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Multifamily Demand Forecast

- Recent declines in homeownership related to economic stress and high foreclosures in the single-family housing market have benefited the multifamily market.
- The homeownership rate will drop 1-2 percentage points if the current slow recovery continues.
- The single-family rental market, a growing and distinct market from multifamily, has expanded 16% (about 3 million units) since 2007.
- Multifamily market demand is expected to be strong through 2015 primarily due to demographic trends and shift in homeownership preference.

In this analysis we provide an outlook for the multifamily real estate market over the next several years. Analyzing demographic trends, housing supply, and economic data, we forecast future multifamily demand. Our scenario-based approach explores rental market conditions, including both single-family and multifamily[1] units, under different economic environments. While the current rental markets are strong with low vacancy rates and rising rents, we evaluate the near-term outlook for the housing market and develop a forecast of the demand for multifamily rentals.

Across the scenarios we tested, rental demand will continue to grow faster than historical averages. Our results are summarized here:

[1] Multifamily is defined as rental properties with 5 or more units in contrast to 1- to 4-unit single-family properties (including condo units).

1. Base Scenario: given assumptions consistent with economic growth slightly slower than long run averages, multifamily demand is likely to be in the range of 1.7 million net new renter households between now and 2015.
2. Accelerated Recovery Scenario: if the economy recovers more quickly than expected – together with current homeownership affordability – multifamily rental demand will be healthy but more muted because of competition from the owner market. With relative strength in the economy, there are 1.0 million new multifamily renters over the same period.
3. No Recovery Scenario: in a stalled economy, households are more likely to choose to rent despite continued high ownership affordability, a scenario nearly as favorable to the multifamily market as our base scenario. The increase in multifamily renters is 1.6 million.

In each of these scenarios, some of the renters will choose multifamily apartments, and others will choose to rent single-family homes – currently 42% of the rental market is in multifamily rentals. Considering that the long-run 30-year average increase in multifamily households is 200,000 each year, all of our scenarios are strong relative to history. Our scenarios also suggest that at the national level the increases in multifamily rental demand will be sufficient to absorb the new units coming on line over the next few years. With just over 1 million units delivered over the coming 2012-2015 period, the multifamily market will remain healthy.

Introduction

Multifamily fundamentals are generally strong. The multifamily market weakened during the recent recession, but not to the same extent as the single-family residential market. During the recession, single-family house prices fell 28% from peak to trough according to Freddie Mac House Price Index. The broader economy is still struggling to return to full strength, as evidenced by a weak labor market. These are a couple of the factors that have led to a 2.7% decline in the homeownership rate from 68.2% in 2007 to 65.5% in 2012Q2. There are signs that the single-family market is improving, but it will take more time before it is fully healthy and contributing to a growing economy.

The multifamily housing segment has directly benefited from the change in the homeownership rate. Over the past few years the shift of households from homeowners to renters increased the demand for rental units, contributing to strong multifamily market fundamentals. According to CBRE Econometric Advisors, commercial multifamily rent increased about 4.9% in 2011, while the vacancy rate dropped from over 7.3% in 2009 to the current level of 5%. Moreover, new multifamily supply remains low: only 167,000 units started construction in 2011 according to the U.S. Census Bureau. This number is far below the average volume of 260,000 units per year delivered during 2001-2010. New supply has been slow to be delivered despite strong multifamily market conditions because of issues in the broader economy and credit markets. Based on permit issuance to date and expected construction time, it is unlikely that the number of new units delivered nationwide will exceed long-run averages over the next two years. Nevertheless, market participants need to keep an eye on new supply, especially in their local markets.

The positive conditions for multifamily fundamentals described above raises questions as to how long the favorable conditions can last – with more construction on the way some industry observers are concerned about whether multifamily demand will be sufficient to keep up with growing supply. If trends swing back to homeownership, that will reduce the demand for multifamily. Also, if a significant number of single-family properties are converted to rental, it impacts how much multifamily development is needed.

