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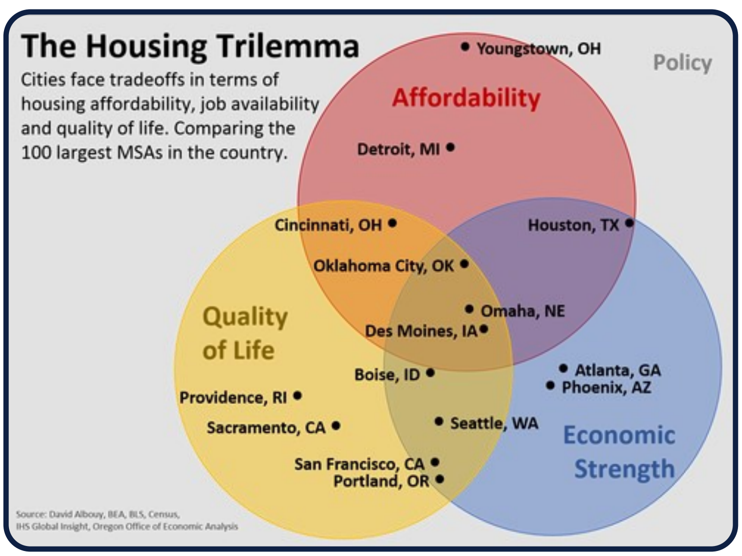
Housing Market Booming:

Bubble or Sustainable?

By Kevin Chambers

In 2016, Josh Lehner, an economist for the State of Oregon, compiled a database for the Oregon Office of Economic Analysis[1] of the 100 largest metro areas in the US. He compared them using three dimensions: affordability, quality of life, and economic strength. After reviewing the data, Lehner created a paradigm called the Housing Trilemma. He argues that after the 2008 crisis, most Americans have to give up one or two of the factors when choosing a metro area in which to live. Only a few cities in the nation are balanced in all three.

Most of the tradeoffs occur due to market forces and are relatively logical. People want to move to places that have strong economies and high quality of life, so those popular places become less affordable. On the flip side, cities that are struggling financially usually have more affordable housing options.



In the Housing Trilemma diagram, you can see a representative number of cities. Portland is an ideal example of a city that has an appropriate balance of economic strength and quality of life, but poor housing affordability. For Portland, this is driven mostly by its acutely low vacancy rate and low house price to income ratio. Houston is an example of a city that has a strong economy and affordable housing. However, it scores low

[1] https://oregoneconomicanalysis.com/2016/06/08/the-housing-trilemma/

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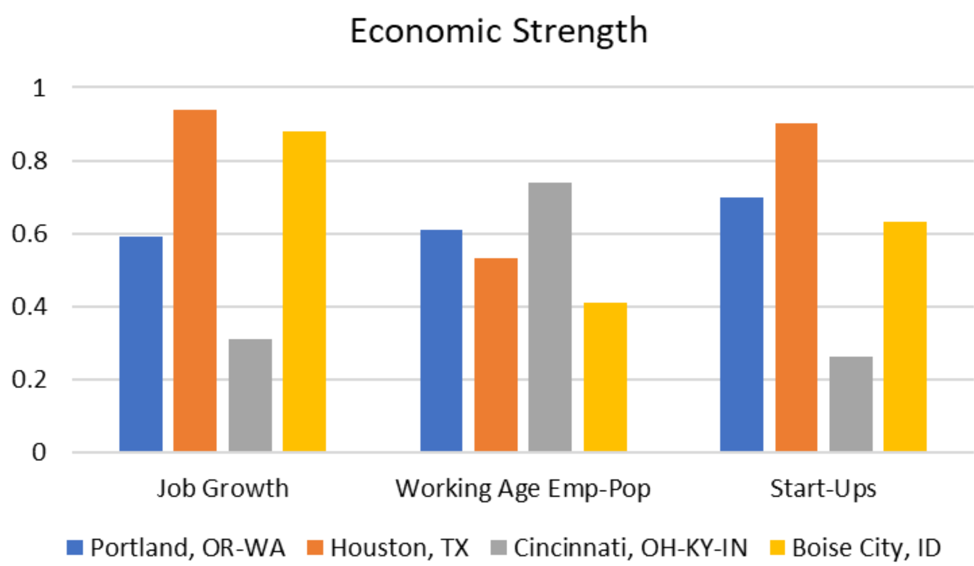
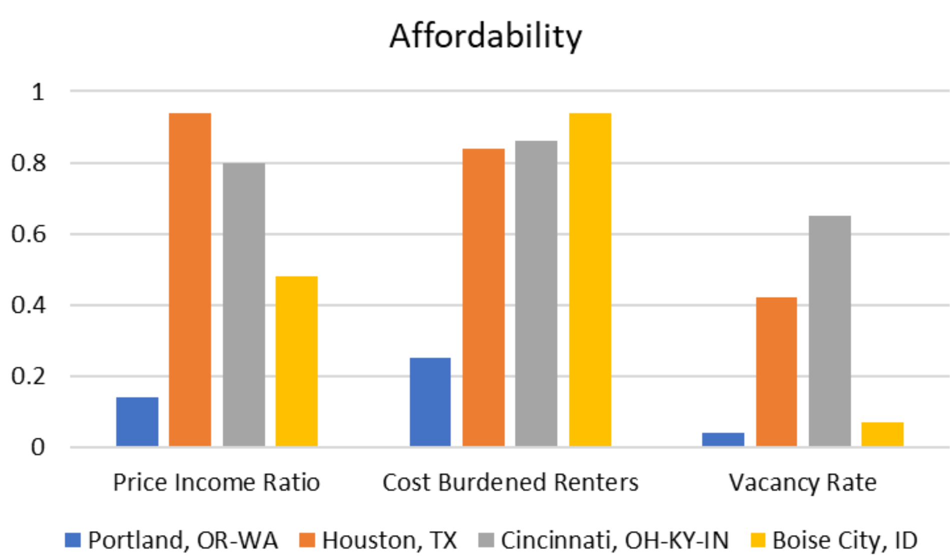
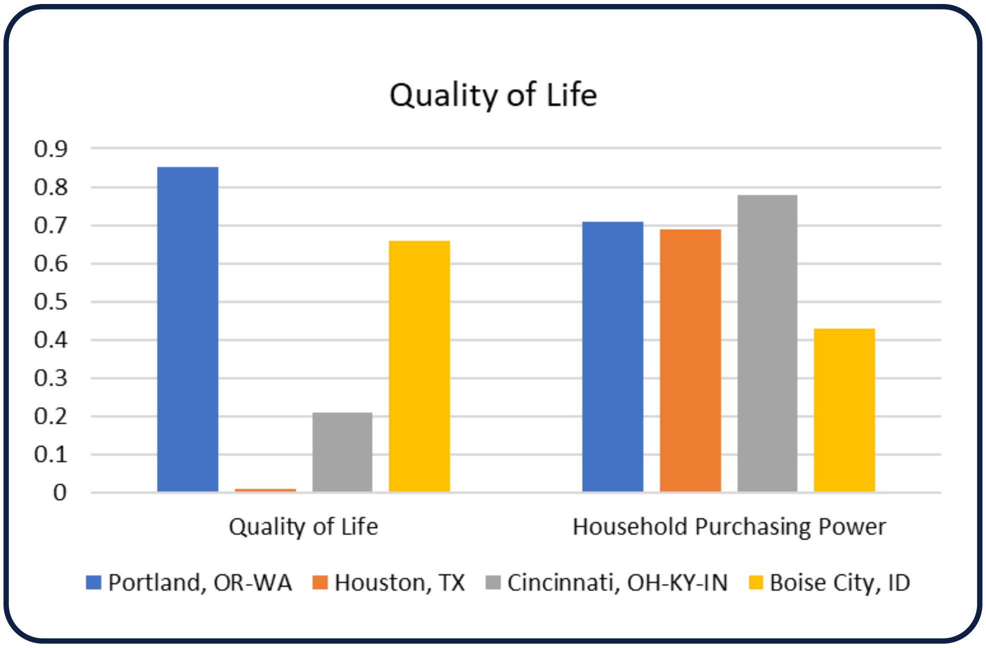

