



Introduction

Since 1993, commercial real estate has gone through two full cycles. It has yet to be seen if we have reached the trough of the current cycle.

- As measured by Standard & Poor's/GRA Commercial Real Estate Indices (SPCREXTM), most indices show that recent Year-Over-Year (YOY) price appreciation peaked at higher rates than the prior cycle. In addition, the rate of deceleration (decline phase) was similar to that experienced during the 1998-2002 period; however, deceleration during this most recent cycle was quicker and steeper than that experienced during the prior cycle.
- Over time it has been shown that there are relationships between business (economic variables) and commercial real estate (price) cycles. Depending on the time period, property sector and geographic region being measured, commercial real estate price movements may lead, lag or coincide with economic indicators (employment, production, retail sales, income, etc.). Over the past two cycles, on average, SPCREXTM Year-Over-Year (YOY) appreciation/depreciation rates tend to lead the troughs and lag the peaks of the overall business cycle.

This report looks at the peaks and troughs across the two commercial real estate cycles; compares the speed of deceleration in the current decline-trough phase of the commercial real estate cycle with that of the prior cycle; analyzes the correlation and statistical significance between selected demand side economic variables and SPCREX indicators; and measures the degree of lead and lag at both the peaks and troughs of commercial real estate cycle and that of the overall business cycle.

Overall Comments

Peaks/Troughs

As measured by Year-Over-Year (YOY) percent change in the Standard & Poor's/GRA Commercial Real Estate Indices (SPCREX™):

- Most indices in the prior commercial real estate cycle peaked around May-June 1999 (average +14.5%, median +14.7%) and troughed around May-June 2001 (average -1.0%, median -1.2%).
- Compared to the recent cycle where most indices peaked around May-Aug 2006 (average +16.3%, median +16.6%) and troughed between October 2007-April 2008 (average +1.7%, median +2.1%).

Amplitudes for peaks across the two cycles were similar, but the peak in YOY appreciation rates were roughly 185 bps higher during this most recent cycle compared to last. It has yet to be determined if the current commercial real estate cycle has technically hit bottom, or if the market will fall below its technical support reached in the 2001-2003 period. This analysis uses monthly YOY percent change in SPCREX index and economic data up to April 2008.

The table below is a summary of index peaks and troughs for the two most recent commercial real estate cycles:

Index	1998-2002				2005-2008			
	Date	Peak	Date	Trough	Date	Peak	Date	Trough
National	May-99	13.3%	Apr-01	0.9%	Aug-06	14.7%	Apr-08	3.1%
Office	Nov-98	16.6%	Jun-03	-0.8%	Mar-07	18.8%	Apr-08	0.3%
Apartments	Jun-99	14.6%	Apr-01	-2.0%	Aug-06	16.6%	Jun-07	-3.5%
Warehouse	Jul-98	11.9%	Oct-99	-1.4%	May-05	14.2%	Apr-08	4.8%
	Oct-00	9.5%	Apr-02	-1.0%				
Retail	Nov-99	13.3%	Jun-01	-1.4%	Jun-07	15.1%	Apr-08	2.1%
Northeast	May-99	18.0%	Apr-01	0.6%	Aug-06	19.9%	Apr-08	0.8%
PacificWest	Jul-99	15.2%	Oct-99	3.1%	Jan-05	15.0%	Feb-07	5.8%
	Sep-00	16.2%	Sep-01	-2.8%				
MidAtlanticSouth	May-99	13.3%	Sep-01	-5.3%	May-06	18.3%	Nov-07	-1.9%
DesertMountainWest	Mar-99	16.9%	May-01	-3.3%	May-05	17.9%	Mar-06	4.7%
					Mar-07	18.1%	Apr-08	-0.2%
Midwest	Aug-98	14.7%	Oct-02	1.5%	Oct-06	11.1%	Jan-08	3.0%
Average	Jun-99	14.5%	Jun-01	-1.0%	May-06	16.3%	Oct-07	1.7%
Median	May-99	14.7%	May-01	-1.2%	Aug-06	16.6%	Apr-08	2.1%

Decline Phase Deceleration

On average, across most indices, recent YOY deceleration in appreciation rates is steeper and faster than that experienced during the 1999 to 2001 period.

The table below is a summary of peaks and troughs for the indices, along with total absolute drop from peak to trough, and rate of drop per month in basis points:

Geo/Sector	Peak		Trough		Decline from Peak to Trough		
	Month	YOY % Change	Month	YOY % Change	Total Change (in bps)	Months	Bps per Month
National	Aug-06	14.7%	Apr-08	3.1%	1160	20	58
	May-99	13.3%	Apr-01	0.9%	1240	23	54
Office	Mar-07	18.8%	Apr-08	0.3%	1850	13	142
	Nov-98	16.6%	Jun-03	-0.8%	1740	55	32
Apartment	Aug-06	16.6%	Jun-07	-3.5%	2010	16	126
	Jun-99	14.6%	Apr-01	-2.0%	1660	22	75
Warehouse	May-05	14.2%	Apr-08	4.8%	940	35	27
	Oct-00	9.5%	Apr-02	-1.0%	1050	18	58
	Jul-98	11.9%	Oct-99	-1.4%	1330	15	89
Retail	Jun-07	15.1%	Apr-08	2.1%	1300	10	130
	Nov-99	13.3%	Jun-01	-1.4%	1470	19	77
Northeast	Aug-06	19.9%	Apr-08	0.8%	1910	20	96
	May-99	18.0%	Apr-01	0.6%	1740	23	76
PacificWest	Jan-05	15.0%	Feb-07	5.8%	920	25	37
	Sep-00	16.2%	Sep-01	-2.8%	1900	12	158
MidAtlanticSouth	May-06	18.3%	Nov-07	-1.9%	2020	18	112
	May-99	13.3%	Sep-01	-5.3%	1860	33	56
DesertMountainWest	Mar-07	18.1%	Apr-08	-0.2%	1830	13	141
	May-05	17.9%	Mar-06	4.7%	1320	10	132
	Mar-99	16.9%	May-01	-3.3%	2020	26	78
Midwest	Oct-06	11.1%	Jan-08	3.0%	810	15	54
	Aug-01	8.7%	Oct-02	1.5%	720	14	51
	Aug-98	14.7%	Sep-00	1.9%	1280	25	51

In the most recent decline phase of the commercial real estate cycle, SPCREX indices showing the quickest rate of deceleration per month were:

- Office (-142 bps), Desert Mountain West (-141 bps), Retail (-130 bps), Apartment (-126 bps) and Mid-Atlantic South (-112 bps).