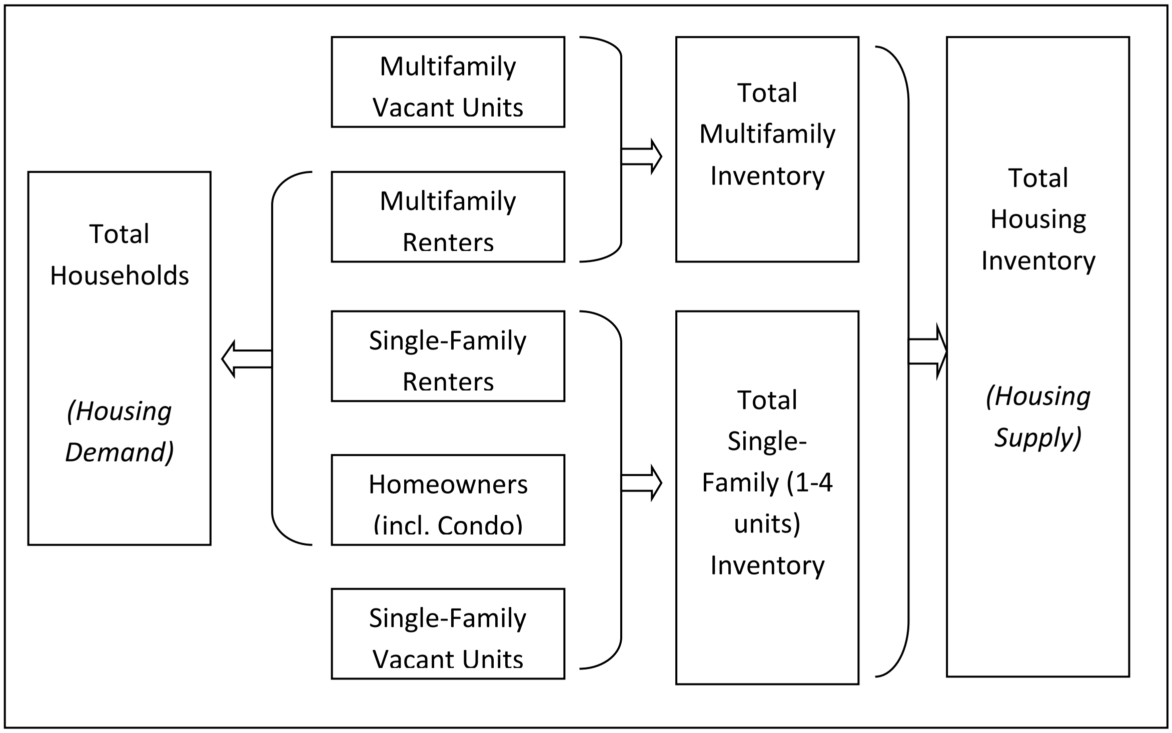
In this paper, we establish a framework to analyze and predict future multifamily demand during the 2012-2015 period. The framework uses a unique approach that considers both renters' and owners' share of the residential housing market. Our predictions are based on three different economic scenarios: (1) no economic recovery, (2) slow economic recovery, and (3) accelerated-growth economic recovery. In the three scenarios, we apply different assumptions on overall economic/demographic trends and analyze the dynamics in the housing markets.

Framework and Methodology

In our analysis we use statistical tools to analyze the balance between homeowners and renters. We are interested in households' decision to own or rent, and we also go a step further to determine the propensity to rent single-family or multifamily units. With assumptions about future demographic trends (household formation), housing inventory[2] changes, and economic trends, we forecast the number of owner-occupied housing units, renter-occupied single-family units, and multifamily renters. The following exhibit provides an illustration of our analysis and shows that renters come from two sources.

[2] We exclude all seasonal units and "held-off market" units from the housing inventory.

Exhibit 1 – Relationship between Housing Demand and Supply Data



Source: Freddie Mac

Exhibit 1 shows the match between households and housing inventory, and the split between renters and owners across the multifamily and single-family space. The exhibit shows that homeownership decisions impact the demand for space, and should be considered in the context of the inventory of units in the housing market. In the exhibit we can see that household growth that exceeds inventory growth will cause vacancy rates to fall. The additional households will be split between the owner market and the rental market. In 2011, there were about 38 million renter households and 16 million of them lived in multifamily rentals.

Historically, there has been a significant trend towards homeownership, beginning in the middle of the last century. That trend slowed slightly during the 1980s and then accelerated dramatically during the housing boom leading up to the "Great Recession." Since that time the homeownership rate has fallen by nearly 3 percentage points. This decline in the homeownership rate implies a 3 million drop in the number of owner households. The move from homeownership to renting benefits the rental market. The increase in renters then flows both to single-family rentals and multifamily rentals.

Some renters choose residential homes, instead of multifamily apartments, especially those with larger households. Meanwhile, demographic issues can also play a role in the decision of where to rent. For example, households with children or previous owners would be more interested in single-family rental units. Because of the low barrier of converting owner-occupied single-family properties into rental units and the high foreclosure inventory, growing numbers of "own-to-rent" units may have a greater impact on some multifamily markets today than in the past.

Part of our analysis is a simple counting of households and splitting them into housing types.