Economic Strength
1
0.8
0.6
0.4
0.2
0
Job Growth
Working Age Emp-Pop
Start-Ups
Portland, OR-WA
Houston, TX
Cincinnati, OH-KY-IN
Boise City, ID


Affordability
1
0.8
0.6
0.4
0.2
0
Price Income Ratio
Cost Burdened Renters
Vacancy Rate
Portland, OR-WA
Houston, TX
Cincinnati, OH-KY-IN
Boise City, ID



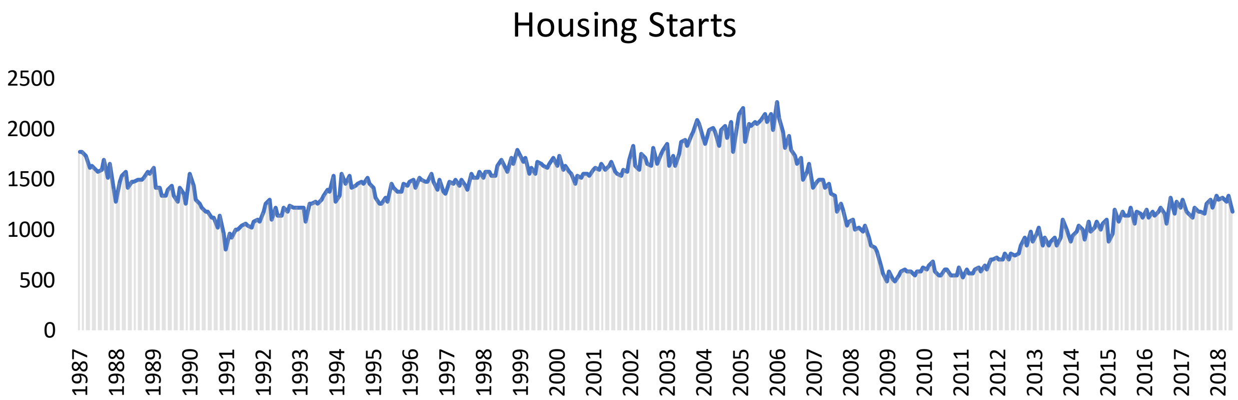
on quality of life. Cincinnati is the third extreme: a city with high quality of life and affordability; however, their local economy is struggling.

