
CENTER FOR REAL ESTATE

Quarterly Report

Volume 9, Number 1

Winter 2015

CENTER FOR REAL ESTATE Quarterly Report

A publication of

Portland State University Center for Real Estate
P.O. Box 751-SBA
Portland, Oregon 97207-0751

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SUMMARY AND EDITORIAL

ERIC FRUITS

Editor and Oregon Association of Realtors Faculty Fellow
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Oregon law requires that every six years the Metro Council evaluate the capacity of the Portland region's urban growth boundary to accommodate a 20-year forecast of housing needs and employment growth. That evaluation results in the Urban Growth Report. The last issue of the *Quarterly Report* began a conversation about the assumptions and conclusions presented in the Metro's Urban Growth Report. This month, the conversation continues with comments from Metro staff and a response by Center for Real Estate Academic Director, **Gerry Mildner**.

This issue of the *Report* welcomes **Clancy Terry**, a candidate for a Master of Real Estate Development and an RMLS Student Fellow. Clancy will provide reports on the single family and multifamily residential markets. He reports that while **residential markets** saw some pick up in the number of transactions, pricing and days on market we little changed year-over-year in most areas of the state. As with much of the country, Oregon's **multifamily market** ended a strong 2014 and is expecting an even stronger 2015.

■ **Eric Fruits, Ph.D.** is editor of the Center for Real Estate *Quarterly Report* and the Oregon Association of Realtors Faculty Fellow at Portland State University. He is president and chief economist at Economics International Corp., a Portland-based consulting firm. Any errors or omissions are the author's responsibility. Any opinions expressed are those of the author solely and do not represent the opinions of any other person or entity.

I hope you enjoy this latest issue of the Center for Real Estate *Quarterly Report* and find it useful. The *Report* is grateful to the Oregon Association of Realtors and RMLS for their continued support. ■

DENSITY AT ANY COST, REVISITED

GERARD C. S. MILDNER

Academic Director, Center for Real Estate, Portland State University

In the November issue of the *Center for Real Estate Quarterly Report*, I published an article that expressed concern about the draft Urban Growth Report that Metro was considering. The article generated a flurry of comments, including a number of widely circulated emails, several articles in the *Portland Tribune*, an opinion editorial by Andre Baugh and Katherine Schultz, the chair and vice chair of the City of Portland's Planning and Sustainability Commission. In addition, Metro staff John R. Williams (Deputy Planning Director) and Molly Vogt (Interim Research Center Director) prepared an official response, listing what they characterized as 10 "serious problems" the information and conclusions presented in my earlier article. Metro staff's response was posted on the Metro website and distributed to the Metro Council on the night of the Council vote and is included as an appendix to this article.

On Thursday, December 4, the Metro Council held a hearing and approved the draft Urban Growth Report. The UGR received comments from environmental activists and urban planners arguing in favor, and letters of concern from the Portland Home Builders, suburban mayors, and leaders of various Portland business and real estate organizations. Personally, I'm glad the Council voted to approve the Report.

■ **Gerard Mildner, Ph.D.** is an associate professor of real estate finance and the academic director of the Center for Real Estate at Portland State University. Dr. Mildner has an undergraduate degree from the University of Chicago and a Ph.D. in economics from New York University. His research is focused on land use regulation, growth managements, rent control, urban transportation and the economics of local government. Any errors or omissions are the author's responsibility. Any opinions expressed are those of the author solely and do not represent the opinions of any other person or entity.

Using its MetroScope model, the Report documents the fundamental tradeoff between minimizing the expansion of the Urban Growth Boundary and housing costs. Continuing with Metro's "Region 2040 Plan" will lead to dramatic increases in housing rents and significant losses in the wellbeing of Portland residents. The remainder of this article explains why this is the likely outcome while addressing the issues identified in the Metro staff letter.

METROSCOPE ACCOUNTS FOR HOUSING PREFERENCES.

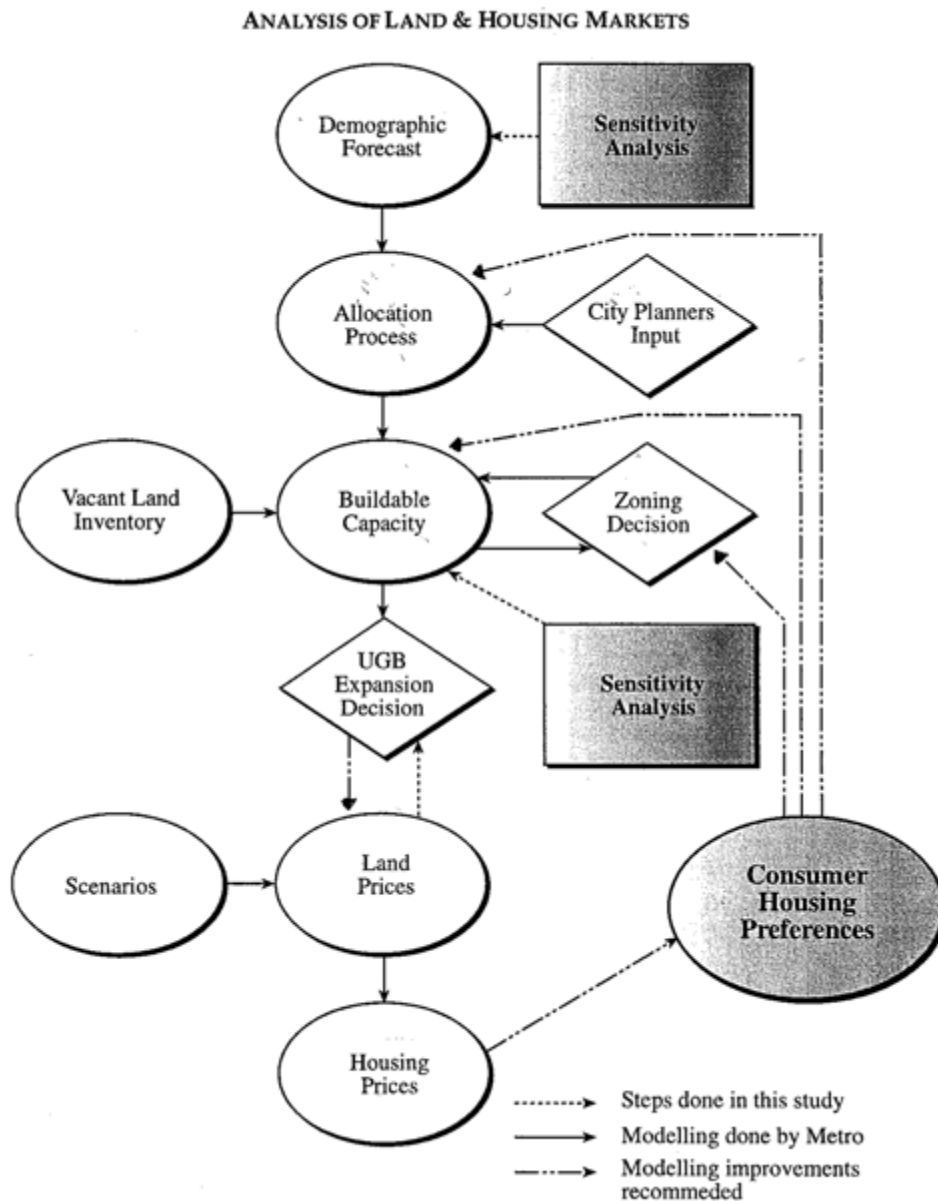
Williams and Vogt argue that MetroScope incorporates housing preferences and they cite my participation in a 2008 review panel as an endorsement of the model.¹ However, demographic projections are established at the beginning of the planning process, including how much of the regional population growth will be accommodated outside the Portland UGB, known as the capture rate. Demography is a sophisticated social science that makes projections based upon past trends and current policy. However, the Metro policy of zero expansion of the UGB is unprecedented and difficult for federal and local demographers to model. As a result, consumers and businesses in the MetroScope model don't have the freedom to pick San Francisco, Denver, Houston, or Atlanta inside the MetroScope model, much less Estacada, Salem, or Battleground, should Portland housing costs explode.

In fact, I co-authored a report in 1996 that encouraged Metro to develop a more sophisticated economic and land use planning model, which led to the development of MetroScope.² One of our points at the time was that Metro needs to apply more sensitivity analysis to its planning assumptions and to its demographic assumptions and create feedback loops between housing consumer preferences, location decisions, and buildable capacity of the region (see the diagram that report on the following page).

At the time, my co-authors and I were concerned that the increases in home prices and rents would steer more development activity towards the exurban communities in Oregon (Canby, North Plains, Newberg, McMinneville), as well as suburban Clark County, Washington. We were also concerned about the decision to focus future urban growth boundary expansion locations on Clackamas County, where housing demand was (and is) weak, rather than Washington County, where demand was (and is) much higher, would not lead to efficient outcomes. Sixteen years after the unproductive UGB expansion in Damascus, this seems like good advice not taken. And we were very much concerned whether Metro could force jurisdictions to change their zoning to raise neighborhood density.

¹ George C. Hough, Jr., Sheila A. Martin, Gerard C.S. Mildner, Risa S. Proehl, 2008. "Housing Needs Study for the Portland Metropolitan Area: Final Report," Portland State University, Institute of Portland Metropolitan Studies.

² Gerard C.S. Mildner, Kenneth J. Dueker, and Anthony M. Rufolo, 1996. "Impact of the Urban Growth Boundary on Metropolitan Housing Markets," Portland State University, Center for Urban Studies.



Since that report was written, Metro deserves credit for developing the MetroScope model, which does incorporate some consumer housing preferences into the allocation model and for introducing sensitivity analysis into the demographic forecasts. Also, Metro brought forward a referendum to limit their ability to adjust local zoning. However, it isn't fair to use the 1996 report or my participation in subsequent panels at Metro as an endorsement for all the ways in which Metro planners are utilizing the MetroScope model.

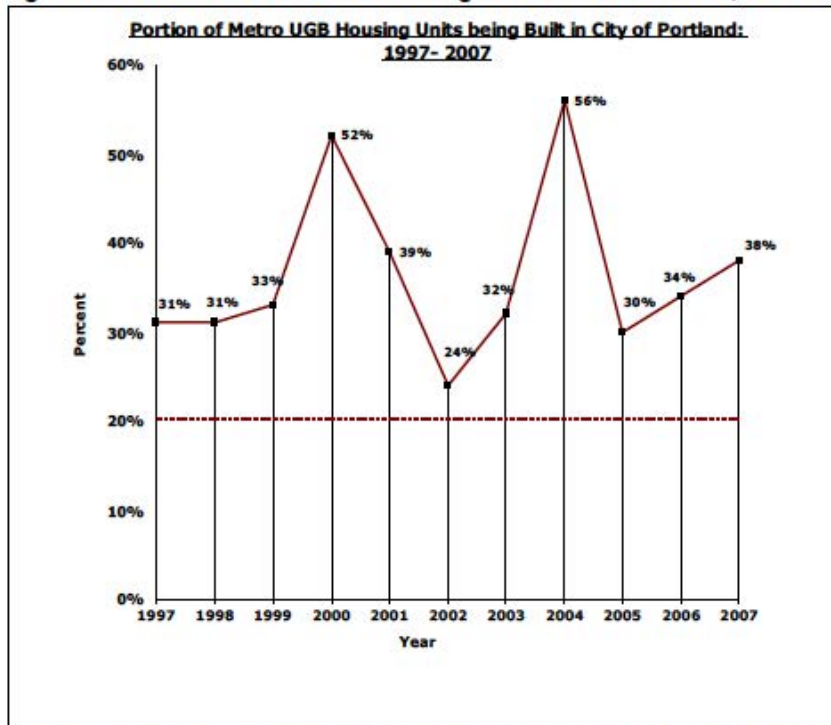
Fundamentally, Metro staff need to recognize that the MetroScope model is being overwhelmed by the huge rent and price increases that are being required to fit the anticipated population growth inside the existing UGB. Unfortunately, there is no feedback loop inside MetroScope that allows citizens to move elsewhere in the United States if the rent levels in Portland double from their current levels as predicted by the model.

METROSCOPE'S SUPPLY CONSTRAINTS ARE EXTERNALLY CHOSEN

Williams and Vogt argue that the regional housing and employment capacity is determined by the policies and judgments of local officials and not a Metro or MetroScope assumption. That is exactly the problem with how the MetroScope model is being applied.

In establishing its buildable capacity, the City of Portland has offered large number of acres of land zoned for high density apartments that are currently occupied by other land uses. If you look at Appendix 4, pages 18-21, you find that 58 percent of the housing unit capacity within the Metro region is found in the City of Portland, well beyond its historic percentage. For example, if you look at a table from p. 41 of a 2009 City of Portland study, you will find that Portland averaged about 35 percent of the housing units built in the Portland Metro UGB from 1997-2007.³

³ City of Portland, 2009. "Portland Plan: Household Demand and Supply Projections," Bureau of Planning and Sustainability.

Figure 10: Portion of Metro UGB Housing Units Built in Portland, 1997-2007

**Portland's Goal:
20%**

Source: City of Portland Permits Data & Metro Information from Construction Monitor

Moreover, 89 percent of Portland's capacity comes from redevelopment, which means the demolition of current houses and structures. This creates a significant cost to the developer since those existing structures have value and makes it less likely that the development will take place. In addition, redevelopment is facing increasing political risks due to citizen complaints about housing demolitions. Recent statements by Portland Mayor Charlie Hales suggest that Portland will create barriers to that limit the ability of property owners to demolish their properties in a redevelopment project.

Where will this high density housing be built? The planned location of future housing development capacity can be seen from p. 14 of a 2013 City of Portland study, which shows extensive development of high density housing in Downtown Portland, but also in the Lloyd District, the Pearl District, Central Eastside, and South Waterfront, as well as Interstate Avenue, the Gateway District, Rockwood, and 82nd Avenue.⁴

⁴ City of Portland, 2013. "Comprehensive Plan Update: Growth Scenarios Report," Bureau of Planning and Sustainability.

Figure 5. BLI Housing Development Capacity



Some of these areas are likely bets, but others are extremely unlikely. On the positive side, the highest rents in the region exist in Downtown Portland, the Pearl District, South Waterfront, and the Lloyd District, so anticipating demand there seems appropriate. However other areas face significant political barriers (the Central Eastside, Interstate Avenue) or very low demand (the Gateway District, Rockwood, and 82nd Avenue). As the MetroScope model churns away, looking for places to fit additional households without a UGB expansion, the demand pushes up rents through the region until these otherwise affordable locations until construction costs are covered. Because the theoretical capacity exists, this allows Metro to state in the Urban Growth Report that no expansion is needed today, while discussion of rent increases placed in an appendix.

METROSCOPE IS NOT DESIGNED FOR YEAR-ON-YEAR ANALYSIS

Williams and Vogt argue that MetroScope is a long-run model and that my citation of annual Case-Shiller index housing price increases isn't relevant. My reference to the Case-Shiller index on p. 13-14 of my November article was to show that housing prices in the Portland region have fully recovered from the housing bust and are escalating rapidly. Supply in our region is constrained and the increase in demand has not lead to vigorous housing production, but rapid price escalation. For example, according to a recent report from real estate website Zillow, Portland has the fifth-fastest growing rental market in the country, with prices increasing by 7.2 percent between January 2014 and January 2015, while nationwide, rent increased 3.3 percent.⁵

In that sense, I think the response by Williams and Vogt is beside the point. It is well known that demand in Portland's apartment market has been on fire for many

⁵ Zillow, 2015. "Rapid Rent Appreciation Reaches Beyond Housing Hot Spots to Smaller, Unexpected Markets." Press release, February 20.

years, and the decision to advocate a zero-expansion policy is pouring gasoline on that fire. Now is the exactly the time we should be adding urban reserves to the UGB so that housing costs are moderated.

METROSCOPE MODELS THE 7-COUNTY MSA, NOT METROPOLITAN PORTLAND

Williams and Vogt claim that I am creating confusion between the 7-county Portland-Vancouver Metropolitan Statistical Area and the Portland Metro UGB area. I will agree that the terminology is confusing, but I think I've been clear in my presentation. Without providing a specific objection, I cannot respond.

METROSCOPE INCLUDES UGB EXPANSIONS

In their letter, Williams and Vogt claim that, "In truth, a significant share of our designated urban reserves are assumed to be within the Metro UGB by the end of the planning period." This statement by Williams and Vogt is misleading. The computer runs of MetroScope test how much employment and residential capacity exists within the existing UGB. Page 26 of the Urban Growth Report asserts that under the baseline population and employment growth forecast, the existing UGB has 800 surplus acres for commercial development, 1,400 surplus acres for industrial development, 13,100 surplus acres for single-family development, and 9,600 surplus acres for multi-family development. If that forecast is accepted, no expansion in 2016 is warranted.

In the next 20 years of the planning horizon, the MetroScope model brings additional capacity from urban reserves into the UGB but at dates very far into the future. See the following table from the Urban Growth Report:

Table 4: Prospective UGB expansion modeling assumptions

| Code | Year Available | SF DU | MF DU | Total DU | COM acres | IND acres |
|--------|----------------|-------|-------|----------|-----------|-----------|
| 1C | 2040 | 2,815 | 4,443 | 7,258 | 28 | 0 |
| 1D | 2045 | 0 | 0 | 0 | 0 | 1,159 |
| 1F | 2045 | 0 | 0 | 0 | 0 | 492 |
| 2A | 2045 | 4,064 | 6,414 | 10,478 | 40 | 0 |
| 3B | 2045 | 713 | 1,574 | 2,287 | 10 | 0 |
| 3C | 2045 | 658 | 1,454 | 2,112 | 9 | 0 |
| 3D | 2035 | 1,052 | 2,324 | 3,376 | 14 | 0 |
| 3F | 2030 | 685 | 1,514 | 2,199 | 9 | 0 |
| 3G | 2030 | 479 | 1,058 | 1,537 | 7 | 0 |
| 4A (1) | 2040 | 1,293 | 2,856 | 4,148 | 18 | 0 |
| 4A (2) | 2045 | 4,282 | 8,109 | 12,390 | 51 | 0 |
| 4B | 2040 | 343 | 759 | 1,102 | 5 | 0 |
| 4C | 2045 | 1,790 | 3,955 | 5,745 | 25 | 0 |
| 4D | 2045 | 2,863 | 6,325 | 9,188 | 39 | 0 |
| 4E | 2045 | 2,132 | 4,710 | 6,842 | 29 | 0 |
| 4F | 2045 | 694 | 1,533 | 2,227 | 10 | 0 |
| 4G | 2040 | 1,643 | 3,630 | 5,273 | 23 | 0 |
| 4H | 2035 | 949 | 1,348 | 2,298 | 8 | 0 |
| 5A | 2035 | 247 | 545 | 792 | 3 | 0 |
| 5B | 2030 | 4,405 | 6,952 | 11,357 | 43 | 0 |
| 5D | 2035 | 1,223 | 1,929 | 3,152 | 12 | 0 |
| 5F | 2035 | 0 | 0 | 0 | 0 | 257 |
| 5G | 2035 | 403 | 890 | 1,292 | 6 | 0 |
| 5H | 2030 | 239 | 340 | 579 | 2 | 0 |
| 6A | 2035 | 2,369 | 3,368 | 5,737 | 21 | 0 |
| 6B (1) | 2035 | 1,846 | 2,913 | 4,758 | 18 | 0 |
| 6B (2) | 2035 | 798 | 1,260 | 2,059 | 8 | 0 |
| 6B (3) | 2045 | 804 | 1,269 | 2,073 | 8 | 0 |
| 6C (1) | 2030 | 694 | 1,314 | 2,008 | 8 | 0 |
| 6C (2) | 2035 | 433 | 820 | 1,254 | 5 | 0 |
| 6C (3) | 2045 | 429 | 813 | 1,243 | 5 | 0 |
| 6D (1) | 2035 | 445 | 702 | 1,147 | 4 | 0 |
| 6D (2) | 2045 | 815 | 1,543 | 2,358 | 10 | 0 |
| 7A (1) | 2040 | 309 | 585 | 895 | 4 | 0 |
| 7A (2) | 2045 | 456 | 864 | 1,321 | 5 | 0 |
| 8A | 2030 | 206 | 0 | 206 | 0 | 3 |
| 8C | 2035 | 663 | 1,046 | 1,709 | 7 | 0 |

| Code | Year Available | SF DU | MF DU | Total DU | COM acres | IND acres |
|------|----------------|---------------|---------------|----------------|------------|--------------|
| 8F | 2035 | 1,453 | 2,742 | 4,195 | 17 | 0 |
| | | | | | | |
| | Total | 44,692 | 81,900 | 126,592 | 511 | 1,911 |
| | | | | | | |
| | 2030 | 6,708 | 11,177 | 17,885 | 70 | 3 |
| | 2035 | 11,881 | 19,888 | 31,769 | 124 | 257 |
| | 2040 | 6,403 | 12,273 | 18,676 | 77 | 0 |
| | 2045 | 19,700 | 38,562 | 58,262 | 240 | 1,651 |

As you look at the table of urban reserve areas (labeled “codes”), you find that only 17,885 units of housing capacity are added into the Urban Growth Boundary between 2015 and 2035. Compared to the overall increase in housing unit capacity of 392,685 dwelling units (Appendix 4, page 40), that increase in capacity represents only 4.6 percent of UGB expansion capacity, which implies that 95.4 percent of the future dwelling unit capacity comes from existing UGB capacity. Hence, calling this modeling run a “zero expansion” scenario is either a minor error, a rounding error, or an approximation.

Part of the reason for the disconnect between my analysis and the Williams and Vogt letter is that Metro staff claims that all of the Urban Reserves are included in the UGB in 2015-2035. However, Metro applies a 10-year delay period between when land is included inside the UGB and when “urban level” densities can be achieved, ostensibly to issues of zoning, governance, and lack of infrastructure. That delay period may be realistic, but it’s an argument in favor of acting now to expand the UGB.

In that sense, it’s important to realize that we are harvesting today the UGB expansions that were decided decades ago. Keeping in mind that we have about 240,000 acres inside the UGB, these are the past expansions over 1,000 acres

- 3,500 acres in 1998 (Pleasant Valley)
- 21,538 acres in 1999 (Damascus)
- 1,956 acres in 2004
- 1,958 acres in 2011

As a result, given the political dysfunction in Damascus today and the miniscule expansion in 2004 and 2011, we will have very little large suburban developments happening in the Portland region for a long time. And we won’t have any until 2025, unless we act today.

In their letter, Williams and Vogt claim that a “significant share of our designated urban reserves are assumed to be within the Portland UGB at the end of the planning period.” Whether 4.6 percent of dwelling unit capacity comprises a “significant share” assumes you think adding land to the UGB without the local government being willing and able to facilitate development is helpful. The biggest chunks of land for housing being added to the UGB in the modeling run are in Damascus (codes 1D, 1F, and 2A) and the Stafford Triangle (codes 4A, 4B, 4C, and 4D), both in the latest possible years, both with local governments uninterested in their development.

Metro further assumes that the expansion areas deliver housing unit capacity at 15 units per acre (Appendix 11, page 13). This assumption is particularly aggressive given that most inner Portland single family neighborhoods have been developed at about 8 units per acre, and one would expect lower cost suburban land to be built at lower densities. Part of that difference is explained by Metro’s assumption that two-thirds of the dwelling unit capacity in the UGB expansion areas will be developed as multi-family. However my data on apartment rent per square foot (November *Quarterly* article, p. 6-7) suggests that these expansion areas barely have sufficient rent levels to justify garden apartments. Of course, most of this capacity will come online in 2030-35 and (according to the Urban Growth Report) Portland area rent levels will be twice as high as they are today in the model.

ANY UGB EXPANSION REQUIRES PUBLIC SUBSIDY

Williams and Vogt argue that I highlight the public subsidy costs of high density development and ignore the infrastructure costs of suburban single family development. I agree that all development requires some public participation, however there are established revenue sources for the road construction and sewer extension. What is often missing is the political will of county jurisdictions and Metro to raise the gasoline taxes and impact fees to fund those extensions. Gas taxes and system development charges are user fees where the driver or the developer who pays them receives some dedicated capital construction or improvement.

By contrast, the two areas of subsidy that I highlighted in my November article—subsidized housing and light rail transit—must rely upon urban renewal funds, payroll taxes, and other general fund revenue to be built and operated. And by diverting general fund revenue, we take money from schools, police, fire, and other essential functions of government. Moreover, the dependence upon subsidized housing is caused directly by the decision to not expand the Urban Growth Boundary and keep rents at unaffordable levels.

WAGES SHOULD BE INFLATED, NOT JUST PRICES

Williams and Vogt argue that I inflate rents and prices, but I fail to inflate incomes. Of course, that’s true since I made no statement about incomes. What I think they are complaining about is my characterization that apartments rents will more than double in 20 years under the planning scenario that I’ve modeled. In fact, all

the dollar numbers in the Urban Growth Report are shown in inflation-adjusted values, which is a standard reporting method for academic researchers.

