4th Quarter 2012 Economic Updates

Prepared for: A Colorado Bank, Board of Directors

Prepared by: Benjamin T Solomon

Date: January, 09, 2013

Executive Summary:

- ***GDP Growth Holding***: The 3Q12 Annual GDP growth was 2.60%. The average long term Annual GDP growth is 3.23%, and when discounted for the housing sectors would be 2.70%. This implies that the non-housing sectors are approaching a full recovery.

- ***Unemployment Recovery Steady***: Civilian Unemployment has improved from 10.00% (Oct '10) to 7.7% (Nov '12), and the Broader Unemployment rate has fallen from 17.20% (Oct '11) to 14.40% (Nov '12). The Broader Unemployment rate is falling faster than the Civilian Unemployment rate. The Civilian Unemployment rate of decline is holding steady at -0.80%/year. A full recovery at 6% and 4% is expected to be reached by 4Q14 and 2Q17, respectively.

- ***Inflation Abated***: Inflation has abated to 1.77% (Nov '12) and this rate of decrease in inflation of -0.12%/month is much slower than it was last quarter, moving the possibility of a deflation out to 1Q14 from the previous quarter's estimate of 1Q13.

- ***Consumer Sentiments Improve***: Consumer Sentiments has improved since Mar '12 from 67.5 to 74.5 (Dec '12), but consumers are still uncertain.

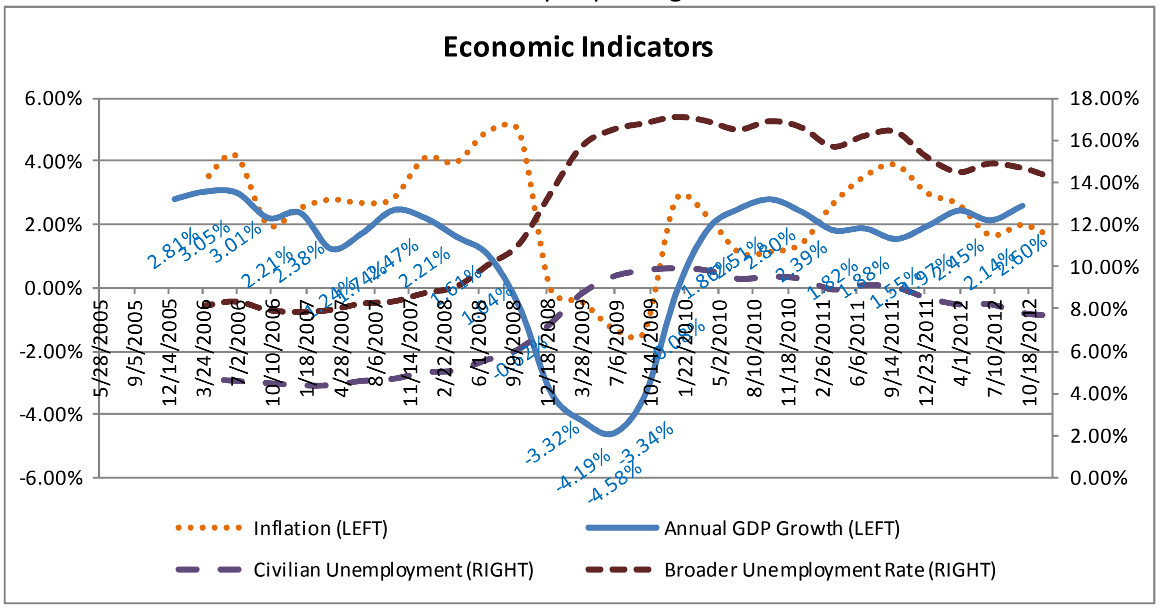
- ***Banking Sector Improving***: The Velocity of Money M2 is 1.57 (3Q12), and its contraction has slowed from -15.73% (2Q09) to -5.36% (3Q12). The trend suggests that the growth in the Velocity of Money M2 should turn positive in Feb '14. Commercial & Industrial loan growth improved to 14.33% (Jul '12) and has slowed to 12.42% (Nov 12). Both Real Estate & Consumer loan growth are positive 1.37% and 1.77% (Nov'12), respectively, though still anemic.

- ***Property Sector Recovery***: Change in home prices rose by 4.31%, year-on-year in Oct '12. Cautious optimism would suggest that it is still early to call a bottom. Commercial Mortgage delinquencies have improved to 4.48x 2Q06 levels. However Residential Mortgage delinquencies at 6.6x 2Q06 levels have deteriorated and have not seen the same recovery as commercial mortgages.

- ***Some Sectors Are Slowing***: Even though the ISM Manufacturing Index at 50.70 (Nov '12) is close to the long term average of 52.74, the index has been contracting since May '11. Construction spending growth is positive but it continues to decrease from 10.00% (Feb '12) to 7.70% (Nov '12). Like Construction, Retail & Food sector positive growth has slowed from 6.38% (Feb '12) to 1.90% (Nov '12). Taken together this would suggest that it is likely that GDP growth may slow in the near term.