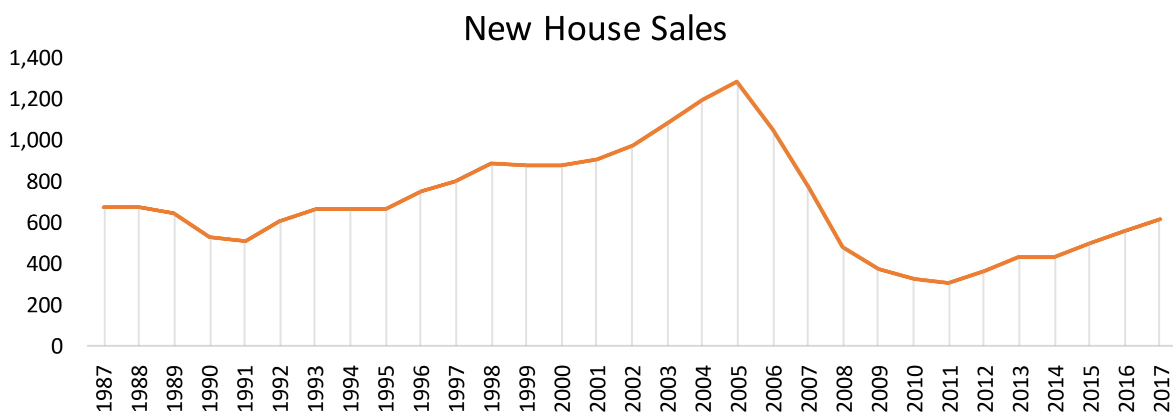
As shown in the first diagram, there are a few cities that have a good balance of the factors. Boise, Des Moines, Omaha, and Oklahoma City all have good scores for all factors. Only 8 cities in the country ranked in the top half for all dimensions. No city ranked in the top 20 in all three dimensions.

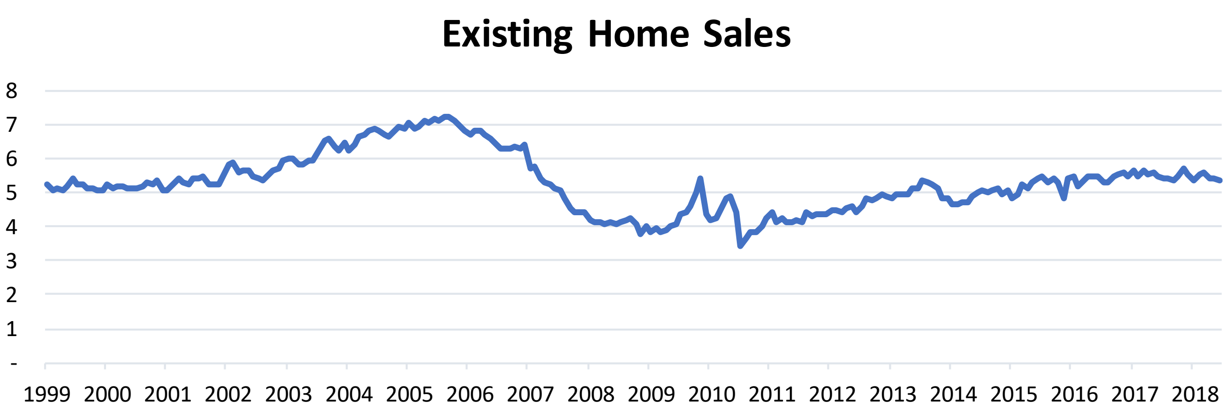
Lehner's research is logical. People mostly move to places that have high quality of life or economic strength. The cluster of cities down in those two circles is evidence. Therefore, one can assume that having more people move to an area, and those people making more money, are primary influencers of housing prices. We will explore this relationship in the next section.

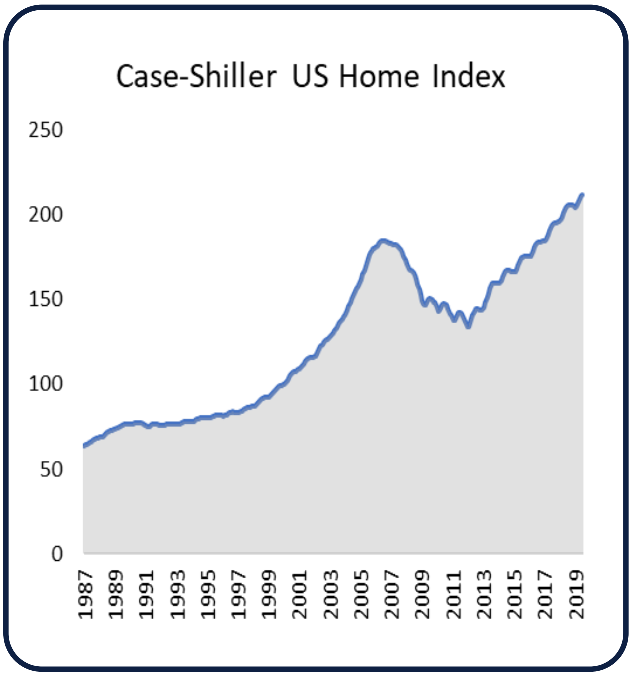
The Aftermath of a Crash

The 2007-2008 market crash was one of the most significant housing events in modern history. Housing markets around the world crashed, followed by the global stock markets and financial institutions. In 2018, housing rebounded. Some people point to a reestablishment of a bubble as prices seem to be getting too expensive and they worry about another collapse. However, there are some meaningful differences this time.