As a result, the reader is left with the antiseptic conclusion in Table 4 in Appendix 5 that average rents will grow by 37 percent in 20 years and average prices will rise by 52 percent in 20 years. To the typical citizen who is not well versed in economics, that sounds like a manageable rate of increase. Rent increases of 37 percent in 20 years sounds like 2 percent per year, which is normal for inflation these days. Now, if they are told that rents will increase by 37 percent and incomes will stay the same, they will look at these numbers differently. Better yet, if they are told that rents will rise 124 percent in 20 years, they can make their own conclusions about whether their own incomes will keep pace. In practice, people make their economic and political decisions in nominal dollars, and not in some kind of economic planning superworld where they factor in inflation rates. In any case, all my statements were very clear about the inflation assumption I used. Metro staff are welcome to assume income increases greater than my 2.5 percent inflation assumption, but they have no economic levers to make such a rosy scenario happen. My point is that when rents rise in inflation-adjusted terms, housing will become less affordable.

CITIZENS PREFER CENTRAL CITY LOCATIONS

Williams and Vogt argue that recent data suggests that young people prefer central city locations, not suburban housing. However, Metro's own Residential Preference Survey, which is now Appendix 14 of the Urban Growth Report, suggests that most current renters aspire to homeownership, including a backyard, not apartment living. It is true that we've seen a lot of apartment development in the City of Portland in 2007-2015, but that's due to several unique circumstances: the Great Recession and the loss of jobs, the decline in house prices and net worth of households, the delay in marriage among young people, and the lack of land for single family home construction.

The first three events are temporary. We have seen a steady expansion of jobs over the last five year. We've seen housing prices and household net worth recover. And biology dictates that young Millennials who delayed marriage will marry and have children. Central cities are attractive when young people are single and looking to meet others of similar age, but they are expensive plans to raise a family. The fourth factor—the lack of single-family home construction—is partly a result of Metro's current zero-expansion policy for the Urban Growth Boundary and partly the challenge of obtaining finance for single family home construction. During the Great Recession, Federal policy caused a tightening of credit standards for homebuyers, while credit was made easier for apartment construction.

SINGLE-FAMILY PRODUCTION WILL REQUIRE LARGE UGB EXPANSION

Williams and Vogt argue that, "Ensuring that half the region's new housing is single-family would require the development of at least 4,000 acres every six years—

that's an area three-quarters the size of Forest Park." This is a scare tactic, which suggests that I would like to see Forest Park converted to single-family housing.

In practice, 4,000 acres is less than 2 percent of the land currently within the Urban Growth Boundary. And Metro has already identified over 8,000 acres of land adjacent to the UGB as urban reserves. Their calculation suggests that we could accommodate 12 years of development at something close to the historic split of single-family and multi-family construction using the existing urban reserves. Plus the Metro region has more land that is not designated as rural reserves, either. As a result, we can adopt a plan with less density and lower housing costs. And there's no reason to offer the hyperbole that Forest Park needs to be developed.

SELECTIVE USE OF METROSCOPE MODEL RESULTS

Finally, Williams and Vogt repeat their claim that I've served on a Metro review panel and endorsed the MetroScope model while at the same time as criticizing the model. Again, my position is that the development of MetroScope is a great achievement for Metro and that the planners at Metro need to consider whether the result make sense. The MetroScope model run—using the zero-expansion policy established by the Region 2040 Plan—suggests that apartment rents will need to double to achieve the desired density. That result seems implausible, and that reflects the weakness that MetroScope cannot adjust its demographic forecast to reflect the housing rent appreciation.

As I argued in the November article in the *Quarterly*, doubling rents in the Portland metropolitan area will make housing costs in Portland equivalent to the Bay Area, Los Angeles, and other high-cost markets in the United States. Much of the economic growth in the region is predicated on our housing costs being lower than the Bay Area. As a result, the more likely outcome from the zero-expansion policy is less economic opportunity and less population growth in the region. Ultimately, I think the Metro Council needs to recognize that an adequate land supply is needed for housing affordability and economic prosperity. ■

APPENDIX: METRO STAFF COMMENTS

The following are comments dated December 3, 2014 from Metro staff, John R. Williams (Deputy Planning Director) and Molly Vogt (Interim Research Center Director).

We believe there is broad agreement in our region about protecting our outstanding natural resources and our amazingly livable communities. Ensuring those protections is the intent behind Oregon's land use system and the goal of the work we do at Metro every day. What also is clear is that managing urban growth is a challenging, complicated endeavor. That is why Metro uses a technical tool called MetroScope to help inform decision makers about the tradeoffs involved in different policy decisions. Again, MetroScope informs policy decisions. It does not make them.

While Metro welcomes the opportunity to discuss MetroScope, our technical work and relevant policy questions, your recent critique of Metro's Urban Growth Report contains significantly misleading statements and errors.

Metro's draft Urban Growth Report has undergone extensive review for two years by more than 40 experts from the private sector, public sector and academia. We have made great efforts to provide information and clarity that could assist you in gaining an understanding and conducting an effective review of our work. We pointed out that your draft contained numerous inaccuracies and mischaracterizations. We offered to meet with you to answer your questions but you declined. Instead, you have spread misinformation via the media.

To ensure an informed policy conversation, Metro believes it is vital to address some serious problems with your work. Here are ten:

1. MetroScope is an economic forecasting model that takes into account household tenure, single-family versus multi-family, and location preferences for residential housing. This speaks to the demand side of the economic model which accounts for tastes and preferences of different types of households. Notably, during 2008, you were part of a PSU review team that found:

"MetroScope integrates the residential housing model with transportation, land use, and commercial location models. Thus, this analysis is consistent with the models and assumptions used for transportation and urban growth boundary (UGB) planning. It can therefore provide a fuller and more realistic model of housing development that incorporates the impact of household choice, development economics, and commuting preferences."

Your statement that "in the MetroScope model, housing preferences play no role, only zoning capacity," is incorrect.

2. MetroScope factors in the development currently allowed by local cities and counties based on their locally adopted zoning districts and a detailed buildable land inventory. In fact, that is the real purpose of the urban growth report, as required by state law—to assess how future growth will be accommo-

- dated under existing plans and policies. These local inputs are the residential supplies utilized in forecasting future growth trends. They are externally decided and not MetroScope “assumptions.” MetroScope is a robust equilibrium model that balances housing demand and supply. Your statements about many of the model's inputs are incorrect.
3. MetroScope operates in 5-year increments rather than Case Shiller index's annual increments. It is not designed or intended to capture exact annual variations but does produce similar trending information when used appropriately to look at the longer time periods, such as 2015 to 2035.
 4. MetroScope is a regional model for the seven-county Metropolitan Statistical Area (MSA). It models growth across the entire seven-county area, not just the Metropolitan Portland UGB as you claim. Again, your statements are incorrect. Importantly, a number of model outputs including vehicle miles traveled, housing tenure, and housing production mix will also vary across these different geographies.
 5. You assert that MetroScope does not account for any future UGB expansions between now and 2035 and that the model forces growth into the existing UGB. When we model what happens under current policies we factor in future UGB expansions within our region's already designated urban reserves. In truth, a significant share of our designated urban reserves are assumed to be within the Metro UGB by the end of the planning period.
 6. There can be no doubt that virtually all development requires some public investment. Nonetheless, your analysis asserts that costs only apply to existing plans and policies but somehow don't apply if development occurs in UGB expansion areas.
 7. Your findings are skewed because you inflate housing prices but not wages. At the same time, you fail to make any meaningful or documented connection among the inflation you allege will occur and the relative supply of land.
 8. You ignore the fact that people are voting with their feet. The popularity and redevelopment of close-in neighborhoods, main streets, and town centers is based on the fact that many people want to live in communities where they can walk, use transit or bike if they want. Metro's work is directed at giving people more choices to live in these kinds of communities. That's the best way to ensure affordability for everyone.
 9. You ignore that your preference for unregulated growth and development has high costs, and that the public and elected officials have consciously and repeatedly chosen the path we are on for a wide variety of social, environmental and economic reasons. Ensuring half the region's new housing is single-family would require development of at least 4,000 acres every six years—that's an area three-quarters the size of Forest Park. And yet, you offer no

realistic path to paying for the public structures and systems required to support that style of growth while decrying the costs for the alternative.

10. Finally, you dismiss the MetroScope model, but you make selective use of its data on several occasions where the data support your conclusions. The MetroScope model has been peer reviewed, including a 2008 review by a team at PSU that included you.

We stand by our work and welcome a reasonable and factual debate about what's best for our growing region. Unfortunately, your paper moves us away from that debate and perpetuates misunderstanding about MetroScope, the Urban Growth Report and the very real challenges of planning for and managing urban growth. Just as we offered before, we remain willing to meet to discuss these important matters. ■

THE STATE OF THE ECONOMY

CARLY HARRISON

Portland State University

Following a slow start to the year, the United States economy continued to improve as was expected. Gross domestic product has increased slightly, unemployment has continued to fall, interest rates remain low, and the price of oil has dropped significantly. Employment rose and even compensation increased slightly, while inflation continued to fall, largely attributed to the drop in energy prices. Overall, with the exception of the price of oil, the economy is behaving more or less in line with expectations.

THE WORLD ECONOMY

The International Monetary Fund's (IMF) most recent update reports that the global economy continues to grow, with moderate growth expectations of 3.5 and 3.7 percent for 2015 and 2016. While the growth should receive a boost by the drop in oil prices, other negative factors such as investment weakness in advanced and emerging economies offsets some of the advantage, with several developments influencing the outlook.

First of all, in looking at the significant decline in oil prices, a 55 percent drop since September, the IMF reports the cause being unexpected demand weakness in

■ Carly Harrison is a Master of Real Estate Development candidate and has been awarded the Center for Real Estate Fellowship. Any errors or omissions are the author's responsibility. Any opinions expressed are those of the author solely and do not represent the opinions of any other person or entity.

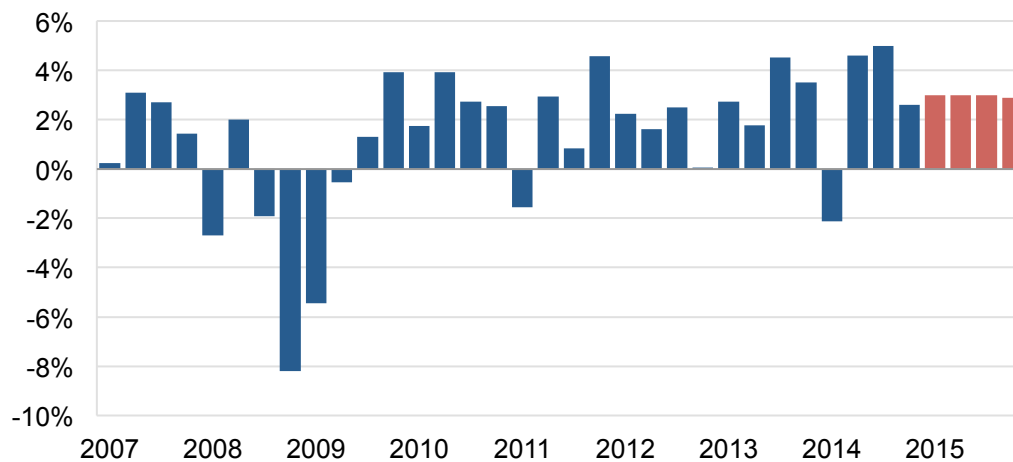
major economies, and an over-supply of production that will take time to correct. Secondly, there was a stronger recovery in the United States than expected, while all other major economies fell short in their economic performance, most likely due to diminished expectations regarding medium-term growth prospects. In looking at currencies, the U.S. dollar has strengthened 6 percent, while the euro and the yen have depreciated 2 and 8 percent respectively, showing the growth discrepancy across major economies. And lastly, interest rates and risk spreads have risen in many emerging market economies.

In general, there is increased uncertainty regarding the influence of oil prices on projected growth, and could either help or hinder growth, depending on how fast supply responds to the drop in demand. Additionally, if there are further declines in inflation, monetary policy must accommodate through other means to prevent real interest rates from rising.

THE UNITED STATES ECONOMY

The end of 2014 brought a GDP of 2.6 percent (Figure 1), lower than the previous 2 quarters, but not far outside of expectation. As noted by the IMF, the United States is the only major economy for which growth projections have been raised, and Wall Street Journal's survey of economists forecasts GDP growth of 3 percent across the four quarters of 2015.

Figure 1: Gross Domestic Product, United States, Annualized Percent Change, 2007–2015

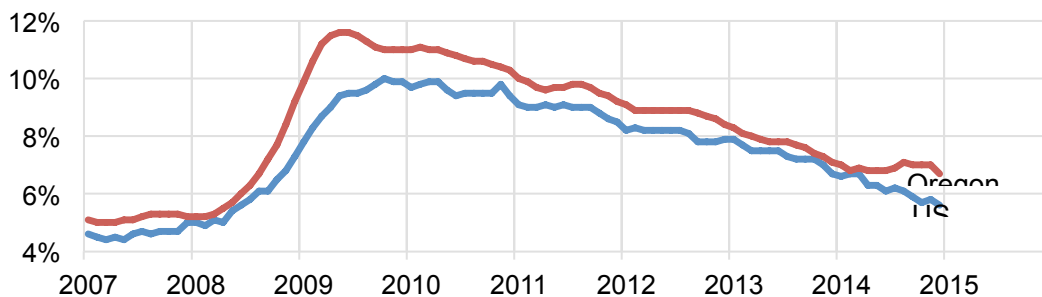


Source: Bureau of Economic Analysis and Wall Street Journal Economic Forecasting Survey

Unemployment went to a new low of 5.6 percent since the middle of 2008 (

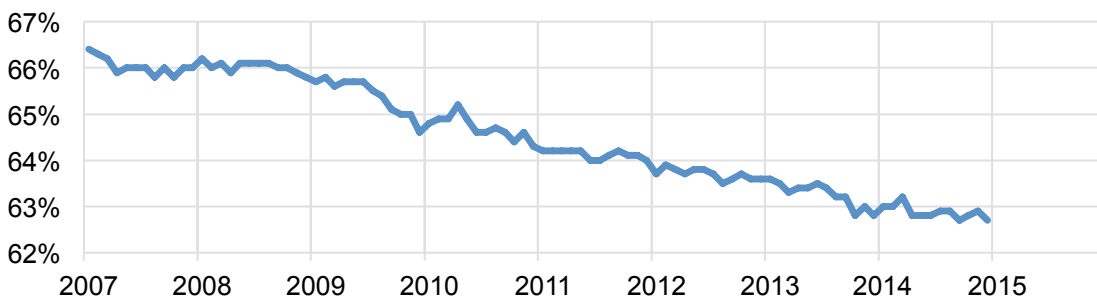
Figure 2), and is expected to remain low provided there are no major changes in the labor force participation rate, which has continued to remain relatively low (Figure 3). According to the Bureau of Labor Statistics, nonfarm payroll employment rose by 252,000 jobs in December, with most job gains in professional and business services, construction, food services and drinking places, health care and manufacturing. Along with the increase in jobs, compensation rose 2.2 percent over the year, with benefits rising 2.6 percent.

Figure 2: Unemployment Rate, Oregon and United States, 2007-2015



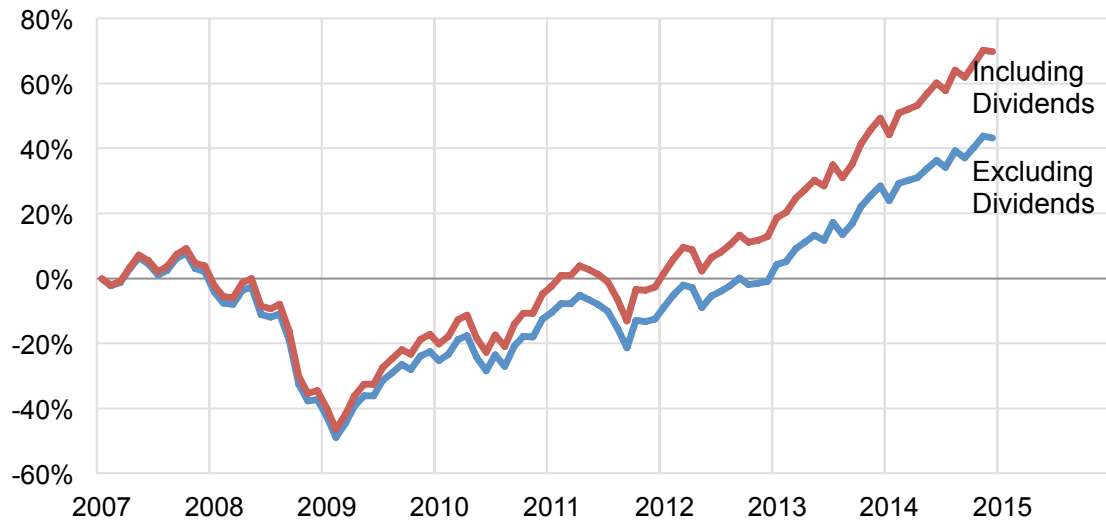
Source: Bureau of Labor Statistics

Figure 3: Labor Force Participation Rate, United States



Source: Bureau of Labor Statistics

Inflation declined 0.4 percent in December, yielding a total 12 month rate of 0.8 percent since the previous December. This is markedly lower than November's 1.3 percent change over its previous 12 months. The Bureau of Labor Statistics further notes that the energy index contributes a 10.6 percent drop over the 12 months, while the food index has increased by 3.4 percent. Kathleen Madigan writes in the Washington Street Journal that because of the cheaper oil, several economists say that inflation may turn to deflation temporarily, but this should be short-lived.

Figure 4: Standard & Poor's 500 Index, 2007–2014

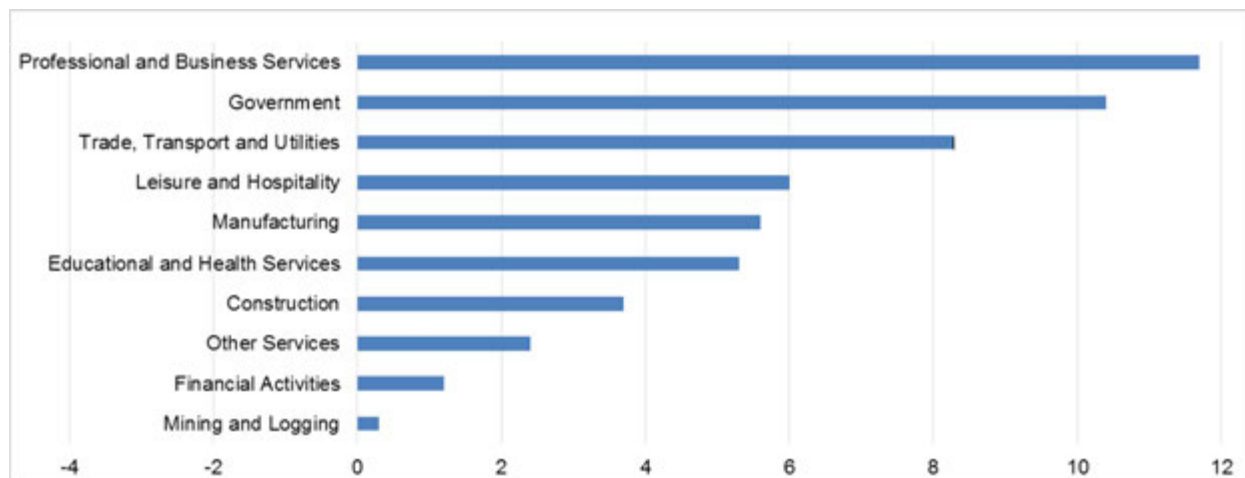
Source: S&P Dow Jones Indices, McGraw Hill Financial

The U.S. Stock Market finished strong in 2014 (Figure 4), with a gain of total annual gain of 11 percent for the S&P 500 Index. The best performing sectors were utilities, health care and technology, and with the amount of cash available to companies, there were also significant mergers and acquisitions. Thomson Reuters reports that the 2014 global M&A was up to \$3.1 trillion, 52 percent higher than the previous year.

OREGON AND THE PORTLAND AREA

The state of Oregon has continued to show signs of growth, with most major economies experiencing above average growth in November. Figure 5 shows that most new jobs are in professional and business services, government, and trade, transport and utilities, with a total December increase in 8,200 jobs. The Oregon Office of Economic Analysis notes that the state's job growth advantage has returned when comparing year-over-year change to the national job growth. However, the state's economists indicate that it is the high-wage and low-wage jobs that have seen the most growth from 2010-2013, with a lack of growth in middle-wage jobs. Oregon's unemployment rate also decreased to 6.7 percent as of December, after hovering between 6.8 and 7.0 throughout 2014.

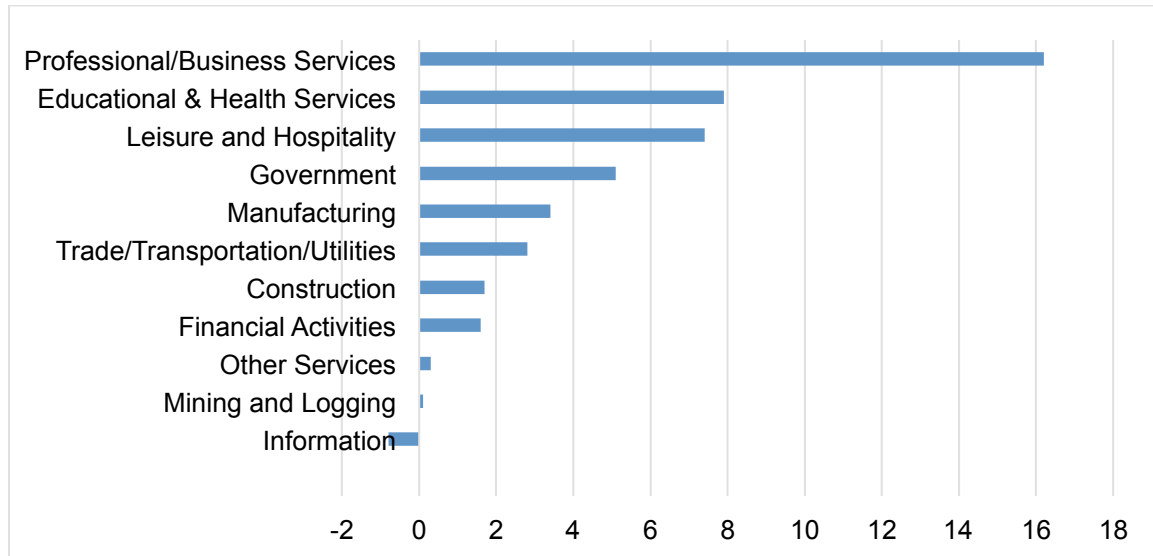
Figure 5: Oregon Job Growth over last 12 months, Nonfarm Payroll Employment, Seasonally Adjusted (1,000's)



Source: Oregon Employment Department

As of November, the Portland-Vancouver-Hillsboro MSA showed 12-month job growth of 2.7 percent, 60 basis points higher than the national growth rate. The sectors with the highest growth rate in the last 12 months (Figure 6) are Professional and Business Services (+16,200), Educational & Health Services (+7,900), and Leisure and Hospitality (+7,400), with Government and Manufacturing falling close behind (+5,100 and +3,400 jobs respectively).

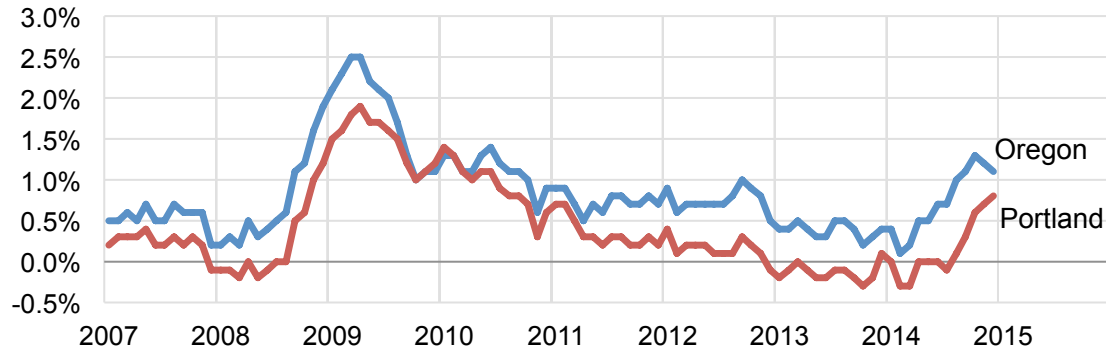
Figure 6: Portland-Vancouver-Hillsboro MSA, Nonfarm Payroll Employment Growth in Last Year, Not Seasonally Adjusted (1,000's)



Source: Oregon Employment Department

Portland's unemployment rate has continued to increase slightly over the fourth quarter, finishing 2014 at 6.4 percent, similar to the first and second quarter to 2014. As in-migration remains strong, this upward pressure is not surprising, although as Figure 7 illustrates, the unemployment rate is still below the state, but above the national average.

Figure 7: Unemployment Rate, Oregon and Portland Metropolitan Area vs. United States



Source: Bureau of Labor Statistics and Oregon Employment Department

Unemployment is lowest in Tualatin (5.0 percent) and highest in Forest Grove (6.5 percent) with a growth in labor force in Washington and Multnomah Counties of 3.3 and 3.2 percent respectively.

