reduction in the homeownership rate. In addition to the affordability hurdles, the extended period of constrained credit availability and the numerous barriers to building new supply, we believe that this lack of recovery in home-ownership is further explained through a better understanding of the ways that traumatic events shape future behavior. In fact, the full, long-term psychological toll of the recent recession is still gradually coming into better view, particularly the far-reaching influence of cognitive bias on future financial decision-making.

Figure 23: Share of Renters Who Can Afford to Own, Yet Continue to Rent



Note: Latest data as of March 2017
Source: Freddie Mac

In general, children who grew up in owner households are significantly more likely than those who grew up in renter households to own their home as adults. In many ways this reflects that fact that owner households are typically wealthier and therefore more able to provide for education and potential assistance with buying homes. However, this fact also reinforces yet another important decision-making bias. The *familiarity principle* is the concept that people develop a preference for that which is familiar. Because the value of homeownership is directly familiar and indelible in the minds of many Americans, despite the shifting perception of risk, the underlying belief in the benefit of homeownership has not been fundamentally shifted for many households.

Even in the wake of the disastrous experience of the recent recession, the vast majority of renters continue to aspire to own a home someday, with approximately 93% stating that it is "something to be proud of", according to Freddie Mac.[50] However, because many more households, and especially minority households, are currently renting rather than buying a home, those children growing up in rental housing today may be markedly less likely to own their own home as an adult, since homeownership as a precedent will be less familiar to them. For minority households, in particular, the historically limited access to building intergenerational household wealth has been well documented by many sociologists as a significant hurdle to social mobility.[51] Moreover, the rapid growth in the number of African American and Hispanic households during the past two decades, expanding by 19.8% and 36.9%, respectively, compared with 3.5% growth rate among white households, and the expectation that the number of minority households will continue to grow rapidly in the coming years, underscores the critical importance of minority household tenure choice.[52] Overall, the large potential impact for future homeownership decisions among children currently growing up in renter households, highlights the urgency of treating homeownership as a national priority today, before we risk damaging the aspirational preferences and the potential household wealth of future generations.

Rebuilding Confidence

While much more research is needed on this front to better understand the ways that negative experiences can affect long term attitudes toward homeownership, what is clear, however, is that a timely, concerted effort can go a long way to redressing the negative perception of risks associated with homeownership while also increasing younger generations' familiarity with the benefits and process of homeownership. Research from the Federal Reserve Bank of Boston suggests that even though home price declines translated into a decline in confidence about homeownership for the millennial and Generation X groups, these beliefs "are still flexible and can change over time."[53] Furthermore, researchers have also found that negative perceptions can reduce over time as new memories are formed.[54]

Even though many experts agree on the economic and social fallout from the recent recession, the lasting psychological impact on future consumer behavior are less well understood. In particular, negative experiences during the recession are likely influencing housing tenure choices in the post-recession era. Younger generations may be especially vulnerable to developing negative associations with mortgage debt. Despite continuing to firmly believe in the benefits of homeownership, many have limited life experience with housing beyond the negative experience of the Great Recession and its aftermath. Moreover, this limited life experience may be further compounded by recent demographic trends highlighted in RCG's previous report which illustrate that millennials are already delaying marriage, childbirth and, ultimately, homeownership compared with prior generations. In the face of a lagging homeownership rate, public policies and programs that can address these potential effects would enable these generations to better understand the realities of mortgage debt and reinforce the benefits of homeownership.

RCG believes that targeted training, workshops, and educational programming that significantly improve financial literacy around the true risks of mortgage debt could go a long way toward developing more positive experiences related to homeownership and reversing the negative biases these younger populations may have developed as a result of the recent housing boom and bust cycle. Whereas existing housing or mortgage counseling programs are typically geared towards those who have already decided to purchase a home, it would also be beneficial to create and expand programs geared at providing helpful information to potential home buyers, education that would be valuable even years before reaching the decision to purchase a home. Moreover, as the post-foreclosure blackout period of seven years expires and a rising number of households are once-again eligible to obtain a mortgage, targeted programs to facilitate a return to homeownership in a safe and sound way will prove increasingly crucial. Additionally, the fragmented landscape of homeownership workshops currently offered could be standardized and expanded to include many more local entities, as part of a comprehensive education outreach effort. Given the large share of households currently renting who lack familiarity with owning a home, a basic introduction to concepts of housing finance through school programs could also help to begin to familiarize adolescents, teenagers, and/or college students with the many benefits of homeownership and the process of buying a home.

Single Family Affordability

Homeownership rates remain low despite the fact that single family affordability relative to income remains elevated, particularly compared with the period of peak home prices prior to the recession. RCG measures single family affordability as the share of households in a given market who could afford the median-priced home, based on spending no more than 30% of their annual income on a mortgage payment, assuming the current mortgage rate, a 20% down payment, a 30-year fixed rate loan, as well as estimates of taxes and insurance. Based on this metric, affordability is nearly 10 percentage points higher on average across all 75 major single family markets tracked by RCG in 2016 compared with 2007. In fact, as of 2016, affordability was more than 15 percentage points higher than in 2007 in Newark, Tucson, Miami, Chicago, and Baltimore (see Figure 24). In contrast, several markets including Dallas, Denver, and Indianapolis were actually slightly less affordable in 2016 in comparison with 2007, by more than four percentage points (see Figure 25). Markets including Houston, Charlotte, and Nashville have returned

Figure 24: Single Family Markets with Largest Improvement in Affordability

Market	2007	2016	Difference
Tucson	39.1%	61.2%	22.0%
Central New Jersey	38.5%	60.4%	21.9%
Stamford	36.9%	58.7%	21.8%
Newark	35.3%	55.4%	20.1%
Norfolk	46.8%	66.8%	20.0%
Baltimore	48.5%	67.5%	19.0%
Bakersfield	39.3%	57.7%	18.5%
West Palm Beach	30.7%	49.1%	18.4%
Washington, D.C.	43.1%	61.2%	18.1%
Nassau-Suffolk	37.2%	55.1%	17.9%
Chicago	47.7%	64.9%	17.2%
Miami	22.4%	39.3%	17.0%
Hartford	52.3%	69.2%	16.9%
Ventura	15.4%	32.0%	16.6%
Fort Lauderdale	29.6%	45.5%	15.9%

Notes: Share of households able afford the median-priced home based on 30% of annual income
Source: RCG

Figure 25: Single Family Markets with Declines in Affordability

Market	2007	2016	Difference
Dallas	67.9%	61.4%	-6.5%
Indianapolis	76.2%	72.0%	-4.3%
Denver	52.5%	48.3%	-4.1%
Fort Worth	73.1%	70.7%	-2.4%
Austin	61.2%	59.6%	-1.5%
Houston	65.4%	65.0%	-0.3%
Charlotte	66.6%	66.4%	-0.1%

Notes: Share of households able afford the median-priced home based on 30% of annual income
Source: RCG

to roughly the same level of affordability as prior to the recession. Overall, RCG estimates that there are roughly nine million more households that could afford to purchase the local median-priced home in 2016 than in 2007 based on household income. However, homeownership rates remain low and have not started to improve, largely reflecting the combination of limited mortgage credit availability, post-foreclosure stress disorder, and the lack of available for-sale inventory, as well as elevated student debt loads and rising cost of living, which are inhibiting the ability to save for a down payment for many households. Even though decreasing mortgage rates have increased affordability today when compared with 2007, affordability conditions have deteriorated during the past few years as home prices continued to increase faster than household income growth. Moreover, RCG expects affordability to deteriorate in the coming years as home prices continue to appreciate and mortgage rates rise, causing many households to either rent longer or migrate to markets with greater affordability.

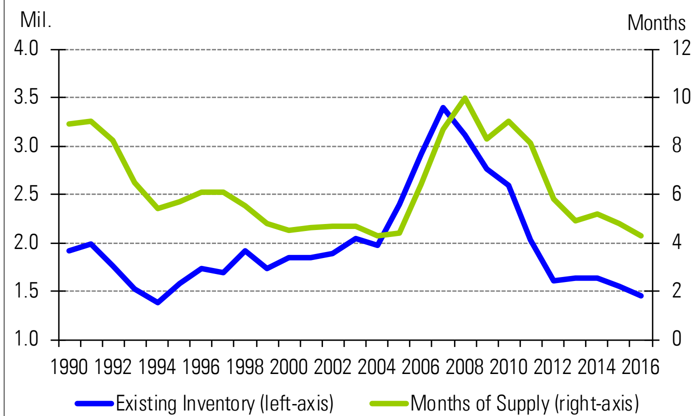
Lack of Inventory

In addition to the rebound from recession-era lows, in many markets rapidly rising home prices in recent years also reflect the limited inventory of existing homes for sale, compounded by the lack of new construction. After the foreclosure crisis investors purchased large numbers of distressed and low-priced homes, many of which were converted to single family rentals, removing stock from the for-sale market. As a result, single family homes captured a large portion of growth in renter-occupied units within the last decade. In fact, the largest increase among all rental property types between 2005 and 2015 was for single family units. As a share of the total national renter-occupied stock, single family rentals grew from 25.0% to 28.5% during this time period, representing an additional 3.3 million single family rentals.[55] Although investor activity as a share of national existing home sales trended downwards to a six-year low of 11% in July 2016, from a post-recession high of 23% in February 2012, the share began to rise again to a five-month average of 15% from December 2016 through April 2017.[56]

After the housing crisis, improving economic fundamentals across markets in combination with a low interest rate environment increased single family housing demand, subsequently increasing absorption and reducing existing single family for-sale inventory. Despite positive market fundamentals in many markets, in the last couple of years, a large share of current homeowners are waiting to sell their homes because of concerns about access to credit and elevated competition in prime markets. Many baby boomers who may wish to downsize someday, thereby adding additional inventory to the market for first-time homebuyers and homeowners looking to trade up, are also holding on to their existing homes for longer. Some households may be holding out for further price appreciation in their current homes, while others may be finding it difficult to locate a replacement home that is both acceptable and affordable, because of the combination of rising prices and limited inventory. Unfortunately, the dearth of available single family inventory further decreases trade-up purchases in the market, perpetuating the low inventory problem.

Homebuying competition increased dramatically in recent years because of the lack of inventory, making it increasingly difficult to find an affordable home, particularly in markets with rapid job growth or a large share of investor and/or cash buyers. However, nationally, all-cash buyers as a share of existing home purchases remained below 30% for the past two years and represented 21% of existing home purchases in April 2017, down from the most recent post-recession high of 35% in February 2014.[57] While investors and cash buyers represent a smaller share of national home sales, those types of buyers typically beat out traditional homebuyers by eliminating the hassle for sellers to deal with financing, even when submitting a somewhat lower offer on a home.

