The Move to Pac-12: Economic Impact and Visitor Experience of University of Utah Football

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Summary

In 2011 the University of Utah joined the Pacific-12 athletic conference (Pac-12) following twelve seasons as a founding member of the Mountain West Conference (MWC). The move to the Pac-12 may carry a number of benefits to the University and the state of Utah. This report presents a summary of preliminary estimates of the economic impacts attributable to the University's football program.

One way the football program yields economic impacts—jobs and associated wage earnings, gross state product, and state tax revenue—to the state of Utah is through the in-state expenditures of out-of-state attendees to University of Utah football games. A second way is through payments to the University of Utah from television networks for the right to televise games.2 A third way, potentially, is through improved visitor perceptions of the state gained through visitation.

During the 2011–2012 season, the University of Utah played five home games against Pac-12 opponents. In order, these opponents were: the University of Washington (UW), Arizona State University (ASU), Oregon State University (OSU), the University of California at Los Angeles (UCLA), and the University of Colorado (CU). A total of 321 out-of-state attendees of these games were surveyed in order to gain information about their spending patterns while in the state. Combining the survey findings with estimates of the number of out-of-state attendees, we estimate that visitors to University of Utah football games spent $5.5 million on in-state goods and services.3 This $5.5 million injected into the Utah economy from the citizens of other states gives rise to additional economic impacts through indirect effects arising out of the flow of these funds through the Utah economy.

In addition to the spending of out-of-state visitors, funds are brought into the state when the University receives payments for the right to televise the games. Such revenues are expected to be $3 million for the 2011–2012 season, gradually climbing to $15 million for the 2014–2015 season as the University’s share in television revenues increases from partial to full. As a member of the MWC the University received $1.2 million per season for television rights.4 Increased television revenues are clearly a major benefit of joining the Pac-12. Like the expenditures of out-of-state visitors, television revenues represent an injection into the state economy that creates additional indirect economic impacts.

The estimated total economic impacts to the state, both direct and indirect, are given in Table 1. In this table the impacts are divided according to whether the source of impact is out-of-state visitors (Visitors) or television revenues (Television). The impacts are measured by the number of supported jobs (Jobs), gross state product (GSP), state economic output (Output), and state tax revenue (State Tax Revenue).5 Visitor spending is seen to support about 121 jobs with total earnings of $3,056,844 and $310,086 of state tax revenues.

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1. Prior to entering the MWC as a founding member in 1999, the University of Utah had belonged to the Western Athletic Conference (WAC) since joining as a founding member in 1962. Prior to WAC the University belonged to the Mountain States Conference since its founding in 1938.
2. In this report, we use the phrase “out-of-state attendees” to refer only to out-of-state attendees who are fans of the opponents. The economic impacts and visitor perceptions are based only on this subset of out-of-state attendees since ticket sales information is not available for out-of-state attendees who are fans of the Utes. The impacts of out-of-state attendees who are fans of the Utes are in addition to those presented in this report.
3. The University makes tickets for fans of the opposing team available through that team’s ticket office. These ticket sales were provided to us by the University of Utah’s Athletics Department for each of the five Pac-12 home games in the 2011–2012 season. Although ticket sales through opposing universities serve as our measure of the number of out-of-state attendees, we note that since tickets are also available through secondary sources, the actual out-of-state attendance and associated economic impacts are at least as great as what we report here.
4. The exact amount of television revenues under Pac-12 is still subject to some uncertainty. The amounts assumed in this study are estimates current as of the beginning of this study. See http://tinyurl.com/87res86.
5. Output is the value of all goods and services produced in the economy, including the value of goods and services used as intermediate inputs in the production of final goods and services. The value of final goods and services thus embodies the value of their intermediate inputs. Subtracting the value of
Television revenues support about 89 jobs with total earnings of $2,100,111 and $205,035 in state tax revenues. As we are assuming television revenues of $3 million for the 2011–2012 season, the statewide impact due to television will increase greatly beyond what is reported here as television revenues reach $15 million in 2014–2015. Altogether, the five Pac-12 games of the 2011–2012 season supported about 210 jobs with earnings over $5 million and over $500,000 of state tax revenue.

