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Will Houston’s Apartment Market Slip with Oil?

As the oil glut persists and concerns over a global economic slowdown mount, oil prices are expected to remain low for an extended period of time, likely lasting several years. The longevity of low oil prices leads to growing concern about economic stress and the effect on the multifamily rental housing market. In fact, the impacts on the multifamily market in energy-dependent areas are already being felt. Houston, having the largest energy-related employment base and the most multifamily housing stock among energy-dependent markets, is of particular concern.

In May 2015, we analyzed the potential impacts low oil prices could have on Houston’s multifamily sector.[1] At the time, the key inputs to our baseline scenario did not foresee the protracted oil price slump. The baseline scenario forecasted that the price per barrel of West Texas Intermediate (WTI) crude oil would remain around $60 through 2017. If it had, our analysis showed employment growth would have slowed slightly but sectors outside of energy would have benefited from the lower oil prices and multifamily growth would not have been significantly affected.

In the months that followed our report’s release, the price of WTI dropped more than originally predicted – to less than $30 per barrel in late January 2016, the lowest level since September 2003. The price inched up above $30 per barrel in February, ending the month around $34 per barrel. The Energy Information Administration (EIA) expects average WTI prices to remain below $40 per barrel throughout 2016 and only rise to $50 per barrel in 2017.

On the positive side, despite oil prices dropping lower than anticipated, job growth remained positive in Houston throughout 2015, albeit much lower than the past few years, while overall multifamily fundamentals continued to remain strong. Some multifamily submarkets in Houston; however, have already begun to feel the effect of the oil slump. Property transaction activities have slowed and vacancy rates are up in some submarkets. Overall, the multifamily sector is expected to slow. Prolonged low oil prices may potentially bring multifamily rent growth to a halt. Furthermore, if the U.S. economy falls into a recession, multifamily fundamentals could decline at a rate worse than in the Great Recession and the subsequent recovery would take longer. But, with Houston’s more diversified economy and a national recession unlikely in the short-term, Houston’s multifamily sector is expected to withstand the stress of low oil prices and will not see a repeat of the 1980s oil shock.

Multifamily Performance Exceeded Expectations in 2015

The pressure from low oil prices made an impact on Houston’s labor market in 2015 and began to ripple through some segments of the multifamily rental housing market, but on average, performance remained strong because of stronger-than-anticipated demand for apartment units. Actual overall market performance was better than predicted in our 2015 study: we projected a 6.2 percent vacancy rate and 4.1 percent rent growth for 2015, but the actual realized vacancy rate was 5.8 percent, while rents grew by 4.6 percent, according to REIS.

On the labor market front, Houston’s total 2015 non-farm employment expanded 0.9 percent, a quarter of the average annual growth since 2011. Employment growth throughout Texas was also impacted, expanding only 1.6 percent, half the average growth since 2011. At the national level; however, employment expanded 1.9 percent, slightly above the average annual growth since 2011.

In Houston, the manufacturing sector slowed the most in terms of employment growth, which declined 6.2 percent, followed by mining and logging, which declined 5.3 percent, shown in Exhibit 1. Many of the jobs lost in the manufacturing sector were related to oil and gas; manufacturing pipe and pipe fitting products, as well as the manufacturing of machinery and equipment for oil and gas fields.[2] The financial, transportation and warehousing,

[1] http://www.freddiemac.com/multifamily/pdf/oil_price_impacts_multifamily_housing.pdf

[2] Data source is from the Quarterly Census of Employment and Wages (QCEW). While overall job growth numbers from Exhibit 1 are as of yearend 2015, breakdown of jobs in the manufacturing sector is as of June 2015. However, this provides an idea of the specific industries in Houston that saw impacts over the past year.

and wholesale-trade sectors also declined. However, overall employment growth in Houston remained positive throughout the year due to strong growth in leisure and hospitality, education and healthcare, and retail trade – sectors that are largely tied to the overall U.S. economy. The expansion of these sectors in Houston surpassed that of the state and national level.