Indices showing the most resilience during the current decline phase were:

- Warehouse (-27 bps), Pacific West (-37 bps), Midwest (-54 bps), and National (-58 bps).

Index Economic Relationships

Due to the importance of commercial real estate as an input into the production of goods and services in the economy, movements in commercial real estates prices have been correlated with the over all business cycle, as measured by movements in economic indicators (employment, industrial production, trade flows, construction, retail sales, income, etc.).

Growth rates for national commercial real estate prices are moderately correlated (but statistically significant) with total non-farm employment growth rates. This makes sense theoretically in that job growth/contraction would have an impact on rising/falling demand for space (net absorption), vacancy (occupancy) rates, rental rates (net operating income), and intrinsic values (closed transaction prices).

The measurement and strength of the relationships between change in index levels and change in economic variables can be improved by focusing in on sector specific drivers of demand. For example, there is a strong relationship between YOY changes in office employment and SPCREX office indices. Other indices showing relationships with economic indicators are: apartment with total non-farm employment; warehouse with gross import-export trade flows, wholesale trade and total non-farm employment; and retail with retail sales and personal income.

At the regional level, the annual percent change in total non-farm employment (metro weighted) has been moderately related (but statistically significant) to commercial real estate price movements. In many cases, moving from changes at the national employment level -- to regional or metro group levels -- show moderately stronger (and statistically significant) relationships.

These relationships are important for monetary and fiscal policy makers, and real estate portfolio managers and developers, in that SPCREX sector and regional indices can be used for economic research and econometric modeling, and commercial real estate research and price forecasting. This simple analysis could be extended and improved by including other economic, demographic and commercial real estate specific variables; adjusting the time-series data for leads and lags; and including supply side variables (permits, starts, and completions, for example).

The tables below show a summary of statistics measuring the relationship between YOY change in index levels and selected economic variables. These relationships are measured by using correlation (Multiple R) and regression (simple -t-) statistics.

Sector Index Correlation				
YOY % Change				
SPCREX Index	Economic Indicator	Multiple R	T-statistic	Correlation
National	Total Non-farm Employment	0.35	4.7	Moderate
Office	Office Employment	0.54	8.2	Strong
Apartment	Total Non-farm Employment	0.27	3.5	Moderate
Warehouse	Gross Trade Flows	0.32	4.2	Moderate
	Wholesale Trade Employment	0.30	4.0	Moderate
	Total Non-farm Employment	0.15	1.9	Weak
Retail	Retail Sales	0.25	3.3	Moderate
	Personal Income	0.19	2.5	Weak-to-Moderate

Sector Index Correlation				
YOY % Change				
SPCREX Index	Non-farm Employment	Multiple R	T-statistic	Correlation
Northeast	National	0.17	2.1	Weak-to-Moderate
	Northeast Region	0.28	3.7	Moderate
	New York-Boston Metro Group	0.24	3.2	Moderate
	Wash-Balt-Rich-Phili Metro Group	0.31	4.1	Moderate
PacificWest	National	0.29	3.9	Moderate
	PacificWest Region	0.41	5.7	Moderate-to-Strong
	Northern California Metro Group	0.36	4.9	Moderate
	SouthernCalifornia Metro Group	0.38	5.2	Moderate-to-Strong
	Pacific Northwest Metro Group	0.41	5.7	Moderate-to-Strong
MidAtlanticSouth	National	0.51	7.6	Strong
	MidAtlanticSouth Region	0.52	7.7	Strong
	South Florida Metro Group	0.49	7.1	Strong
	Atlanta et al. Metro Group	0.47	6.7	Strong
DesertMountainWest	National	0.45	6.4	Moderate-to-Strong
	DesertMountainWest Region	0.42	5.8	Moderate-to-Strong
Midwest	National	0.27	3.5	Moderate
	Midwest Region	0.15	2.0	Weak
	Chicago Metro Group	0.30	3.9	Moderate
	Other Metro Group	0.05	0.6	Weak

Index Leads and Lags

Overall, SPCREX indices appear to lead the troughs and lag the peaks of the overall business cycle.

National Index

The national index was more of a leading indicator in the prior cycle and seems to be more of a coincident-leading indicator at this point in the current business cycle. When looking at industrial production, the national index also appears to lag at the peaks and lead at the troughs.

Index Cycle Phase	National-to-Non-farm Employment Date Variance	National-to-Industrial Production Date Variance
Peak (May 1999)	-8 months	+2 months
Trough (Apr 2001)	-11 months	-3 months
Peak (Aug 2006)	+5 months	+11 months
Trough (Apr 2008)	0 months	0 months

Office Index

The office index was a leading indicator at the peak of the prior cycle and lagging indicator a peak of the current cycle, and could be more of a leading-coincident indicator in the decline-trough phase of the current business cycle. When looking at office employment, the office index appears to lag at the peaks and troughs.

Index Cycle Phase	Office-to-Office Employment Date Variance	Office-to-Non-farm Employment Date Variance
Peak (Nov 1998)	+ 10 months	-14 months
Trough (Jun 2003)	+15 months	+15 months
Peak (Mar 2007)	+11 month	+12 months
Trough (Mar 2008)	+2 months	0 months

Apartment Index

The apartment index was a leading indicator at both the peak and trough of the prior business cycle, and coincident-leading indicator at the peak and trough of the current business cycle. When looking at multifamily permits, they appear to lead the apartment index at its peaks and troughs.

Index Cycle Phase	Apartment-to-5+ unit permits Date Variance	Apartment-to-Non-farm Employment Date Variance
Peak (Jun 1999)	+5 months	-7 months
Trough (Apr 2001)	+3 months	-13 months
Peak (Aug 2006)	+16 months	+5 months
Trough (Jun 2007)	0 months	-10 months

Northeast Index

The Northeast index was a leading indicator in the prior cycles and could be more of a leading-coincident indicator in the current business cycle.