CONCLUSION

Overall, the national and local economy continues to grow at a steady, albeit slightly lower rate. GDP is expected to increase consistently over the coming year, interest rates should rise marginally, and there should be steady unemployment. ■

RESIDENTIAL MARKET ANALYSIS

CLANCY TERRY

RMLS Student Fellow

Master of Real Estate Development Candidate

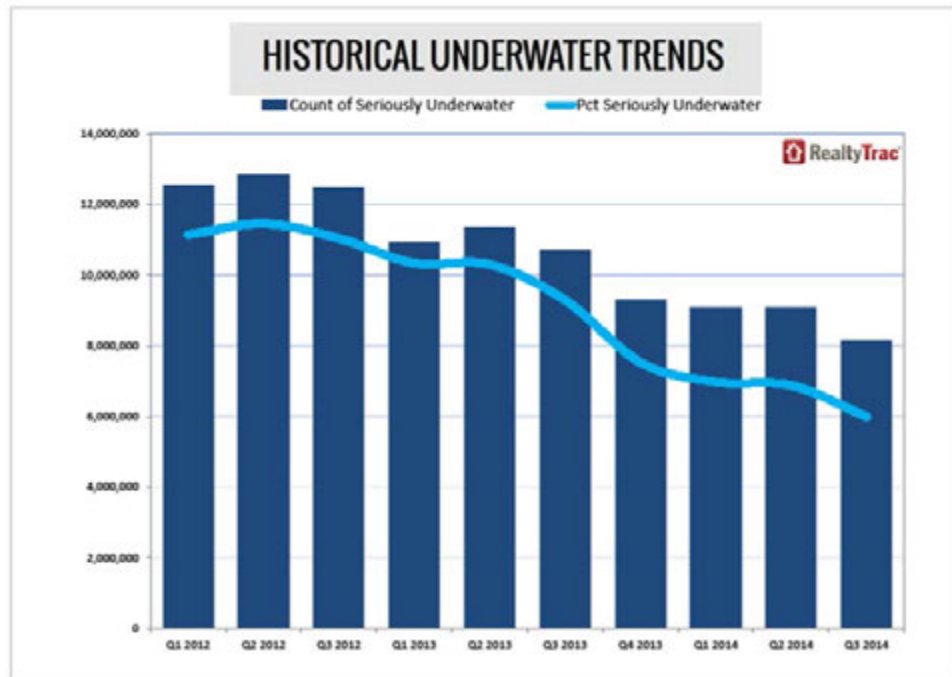
As the U.S. economy continued its recovery from recession during the closing months of 2014, a number of noteworthy trends played out in housing markets. Several market measures declined in the fourth quarter both nationally and in Oregon, but this is typical as temperatures decline at the end of each calendar year.

RealtyTrac's reports that during 2014, 49.5 million residential homes were mortgaged—a portfolio whose aggregate negative equity totaled an estimated \$1.4 trillion for the year. While this number has been falling since its peak in the second quarter of 2012, the longer it persists on household balance sheets, the greater concern becomes over default risk. RealtyTrac indicates this is because “seriously underwater homeowners are more than 2.5 times more likely to fall into foreclosure than the overall population of homeowners with a mortgage, and they are nearly 9 times more likely to fall into foreclosure than homeowners who have at least 50 percent equity in their homes, RealtyTrac data shows.”

RealtyTrac pegs the population of seriously underwater borrowers—those with a loan-to-value of 125 percent or more—at approximately 8.1 million, or 15 percent of total mortgage holders. Additionally, another 8.4 million borrowers are reported to

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have “resurfacing equity,” with LTV rates between 90 percent and 110 percent. In contrast, a healthy housing market, has about 5 percent of homeowners underwater.



RealtyTrac agrees with a recent publication from UC Berkeley’s Haas Institute for a Fair and Inclusive Society that recent appreciation in home prices is mitigating negative equity to only a limited extent. The federal HAMP and HARP distressed borrower programs also had anemic overall impacts on total negative equity, and academic economists Atif Mian and Amir Sufi argue a principal reduction strategy would more effectively make inroads within this upside-down segment.

Axiometrics reports that U.S. housing starts totaled 1,009,000 units at a seasonally adjusted annual rate in October 2014, a rise of 7.8 percent over the same month last year. Single family saw a 15.4 percent increase over last year.

Berlinberg Properties reports 4.93 million existing home sales in the U.S. in November 2014, a 2.3 percent increase over the same time last year. The median home price came in at \$205,300 in November 2014, approximately 5 percent higher than November 2013. Berlinberg says, “In 2014, we’ve seen housing prices return to sustainable growth rates in the 4-6% range. This pattern will likely continue in 2015, with some potential for slightly lower year-over-year gains, depending on how inventory and new home construction develop next year.” In terms of inventory, 2.09 million homes were on the market in November 2014, a 2 percent year-over-year increase representing 5.1 months of supply. Regarding the 1.1 percent drop in median price, Berlinberg suggests this “may be due in part to some uncertainty in equity markets as oil prices continued to fall in November. Anticipation of a continued drop in mortgage rates may also have played a role, as rates have

continued to decline despite already having dipped below the previous year's rates." He presents Freddie Mac's snapshot of mortgage interest rates as follows, suggesting concerns over global growth and other global events may be exerting downward pressure:

| <u>Product</u> | <u>Rate</u> |
|--------------------|-------------|
| 30-year fixed | 3.80% |
| 15-year fixed | 3.09% |
| 5/1 ARM | 2.95% |
| Historical Average | 8.90% |

RealtyTrac reports that the share of existing home buyers purchasing their first home fell to 33 percent in 2014 from 38 percent in 2013. The National Association of Realtors indicates that this is the lowest since 1987. RealtyTrac also reports the following:

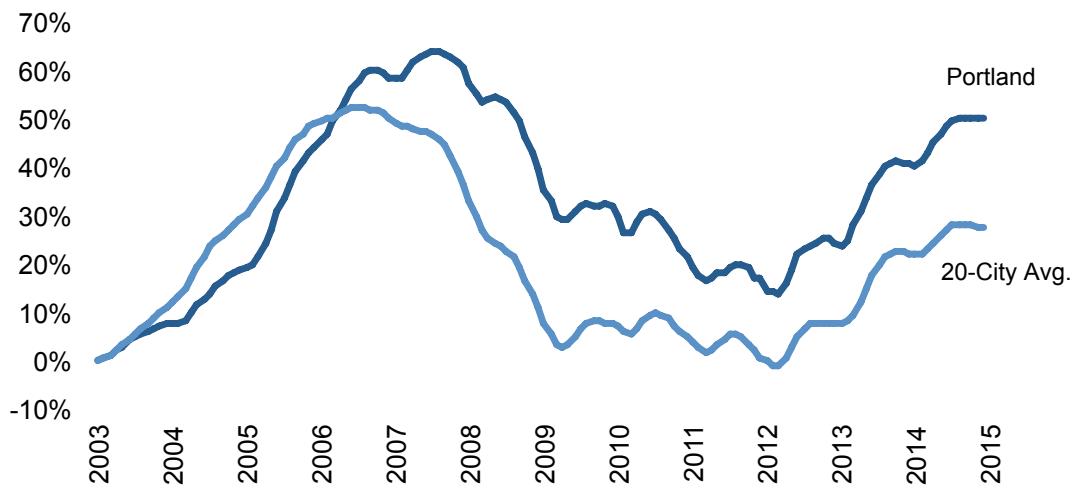
- "Mortgage originations hit a 13-year low in November, with 2014 on pace to be the weakest year for new loans since 2001, according to the Federal Reserve Bank of New York. According to the Federal Reserve report, mortgage lending has averaged \$357 billion per quarter over the prior quarters, the lowest since 2001. Unless the fourth quarter is unusually strong—and housing typically slows in the winter—that will leave 2014 as the worst year for mortgage volume since 2000. Most of the decline has been driven by the falloff in refinancing. But the Fed data doesn't separate refinancing from purchase mortgages."
- HELOC originations are up. Nearly 800,000 HELOCs were originated in the 12 months ending June 2014, up 20.6 percent from a year prior. During the first eight months of 2014, HELOC originations represented 15 percent of all loan originations across the U.S., a market share not seen since 2008.
- "Thanks to stagnant wages and rising costs, nearly 40 million Americans are spending over 30 percent of their income on housing payments, property taxes and other home expenses, according to a survey of 10,000 U.S. households conducted by the Demand Institute. After the housing bubble burst in 2008, a spike in foreclosures forced millions of Americans to start renting. That sent rents soaring by more than 25 percent since 2005, according to the Census Bureau. Since wages have been relatively stagnant it also meant that renters were spending a larger percentage of their income on housing costs each month. 'Home ownership has become more affordable but many renters have still been unable to transition into homeowners,' said Jeremy Burbank, vice president of the Demand Institute. Demand's survey found that the hardest hit group has been the Millennial generation. The survey found that heavy student loan debt and lack of well paying jobs have many Millennials postponing home buying."

- Single-family construction starts fell in November in the U.S. by 5.4 percent to a seasonally adjusted rate of 677,000. In the same period, permits for single-family housing dropped 1.2 percent to a 639,000 unit rate.
- Institutional players: “Residential sales involving all-cash buyers and institutional investors declined in the third quarter, according to RealtyTrac. Cash-only purchases accounted for 33.9 percent of all single family home and condo sales in the three-month period ending in September, down from 36.9 percent in the second quarter, and unchanged from a year ago.”



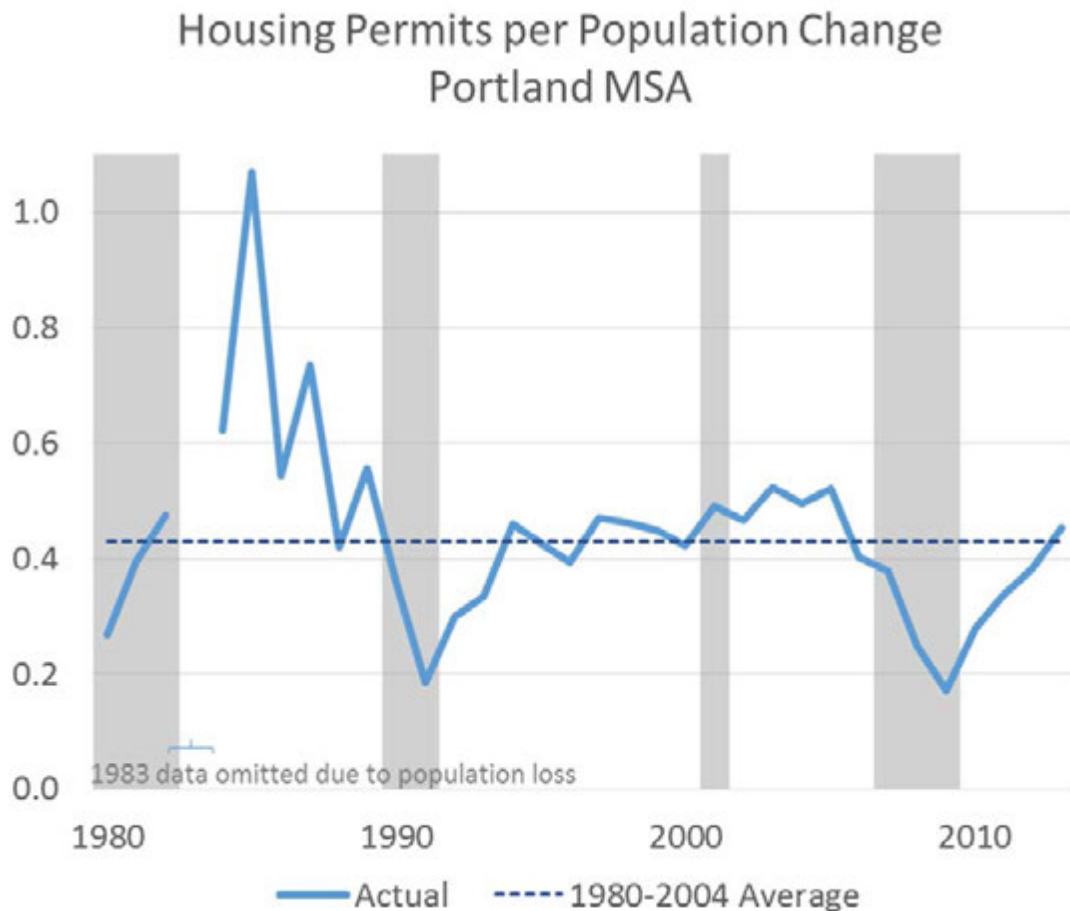
The S&P/Case-Shiller Home Price Index for Portland in November 2014 registered at 170.44, a 0.06 percent increase over the prior month. At the same time, the group's 20-City Composite Home Price Index declined from October 2014 by 0.22 percent to 172.94. Meanwhile, the U.S. National Home Price Index dropped by 0.06 percent to 167.00 in November 2014.

**Case-Shiller Price Index
Portland and 20-City Average**



BUILDING PERMITS

In January, the Oregon Office of Economic Analysis provided an economic forecast for the state. Their research finds that currently 1 housing permit is issued in the Portland Metropolitan Statistical Area (MSA) for every 2.3 new residents. In addition, unlike other places in the U.S., Portland did not overbuild by much during the boom, and in fact suggests a degree of underbuilding may be binding the local housing market today in terms of constrained supply. The analysis also points out the housing bust was greater in magnitude than the boom that it “corrected.”

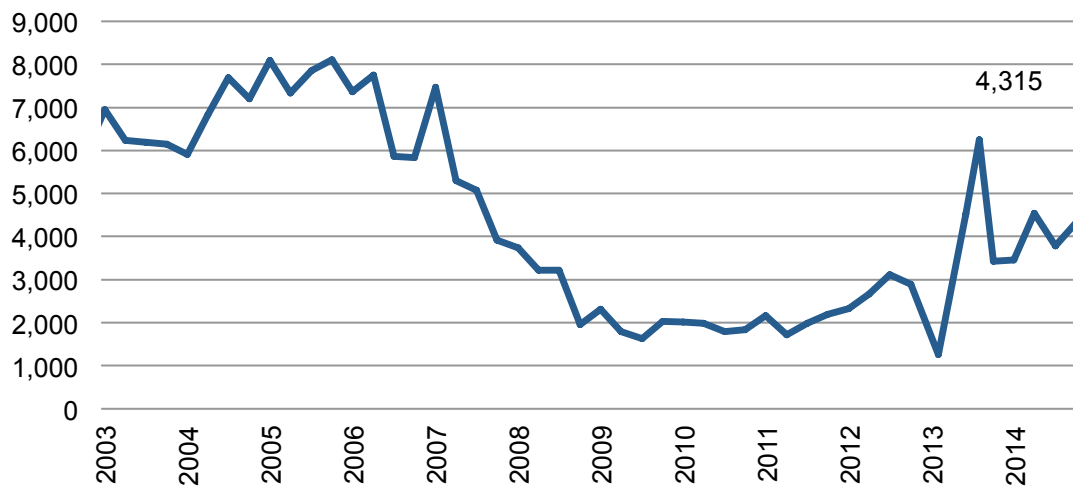


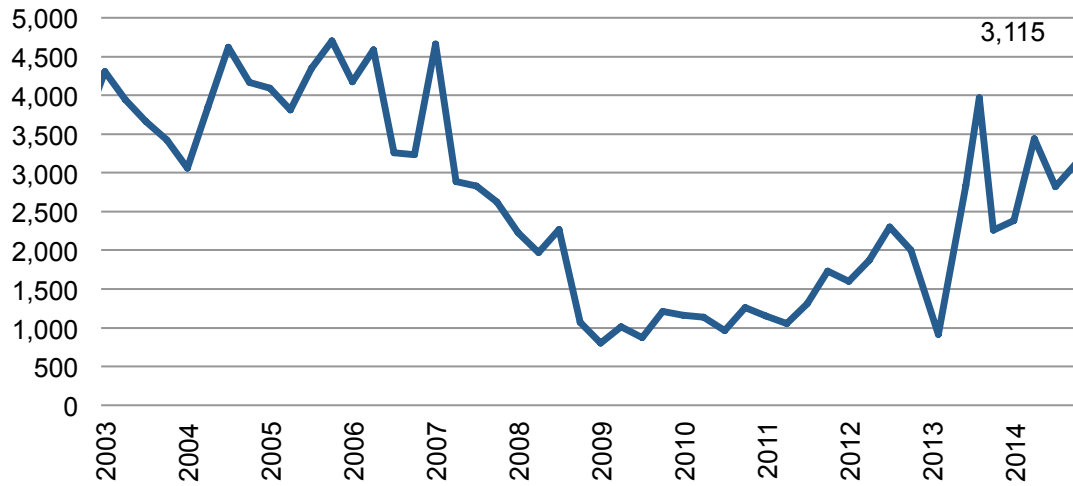
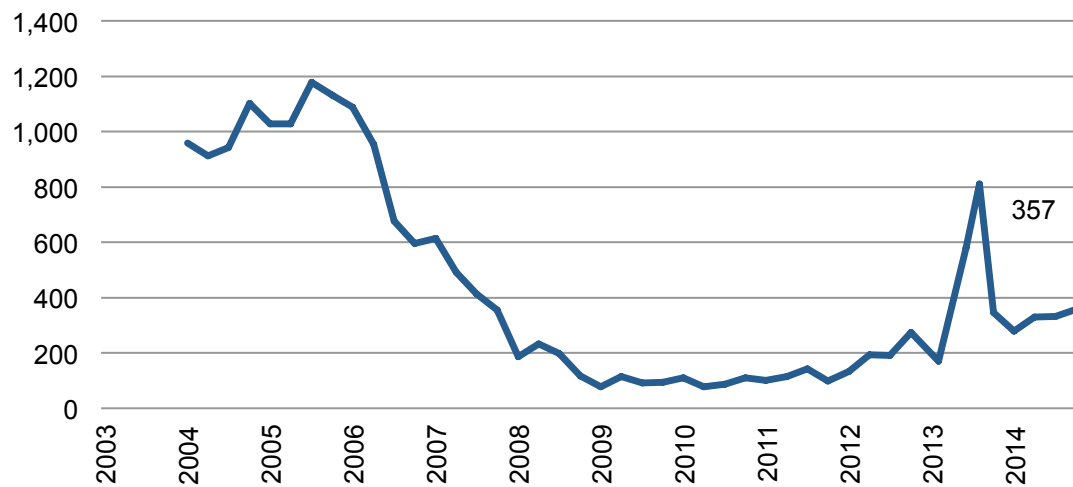
Source: Census, Portland State University, State of Washington, Oregon Office of Economic Analysis

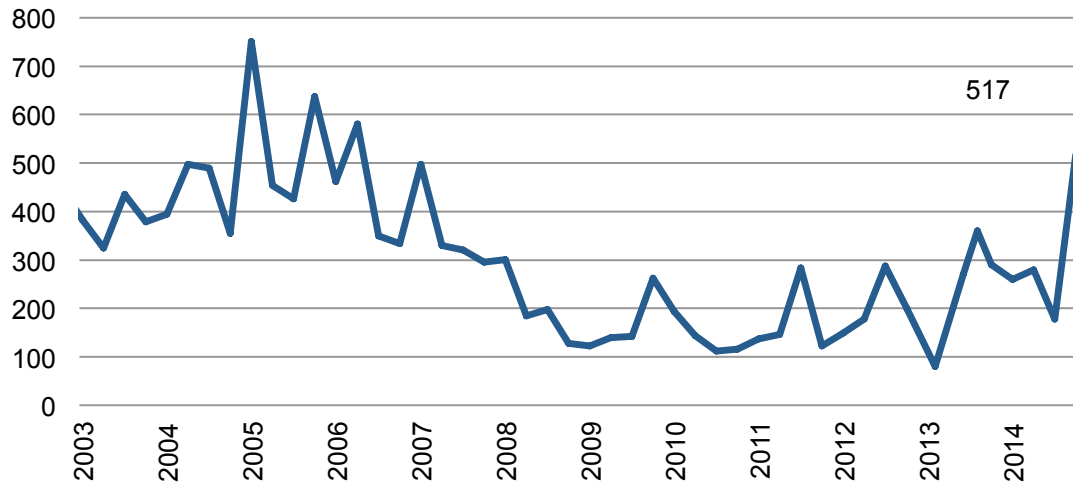
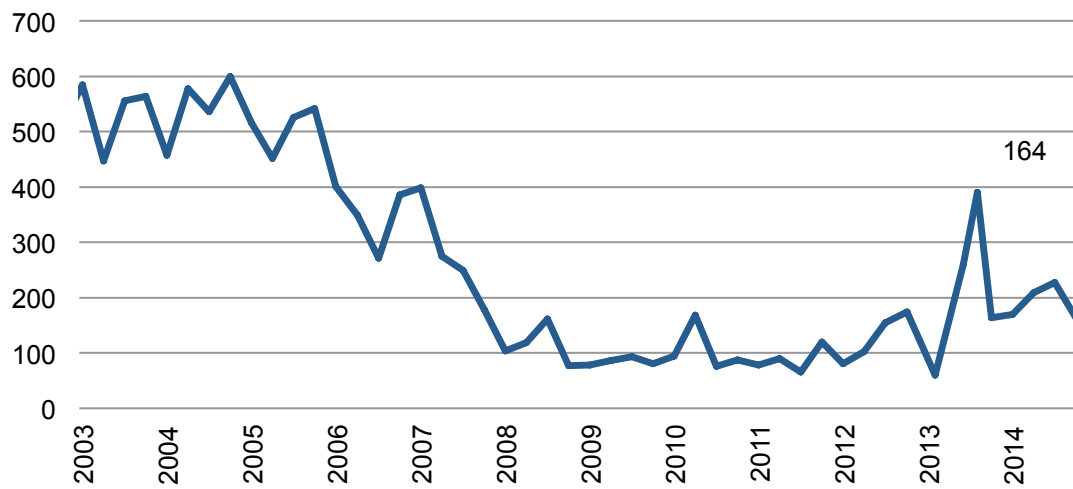
The Office of Economic Analysis reports that household formation in Oregon is currently in a positive growth cycle, but is still relatively constrained due to poor wage growth, slower immigration, lower marriage rates, limited access to credit, degraded mobility, and student loan burdens.

Statewide, permits for new single-family homes were up 26 percent from the same quarter of the previous year. Of the five jurisdictions detailed in this segment, only Medford posted a loss: 63 fewer permits were issued for a 28 percent decline to 164 permits, the same quantity issued in fourth quarter 2013. Stable increases occurred in Portland and Bend. In Portland, 3,115 permits represented a 10 percent increase of 292 over the third quarter, which translates to a 38 percent increase year over year. Bend issued 25 more permits than the prior period, a 7.5 percent increase to 357 which also represents 3 percent more than were issued in fourth quarter 2013. The spotlight shines on Eugene, where permitting increased by 339 units to a total of 517, a 190 percent increase over third quarter. This is also 227 more permits than were issued in Q4 2013, a 78 percent year-over-year increase.

Building permits for new private housing Oregon, statewide



**Building permits for new private housing
Portland-Vancouver-Beaverton MSA****Building permits for new private housing
Bend**

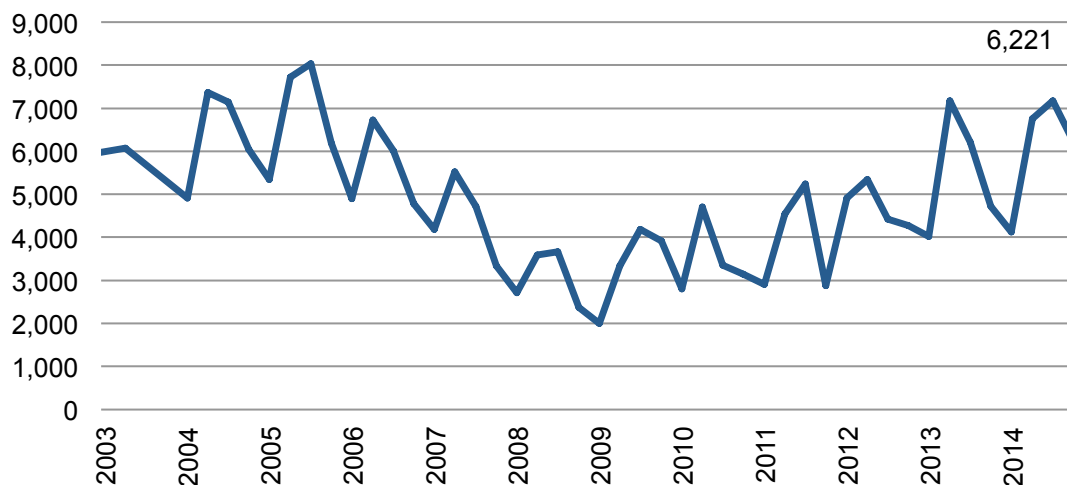
**Building permits for new private housing
Eugene-Springfield****Building permits for new private housing
Medford**

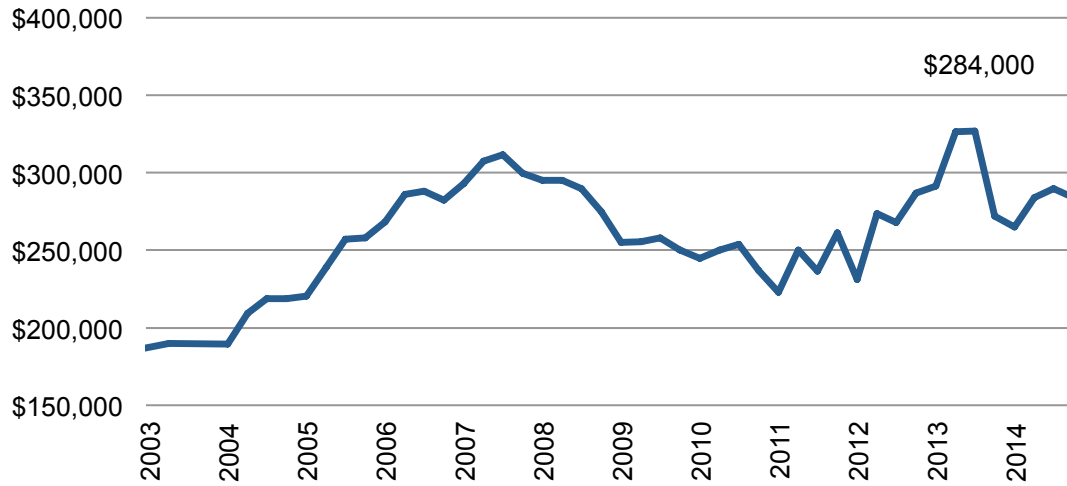
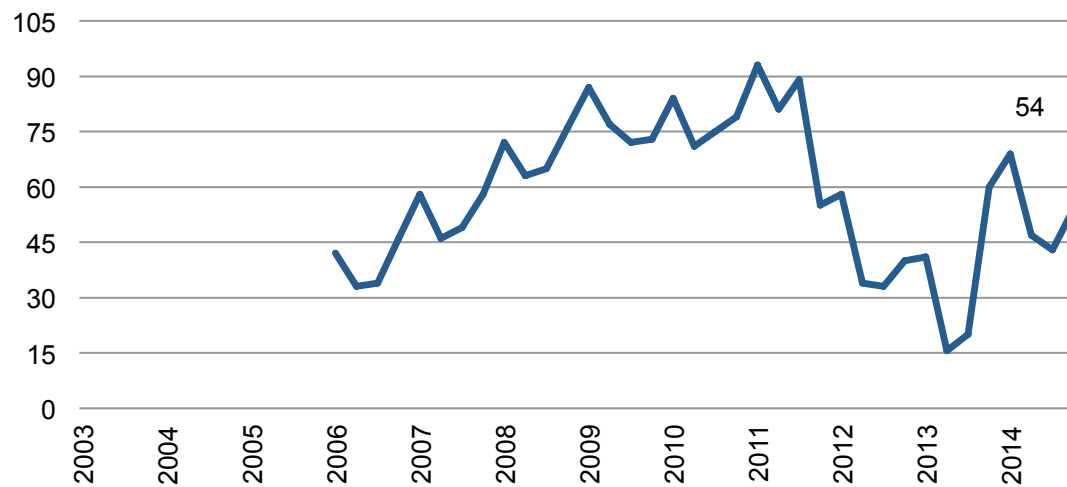
PORTLAND

The market for existing single-family homes in Portland cooled slightly in the fourth quarter versus the third, but year-over-year results are brighter. 958 fewer units transacted versus the third quarter for a total of 6,221, a 13 percent drop. However nearly 32 percent more transactions closed than during the same period in 2013. The median price reverted to its second quarter level, falling \$6,000 or 2 percent to \$284,000. This is around 4.5 percent higher than 2013's fourth-quarter median price. Although average days spent on the market increased by 25 percent to 54 days, this too outperforms Q4 2013—by 10 percent. Fortunately, sellers continue to realize 99 percent of list price.