Exhibit 1: 2015 Year-over-Year Job Growth and Composition of Jobs for Houston, Texas and the Nation

	Houston, TX		Texas		United States	
	YoY % Change 2015	Composition as of 2015	YoY % Change 2015	Composition as of 2015	YoY % Change 2015	Composition as of 2015
Total Non-Farm	0.9%		1.6%		1.9%	
Mining & Logging	-5.3%	3.6%	-10.0%	2.4%	-13.3%	0.6%
Construction	1.7%	7.1%	1.2%	5.7%	4.1%	4.5%
Manufacturing	-6.2%	8.1%	-4.2%	7.2%	0.4%	8.6%
Whole Sale Trade	-2.2%	5.6%	1.5%	5.0%	1.2%	4.2%
Retail Trade	2.8%	10.2%	2.1%	10.9%	1.8%	11.0%
Transportation & Warehouse	-2.4%	4.4%	0.8%	4.1%	2.2%	3.8%
Information	4.4%	1.1%	2.0%	1.7%	1.8%	2.0%
Financial	-3.1%	4.8%	0.3%	6.0%	1.9%	5.7%
Professional & Business Services	0.3%	15.8%	2.9%	13.5%	3.3%	14.0%
Education & Health Services	4.7%	12.5%	4.5%	13.6%	3.0%	15.6%
Leisure & Hospitality	7.1%	10.4%	4.7%	10.7%	2.9%	10.7%
Other	-0.9%	3.5%	1.1%	3.5%	1.2%	4.0%
Government	2.7%	12.9%	1.4%	15.7%	0.4%	15.4%

Sources: U.S. Census Bureau, Freddie Mac

The impact of the slowdown in employment growth on Houston's multifamily performance was barely noticeable according to measures from REIS. Vacancy rates remained flat for the first three quarters and ticked up only 10 basis points (bps) to 5.8 percent in the fourth quarter – only 20 bps higher than the cyclical low of 5.6 percent in the second quarter 2014. Rent growth, at 4.6 percent, was slightly lower than the 4.8 percent recorded in 2014, but higher than the 4.2 percent in 2013. Compared to the market's historical average rent growth of 3.2 percent and vacancy rate of 9.3 percent,[3] 2015 can be considered a great year for the multifamily sector in Houston. However, there is evidence of early signs of stress; according to alternative measures from Axiometrics, concessions picked up in the fourth quarter, vacancy rates increased 50 bps from a year ago and rent growth measured just over 2 percent.

Intuitively, the slowdown in the job market and weakening of the energy industry was expected to have a greater impact on the multifamily sector. However, there are a few factors that offset these headwinds; strength in the overall U.S. economy, a diversified local economy, and lagging total supply compared to total demand for multifamily units. These factors explain why multifamily performance in 2015 remained nearly on par with the growth observed in the past few years.

The strengthening of the U.S. economy's effect on Houston's job market is evident from the growth in the leisure and hospitality, education and health services, and retail trade sectors shown in Exhibit 1. In fact, Houston's economy has become more diversified since the downturn of the 1980s. The diversification helped Houston weather subsequent downturns in the oil and gas production sector, such as the late 1990s when oil prices dropped over 40 percent during the period of the Russian and Asian Financial Crises. But since the U.S. economy was on a strong footing and oil prices recovered quickly, Houston's overall economy and multifamily

[3] The historical average is based on REIS data and is measured from 1981 to 2015.

sector both withstood the shock without any noticeable downturn. During that period, vacancies continued to fall and rents continued to grow. While the current stress to the economy is meaningfully more severe, if the U.S. economy can continue to grow in the coming years, then the benefits of the diversified economy will potentially cushion the blow in Houston.