The impacts reported in Table 1 are the impacts of the University of Utah football program rather than the change in such impacts due to the move to the Pac-12 from the MWC. In order to estimate the change in impact due to the move to the Pac-12, we would need an estimate of impacts during the years of MWC membership. Estimates of those impacts due to visitor spending during the MWC years would require knowledge of visitor spending patterns. The present study gains such estimates for the 2011–2012 season through direct survey of attendees. To our knowledge no similar studies were undertaken in years past.

If visitor spending did not vary significantly according to the visiting team, then our estimates for the present year would serve well as stand-ins for prior-year spending patterns. Analysis of the 2011–2012 spending data suggests that spending may in fact vary somewhat according to the distance of the opposing team (distance would be a proxy, although sometimes a poor one, for the cost of traveling to Salt Lake City). Figure 1 depicts the person-by-person variation in total spending for each game. Underlying differences in spending patterns among the attendees of different games are reflected by the differences in the expenditure curves for those games. For example, compared with attendees of other games, a higher proportion of attendees of the Colorado game (CU) spent less than $300 per day while in Utah. On the other side, a higher proportion of attendees of the UCLA game spent more than $400 compared with attendees of other games.

The curves need not be identical—or even appear all that similar—to each other to warrant a claim that spending patterns do not vary appreciably from game to game. The curves are based on our sample of attendees. Since the attendees that ended up in the survey could have been different, so the curves could have been different. The question is whether the curves at hand are so dissimilar that it is no longer plausible that their dissimilarity is only the result of chance, but that it reflects real underlying differences in spending patterns. A standard statistical test suggests that the dissimilarity depicted in Figure 1 may indeed signal underlying differences in spending patterns.6

Early evidence thus suggests between-game differences in spending patterns. More data would be needed, however, to estimate precisely how spending varies by game. Therefore, subject to revision in light of subsequent data, as a first approximation we assume that the average expenditure per person per day in recent past years is the same as the average reported by those surveyed in 2011–2012: $243.

Early evidence also suggests that there may not be between-game differences in the average length of visit. Our tentative assumption then is that the average length of stay in recent past years is the same as the average from the 2011–2012 season.

Having working estimates of the length of stay and expenditures per day of stay, the last piece we need to estimate past impacts is past attendance. The Department of Athletics provided the study with tickets sales back to 2004. Using ticket sales as a proxy for attendance, average out-of-state attendance at home games between 2004 and 2010 was 546, ranging from a low of 303 in 2007 to a high of 713 in 2005. This year’s average attendance of 1,727 out-of-state visitors at the five Pac-12 home games is therefore about 2.3 times the average attendance of out-of-state visitors during recent past years.

Consequently, the estimated increase in economic impact from visitor spending due to the switch from the MWC to the Pac-12 is 57 percent of what is reported in Table 1. Because television revenues in 2011–2012 are 2.5 times greater under Pac-12 than under the MWC, the estimated increase in economic impacts from television revenue due to the switch to Pac-12 is 60 percent of what is reported in Table 1.

6. The standard analysis in cases such as this one is the one-way analysis of variance (ANOVA). We carried out a variation on ANOVA which is robust to outliers and appropriate for the smaller number of surveys obtained for some games. The finding of this analysis is that if there were in fact no underlying differences in the spending patterns, the probability of getting spending patterns as or more dissimilar to those actually obtained would be quite small—less than one percent. That supports the view that there are spending pattern differences among games. The needs of this analysis did not necessitate the additional step of carrying out pairwise comparisons between games.
Table 2 shows economic impacts due solely to the switch to the Pac-12, separated according to whether the impacts are due to visitor spending or television revenues. The additional funds entering the state in the 2011–2012 season from visitor spending and television revenues support an estimated 122 jobs—with combined earnings of $3 million almost $6 million—beyond those supported by the football program in recent past seasons.

We note again that the impacts reported above are based on the five Pac-12 home games of the 2011–2012 season. Not included in the analysis are the expenditures from the only non–Pac-12 home game of the season—that against Montana State University.