Housing Starts
2500
2000
1500
1000
500
0
1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018


New House Sales
1,400
1,200
1,000
800
600
400
200
0
1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017


Existing Home Sales
8
7
6
5
4
3
2
1
-
1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018

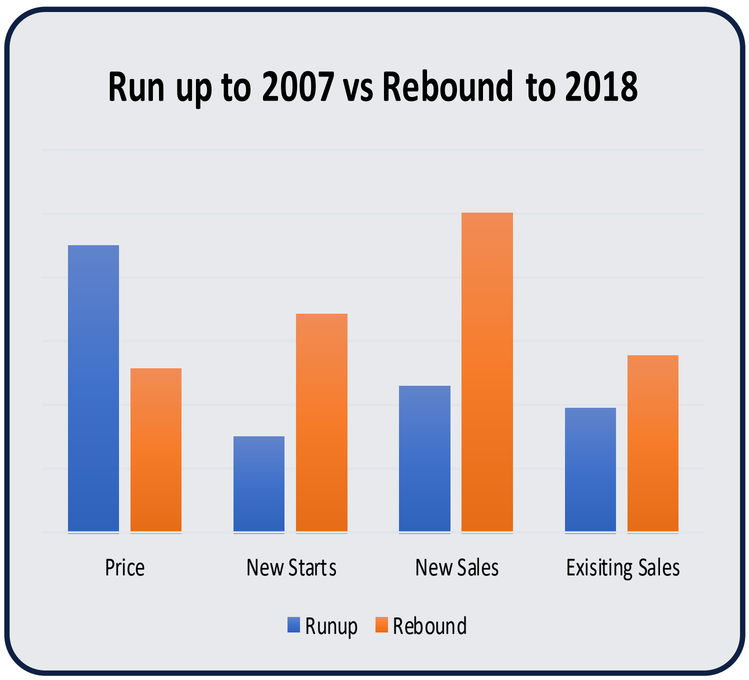


What is Different This Time

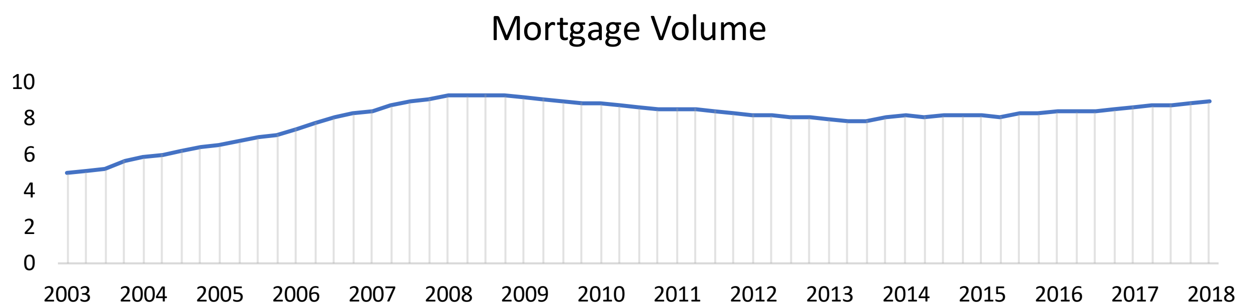
It is generally accepted that the housing market is booming. Most of the major indicators[2] have increased significantly from the bottom of the housing crisis in 2011-2012. The Case-Shiller Index, the leading indicator for housing prices in the US, is up 58% in the seven years. Housing starts are up 69%. New house sales are up over 100%. Existing housing sales are up 56%. In other words, the housing market is growing faster than the six years prior to the collapse of the housing market in both housing starts and sales. Prices are higher than pre-crisis; however, they are not growing as fast as they grew before 2007. Plus the values of other three indicators are still well below the peak values.

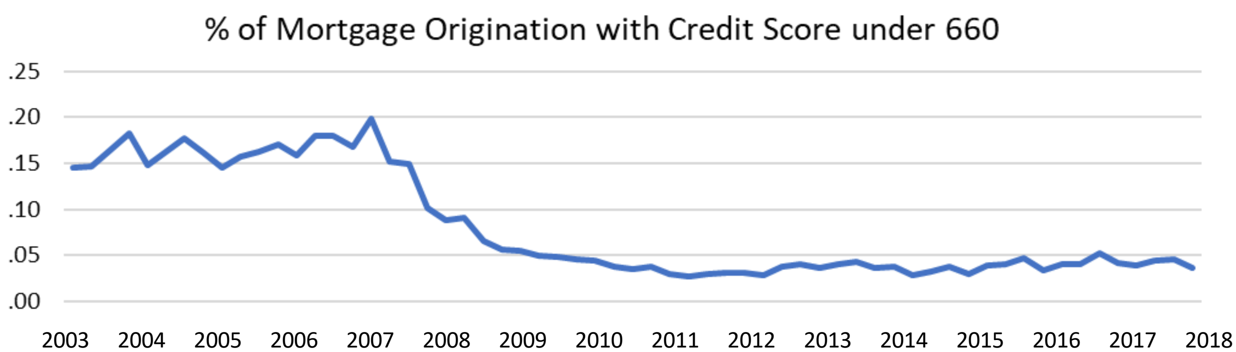
The lead up to the 2007 crash was driven by banks and mortgage brokers getting people to buy houses they could not afford. The boom in house prices was driven by bad debt. The recent housing boom is more controlled. Mortgages increased sharply leading up to 2007. Rising 88% between 2003 and 2007. After the crash, the volume of mortgages fell slightly and have grown at a more reasonable rate since the bottom.