Figure 26: Existing Single Family Inventory



Source: National Association of Realtors

Nationally, the inventory of existing for-sale single family homes increased during the past five months to 1.7 million as of April 2017, yet inventory is down by 8.6% from a year earlier, according to NAR (see Figure 26).[58] Moreover, the supply of homes for sale in April 2017 was down by 1.6 million compared with the pre-recession peak in 2007. Months of supply, which measures the number of months it would take for the current inventory of homes on the market to sell given the current pace of sales, fell steadily during the last three years to a 12-year low of 4.3 months in 2016, from 5.2 months in 2014. The current months of supply was dramatically lower than the post-recession peak of ten months in 2008, and since 1983 is the lowest level of months of supply besides in 2004 when this measure was also at 4.3 months. If the inventory of existing single family homes does not improve, home prices will continue to increase, reaching record-highs or near-peak levels in many markets, depressing homeownership growth. This continued lack of inventory and strong demand will maintain robust consumer competition, further reducing the ability for homebuyers to purchase a home. In fact, in some overheated markets, particularly in the San Francisco Bay Area, inventory shortages are fueling bidding wars with buyers offering significantly above asking price or foregoing inspections in an effort to purchase a home.

Beyond existing home inventory, the lack of new home supply is placing upward pressure on new home prices and decreasing affordability in many markets. New single family construction remains depressed and has yet to return to the long-term average following the recession. While the many issues that are preventing homebuilders from adding additional supply will be discussed in greater detail later in this report, it is clear that additional new supply, particularly moderately priced new homes, will be critically important for both homeowners looking to trade up to a newer home, and as a medium and longer-term strategy to increase affordability and accessibility for households struggling to make the transition into homeownership.

Affordability Outlook

RCG expects limited mortgage credit availability and lack of available inventory for sale to make it increasingly difficult for households to find a home within their budget in the coming years. Furthermore, the combination of price appreciation and the expected rise in mortgage rates is likely to further decrease affordability, suppressing homeownership rates nationwide. Currently, mortgage rates remain at extremely low levels by historical standards, despite the modest increase in response to the Federal Reserve's decision to raise the federal funds rate for the second time since the recession, first to 0.75% in December 2016 and then again to 1.0% in March 2017. The national mortgage rate on a 30-year fixed-rate conventional mortgage held relatively steady in the low-4% range in recent months after hovering in the mid-3% range for most of 2016.[59] However, further rate hikes in the near future may create a potential challenge as mortgage rates increase over the next couple years. In fact, RCG forecasts that the conventional 30-year mortgage rate will reach an annual average of 5.4% in 2019. As a result, monthly mortgage payments for homes will increase, thereby placing additional strain on household budgets and potentially decreasing single family affordability. In fact, all else equal, a monthly mortgage payment for a home priced at $250,000 would increase by an average of $60 for every 50 basis point rise in the annual mortgage rate (see Figure 27). In combination with rising home prices and limited income growth, rising mortgage rates are likely to be of particular concern for low

Figure 27: Rising Interest Rate Impact on Monthly Mortgage Payments

Annual Interest Rate	$250,000	$500,000	$750,000
4.00%	$1,240	$2,490	$3,730
4.25%	$1,270	$2,540	$3,810
4.50%	$1,300	$2,600	$3,900
5.00%	$1,360	$2,720	$4,080
5.50%	$1,420	$2,850	$4,270
6.00%	$1,490	$2,970	$4,460
Change (4% to 6%)	$250	$480	$730

Notes: Calculations include property tax, homeowner's insurance, 20% down payment and 30-year fixed rate mortgage
Source: RCG

and moderate income households and will likely have a greater impact for households with incomes on the margin where a slight increase in monthly mortgage payments may make the difference between choosing to own or rent.

RCG expects an initial surge in demand as mortgage rates begin to increase as households seek to purchase a home and lock in lower rates. However, as mortgage rates continue to climb, higher rates will have a larger impact on monthly mortgage costs, and an increasing number of households will no longer be able to afford to purchase a home. Moreover, continued home price appreciation will compound the impact of rising mortgage rates, reducing affordability. Low levels of existing single family inventory and lack of new home construction in comparison with historical levels are likely to continue to push up home prices. The amount of shadow inventory, or number of properties that are in a stage of foreclosure and have not reached the market, was immense after the recession and depressed home prices in most markets, yet the level of shadow inventory is now nearly back down to pre-recession levels, and therefore no longer represents a potential source of new inventory. RCG expects homes prices to continue to appreciate, with the national median existing home price increasing by an annual average of approximately 4.4% through 2019. Appreciation of home prices combined with rising mortgage rates is expected to further decrease single family affordability in the coming years, limiting demand for home purchases.

Rising monthly mortgage payments as a result of climbing mortgage rates and increasing home prices in combination with slow income growth, are expected to exacerbate the challenges of homeownership affordability and likely hamper demand in the coming years. In fact, RCG forecasts that affordability will fall by an average of nearly nine percentage points across all 75 major markets between 2016 and 2019, with approximately five million fewer households able to afford the local median-priced home by 2019. Affordability is a critical barrier to homeownership for many households, and without policy interventions, these challenges will continue to dampen for-sale housing demand, keeping homeownership rates depressed.

Accumulating a Down Payment

Despite the current elevated level of affordability relative to income, many households are delaying homeownership because they simply cannot save enough money for a down payment. Moreover, after the foreclosure crisis millions of households were forced to rent, and many are finding it hard to save enough to afford homeownership again. Increasing apartment rents and elevated household costs such as child care, transportation and health care, are combining with stagnant wage growth to strain household budgets and force millions of people to remain renters instead of transitioning into homeownership. Apartment rents in major markets across the county began to increase in 2010 and rent growth accelerated rapidly in recent years, leading to diminished rental affordability for moderate and, increasingly, higher-income households, with particularly significant rental affordability challenges for young and minority households. Rising child care costs are of special concern for younger households, because these expenses often represent a large share of household income, particularly in major metropolitan areas, and thereby can make it extremely difficult to afford home-ownership, especially if a household did not purchase or accumulate enough money for a down payment prior to having children. As discussed in depth below, if rising rents continue to outpace income growth, access to homeownership will be further hindered because it will limit the amount households that are able to save, further reducing the number of Americans who can benefit from the opportunities to accumulate wealth and create a sense of financial security. For many, the dream of owning a home is becoming ever more distant, particularly in high-cost markets and in locations where the cost of living is rising most rapidly.

It is difficult for many households to accumulate enough savings for a down payment, even when they are putting down less than the historical standard down payment of 20%. In fact, a 20% down payment for a home priced at $300,000 would amount to $60,000. To put this into perspective, this down payment is roughly equivalent to the total repayment cost for a student loan of $50,000. Alternatively, a 10% down payment of $30,000 would be only $6,000 less than the total repayment for the average student loan amount in 2015.[60]

While the overall level of lending remains constrained and focused on households with the highest credit scores, the share of low down payment lending as a proportion of total loans increased in recent years. Indeed, many of those households who are currently able to purchase a home still cannot afford large down payments. As a result, lending for both new and existing homes with a loan-to-price ratio over 90% steadily increased from the recession-era low of 8% of loans in 2009 to an average of 25% of loans in 2016, just four percentage points below the pre-recession peak of 29% in 2007.[61] In addition, FHA lending accounted for a significant share of low down payment loans, representing nearly 21% of total mortgage origination as of the first quarter of 2017, down from the peak in the immediate aftermath of the recession, but up substantially from around 14% in 2014.[62]

Although the vast majority of renter households still wish to own a home, with student debt and rising rents making it increasingly difficult to save, the reality is that low down payment loan options, particularly the 3.5% minimum down payment FHA loans, are critical to the future of homeownership and represent the only realistic way for many house-holds to even consider purchasing a home. While FHA lending has made this option available, as discussed above, an increasing number of traditional bank lenders are stepping away from FHA lending, because of the restrictive regulatory environments. Given rising costs of living and the challenge of accumulating a down payment, ensuring the continued availability of low down payment loans and increasing the availability of these products through private lenders in a safe and sound way will be necessary to provide homeownership opportunities in the coming years.

Rental vs. Mortgage Affordability

Rental affordability decreased in recent years because income growth did not keep pace with the rise in rents, and in some markets rental payments increased to a level exceeding monthly mortgage payments. While of course there are necessarily differences in size, quality and location, RCG examined the comparison between rents at professionally-managed apartments and monthly mortgage payments for single family homes across major apartment markets as a broad indicator of relative affordability. Based on this analysis, current rents reached levels where apartment rents now exceed the monthly mortgage payment based on the local median existing home price in more than 80% of RCG apartment markets in 2016 (see Figure 28).[63] Among these markets where rent currently exceeds the mortgage payment, monthly rent for a professionally-managed apartment surpassed the mortgage payment by an average of $240 in 2016, with the difference accounting for an annual total of nearly $2,900 more spent on rent.

In comparison, the opposite was true at the peak of the housing bubble, with mortgage payments more expensive than rents in approximately 75% of RCG markets in 2007, with mortgage payments averaging approximately $530 more than monthly rent in these markets, amounting to $6,400 in additional housing costs per year. Rents exceeded monthly mortgage payments by more than $300 in 11 major markets in 2016, including New York, Chicago, Pittsburgh, Philadelphia, Newark, and Atlanta, whereas in 2007 rents only exceeded single family mortgage payments significantly in the Pittsburgh and New York metropolitan areas (see Figure 29). Even excluding the potential for long term wealth accumulation, if households were able to afford the purchase of a home and had access to credit, many more households would likely opt to become homeowners in order to avoid spending a larger share of income on rent than on a mortgage payment, particularly

Figure 28: Largest Difference Between Rent and Monthly Mortgage Payments in 2016

Market	Mortgage	Rent	Difference
New York	$1,930	$3,384	$1,454
Chicago	$846	$1,361	$515
Pittsburgh	$547	$1,023	$476
Philadelphia	$827	$1,235	$408
Newark	$1,321	$1,724	$403
Atlanta	$683	$1,062	$379
Cleveland	$489	$861	$372
Boston	$1,558	$1,925	$367
Baltimore	$918	$1,256	$338
Cincinnati	$565	$885	$320
Detroit	$600	$904	$304
West Palm Beach	$1,153	$1,443	$290
Tampa	$765	$1,054	$289
Charlotte	$732	$1,008	$276
Minneapolis	$878	$1,146	$268
Fort Lauderdale	$1,198	$1,445	$247
Orlando	$850	$1,095	$245
Miami	$1,151	$1,386	$235
St. Louis	$600	$829	$229
Fort Worth	$716	$943	$227

Notes: Monthly mortgage payments represent data for single family homes only; Rent for professionally-managed apartments
Sources: MPF Research, RCG

in the markets where rental payments far exceed mortgage payments.

Of course, renting may still be the preferred option for many people because of shifting demographic trends and locational preferences. However, most renter households still wish to own a home. A recent Freddie Mac survey reported that the largest share of renters, some 38%, felt that renting is a good option currently because they cannot afford to purchase a home, yet would like to in the future.[64] In fact, this sentiment increased the most among millennial-aged renter households with the share rising by ten percentage points to 51% in March 2017, compared with the prior survey in January 2016. If households are able to save for an adequate down payment, qualify for a mortgage and overcome the perceptions of risk associated with buying a home, many more households would likely transition into homeownership. Despite unknown maintenance costs over time and the potential for property tax increases, becoming a homeowner allows households to accumulate wealth and locks in fixed monthly housing costs, whereas renter housing costs are subject to regular increases over time. Securing lower housing costs through homeownership will become more important as younger households age and take on additional expenses.

