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## *Is RPX A Leading Indicator?*

Americans have begun considering the value of their homes as a primary measure of their wealth. For most Americans, their home represents their largest asset. Recently, declining home prices - along with weak economic numbers, the banking crisis, and massive job losses - have left many Americans feeling poorer than they were only a few years before. Given the importance of consumer spending, and thus consumer confidence, to the overall economy, it is not farfetched to surmise that trends in home prices will provide advance indications of other macroeconomic trends.

Traditional housing metrics, such as new and existing home sales or housing starts, provide insight into builders' expectations and the inventory of unsold homes. As such, they provide an essential perspective on the housing market, but only a partial one. They do not reflect actual selling prices on a timely basis and thus reveal little about the relationships between housing prices, homeowner wealth, and consumer confidence.

In contrast, the "spot" price for housing indicates what buyers and sellers believe the market price for residential properties to be, and thus provides a concise look into the balance of supply and demand in the housing market, from the consumers' perspective. Also, given the large portion of consumer wealth tied up in housing, housing prices give an indication of wealth and confidence in the overall economy.

The purpose of this paper is not to prove or disprove the idea that housing spot price is a strong indicator of broader macroeconomic conditions. Rather, it is intended to prompt a more in-depth look into the subject and generate additional study.

# Consumer Sentiment

Movement in residential real estate prices has a strong effect on homeowners' perception of their wealth. This, in turn, affects their attitudes toward spending. The relationship between home prices and consumer confidence is visible in Exhibits 1 and 2, which display Consumer Sentiment Index data published by the University of Michigan and Reuters alongside the 25-MSA RPX Composite. Exhibit 1 presents these indicators from January 2000 through April 2009, while Exhibit 2 focuses on the recent past, from November 2008 through April 2009.

As shown in Exhibit 1, the beginning of the decline in home prices in mid-2007 coincides with the beginning of a long decline in consumer sentiment. As consumers watched the value of their homes drop, their outlook on their personal finances soured and their appetite for consumption diminished. Exhibit 2 shows that the recent stabilization in home prices coincides with an uptick in consumer sentiment. While the increase in sentiment is a recent occurrence and it is too early to claim that consumer confidence has turned a corner, it is reasonable to expect that stabilization in home prices will help allay consumer fears about their financial health and lay the foundation for an eventual recovery.

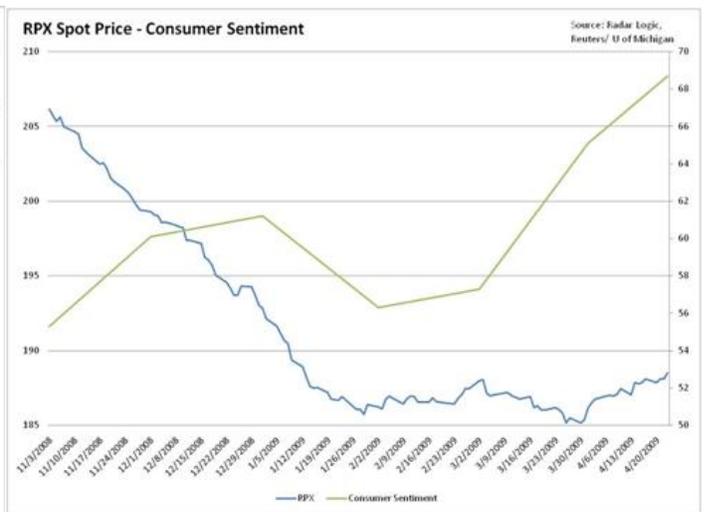


Exhibit 1

Exhibit 2

# Retail Sales

As shown in Exhibit 3, the decline in home prices that began in 2007 preceded a notable decline in retail sales in 2008, as measured by the U.S. Bureau of the Census. Recent stabilization in home prices, shown in Exhibit 4, appears to coincide with stability in retail sales. While it may be too early to make a definitive judgment in this regard given the highly seasonal pattern in retail sales – the recent increase in retail sales may reflect the run up to the summer buying season rather than a broader shift in consumption patterns – the movements in home prices and retail sales shown here are consistent with the notion that stabilization in home prices will help stabilize consumer confidence and, in turn, retail sales.