- ***Colorado State Improving***: The Colorado GDP grew 4.43% (4Q11), much better than the national economy. The CO Leading Index expanded by 41.78% (Oct '12) from a year ago. A definite positive for Colorado. However, CO Unemployment recovery has slowed.

Economic Outlook: National Economy Improving



Data Source: Federal Reserve Bank of St. Louis's GDP growth (GDPC1), inflation (CPIAUCSL), civilian unemployment (UNRATE) & the broader unemployment rate (U6RATE).

Date	Annual GDP Growth (LEFT)	Civilian Unemployment (RIGHT)	Broader Unemployment Rate (RIGHT)	Inflation (LEFT)
Nov-12		7.70%	14.40%	1.77%
Sep-12	2.60%	7.80%	14.70%	2.00%
Dec-11	1.97%	8.50%	15.20%	3.00%

- *Positive Trending GDP Growth*. The revised data shows that in the last three quarters, Annual[1] GDP[2] was 2.45% (1Q12), 2.14% (2Q12) and 2.60% (3Q12). 3Q12 GDP growth is a significant improvement over the previous quarter, as a positive GDP growth trend is now evident. GDP growth is expected to increase by an average of 0.23% per quarter to 2.82% in 4Q12. The 95% range of this 4Q12 forecast is between 1.92% on the low end and 3.71% on the high end. The probability of GDP growth exceeding the long term average growth rate of 3.23% is only 15.7%. That is it is not likely that GDP growth in 4Q12 will exceed 3.23%.

- *The New Normal*. Generally, the total housing market contributes 17.5%[3] of GDP or 0.56% to a typical GDP growth of 3.23%. Given the current depressed housing sectors, a GDP growth of 2.70% can be considered normal. The US economic recovery has bifurcated into two parts, non-housing and housing sectors.

- *Rate of Unemployment Decline Improves*. Unemployment peaked at 10.0% in Oct '09, and is 7.7% as of Nov '12. This is much better than Jul '12 8.3% and the average rate of decline in the UNRATE[4] has improved. The 24-month decline in Civilian Unemployment (UNRATE) as Nov '12 was -0.795% per annum. Six month earlier, as of May '12, the corresponding decline was -0.767%. That is the rate of the decline in the Unemployment rate has improved. With the current trends one can expect unemployment to reach 6% by Dec '14, and 4% by Jun '17[5]

- *Broader Unemployment Improving*. The Broader Unemployment Rate (U6RATE) has come down from its Oct '09 high of 17.2% to 14.4% in Nov '12 but is still above the long term average of 10.41%[6]. The 24-month decline in Broader Unemployment (U6RATE) as Nov '12 was –1.040% per annum. Six month earlier, as of May '12, the corresponding decline was -1.083%. That is the rate of the decline in the Broader Unemployment rate has slowed. With the current trends one can expect unemployment to reach 6% by Nov '20, and 4% by Oct '22. Note that the Broader Unemployment rate is declining faster than the Civilian Unemployment or part time employment is increasing faster than full time employment.

- *Inflation Continues to Decrease*. In the past 12 months the decline in inflation[7] slowed from an Aug '12 rate of -0.22%/month to the Nov '12 rate of -0.12%/month. This moves out the date deflation is expected to start from Mar '13 to Jan '14. This slowing is welcomed as deflation is most likely to have an unwelcomed negative impact on asset prices and could adversely impact a sustained economic recovery.

---

[1] The Annual GDP growth metric (GDP growth measured over 4 Quarters) is less volatile (i.e. less noisy) than the Quarter-to-Quarter metric that is reported in the news, and is a better indicator of trends than the Quarter-to-Quarter metric.

[2] GDPC1 started in 1947. The Real GDP growth, a high of 13.36% in 3Q 1950, a low of -4.58% in 2Q 2009; 1947-2012 average of 3.23%.