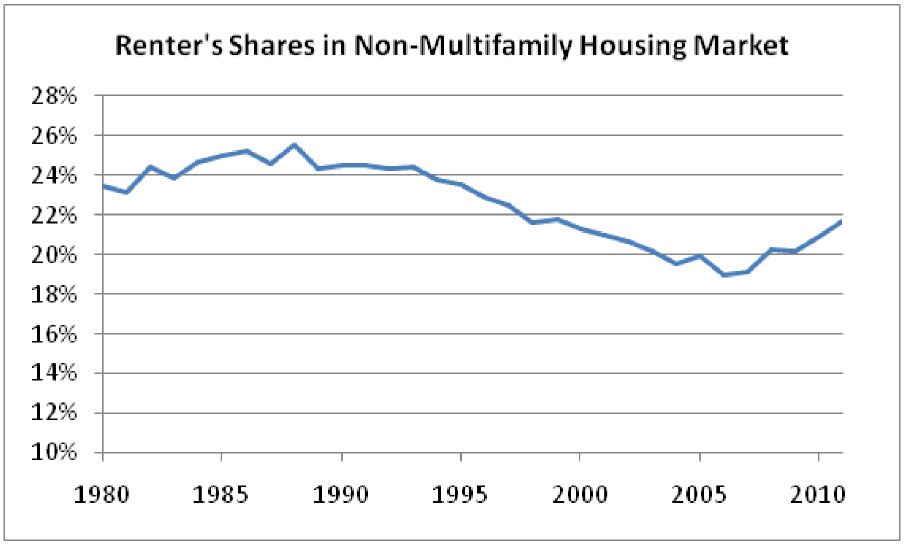
Exhibit 2 – Multifamily Demand Calculations

Homeowners	= Total single-family (1-4 units) inventory – single-family renters – single-family vacant units
Multifamily Renters	= Total households – single-family renters – homeowners
Homeownership Rate	= Homeowners / total households
Multifamily Demand Increase	= Change of multifamily renters

Source: Freddie Mac

Our analysis takes an indirect approach to understanding the multifamily rental market by investigating the rental unit share and vacant unit share of the single-family housing market. The following exhibits provide the history of two statistics that are important to understanding rental market conditions outside of multifamily buildings. By better understanding the tendency to rent in single-family properties as opposed to multifamily apartment rentals, we can better understand the demand for multifamily units. Exhibit 3 shows that renters are becoming a bigger share of the residential housing market and the share of renters in residential homes is approaching levels that were typical in the 1980s and 1990s.

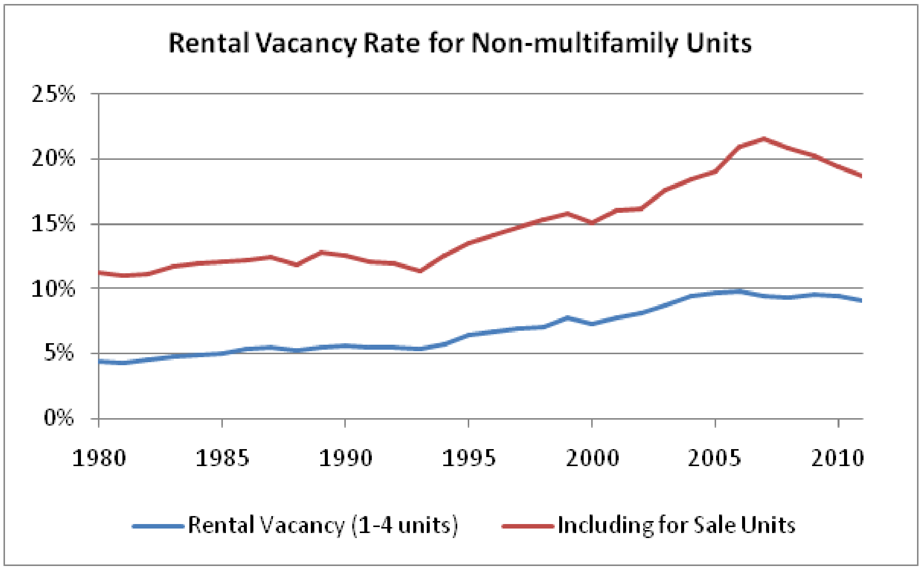
Exhibit 3 – Non-multifamily rental market



Sources: Census Bureau, Freddie Mac

Exhibit 3 indicates that renters generally make up more than 20% of the single-family space. This number dropped below 20% when the ownership market was at its peak. Since that time, the renter proportion of the residential market has been increasing towards historical norms. Exhibit 4 shows that single-family rental vacancy[3] had been trending upward for years starting in the mid-2000s.

Exhibit 4 – Rental Vacancy Rate, non-Multifamily



Source: Census Bureau, Freddie Mac

[3] The rental vacancy rate considers vacant units both for rent and for sale in our analysis.

Exhibit 4 shows that the vacancy rate began falling, especially considering units for sale, just prior to the stress in the residential market. The trend continues while the overall vacancy rate remains high. The two exhibits above suggest that since the recession many renter households are choosing to inhabit single-family homes. Recognizing that the rental market outside of the multifamily rental space is growing, we explore how much demand will remain for multifamily apartment units.