Index Cycle Phase	NE-to-Non-farm Employment Date Variance	NE-to-NE Region Employment Date Variance	NE-to-NE-NY-Boston Employment Date Variance	NE-to-NE-Wash et al Employment Date Variance
Peak (May 1999)	-8 months	-13 months	-12 months	-13 months
Trough (Apr 2001)	-11 months	-8 months	-9 months	-8 months
Peak (Aug 2006)	+5 months	-4 months	-4 months	+5 months
Trough (Apr 2008)	0 months	0 months	TBD	TBD

Pacific West Index

The Pacific West index was more of a lagging-coincident indicator in the prior cycles and could be more of a leading-coincident indicator in the current business cycle.

Index Cycle Phase	PW-to-Non-farm Employment Date Variance	PW-to-PW Region Employment Date Variance	PW-to-PW-NorCal Employment Date Variance	PW-to-PW-Seattle Employment Date Variance	PW-to-PW-SoCal Employment Date Variance
Peak (Jul 1999)	N/A	+24 months	+19 months	+32 months	+8 months
Trough (Oct 1999)	N/A	N/A	+10 months	N/A	N/A
Peak (Sep 2000)	+8 months	N/A	+3 months	N/A	N/A
Trough (Sep 2001)	-6 months	-6 months	-5 months	-3 months	-4 months
Peak (Jan 2005)	-14 month	-16 months	-16 months	-19 months	-13 months
Trough (Feb 2007)	-14 months	-13 months	TBD	TBD	TBD

Conclusion

This research analyzed the peaks and troughs across the two commercial real estate cycles; rates at which SPCREX indices decelerated in the current decline phase of the commercial real estate cycle; correlation and statistical significance between the indices and selected economic indicators; and degree of lead-lag at the peaks and troughs of the commercial real estate cycle compared to the overall business cycle.

Commercial real estate, like the economy, goes through cycles, and we have been through two full cycles since 1993, as measured by the Standard & Poor's/GRA Commercial Real Estate Indices. Amplitude in YOY percent change peaked at higher levels than those seen in the previous cycle, and the rate of deceleration in appreciation rates during the most recent decline phase was faster and steeper than the previous cycle.

- Indices showing the fastest rate of deceleration were Office, Desert Mountain West, Retail, Apartment and Mid-Atlantic South.

Commercial real estate price cycles have also been correlated with the overall business cycle. The degree of correlation and significance is dependent on the economic-sector indicator-index and their lead-lag characteristics.

- Over the past two commercial real estate cycles, on average, SPCREX™ Year-Over-Year (YOY) appreciation/depreciation rates tend to lead the troughs and lag the peaks of the overall business cycle.

The measurement and strength of commercial real estate price and economic fundamental relationships can be improved by analyzing commercial real estate -- sector specific -- variables (employment, trade, sales, income, etc.) and granulating down by geography to more regional-metro group (weighted) local economic and employment factors.

- For example: office or wholesales trade employment, gross import-export trade flows, retail sales, personal income, etc.

Overall, SPCREX indices appear to lead the troughs and lag the peaks of the overall business cycle. The national index appeared to be more of a leading indicator in the prior cycle and appears to be more of a coincident-leading indicator at this point in the current business cycle.

- When looking at industrial production, the national index appears to lag at the peaks and lead at the troughs of the business cycle.

The SPCREX indices are important indicators for monitoring the health of commercial real estate markets across the nation; conducting national and regional monetary and fiscal policy; and for commercial real estate portfolio managers and developers who conduct economic and commercial real estate research, market forecasting, portfolio benchmarking, and property derivatives trading.

APPENDIX

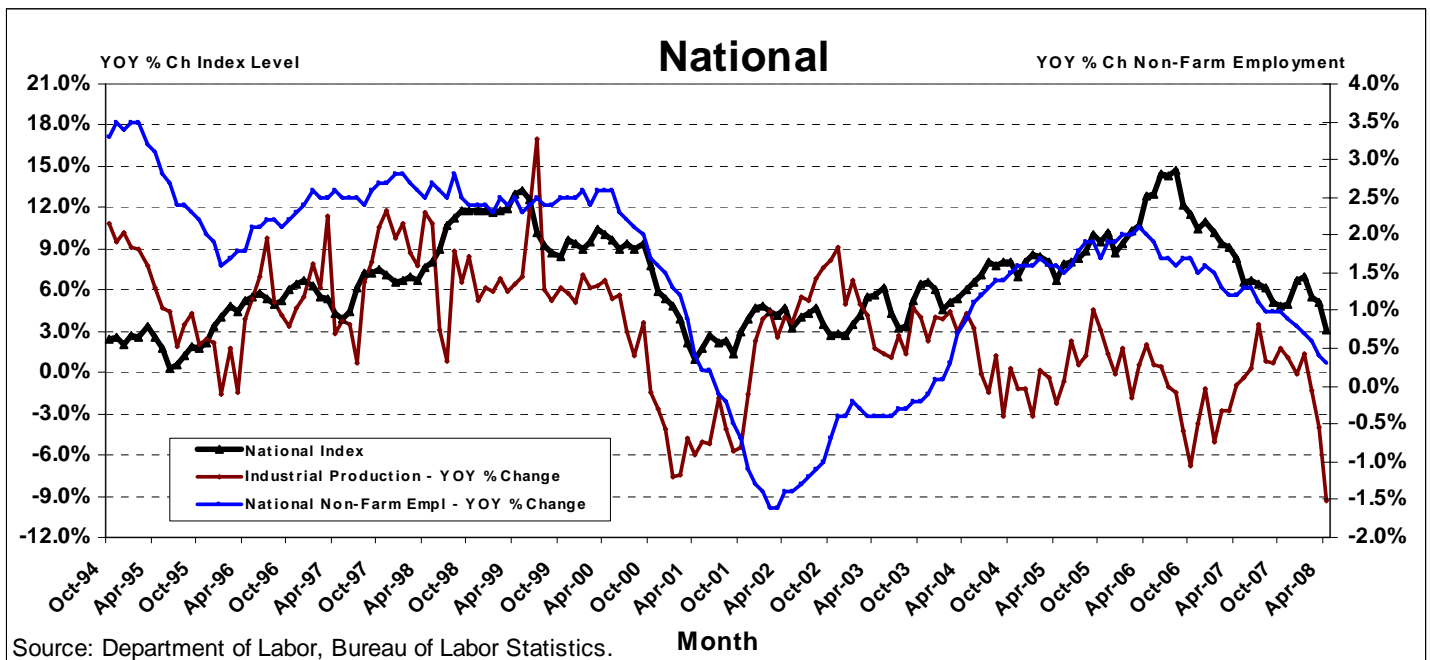
SPCREX National Composite Index (SPXUS)