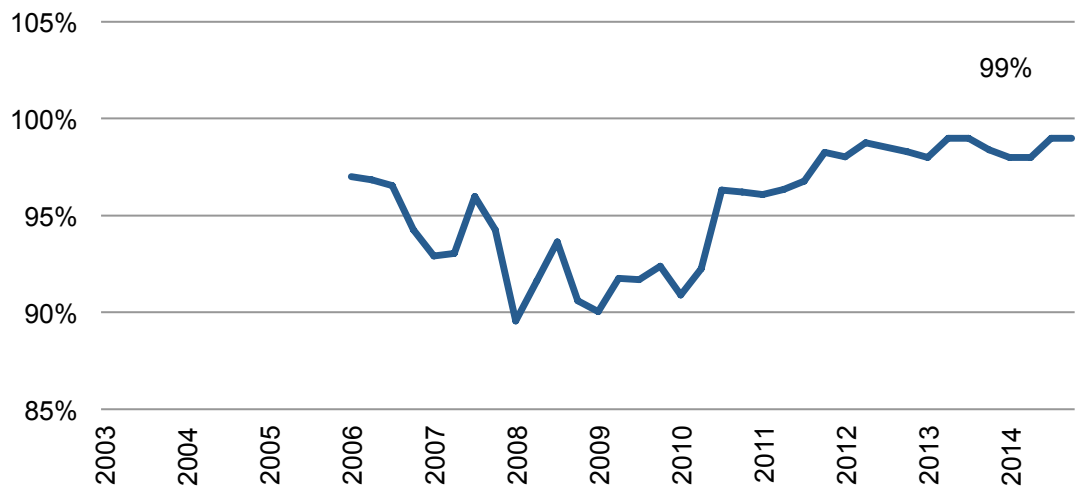
Buyers in the new construction market closed on approximately 9.5 percent fewer homes, bringing the fourth quarter's total to 546 (2.3 percent greater than 2013's final quarter). The median price for new units—\$364,900—offers a bright spot thanks to its continued slow-but-steady overall rise since the beginning of 2012. This price point is 1.6 percent higher than the prior quarter, 4.3 percent higher than fourth quarter 2013, and a number higher than this has not been reported since the second quarter of 2008 when the metric reached \$370,000.

Number of transactions
Portland metro, existing homes

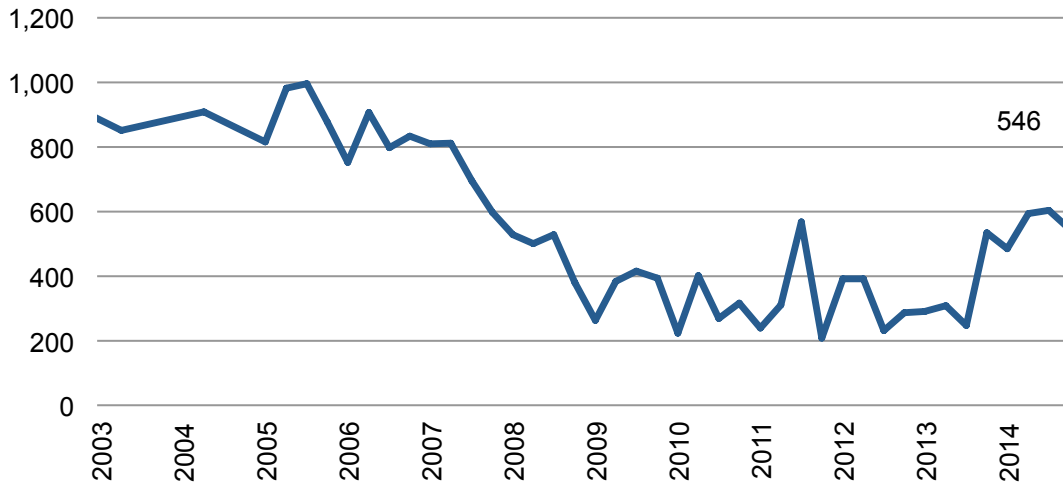


**Median sales price
Portland metro, existing homes****Days on market
Portland metro, existing homes**

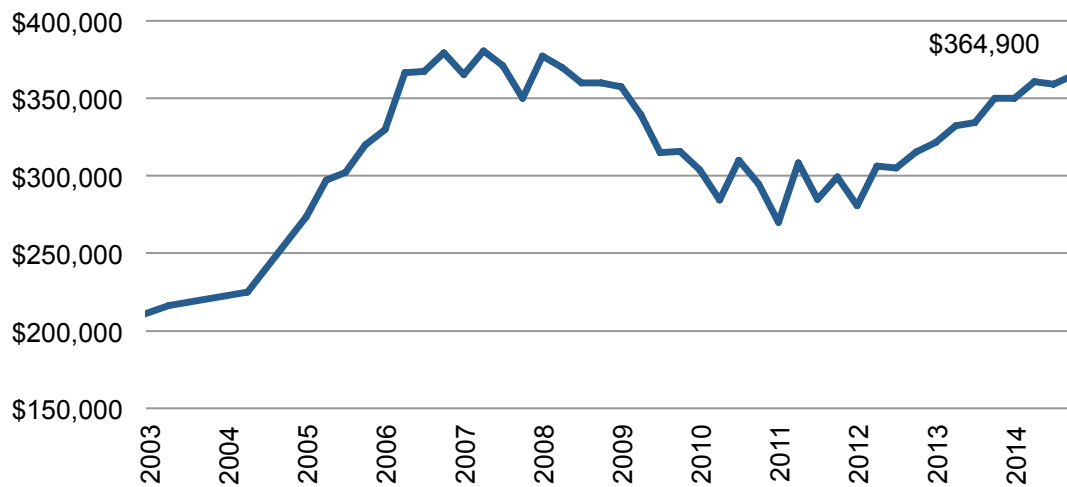
Ratio of sales price to list price
Portland metro, existing homes



Number of transactions
Portland metro, new detached homes



Median sales price
Portland metro, new homes

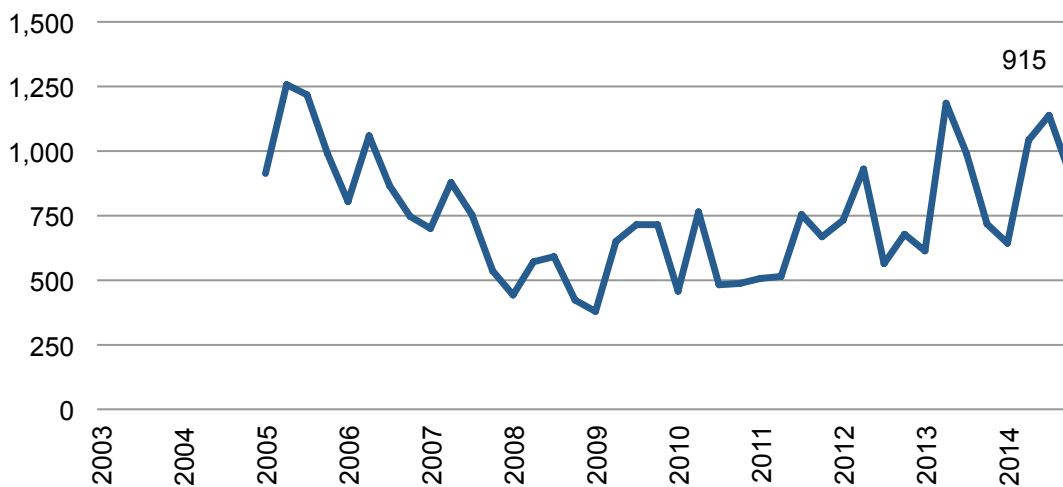


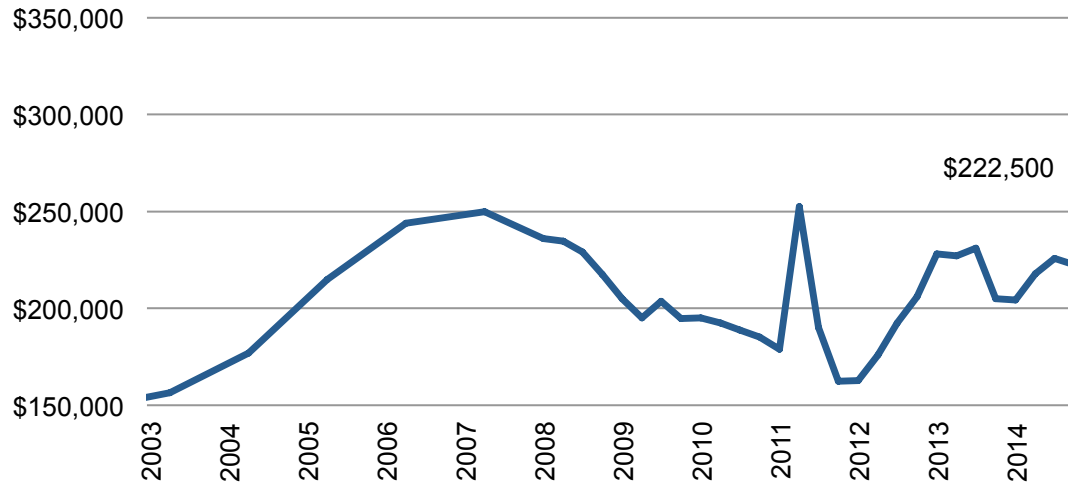
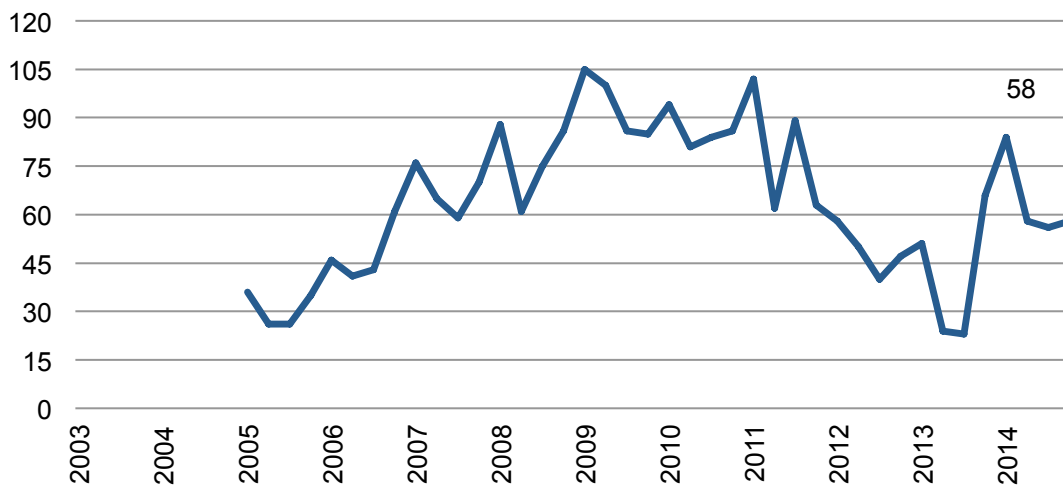
VANCOUVER/CLARK COUNTY

Trends in Vancouver's and Clark County's existing housing stock resembled those in Portland during the fourth quarter of 2014. Transactions in Vancouver dropped by 223 from the third quarter to 915, a decrease of almost 20 percent. Compared to the fourth quarter of 2013, however, nearly 28 percent more closings were booked. Vancouver's median price contracted by around 1.5 percent or \$3,500 to \$222,500, yet this is \$17,500 greater year over year. Average days on market increased by 2 to 58, returning to the same total seen in the second quarter of 2014; this is 8 days faster than fourth quarter 2013.

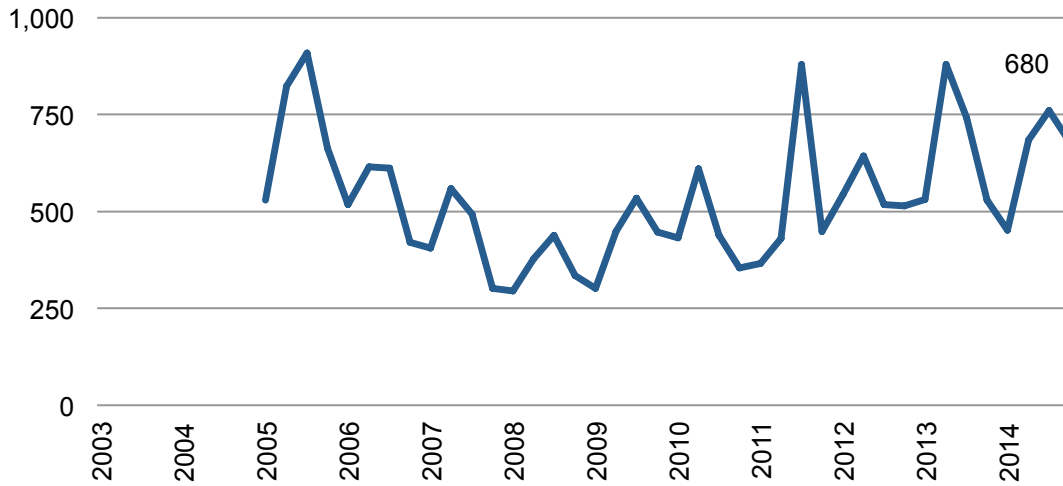
Against third quarter 2014, Clark County excluding Vancouver showed a more modest decrease in number of transactions but a steeper drop in prices relative to the same metrics in Vancouver proper. Transactions decreased by 81 or 11 percent to 680 units, yet this is 28 percent higher than the same period a year earlier. The median price fell by 5 percent or \$14,550 to \$259,450, yet this is 5 percent better than Q4 2013's \$246,950. Houses averaged 75 days on the market, 7 more days than in the prior period but exactly the same as fourth quarter 2013.

Number of transactions
Vancouver, existing homes

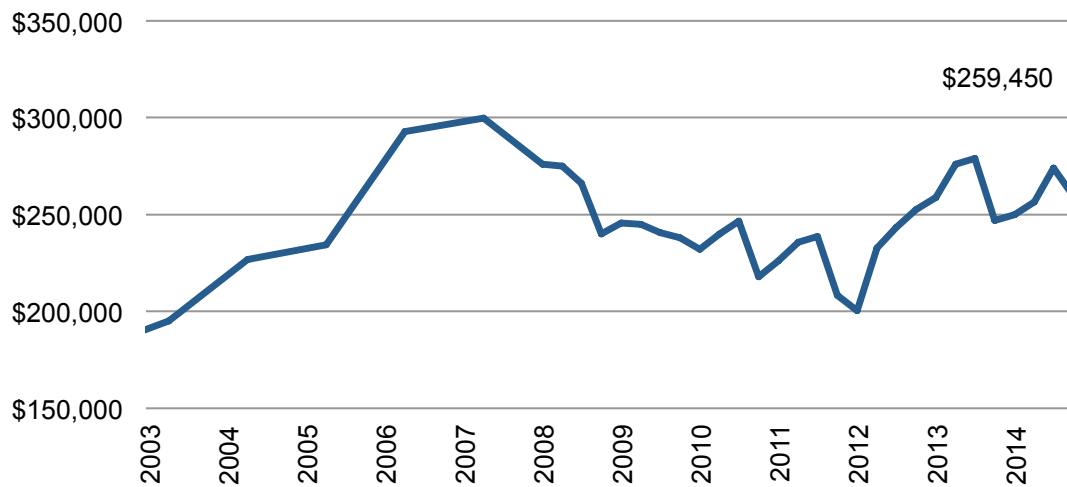


**Median sales price
Vancouver, existing homes****Days on market
Vancouver, existing homes**

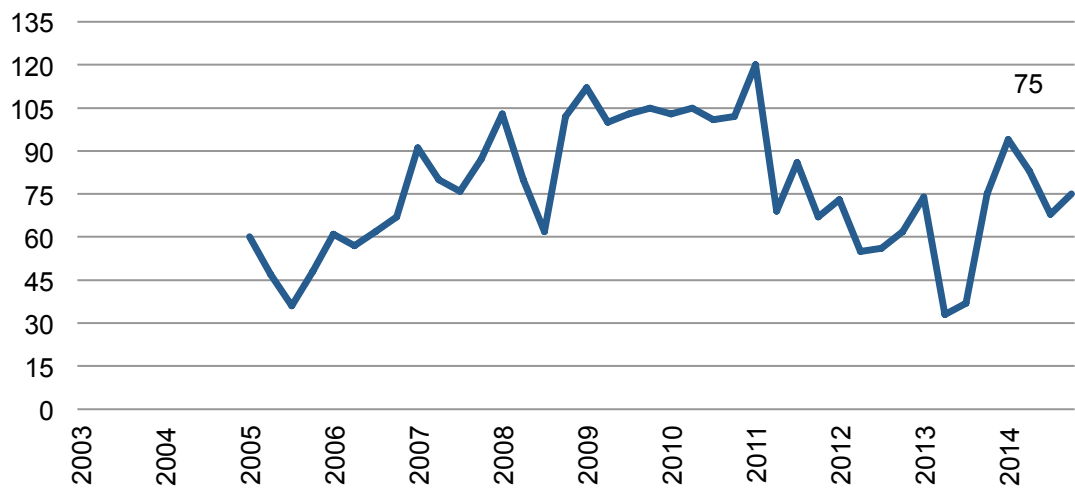
Number of transactions
Clark County, excluding Vancouver, existing homes



Median sales price
Clark County, excluding Vancouver, existing homes



Days on market
Clark County, excluding Vancouver, existing homes



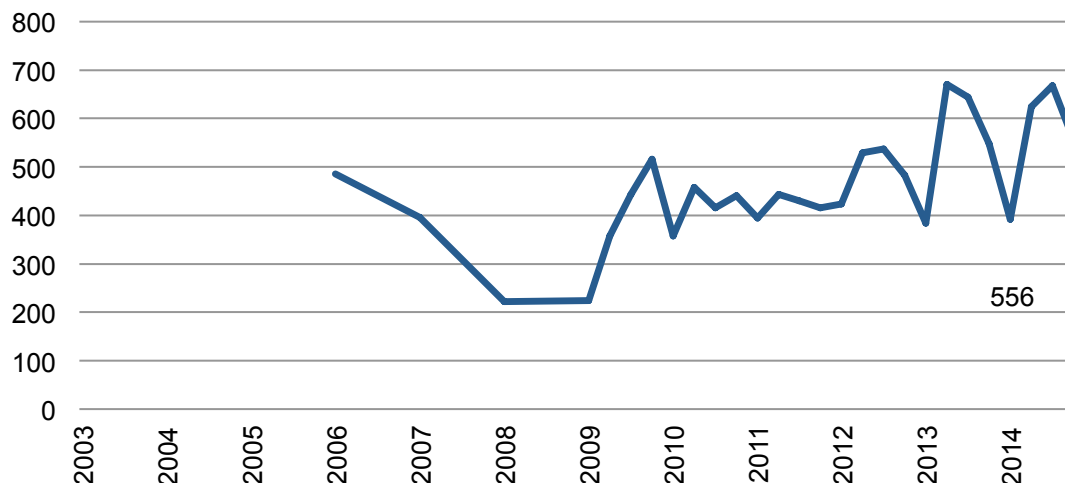
CENTRAL OREGON

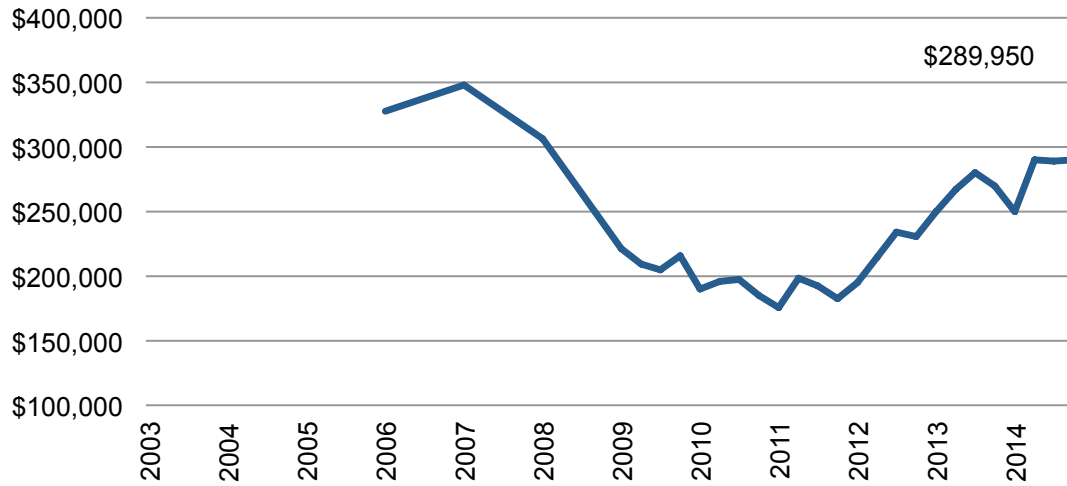
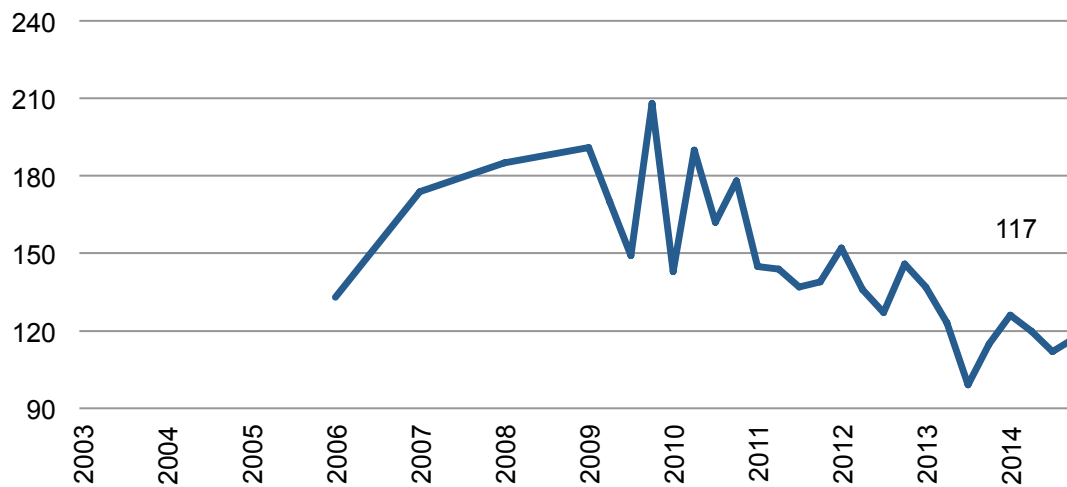
Over the last two years, transaction volumes of existing properties under 1 acre in Bend and Redmond have exhibited distinctly shaped annual cycles, starting low at the beginning of the year, peaking in second or third quarter, and falling again, as the corresponding charts demonstrate. Prices are among the most noteworthy factors for the final quarter of 2014 because they made negligible movements over the prior quarter but gained noticeably year over year and have reached levels not seen since mid-2008. Anecdotally, the author's mid-January 2015 visit to Bend revealed readily observable construction activity in housing, education, and retail properties.