Table 3 summarizes visitor information by game, including averagelength of stay, spending, choice of lodging and mode of transportation. It shows, for example, that among the estimated 1,522 out-of-state attendees of the game against Arizona State University (ASU), the average length of stay was 3.3 days, average spending per attendee per day on lodging was $96, 75 percent arrived in Utah via airplane, and 82 percent stayed at a hotel or motel while in Utah.

An additional objective of the study was to assess visitor attitudes toward the University and Salt Lake City and their experience while visiting. Specifically, participants were asked to indicate their perceptions of Salt Lake City and the University both before and after their arrival (as of the time of the survey) in the state. To express their impressions, participants chose among the options “very unfavorable,” “unfavorable,” “neutral,” “favorable,” and “very favorable.”

Figures 2 and 3 show the percentage of visitors reporting the indicated impressions before and after their visit to the state. For example, 20 percent of out-of-state attendees report a “very favorable” impression of the University before their visit and 34 percent report a “very favorable” impression after their visit.

Tables 4 and 5 show the before-after movement between each of the five categories of impressions. Each row in the table corresponds to a particular group. The first row, for example, refers to visitors who reported a “very unfavorable” initial impression. Each group, in turn, is divided according to their subsequent impressions. Moving from left to right on a given row (where initial impressions are constant but subsequent impressions change), we observe the percentage of initial impressions.

Source: Bureau of Economic and Business Research, University of Utah.
Economic Impact and Visitor Experience of University of Utah Football

2012 football season by approximately 60 percent. The vast MWC to the Pac-12 increased the economic impact of the 2011–2012 member of the Pac-12. We found that the transition from the University’s football program during its inaugural season as a

Conclusions

87 percent reported being more likely to return. Among those who have visited the state in the past, 87 percent reported being more likely to return.

Participants in the survey were also asked whether their experience in Utah left them more or less likely to return in the future for reasons other than to attend football games (e.g. to ski). As shown in Table 6, more than 70 percent of first-time visitors to the state reported that their visit left them more likely to return in the future. Among those who have visited the state in the past, 87 percent reported being more likely to return.

Homeownership: A Long-Term Investment

Low levels of real estate sales have led to much discussion about the prospects of a long-term decline in homeownership. We’ve had this conversation before. In the housing bust of the early 1980s, which featured stagnant housing prices, a 57 percent decline in real estate sales, and double-digit interest rates, housing demand shifted to the rental market. Over a period of eight years 43 percent of all new residential units built in Salt Lake County were apartments, and the homeownership rate in the county dropped from 68.1 percent to 65.1 percent. Many wondered if the homeownership market would ever return to its old self. Of course it did in the 1990s and for much of the past decade. The 2010 Census reports that 67.3 percent of households in Salt Lake County are homeowners.

Most Utah households prefer homeownership. Unfortunately, many cannot currently express that preference due to tarnished credit. Over time, however, lending requirements will loosen and household balance sheets improve, creating increased demand for ownership units. The federal tax structure gives a significant advantage to homeowners, providing deductions for mortgage interest and property taxes plus relief in most cases from capital gains taxes. Furthermore, in recent years the Federal Reserve has invested several hundred billion dollars in the credit market, driving down interest rates to the current low levels, again an advantage for the homeownership market. Without doubt, federal fiscal and monetary policy provide substantial incentives for homeownership.

Homeownership in Utah remains a reasonable long-term investment despite the performance of housing prices over the past four years. Historically, the value of a home has increased slightly faster than the rate of inflation. From 1980 to 2011 the average sales price (adjusted for inflation) of a home in Salt Lake County increased from $175,700 to $234,931 (Figure 1). Keep in mind this 30-year period includes the ten years of declining real prices in the 1980s and the drop in prices over the last few years.
Confirmation of Utah’s particular price appreciation advantage is also provided by the House Price Appreciation Index published quarterly by the federal Housing Finance Agency. Recently published data show the increase in the index from 1991 through the third quarter of 2011. Utah ranked fourth among all states in appreciation over the 20-year period, exceeded only by Wyoming, Montana, Colorado and Oregon. Utah’s price appreciation index increased by 139 points compared with an 80-point increase for the U.S.