Exhibit 3

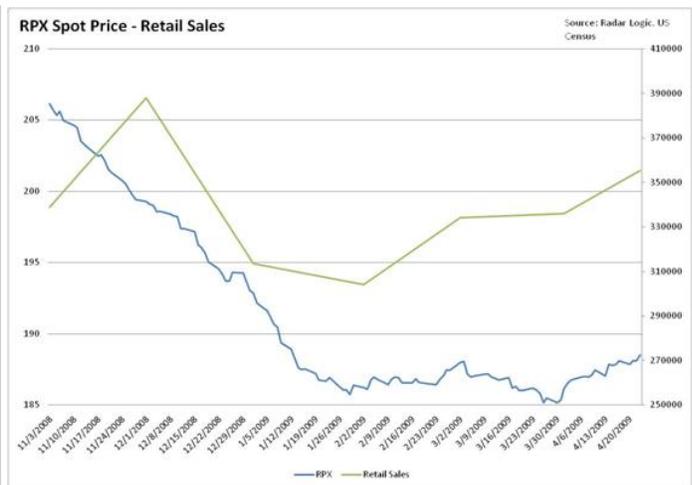


Exhibit 4

Exhibits 5 and 6 display lightweight vehicle sales (which is not measured as part of retail sales by the US Bureau of the Census) and the RPX Composite. The trend remains consistent with retail sales. The stabilization in home prices precedes an inflection point in vehicle sales, between a downward trend and an upward trend. Stabilization in home prices may be creating the confidence in consumers that is needed to purchase big ticket items.



Exhibit 5



Exhibit 6

## Housing Statistics Seem To Lag

Exhibit 7 depicts new home sales as reported by the Census Bureau alongside the RPX Composite. It may seem odd that residential spot price and new home sales, as reported by the US Bureau of the Census, do not track well. However, the lack of an apparent relationship is consistent with the fact that, in many areas, the market price for housing is being determined in foreclosure-related sales (including short sales, foreclosure auction sales and REO sales), which make up a large and increasing proportion of total home sales.

In contrast to new home sales, the Existing Home Sales Index, published by the National Association of Realtors (NAR), tells a very interesting story. As can be observed in Exhibit 8, stabilization in the market is created by two facets which include spot price and inventory cycle. Whereas spot price serves as a reliable estimate of wealth by giving an indexed value of the residential real estate prices, existing home sales add context to the price by giving an accurate estimate of activity and thus liquidity in the market. This means that these two indicators, while different, work well in conjunction.



Exhibit 7



Exhibit 8

Exhibit 9 shows that stability in the residential real estate spot price corresponds to an increase in new home starts as measured by the US Bureau of the Census. Note that new home starts tick up as the RPX Composite increases. What we cannot see is the projected price points for starts, but it is reasonable to assume that home builders are starting new construction at price points consistent with buyer demand.



Exhibit 9

## Broader Economic Measures

Residential real estate spot price is a strong indicator of the direction of mortgage rates. Exhibit 10 displays the RPX Composite along with the 10-Year Treasury, which traditionally tracks the prime rate closely. Exhibit 11 shows the Composite alongside weekly mortgage rates as published by Freddie Mac. Fluctuations in the weekly mortgage rates closely track movements in home prices. Even small movements in the price of real estate correspond with dramatic shifts in mortgage rates. While this does not support spot price as the main driver of mortgage rates, as interest rate also affects spot price, there is a negative feedback loop where major changes in spot price will precede major changes in mortgage rates.

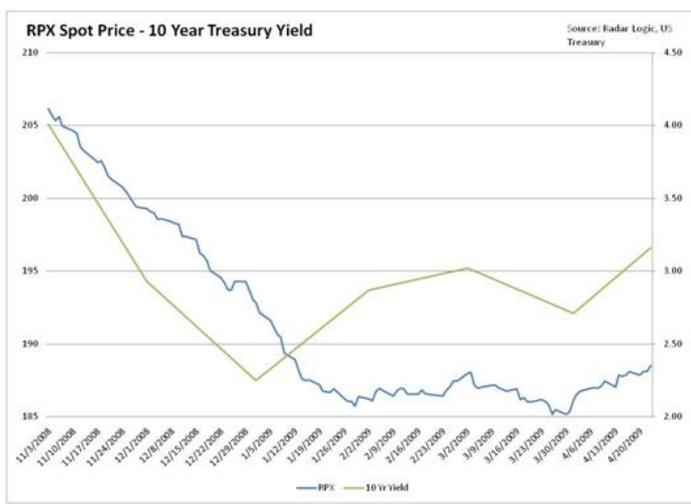


Exhibit 10



Exhibit 11

In Exhibit 12 it is clear how closely housing and Non-Farm Payroll numbers have tracked one another. Falling home prices have led the overall economic climate, which has deteriorated and thereby reduced employment. As the housing market showed signs of stabilization, the employment situation began to show signs of stabilization.