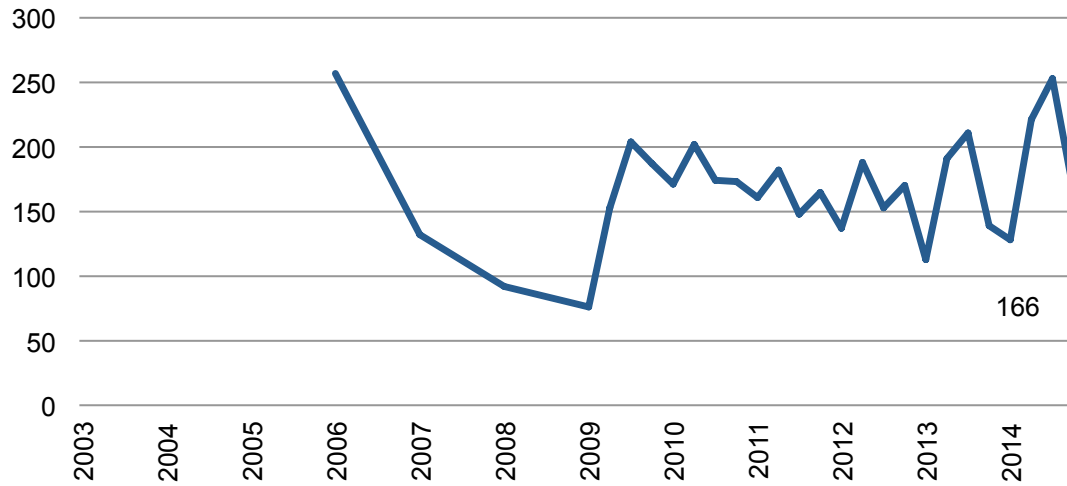
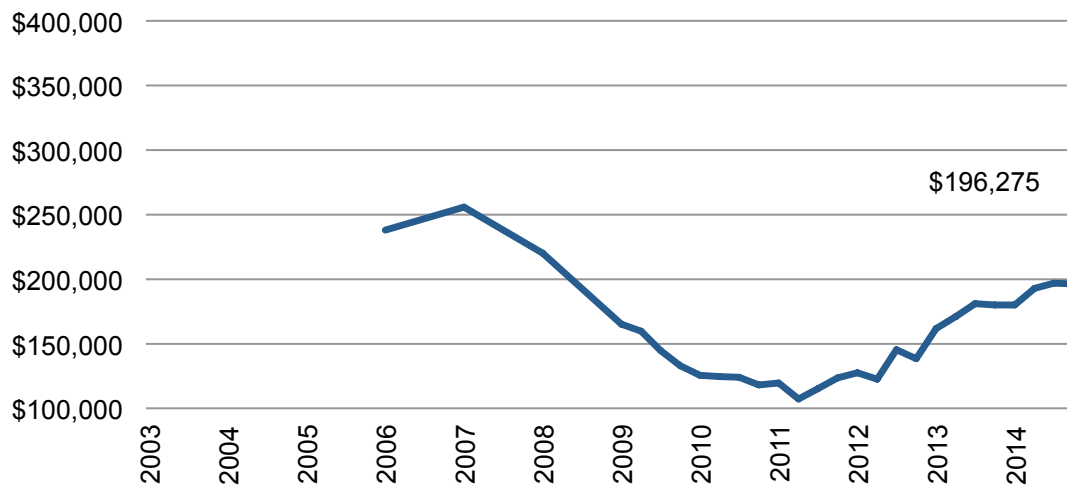
For Bend, transactions fell by 112 to 556, a nearly 17 percent contraction. This is 8 units more than Q4 2013. Sliced either way, median price rose—by \$850 or 0.3 percent to \$289,950 which is \$20,000 or 7 percent greater than fourth quarter 2013. From third quarter 2014, average marketing time increased 5 days to 117; this is 2 days longer than the same period in 2013.

For Redmond, transaction volume declined by 87 units or 34 percent to 166 homes, which is still 19 percent more than Q4 2013. Median price declined very slightly by 0.4 percent or \$725 to \$196,276, still 9 percent better than fourth quarter 2013. Marketing time actually decreased by 1 day to 125 days, and this is 8 days less than fourth quarter 2013.

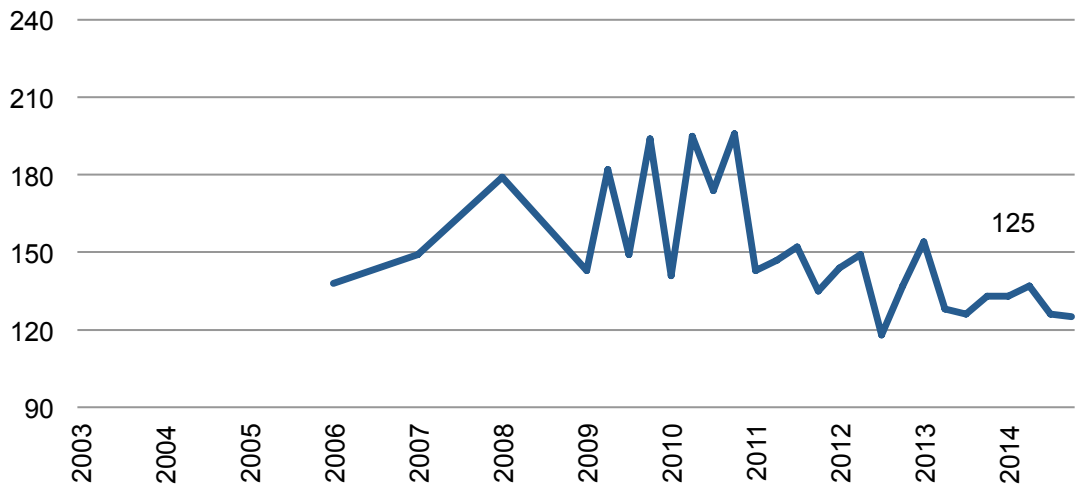
Number of transactions
Bend, under 1 acre



**Median sales price
Bend, under 1 acre****Days on market
Bend, under 1 acre**

**Number of transactions
Redmond, under 1 acre****Median sales price
Redmond, under 1 acre**

Days on market
Redmond, under 1 acre

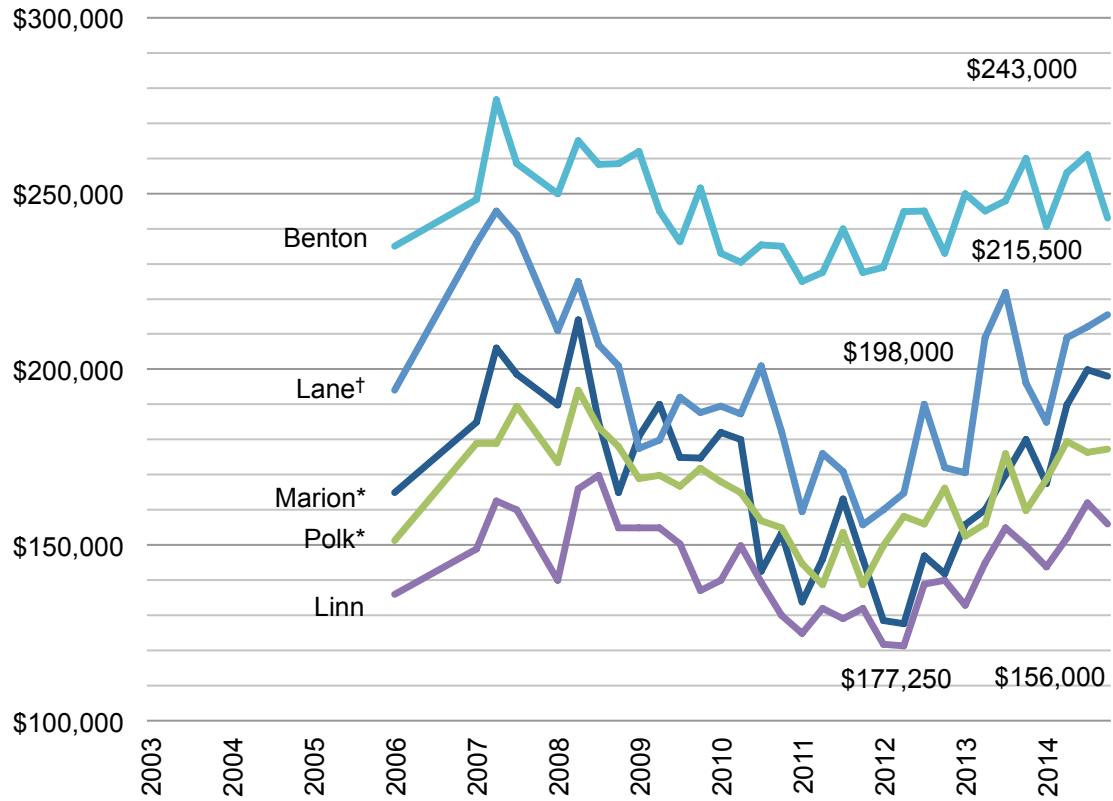


WILLAMETTE VALLEY

Median prices in the counties comprising the Willamette Valley were a mixed bag in the final quarter of 2014. Excluding Salem, Marion County and Polk County's price changes amounted to movements of less than 1 percent versus the third quarter. Lane County (excluding Eugene), Linn County, and Benton County all posted single-digit changes, albeit in varying directions. Note that the price level relationships among these five counties continue in the same descending order as inception of data collection in 2006.

- Benton County: \$243,000, 7 percent decrease of \$18,000; 6.5 percent decrease of \$17,000 year over year
- Lane County (excluding Eugene): \$215,500, 1.7 percent increase of \$3,500; 10 percent increase of \$19,500 year over year
- Marion County (excluding Salem): \$198,000, 1 percent decrease of \$1,900; 10 percent increase of \$18,000 year over year
- Polk County (excluding Salem): \$177,250, 0.5 percent increase of \$850; 11 percent increase of \$17,350 year over year
- Linn County: \$156,000, 3.7 percent decrease of \$6,000; 4 percent increase of \$6,100 year over year

Median sales price
Willamette Valley, existing homes



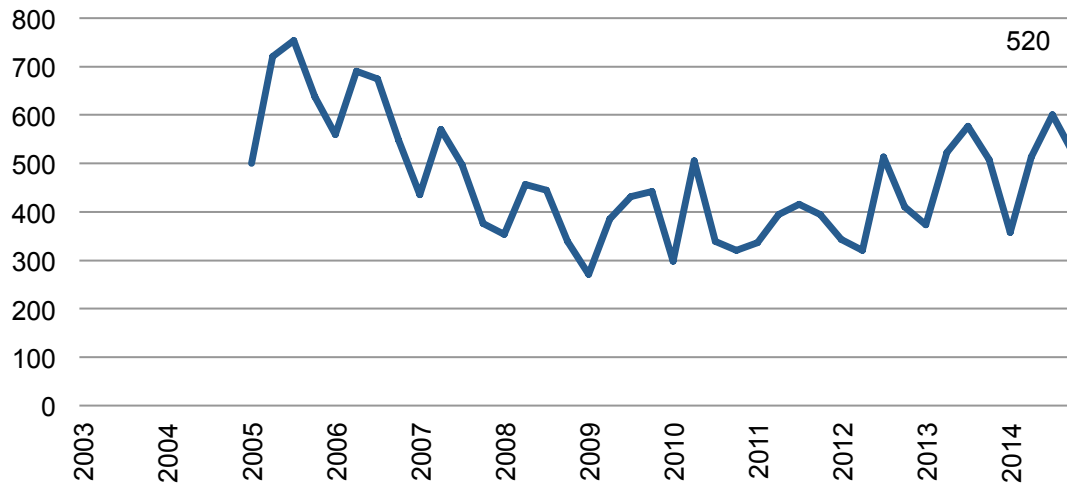
†Excluding Eugene

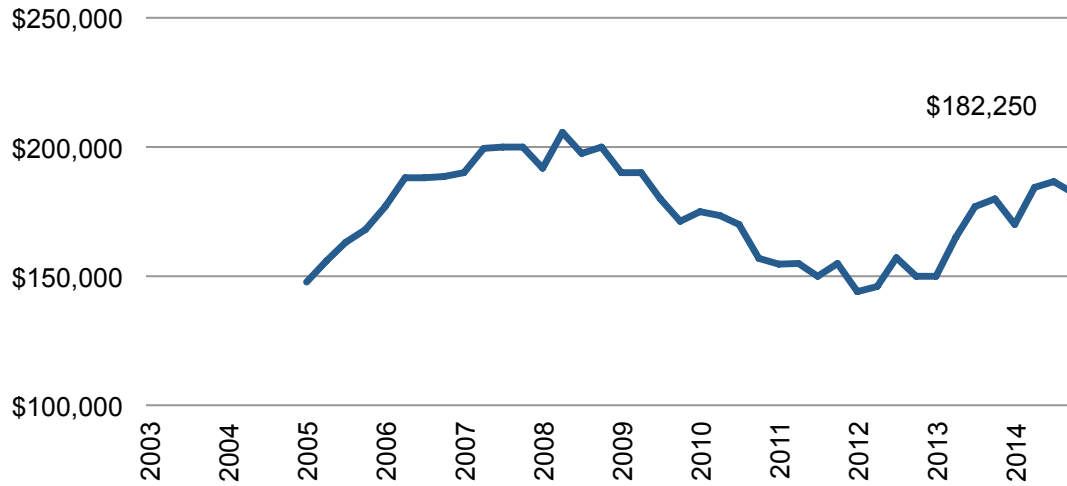
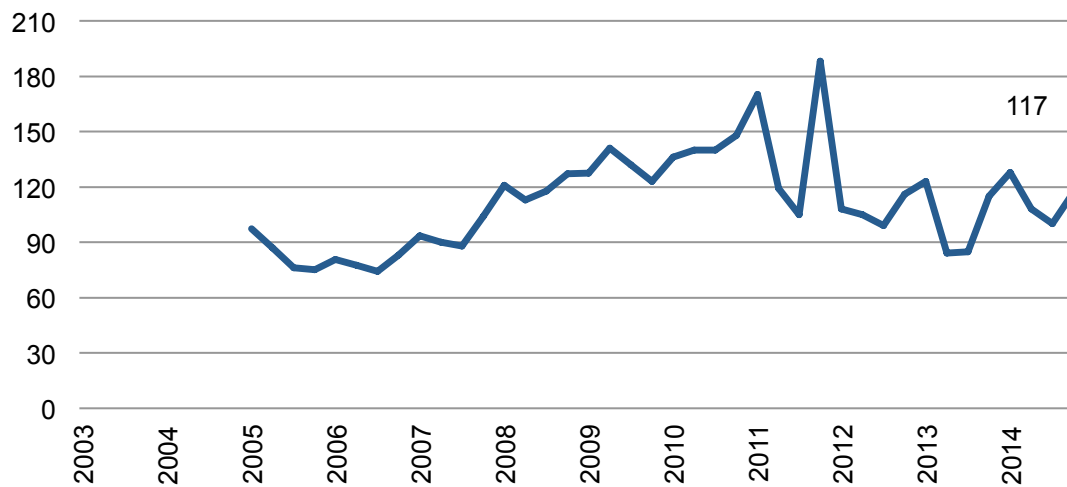
*Excluding Salem

SALEM

Transactions in Salem fell from their third-quarter peak by 80 units to 520, a 13 percent reduction. The chart representing transaction volume shows a generally predictable annual cycle, with some variation at the beginning of this decade. Compared to the fourth quarter of 2013, number of transactions is up 2 percent in the most recent quarter. Median price decreased 2 percent or \$4,250 to \$182,250, a level 1 percent above year-end 2013. Both metrics show increases in average days on market: a 17 percent increase from third quarter 2014 to 117 days, which is 2 days more than fourth quarter 2013.

**Number of transactions
Salem, existing homes**

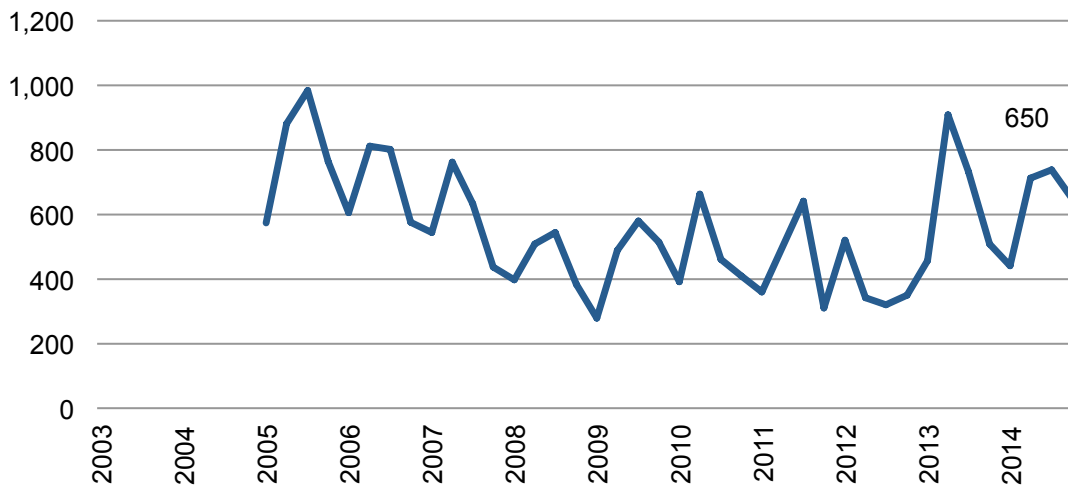


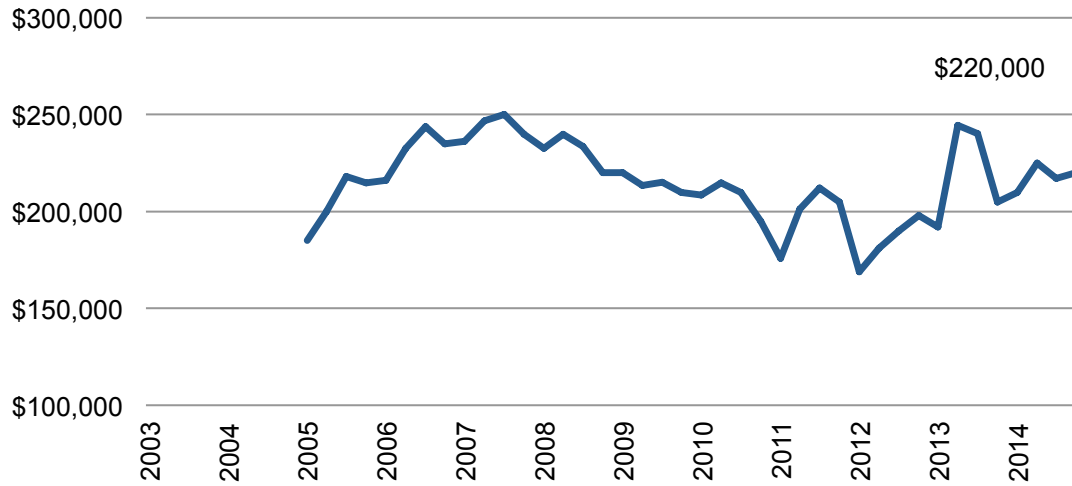
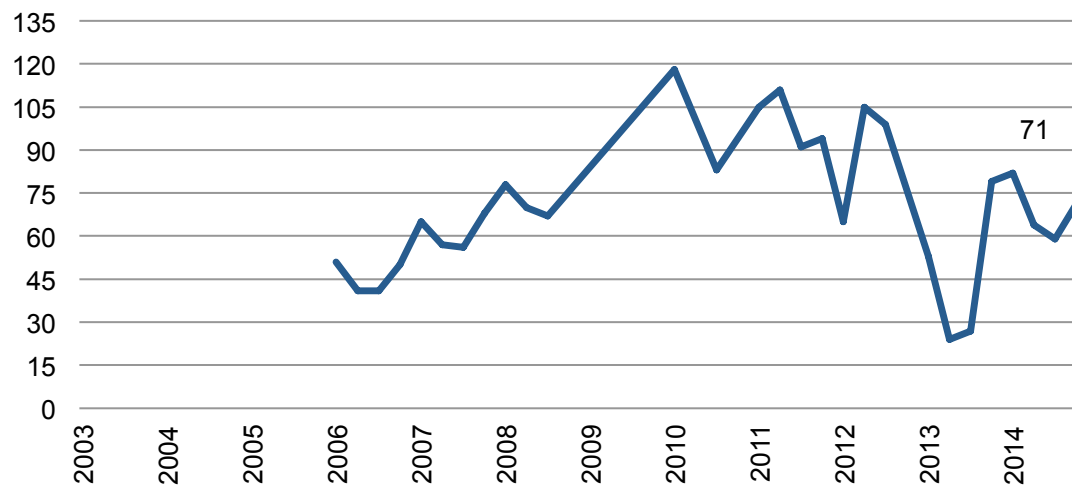
**Median sales price
Salem, existing homes****Days on market
Salem, existing homes**

EUGENE-SPRINGFIELD

Although the Eugene-Springfield market experienced a decline in transaction volume of 89 units to 650 (a 12 percent drop), median sales price increased \$3,000 or 1 percent to \$220,000. Nevertheless, the number of transactions is nearly 28 percent larger than the same period a year earlier. Even better, the median price is 7 percent or \$15,000 above Q4 2013. While marketing time increased 20 percent or 12 days to 71 days in the short term, this is 10 percent or 8 days shorter than fourth quarter 2013.

Number of transactions
Eugene-Springfield, existing homes



Median sales price
Eugene-Springfield, existing homes**Days on market**
Eugene-Springfield, existing homes

SOUTHERN OREGON

Data for southern Oregon comes to us on a rolling three-month basis—the following information pertains to the period September 1, 2014 – November 30, 2014.

During this time, Josephine County posted a median sales price of \$182,679 on 123 transactions that averaged 69 days on the market.

Meanwhile, Jackson County's median price landed at \$205,000 on a more robust 546 transactions that averaged a quicker 56 days on the market. ■

MULTIFAMILY MARKET ANALYSIS

CLANCY TERRY

RMLS Student Fellow

Master of Real Estate Development Candidate

Rental rates, vacancy, and multifamily existing sales and new construction all demonstrated strong, profitable fundamentals in Portland during 2014. Savvy investors, landlords, and developers were rewarded for their hard work, and 2015 appears ready to deliver similar results. Beyond 2015, new supply, global trends, and inevitably unforeseeable events will require market participants to keep a close watch on the demands their respective portfolios will place on ever-shifting markets.

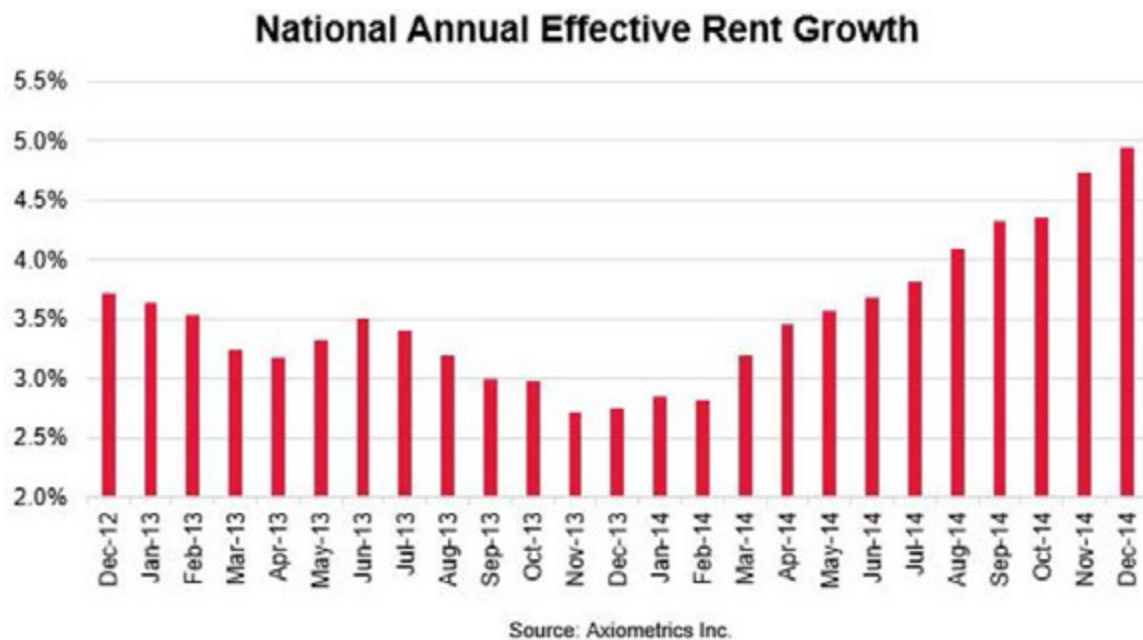
Colliers reports that the Portland metro multifamily market finished strong in 2014, but may be eclipsed by 2015. Last years record permit activity and new supply of 7,000 units. The forecast for 2015 indicates sales are expected to reach \$1.5 billion, vacancy should stay below 5 percent, and rents will likely make another 5 percent increase (at least).