In our framework, many factors play a role in influencing multifamily demand. These inputs are new household formation rates (as influenced by demographic trends and net international migration), foreclosure activity, and macroeconomic factors such as unemployment, housing affordability, and new home construction.

Demographic Trends

A key driver of household formation and rental demand is demographic trends. U.S. population growth leads to an increase in the number of households. Reviewing data going back to World War II the U.S. population average growth rate is 1.2% annually. During the last recession, population growth dropped to its lowest rate in five decades. However, the slowdown has not caused a contraction, just a slower rate of growth. The US population still grew by 2.26 million in 2011 or 0.7% according to the U.S. Census Bureau.

International migration is a key element to overall population growth. Net migration is influenced by economic growth. Without a strong economy, immigration also slows dramatically. The table below shows that the U.S. Census Bureau predicts population growth based on international migration to range from 5.6 to 13.3 million people across three different scenarios.

Exhibit 5 – Population Forecasts

Scenario	***Population Increase*** *2011-2015*
Zero International Migration	5.6M
Constant International Migration	10.6M
High International Migration	13.3M

Source: Census Bureau

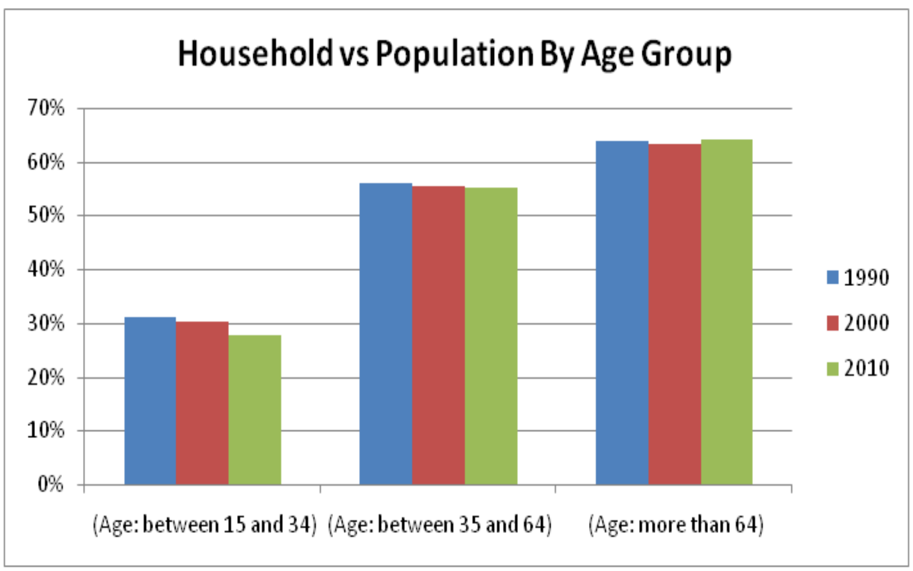
In our analysis, we leverage the U.S. Census Bureau's population forecasts. We conservatively assume no population growth from international migration for the no recovery scenario. We assume constant international migration[4] for the slow

[4] Census assumes the level of net international migration (about 975,000 each year) is held constant in the population forecasts.

recovery scenario. Lastly, we assume high international migration for the accelerated economic growth scenario. Households form the basis for housing demand, so converting population to households is our next step. Here, we use the headship rate (the household to population ratio) to forecast household formation, which will also depend on the age distribution.

The variation in population growth across different age groups is important for housing considerations. The leading baby-boomers will start their retirement in the next few years which will contribute to a large increase in the oldest age cohort; a trend that will impact future household growth. Seniors have the highest headship rate across all age groups, but the growth of this cohort is so large that it will have a large impact on both the owner and rental markets. Based on U.S. Census data, the headship rate for the 65+ age group has remained stable in the range of 64% for the past three decades. Baby boomers are expected to make housing decisions similar to those of previous generations, but any change in their propensity to own or rent could have a major impact on housing demand. Exhibit 6 shows the headship rates in the past decennial census.