- When comparing the two cycle periods, the recent decline phase for the national composite index shows YOY deceleration in appreciation rates steeper than that experienced in the 1999 to 2001 period. YOY rates dropped 58 bps per month from peak-August 2006 to trough-April 2008, compared to 54 bps per month from May 1999 to April 2001.

Geo	Peak		Trough		Total Change (in bps)	Months	Bps per Month
	Month	YOY % Change	Month	YOY % Change			
National	Aug-06	14.7%	Apr-08	3.1%	1160	20	58
	May-99	13.3%	Apr-01	0.9%	1240	23	54

- The relationship (correlation) between YOY percent change in the national index and non-farm employment moderate-significant.

YOY % Change		Multiple R	T-statistic	Correlation
SPCREX Index	Economic Indicator			
National	Total Non-farm Employment	0.35	4.7	Moderate



National	Date	YOY % Change	Non-farm Empl.	Date	YOY % Change	Industrial Production	Date	YOY % Change
Peak	May-99	13.3%	Peak	Jan-00	2.6%	Peak	Jul-99	17.0%
Trough	Apr-01	0.9%	Trough	Mar-02	-1.6%	Trough	Jan-01	-7.6%
Peak	Aug-06	14.7%	Peak	Mar-06	2.1%	Peak	Sep-05	4.6%
Trough	Apr-08	3.1%	Trough	Apr-08	0.3%	Trough	Apr-08	-9.3%

- As indicated in the table below, the YOY percent change in the national index led the peak in the business cycle (as measured by non-farm employment) by 8 month in the prior cycle and lagged the peak by 5 months in the current cycle.
- In the prior cycle, YOY percent change for the national index led the trough in the business cycle by 11 months, and it has yet to be seen if the index leads the decline phase of the current business cycle.

Index Cycle Phase	National-to-Non-farm Employment Date Variance	National-to-Industrial Production Date Variance
Peak (May 1999)	-8 months	+2 months
Trough (Apr 2001)	-11 months	-3 months
Peak (Aug 2006)	+5 months	+11 months
Trough (Apr 2008)	0 months	0 months

- Overall, it appears that the national index was more of a leading indicator in the prior cycle, and seems to be more of a coincident-leading indicator at this point in the current business cycle. When looking at industrial production, the national index appears to lag at the peaks and lead at the troughs of the business cycle.

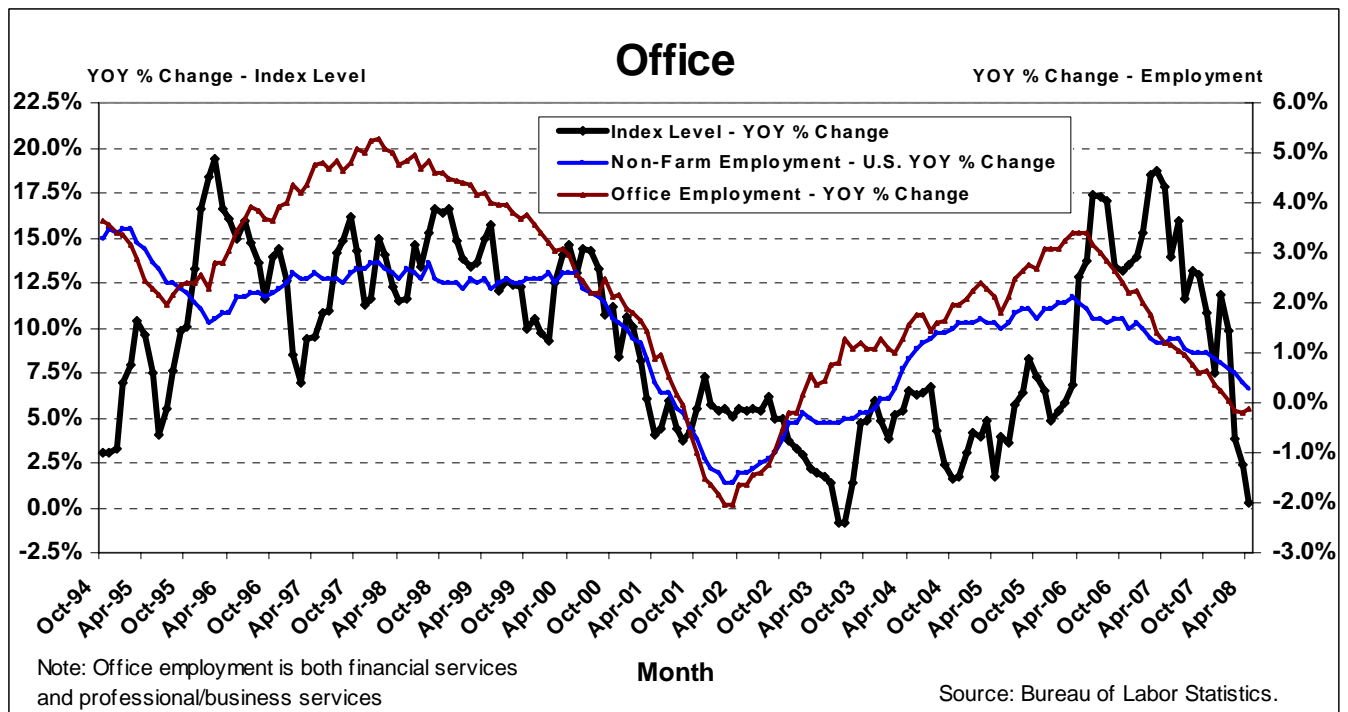
Office Sector Index (SPXCUSOF)

- Office YOY appreciation rate deceleration reflected in this most recent down cycle is steeper than that experienced during the 2000 to 2001 period, dropping 142 bps per month from peak-March 2007 to trough-April 2008; compared to 32 bps per month from November 1998 to June 2003.