Portland's attractiveness to Millennials and burgeoning employment growth will probably contribute to apartment demand continuing to outstrip supply. The strength of the multifamily investment market in 2015 will be supported by the metro area's growth rate (among the 10 fastest growing in the county) and its output growth—the fastest growing in the U.S. from 2008 to 2013.

■ Clancy Terry is a current Master of Real Estate Development candidate through a joint program of Portland State University's School of Business Administration and School of Urban Studies and Planning. He is the 2015 RMLS Student Fellow at PSU's Center for Real Estate. Any errors or omissions are the author's responsibility. Any opinions expressed are those of the author solely and do not represent the opinions of any other person or entity.

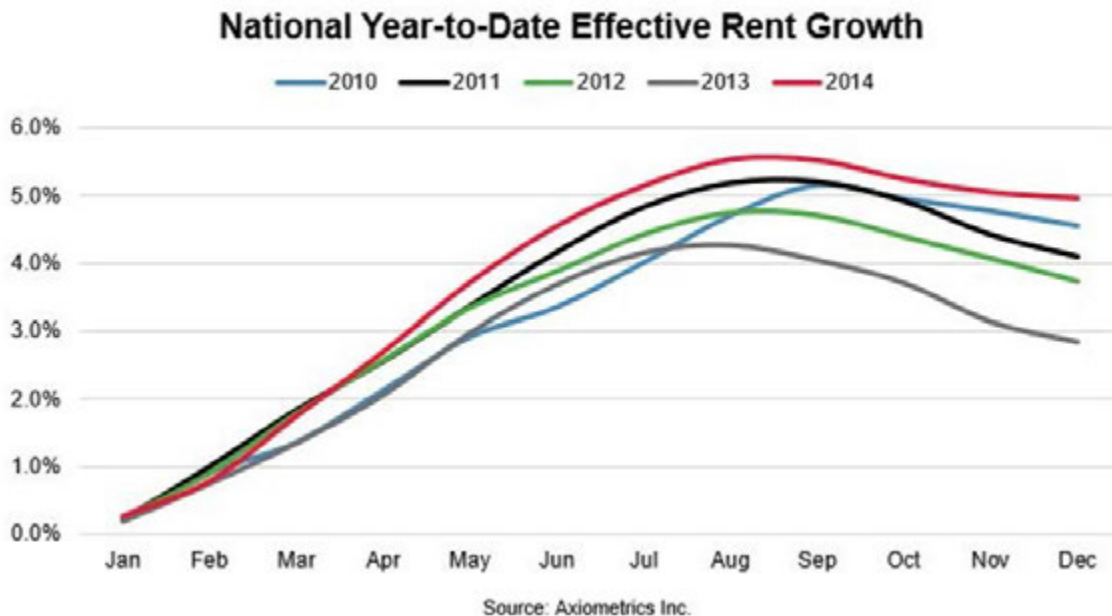
Axiometrics indicates national annual effective rent growth reached 4.7 percent in November 2014, the highest level seen at that point in the year and also the highest since August 2011, 40 months prior. And November was an even better month for apartment REITs, which saw annual effective rent growth of 5.1 percent, departing from the typical fourth-quarter decrease. This is a clear indication of the underlying strength of the national multifamily market in 2014.

Not to be outdone, December 2014 peaked higher at 4.9 percent annual effective rent growth, also resisting the usual seasonal slowdown. The national rate increased for 10 consecutive months, beating each prior month in 11 of 12 months in 2014. The December rate was 219 basis points higher than December 2013's 2.7 percent annual effective rent growth.



Another measure, year-to-date effective rent growth, reveals 2014 as the U.S. apartment market's best year since the end of the Great Recession. Says Axiometrics, "YTD growth ended 2014 at 5.0 percent, a heady 42 bps higher than the final 2010 YTD rate of 4.6 percent. YTD rent growth in 2014 has led the other recovery years since April and was never really challenged the rest of the year. Though the 2014 figure decreased somewhat from the August-September peak of 5.5 percent, the market's fourth-quarter strength kept 2014 safely at the top of the post-recession year's trend lines. It will be interesting to see if the same trend continues in 2015. Axiometrics' forecast is that rent growth will begin to slow in 2015, as current levels are unsustainable in the long term and the amount of new supply begins to take a toll."

In Axiometrics' ranking of MSAs with greatest annual effective rent growth, Portland ranks number 7. December 2014's annual effective rent growth in Portland was 7.5 percent (while December 2013's annualized rate was 8.4 percent). The top 6 MSAs with rent growth stronger than Portland in 2014 were Oakland, CA (13.9 percent); San Francisco, CA (11.6 percent); Denver, CO (11.2 percent); San Jose, CA (10.4 percent); Sacramento, CA (9.3 percent); and West Palm Beach, FL (8.7 percent). Rounding out the top 10 after Portland were Atlanta, GA (7.4 percent); Fort Lauderdale, FL (6.9 percent); and Seattle, WA (6.7 percent).



In its 2015 Emerging Trends report, the Urban Land Institute's survey respondents ranked 75 U.S. markets to watch for overall real estate prospects. Portland ranked 16th overall. ULI indicates the ranking has a lot to do with the city's attractiveness to Millennials, efforts to foster a "vibrant urban core," and a diversified economy. Millennials support in-migration without guaranteed employment, making for an attractive labor pool that may draw employers, rather than the other way around. Strengths in the local housing market also played a role in the ranking: respondents ranked the multifamily market fourth and the single-family market eighth. Furthermore, "Local market participants see the strength of the local economy as the driving force for 2015. Capital is expected to be readily available, so this should support a healthy level of investor demand. One potential drawback seen in the market may be fewer development or redevelopment opportunities in the market."

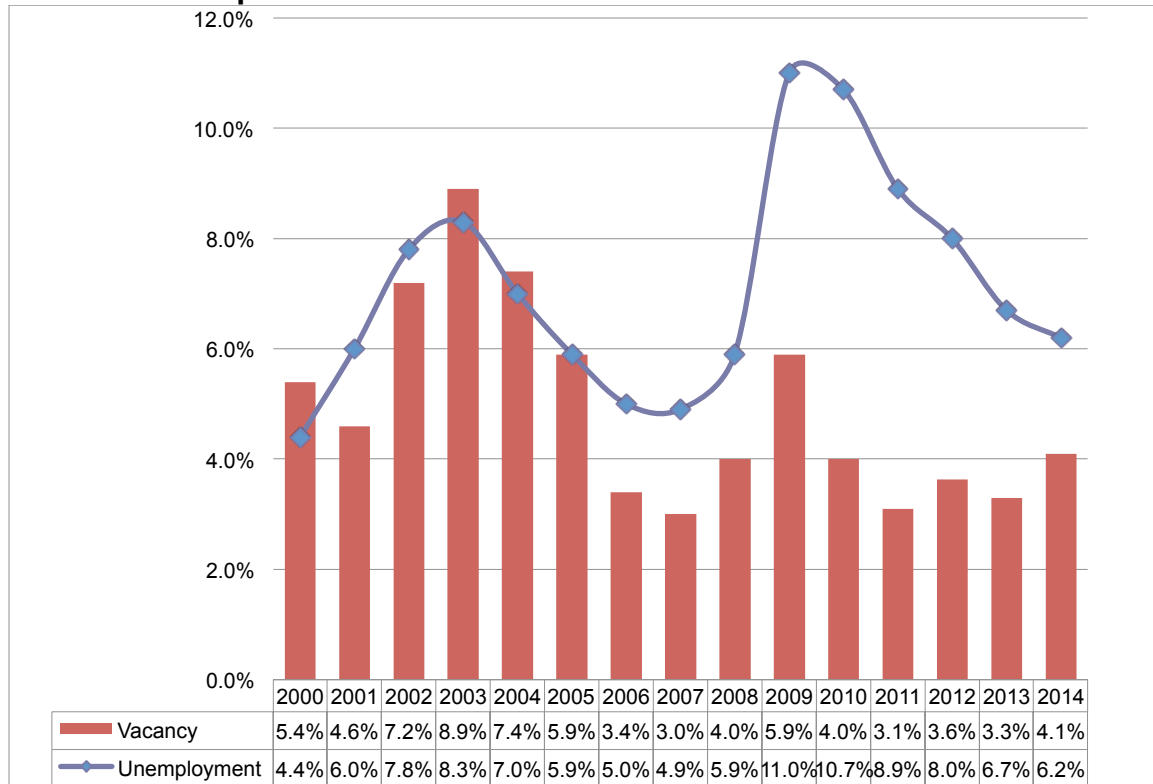
OCCUPANCY

Nationally, Axiometrics indicates the December 2014 occupancy rate was 94.6 percent, down very slightly from November's 94.8 percent but better than December 2013's 94.2 percent. Occupancy rates were contained between 94 percent and 95 percent during the year, and in fact have not fallen below 94 percent since March 2012. Axiometrics began monthly tracking of national occupancy rate in 2008, and the 94.6 percent rate was the highest of any December since inception. Occupancy rates of this magnitude clearly illustrate the strength of demand for apartments, especially given their stability in the face of incoming new supply. Such demand is likely related to employment rates that are finally recovering.



Axiometrics also reports overall annual vacancy increased to 4.1 percent in the Portland market as 2014 came to a close, likely related to new supply of multifamily units coming online locally throughout the year; this is reflected in the graph below. (ABR Winkler Real Estate Services, an Oregon and Washington real estate brokerage, reports fourth-quarter Portland vacancy across all unit types around 3.6 percent.) Unemployment in the metro area continues to improve, landing at 6.2 percent which is below Oregon's statewide unemployment rate of 7 percent yet above the national 2014 rate of 5.8 percent.

Unemployment and multifamily vacancy Portland metropolitan area



Source: Axiometrics, Inc.; U.S. Bureau of Labor Statistics

TRANSACTIONS

According to data provided by Steve Morris, Senior Advisor with Sperry Van Ness | Bluestone & Hockley, there were several noteworthy events in the market for multifamily properties priced above \$450,000 in the Portland metropolitan area.

In October 2014, 19 properties traded versus October 2013's 21 transactions. Sales totaled \$165,792,209 however—200 percent greater than October 2013's dollar volume. Averages for these 19 transactions are as follows: 82.1 units, \$8,725,906 price, \$111,538/unit, 921.2 SF, \$121.63/SF, 5.37 percent average reported cap rate.

In November 2014, 25 properties traded versus 15 in November 2013. Dollar volume of sales was down however, falling 12.4 percent year over year to \$92,533,348. Averages for the 25 transactions are as follows: 27.9 units, \$3,701,334 price, \$132,569/unit, 862.1 SF, \$133.16/SF, 5.93 percent average reported cap rate.

In December 2014, 19 properties traded compared to 24 in December 2013. Dollar volume was again down, this time significantly: a 40.9 percent drop year over year to \$181,656,000. Averages for the 19 transactions are as follows: 62.0 units, \$9,560,842 price, \$154,207/unit, 928.6 SF, \$186.31/SF, 6.25 percent average reported cap rate.

Despite the seasonal and year-over-year slowdowns, Morris reports a new record for Portland metro in the over \$450,000 segment: total dollar volume reached \$1.49 billion by December 31, 2014. Transactions totaled 197 for the year.

ABR Winkler's year-end apartment statistics for the Portland metropolitan region are as follows:

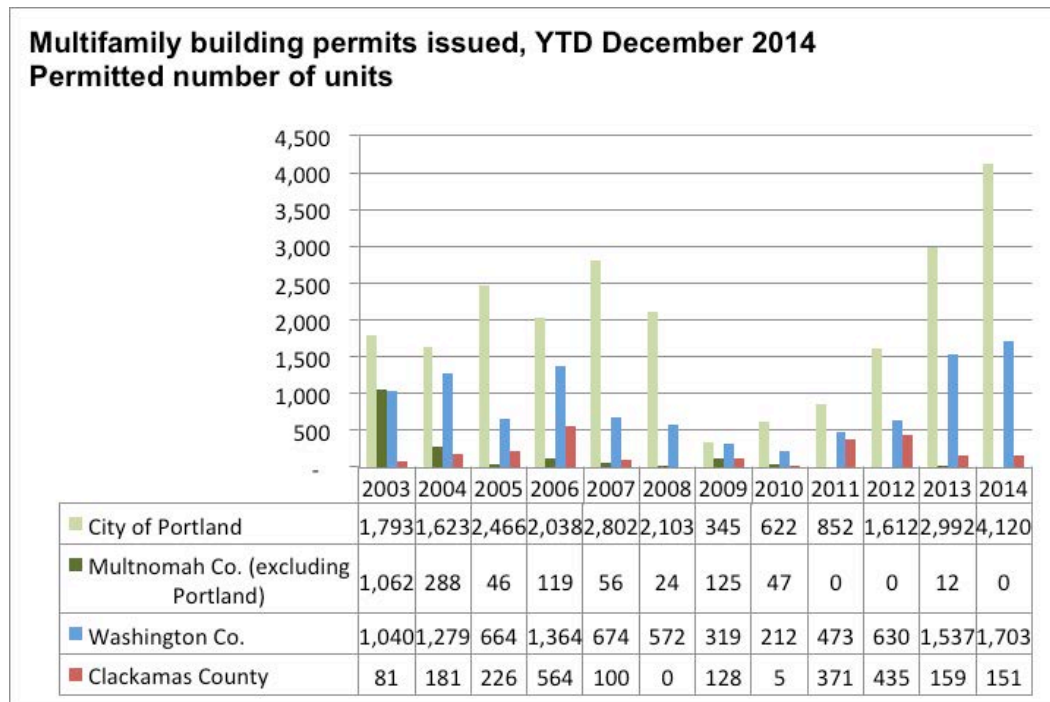
| | |
|------------------------------|-----------------|
| Average price per foot | \$128.35 |
| Median cap rate | 6.50% |
| Dollar volume | \$1,517,081,997 |
| Median gross rent multiplier | 9.10 |
| Median price per unit | \$79,500 |
| Average price | \$5,660,754 |
| Average number of units | 49 |

Colliers reports the following significant sales during the fourth quarter of 2014:

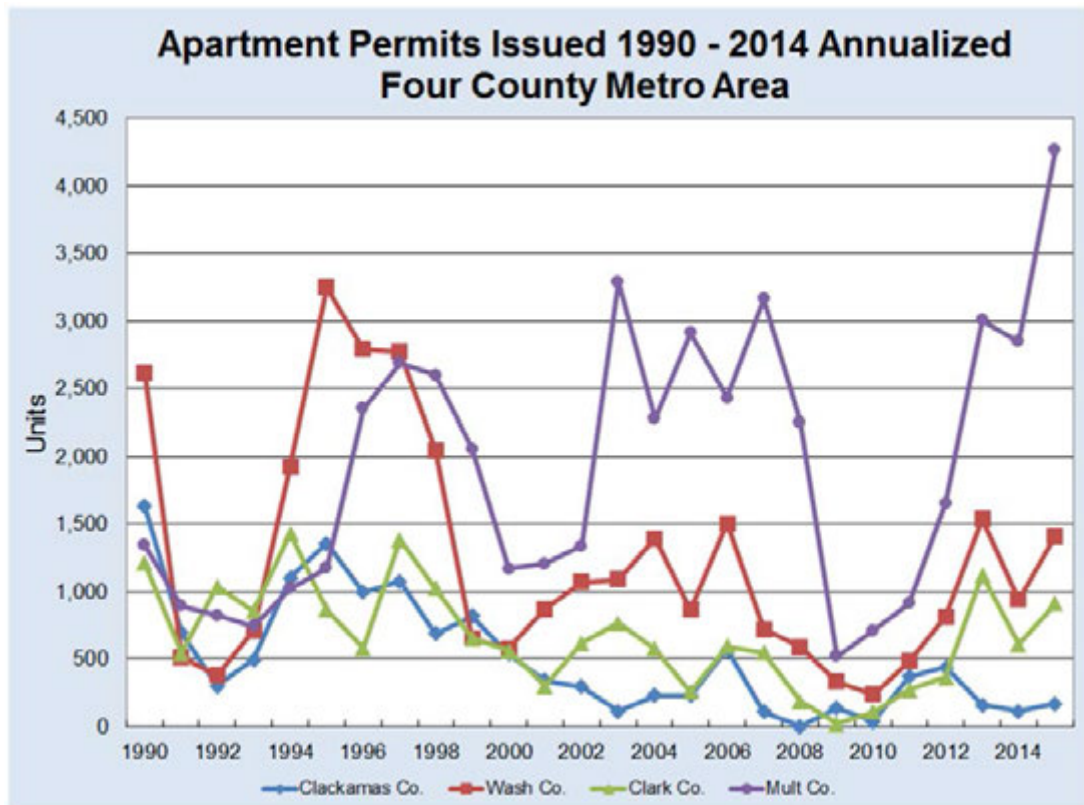
| UPDATE: SIGNIFICANT SALES | | | | | | | |
|----------------------------------|---------------|------------|--------------|---------|------------|----------|----------|
| SALES ACTIVITY | | | | | | | |
| PROJECT | CITY | SALE DATE | SALES PRICE | # UNITS | PRICE/UNIT | PRICE/SF | CAP RATE |
| Arbor Heights | Tigard | 10/20/2014 | \$54,100,000 | 348 | \$155,460 | \$189.68 | 4.65 |
| Harrison Tower Apartments | Portland | 12/16/2014 | \$53,000,000 | 185 | \$286,486 | \$354.59 | |
| Lumina Apartments | Gresham | 10/17/2014 | \$43,550,000 | 440 | \$98,977 | \$121.00 | 6.00 |
| Honeyman Hardware Lofts | Portland | 11/24/2014 | \$37,050,000 | 100 | \$370,500 | \$268.18 | 4.65 |
| Tualatin Meadows | Tualatin | 10/30/2014 | \$23,750,000 | 240 | \$98,958 | \$138.11 | |
| Creskide Village | Vancouver | 12/16/2014 | \$19,970,000 | 132 | \$151,288 | \$102.53 | |
| Townhomes With A View Apartments | Clackamas | 12/19/2014 | \$16,250,000 | 322 | \$50,466 | \$55.47 | |
| Chesapeake Pointe | Milwaukie | 10/16/2014 | \$14,000,000 | 159 | \$88,050 | \$105.69 | 5.80 |
| Cherry Park Plaza | Troutdale | 11/20/2014 | \$13,366,698 | 81 | \$165,021 | \$164.95 | |
| Seasons on the Park | Battle Ground | 10/22/2014 | \$13,350,000 | 120 | \$111,250 | \$128.37 | 5.82 |
| Courtyard Village Apartments | Vancouver | 11/14/2014 | \$7,900,000 | 151 | \$52,318 | \$76.37 | |
| Foothills | Portland | 12/16/2014 | \$5,071,000 | 60 | \$84,517 | \$85.76 | 6.00 |
| Sapphire Apartments | Hillsboro | 10/29/2014 | \$4,950,000 | 25 | \$198,000 | \$97.79 | |
| Victoria Gardens Apartments | Portland | 10/3/2014 | \$4,825,000 | 50 | \$96,500 | \$90.59 | |
| Gladstone Forest Apartments | Gladstone | 12/18/2014 | \$3,710,000 | 53 | \$70,000 | \$96.68 | 4.04 |
| The Hillcrest Apartments | Portland | 12/8/2014 | \$3,600,000 | 33 | \$109,091 | \$76.86 | |
| Alexan Park Commons | Gresham | 10/1/2014 | \$3,400,000 | 40 | \$85,000 | \$82.28 | 5.50 |

PERMITS

The U.S. Census Bureau revised a small percentage of third-quarter 2014 multifamily permitting data, and indeed when December year-to-date data was retrieved, the Multnomah County excluding Portland and Washington County numbers differed slightly than we reported in the prior issue of the Quarterly. Portland finished the year with a record-setting 4,120 multifamily units permitted, 37.7 percent more than 2013 and 1,094 percent of the recession trough in 2009. Unfortunately yet unsurprisingly, the balance of Multnomah County shows 0 new permits for the entire year. Washington County's total comes in at 1,703 permitted units (10.8 percent greater than 2013), and Clackamas County's full-year total increased to 151 units over the previously reported partial-year annualized rate, a total roughly equivalent to 2013's 159 units.



Source: U.S. Census Bureau



Source: Barry Apartment Construction Report, Fall 2014

NEW CONSTRUCTION

CoStar views the national apartment market transitioning from full recovery to an expansion phase in 2015. This could lead to rent increases falling to the 2 percent range on a national basis. The sheer volume of apartment starts and completions recently and planned for 2015 should shift the national vacancy rate from 4.1 percent to over 5 percent by the end of 2015. Over 220,000 units were delivered in 2014, and the forecast for 2015 deliveries comes in at 250,000 units.

Even so, “apartment vacancies are still expected to remain near 10-year lows across most of the nation,” reports a CoStar analyst. While such increases in supply may exert some downward pressure on rents, CoStar analysts are beginning to observe a widening affordability gap since most of the newly build properties are in the expensive luxury sector. CoStar Portfolio Strategy’s Francis Yuen says: “In the Oakland/East Bay Area, for example, the average income has risen by about 15 percent to over \$75,000 in the strengthening economy. However, rents have grown by a staggering 30 percent over the same period and now require more than 25 percent of annual income.” Also, usage of concessions remains infrequent, despite occupancy rates beginning a gentle downward slope. Demographics are bolstering occupancy and rents, however, as rising job growth introduces more prospective renters to the apartment market but is not strong enough to push existing renters into homeownership.

For the local Portland market, The Barry Apartment Construction Report indicates 2014 as the busiest year for multifamily permitting and new construction, based on data back to 1990 and 2014 permit information. The Report indicates a previous high occurred in 2003 when Multnomah County issued permits for 3,300 new units. It predicts total apartment units delivered in the Portland metro over 2014 and 2015 to reach 10,000 to 12,000. The prediction for vacancy rates in the metro in late 2015 is a range between 4.5 percent and 5.25 percent.

**Multifamily new construction pipeline
Portland as of December 3, 2014**

| | Summary of Units by Location | | | |
|------------------------|------------------------------|-------------|----------|--------|
| | Proposed | Under Const | Complete | Total |
| North Portland | 1,447 | 935 | 604 | 2,986 |
| Close in East Portland | 3,528 | 1,816 | 1,707 | 7,051 |
| Close in West Portland | 4,304 | 2,094 | 2,208 | 8,606 |
| Suburban West | 4,041 | 1,851 | 1,882 | 7,774 |
| Suburban East | 807 | 289 | 184 | 1,280 |
| Suburban South | 796 | 292 | 1,503 | 2,591 |
| Clark County | 545 | 971 | 1,215 | 2,731 |
| Total | 15,468 | 8,248 | 9,303 | 33,019 |

| | Summary of Projects by Location | | | |
|------------------------|---------------------------------|-------------|----------|-------|
| | Proposed | Under Const | Complete | Total |
| North Portland | 27 | 17 | 16 | 60 |
| Close in East Portland | 52 | 20 | 35 | 107 |
| Close in West Portland | 45 | 15 | 27 | 87 |
| Suburban West | 20 | 11 | 11 | 42 |
| Suburban East | 13 | 6 | 4 | 23 |
| Suburban South | 6 | 2 | 6 | 14 |
| Clark County | 6 | 6 | 9 | 21 |
| Total | 169 | 77 | 108 | 354 |

Source: The Barry Apartment Construction Report

Sampling of new construction completions

| North Portland | | | | |
|-------------------------|------------------------|-------|----------------------|--|
| Name | Address | Units | Estimated Completion | Notes |
| The Prescott | 4312 N Interstate Ave | 155 | 2014 | 5 & 6 story, studio, 1br, 2br, on site parking |
| Beech Street Apartments | 220 NE Beech St | 61 | 2014 | Home Forward, some outpatient treatment |
| Corso Apartments | 5118 N Interstate Ave | 46 | 2014 | 4-story, no parking, 1br, studios, |
| N Mississippi Apts. | 4018 N Mississippi Ave | 44 | 2014 | 4-story, ground floor retail |

| Close-in Eastside Portland | | | | |
|-----------------------------|----------------------|-------|----------------------|---|
| Name | Address | Units | Estimated Completion | Notes |
| Grant Park Village; Phase I | 3246 NE Broadway St | 211 | 2014 | Apts above New Seasons grocery store. |
| Burnside Apartment | 2625 E Burnside | 135 | 2014+ | 4 story, ground floor retail, underground parking |
| Taylor Street Lofts | 1110 SE 12th Ave | 96 | 2014 | 4 story, on-site parking. Rooftop deck |
| U Street Lofts | 2627 SE Hawthorne St | 78 | 2014 | 4-story, 21 parking spots, ground floor retail |

| Close-in Westside Portland | | | | |
|----------------------------|---------------------|-------|----------------------|---|
| Name | Address | Units | Estimated Completion | Notes |
| The Parker | 1415 NW 12th Ave | 177 | 2014 | Underground parking, 6-story. |
| The Cordelia | 1920 NW Johnson St | 134 | 2014 | 2 - 5 story bldgs, underground parking |
| Stephens Creek Crossing | 6715 SW 26th Ave | 122 | 2014 | Subsidized housing, replaced existing units |
| The Addy | 1721 NW Northrup St | 104 | 2014 | 5-story, on-site parking |

| Suburban West | | | | |
|---------------------------|-----------------------------|-------|----------------------|--|
| Name | Address | Units | Estimated Completion | Notes |
| Tessera (FKA Orenco Wrap) | NE 231st and Campus Way | 304 | 2014 | Central Parking; Commercial space & retail. 3 bldgs |
| Steed Creek | SW 170th Ave at SW Merlo Dr | 243 | 2014 | 10 - 4-story buildings. 10 acre site, club house, pool |
| The 206 | 2499 NW 206th Avenue | 203 | 2014 | 2 - four story buildings, large site, elevator servcd |
| 4th and Main | 150 E. Main St | 71 | 2014 | 4-story, ground floor retail, 3 buildings. Nov 2013 |

| Suburban East | | | | |
|---------------------------|----------------------|-------|----------------------|---|
| Name | Address | Units | Estimated Completion | Notes |
| Glisan Commons | 9999 NE Glisan St | 127 | 2014 | Some subsidized housing, 1st floor retail space |
| SE 151st Apartments | 117 SE 151st Ave | 27 | 2013 | 3 story, 3 buildings. Connected by 2nd floor balconies. |
| Multnomah Student Housing | 8345 NE Glisan St | 21 | 2013 | 3-story, student housing, two phases |
| Kah San Chako Haws | 9707 SE Holgate Blvd | 9 | 2013 | Modular apartments, affordable units |

| Suburban South | | | | |
|-------------------------|--------------------------------|-------|----------------------|---|
| Name | Address | Units | Estimated Completion | Notes |
| Eddyline at Bridgeport | 18055 SW Lower Boones Ferry Rd | 367 | 2014 | Completed in phases |
| Jory Trail at The Grove | 8750 SW Ash Meadows Rd | 324 | 2013 | Large site, many buildings, 3 story |
| The Landing | 14743 Scarlett Oak St | 294 | 2013 | TH & apts, 3 br 2.5 bath units. Phased construction |
| Terrene Apts | 8890 SW Ash Meadows Rd | 288 | 2013 | Completed in phases, 1br, 2br, 3br |

| Clark County | | | | |
|--------------------|------------------------|-------|----------------------|--|
| Name | Address | Units | Estimated Completion | Notes |
| 134th Street Lofts | NE 134th and I-205 | 120 | 2014+ | 4 story, 31 extended stay units for patient families |
| Prestige Plaza | 307 E Mill St | 96 | 2014 | 3-story, studios, 1br, 2br |
| The Reserve | 600 SE Mill Plain Blvd | 418 | 2013 | Completed in phases |
| NorthGlen Villas | 7101 NE 109th St | 200 | 2013 | Phased - gas FP, W/D, fitness center, jacuzzi, spa |

Source: The Barry Apartment Construction Report



OFFICE MARKET ANALYSIS

A. SYNKAI HARRISON

Portland State University

Nationally the office sector experienced its “best performance in years” according to the National Real Estate Investor as employment in professional and business services sectors continues to grow. Demand in the office market is expect to remain strong in 2015 due to low inflation and the expansion of the US economy. Nationally the demand for office space is its strongest since 2006 with West Coast markets taking the lead. Once again technology firms continue to be a primary driver in the metro Portland office market as companies from San Francisco continue to seek Portland as their new home. Interest from institutional investors continues to grow due to low vacancy rates and increasing rents according to Jones Lang LaSalle, especially due to Portland being seen as a superior value compared to its closets major competitors.