Unlike most other oil and gas dependent markets, Houston's energy sector spans nearly the entire spectrum of oil and gas related industries. Houston is a hub for oil and gas production and exploration, an integral part of the industry that determines the level of production activities. There are also jobs related to arranging the financial aspect of the production, as well as engineering and service-related jobs. These job categories are typically well paid and are largely concentrated in the west side of Houston, in the vicinity of the 'Energy Corridor'.[4] Furthermore, Houston houses very extensive operations of oil refining and petrochemical manufacturing products. These are typically lower paid jobs and are concentrated in the east side of Houston. But, since oil and gas are inputs to these processes, low prices actually help these sectors, unlike the production and exploration services.

The differing job concentrations in the west and east side of Houston explain much of the market's recent multifamily trends. In previous years when the oil industry was booming, multifamily fundamentals were thriving on the west side. Most of the supply – typically Class A apartments – was delivered in this area of the market, targeting the high-paid professionals of the production and exploration sector. The collapse of oil prices has begun to show its effects there; vacancy rates increased between 2.8 to 4.8 percentage points in some of the western submarkets. In contrast, vacancy rates are declining in submarkets on the east side. The east side has a high concentration of Class B and C apartments, and had very little development of new units in recent years. Furthermore, several construction projects for refinery and petrochemical plants have spurred construction activities, which, in turn, have boosted the demand for multifamily units in those areas.

On the supply side, the development of multifamily units in Houston lagged the demand since the end of the Great Recession. The inventory of multifamily units has grown by 47,300 units, or by 9.6 percent, between 2010 and 2015, while the number of renter households has grown by 76,500, or by 17.8 percent, according to REIS. Therefore, demand outpaced supply by nearly 60 percent, pushing vacancy rates to levels much lower than the historical average. Growing demand for rental units and increases in higher paying jobs put upward pressure on rents, which have grown on average by 4.6 percent since 2012, 1.4 percentage points above the historical average.

The surge in supply in recent years was in part to fill this gap, but also in anticipation of growing demand. Based on the number of units already under construction, it is likely that the total number of units delivered in 2016 will be higher than in 2015 by as much as 25 percent. Unfortunately, most of the construction is in the west side, which has already begun to feel the pinch from declining oil prices and is likely to continue, thereby extending losses in the employment base and adding more stress on the multifamily sector in this part of the market.

However, developers are reacting to the slowing economy. For example, Camden Property Trust has announced recently that it will delay the development of a 550-unit luxury apartment development in downtown Houston; just one of many examples of delayed property development.[5] Furthermore, the number of multifamily permits in the second half of 2015 was 40 percent lower than the prior year and the lowest since 2012 for the same period. Developers slowing supply will help existing properties in this period of stress. Also, according to Real Capital Analytics (RCA), transaction volume in Houston dropped by 20 percent in 2015, the first decline since 2009, in contrast to a 33 percent increase in transaction volume at the national level.

[4] Energy Corridor' is referred to a district in Houston that houses some of the largest energy companies, such as BP America, ConocoPhillips and Shell.
[5] See http://www.bizjournals.com/houston/morning_call/2016/01/houston-developer-holds-off-on-proposed-downtown.html

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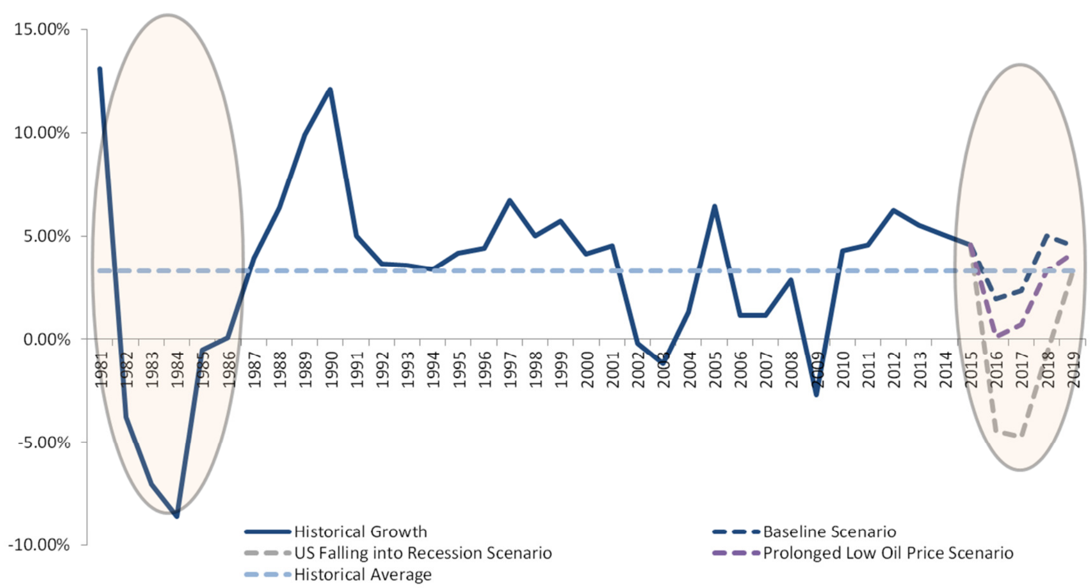
Multifamily Performance Forecasts in 2016 and 2017 under New Realities