Sector	Peak		Trough		Total Change (in bps)	Months	Bps per Month
	Month	YOY % Change	Month	YOY % Change			
Office	Mar-07	18.8%	Apr-08	0.3%	1850	13	142
	Nov-98	16.6%	Jun-03	-0.8%	1740	55	32

- The relationship (correlation) between YOY percent change in the office index and office employment is strong-significant.

YOY % Change		Multiple R	T-statistic	Correlation
SPCREX Index	Economic Indicator			
Office	Office Employment	0.54	8.2	Strong



Office	Date	YOY % Change	Office Employment	Date	YOY % Change	Non-farm Employment	Date	YOY % Change
Peak	Nov-98	16.6%	Peak	Jan-98	5.3%	Peak	Jan-00	2.6%
Trough	Jun-03	-0.8%	Trough	Mar-02	-2.1%	Trough	Mar-02	-1.6%
Peak	Mar-07	18.8%	Peak	Apr-06	3.4%	Peak	Mar-06	2.1%
Trough	Mar-08	2.3%	Trough	Feb-08	-0.2%	Trough	Apr-08	0.3%

- As indicated in the table below, the YOY percent change in the office index led the peak in the prior business cycle (as measured by national non-farm employment) by 14 months; and lagged the peak in the current business cycle by 12 months. The office index lagged office employment peaks by roughly 10 months in both cycles.
- In the prior cycle, YOY percent change for the office index lagged the trough in the business cycle by 15 months, and it appears that the index might be leading the decline phase of the current business cycle.

Index Cycle Phase	Office-to-Office Employment Date Variance	Office-to-Non-farm Employment Date Variance
Peak (Nov 1998)	+ 10 months	-14 months
Trough (Jun 2003)	+15 months	+15 months
Peak (Mar 2007)	+11 month	+12 months
Trough (Mar 2008)	+2 months	0 months

- Overall, it appears that the office index was a leading indicator at the peak of the prior cycle and lagging indicator a peak of the current cycle, and could be more of a leading-coincident indicator in the decline-trough phase of the current business cycle. When looking at office employment, the office index appears to lag at the peaks and troughs of the business cycle.

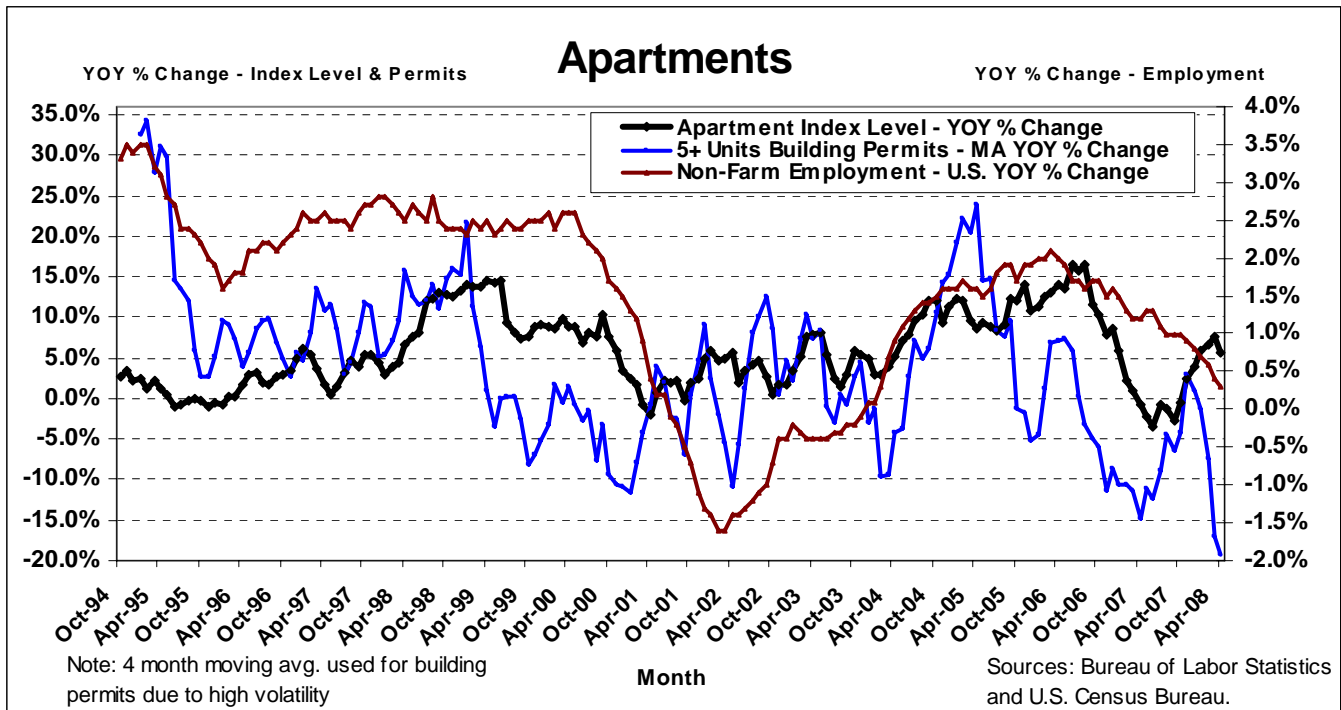
Apartment Sector Index (SPXCUSAP)

- YOY appreciation rate deceleration reflected in this most recent down cycle was steeper than that experienced during the 1999 to 2001 period, dropping 126 bps per month from peak-August 2006 to trough-June 2007; compared to 75 bps per month from June 1999 to April 2001.