Figure 29: Largest Difference Between Monthly Mortgage Payments and Rent in 2007

Market	Mortgage	Rent	Difference
San Francisco	$4,493	$1,965	$2,528
San Jose	$4,122	$1,657	$2,465
Orange County	$3,301	$1,550	$1,751
Oakland	$2,938	$1,378	$1,560
San Diego	$2,570	$1,315	$1,255
Seattle	$2,047	$1,030	$1,017
Newark	$2,057	$1,117	$940
Los Angeles	$2,470	$1,580	$890
Miami	$1,763	$1,079	$684
Washington	$1,961	$1,282	$679
West Palm Beach	$1,690	$1,073	$617
Portland	$1,428	$858	$570
Inland Empire	$1,672	$1,104	$568
Fort Lauderdale	$1,691	$1,140	$551
Tucson	$1,159	$641	$518
Sacramento	$1,463	$946	$517
Las Vegas	$1,344	$840	$504
Boston	$1,871	$1,402	$469
Phoenix	$1,188	$766	$422
Orlando	$1,182	$838	$344

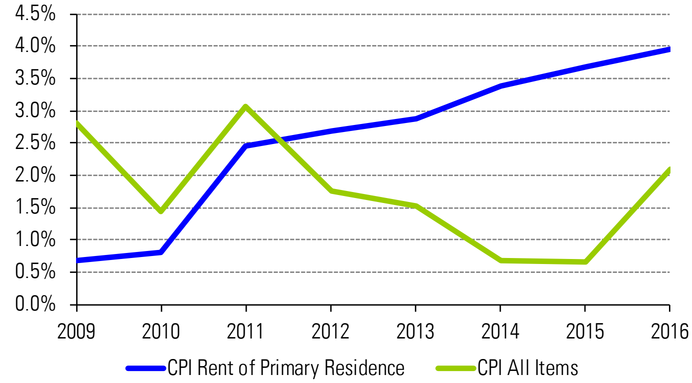
Notes: Monthly mortgage payments represent data for single family homes only; Rent for professionally-managed apartments

Sources: MPF Research, RCG

Declining Rental Affordability

Apartment rents in markets across the United States increased dramatically since the Great Recession trough, with monthly rents in some markets recently reaching record-high levels. Overall national rent growth, as determined by the broad measure of the Consumer Price Index (CPI) rental component, remained positive even during the Great Recession at less than 1% per year in 2009 and 2010, and since steadily accelerated to 3.9% growth as of the first quarter of 2017 (see Figure 30).[65] In fact, rent growth expanded by an annual average of 3.2% since 2011, double the pace of overall inflation. Additionally, among professionally-managed apartments, the national average effective monthly rent surged by an annual average of 4% between 2011 and 2016, according to MPF Research.[66] Both national and several market-specific rents eased somewhat in 2016 from the particularly strong pace of rent growth in recent years because of the large wave of new apartment supply in many major markets. Despite a minor easing of historically tight apartment market conditions, continued rising rents represent a significant issue because increasing monthly rent payments put additional pressure on household finances, preventing down payment savings and further delaying homeownership.

Figure 30: Annual Growth in Overall Rent Growth vs. Overall Inflation



Source: Bureau of Labor Statistics

RCG estimates that the minimum household income needed to afford a professionally-managed apartment surged by an average of $10,200 between 2009 and 2015 across 58 major apartment markets covered by RCG. In addition, it increased by more than $13,000 in 14 of these major markets, with the largest gains concentrated in the three Bay Area markets of San Francisco, San Jose and Oakland, along with the New York market. In comparison, the median household income increased by an average of just $6,400 across the same major markets from 2009 through 2015, according to the latest data available, and increased by more than $10,000 in just six markets (see Figure 31). Across all 58 markets, the average gap between the growth in the minimum income needed to afford a professionally-managed apartment and the growth in the median household income was approximately $3,800.

Figure 31: Affordability Gap (2009-2015)

Market	Affordability Gap
San Francisco	$28,300
San Jose	$22,300
New York	$19,800
Oakland	$17,400
Los Angeles	$11,500
Newark	$10,400
Miami	$8,800
Ft. Lauderdale	$8,300
Denver	$7,800
Orange County	$7,800
Boston	$7,300
Portland	$6,700
San Diego	$6,700
Chicago	$6,400
Inland Empire	$6,200

Note: Gap between growth in income needed to afford a professionally managed apartment and growth in median household income

Sources: MPF Research, Census, RCG

On average, the effective rent for a professionally-managed apartment across these major markets increased cumulatively by 25.5% between 2009 and 2015, whereas the median household income only grew by 11.3% during the same time period. In fact, rents increased by almost two and half times the pace of median household income growth between 2009 and 2015, with rents in places such as Charlotte, Inland Empire and Miami rising by more than four times the pace of income growth (see Figure 32). As a result, rental affordability decreased significantly in recent years, making it more difficult for households to save enough money to afford a down payment on a home.

Increasing rents in recent years left many households cost-burdened, meaning they pay more than 30% of their income on housing.[67] In fact, there are significantly more higher-income households that are rent burdened than ten years ago. Of particular importance in terms of potential homeowners, the share of rent burdened households making more than $50,000 annually more than doubled in the past decade, rising by roughly 1.3 million households between 2005 and 2015, reflecting the pervasiveness of the rental affordability issue.[68] As rent burdens extend into higher income categories the challenges of affording homeownership will become increasingly difficult, likely forcing more households to rent by necessity or to look further outside of high-cost markets in an effort to become homeowners.

Figure 32: Rent Growth vs. Income Growth by Market (2009-2015)

Market	Rent Growth	Income Growth	Multiple (Rent Outpacing Income)
Newark	26.2%	4.8%	5.5
Inland Empire	20.8%	4.2%	4.9
Miami	27.1%	5.6%	4.8
Phoenix	24.3%	5.2%	4.7
Charlotte	31.3%	7.0%	4.5
Oakland	55.2%	15.5%	3.6
Chicago	26.1%	7.5%	3.5
Atlanta	29.6%	8.6%	3.5
San Jose	67.2%	20.7%	3.2
Jacksonville	20.7%	6.4%	3.2
Portland	47.8%	15.0%	3.2
Los Angeles	27.2%	8.6%	3.2
Denver	58.0%	19.1%	3.0
Nashville	40.8%	13.5%	3.0
Orlando	26.5%	8.8%	3.0

Note: Median household income growth, average professionally managed apartment rent growth

Sources: MPF Research, Census, RCG

Figure 33: Largest Difference between 1 Bedroom Rent and Shared Rent

Market Name	1 Bedroom Rent	2 Bedroom Shared Rent Per Person	Difference
San Francisco	$2,790	$1,721	$1,070
New York	$2,987	$1,959	$1,028
San Jose	$2,300	$1,374	$927
Boston	$1,779	$998	$782
Oakland	$1,903	$1,141	$762
Stamford	$1,849	$1,167	$682
Los Angeles	$1,788	$1,118	$671
Washington, D.C.	$1,528	$865	$664
Orange County	$1,693	$1,041	$653
San Diego	$1,553	$930	$623
U.S.	**$1,080**	**$635**	**$445**

Note: Professionally managed apartment rent; Data as of 1Q 2017

Sources: MPF Research, RCG

Although declining rental affordability affects all types of renter households, rising rents and increasing costs of living are particularly problematic for young and minority households. In the same Freddie Mac survey mentioned previously, it was reported that 45% of millennial renters spend more than a third of income on rent in comparison with 43% of Generation X renters and 31% of baby boomers (see Figure 33).[69] As a result, in an effort to save money many young households are forced to live at home with their parents or stay in shared living situations with roommates, delaying the formation of their own household. Based on the national average effective monthly rent in the first quarter of 2017 RCG estimates that renters spent approximately 40% less on rent for a professionally-managed apartment by living with a roommate in a two bedroom apartment compared with living in a one bedroom alone.[70] Markets where living with a roommate saves the most money per month tend to be in higher-cost coastal markets and include: San Francisco, New York, San Jose, Boston, Oakland, Los Angeles and Washington D.C.

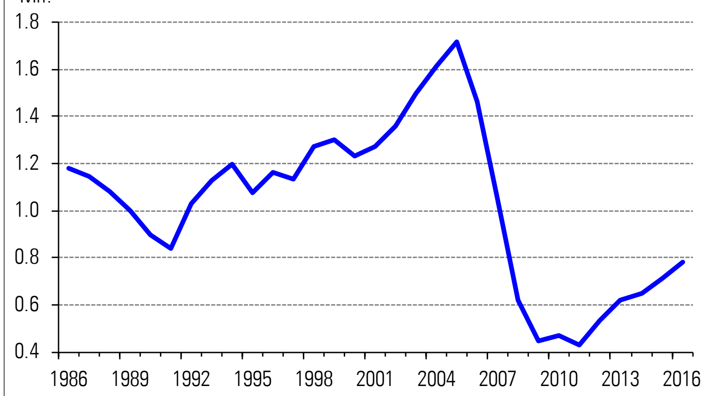
Rising rents are also of particular concern for the growing number of minority households. African American renter households are disproportionately burdened with 57% rent-burdened, followed by Hispanic households at 56% and Asian and other households at 48%, in comparison with 44% of white households in 2014, the most recently available data.[71] Within each of these racial and ethnic categories, there is a higher share of severely burdened renters (those paying more than 50% of household income on housing) in comparison with moderately burdened renters (paying between 30% and 50% of household income on housing). If the share of rent burdened minority households increases over time, it will be harder for these households to accumulate a down payment in order to purchase a home. Without significant changes, the gap between white and minority homeownership will increase and the disparity between white and minority household wealth will widen. Aspirations to become a homeowner should only increase over time for younger households and are currently strong across all minority households. These households represent a rising share of total households nationwide, and enacting policies to address declining affordability that can assist in increasing homeownership rates for these groups will be imperative to raising the national homeownership rate in the future.

Hurdles in Single Family Housing Supply

The single family construction industry is integral to the overall for-sale housing market, an important factor in maintaining homeownership rates and a key component to national economic growth. As stated in our previous paper, if the homebuilding industry returned to a more normalized level, consistent with the historical trend, RCG estimates that more than $300 billion dollars would have been added to the national economy in 2016, representing a 1.8% increase to GDP. Boosting homebuilding would not only create jobs and increase wages, but it would promote an overall healthier housing market. New single family housing supply provides more homes in growing cities, and contributes supply to a vital segment of the housing market ecosystem. In particular, new construction homes are a desirable upgrade for many households currently living in less expensive "starter homes", as a purchase of a larger or newer home. As households move from smaller and older homes into their second or third house, housing stock at a variety of prices become available, helping to foster a dynamic, well-functioning marketplace. With varied housing stock on the market, a greater diversity of households can afford to purchase a home. In addition to fostering a well-functioning housing market, consistent new construction is important from the perspective of the consumer, as new supply can help limit the pace of price appreciation, further promoting affordability and access to homeownership.