Exhibit 6 – Headship Rate by Age Cohort

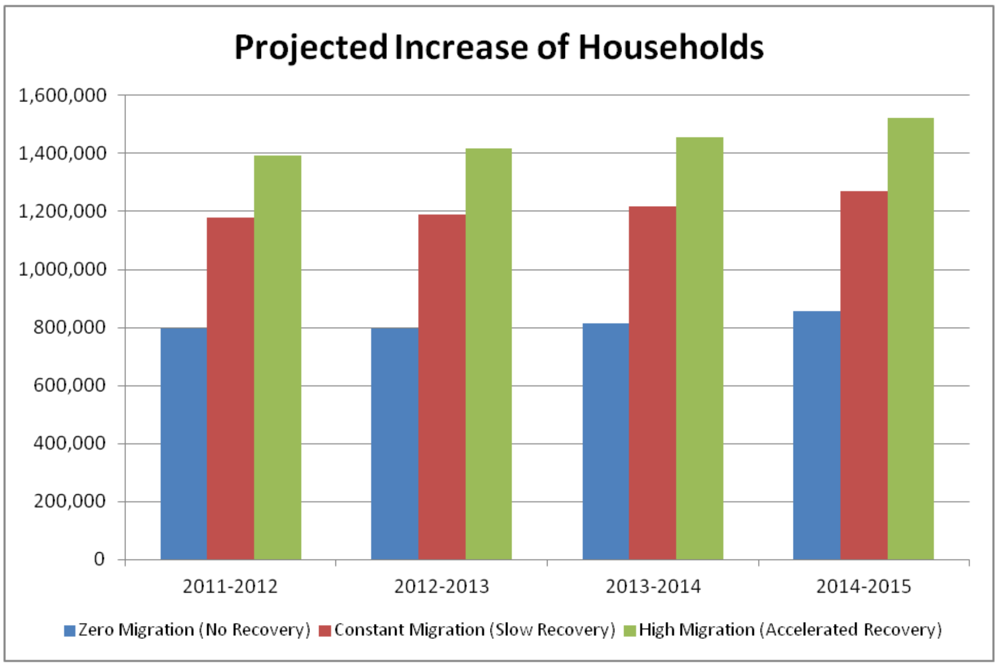


Source: Census Bureau, Freddie Mac

Compared to seniors, headship rates are lower on the other end of the age spectrum because young adults are more likely to "double up" or return to their parents' homes. These factors slowed household formation by this cohort more than usual in recent years. As this group moves into the next stages of life and housing becomes more important to them, this younger cohort will become a source of future demand.

We combine age-specific headship rates and population growth to produce household forecasts for each scenario. In our slow recovery scenario assuming constant migration in population, we expect approximately 1.2 million new households annually from 2011 to 2015. Exhibit 7 presents our forecasts under the different international migration scenarios over the same period. In the accelerated growth scenario, the economy will grow at a healthy pace and young adults, as well as new immigrants, will form more households. This will contribute substantially to overall household formation and increase the demand for rental units.

Exhibit 7 – Forecasted Household Growth



Source: Census Bureau, Freddie Mac

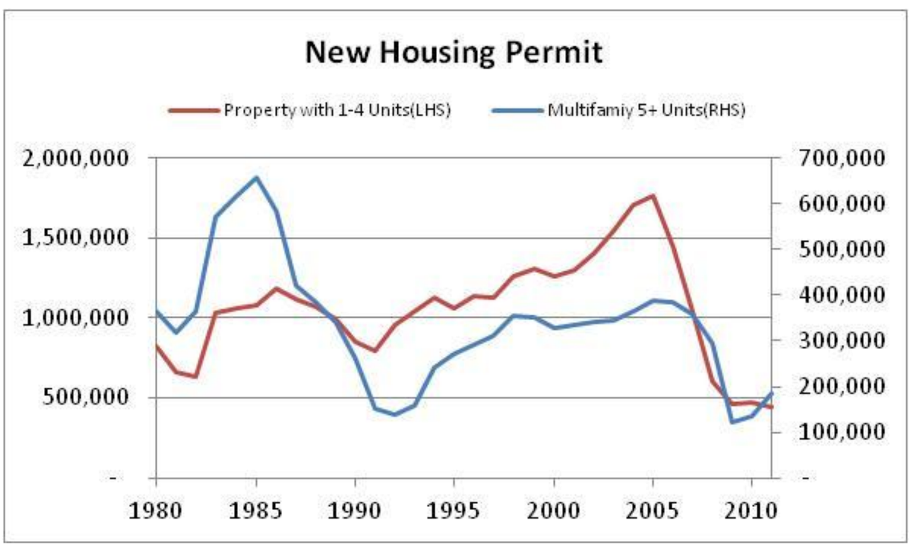
The three forecasts are fairly consistent across years of the forecast, and the graph clearly shows the powerful impact migration has on household growth. Our analysis to this point establishes forecasts for new housing demand over our forecast period. In this work we do not explicitly account for any reverse impact of pent-up household formation during the "Great Recession". As the economy moves further into a period of stability and growth, there is a potential for additional household formation across the population. To the extent there is pent-up demand, our forecasts are conservative. Now we move on to explore factors that will impact the decision to own or rent – and for the renter households, where to rent.

