

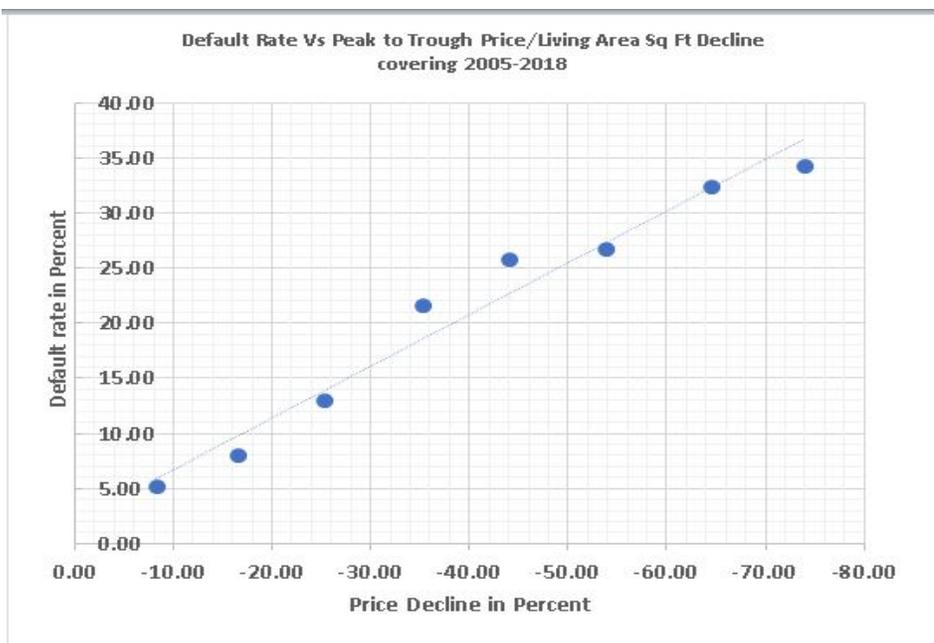
Residential Mortgage Default Forecasting: How Much Do Price Trends Matter? Part 2

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Introduction

In early December of 2018 we published a discussion on the significant and dominant influence of price trends on mortgage default rates. There we noted that home price changes, analyzed at the zip code level, were a significant driver of default rates and were especially dominant when the loan to value ratios were relatively high. Here, we continue the analysis using the change from the peak to the trough of prices over the period of 2005 through 2018 for a variety of CBSAs. Again, we see a very strong impact on residential mortgage backed securities (RMBS) default rates from average property price declines. For the aggregate of all of the zip codes in all of the CBSAs shown below, we see a correlation between the default rate and peak to trough price decline of -0.74. We show all of these markets in aggregate in Exhibit 1 below with a trend line inserted. Default rates climb significantly when peak to trough prices decline more than -20%. This is consistent with typical loan to value, LTV, ratios and shows why conservative loans will be at 80% LTV or below.

Exhibit 1: Aggregate Default Rates Vs Peak to Trough Price Change for the Orange County, Los Angeles, San Diego, San Francisco and Seattle CBSAs Grouped in Deciles



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Next, we show the same relationship within a given metro where each observation is based upon the change in price per square foot, from peak to trough, over the period from 2005 through 2018. Note that most of these defaults occurred in 2007-2009 but defaults continued through the 2009-2018 period and were higher where the price declines were greatest. The price declines were, of course, directly related to the price increases and those markets which rose further and faster tended to fall fast as well. Note also that the key threshold of decline seems to be around 20%. It is not clear if home owners are aware of small price declines, but they seem very aware of large price declines.

Exhibits 3 through 6 focus on west coast cities. A 10 percentage point increase in the decline in house prices from the peak is associated with an increase in default rates from 7.2% in Seattle to a 5.0% in Los Angeles. Exhibits 7 through 9 show that similar relationships hold for east coast cities also. The strongest relationship is found in Boston and the weakest in Washington DC.

We note again that price declines are not the only trigger of default. Loss of job, medical expenses, business losses and other factors come into play in driving default rates, but a total loss of equity is a critical component of any default model. For example, the weaker relationship in Washington DC CBSA reflects the role of the federal government as a stabilizing force for the regional economy through the recession. In all locations, accurate valuations and price trend analysis is very important for mortgage underwriters and investors. In every exhibit below, we observe a clear pattern of default correlated with price declines. In the last discussion on this topic we noted that early buyers in the cycle could ride through the ups and downs of the market and defaulted at relatively much lower rates, but this analysis includes all buyers at any point in the cycle.