Sector	Peak		Trough		Total Change (in bps)	Months	Bps per Month
	Month	YOY % Change	Month	YOY % Change			
Apartment	Aug-06	16.6%	Jun-07	-3.5%	2010	16	126
	Jun-99	14.6%	Apr-01	-2.0%	1660	22	75

- The relationship (correlation) between YOY percent change for the apartment index and non-farm employment is moderate-significant.

YOY % Change		Multiple R	T-statistic	Correlation
SPCREX Index	Economic Indicator			
Apartment	Total Non-farm Employment	0.27	3.5	Moderate



Apartments	Date	YOY % Chg.	5+ units Permits	Date	YOY % Chg.	Non-farm Empl.	Date	YOY % Chg.
Peak	Jun-99	14.6%	Peak	Jan-99	21.8%	Peak	Jan-00	2.6%
Trough	Apr-01	-2.0%	Trough	Jan-01	-11.7%	Trough	Mar-02	-1.6%
Peak	Aug-06	16.6%	Peak	Apr-05	24.0%	Peak	Mar-06	2.1%
Trough	Jun-07	-3.5%	Trough	Jun-07	-12.3%	Trough	Apr-08	0.3%

- As indicated in the table below, the YOY percent change in the apartment index led the peak in the prior business cycle (as measured by non-farm employment) by 7 months; and lagged the peak in the current business cycle by 5 months.
- In the prior cycle, YOY percent change for the apartment index led the trough in the business cycle by 13 months, and it appears to have led the decline and trough phase of the current business cycle.

Index Cycle Phase	Apartment-to-5+ unit permits Date Variance	Apartment-to-Non-farm Employment Date Variance
Peak (Jun 1999)	+5 months	-7 months
Trough (Apr 2001)	+3 months	-13 months
Peak (Aug 2006)	+16 months	+5 months
Trough (Jun 2007)	0 months	-10 months

- Overall, it appears that the apartment index was a leading indicator at both the peak and trough of the prior business cycle, and coincident-leading indicator at the peak and trough of the current business cycle. When looking at multifamily permits, they appear to lead the apartment index at its permit peaks and troughs.

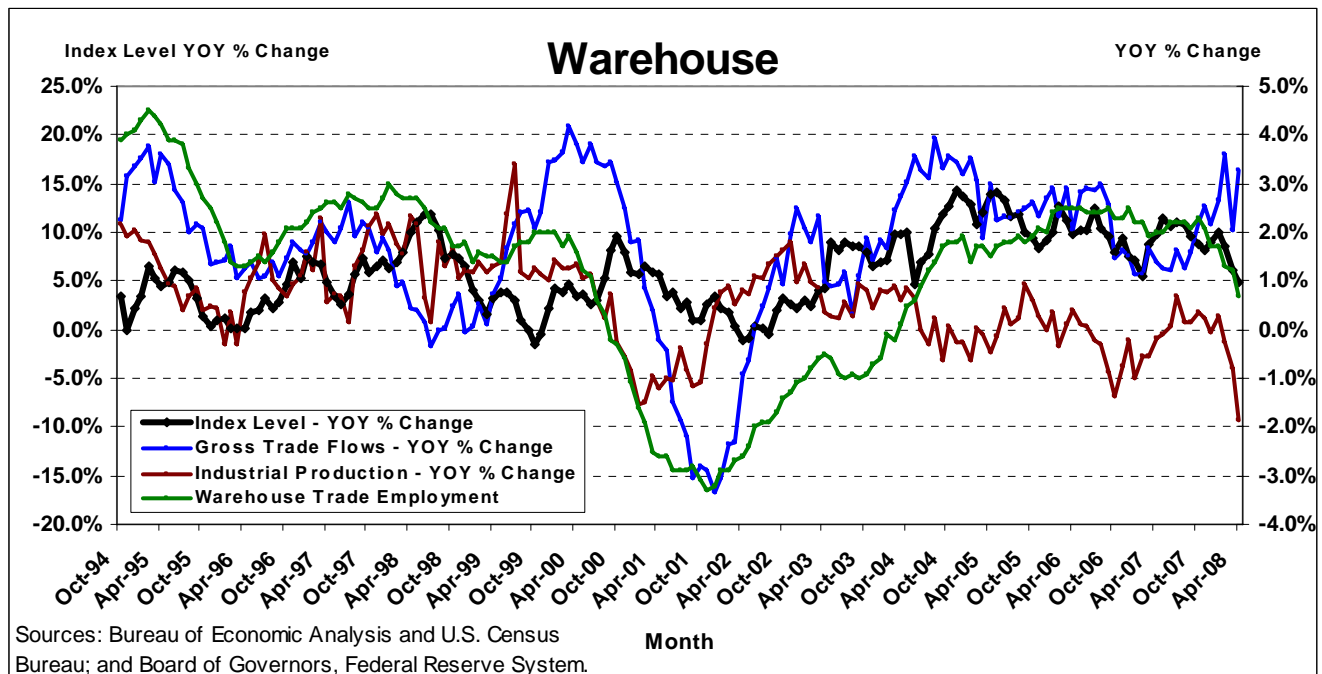
Warehouse Sector Index (SPXCUSWA)

- YOY appreciation rate deceleration reflected in this most recent down cycle is more gradual than that experienced during the 1998 to 1999 and 2000 to 2002 periods. Dropping 27 bps per month from peak-May 2005 to trough-April 2008; compared to 89 bps per month from July 1998 to October 1999; and 58 bps per month October 2000 to April 2002.

Sector	Peak		Trough		Total Change (in bps)	Months	Bps per Month
	Month	YOY % Change	Month	YOY % Change			
Warehouse	May-05	14.2%	Apr-08	4.8%	940	35	27
	Oct-00	9.5%	Apr-02	-1.0%	1050	18	58
	Jul-98	11.9%	Oct-99	-1.4%	1330	15	89

- The relationship (correlation) between YOY percent change in the warehouse index and gross trade flows is moderate-significant; with wholesale trade employment, moderate-significant; and national non-farm employment, weak-slightly insignificant.