Housing Supply

Housing supply relative to demand determines house price and rent levels, which impact homeownership and new development. During the housing bubble, higher house prices encouraged residential development that led to an increasing housing stock. Since the economic recession that started at the end of 2007, new construction has plummeted. In 2011, single-family builders delivered 455,000 new units, which is a fraction of the 1.7 million new units delivered in 2006. With some increase in the demand for housing, the number of vacant units declined despite a high number of distressed properties for sale. About 440,000 new 1-4 unit building permits were issued in 2011, which is far below the 30-year average of 1.0 million permits.

Multifamily development also dropped dramatically during the recession, but has since become the leading source of residential construction. Based on U.S. Census Bureau data, new construction starts in the multifamily sector jumped 60% from 2010 to 2011. Even with the jump, starts are still below average over the last two decades, 260,000 units. Considering the lag between construction start and completion, delivery of new multifamily housing will remain at a relatively low level in the short term. Exhibit 8 presents multifamily permitting trends relative to that of single-family.

Exhibit 8 – New Housing Permit



Sources: Census Bureau

Exhibit 8 shows that single-family permitting boomed in the mid-2000s followed by a collapse. New supply trends for multifamily have been relatively stable since the 1990s. Even with the currently low level of new construction, multifamily investors need to consider supply risk in the intermediate term. Economic growth provides an incentive for new development, but economic improvement will also encourage some households to return to homeownership due to better employment conditions.

It will take time for single-family construction to catch up with the long run average of 1 million new units per year. For our forecasting and scenario analysis, we assume the following new single-family housing supply volumes from 2012 to 2015:

1. No recovery scenario: a constant 450,000 new single-family units.
2. Slow recovery scenario: new single-family units rising from the current level of 450,000 units to 750,000 units in 2015, with an average of 600,000 units per year from 2012 to 2015.
3. Accelerated growth scenario: new single-family units rising from the current level of 450,000 units to 1,000,000 units in 2015, with an average of 750,000 units per year from 2012 to 2015.

Foreclosure Rate

The percentage of loans in foreclosure proceedings can be used as a measure of single-family housing market conditions. Based on MBA's National Delinquency Survey, the foreclosure rate has skyrocketed from around 1% in late 2005 to a historical high of 4.6% by 2010; since then it has decreased from the peak but is still at an elevated level of 4.3%. Foreclosures increase both the supply of housing available and the demand for housing. Even with economic growth we do not expect a rapid decline of the foreclosure rate. Over the past several years, the pipeline of non-performing mortgages to be resolved has become large. In addition to various government efforts to reduce distressed sales, delayed bank repossessions, legal issues, property maintenance, and other issues continue to complicate and slow down the current foreclosure process. There are still 1.4 million foreclosures in process and an even higher number of underwater mortgages (11 million) according to the CoreLogic 2012 May Foreclosure Report. Generally, a higher foreclosure rate is an indicator of a weaker homeownership market. We expect high foreclosure volumes to continue. Based on the above analysis, we make the following assumptions for our three scenarios in terms of the foreclosure rates:

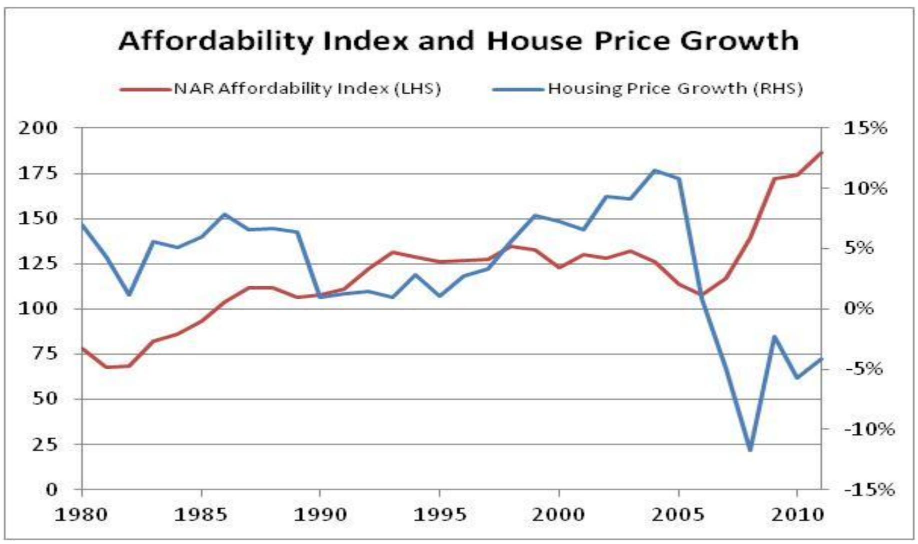
1. No recovery scenario: a 4.4% foreclosure rate (the same rate as in 2011).
2. Slow recovery scenario: a gradually declining foreclosure rate from 2012's 4.2% to 3% in 2015.
3. Accelerated growth scenario: a rapidly declining foreclosure rate from 2012's 3.75% to 1.5% in 2015.