[3] http://www.nahb.org/generic.aspx?sectionID=784&genericContentID=66226

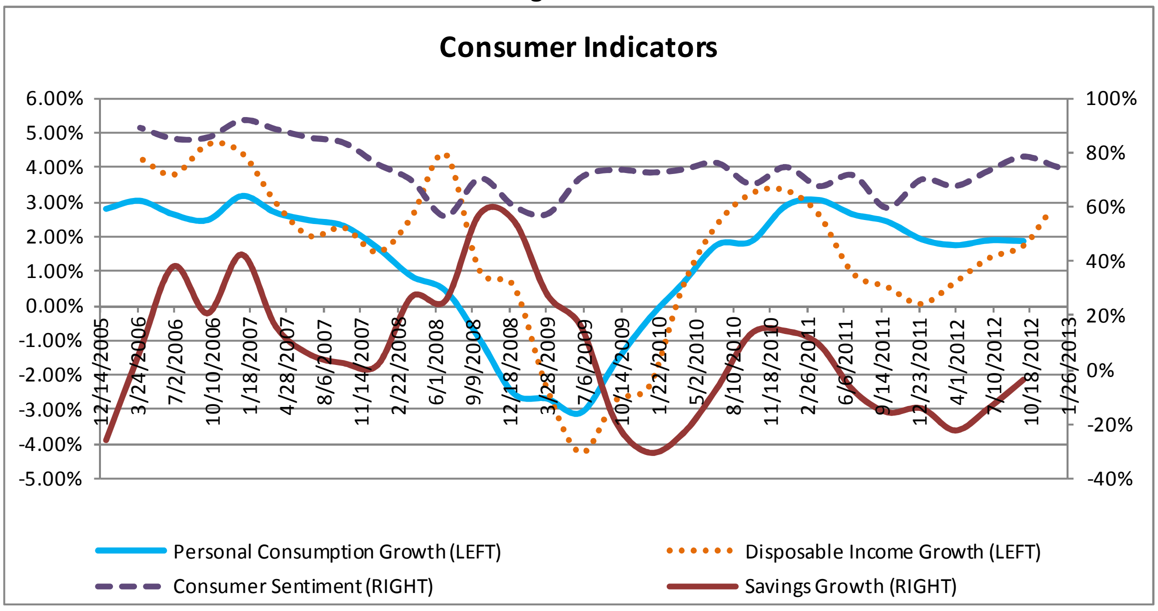
[4] UNRATE started in 1948. Civilian Unemployment, a high of 10.80% in Dec 1982, low of 2.50% in May/Jun 1953; 1948-2012 average of 5.82%.

[5] Note, when Unemployment reach 10.80% in Nov '82 to took 5 year to decline to 6% in Aug '87. The low was 6.8% in Oct' 00 and the high of 17.2% in Oct '09.

[6] U6RATE started in 1998. Broader Unemployment, a high of 17.20% in Oct 2009, low of 6.80% in Oct 2000; 1998-2012 average of 10.41%.

[7] CPIAUCSL started in 1947. Inflation high of 14.59% in Mar/Apr 1980, low of -2.99% in Aug 1949; 1947-2012 average of 3.70%, deflation or negative inflation occurred between May '49 to Jun '50, and again during Dec '08 to Oct '09.

Consumer Outlook: Consumer Strength Remains Weak



Data Source: Federal Reserve Bank of St. Louis's Consumption (PCECC96), Disposable Inc. (DSPIC96), U of MI Consumer Sentiment (UMCSENT) & Healthcare Coverage Rate (USHICCOVPCT). Note: UMCSENT is divided by 100 to fit on the graph.

Date	Consumer Sentiment (RIGHT)	Personal Consumption Growth (LEFT)	Disposable Income Growth (LEFT)	Savings Growth (RIGHT)
Dec-12	74.5			
Sep-12	78.3	1.89%	1.70%	-3.75%
Jun-12	73.2	1.91%	1.35%	-14.07%
Dec-11	69.9	1.94%	0.03%	-14.33%

- *Consumer Sentiments Improving*. The Consumer Sentiments[8] has picked up every month since Mar '12 from 67.5 to Dec '12, 74.5 compared to year ago. It is still below the long term average of 85.29[9] and it is left to be seen whether the 2-month dip (Nov & Dec '12) in year-on-year change in Sentiments is just a speed bump or part of a longer term trend.

- *Personal Consumption Growth Improving*. The Personal Consumption growth turned positive in 1Q10 and has remained in positive territory since, with a 1.89% growth as of 3Q12. 1.89% while positive, is a slight decline from 2Q12's growth of 1.91%, and is still below the long term average of 3.35%[10]. GDP growth is highly correlated (79.0%) to Personal Consumption growth. Therefore, year-on-year GDP growth is not likely to exceed 3% as Personal Consumption growth has remained flat over the last four quarters (4Q11 to 3Q12).

- *Anemic Disposal Income Growth*. Disposal Income growth dipped into negative territory -0.19% in Jan '12, and has remained positive every month since, to 2.54% in Nov '12. However, it is still below the long term average of 3.65%[11]. In theory GDP growth should convert into some combination of unemployment reduction and increased Disposal Income growth. There is no correlation (11.9%) between Disposal Income growth and GDP growth. In practice this is to be expected. As a result of outsourcing to foreign suppliers, in the near term, a large portion of GDP growth translates to imported goods and services. This inference is a cause for concern as in the long term the lack of domestic Disposal Income growth will eventually convert to a decline in Consumption growth and a GDP growth that is not sustainable.