In recent years, rising employment, growing wages, and historically low mortgage rates created one of the most favorable positions for new and existing homebuyers in the past decade. Yet, these positive economic conditions have not translated into greater supply, as new single family starts stalled in the aftermath of the Great Recession. Throughout the recovery, housing starts remained weak despite rising home prices. New single family housing construction reached a not seasonally adjusted annual rate of 782,000 in 2016, less than half the pre-recession peak in 2005, when more than 1.7 million new homes were started (see Figure 34).[72] Despite improvement from the low of 430,000 in 2011, starts remain far below the historical pace of housing construction between 1986 and 2016, with an average of more than one million new homes built each year. Compared with the long-term construction average, RCG estimates that the low level of single family building during the last eight years represents a cumulative deficit of nearly 3.7 million new home starts. This total deficit is far larger than the amount of "excess" supply produced during the boom years – roughly 1.8 million additional home starts between 2004 and 2007 compared with the historical average trend. The absorption of any excess housing supply is reflected in the sharp decline in the number of vacant single family homes during recent years. After peaking at 2.6% in 2008, the percentage of vacant homes for sale as a share of the total housing stock decreased to 1.5% as of first quarter 2017 (see Figure 35).[73] This tight vacancy rate reflects an undersupplied market.

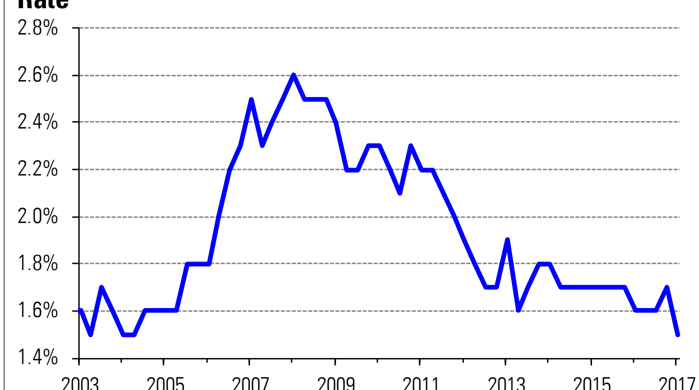
Figure 34: Annual Single Family Housing Starts



Source: Census

Even as demand for the housing market returned, several major hurdles are hampering the development of new supply. In particular, the availability of capital for homebuilders, the rising cost of construction, and the combined effect of local land-use and zoning regulations across the country, are limiting new developments and constricting new single family housing supply nationwide. In the wake of the recession and foreclosure crisis, capital availability declined, with regional and small lenders pulling back on debt availability. Investment in the single

Figure 35: Single Family Homeowner Vacancy Rate

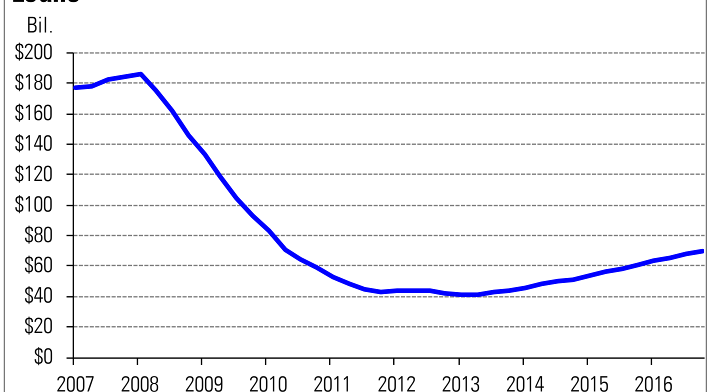


Source: Census

family homebuilding industry also remained low after the recession, as institutional investors pulled away and limited equity availability. As lending and investing stayed depressed, construction costs also rose. A shortage of skilled labor and rising commodity prices increased overall construction costs and squeezed profit margins, making it harder for single family homebuilders to develop profitably, especially in high cost markets. Rising land prices, also increased the costs of acquiring new land for development. Further constricting supply, local government regulations such as zoning restrictions, minimum lot sizes and affordability requirements, make it difficult for homebuilders to bring affordable product to market, especially in the most desirable cities and sub-markets. All of these factors combined to tighten new supply in the single family housing industry, creating the undersupplied market conditions that exist today. As new single family housing supply is critical to the future of U.S. homeownership and a key driver of national economic growth, the discussion below aims to expand our understanding of the major hurdles that constricted single family homebuilders, in an effort to determine how these problems should be addressed moving forward.

Homebuilding Financing

Figure 36: 1-4 Family Residential Construction Loans



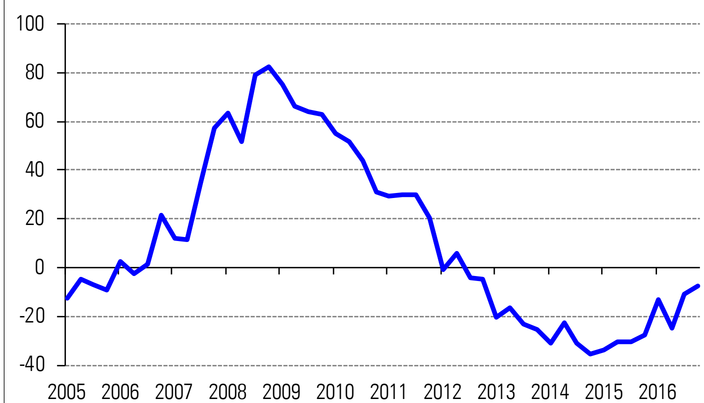
Source: FDIC

The decline in lending and investment for the homebuilding industry played a large role in diminishing the post-recession recovery in new single family housing supply. Limited capital availability and conservative credit standards hampered the capacity of developers to meet rising demand for new single family homes. The volume of loans for new single family construction severely contracted following the collapse of the housing market. Reflecting this slowdown in lending, the total outstanding volume of Acquisition, Development and Construction (AD&C) loans used to finance the acquisition and development of land for 1-4 unit homes fell to $40.7 billion in the first quarter of 2013, down by 78% from the recent peak in the first quarter of 2008, according to the Federal Deposit Insurance Corporation (FDIC) (see Figure 36).[74] The FDIC data measures only the stock of outstanding AD&C loans, without distinguishing either the impact of new lending or existing loans retiring. This outstanding loan volume, which bottomed out in 2013, started declining in 2008 as new lending contracted after the financial crisis in

2007, the earliest year of data available. Yet in recent years, AD&C lending started to recover. As of fourth quarter 2016, the value of outstanding single family AD&C loans was $69.6 billion, a 71% increase from the recent trough. Despite this recovery, the stock of AD&C loans still remains 63% below the peak levels of $186.3 billion reached during the first quarter of 2008, indicating considerable room for further recovery.

A limited recovery in AD&C lending continues today, but with conflicting signs. According to the quarterly survey on AD&C lending conditions conducted by the National Association of Home Builders (NAHB), lending conditions for builders are easing, but only gradually. As of fourth quarter 2016, the survey found that 16% of respondents reported better credit conditions for single family construction than last quarter, while only 9% reported worsening credit conditions.[75] Demand for loans is also returning according to the survey, as 40% of builders sought new loans for land acquisition in the fourth quarter of 2016, the highest share since the question's inception in 2008. These findings are consistent with the steady improvement in NAHB's overall net tightening index, which represents the easing or tightening of the AD&C loan market. The index increased by 28.4 points during the previous two years, with the positive increase of the index indicating an easing of the loan market. However, despite the recent improvement, this increase was still relatively low compared with previous growth cycles, representing much tighter conditions than during the housing boom in the mid-2000s. In comparison, from year-end 2005 to 2007, the NAHB's overall net tightening index increased by 66.4 points (see Figure 37).

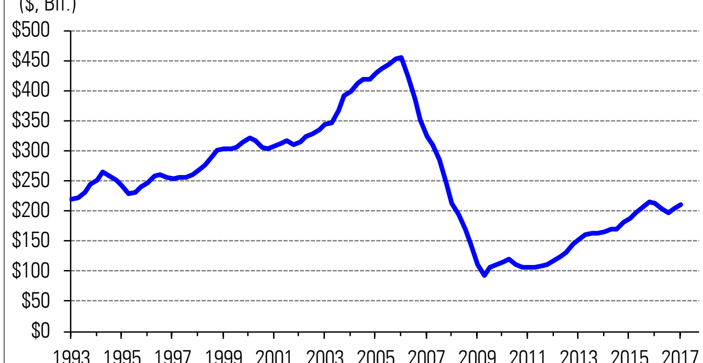
Figure 37: NAHB Net Tightening Index



Note: Increasing index indicates an easing of loan market, decreases indicate tightening
Source: NAHB

Figure 38: Value of Single Family Construction Put in Place

($, Bil.)



Source: Census

As construction financing slightly recovered, so did construction spending. The total value of single family housing construction – including both new construction and renovations – collapsed during the recession and early recovery years, falling by 79.4% from the 2006 peak to a low point in 2009, according to the U.S. Census (see Figure 38).[76] Although single family construction expenditures resumed an upward trend beginning in 2011, increases were limited. Single family construction spending reached the highest level since 2008 in 2017, but remained more than 53.8% lower than peak levels. As of first quarter 2017, the inflation-adjusted value of single family construction put-in-place was $210 billion, compared with the pre-recession average of $313 billion annually from 1993 through 2006. Indeed, approximately $100 billion a year of financing is needed to return to these levels of construction. As construction spending and the AD&C lending market continue to move in positive directions, RCG believes there is substantial growth needed in lending volume to help reduce the supply shortage.

As the recovery from the recession picked up steam, many homebuilders were unable to secure financing through traditional avenues, greatly limiting the flow of capital into construction in recent years. Private homebuilders, which consisted of 81% of homebuilder and specialty trade contractor firms as of 2012, according to the latest economic census, faced and continue to face particularly significant challenges in obtaining financing.[77] Since publicly-traded homebuilders can raise capital in several avenues not available to private firms, such as selling additional shares on the stock market, privately-owned operations must look towards other ways to raise capital. Historically, smaller private operators developed financial relationships with smaller and regional banks to procure financing. Yet, in the aftermath of the recession, these banks were generally unable or unwilling to lend to homebuilders.

A combination of factors led to the decline of small and regional banks lending to the homebuilding industry. First, the new regulatory regime enacted after the recession designated construction loans as higher risk thereby necessitating larger capital reserves and blunting the profitability of constructing lending for many commercial banks. The National Association of Home Builders' Survey on Acquisition, Development & Construction in the fourth quarter of 2016, asked homebuilders the reasons that lenders were restricting the availability of new loans. Some 50% of respondents indicated that regulatory or accounting rules were to blame and 47% of respondents felt that regulators were forcing lenders to restrict new loans. In comparison, only 7% of respondents said their lender was concerned about the loan performance.[78] Additionally, similar to the shift in financial decision-making for individual consumers discussed later, in the wake of the recession, the perception of risk shifted for many bank managers and loan committee members. Afraid to loan or invest in anything related to single family homes after the losses incurred during the Great Recession, smaller and regional banks dramatically stepped away from funding homebuilding, except for select private homebuilders with a proven track-record, strong existing banking relationships and with access to premier development projects.