VACANCY

The overage vacancy rate for the Portland market according to Kidder Mathews ended the fourth quarter at 8.2 percent compared to the previous quarter at 8.6 percent and 9.4 percent at the end of the fourth quarter of 2013. Colliers International reports an average total vacancy of 9.2 percent for the Portland market at the end of the fourth quarter down from 9.6 percent at the end of the third quarter and 10.4 percent at the end of the fourth quarter of 2013. CoStar reports the lowest vacancy rate for the Portland metro office market at 8.1 percent down from 8.5 percent at the end of the previous quarter of 2014. Jones Lang LaSalle reports a total vacancy for the Portland metro office market of 9.6 percent at the end of 2014

■ **A. Synkai Harrison** is a Master of Real Estate Development candidate and has been awarded the Center for Real Estate Fellowship. Any errors or omissions are the author’s responsibility. Any opinions are those of the author solely and do not represent the opinions of any other person or entity..

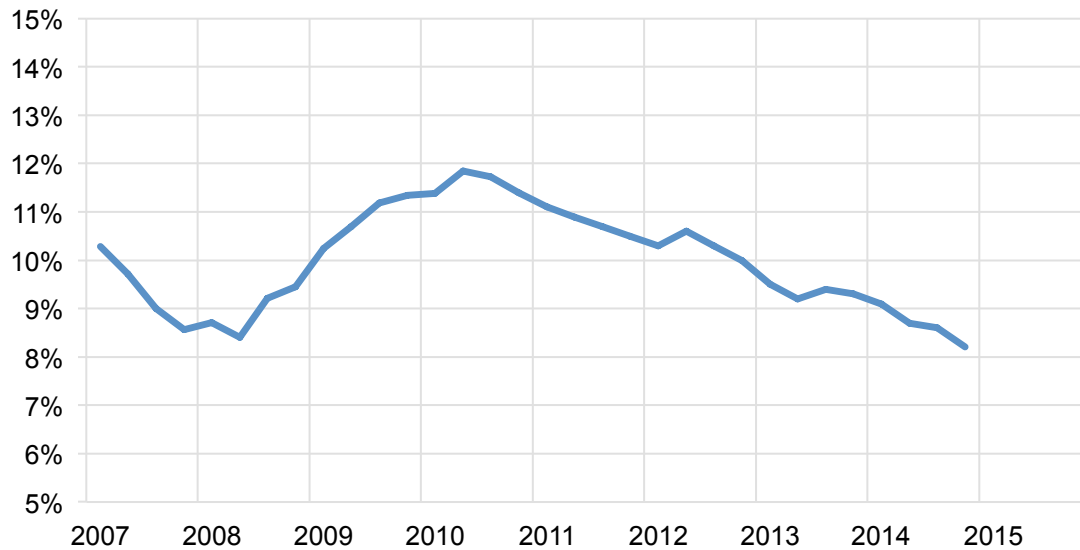
compared to 11.1 percent at the end of 2013. According to Jones Lang LaSalle this is the lowest vacancy rate for the Portland's office market in nine years.

Average vacancy rates for Class A projects was 9.6 percent at the end of the fourth quarter compared to 10.2 percent in the three previous quarters of 2014 and 10 percent in the end of the fourth quarter of 2013 according to CoStar.

CoStar reports that the vacancy rate has remained unchanged for Class B properties in the last two quarters at 8.5 percent. The vacancy rates for the first and second quarters was 9.5 percent and 8.8 percent respectively. Class C properties reported the lowest average vacancy rate, 5.9 percent, for all property types down from 6.6 percent at the end of the third quarter of this year.

As it seems with Portland's office market overall, tech firms continue to drive demand in the Central Business District (CBD). Jones Lang LaSalle recently reported that 30 percent of leasing activity in 2014 can be attributed to high tech firms compared to 18 percent in 2007. Finance firms came in second with 22 percent and professional services at 12 percent.

Norris Beggs and Simpson (NBS) reports the most significant drop in vacancy for the Central City Portland, which includes Portland's CBD, to 9.01 percent at the end of the fourth quarter of 2014 from 10.58 percent at the end of the third quarter. Portland's Northwest area reported the lowest average vacancy rate at 7.77 percent compared to the CBD at 8.84 percent according to NBS. Total vacancy in the CBD according to Colliers International was 9.2 percent at the end of the fourth quarter of 2014. CoStar reports for the CBD, overall average vacancy has dropped to 9 percent at the end of the fourth quarter down slightly from 9.1 at the end of the third quarter of 2014. NBS reports an average vacancy rate for the suburban market of 13.52 percent.

Figure 1: Portland Office Market Vacancy Rate, 2007–2014

Source: Kidder Mathews

RENTAL RATES

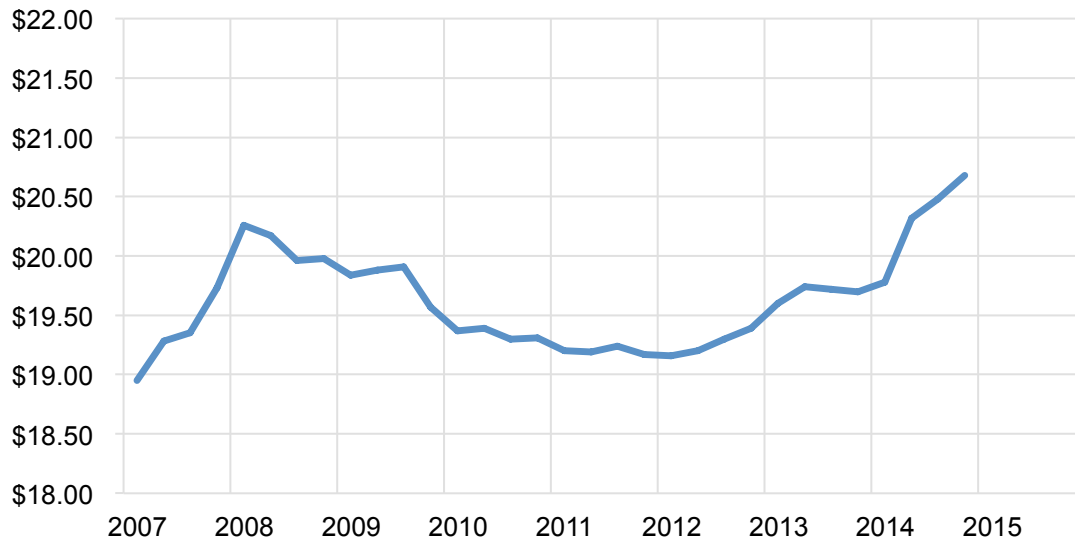
Colliers reports an average annual rental rate of \$21.34 per square foot for the Portland metro office market. The third quarter of 2014 ended with an average annual rental rate of \$21.14 per square foot. The fourth quarter of 2013 ended with an average rate per square foot of \$20.38 all according to Colliers. Kidder Mathews reports an average asking rate of \$20.68 per square foot up slightly from the previous quarter which ended with an average asking rate of \$20.53. The average asking rate a year ago was \$19.73 per square foot according to Kidder Mathews. Jones Lang LaSalle reports a direct average asking rental rate of \$22.49 per square foot at the end of the fourth quarter up from \$21.18 at the end of 2013. CoStar reports an average quoted rental rate of \$20.90 per square foot.

CoStar reports an average asking rental rate of \$24.91 per square foot in Portland's CBD up from \$24.53 at the end of the third quarter. The average annual rental rate for the CBD at the end of the fourth quarter of 2014 was \$25.20 per square foot, according to Colliers.

Class A office properties in the CBD reported an average annual per square foot rental rate of \$27.25 according to Colliers International. According to CoStar, the average quoted rate for the Class A market overall was \$25.17 per square foot at the end of the fourth quarter.

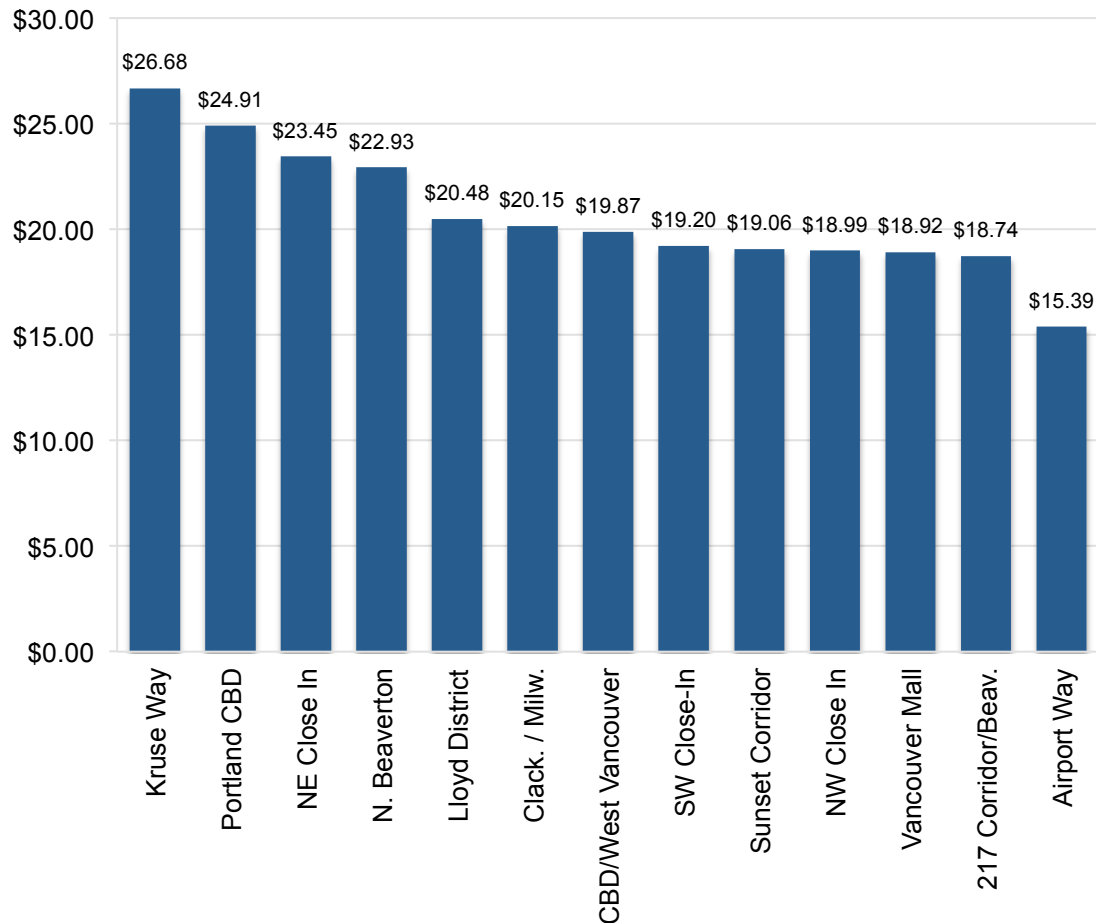
Class B properties reported an average quoted rate of \$19.50, according to CoStar with Class C reporting \$16.89 per square foot.

Figure 2: Portland Office Market Average Asking Rents, 2007–2014



Source: Kidder Mathews

**Figure 3: Office Market Average Asking Rents in Portland Area
Submarkets, fourth quarter 2014**



Source: CoStar

ABSORPTION AND LEASING

Tech firms have become a primary driver in Portland's office market accounting for 35% of leasing activity in the fourth quarter of 2014 according to Jones Lang LaSalle. Net absorption for the overall Portland market was 340,094 square feet according to Colliers International up from 102,997 square feet of positive absorption the previous quarter for a total of 1,022,416 square feet for the year. Norris Beggs and Simpson reports 229,146 positive absorption for the CBD and 260,146 square feet for the Central City as a whole. Norris Beggs and Simpson reports only 79,468 square feet of positive absorption for the suburban market. Some submarkets experienced significant positive absorption such as the Sunset Corridor with 92,323 square feet. On the other hand Central Beaverton and Central 205

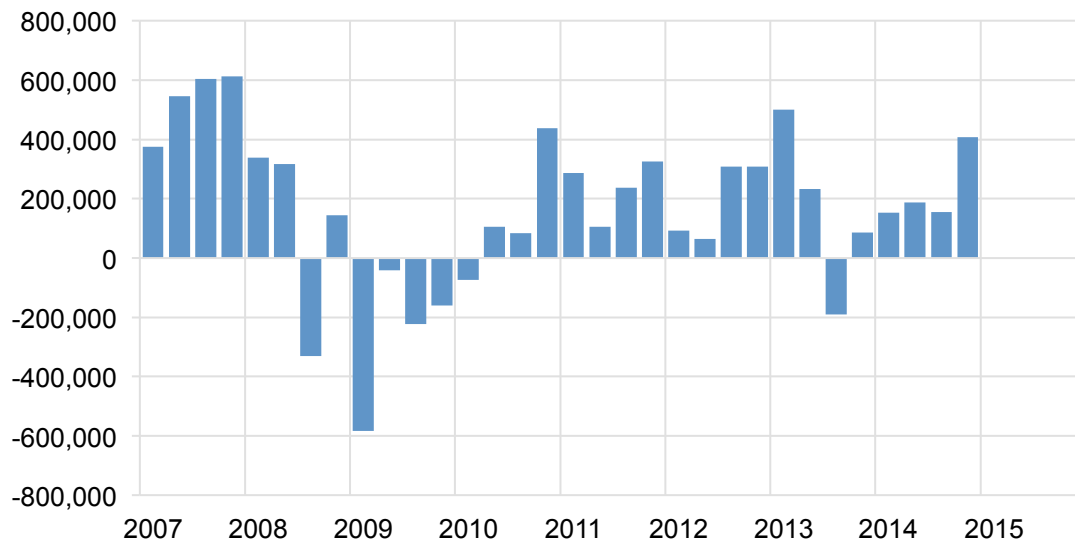
experienced negative absorption of 19,305 square feet and 190,355 square feet respectively.

According to CoStar Portland's Class A market experienced 171,972 square feet of positive absorption at the end of the fourth quarter of 2014 compared to the end of the third quarter with 1,954 square feet of positive absorption. In the CBD, Class A saw 128,773 square feet of positive absorption followed by the Westside market with 54,293 square feet according to Colliers International.

The Class B market experienced 45,985 square feet of positive net absorption at the end of the fourth quarter of 2014, a decrease from the third quarter which ended with 137,435 square feet of positive absorption. Absorption was negative for Class B properties in the CBD, according to Colliers. The fourth quarter ended with negative absorption 112,109 square feet.

Net absorption for the Class C office market was positive 179,514 square feet according to CoStar. The Class C market 31,400 square feet of positive absorption in the CBD for a year to date total of 108,461 square feet.

Figure 4: Portland Office Market Net Absorption, Square Feet, 2007–2014



Source: Kidder Mathews

Table 1: Notable Lease Transactions

| Tenant | Address | Market | Size |
|------------------------------|--------------------|---------------|-------------|
| Portland Energy Conservation | First & Main | CBD | 41,310 |
| CLEAResult | First & Main | CBD | 28,426 |
| Lattice Semiconductor | US Bancorp Tower | CBD | 23,680 |
| Aruba Networks | Block 300 | CBD | 22,181 |
| VelaPoint | AmberGlen Corp Cen | Sunset/HBO | 17,667 |
| Schrodinger, LCC | One Main Place | CBD | 16,554 |

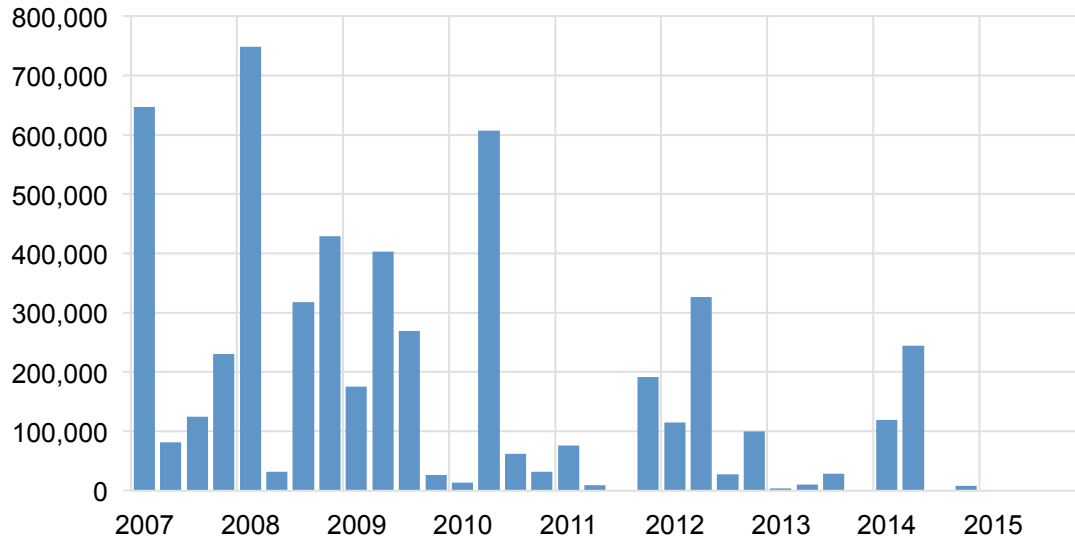
Source: Colliers International

Table 2: Notable Sales Transactions

| Tenant | City | Price |
|-------------------------------|-------------|--------------|
| One Main Place | Portland | \$87,300,000 |
| Historic US Nat. Bank Block | Portland | \$40,000,000 |
| The Yeon Bld | Portland | \$29,750,000 |
| Mt. Scott Professional Ctr II | Portland | \$11,000,000 |

Source: Colliers International

Figure 5: Portland Office Market Deliveries, Rentable Building Area, Square Feet, 2007–2014



Source: Kidder Mathews

DELIVERIES AND CONSTRUCTION

Kidder Mathews reports that one building was delivered during the fourth quarter 2014 compared to three at the end of the third quarter, six at the end of the second quarter and four at the end of the first. CoStar also reports only one building was delivered at the end of the fourth quarter of 2014 totaling 36,000 square feet compared to 7,560 square feet in the third quarter.

Currently there are 9 buildings totaling 582,296 square feet under as reported by Kidder Mathews. The largest office projects under construction according to CoStar are the Park Avenue West Tower and Pearl West. Approximately 67 percent of Park Avenue West's 221,380 square feet is preleased. Pearl West, at 160,000 square feet, is 30 percent preleased. ■

INDUSTRIAL MARKET ANALYSIS

A. SYNKAI HARRISON

Portland State University

The National Real Estate Investor recently reported that 2014 saw the return speculative development in the industrial market in both major and secondary cities. Nationally, food supply, third party logistics and e-commerce firms are searching for spaces between 200,000 and 500,000 square feet with demand leaning towards larger spaces.

According to Jones Lang LaSalle, Portland has seen a significant increase in speculative development in recent months with over 2 million square feet of industrial space under construction at the end of the fourth quarter of 2014. In the first quarter of 2015, Portland should see the delivery of 500,000 square feet of space much of it speculative. Kidder Mathews reports that Portland's industrial market is experiencing its lowest vacancy rate since the third quarter of 2007.

Leverage favors owners in Portland's market as vacancies continue to tighten. Technology and automation are expected to increase demand, US manufacturing production output is at an all-time high, according to CBRE, primarily due to increases in technology and automation. Increased output should spur demand in key manufacturing and supply chain markets.

With the impending legalization of marijuana in Oregon, the marijuana industry is actively competing for industrial space which may put pressure on an already tight industrial market. According to the Oregonian, Portland is home to more big medical marijuana growers than any other city in the state which puts the metro area in the position to be a major producer for the recreational market.

■ **A. Synkai Harrison** is a Master of Real Estate Development candidate and has been awarded the Center for Real Estate Fellowship. Any errors or omissions are the author's responsibility. Any opinions are those of the author solely and do not represent the opinions of any other person or entity.

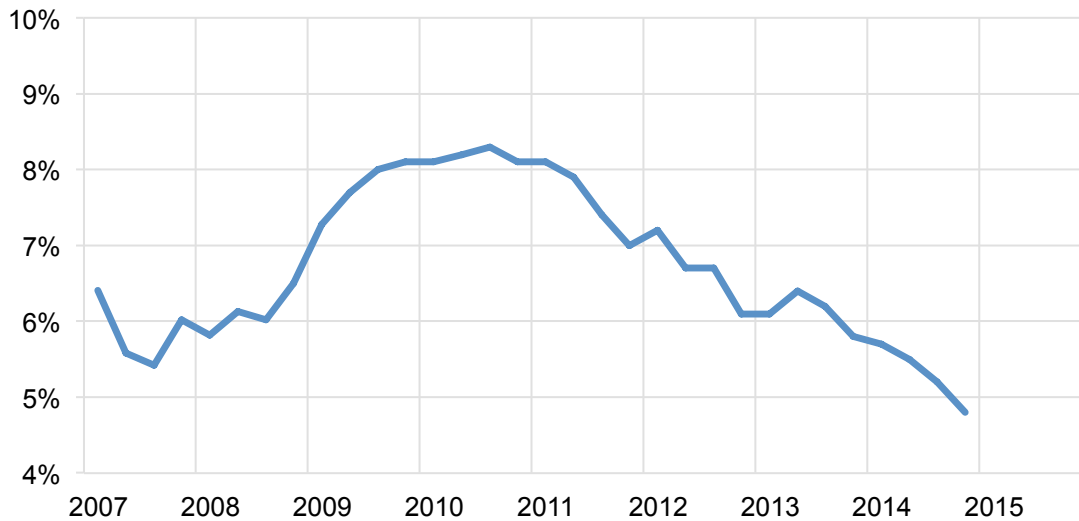
VACANCY

Kidder Mathews reports an overall vacancy rate of 4.8 percent for the fourth quarter of 2014. This is the lowest rate reported since the third quarter of 2007. At the end of the third quarter, Kidder Mathews reported an overall vacancy rate 5.2 percent, at the end of the second quarter it was 5.7 percent and 5.8 percent at close of the first quarter of this year. CoStar is showing a slightly higher overall vacancy of 5.3 percent for Portland's industrial market. As with Kidder Mathews, CoStar has been reporting a downward trend for several quarters. Last quarter ended with a 5.5 percent vacancy rate with the second and first quarters both ending at 5.9 percent.