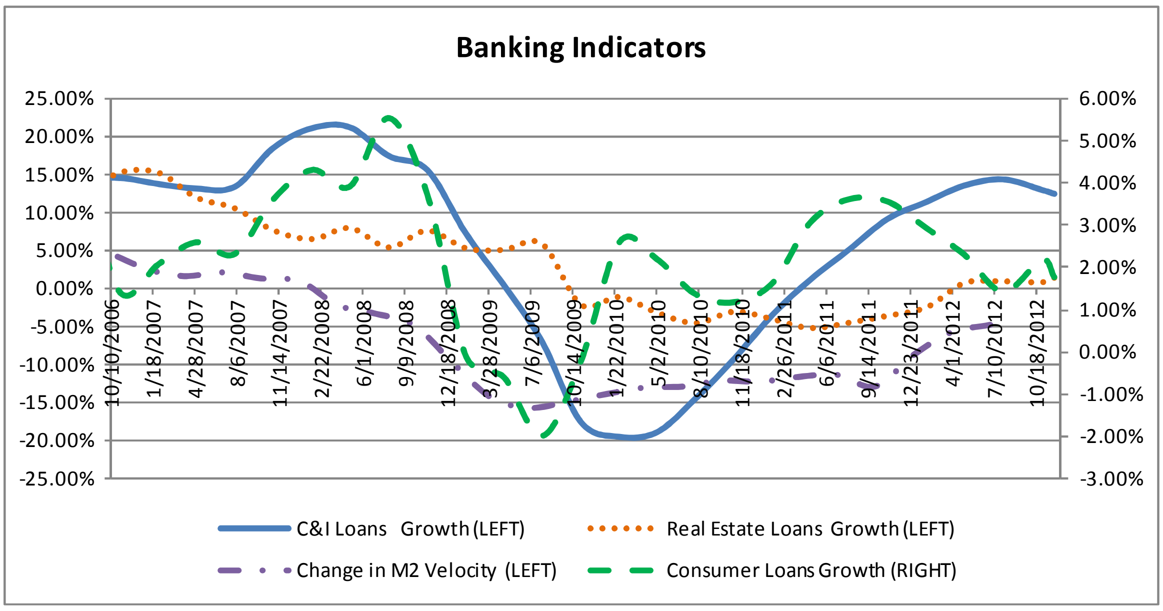
- *Savings Remains Negative*. From 2006 to mid 2009 Disposable Income grew at a faster rate than Personal Consumption, ensuring growth in Savings. This has reversed from late 2009 to 2012 except for a very short period in mid 2010. As of 3Q12 Savings contraction has reduced to -0.97% but is well below the 1959-2012 average of 3.65%[12].

- *Consumers Uncertain*. A test of changes in the Savings versus Consumer Sentiments before and after the Great Recession of 2008-2009 provides some new insights into consumer behavior. Prior to 2008, Consumer Sentiments is positively correlated (58.6%) to Savings growth 9 quarters later. That is there is a lagged tendency for consumers to save a larger portion of their Disposal Income when the future looks good. However, after 2007, this reversed. The correlation is negative and leading. In the post recession environment, the decrease in Savings (i.e. increased Consumption as a proportion of Disposal Income) produces an improvement in Consumer Sentiments 3 quarters later. Or, consumers remain uncertain in their outlook, and Consumer Sentiments has changed from a leading indicator to a lagging indicator of the economy.

---

[8] Data shown on graph is divided by 100 to fit in with the other time series on the same graph.
[9] UMCSENT started in 1978. UM Consumer Sentiments, high of 111.30 in Feb '00, low of 51.7 in May '80; 1978-2012 average of 85.33.
[10] PCECC96 started in 1947. Personal Consumption growth, high of 10.22% in 3Q1950, low of -3.09% in 2Q 2009; 1947-2012 average of 3.36%.
[11] DSPIC96 started in 1959. Disposal Income growth, high of 8.70% in Apr 1973, low of -4.86% in May 2009; 1959-2012 average of 3.25%.
[12] Calculated as DSPIC96 – PCECC96. Savings growth, high of 71.96% in 2Q 1988, low of -47.73% in 2Q 1987; 1959-2012 average of 3.92%.

Banking Outlook: Bank Lending Turned Around



Data Source: Federal Reserve Bank of St. Louis's C&I (BUSLOANS), Consumer (CONSUMER), Real Estate (REALLN) loans & Velocity of M2 (M2V).

Date	C&I Loans Growth (LEFT)	Consumer Loans Growth (RIGHT)	Real Estate Loans Growth (LEFT)	Date	Change in M2 Velocity (LEFT)
Nov-12	12.42%	1.77%	1.37%	Sep-12	-5.36%
Oct-12	12.95%	2.18%	0.77%	Jun-12	-4.77%
Oct-11	9.14%	3.55%	-3.61%	Jun-11	-11.36%

($Billions) Date	C&I Loans (LEFT)	Consumer Loans (LEFT)	Real Estate Loans (RIGHT)	Date	Velocity of M2 Money Stock (RIGHT)
Nov-12	1,481	231	3,543	Sep-12	1.57
Oct-12	1,479	232	3,520	Jun-12	1.58
Oct-11	1,309	227	3,494	Jun-11	1.66

- *Improving Velocity*. The Velocity of Money M2[13] has contracted every quarter since 1Q02. This contraction was at its worst -15.73% in 2Q09, and has since reduced to -5.36% in 3Q12. At this rate the growth in the Velocity of Money M2, should turn positive in Feb '14.