In recent years, this disparity between the access to capital for private and public homebuilders increased the share of homes built by publicly-owned companies. The top ten public homebuilders in the United States captured 23.9% of new single family home closings in 2012, according to the NAHB.[79] Yet, these top ten public homebuilders were responsible for 26.4% of new single family home closings in 2014, and 27.4% in 2016. This shift largely reflects the decline of the private homebuilder, a trend that continues to stifle the recovery of the single family housing supply.

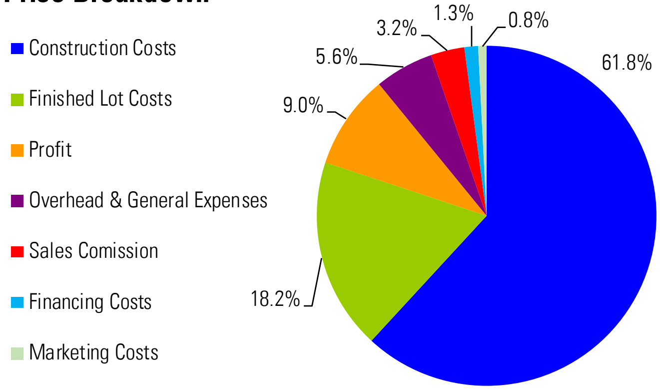
In these constrained financial conditions, we would expect institutional investors, such as pension funds or insurance companies, to step in to provide liquidity. In the past, institutional investors purchased equity, in either a specific development, a development security fund, or stock of a publicly-owned company, enabling homebuilders to raise additional capital for construction expenses. In addition to this direct infusion of investment, homebuilders were able to leverage these equity investments to make it easier to obtain debt financing to cover remaining development costs. Before the recession, institutional investors were heavily involved in equity financing for the single family housing industry, on both the supply and demand-sides. However many investors suffered large losses during the foreclosure crisis, and remain hesitant to invest in single family homebuilders after nearly a decade. Another concern disparaging institutional investors from financing single family homes, is the impression that new construction is out of the price range for the majority of households, and therefore developments may not sell out on schedule. Ironically, the difficultly of obtaining homebuilding equity and debt, is further contributing to this very lack of affordability by increasing financing costs for those projects that are able to move forward and by further constricting new supply, both of which drive up the prices of new homes further. In order for single family construction activity to return to historical levels, commensurate with rising consumer demand, capital availability for homebuilders will need to increase dramatically, through more prolific lending and a return to significant equity investments from major institutional capital sources.

With rising home prices, low single family vacancies, and favorable mortgage rates, the availability of capital for homebuilders should be expanding to meet the growing demand for single family homes. Yet, given lenders' persistently restrictive loan-to-value ratios following recession-era losses, debt availability remains insufficient to offset the substantial capital requirements needed to boost the level of new home construction nationwide. Institutional investors, still recovering from the post-recession mindset, also remain hesitant to invest in the single family homebuilding industry. Looking forward, job growth and demographic fundamentals will support growth in the demand for single family housing, but without an improvement in the financing environment for homebuilders, and a greater willingness to lend and invest in single family homes once again, the gap between demand and available supply will only expand through the near and medium term. Moreover, as institutions financing single family homebuilders remain hesitant, the dramatic rise in the cost of construction and a shortage of skilled labor will further limit the growth of the single family housing supply.

Rising Construction Costs

The persistent difficulty in financing new single family construction, because of both limited equity capital and the tight lending environment for the homebuilding industry, is particularly worrisome given that both construction and land costs are also rising rapidly. As of 1998, construction costs for a single family home represented 54.8% of the total sales price. In comparison, following the recent period of increasing construction costs, as of 2015, construction costs represented 61.8% of the total sales price (see Figures 39 and 40).[80] Rising construction costs tend to discourage new residential development and increase the value of current single family homes, by both increasing replacement costs and reducing additions of future supply. Simply put, rising construction costs increase new home prices, reduce demand, and thereby restrain new construction. The U.S. Census's Fixed-Weighted Price Index for houses under construction, measures the cost for new houses under construction, excluding the value of land, with the average cost of construction indexed to 2005. The previous peak of the index reached 108.4 in 2007, before falling to a trough after the reces-

Figure 39: Single Family New Home Sales Price Breakdown



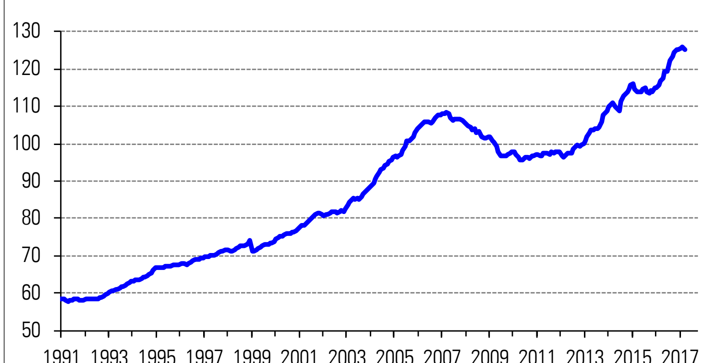
Source: NAHB

Figure 40: Construction Costs as Share of New Single Family Home Sales Price

Year	Share of Sales Price
1998	54.8%
2002	50.8%
2004	51.7%
2007	48.1%
2009	58.9%
2011	59.3%
2013	61.7%
2015	61.8%

Source: NAHB

Figure 41: New Single Family Homes Under Construction Index



Source: Census

sion of 95.6 in 2010.[81] However, construction costs increased rapidly in recent years, with the index rising to 125.1 as of March 2017 (see Figure 41). Based on this index, construction costs increased by 15.4% from the previous peak, or a 30.9% increase from the recent trough in 2010. Therefore, in less than seven years, for every $100,000 a builder used to spend towards the construction of a home, they spend over $130,000 today. This significant rise in costs is rapidly pricing out many potential homebuyers.

Figure 42: Engineering News-Record Materials Price Index

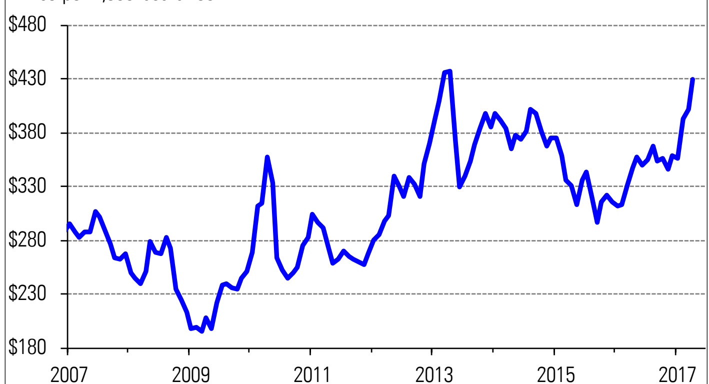
Source: The Engineering News-Record

Material Costs

Construction costs rose in part, as commodity prices recovered after the recession. Typically, construction materials prices increase in line with inflation, but price gains in building materials were particularly strong as global demand for construction materials strengthened. Recently, demand for some construction materials decreased somewhat, as Chinese demand fell and energy prices remain low. However, many construction materials costs continue to climb, fueled in large part by increased development activity in other segments of the U.S. real estate market. The Engineering News-Record Materials Price Index, which tracks the weighted price movement of structural steel, cement and 2 X 4 lumber and is widely used within the construction industry, increased by 7.4% from a 2008 high, as prices of materials from across the commodity market rose (see Figure 42).[82]

Figure 43: Framing Lumber Composite Price

Price per 1,000 board feet

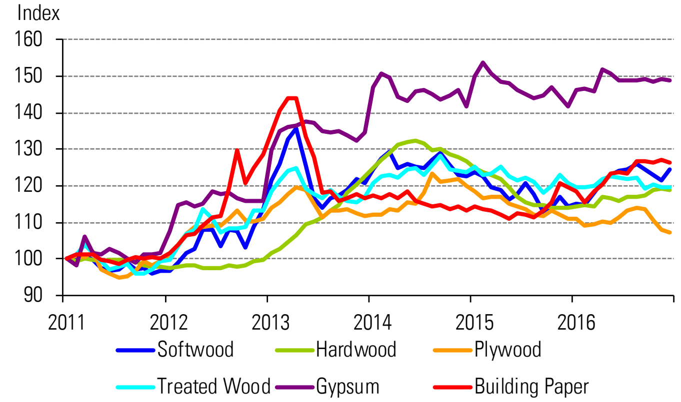


Source: Random Lengths

In particular, wood framing prices spiked during recent years. In March 2009, the framing lumber composite price was $195 per thousand board feet.[83] Yet, as of April 2017, the price increased to $430 per thousand board feet, more than doubling in price in eight years (see Figure 43). Framing lumber costs profoundly impact the costs of new home construction, as framing lumber constitutes the method that builders use for the majority of new single family homes.

In fact, as of 2015, 93% of all new single family homes completed were built with wood framing.[84] Prices of framing lumber are expected to climb even further in the coming years, after the U.S. Department of Commerce levied a nearly 20% duty rate against Canadian lumber in April 2017. According to a recent analysis by the NAHB, this tariff will result in lumber prices paid by U.S. customers increasing by 6.4% and the average cost of a new single family home rising by over $1,200.[85] Other construction materials, when examined individually, such as softwood, hardwood, plywood, treated wood, gypsum, and building paper, also increased in price during recent years. Compared with 2011 prices, gypsum prices increased by 48%, building paper and softwood prices increased by nearly 25%, hardwood and treated wood prices increased by nearly 20% and plywood prices were up by 7% (see Figure 44).[86] As the cost of physical building materials remains elevated, homebuilders responded by passing costs along to consumers, targeting homes to buyers from the higher-end of the market to compensate for additional expenses, or by forgoing development plans altogether.

Figure 44: Construction Material Costs Since 2011



Note: Latest data as of December 2016
Sources: Census, RCG

Labor Costs

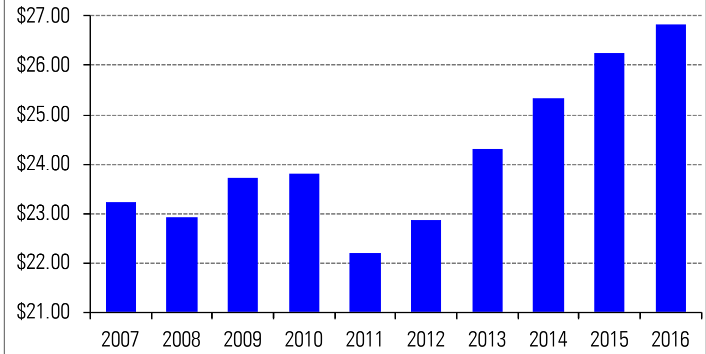
Compounding the rise in construction materials, one of the major factors pushing the cost of construction higher is the cost of labor. The Engineering News-Record Skilled Labor Index, another widely used gauge on the labor wages within the construction industry, increased by 19.8% since year-end 2009, rising at a pace similar to the construction materials index (see Figure 45).[87] When compared with the average hourly earnings for all employees in the construction industry, a comparable trend emerges. The average labor costs of a construction worker

Figure 45: Percent Change of Engineering News-Record Skilled Labor Index

Note: Percent change year-over-year
Source: The Engineering News-Record

per hour among new single family home general contractors increased to $26.82 in December 2016, up from $22.19 in December 2011 (see Figure 46).[88] This nearly 20.9% increase in labor costs within five years represents an average annual increase of 4.2%. As wages grew significantly faster than the average rate of inflation, which was 1.6% annually since 2010, homebuilders had no choice but to spend more to build at a similar pace.