Exhibit 2: Zip Code Default Rates Vs Peak to Trough Price Change for the Orange County CBSA

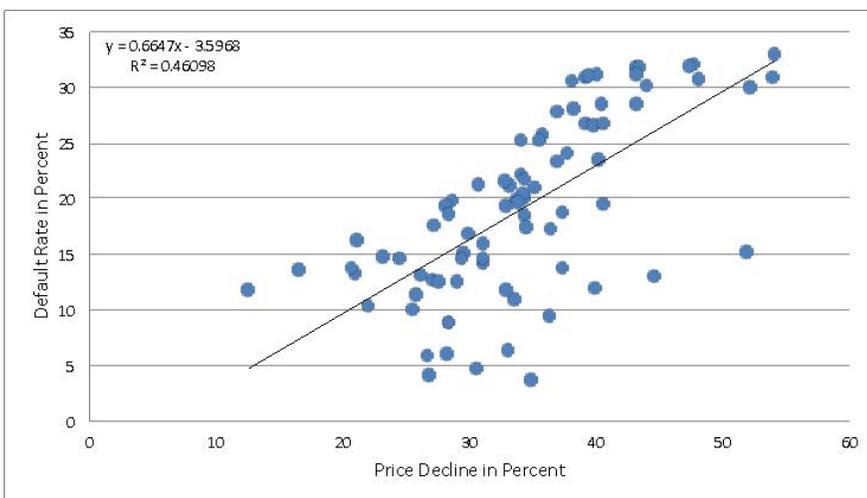


Exhibit 3: Zip Code Default Rates Vs Peak to Trough Price Change for the Los Angeles CBSA

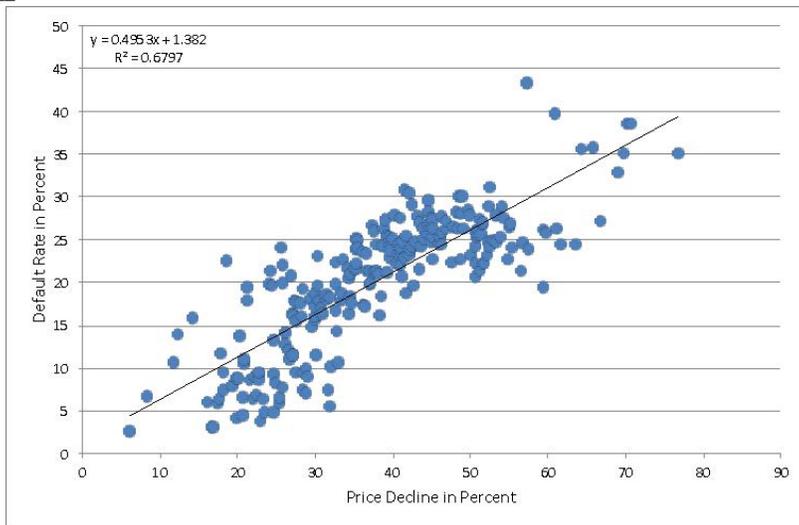


Exhibit 4: Zip Code Default Rates Vs Peak to Trough Price Change for the San Diego CBSA

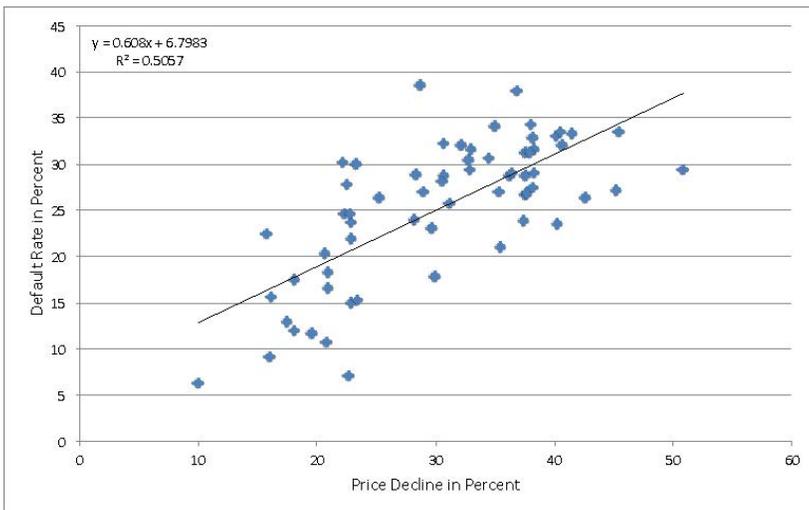


Exhibit 5: Zip Code Default Rates Vs Peak to Trough Price Change for the San Francisco CBSA