Housing Affordability

Generally, higher owner affordability pushes up homeownership and decreases demand in the rental market. However, the relationship between economic growth and affordability (and then the multifamily market) is complicated. An improving economy could cause increased house prices, a higher inflation rate, and higher mortgage rates – all of which then lower affordability in the owner market and lead to increased rental demand. On the other hand, a deteriorating economy will likely increase affordability, but weakness in the economy can slow the decision to buy and, all else equal, increase rental demand. This is why it is important to consider this joint interaction between employment and affordability to provide a comprehensive view when analyzing the future rental market.

Exhibit 9 shows that affordability increased with falling house prices, and the impact was intensified by falling interest rates. However, the stresses of the recent recession have caused consumers to be slow to buy.

Exhibit 9–Affordability and House Price



Sources: Freddie Mac, National Association of Realtors

In our scenario analysis, we try to capture future housing affordability with assumptions regarding employment, mortgage rates, and household income:

1. No recovery scenario: the unemployment rate stays at a high level of 8.3% and housing price does not increase. In this scenario there is no change in the mortgage rate from 2012 to 2015 and there is also no household income growth.
2. Slow recovery scenario: the unemployment rate gradually declines from 8.2% to 6.5% with a mortgage rate increase of 1.7% from 2012 to 2015. The single-family housing prices growth also gradually rises to 3% in 2015 with 1% annual household income growth.

3. Accelerated growth scenario: the unemployment rate declines rapidly from 8% in 2012 to 5.5% in 2015 with a higher mortgage rate growth of 2.7% during the same period. The house price growth rises to 4% in 2015 with a constant income growth of 3% per year.

Using these various inputs, we are able to predict the employment and affordability environments.

Forecasts

We have discussed many economic and real estate market factors that play a role in determining future demand for rental housing. Our study, based on public data and statistical analysis, offers a future perspective of the rental market under various possible economic environments. The three economic scenarios have been designed to provide a broad view of potential future outcomes. In the table below, we summarize the factors considered in our analysis.

Exhibit 10 – Factors in the model

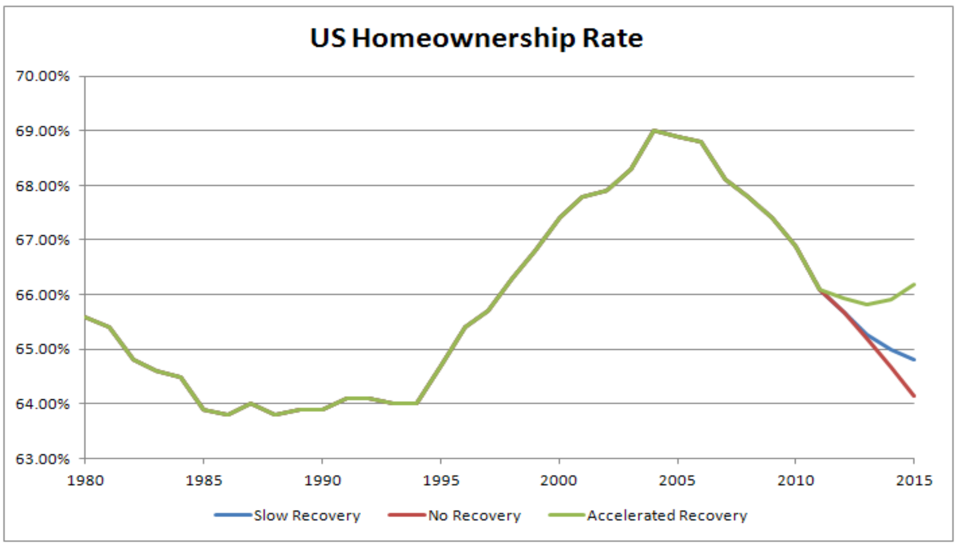
Factor	First-order relationship to MF demand	2015 Assumption (Slow Recovery)	2015 Assumption (No Recovery)	2015 Assumption (Accelerated Growth)
Unemployment	Positive	6.00	8.3	5.5
Foreclosure	Positive	3.0%	4.4%	1.5%
Increased SF supply (000's)	Negative	750	450	1000
House Price Growth	Positive	3%	0%	4%

Source: Freddie Mac

In the no recovery scenario, we simply assume the statistics considered are held constant at levels consistent with year-end 2011. For the slow recovery scenario, the housing market and broader economy stabilize by 2015, with the exception of the foreclosure rate and new single-family supply. Taking the current two million backlog of foreclosure units and lengthy legal processes into account, we conservatively assume the foreclosure rate will be 3%, while single-family new deliveries will be 750,000 units (in contrast to the historical average of 1.1 million for 1991-2011). The accelerated growth scenario is slightly more aggressive: in it the housing market and labor market conditions are comparable to the early 2000s. In this last scenario, interest rates and mortgage rates are higher to reflect a higher inflation rate often related to fast economic growth.