As an asset, a home provides a hedge against inflation, tax advantages, and forced savings. Furthermore, once a mortgage is paid off housing costs are reduced to maintenance, insurance, and property tax costs. In Salt Lake County 55,000 households are mortgage-free, 25 percent of all households in owner-occupied units.

Sales Activity

For the first time in four years existing homes sales in Salt Lake County showed some signs of improvement. In 2011 single-family home sales totaled 9,300, up about 9 percent over the 8,565 sales in 2010 (Figure 2). During the peak of the boom home sales in Salt Lake County reached an unsustainable level of 15,000 in 2005 and 2006. With the collapse of the housing market, sales dropped 44 percent from 2005 to 2010, a serious contraction but less severe than the 57 percent drop in sales during the 1979–1982 housing downturn.

New home building has been devastated by the recession. New home construction is down 76 percent from the peak of 2005. Historically, the volume of home sales by realtors has been about twice the level of new home construction. However, the gap began to grow during the recession in 2001–2002 and has widened significantly in the past few years. In 2011 existing home sales were seven times higher than new home construction in Salt Lake County.

Prices Decline for Fourth Year

Until recently the average nominal sales price of a home in Salt Lake County rarely declined. In only 10 of the past 56 years have prices declined, including the four most recent years. Previously price declines were limited to the 1950s and ‘60s, but even then there were no years of consecutive declines, not until the 2008–2011 period (Figure 3). These four recent years are unique in the magnitude and duration of price weakness. During this period the average nominal price of a home sold in Salt Lake County fell by 25 percent, with the largest single-year drop of 10.3 percent in 2011.

There are several measures of housing prices but they all tell a similar story. The median sales price of homes in Salt Lake County over the past four years fell 22 percent and in 2011 dropped 9.5 percent. The National Association of Realtors reports median price data for the Salt Lake Metropolitan Area (Salt Lake, Tooele and Summit counties). These data show prices falling 26 percent over the four-year period and 15.3 percent in 2011. And finally the Federal Housing Finance Agency shows a 25 percent decline in the housing price index for Utah from 2007 to 2011.

Falling prices erode equity, leaving many homeowners “underwater.” In Utah there are currently about 480,000 mortgage loans, with 124,000 of these loans having a status of negative equity or near
negative equity (within 5 percent of negative equity). The households with these loans are effectively stuck in their homes. Moving up to a larger home is not an option for the vast majority. This has hurt demand and contributed to sluggish home sales. Traditionally, the move-up buyer has been a source of significant demand for both the existing and new home markets.

Foreclosures, Notices of Default, REOs and Short Sales

The Mortgage Bankers Association reports quarterly foreclosure filings and delinquencies by state. In the second quarter the percent of mortgage loans in Utah in the foreclosure process was 2.58 percent, or 11,300 loans (Figure 4). While this level is very high, the number of loans in foreclosure has fallen steadily over the past 18 months. The peak in foreclosures was the first quarter of 2010, when nearly 15,000 loans or 3.4 percent of all mortgages were in the foreclosure process.

Consistent with the decline in foreclosure filings is the recent drop in notices of default in Salt Lake County. The estimated number of notices in 2011 was 5,400, down 28 percent from 2010 (Table 1), a positive sign since notices of default are a leading indicator of foreclosures. However, in contrast short sales and REO sales are rising.

In 2011 the combined number of short sales and REO sales increased to nearly 2,800, a 13 percent increase over 2010 (Table 2). These distressed and discounted properties represented 30 percent of the total home sales in Salt Lake County in 2011. When distressed properties account for such a large share of sales activity, the median sales price is certain to be pushed lower. The downward pressure on prices becomes more apparent from a review of the short sale and REO prices. The median sales price of a short sale property was $175,625 in 2011, and for an REO property it was $149,950 (Table 3). In both cases these prices were well below the overall median sales price in the county of $199,000.