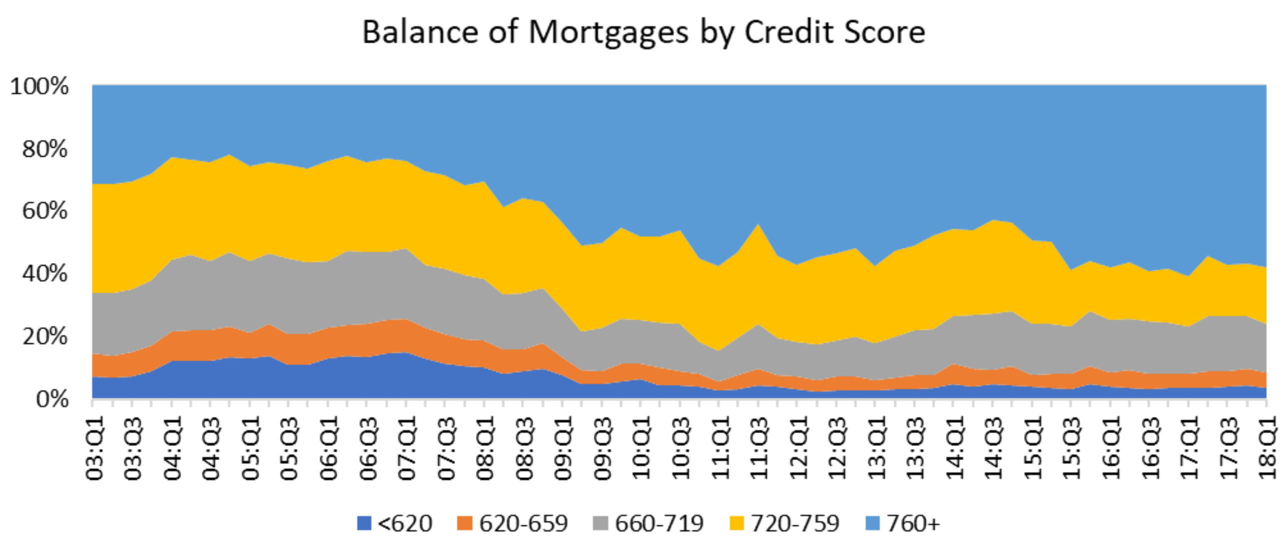
One of the main contributors to the drop in mortgages is the increased regulation from the federal government, leading to tighter standards of who can lend to homebuyers. The percentage of mortgage originations for people with a credit



[2] For more info on indicators see Topic Paper—American Household Debt: Post 2008 Credit Crisis Update, April 2016.


Mortgage Volume
10
8
6
4
2
0
2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018


% of Mortgage Origination with Credit Score under 660
.25
.20
.15
.10
.05
.00
2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018

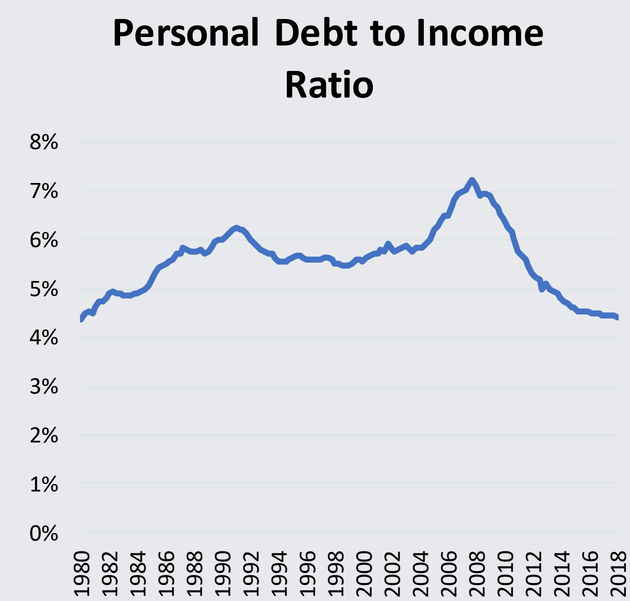

Balance of Mortgages by Credit Score
100%
80%
60%
40%
20%
0%
03:Q1 03:Q3 04:Q1 04:Q3 05:Q1 05:Q3 06:Q1 06:Q3 07:Q1 07:Q3 08:Q1 08:Q3 09:Q1 09:Q3 10:Q1 10:Q3 11:Q1 11:Q3 12:Q1 12:Q3 13:Q1 13:Q3 14:Q1 14:Q3 15:Q1 15:Q3 16:Q1 16:Q3 17:Q1 17:Q3 18:Q1
<620 620-659 660-719 720-759 760+

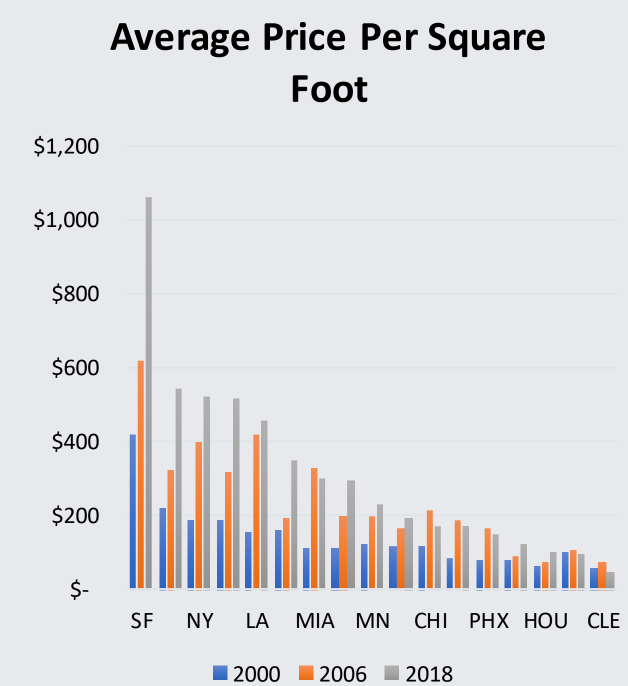
score under 660 has fallen from around 2% during the lead up to the mortgage crisis to less than half a percent now.