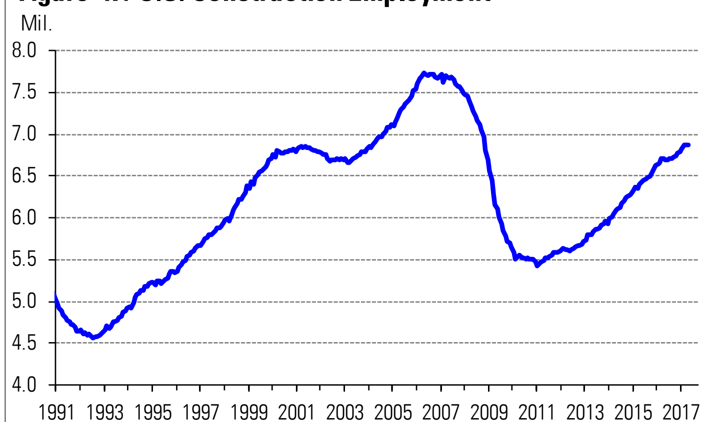
Figure 46: Average Hourly Earnings of Employees of Single Family General Contractors



Source: BLS

Besides typical wage growth, wages are up because of a shortage of skilled construction labor within high-demand markets. Finding skilled labor in the trades and construction industry is currently particularly challenging, in stark contrast with before the recession. Private construction employment expanded rapidly in the pre-recession era, increasing by over 1 million jobs in the five years leading up to the pre-recession peak (see Figure 47).[89] After the foreclosure crisis and the slowdown in construction, employment fell by nearly 30%, from a high of 7.7 million employees in January 2007, to a trough of 5.4 million in January of 2011. Since this low, construction employment grew steadily, increasing to 6.9 million as of April 2017. However, national construction employment remains 11% below the pre-recession peak. In total, nearly 2.3 million construction jobs were lost from January 2007 to January 2011. During this time period, employment declined severely within the single family homebuilding industry as well. As of June 2006, during the previous peak, there were 637,000 employees nationwide in the single family general contractors segment of the construction sector (see Figure 48).[90] By February 2011, there were only 264,000 single family general contractor employees, a massive decline of 58.5% in less than five years, as workers fled into other industries or other types of construction. In the last six years, payroll employment for single family general contractors rebounded to 342,000 employees as of February 2017, but employment remains 46.3% below the pre-recession peak, represent-

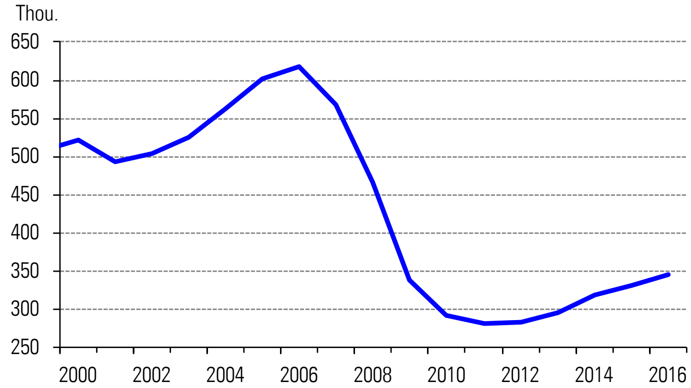
Figure 47: U.S. Construction Employment



Source: BLS

ing a gap of nearly 300,000 workers. As a result, labor shortages continue to bolster construction industry wage growth and limit the pace of new development.

Figure 48: Employees in Single Family General Contractor Industry



Source: BLS

Seasonality and the contract-style of this type of work can lead to large shifts in the number of employment jobs from season to season. In the past, consistent labor shortages were met with a surge in the supply of vendors, contractors, and subcontractors, re-entering the labor market as construction demand increased. However, the extreme loss of construction jobs in the recession led many older workers to retire or find careers in other industries, with younger workers entering the workplace for the first time, opting for employment in other sectors. As of September 2016, the National Association of Homebuilders estimated that there were approximately 200,000 unfilled construction jobs nationwide, a jump of 81% in the last two years.[91] Moreover, the immediate outlook for construction contractors filling vacancies looks grim. A 2017 survey by the Associated General Contractors of America found that nearly three-fourths of all contractors have had a "hard time" filling either salaried or craft worker positions in the past year.[92] Among the firms surveyed, 55% are expecting worker shortages to be their "largest concern" in 2017, making this the number one concern across the industry. Indeed, with 73% of construction firms expecting to expand payroll in 2017, these vacancies will continue to require homebuilders to raise wages in competition for limited labor reserves.

Importantly, the skilled labor shortage is expected to only intensify in the medium term. By 2020, the construction industry is projected to face a two-million-person shortage of skilled labor, according to the Associated Builders and Contractors.[93] In an economy with fewer vendors and a shortage of subcontractors, costs are expected to continue to rise if current trends persist. Moreover, as an increasing number of baby boomers retire from the construction industry, younger workers have not replaced them. As of 2015, the United States had fewer construction and engineering graduates than during the previous peak, with many construction management and civil engineering programs running below maximum enrollment.[94] Additionally, the construction field is highly dependent on immigrant labor, and it is unclear what impact will come to immigration from the policies of the new administration. As of 2013, nearly 2.9 million construction workers nationwide were foreign born.[95] Of these workers, more than 1.1 million were undocumented immigrants, constituting

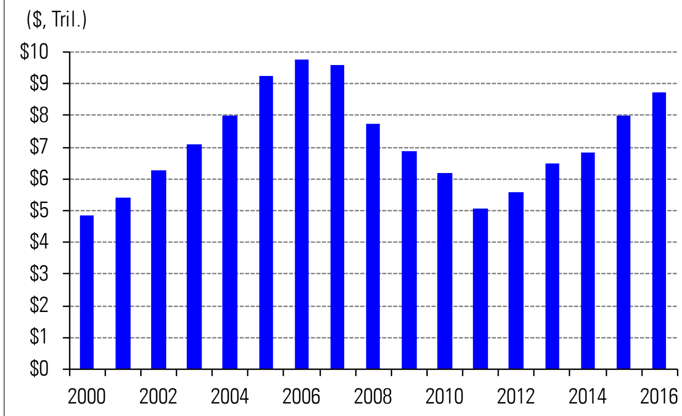
12.7% of the total national construction workforce. Data from the Pew Research Center also provides a similar picture. In 2014, the Pew Research Center estimates that nearly one-fourth of all construction workers were foreign born, with 13% of the total construction workforce consisting of undocumented immigrants, and 12% of construction payrolls consisting of legal immigrants.[96] If immigration declines further or continues to stagnate, fewer immigrants will translate into more construction worker vacancies, placing greater pressure on wage inflation.

The severity of the current and anticipated labor shortage is troublesome, and well beyond the norm of what the industry experienced in prior growth cycles. RCG believes that specific factors have exacerbated the labor shortage. As construction lagged during the early years of the recovery, the national energy industry boomed. With high wages and severe labor shortages, the energy industry attracted workers from across various fields, including many former construction workers, driving skilled laborers away. Subsequently, as new residential and commercial construction activity began to accelerate, firms found it harder to hire, particularly in high-cost markets, and the skilled labor shortage drove up worker's wages fastest in these markets. The net effect of these forces increased homebuilder's costs sharply, because of higher wages in markets that struggle with affordability, while at the same time, labor shortages have constricted oncoming supply, further exacerbating affordability. As labor costs rose, and will continue to rise in the medium term, land prices exacerbated construction costs, and will have a tremendous impact on incoming supply in the years to follow.

Land Values

Among the many constraints driving development expenses up, costs associated with rising land values represent yet another hurdle for new construction, as national housing production is overwhelmingly concentrated in either undeveloped land or low density areas. Nearly one-fourth of new homes in the 2000s were built in undeveloped areas, with an additional 33.2% of new homes built on land with less than one home per acre.[97] Acquiring new land for development is a crucial aspect of new construction. An increase in land values directly translates to an increase in acquisition costs, which affects the end prices for final product. As land values rise, so does the over costs of new housing, both making it harder for homebuilders to find financing to purchase developable lots, and forcing up the final prices of new construction. Nearly ten years ago, aggregate land value in the United States reached an all-time high of $9.78 trillion in 2007, according to the Lincoln Institute of Land Policy (see Figure 49).[98] Following this all-time high, land prices plummeted dramatically with the onset of the foreclosure crisis and recession. Land values dropped by more than 19% from 2007 to 2008, and continued to decline until reaching a trough of $4.96 trillion in the second quarter of 2011. As the housing market stabilized and started to rebound, land values once again rose following the early recovery years. By the first quarter of 2016, the latest data available, land prices increased by 72.7% from 2011, up to $8.75 trillion in aggregate, increasing by an average of 14.5% year-over-year. As of the first quarter of 2016, the aggregate land value was still 10.7% below the pre-recession high, but with sustained growth, land prices will most likely surpass this milestone very soon (see Figure 50). Indeed, if land values continue to rise, even by the long-term average of 6.7%, the aggregate land value will pass the pre-recession high by the end of 2017.

Figure 49: Total Value of U.S. Residential Land



Note: Latest data as of 1Q16
Sources: Lincoln Institute of Land Policy, RCG

National land price appreciation was fueled by rapid growth in a number of specific markets. After the recession, land values plummeted in many major metropolitan areas. Among 46 of the largest metro areas in the United States tracked by the Lincoln Institute, the average land value for single family homes fell from $230,000 at the pre-recession peak, down to a trough of $96,000, a drop of 58.2% in five years.[99] However, on average, land values among the 46 largest metro areas in the United States have rallied since the post-recession trough, climbing by 72.1% as of first quarter 2016, very similar to the total increase in aggregate land value.