- *C&I Bright Spot*. Commercial & Industrial Loan[14] growth continues to be the bright spot in the bank-lending, having bottomed in Oct '10 at $1,199 Billion, growth turned positive in Mar '11 at 0.08% and is now at 12.42% as of Nov '12. This is above the long term average growth rate of 7.88%. Note that much of this growth would be due to the economic stimulus package. Any reduction or termination of this economic stimulus could lead to further growth decline.

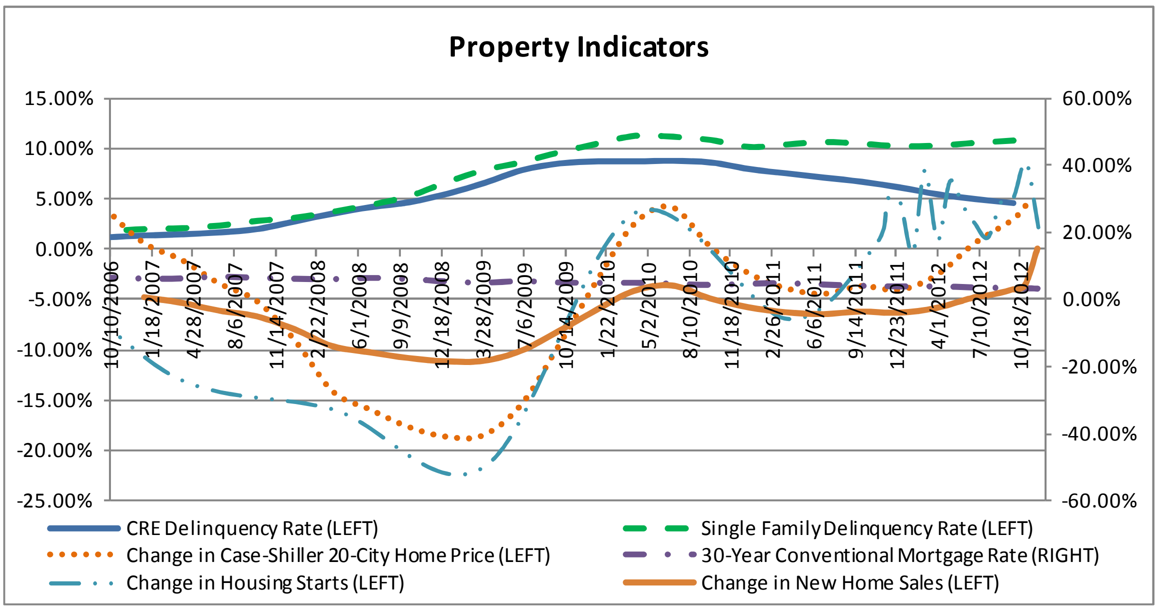
  Note, "*Since the economy began to falter in 2007, Congress has passed what amounts to three stimulus bills — a bipartisan $158 billion package of tax cuts signed by President George W. Bush in early 2008; a $787 billion bill pushed by President Obama when he took office in 2009 in the wake of the financial system's collapse; and a tax cut and unemployment fund extension agreement reached by Mr. Obama and Congressional Republicans in 2010 and extended again to cover 2012*". New York Times, 03/15/2012.

- *Anemic Consumer Loan Growth*. The revised data from St. Louis Fed shows that the Consumer (Individual) turned positive in Oct '09 at 1.90%, and as of Nov '12 it is at 1.77%. This growth rate is anemic as it is well below the historical average of 3.70%[15].

- *Anemic Real Estate Loan Growth*. Real Estate loan growth turned a positive 0.20% in Mar '12. As of Nov '12 it is at 1.37%. This growth rate is also anemic as it is well below the historical average of 10.04%[16].

[13] M2V started in 1959. M2V growth, high of 14.92% in 4Q 1994, low of -15.73% in 2Q 2009; 1959-2012 average of -0.04%.
[14] BUSLOANS started in 1947. BUSLOANS growth, high of 39.03% in Jun 1951, low of -19.85% in Feb 2010; 1947-2012 average of 7.88%.
[15] CONSUMER started in 1947. CONSUMER growth, high of 38.87% in Jan 1948, low of -8.94% in Feb 2010; 1947-2012 average of 9.00%.
[16] REALLN started in 1947. REALLN growth, high of 29.77% in Jan 1948, low of -5.22% in Apr 2011; 1947-2012 average of 10.08%.

Property Outlook: Residential, the Exception to Recovery



Data Source: Federal Reserve Bank of St. Louis's Case-Schiller (SPCS20RSA), CRE Delinquency (DRCRELEXFACBS), Single-Family Delinquency (DRSFRMACBS), Housing Starts (HOUST), New 1-Family Homes for Sale (HNFSEPUSSA), Average Sale Price (ASPNHSUS) & 30-Yr Mortgage Rates (MORTG).