YOY % Change		Multiple R	T-statistic	Correlation
SPCREX Index	Economic Indicator			
Warehouse	Gross Trade Flows	0.32	4.2	Moderate
	Wholesale Trade Employment	0.30	4.0	Moderate
	Total Non-farm Employment	0.15	1.9	Weak



Warehouse	Date	YOY % Change	Gross Trade Flows	Date	YOY % Change	Industrial Production	Date	YOY % Change
Peak	Jul-98	11.9%	Peak	Jul-97	13.2%	Peak	Nov-97	11.8%
Trough	Oct-99	-1.4%	Trough	Jul-98	-1.7%	Trough	Jul-98	0.8%
Peak	Oct-00	9.5%	Peak	Mar-00	20.9%	Peak	Jul-99	17.0%
Trough	Apr-02	-1.0%	Trough	Dec-01	-16.6%	Trough	Jan-01	-7.6%
Peak	Nov-04	14.4%	Peak	Aug-04	19.6%	Peak	Nov-02	9.0%
Trough	Feb-07	5.4%	Trough	Jan-07	5.6%	Trough	Sep-04	-3.2%
Peak	May-07	11.3%	Peak	Feb-08	18.1%	Peak	Sep-05	4.6%
Trough	Apr-08	4.8%	Trough	TBD	TBD	Trough	Apr-08	-9.3%

Non-farm Empl.			Wholesale Trade Empl.		
Date	YOY % Chg.		Date	YOY % Chg.	
N/A	N/A	Peak	Jan-98	3.0%	Peak
N/A	N/A	Trough	Jun-99	1.4%	Trough
Jan-00	2.6%	Peak	Jan-00	2.0%	Peak
Mar-02	-1.6%	Trough	Nov-01	-3.3%	Trough
N/A	N/A	Peak	N/A	N/A	Peak
N/A	N/A	Trough	N/A	N/A	Trough
Mar-06	2.1%	Peak	Dec-06	2.5%	Peak
Apr-08	0.3%	Trough	Apr-08	0.7%	Trough

- As indicated in the table below, the YOY percent change in the warehouse index lags the peaks of the business cycle (as measured by industrial production) by roughly 17 month on average across all cycle periods; and lags the business cycle (as measured by gross trade flows) by only 6 months on average across all cycle periods. It appears that the index is more of a lagging-coincident indicator when measured against wholesales trade employment.
- In the prior cycles, YOY percent change for the warehouse index lagged the trough in the business cycle (industrial production) by 19 months on average, and it is yet to be seen what degree of lag there is at the trough of the current business cycle. The lag against grows trade flows at the trough is shorter at 11 months on average.

Index Cycle Phase	Warehouse-to-Gross Trade Flows Date Variance	Warehouse-to-Industrial Production Date Variance	Warehouse-to-Non-farm Employment Date Variance	Warehouse-to-Wholesale Trade Employment Date Variance
Peak (Jul 1998)	+12 months	+8 months	N/A	+6 months
Trough (Oct 1999)	+15 months	+15 months	N/A	+4 months
Peak (Oct 2000)	+7 months	+15 months	+9 months	+9 months
Trough (Apr 2002)	+16 months	+15 months	+1 month	+5 months
Peak (Nov 2004)	+3 months	+24 months	N/A	N/A
Trough (Feb 2007)	+1 month	+29 months	N/A	N/A
Peak (May 2007)	+1 month	+20 months	+14 months	+5 months
Trough (Apr 2008)	TBD	0 months	0 months	0 months

- Overall, it appears that the warehouse index is a consistent lagging indicator at the peaks and troughs of the business cycle (as measured by gross trade flows and industrial production). Peak-trough lags are shorter for wholesale trade employment and most recent trade flows cycle.

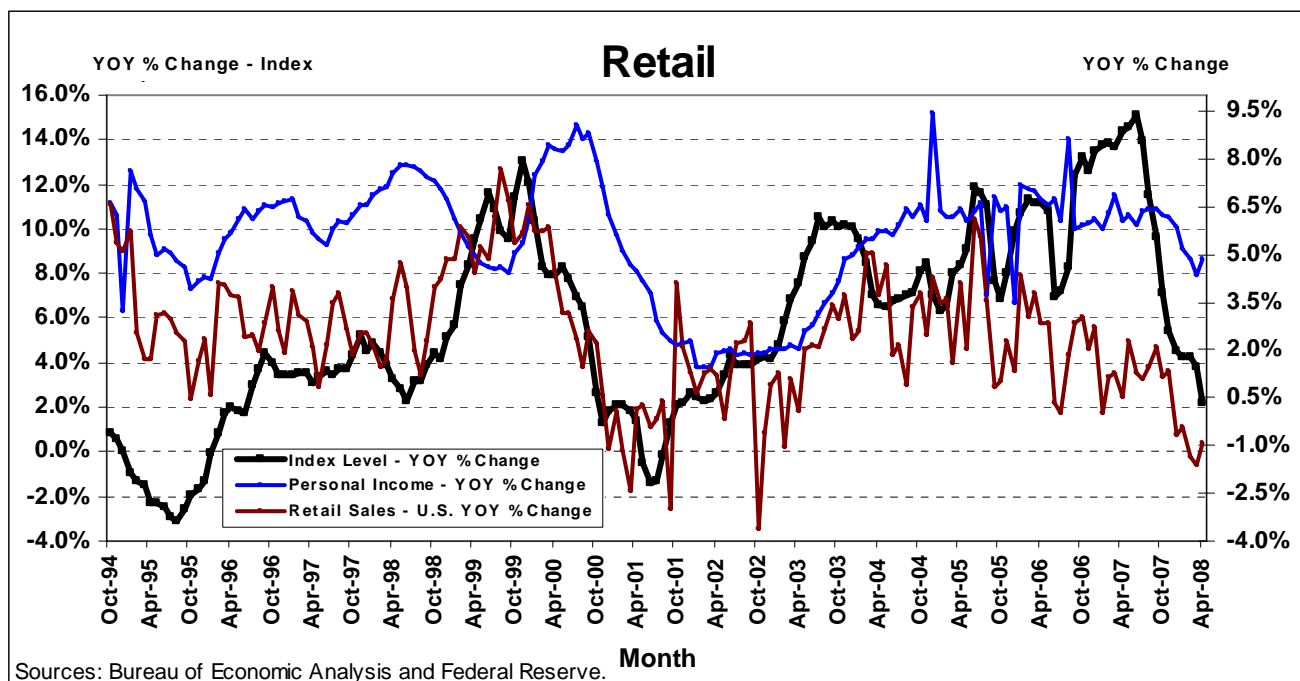
Retail Sector Index (SPXCUSRE)

- YOY appreciation rate deceleration reflected in this most recent down cycle is steeper than that experienced during the 1999 to 2001 period, dropping 130 bps per month from peak-June 2007 trough-April 2008; compared to 77 bps per month from November 1999 to June 2001.