To assess the possible outcomes of multifamily performance in Houston, we use a range of economic scenarios to forecast effective rental income growth (market average rent growth factoring in changes in vacancy rates). The underlying assumptions are based on Moody's Analytics projections. Moody's Analytics derives these projections based on its macroeconomic models, which capture a broad set of factors that influence national as well as individual markets' economic growth. However, to better account for the effects discussed in the preceding section, which are not captured in Moody's Analytics macroeconomic model, we made some adjustments to the forecast trajectories. For example, one central feature of Moody's Analytics' recessionary scenarios is the steep jump in economic growth shortly after a downturn. In our analysis, we incorporate a slower recovery for Houston in recessionary scenarios that are accompanied by low oil prices.

We consider the following scenarios: a baseline scenario, a prolonged low oil price scenario, and a scenario in which the U.S. economy trips into a recession in 2016. Historical effective rental income growth as well as our projections across these three scenarios is shown in Exhibit 2. The likelihood of each of these scenarios coming to fruition varies; the most likely outcome is the baseline scenario while there is less than a 10 percent chance that the economy will trip into a recession. According to Moody's Analytics the realization of the recessionary scenario requires a sequence of harsher economic conditions that have a low likelihood of happening: larger expected decline in the Chinese economy, along with a recession in the Eurozone. But there is a higher likelihood that multifamily growth will fall between the baseline and the prolonged low oil price projected paths.

Exhibit 2: Gross Income Growth Projected under Various Scenarios



Sources: REIS, Freddie Mac

Exhibit 3 compares growth rates and market fundamentals across the three forecasted scenarios as well as average historical growth from the Great Recession (2008 to 2009) and the oil shock of the early 1980s (1983 to 1985).

Exhibit 3: Forecasted and Historical Multifamily Performance, Completions and Employment

	Past 2 Years	Forecasted Scenarios 2016 – 2017			Historical Values	
	2014 - 2015	Baseline Scenario	Prolonged low-oil-price	Recession Scenario	Great Recession: 2008 – 2009	Oil Shock of 1980s: 1983 - 1985
Vacancy rate	5.8%	7.6%	8.5%	9.4%	11.3%	17.5%
Rent Growth	4.7%	4.2%	2.3%	-2.2%	2.0%	-4.8%
Effective Income Growth	9.6%	5.9%	0.8%	-9.2%	0.2%	-16.1%
Employment Growth	5.4%	2.4%	-0.9%	-6.9%	-0.5%	-11.5%
Multifamily Completions	34,540	24,140	22,800	22,480	28,640	79,110

Sources: U.S. Census Bureau, Freddie Mac, REIS
Note: Vacancy rates and rent growth are annual average rates; effective income growth, employment growth, and multifamily completions are cumulative value for the period.