In absolute terms, prices increased the most in markets with traditionally restrictive regulatory regimes and areas with strong demand for housing. Land values in nine of these 46 metropolitan areas increased by more than $100,000 per single family home since post-recession troughs (see Figure 51). Single family land values rose by $501,000, $437,000 and $317,000 on average in the top three markets, San Francisco, San Jose, and Oakland, respectively. Bay Area pricing was inflated by the region's notoriously difficult regulatory process, a

Figure 50: Change in Total U.S. Residential Land Value

	Change in Value
Peak to Trough	-48.3%
Trough to Current	72.7%
Peak to Current	-10.7%

Sources: Lincoln Instute of Land Policy, RCG

Figure: 51 Markets with Largest Change in Land Prices, Trough to Current

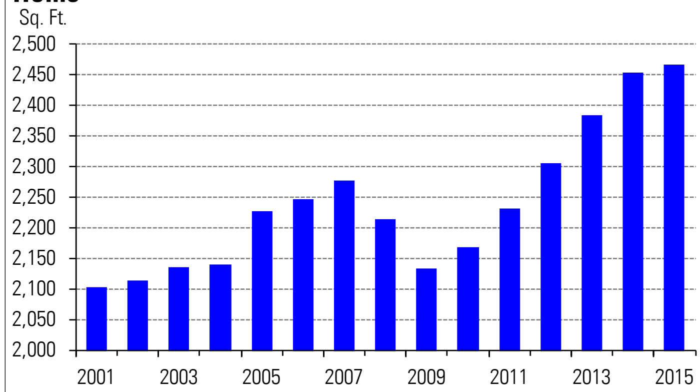
Market	Trough	2016	Change in Value	% Change
San Francisco	$588,700	$1,089,200	$500,500	85.0%
San Jose	$496,600	$933,800	$437,100	88.0%
Oakland	$302,300	$619,400	$317,100	104.9%
Orange County	$439,500	$672,700	$233,200	53.0%
Los Angeles	$297,200	$483,700	$186,500	62.7%
San Diego	$274,300	$436,100	$161,700	59.0%
Seattle	$152,400	$268,400	$116,000	76.1%
Sacramento	$35,800	$145,400	$109,600	306.1%
Miami	$110,200	$216,100	$105,800	96.0%
San Bernadino	$29,900	$128,700	$98,800	330.7%

Note: Residential land, latest data as of 1Q16
Source: Lincoln Instute of Land Policy

limited amount of developable land, as well as rapid employment growth and an acceleration in population growth. After the Bay Area, Los Angeles and San Diego land values increased the most since the recession, with Seattle, Sacramento, Miami and San Bernardino rounding out the other top ten cities. Of the top markets, only two are not in California.

Amid the rapid rise in land values, much of the single family new construction that took place in recent years started with the advantage of very low land costs, either because the land was purchased at a significant discount during the recession or early in the recovery, or because land was already marked-to-market following steep declines in value during that period. These factors helped reduced the land cost basis, making it possible for homebuilders to produce new homes at a lower price-point early in the recovery period, allowing for sustainable profit margins in mid-tier housing options. However, as land prices increased considerably in recent years, new development will be much more expensive going forward. Given the higher cost basis for land, developers will require larger amounts of capital to get projects off the ground, in an already constrained financing market. However, the story of land appreciation is contextual, with specific markets increasing rapidly, while others stagnate. Ultimately, rising land values are a product of demand, geography and the regulatory environment that constricts supply, with elevated employment and demographic fundamentals bolstering home and land prices in particular regions of the country significantly more than others. However, in general, land values in most metropolitan areas increased persistently in the current growth cycle, with price appreciation rapidly increasing the costs of construction.

Figure 52: Median Size of New Single Family Home



Source: Census

Other Costs

Adding to all of these cost factors, the size of homes, and therefore the total costs of constructing a new home, increased in recent years. Following a long-standing trend, homebuilders built larger and more spacious homes in order to meet consumer expectations for new homes and to increasingly appeal to higher-end buyers as costs and prices surged. In 2015, the median size of a completed new single family house was 2,467 square feet, compared with the pre-recession peak of 2,277 square feet in 2007, an 8.3% increase in home size in eight years (see Figure 52).[100] As homes became larger, total home prices increased accordingly. Local building or environmental regulations can also drive up the costs of new construction. The National Association of Homebuilders estimates that regulatory costs add roughly $85,000 to the cost of the average new single family home nationwide, up nearly 30% from 2011.[101] In addition, many of the soft costs associated with new construction, such as architect fees, appraisals, insurance, environmental tests, taxes during construction, and financing costs increased in recent years, added to the overall expenses of home-building. The combination of all of these factors, pushed construction costs even higher in recent years, further limiting the supply of single family homes.

As construction costs rise, homebuilders find it harder to secure financing, and regulations restrict oncoming supply, many homebuilders are building even more expensive homes to maintain their profit margins, intentionally shifting away from the starter home market. Select public builders are building lower cost homes in an effort to cater to a lower income household, but in general homebuilders are building more expensive homes. As a result, as of December 2016, only 28% of all newly built homes were priced below $250,000, down from 43% during the pre-recession peak, according to the Federal Reserve Bank of Atlanta.[102] This trend reflects a continued mismatch between supply and demand, particularly at price points that are most accessible to first-time homebuyers. Indeed, the share of entry-level home sales decreased in recent years. As of March 2017, 6.9% of new homes sold were under $150,000, according to the U.S. Census. This is up from a year ago, when 3.9% of new homes sold were under $150,000 in March 2016, but a huge decline from the 35.4% of homes sold in September 2002 in that same price bracket. Of course some of the increase reflects overall inflation, however, in general, the under $150,000 bracket is rapidly declining and will continue to shrink in the near term. The supply of entry-level homes is particularly tight, shutting out many would-be buyers at a time when mortgage rates are near historic lows. If homebuilders are unable to overcome the many current barriers to building affordable single family homes, new housing supply will continue to be pushed into the higher-end of the housing market, as homebuilders are compelled to produce fewer homes for higher prices, in order to remain profitable.

Land Use and Other Regulatory Barriers

Despite the significant hurdles of affordability and mortgage credit, as overall employment conditions improve, household formation is expected to increase, improving single family housing demand. With demand increasing, homebuilders should be compelled to add supply. Despite the significant cost hurdles detailed above, builder confidence also increased recently, reflecting homebuilders' recognition of improving market conditions and increased desire to build. In March 2017, the National Association of Home Builders' Housing Market Index recorded the highest level of builder confidence in the home sales market in the past twelve years.[103] However, while capital availability and rising costs are a large part of the equation restricting new supply, zoning restrictions and local land use regulations further hamper homebuilders from delivering new supply. At the local level, zoning and land use regulations restrict both the density of developable land, and how much land is available for development. Occasionally the impact is isolated or offset by more accommodating regulations in nearby areas. For example, if one town or county restricts supply, a neighboring town or county may still allow for additional supply, growing the number of units made available. Therefore, the municipality that limited development may, in theory, still gain some of the benefits of an increase in the region's population, without incurring the costs of local development. However, in aggregate, on both the regional and national levels, the collection of regulations from many municipalities, counties and states from across the country significantly constrict both the potential land available to build new housing and the total number of new housing units produced. As outlined in the 2016 Annual Economic Report of the President, RCG believes that land use regulations are not necessarily negative or positive in nature, but when land use regulations are specifically geared towards protecting the interest of current homeowners, rather than encouraging a sustainable supply of new housing, these regulations tend to adversely affect housing affordability and reduce productivity on a national scale.[104]

Stringent regulations have local benefits but national implications. Locally, a wide variety of limitations on development can both reduce the total number of construction starts and constrict the supply of land that can be developed. Minimum lot size requirements, such as zoning requiring builders to build no more than one home per acre, or half-acre, can severely reduce the number of lots available to build homes in new developments. Such regulations have become more common across the country, and can severely limit new housing construction. As of 2006, 22 suburban municipalities in the Boston region with minimum lot sizes of less than a quarter of an acre, a relatively smaller lot size, held more than 25% of the region's population within roughly 25% of the land mass, a one-to-one ratio of population to land area.[105] However, in 14 other suburban municipalities where minimum lot size was around two acres, only 4% of the region's population were contained in these areas, despite consisting of more than 10% of the region's land, a one-to-two ratio of population to land area. The disparity between densities of these two types of municipalities, low density and high density, is indicative of the significant impact that land use regulations have on the delivery of new housing supply across different metropolitan areas, and among different communities within the same region.

Minimum lot size regulations are only one way that communities prevent development. Another direct approach is a growth cap, which limits the number of new units that can be built during a specified time period. A common variant is a phasing schedule that limits the pace of construction within a subdivision or tract of land. Other land supply constraints, such as reserving land for specific non-residential uses, also constricts land supply. There are many other formats of regulations, such as requirements that homes be of a certain size or height, or have a certain size front or backyard, including setback requirements or side-yard requirements. In aggregate, all of the rules translate to larger overall lot sizes and greater barriers to new single family development. Moreover, parking and open-space requirements, which effectively act as indirect density restrictions, impose additional costs on building projects, further reducing the potential for the additional housing supply. Many municipalities also have septic, wetland, environmental regulations or irregular lot line rules, which further snip away at the amount of developable land. Estimating the impact of the patchwork of local and regional regulations on the national single family housing market is a difficult task. In terms of housing supply, a 2006 Boston area study found that for each quarter-acre increase in the minimum lot size within a municipality, there were approximately 9-10% fewer homes in that municipality.[106] In addition, between 1980 and 2002, each quarter-acre increase in the minimum lot size translated to 10% fewer housing permits issued. Conversely, during the same period, if the average size per lot fell by one-tenth of an acre, permitting increased by 4% and total housing stock increased by as much as 5% in that municipality.

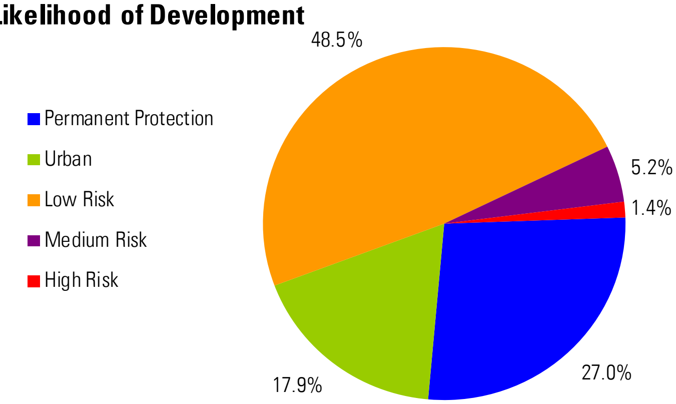
The artificial limits on construction created by the numerous regulatory barriers imposed on new single family housing are not only reducing the supply of new homes, but are also increasing housing costs and exacerbating challenges of single family affordability. To compensate for the restriction on developable land and lot divisions within many areas, public and private homebuilders are turning to vacant lots to build new single family homes. Since 2008, vacant development lot supply declined by 34% nationwide, as homebuilders used this land in order to build new homes.[107] However, much of this lot development was in high-priced submarkets or represented vacant land that was procured cheaply in the aftermath of the recession. As vacant land becomes more expensive and harder to acquire, land costs and availability will further limit the homebuilding industry's ability to produce new supply, particularly low or mid-tier priced new homes. While the diverse assortment of land use regulations nationwide make it hard to fully grasp the barriers that homebuilders face, without major policy intervention or innovative new approaches to local zoning, land use regulations and restrictions will continue to suppress incoming supply, especially in high cost and high barrier markets around the country.