Date	CRE Delinquency Rate (LEFT)	Single Family Delinquency Rate (LEFT)	Change in Case-Shiller 20-City Home Price (LEFT)	Change in Housing Starts (LEFT)	Change in New Home Sales (LEFT)	30-Year Convention al Mortgage Rate (RIGHT)
Nov-12				21.61%	15.24%	3.35%
Sep-12	4.56%	10.77%	2.93%	30.29%	2.93%	3.50%
Mar-12	5.43%	10.28%	-2.55%	17.67%	-2.55%	3.95%
Mar-11	7.53%	10.38%	-3.86%	-5.66%	-3.86%	4.84%

- *Home Prices Increased*. The Case-Shiller 20-City Home Price Index[17] appears to have bottomed at 136.70 in Jan. In Nov '12 year-on-year home prices rose by 4.31%. The annual home prices increase turned positive, 0.60% in Jun '12. Home prices are now -30.26% below their 206.66 Apr '06 peak and -5.78% below the 2000-2012 average of 152.97.

- *Commercial Mortgage Recovery by 4Q14*. Commercial Mortgage delinquencies are 4.56% in 3Q12, and still high at 4.47x 2Q06 rate of 1.02%. Current trends are stable, and delinquencies are expected to return to 2006 levels by 4Q14. That is there has not been any deterioration in commercial mortgage delinquency rates.

- *Residential Mortgage Recovery Deteriorating*. Residential Mortgage delinquencies are up at 10.77% in 3Q12 from 10.54% in 2Q12. It is still very high at 6.6x 2Q06 rate of 1.62%. Recovery trends have essentially flattened, and if the current trend continues the residential mortgage delinquencies are not expect to recover in this century. This means that there are residential mortgage problems in the banking sector that have not come to the surface.

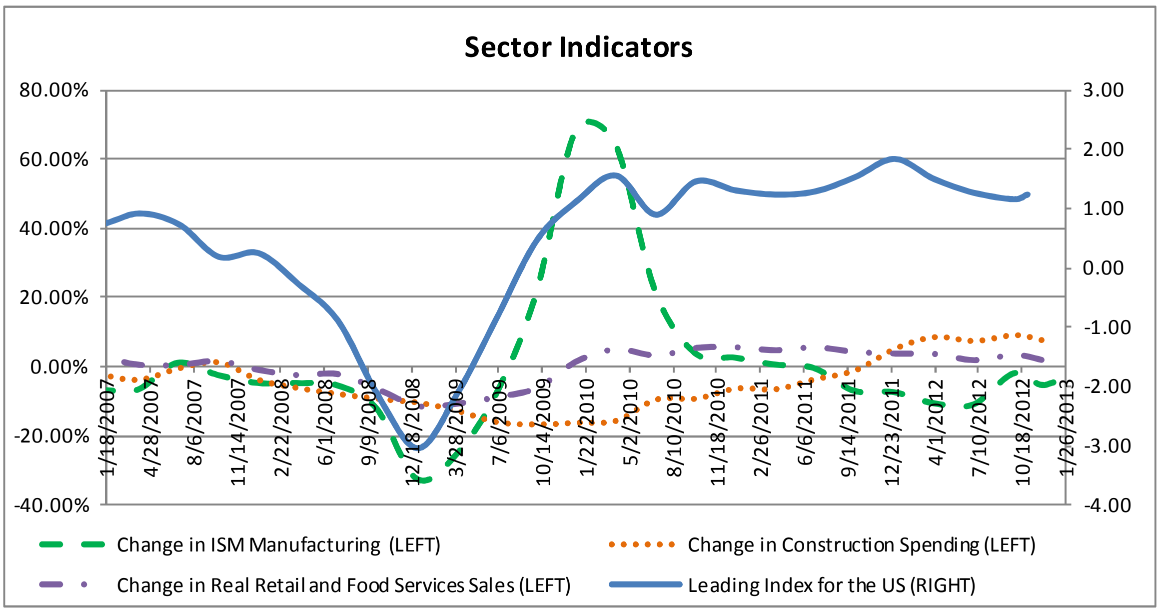
- *Housing Starts Improve*. New housing starts increased significantly 21.61% (Nov '12), and have increased every month since Oct '11. However, note that housing starts at 861 are well below the 1959-2012 average of 1,468[18]. Note too that Housing Starts are optimistic statistics as they do not always convert to housing construction. Further caution is advised as the change in housing starts dropped from 40.95% in Oct '12 to the current 21.61% in Nov '12.

- *New Home Sales Increased*. One-family New Homes sold excluding unsold for sale, increased by 15.24%[19] in Nov '12. This is a significant improvement from previous two month of -2.57% (Oct '12) and 4.07% (Sep '12). The average growth in New Homes sold between 1975 & 2012 was 4.66%. Given the latent residential delinquency problems, the home sales and home price increases may be temporary.

- *Mortgage rate lower*. The 30-Year Conventional Mortgage Rate is at a 41 year low at 3.35%.

[17] SPCS20RSA started in 2000. SPCS20RSA growth, high of 17.08% in Aug 2004, low of -18.95% in Jan 2009; 2000-2012 average of 2.90%.
[18] HOUST started in 1959. HOUST, high of 2,494 in Jan 1972, low of 478 in Apr 2009; 1959-2012 average of 1,471.
[19] One-Family New Home Sales = HNFSEPUSSA*ASPNHSUS/1000.