A Boost from Job Growth

At year-end the Utah economy showed clear signs of recovery, which should give a boost to the real estate market in 2012. All major indicators, with the exception of housing, improved over 2010 and the forecast for 2012 shows further improvement. Double-digit gains were recorded for exports, nonresidential construction, vehicle sales and state tax revenues (Table 4). Most impressive, however was the strength of Utah’s job market in the second half of the year. Employment growth jumped from an annual rate of around 1.5 percent, where it had been stuck for several months, to the 2.5–2.9 percent range. For the year,

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**Figure 4**

Total Mortgage Loans in Utah with Foreclosure Filing Status, Q1 2007–Q2 2011

![Graph showing mortgage loans in Utah with foreclosure filing status from Q1 2007 to Q2 2011.](source: Mortgage Bankers Association.)

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**Table 1**

Notices of Default in Salt Lake County, 2007–2011

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Notices</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>3,132</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>5,267</td>
<td>68.2%</td>
</tr>
<tr>
<td>2009</td>
<td>8,152</td>
<td>54.8%</td>
</tr>
<tr>
<td>2010</td>
<td>7,541</td>
<td>–7.5%</td>
</tr>
<tr>
<td>2011</td>
<td>5,400</td>
<td>–28.4%</td>
</tr>
</tbody>
</table>

Source: NewReach.

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**Table 2**

Number of Short Sales and REO Sales in Salt Lake County, 2008–2011

<table>
<thead>
<tr>
<th>Year</th>
<th>Short Sales</th>
<th>REO Sales</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>103</td>
<td>156</td>
<td>259</td>
</tr>
<tr>
<td>2009</td>
<td>1,117</td>
<td>436</td>
<td>1,553</td>
</tr>
<tr>
<td>2010</td>
<td>1,210</td>
<td>1,276</td>
<td>2,486</td>
</tr>
<tr>
<td>2011</td>
<td>1,242</td>
<td>1,557</td>
<td>2,799</td>
</tr>
</tbody>
</table>

Source: NewReach.

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**Table 3**

Median Sales Price of Short Sales and REO Properties in Salt Lake County, 2008–2011

<table>
<thead>
<tr>
<th>Year</th>
<th>Short Sales</th>
<th>REO Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>$246,000</td>
<td>$287,450</td>
</tr>
<tr>
<td>2009</td>
<td>$229,900</td>
<td>$239,750</td>
</tr>
<tr>
<td>2010</td>
<td>$205,000</td>
<td>$175,000</td>
</tr>
<tr>
<td>2011</td>
<td>$175,625</td>
<td>$149,950</td>
</tr>
</tbody>
</table>

Source: NewReach.