Challenges in High Cost Markets

Supply constraints provide a structural challenge in the housing market, particularly in high cost cities. In markets with high barriers to new development, housing supply is constrained, and therefore less responsive to increases in demand. Moreover, the higher costs of development translate to higher prices and lower affordability for consumers. High cost markets, or metropolitan areas with both higher priced housing and higher construction costs, face a particular set of challenges in the production of new single family homes. Historically, some of the largest markets in the United States, such as New York, Boston, San Diego, Los Angeles and the San Francisco Bay Area markets, struggled to deliver large quantities of all types housing, including single family homes, owing to decades of strict land-use restrictions, a focus on providing multifamily units, and a dearth of developable land. Today, these challenges are no longer confined to a small number of high cost markets, but have spread to other markets including Miami, Washington D.C., Chicago, Seattle and Portland, which are unable to deliver new single family homes at the same rate from decades past. Many of the challenges in delivering new product are not unique to high cost and coastal markets, but are more pronounced because of a combination of several additional barriers that many smaller or low-cost cities do not face. First, geographic limitations to growth, such as the close proximity or inclusion of mountains, waterways, or parkland within city or regional boundaries, directly limit the amount of land potentially available for development. Second, large coastal markets typically have extensive land use and affordable housing policies, which, while often well-intentioned, deplete the total amount of developable land, further constricting new supply. Third, as new commercial and multifamily development accelerated in recent years, many large, high-cost markets currently face significant construction worker shortages, as traditional workers from the homebuilding industry fled these geographic regions for the reasons described previously, such as transferring employment to different industries. Lastly, employment increased rapidly in many of these markets through the recovery and growth cycle in the recovery years, increasing the pace of migration and population growth, propelling housing demand, and further driving both increased construction costs and home price appreciation.

With some of the highest home prices in the country and extreme versions of several of the above challenges commonplace in high cost markets, the San Francisco Bay Area provides a unique case study into the challenges of high cost markets. In particular, geographic limitations deny vast sums of land from development in the Bay Area. Besides being located on a coastline, with a collection of cities and suburbs surrounding the bay and a series of estuaries and waterways that prohibit building, the region's many steep hills and general topography are not well-suited for development. Additionally 27% of the Bay Area's square acreage is permanently protected from development including local, state and national parks, with 49% of land either unfeasible for development because of topography or zoned as farm or ranch land (see Figure 53).[108] Essentially, 76% of the entire region is undevelopable, a vast

Figure 53: Share of Bay Area Land by Likelihood of Development



Source: Greenbelt Alliance

percentage of total land area. In fact, only 7% of the total land mass represented within the approximately 4.4 million square miles that comprise the Bay Area, is currently vacant land and open to development, albeit with stringent restrictions on a majority of that open space.

Figure 54: Wharton Land Use Regulation Index

Market	Index Value
Providence, MA	1.79
Boston, MA	1.54
Monmouth-Ocean, NJ	1.21
Philadelphia, PA	1.03
Seattle, WA	1.01
San Francisco, CA	0.90
Denver, CO	0.85
Nassau-Suffolk, NY	0.80
Bergen-Passaic, NJ	0.71
Fort Lauderdale, FL	0.70

Source: University of Pennsylvania

In addition to the dearth of usable land, development in and around the Bay Area is nationally renowned for a collection of stringent local land use policies. The Wharton Residential Land Use Regulation Index, which compares cities land use regulations, ranked San Francisco as the 6th most restrictive housing market in the nation as of 2008, the last year available for the index, with an index value 230% higher than the national average (see Figure 54).[109] Among major markets, only Boston, Philadelphia and Seattle ranked higher. In California, local governments have substantial control over the quantity and type of housing built within each jurisdiction. The environmental review process, developer and impact fees, parking requirements, lot sizes, affordable housing requirements, retail requirements, design requirements and other regulations all impact the ability and costs for developers to deliver new units to the market. In particular the California Environmental Quality Act (CEQA), requires considerable time and effort from homebuilders to obtain construction approvals. While some of these requirements only apply to multifamily builders, the broader impact of reducing supply growth extends to the overall housing market.

Indeed affordability requirements, and other land use regulations are commonplace within the San Francisco Bay Area, elevating the costs of new for-sale housing and reducing the pace of supply additions. In June 2016, San Francisco voters passed Proposition C, which raised the amount of affordable housing required "on-site" for new developments with more than 25 units from 12% to 25%, more than doubling the share of affordable housing units developers must provide. The proposition also modified the income requirements for these affordable units, dedicating three-fifths to low income affordable housing units and two-fifths to middle income units. Both of these additional requirements are more expensive in most contexts to developers, and were designed to encourage "on-site" production, which is the most likely outcome.

The general effect caused by extensive development requirements is less overall housing production, increases in the costs of land and decreases in overall affordability. Proposition C, in particular, is expected to increase net housing prices by more than 2.7%, according to the San Francisco Comptroller.[110] RCG believes that the impact could prove to be far greater in the long-term, and will significantly impact the delivery of new homes, further constricting already limited supply. Indeed, incoming inventory is also expected to slow in coming years, as developers, unable to make the financials work, stall or cancel proposed developments. In fact, Proposition C is expected to reduce multifamily housing apartment and condominium production by between 4% and 17% in the next five to ten years, depending on how developers model the tradeoffs between rental and ownership units, according to the Terner Center at UC Berkeley.[111]

A 2017 study by Ed Glaeser, used construction industry data to determine how much a house should cost to build, in a scenario where land-use regulations were drastically cut back. Since the cost of construction materials varies little from state to state, the measurement is intending to disaggregate additional costs to the construction of new homes, such as wages, impact fees and land costs – which are products of regulations and market conditions. According to this study, a home in San Francisco-Oakland-Hayward metropolitan area should theoretically cost approximately $281,000 to construct, yet the price for an average home was around $800,000 as of 2013.[112] This study concludes this cost to price difference is a reflection of the regulatory hurdles, such as design and environmental reviews, which can add years to a project's timeline and suppress overall housing supply. The result is a much higher cost for the relatively few homes that are actually built. RCG believes that, strict zoning controls, such as affordability requirements or zoning laws, are a prominent factor for the high housing costs found throughout much of California, greatly increasing the costs of construction.

A significant factor impacting the cost of construction and, ultimately, the delivery of for-sale housing in high cost markets, is the severe skilled labor shortage in the construction industry. Indeed, construction wages and costs increased nationwide in recent years, but were most acute in high cost markets. From across the Bay Area, anecdotal cases of construction firms highlighting a shortage of skilled construction workers which delay timelines and push wages up, are common. During the recession, employment in the construction industry fell sharply among the principal markets in the Bay Area, decreasing by 28.3% in San Francisco, 32.4% in San Jose, and 38.1% in Oakland, between the pre-recession peak and the post-recession trough (see Figure 55).[113] Construction payrolls recovered since then, but construction firms still struggle to find skilled workers, and must make adjustments due to labor shortages, particularly as the pace of multifamily and commercial construction acceler-

Figure 55: Bay Area Construction Employment (Thou.)

	San Francisco	San Jose	Oakland
Pre-Recession Peak	45.6	46.8	73.7
Post-Recession Trough	32.7	31.6	45.6
% Change from Peak to Trough	-28.3%	-32.4%	-38.1%

Note: Pre-Recession Peaks are between 2005-2007, Post-Recession Troughs are in 2010
Source: BLS

ated significantly in recent years. Labor shortages pushed local construction wages up significantly, with wages increasing by 37.9% in San Francisco County, 33.6% in Santa Clara County (in the San Jose market) and 27.9% in Alameda County (in the Oakland market) since the recession era trough (see Figure 56).[114] Labor shortages are not the full reason why construction wages sustained rapid increases in recent years. However, increasing construction costs, including wages, undoubtedly added to the challenges builders face in developing new supply in the San Francisco Bay Area market.

Figure 56: Hourly Wage of Bay Area Construction Worker

	San Francisco	Santa Clara County	Alameda County
Pre-Recession Peak	$1,478	$1,263	$1,298
Post-Recession Trough	$1,297	$1,148	$1,192
Current	$1,788	$1,534	$1,521
% Change from Trough to Current	37.9%	33.6%	27.6%

Note: Pre-Recession Peaks are in 2007, Post-Recession Troughs are in 2008-10, Current as of Third Quarter 2016
Source: BLS

While San Francisco is a pertinent example of one of the growing number of markets where a confluence of challenges are negatively impacting regional housing supply growth, many markets in California embody the harshest extremes of these challenges in delivering enough single family homes to meet demand, especially at a price level affordable enough for many households. Limited land availability, strict land use regulations and a dearth of skilled construction workers have combined to stifle housing production, despite robust job growth and in-migration fueling strong for-sale housing demand throughout region. While these factors are most pronounced in high cost cities, homebuilders in small and mid-sized markets also face obstacles in building more supply. Without a concentrated effort to combat the numerous hurdles that homebuilders face nationwide, new housing supply will continue to lag behind increasing for-sale demand, reducing affordability and preventing potential buyers from transitioning into homeownership.

Policy Implications

In the wake of the worst recession since the Great Depression, historical precedence provides an excellent guide for the future direction of national housing policy in beginning to address the many ongoing hurdles to homeownership. In the aftermath of the Great Depression and World War II, a wide range of government programs were created to promote the American Dream of sustainable homeownership. By providing a broad and innovative array of programs ranging from loan forgiveness and repayment assistance during the Great Depression to a variety of affordable loan products with low down payments, discounted interest rates, mortgage insurance and federally-backed guarantees, these public programs bolstered the private housing industry by facilitating safe and sound home purchases for many middle-class households, especially those headed by veterans returning from war. These programs revolutionized the housing finance industry by introducing practical, but innovative ideas which helped stabilize the housing market for decades to come, many of which became standard conventions, still crucial to the housing market today. Moreover, many working class families were able to build and pass on household wealth, transformed social mobility, helping to ensure the socio-economic well-being of future generations, and redefining what it meant to be middle class in the United States. This multi-pronged emphasis on homeownership as a national priority resulted in a sustained postwar housing expansion and spurred the growth of affordable suburbs throughout the middle of the 20th Century.

While there are numerous housing programs that continue to serve millions of Americans today, we believe that the innovative and wide-ranging spirit of earlier programs should be revitalized to once again champion the American Dream in the 21st Century. Indeed, viewing these aims as a national priority, could go a long way toward alleviating the hurdles of affordability, credit availability and the barriers to new supply, while unwinding the negative associations younger generations have developed about homeownership in the wake of the recession. Ultimately, tackling the many issues ranging from the hurdles to new development and the accessibility of mortgages, to the burdens of student debt and rising childcare costs, will require a willingness to rethink the status quo and embrace new ideas that are both innovative and pragmatic. RCG will embrace these principals in our next report, as we look to highlight a series of creative policy ideas to help break down the barriers to buying a home in order to promote safe, affordable and sustainable homeownership.

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