Norris Beggs and Simpson reports that the vacancy rate in the industrial market has fallen to 6.8 percent with Vancouver having the lowest rate in the region at 2.83 percent. Colliers states that the overall vacancy rate in the Portland market was 5 percent at the end the fourth quarter. The areas with the lowest rates in the industrial sector were Southwest Sunset with 2.83 percent, Southeast with 4.07 percent and Southwest I-5 with 4.67 percent according to Norris Beggs and Simpson. Jones Lang LaSalle reports a 6.5 percent average overall vacancy rate for Portland's industrial market.

Costar reported an overall vacancy rate for the flex market of 11.5 percent for the final quarter of 2014. This was up slightly from the previous quarter at 11.2 percent. The second quarter ended with 10.8 percent and 10.3 percent at the end of the first quarter. Norris Beggs and Simpson reports an 11.02 percent vacancy rate for the flex market at the end of the fourth quarter of 2014.

For the warehouse market, CoStar reports a 4.7 percent average vacancy rate at the end of the fourth quarter of 2014. Warehouse project reported vacancy rates of 4.9 percent at the end of the third quarter, 5.4 percent in the second quarter and 5.5 percent at the end of the first.

Figure 1: Portland Industrial Market Vacancy Rate, 2007–2014

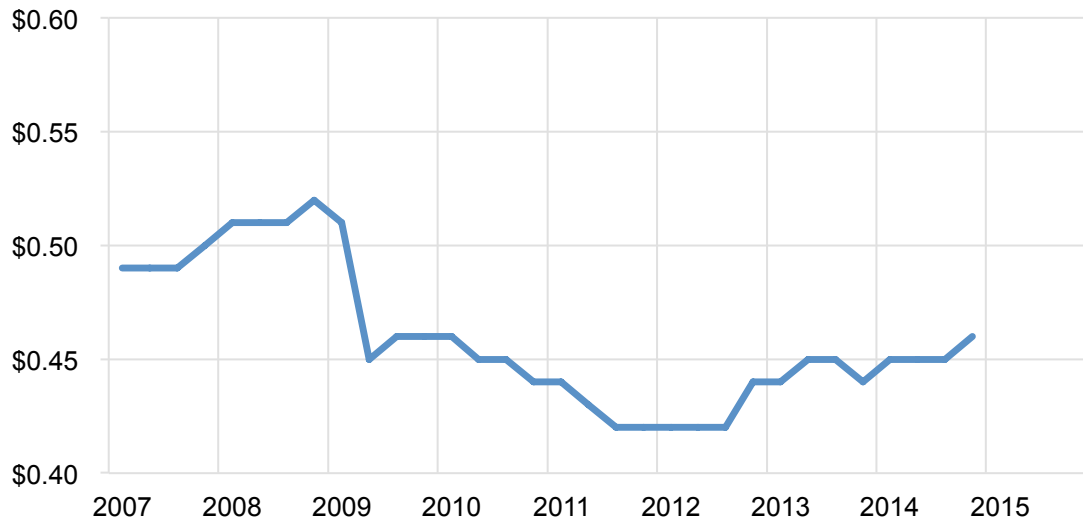
Source: Kidder Mathews

RENTAL RATES

CoStar is reporting an average annual industrial rental rate of \$6.63 per square foot, approximately \$.55 per square foot monthly, for the fourth quarter of 2014. According to CoStar, this was a 3.9 percent increase from the previous quarter of \$6.38 or approximately \$.51 per square foot monthly. Colliers International reports an average monthly rental rate of \$.44 per square foot. Average monthly rental rates have remained unchanged since the first quarter of this year according to Colliers. Kidder Mathews reports an average annual asking rental rate of \$5.48 for the Portland market an increase of 4 percent since the fourth quarter of 2013. The fourth quarter of 2013 reported an average annual rental rate of \$5.26 per square foot according to Kidder Mathews.

The flex sector ended the fourth quarter at \$11.68 per square foot annually according to CoStar. This is up from \$11.24 per square foot annually from the previous quarter.

The warehouse sector's average annual rental rate was \$5.69 per square foot annually up slightly from the third quarter at \$5.59 per square foot.

Figure 2: Portland Industrial Market Average Quoted Rates, 2007–2014

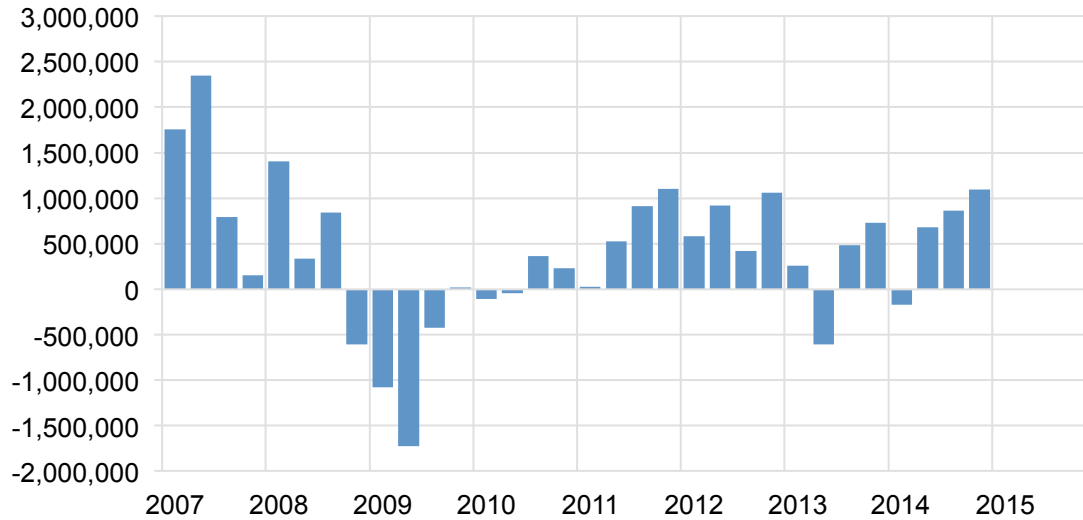
Source: Kidder Mathews

ABSORPTION AND LEASING

Absorption was up significantly in the fourth quarter compared to the third quarter of 2014 according to Kidder Mathews. The fourth quarter ended with 1,098,195 square feet up from 863,882 square feet at the end of the third quarter. The fourth quarter of 2013 experienced 827,047 of positive absorption according to Kidder Mathews. According to CoStar, overall net absorption for the Portland industrial market was positive 952,749 up from 746,963 in the previous quarter. The second and first quarters saw 582,457 and negative 33,447 respectively. Jones Lang LaSalle reports 406,896 square feet of positive absorption at the end of the fourth quarter of 2014 for a total of 2,491,006 for 2014.

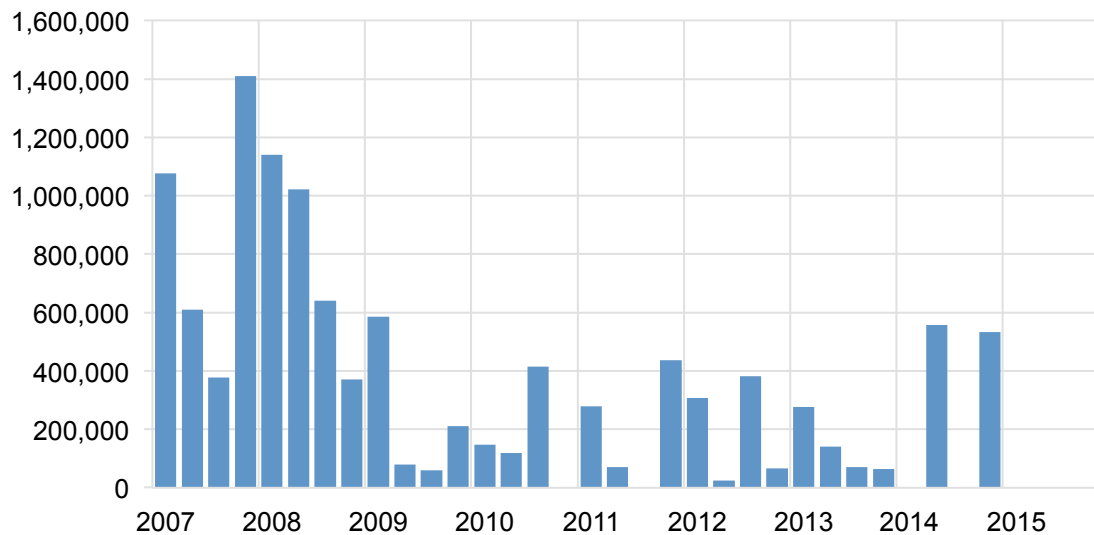
The Flex market ended the fourth quarter with 17,417 square feet of positive absorption according to CoStar. This was a slight improvement over the third quarter with negative absorption of 65,568 square feet. Norris Beggs and Simpson reported 1,141,522 positive absorption for the Flex market.

Figure 3: Portland Industrial Market Net Absorption, Square Feet, 2007–2014



Source: Kidder Mathews

Figure 4: Portland Industrial Market Deliveries, Rentable Building Area, Square Feet, 2007–2014



Source: Kidder Mathews

Table 1: Notable Industrial Lease Transactions

| Tenant | Address | Market | Size |
|------------------------|---------------------------------|-----------------|-------------|
| Grocery Outlet | Cascade Distribution Center | East Col. Corr | 184,860 |
| Bay Valley Foods, LLC | Kelly Point Distribution Center | Rivergate | 150,000 |
| Wymore Transfer Co. | Columbia Commerce Park | Airport Way | 73,928 |
| Intl. Paper Company | Riviera Bldg | 217Corr | 60,000 |
| Expeditors | Stockyards Comm. Cir | Hayden/Swan Is. | 49,265 |
| Pinnacle Exhibits | Sunset Corr. Ind Bldg | Sunset Corr | 47,565 |
| Three J's Distributing | Comm. Park Clackamas | Clack/Milwaukie | 40,960 |
| Daimler Trucks | 4859 N Lagoon Ave | Hayden/Swan Is. | 37,700 |
| Cash & Carry Food Serv | 1958 NW Upshur St | NW Close-in | 34,000 |

Source: Colliers International

Table 2: Notable Industrial Sales Transactions

| Building | City | SF | Price | Price/SF |
|------------------------------|-------------|-----------|--------------|-----------------|
| 5000-5130 N Basin Ave | Portland | 346,612 | \$12,600,000 | \$36.35 |
| 23810 NW Huffman St | Hillsboro | 80,000 | \$7,550,000 | \$94.38 |
| 2850 NW 31 st Ave | Portland | 71,868 | \$6,740,000 | \$57.05 |
| 2828-2840 NE Riverside Way | Portland | 49,150 | \$3,650,000 | \$74.26 |
| 15561 SW Oregon ST | Sherwood | 48,000 | \$3,275,000 | \$68.23 |

Source: Kidder Mathews

DELIVERIES AND CONSTRUCTION

CoStar reports five buildings were delivered by the end of the fourth quarter for a total of 590,700 square feet. No buildings were brought to market in the third quarter and first quarters compared to the second quarter where six buildings were completed for a total of 505,601 square feet. Five buildings were delivered during the fourth quarter according to Kidder Mathews for a total of 534,200 square feet. Six buildings were delivered in the second quarter of 2014 for a total of 557,963 square feet whereas the third and first quarter saw no deliveries. Jones Lang LaSalle reports that 534,200 square feet was delivered during the fourth quarter of 2014, all of which was speculative. This brought the total amount of industrial space for 2014 to 1,184,233 square feet with an additional 2 million square feet under construction. ■

RETAIL MARKET ANALYSIS

A. SYNKAI HARRISON

Portland State University

The US Bureau of Labor Statistics reports that the national unemployment rate declined to 5.6 percent in December, adding 252,000 jobs nationally. Portland's unemployment rate has continued to decline to 6.2 percent in November of 2014, below the most recent statewide rate of 7 percent. Consumer confidence has begun to rebound as oil and gas prices declined steadily which led to an increase in retail sales during the holidays.

Typically there is a six month lag between a decrease in energy prices and an increase in retail sales. Since the decline in energy prices, particularly oil, began during the latter part of 2014, the US economy should begin to experience an increase in retail sales during mid-2015. According to Colliers International, US GDP growth in 2015 is predicted to be its highest in ten years. Portland is well positioned to take advantage of this growth as the city is reported to be one of the country's fastest growing major metro regions.

VACANCY

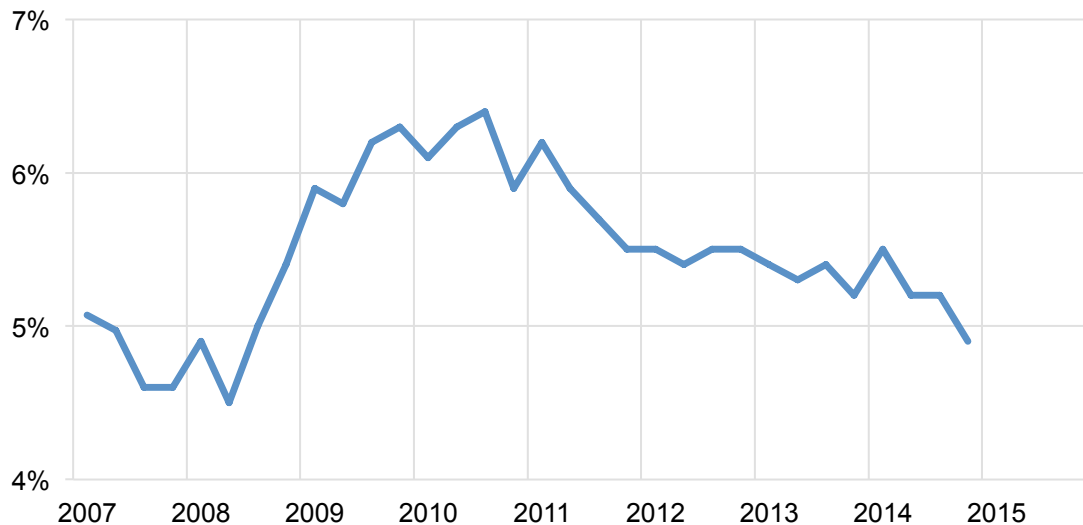
According to Kidder Mathews Portland's retail market ended the fourth quarter of 2014 with an average vacancy rate of 4.9 percent down from 5.2 percent at the end of the third quarter. The rate for the retail market has remained unchanged since the fourth quarter of last year in spite that the fourth quarter saw the lowest vacancy rate since the third quarter of 2008, according to Kidder Mathews. CoStar is

■ **A. Synkai Harrison** is a Master of Real Estate Development candidate and has been awarded the Center for Real Estate Fellowship. Any errors or omissions are the author's responsibility. Any opinions are those of the author solely and do not represent the opinions of any other person or entity.

reporting an average vacancy rate of 4.8 percent for the fourth quarter down slightly from the previous two quarters which ended with a 5 percent vacancy rate at the end of the second quarter and a 5.2 percent vacancy rate at the end of the first quarter of this year. Norris Beggs and Simpson reported one of the highest average vacancy rates for the end of the fourth quarter 2014 at 6.06 percent.

Kidder Mathews reports, Convenience Centers, which include shopping centers up to 30,000 square feet, experienced a vacancy rate of 11 percent. Neighborhood Centers, properties anchored by a supermarket and ranging from 30,000 to 100,000 square feet, reported a vacancy rate of 7.4 percent. Community centers, properties between 100,000 and 300,000 square feet reported the lowest vacancy rate according to Kidder Mathews, 3.4 percent. Regional and Super-Regional centers reported a “sub-4 percent vacancy”.

Figure 1: Portland Retail Market Vacancy Rate, 2007–2014



Source: Kidder Mathews

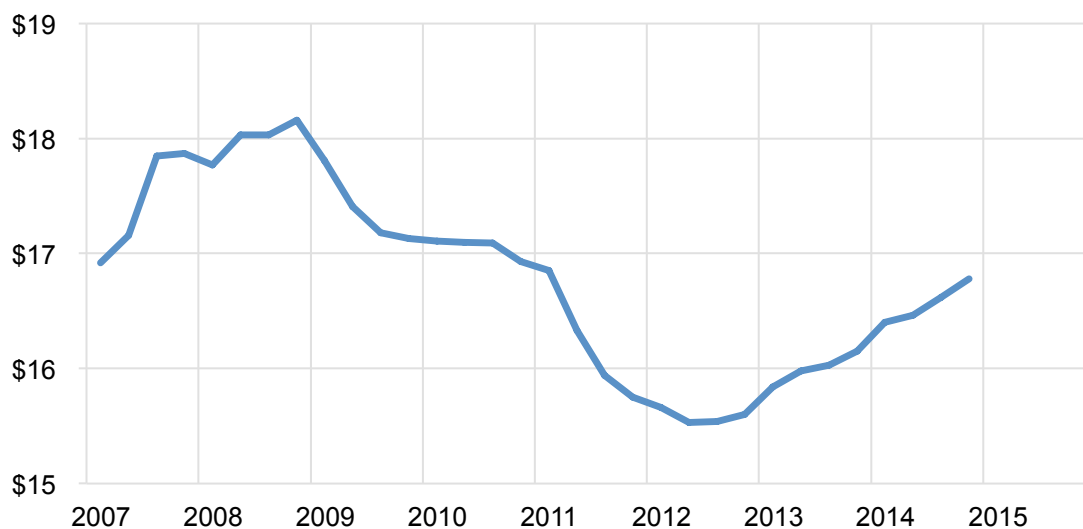
RENTAL RATES

According to Colliers International, the average rental rate for the Portland retail market was \$16.85 per square foot. Rates have continued rise for five consecutive quarters. At the end of the third quarter, the average rental rate was \$16.72 per square foot, at the end of the second quarter the average rental rate was \$16.51 per square foot and the first quarter ended with \$16.49 per square foot. Colliers reported that the submarket area with the highest average rental rate was the Lake Oswego/West Linn/Kruse Way market. This area reported an average rental rate of \$25.74 per square foot. The Portland CBD came in second, according to Colliers, ending the fourth quarter with an average rental rate of \$22.10 per square foot.

For retail sub property types, Colliers International reports that at the end of the fourth quarter of 2014 the average rental rate for malls was \$19.36 per square foot, for Shopping Centers the average rental rate was \$17.33 per square foot, Power Centers the average rate was \$19.68 per square foot and General Retail at \$15.57 per square foot.

Kidder Mathwes reports that “Neighborhood Centers”—properties ranging between 30,000 and 100,000 square feet—had an average asking rental rate of \$15.39 per square foot.

Figure 2: Portland Retail Market Average Quoted Rates, 2007–2014

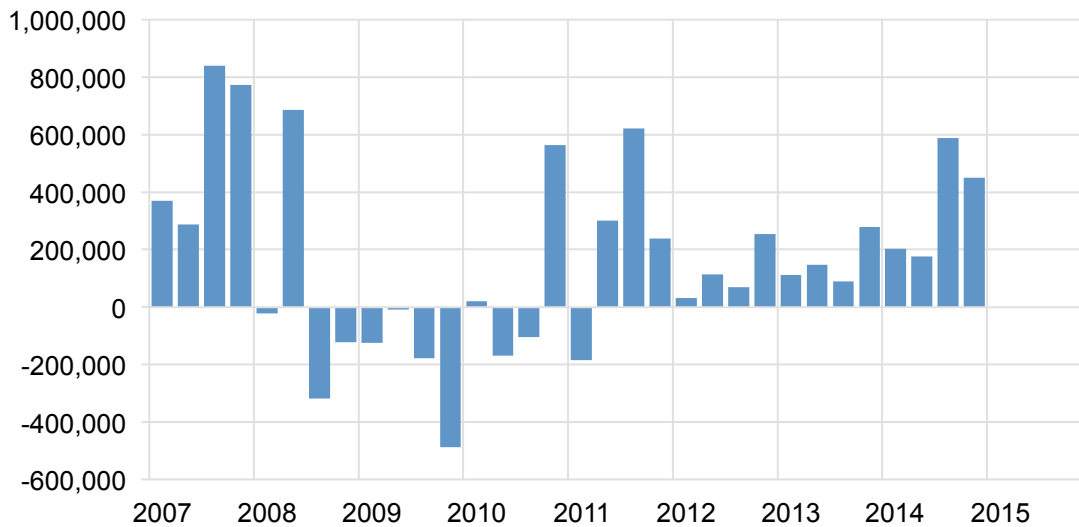


Source: Kidder Mathews

ABSORPTION AND LEASING

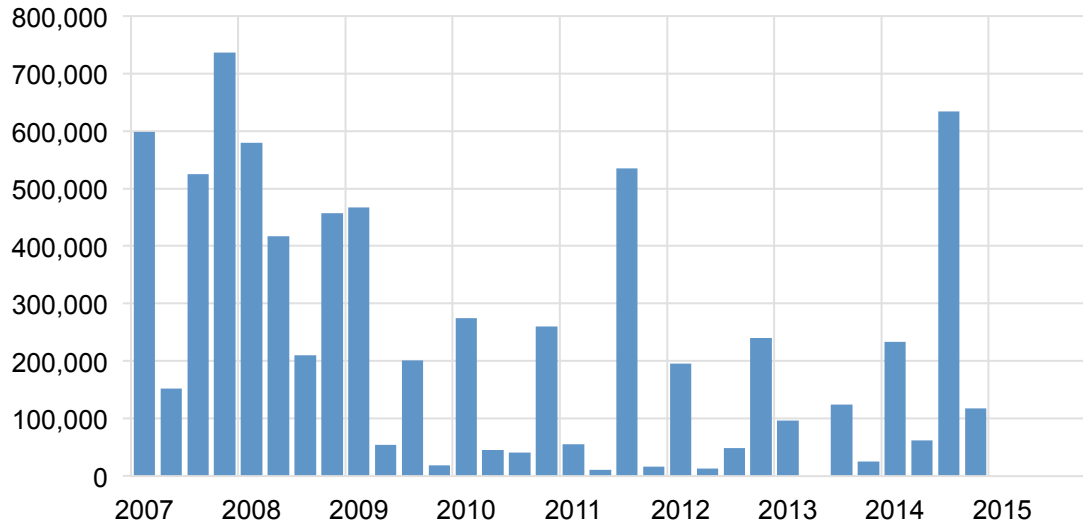
Kidder Mathews is reported 450,836 square feet net positive absorption for the overall retail market at the end of the fourth quarter compared to the third quarter with 589,374 square feet of positive absorption. CoStar reported 316,938 square feet of positive absorption compared to the third quarter which saw 557,910 square feet of positive absorption. The market experienced 378,948 square feet of positive absorption during the fourth quarter according to Colliers International.

Figure 3: Portland Retail Market Net Absorption, Square Feet, 2007–2014



Source: Kidder Mathews

Figure 4: Portland Retail Market Deliveries, Net Rentable Building Area, Square Feet, 2007–2014



Source: Kidder Mathews

Table 1: Notable Retail Lease Transactions

| Tenant | Address | Market | Size |
|----------------------|-------------------------------|-----------------|--------|
| Wilco Farms | 1900 NE 162 nd Ave | Camas/Washougal | 40,354 |
| Craft Warehouse | Cedar Hills Crossing | N. Beaverton | 19,524 |
| Ace Hardware | Sunnyside Village | Clack/Milwaukie | 12,000 |
| Speed's Auto Service | 120 SE Clay St | SE Close-in | 11,880 |
| Mattress World | 2919-25 NW Division | Gresham | 10,000 |
| The Rosewood Init. | Village Square | Mall 205 | 7,150 |
| Heart Montessori | West Linn Retail Ctr | LO/West Linn | 7,098 |

Source: Colliers
International

Table 2: Notable Retail Sales Transactions

| Building | City | Price | Price/SF |
|----------------------|-------------|--------------|-----------------|
| Wilsonville Town Ctr | Wilsonville | \$35,600,000 | \$212 |
| Sunnyside 205 | Portland | \$17,525,000 | \$327 |
| Baker Street Square | McMinnville | \$17,200,000 | \$368 |
| Oregon City Point | Oregon City | \$12,350,000 | \$348 |
| Hillsboro Town Ctr | Hillsboro | \$10,000,000 | \$92 |
| Former Target | Portland | \$6,000,000 | \$51 |

Source: Kidder Mathews

DELIVERIES AND CONSTRUCTION

Three buildings totaling 82,820 square feet of retail space were delivered during the fourth quarter of 2014 according to CoStar. 265,931 square feet was still under construction at the end of the quarter. Norris Beggs and Simpson reported 257,399 square feet under construction in the Portland metro market at the end of the fourth quarter of 2014. According to Colliers International, 296,262 square feet of retail space was still under construction at the end of the fourth quarter. Kidder Mathews reports that there are currently nineteen projects under construction for a total of 258,807 square feet. A total of forty three projects were delivered during 2014, whereas only twenty two projects were delivered in 2013 according to Kidder Mathews.

CoStar reported that there were 57 retail sales transactions in the first nine months of 2014 totaling \$401,612,199. This is compared to the same time period in 2013 where only 41 transactions took place for a total of \$503,766,688. Prices per square foot averaged \$140.11 in 2014 compared to \$165.05 per square foot in 2013. Kidder Mathews also reported that there were \$678 million in retail transactions for the year with average price per square foot of \$160. This amounts to a 10 percent increase in total sales volume from 2013 to 2014.