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**Table 4**

Utah’s Economic Forecast, 2011–2012

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2011f</th>
<th>2012f</th>
<th>% Chg</th>
<th>% Chg 2011</th>
<th>% Chg 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonfarm Employment (thousands)</td>
<td>1,181.5</td>
<td>1,209.1</td>
<td>1,243.2</td>
<td>2.3%</td>
<td>2.8%</td>
<td></td>
</tr>
<tr>
<td>Unemployment Rate</td>
<td>7.7%</td>
<td>7.1%</td>
<td>6.7%</td>
<td>---</td>
<td>---</td>
<td></td>
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<tr>
<td>Utah Average Pay</td>
<td>$38,665</td>
<td>$39,811</td>
<td>$41,070</td>
<td>3.0%</td>
<td>3.2%</td>
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<tr>
<td>Utah Nonfarm Wages (millions)</td>
<td>$45.7</td>
<td>$48.1</td>
<td>$51.0</td>
<td>5.3%</td>
<td>6.0%</td>
<td></td>
</tr>
<tr>
<td>New Residential Construction Permits (thousands)</td>
<td>9.3</td>
<td>8.7</td>
<td>10.0</td>
<td>–6.5%</td>
<td>14.9%</td>
<td></td>
</tr>
<tr>
<td>Residential Value (millions)</td>
<td>$1.7</td>
<td>$1.8</td>
<td>$2.0</td>
<td>5.9%</td>
<td>11.1%</td>
<td></td>
</tr>
<tr>
<td>Nonresidential Value (millions)</td>
<td>$925</td>
<td>$1,100</td>
<td>$1,100</td>
<td>18.9%</td>
<td>0.0%</td>
<td></td>
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<tr>
<td>Taxable Retail Sales (billions)</td>
<td>$25.1</td>
<td>$26.4</td>
<td>$28.0</td>
<td>5.2%</td>
<td>6.1%</td>
<td></td>
</tr>
<tr>
<td>Total State Tax Revenues (millions)</td>
<td>$4,752.2</td>
<td>$5,246.7</td>
<td>na</td>
<td>10.4%</td>
<td>na</td>
<td></td>
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<tr>
<td>New Vehicle Sales (thousands)</td>
<td>$69.1</td>
<td>$79.3</td>
<td>$86.0</td>
<td>14.8%</td>
<td>8.4%</td>
<td></td>
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<tr>
<td>Oil (millions barrel)</td>
<td>24.7</td>
<td>25.9</td>
<td>26.6</td>
<td>4.9%</td>
<td>2.7%</td>
<td></td>
</tr>
<tr>
<td>Exports (billions)</td>
<td>$13.6</td>
<td>$18.9</td>
<td>$21.5</td>
<td>39.0%</td>
<td>13.8%</td>
<td></td>
</tr>
<tr>
<td>Population (July 1; thousands)</td>
<td>2,774.6</td>
<td>2,817.2</td>
<td>2,858.5</td>
<td>1.5%</td>
<td>1.5%</td>
<td></td>
</tr>
<tr>
<td>Migration (thousands)</td>
<td>0.8</td>
<td>3.5</td>
<td>5.0</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
</tbody>
</table>

f: forecast

Source: Revenue Assumption Committee, State of Utah.
nonfarm employment in Utah is expected to have grown by 2.3 percent, an increase of 27,600 jobs. The employment forecast for 2012 shows an increase of 2.8 percent or 34,100 additional jobs. Currently Utah ranks fourth among all states in job growth. The only states growing at a faster pace are all energy producing states: North Dakota with 4.9 percent job growth, Oklahoma at 3.0 percent, and Wyoming at 2.7 percent.

For Utah’s job market the results of the Great Recession are closer to a V-shaped cycle than the prolonged U-shaped cycle predicted for the national economy (Figure 5). Utah had sharp declines in employment in 2008 and 2009. Job growth dropped by 46,000 in 2008 to near zero, and in 2009 turned negative with a loss of nearly 64,000 jobs. In 2010 losses shrank to 7,200 followed in 2011 by job gains of 27,000. The relatively swift recovery underscores the strong fundamentals of the Utah economy.

In 2011 all sectors of the Utah economy showed job growth, ranging from 232 new jobs in information to 5,326 jobs in professional and business services (Figure 6). Construction employment finally registered a gain with an additional 463 jobs. Half of the state’s job growth of 27,000 in 2011 occurred in Salt Lake County.

Outlook for Sales and Prices

In 2012 higher levels of real estate sales will be supported by favorable interest rates and housing prices. In addition, the Utah labor market is expected to grow by over 30,000 jobs with all sectors of the economy expanding. These conditions will lead to an improvement in home buyer confidence, which should stimulate housing demand. Over the last three years pent-up demand has been building as the weak job market caused households to double-up and postpone marriage and moving. With improved economic conditions some of this pent-up demand will be released in 2012, pushing sales of single-family homes up by 15 percent to 10,500 units. Total residential sales, including condominiums, townhomes and twin homes, will also increase by about 15 percent to 12,500 units.

Prices will continue to face downward pressure from REO and short sales. As 2011 ended there was no sign of improvement as fourth quarter prices declined by more than 10 percent. This weakness will linger through the first two quarters of 2012, but in the second half of the year prices should stabilize. The median sales price for a single-family home in Salt Lake County will likely drift down another 3 to 5 percent in 2012.

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