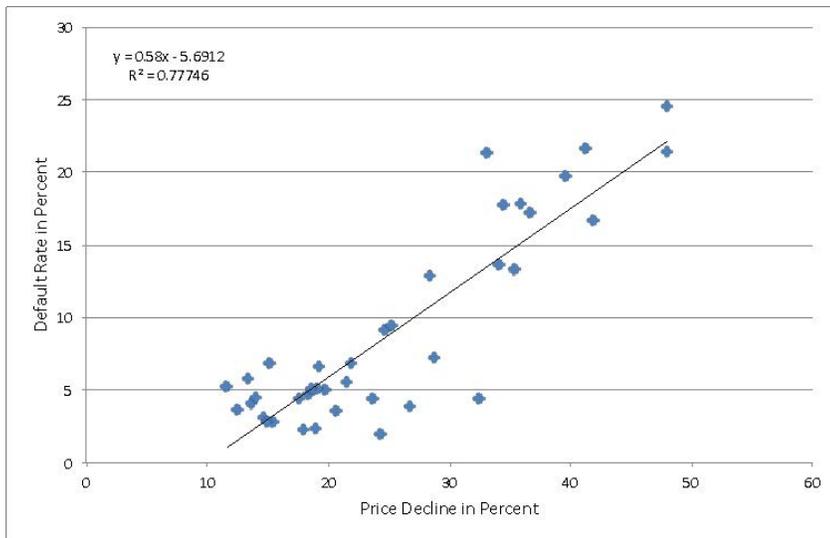


Exhibit 6: Zip Code Default Rates Vs Peak to Trough Price Change for the Seattle CBSA

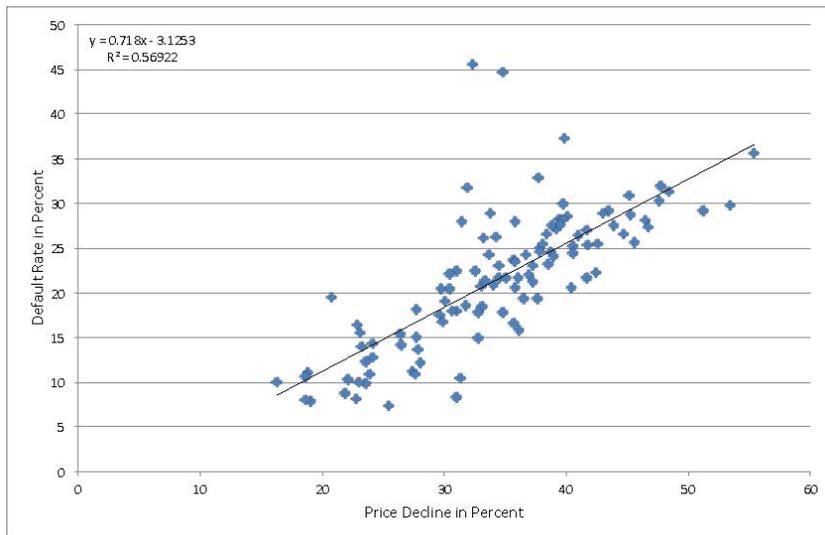


Exhibit 7: Zip Code Default Rates vs Peak to Trough Price Change for the Boston CBSA