Our analysis describes the future of the single-family rental market and vacancy trend together with forecasts of homeownership and multifamily renters. The following charts provide a comparison of these three scenarios with reference to future homeownership rates and future increases in multifamily demand. Exhibit 11 shows that homeownership rebounds in a strong economy, but in the other two scenarios, the rate continues to fall.

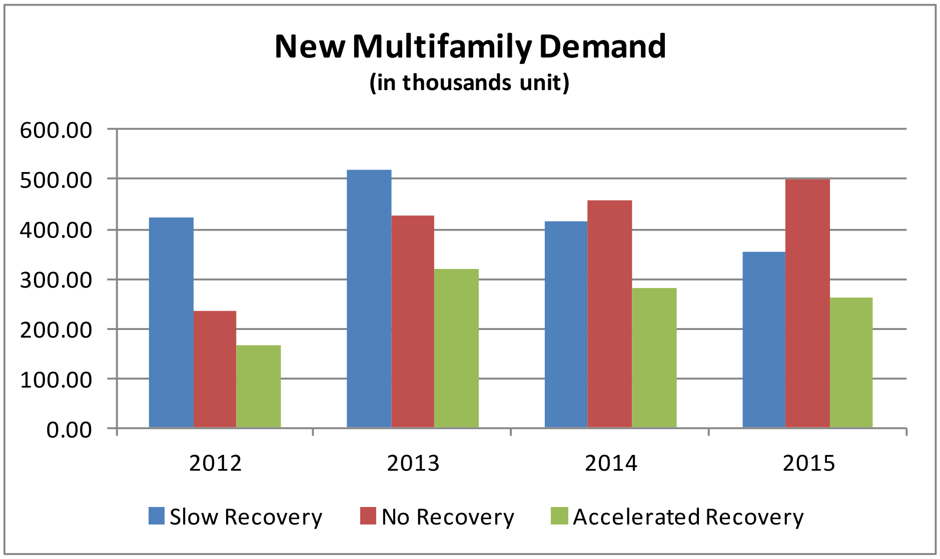
Exhibit 11–Forecast: US Homeownership Rate



Source: Freddie Mac

The swing up in the homeownership rate in the stronger economic scenario suggests that rental market demand may lag in those conditions. That is confirmed in exhibit 12 which shows that multifamily demand is strongest in the short term in the slow recovery scenario.

Exhibit 12 – Forecast: New Multifamily Demand



Source: Freddie Mac

Currently, most industry practitioners, including us, expect overall economic growth to be slower than the long-run average. Given this outlook, we forecast that the homeownership rate will continue to decline to around 65% level, which implies 3.1 million new families or more than half of total new households will move into rental units. Consequently, multifamily demand will be solid with a total of 1.7 million net new renters from 2011 to 2015. Considering that the current multifamily construction pipeline is around 200,000 this year, this scenario suggests continued strength in the multifamily market.

In the relatively pessimistic scenario, homeownership will dip another 1.4% from the current level of 65.5% (2012 Q2) to 64.1% in 2015. The multifamily market will benefit from this trend despite continued economic stress and lower new household formation. In this scenario, the single-family rental sector is relatively competitive with the multifamily sector due to low house prices and the high foreclosure rate. Total new multifamily demand will still reach 1.6 million from 2011 to 2015.

If the overall economy strengthens quickly, a more optimistic scenario, there will be a rebound in homeownership. In 2015 it will rise to the 1999-2000 level. With expected high population growth, we foresee a modest increase of on average 250,000 units annually in multifamily renters. Unless there is a major jump in multifamily new construction, the multifamily market will still be balanced. However, the single-family rental market will see a significantly smaller increase of an estimated 800,000 households compared to 4 million growth in the ownership market.

The following exhibit provides the forecast details in our analysis.

Exhibit 14–Distribution of Households Increase

Scenarios	Increase of Homeowners (2012-2015)	Increase of single-Family Renters (2012-2015)	Increase of Multifamily Renters (2012-2015)
Base Scenario	1.7M	1.4M	1.7 M
No Recovery	-0.1M	1.7M	1.6M
Accelerated Recovery	4.0M	0.8M	1.0M

Source: Freddie Mac

Summary

In this analysis, we investigated the relationship between economic trends and the rental market at the national level, assuming no housing policy changes. Based on our framework that focuses on the entire residential market, we developed an indirect approach to forecast future homeownership and new multifamily demand. The analysis considers the impact of single-family rental units on the multifamily rental demand. Under three economic scenarios: slow growth, no growth, and accelerated growth we find the multifamily market will remain solid and healthy through at least 2015.