Across all three scenarios, the level of new completions does not change meaningfully despite the deteriorating conditions. Total completions for 2016 and 2017 are projected to fall between 22,480 and 24,140 units, depending on economic conditions. The lack of any change in completions is because of the lag in new construction. Because construction can take a year or two to be completed, most of the new units that will be completed over the next two years began construction prior to 2016. Nevertheless, as discussed in the preceding section, we project some slowdown in construction activities for the two adverse scenarios. In all scenarios, however, more than 75 percent of these units are expected to be delivered in 2016, while less than 25 percent will be delivered in 2017.

The baseline scenario assumes that oil prices will gradually make their way back to $50 per barrel by 2017. The scenario projects that low oil prices will boost the general demand for consumption goods including products that consume gas (such as automobiles), which in turn will increase the demand for oil. Under this scenario, effective income growth in Houston will drop below the historical average level in 2016 and 2017, after which growth will return to more recent levels.

The prolonged low oil price scenario assumes that oil prices will stay under $35 per barrel until the end of 2018. The effects of the prolonged period of low oil prices will eventually spill into nearly all sectors of Houston's economy. Losses in high paying jobs in the energy sector will ripple through other sectors resulting in job cuts in those areas. The capital market sector also will eventually start to feel the effect which will further exacerbate the situation. The cumulative effect of all these is likely to bring multifamily growth to a halt for two years. Under this scenario, employment is projected to contract by nearly one percent. Effective income growth in 2016 is projected to stay near zero and remain below one percent in 2017. Vacancy rates are projected to increase to 8.5 percent, below the historical average which will allow rents to increase slightly, albeit at a much lower rate. We project effective income growth to return to the historical average in 2018. Overall, Houston's multifamily performance under this scenario will be similar to the performance in the Great Recession.

In the recessionary scenario, multifamily performance would suffer more than under the prolonged low oil price scenario. A recession will cause effective income growth to drop below zero, -4.5 percent in 2016 and -4.7 percent in 2017, which is more severe than what was experienced during the Great Recession. In this scenario, the recovery time will be longer, with effective income growth reaching the historical average in 2019. The substantial decline in multifamily performance is because job growth will contract by a larger amount while the delivery of new units will only decline slightly, driving vacancy rates up and rent growth down. Overall multifamily effective income growth will be much worse than in the Great Recession, but no match to what was experienced during the oil shock in the early 1980s.

Despite the severity of the Great Recession, Houston's multifamily market weathered that recession fairly well compared to most markets partially because of the strength in the energy sector. In the forecasted recessionary scenario, all industries would be impacted along with the drag from the energy sector which would lead to further deterioration of the multifamily sector. This was the case in the 1980s when the shock in oil prices coincided with an economic downturn in the overall multifamily sector, resulting in a near collapse of the banking system. The impacts during that time were more severe than our recessionary scenario. In the early 1980s, because of Houston's less diversified economy, the impact resonated into nearly all sectors the economy, resulting in a contraction of total employment nearly twice as much as what is projected under the recessionary scenario. Furthermore, multifamily units delivered during that time were more than three times higher than what is expected in the next two years. As a result, market deterioration was much worse during the oil shock of the 1980s than what is projected under the recessionary scenario.

Conclusion

The circumstances in Houston have changed since our report published in May 2015. Oil prices have dropped more than originally predicted and are expected to remain low over the next few years instead of rebounding back to the high levels seen in 2014. Consequently, the adverse scenarios have become more severe with higher expected job losses. The current environment is less favorable for Houston. Our analysis reveals that there is a chance that Houston's multifamily growth will stall in 2016 and remain low in 2017. There is a small likelihood that the United States will roll into a recession; in which case Houston's multifamily growth will turn negative and perform much worse than in the Great Recession. But, Houston's economy has become more diversified than the 1980s despite the high concentration of energy sector jobs. With its more dynamic economy, Houston is likely to weather the shock in oil prices much better than it did in the 1980s. Market participants should continue to carefully watch Houston as conditions impacting the local market are continually changing.

For more insights from the Freddie Mac Multifamily Research team, visit the Research page on FreddieMac.com/Multifamily.

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