Changes in lending standards mean that the majority of mortgages are now taken out by people with credit scores over 760. In 2005 and 2006, close to 80% of all people getting mortgages had a score under 760.

We have also seen a cultural shift. The 2008 crash scared people and instilled a greater fear of debt in our society. Apart from student debt, all other types of debt have fallen in volume after the crash. More importantly, the debt-to-income ratio of personal accounts has been declining since the crash to 1980s levels.

In Oregon, where Headwater Investments is located, we have experienced the recent Housing runup. Prices have increased by around 60% in the Portland area in just the last seven years. There is a distinct difference between this time and the previous time. The rise in real estate prices correlates with increases in population and income. Real estate is local. Each market is different. With lax credit restrictions, we saw markets increasing around the country. In the last seven years, we have seen specific markets increase substantially with other markets trailing behind.





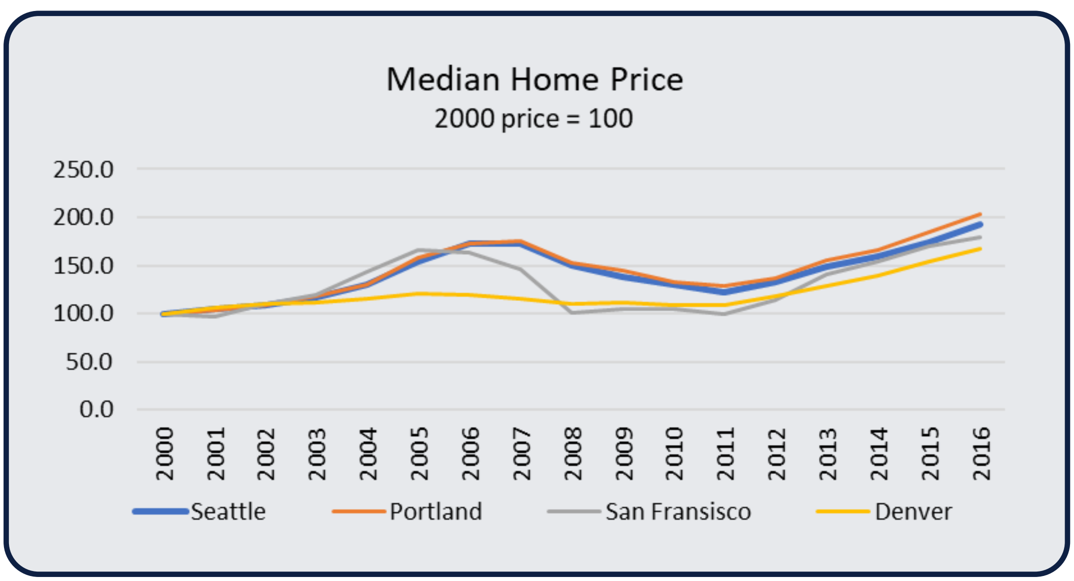
A Closer Look Around the Country

The markets in cities with strong economies and job markets are booming. San Francisco, Seattle, Boston all had Gross Regional Product grow by 26.5%, 19.7%, and 17.9%, respectively, since 2011(Strauss). These markets have also had big jumps in housing prices.