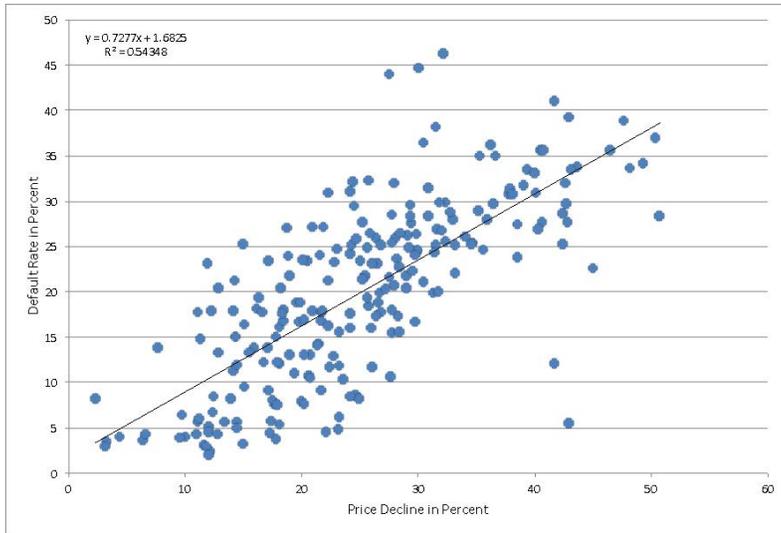


Exhibit 8: Zip Code Default Rates vs Peak to Trough Price Change for the Charlotte CBSA

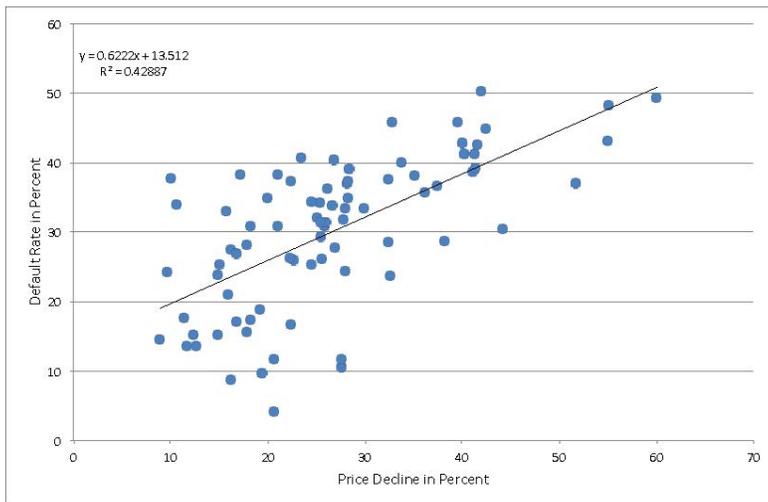
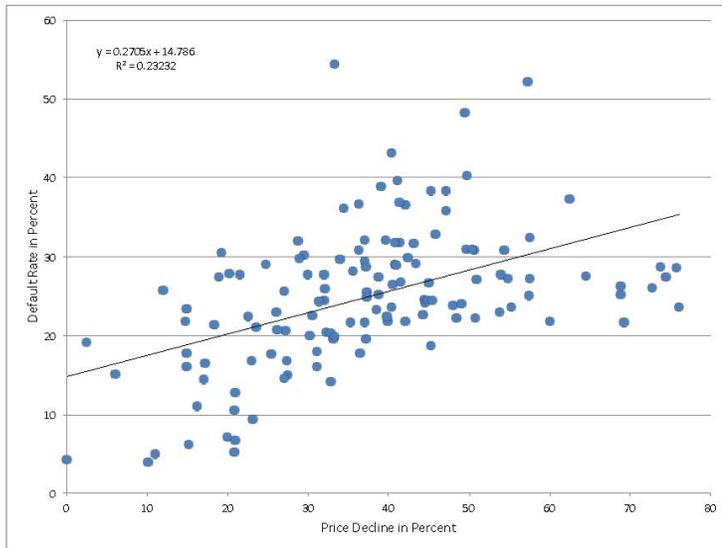


Exhibit 9: Zip Code Default Rates Vs Peak to Trough Price Change for the Washington DC CBSA



Conclusions

House prices matter to almost everyone, ranging from towns and their homeowners to mortgage backed securities investors. Buyers who buy at a peak of the price cycle and subsequently face significant price declines are much more likely to default, regardless of personal circumstances with respect to employment, life trigger events, or credit rating status. Equity cushion is a critical element in default forecasting models, along with accurate valuations at the time of purchase and mortgage underwriting. Here we show that the impact of price declines on default rates is very strong and consistent across a variety of different locations and corresponding home price levels.