Sectors Outlook: Some Sectors are Slowing



Data Source: Federal Reserve Bank of St. Louis's Leading Index (USSLIND), ISM Composite Index (NAPM), Construction Spending (TTLCONS) Retail and Food Sales (RRSFS).

Date	Leading Index for the US (RIGHT)	Change in ISM Manufacturing (LEFT)	Change in Construction Spending (LEFT)	Change in Real Retail and Food Services Sales (LEFT)
Nov-12		-5.17%	7.70%	1.90%
Sep-12	1.17	-1.90%	9.10%	3.34%
Dec-11	1.85	-7.33%	5.22%	3.71%

- *Leading Index Stabilizes*. The US Leading Index increased significantly since the recession from -3.10 in Jan '09 to a high of 1.84 in Nov '11 and then declined to the current 1.17 in Sep '12, has recovered very slightly to 1.25 in Nov '12. It is significantly below it historical high of 3.60[20] in Aug '83, and below the long term average of 1.17.

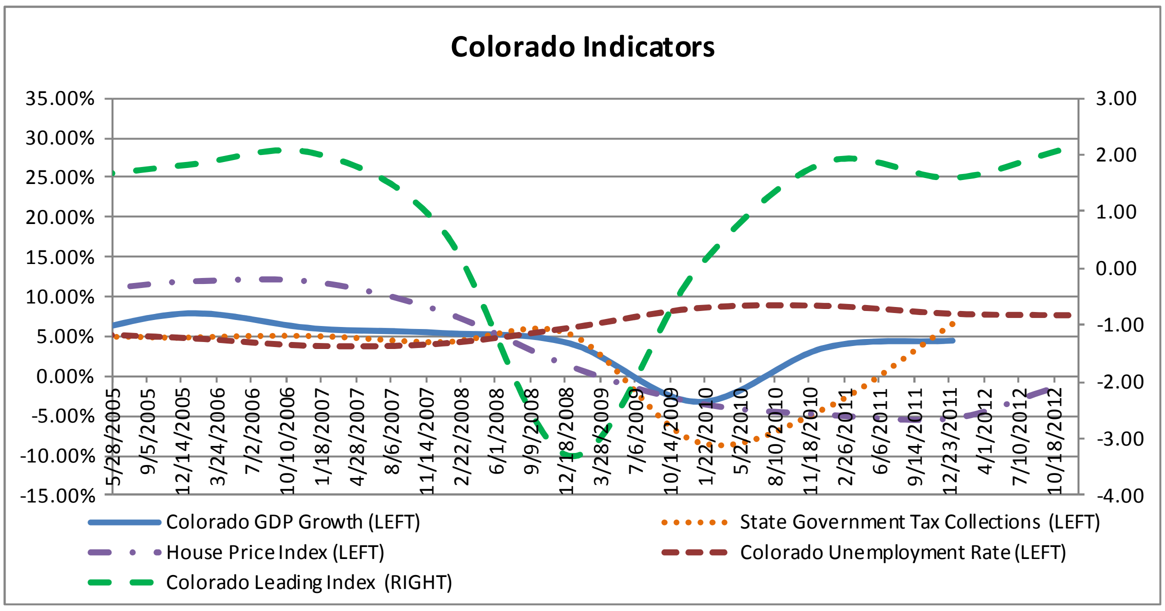
- *Manufacturing Contracts*. As of Nov '12 the ISM Manufacturing PMI Composite Index is at 50.70, marginally below the long term average of 52.74[21], significantly below the Jul 1950 peak of 77.50. On a year-on-year basis, this index has declined every month since May '11.

- *Constructions Growth Slowing*. Total Construction Spending turnaround from a low of $795 billion in Feb '10 to $866 billion as of Nov '12[22]. The contraction in the industry was at its worst in Nov '09 at -17.34%, and has been positive since Nov '11 and at 7.70% as of Nov '12. However, this positive growth seems to have peaked in Jul '12 and the growth rate has been declining ever since.

- *Retail Growth Slowing*. Retail and Food Services Sales has had positive growth since Dec '09. However, the growth has slowed since the Feb '11 peak of 6.38%[23], at an average rate of -0.17% per month. Though there was an uptick in Sep '12, this may be the exception, and if this trend continues one can expect a contraction by Oct'13.

[20] USSLIND started in 1982. USSLIND, high of 3.60 in Aug 1983, low of -3.10 in Jan 2009; 1982-2012 average of 1.17.
[21] NAPM started in 1948. NAPM, high of 77.50 in Jul 1950, low of 29.40 in May 1980; 1950-2012 average of 52.74.
[22] TTLCONS started in 1993. TTLCONS growth, high of 14.25% in Jan 2006, low of -17.34% in Nov 2009; 1993-2012 average of 3.20%.
[23] RRSFS started in 1992. RRSFS growth, high of 8.30% in Mar 1994, low of -11.48% in Dec 2008; 1992-2012 average of 2.06%.