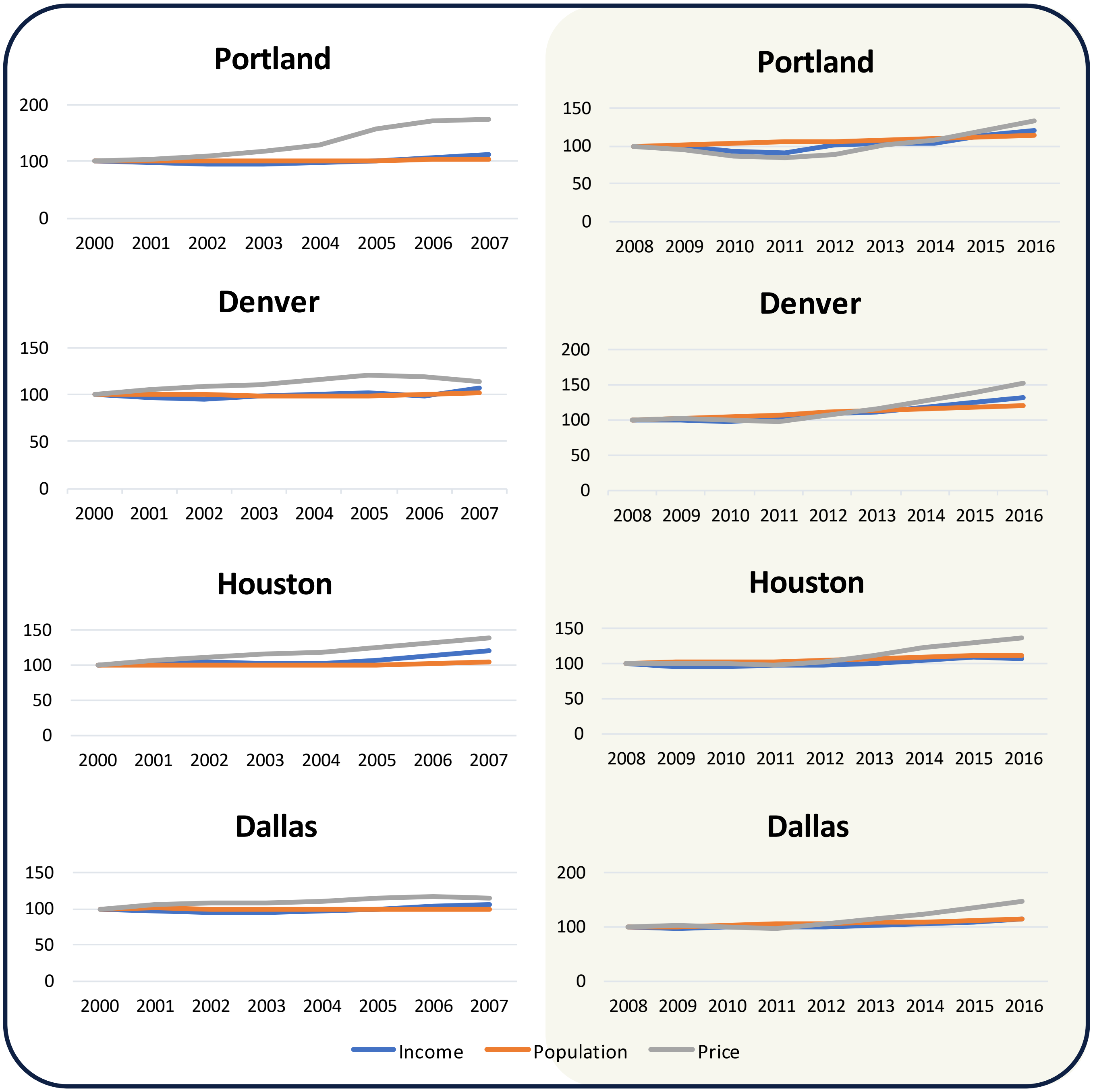
For this project, we compiled housing and census data from some of the largest cities in the US. Looking at the relationship between population and income changes related to housing prices shows a stark example of how this rise in prices is different than the pre-crisis increases, where you can see housing prices diverge from the economy.

Let's take a look at population and income because they are drivers of demand in the housing market. More people moving into an area makes buying homes more competitive, driving up prices. Higher incomes in a market give people more ability to buy more expensive homes, also driving up prices.

In the Pre-crisis graphs, you can see the grey lines separating from the demand factors, rising at a faster rate than income and population. In other words, housing prices rose faster than income and population increased. In the second set of graphs, 2008-2016, the grey line shifts are more inline.