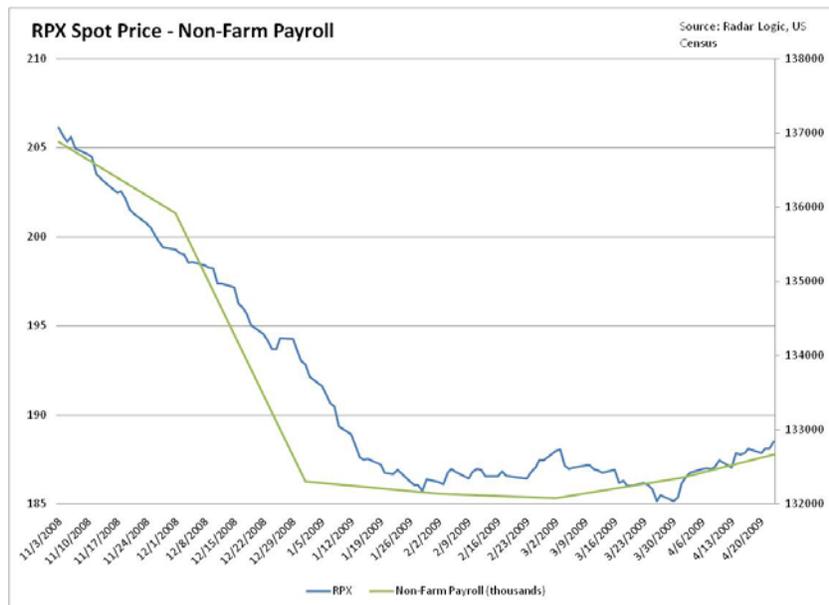


Exhibit 12

The state of the housing market influences orders for durable goods, as measure by the Census Bureau. As consumers feel comfortable in their homes they tend to buy goods for their residences that are intended to last for years to come. These goods can range from appliances to furniture. What these goods have in common is that they tend to be higher ticket items and thus require the consumer to have a good amount of certainty about the level of their wealth and wage expectations. In that way, and as can be seen from Exhibit 13, durable goods orders increase as housing shows signs of stability.



Exhibit 13

## Conclusion and Comments

No single indicator can capture all aspects of the housing market, and the observations in this paper provide only a cursory view of the complex interactions between home prices and the broader economy. Nevertheless, Radar Logic Daily Prices, as daily spot prices for residential property values, clearly provide insight into housing markets and their impact on the economy in ways and with a frequency that other housing indicators do not. Given the central role that falling housing values have played in the current economic crisis, it is likely that stability and recovery in housing values will precede similar trends in the overall economy.

## About Radar Logic

Radar Logic Incorporated, a real estate data and analytics company, calculates and publishes the Radar Logic Daily™ Prices. The prices track housing values for major U.S. metropolitan areas and are the basis of the Residential Property Index™ (RPX™), a market that enables real estate to be traded as a liquid asset, via property derivatives marketed by major financial institutions.

RPX allows real estate and financial professionals to manage opportunity and risk, invest in real estate values without owning physical assets and effectively analyze markets using a consistent metric: price per square foot. Data in the RPX Monthly Manhattan Neighborhoods Report reflect the 28-day aggregated value of Radar Logic Daily Prices. The price per square foot metric used significantly reduces the influence of property sizes on overall housing price trends, which can skew results.

The Daily Prices are not adjusted for seasonal variations. In some cases, Daily Prices may vary based on reporting characteristics within individual markets.

## RPX Analytics & Research

Radar Logic offers specialized analytic services which allow real estate and financial professionals to view current and historical price per square foot and transaction count trends for all markets and sub-markets we track. MSAs and neighborhoods can be segmented by location (zip code and county), property type (single family, multi-family and condo), property size, date range, and sale price. The database is derived from our neutral, public source records.

Our web-based tools provide a means for all entities associated with or affected by housing prices to maintain market data streams on a constant, neutral and daily updated basis.

For additional insight on this report or for inquiries about research or analytic products, please contact:

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