Colorado State Outlook: Looking Better with Risks



Data Source: Federal Reserve Bank of St. Louis's CO GDP Growth (CONGSP), CO Leading Index (COSLIND), Sales Tax (COSALESTAX), House Price Index (COSTHPI) & CO Unemployment (COUR)

Date	Colorado GDP Growth (LEFT)	Colorado Leading Index (RIGHT)	State Government Tax Collections (LEFT)	House Price Index (LEFT)	Colorado Unemployment Rate (LEFT)
Nov-12					7.70%
Oct-12		2.07			
Dec-11	4.43%	1.59	6.59%	-5.39%	7.90%
Dec-10	3.55%	1.86	-3.97%	-4.91%	8.90%
Dec-09	-3.19%	-0.01	-8.17%	-3.43%	8.60%

- *Better CO GDP Growth*. Colorado GDP growth is positive at 4.43% as of 4Q11. This is much better than the national economy's Annual GDP growth of 1.97% for the same period of 1Q11-4Q11.

- *Future Looks Better*. The Colorado Leading Index is 2.07 at Oct '12 and an expansion of 41.78% from a year ago.

- *State Revenues Improving*. Collection of Sales Tax has increased by 6.59% in 2011 compared to contractions of -3.97% in 2010 and -8.17% in 2009. That is, CO's GDP growth is converting into increased tax revenues.

- *Home Prices Fall*. The Colorado House Price Index shows a price decrease of -1.84% (3Q12) which is worse than the Case-Shiller 20-City Home Price Index increase of 2.93% (Sep '12). However, since the rate of decline is decreasing, CO home prices should begin to increase in 4Q12 or 1Q13.

- *Lags in Unemployment*. The Colorado unemployment is at 7.70% (Nov '12) which is the same as the national average of 7.7% (Nov '12). The CO Unemployment is declining at -0.04% per month or -0.42% per annum. This rate of decline is slower than the national economy's -0.80% per annum. CO's Unemployment is expected to fall to 6% by Nov '16.

- *Denver Real Estate Summary by CBRE*:

CBRE Local	Total Vacancy		Direct Vacancy		Lease Rates		Net Absorption		Under Construction	
Reports	4Q12	3Q12	4Q12	3Q12	4Q12	3Q12	4Q12	3Q12	4Q12	3Q12
Industrial	5.10%	5.40%	5.00%	5.30%	$5.98	$5.88	1.0M	925K	963K	1.6M
Office	15.10%	15.30%	14.80%	15.00%	$20.20	$20.08	395K	(766K)	523K	557K
Retail	7.70%	7.70%	7.20%	7.40%	$15.39	$15.89	175K	400K	616K	487K

On The Horizon: Hope, Clouds or Black Swans?

- ***Hope, Housing Market May Be in Recovery***: Blackstone has spent more than $2.5 billion on 16,000 homes to manage as rentals, deploying capital from the $13.3 billion fund it raised last year[24]. The housing market may be in the initial stages of a recovery as three metrics show year-on-year increases; Case-Schiller 20-City Home Price Index rose by 4.31%, Housing Starts increased by 21.61%, and New Home Sales by 15.24%. However, caution is advised as Residential Mortgage Delinquencies deteriorating at 6.6x 2Q06 levels. This may suggest that the positive housing market news may not be sustainable, and only time will tell.

- ***Clouds for Select Investors***: On Feb. 8, 2012[25], the U.S. Department of Treasury and the Internal Revenue Service released lengthy and detailed proposed regulations for the Foreign Account Tax Compliance Act (FATCA). The Foreign Account Tax Compliance Act (FATCA) can raise significant issues for:
  - U.S. partnerships that make certain kinds of U.S.-source payments (including payment of certain gross proceeds) to foreign entities
  - U.S. partnerships that receive certain kinds of U.S.-source payments or proceeds and that have foreign entities as partners
  - Foreign partnerships that receive certain kinds of U.S.-source payments or proceeds

  Although proposed regulations, include some favorable provisions, the FATCA regime still can be expected to raise substantial compliance burdens—as well as business strategy, customer relations and legal issues—for many partnerships and other entities, particularly in the investment fund context.

- ***Black Swans***: There are no visible potential black swans on the horizon, and that is the real problem with black swans. Like tsunamis, black swans are usually not detectable until it is too late. There are three key characteristics of black swans. First, they are rare and occur close to the 100th percentile of a loss distribution. Second, they occur only with loss distributions that have very long tails, which means that even though they are rare when they do occur, the sustained losses are catastrophic. And third, they are always unexpected. With this perspective the crash of 1929 was a black swan while the crash of 2008 was not.

[24] Bloomberg, http://www.bloomberg.com/news/2013-01-09/blackstone-steps-up-home-buying-as-prices-jump-mortgages.html
[25] KPMG, http://kpminstitutes.com/taxwatch/insights/2012/wnit-fatca-issues-for-partnerships.aspx