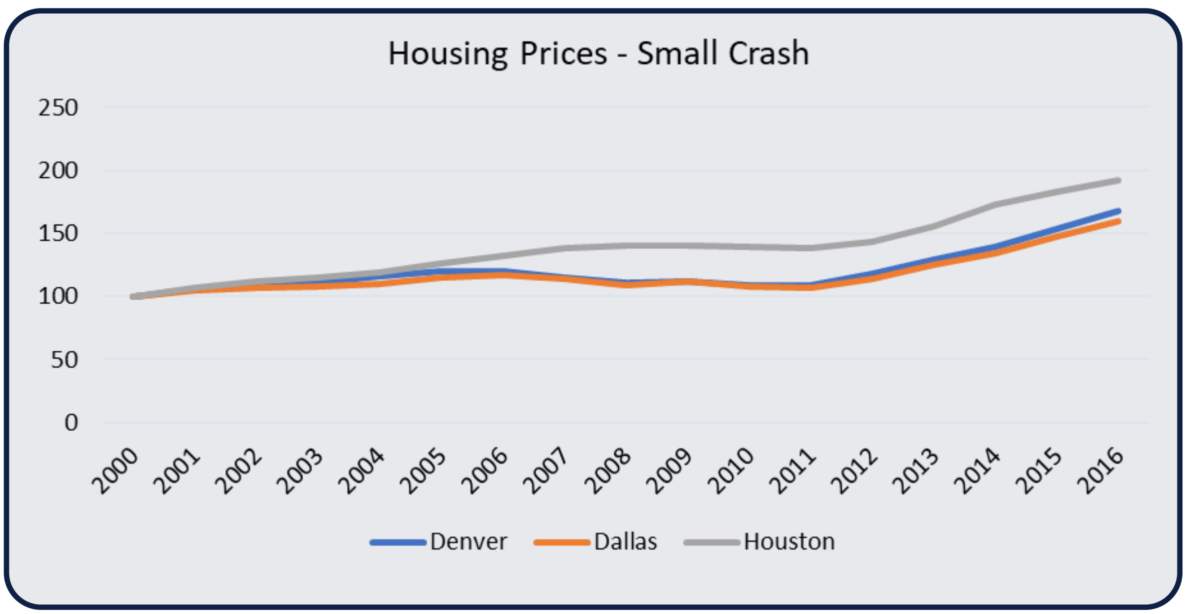
Pre-2008 Crisis ***Post 2008 Crisis***



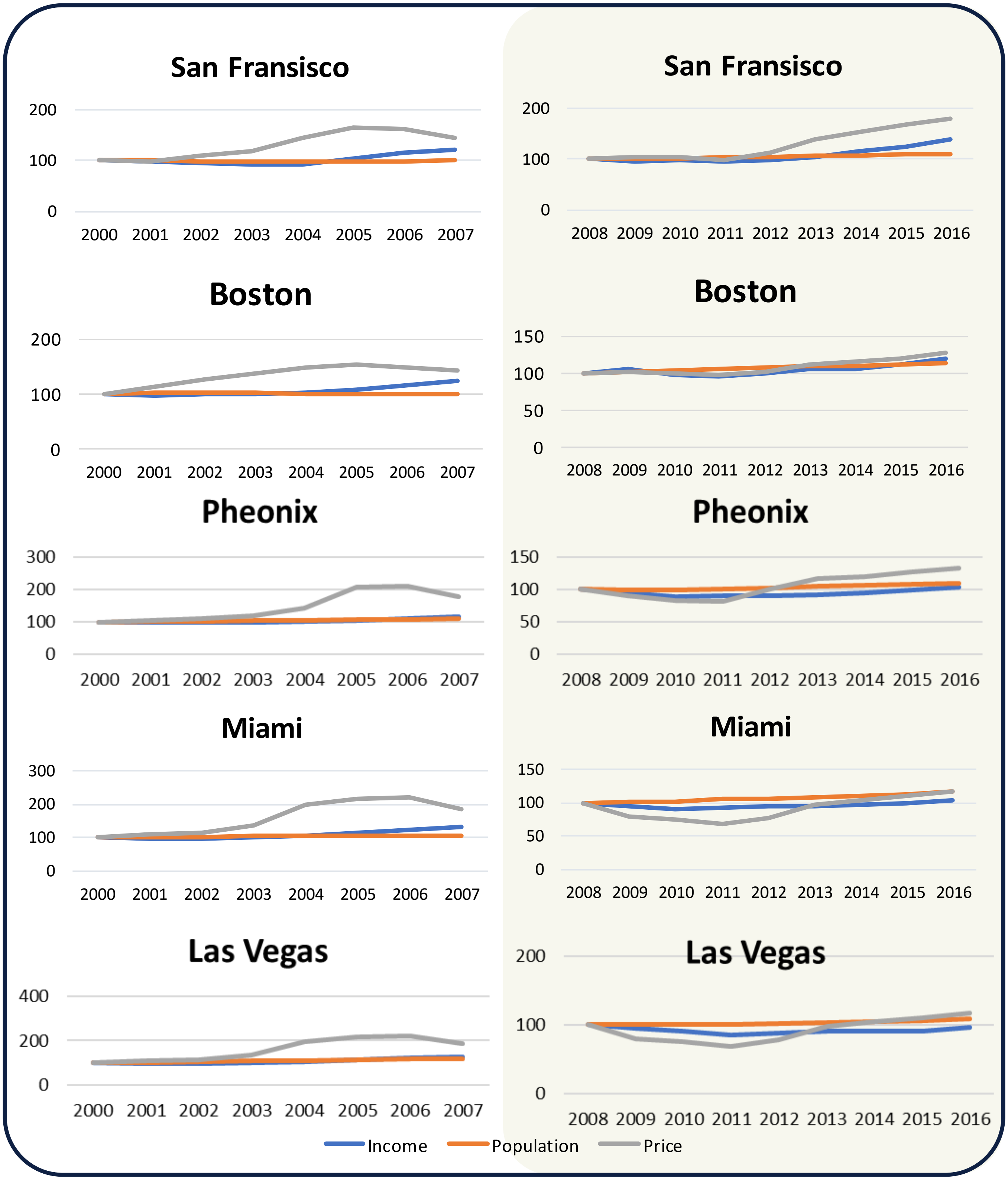
If you look at cities pre-crisis that did not have a divergent price pattern, they experienced significantly less to almost no decline during the crash. For example, look at the graphs for Denver, Houston, and Dallas. It seems as if before the mortgage crisis, their housing market increases were reasonable to their regional situations.

Although housing prices did exceed the income and population, we do not see the considerable divergence experienced in other markets. This resulted in a small to no crash in 2006-2007. Although history is never an indication of future results, hopefully history repeats itself in this case, and we see the correlation of housing prices with income and population as an indication of a lack of a bubble.

On the flip side, the cities that saw the greater divergence of prices from their primary drivers saw the biggest crashes in 2008. In Phoenix, Miami, and Las Vegas saw housing prices spike before the crash. Their prices rose at much higher levels than the leading indicators. Phoenix and Vegas saw prices rise over 100%. With income and population increasing at closer to 20%. Miami saw prices rise over 145% with population and income lagging very far behind.



Pre-2008 Crisis ***Post 2008 Crisis***



Major Takeaways

The US housing market is the largest asset class in the world. It is a crucial sector in our economy. It is important to remember that real estate markets are local, affected by regional differences in the economy and demographics. The bubble of 2008 was more of a national problem, a systemic breakdown of our lending market, not necessarily the housing market. It was more of a credit crisis than a real estate crisis. It seems like now there might be some bubble building in California, but in the rest of the country, it looks like the real estate market has reverted to following indicators. Sometimes it is easy to get swept up in high real estate prices and predict a bubble. Not to say there is not a bubble brewing in Oregon or other places, just this time looks a lot different than last time.

Works Cited

Strauss, Karsten. “The 10 Big U.S. Cities With the Fastest-Growing (And Slowest-Growing) Economies.” Forbes, Forbes Magazine, 4 Mar. 2018, www.forbes.com/sites/karstenstrauss/2018/01/03/the-10-big-u-s-cities-with-the-fastest-growing-and-slowest-growing-economies/#58fea13a4734.

Graphs complied from data points from the Oregon Economic Analysis, the S&P/Case Shiller Home Price Indices and the U.S. Census Bureau.

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