Sector	Peak		Trough		Total Change (in bps)	Months	Bps per Month
	Month	YOY % Change	Month	YOY % Change			
Retail	Jun-07	15.1%	Apr-08	2.1%	1300	10	130
	Nov-99	13.3%	Jun-01	-1.4%	1470	19	77

- The relationship (correlation) between YOY percent change for the retail index and retail sales is moderate-significant, and for personal income weak-moderate significant.

YOY % Change		Multiple R	T-statistic	Correlation
SPCREX Index	Economic Indicator			
Retail	Retail Sales	0.25	3.3	Moderate
	Personal Income	0.19	2.5	Weak-to-Moderate



Retail	Date	YOY % Change	Personal Income	Date	YOY % Change	Retail Sales	Date	YOY % Change
Peak	Nov-99	13.3%	Peak	Jul-00	9.0%	Peak	Aug-99	7.7%
Trough	Apr-01	-1.4%	Trough	Feb-02	1.4%	Trough	Oct-02	-3.6%
Peak	Jun-07	15.1%	Peak	Aug-06	8.6%	Peak	Jun-05	6.1%
Trough	Apr-08	2.1%	Trough	Mar-08	4.4%	Trough	Mar-08	-1.6%

- As indicated in the table below, YOY percent change in the retail index led the peak in the business cycle (as measured by personal income) by 8 months in the prior cycle; and lagged the peak in the business cycle by 10 months in the current cycle. When comparing YOY index peaks to retail sales, the index lagged retail sales by 3 month in the previous cycle and 24 months in the current cycle.
- In the prior cycle, YOY percent change for the retail index led the trough in the business cycle (personal income and retail sales) by 10 and 18 months, respectively. It is yet to be seen if the index leads the decline phase and troughs prior to the business cycle, but currently the peak and rate of decline seems to be slightly leading-coincident.

Index Cycle Phase	Retail-to-Personal Income Date Variance	Retail-to-Retail Sales Date Variance
Peak (Nov 1999)	-8 months	+3 months
Trough (Apr 2001)	-10 months	-18 months
Peak (Jun 2007)	+10 months	+24 months
Trough (Apr 2008)	+1 months	+1 months

- Overall, it appears that the retail index was a leading-coincident indicator in the prior peak-trough cycle, and is more of a lagging indicator at the peak and leading-coincident indicator in the decline-trough phase of the current business cycle, as measured by personal income and retail sales.

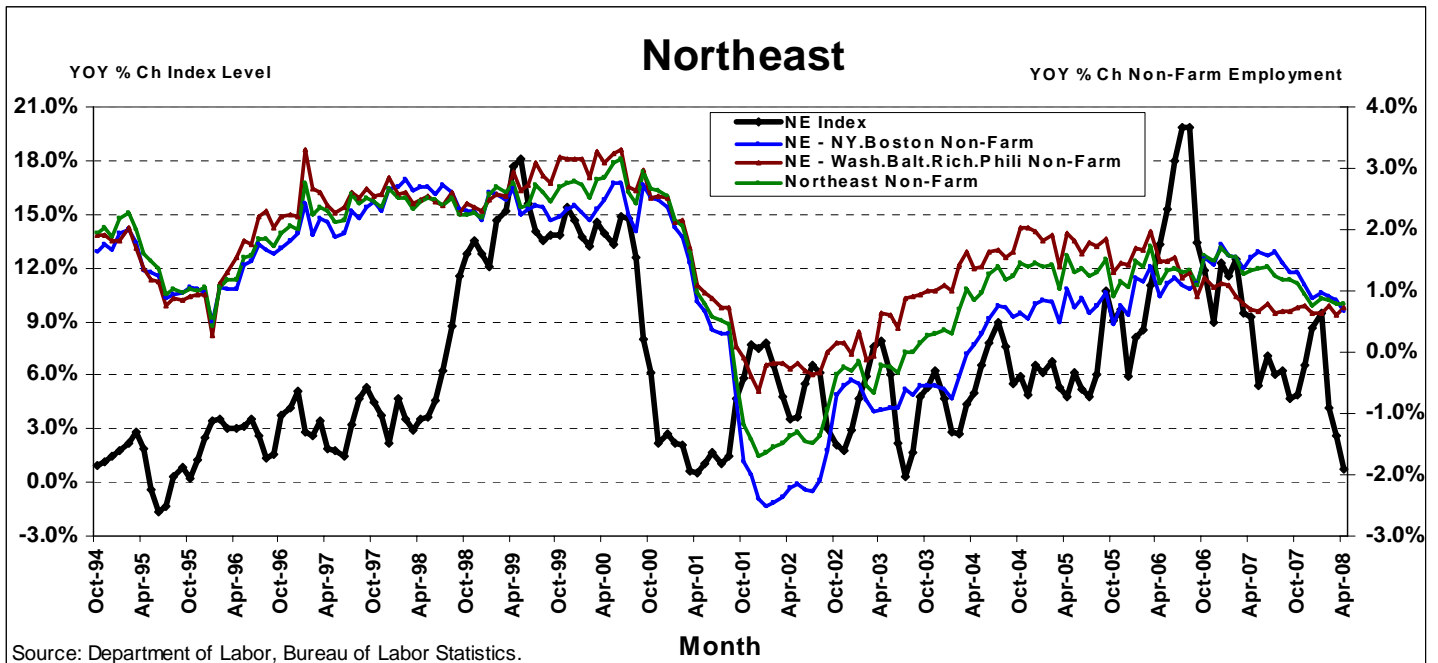
Northeast Regional Index (SPXCUSNE)

- YOY appreciation rate deceleration reflected in this most recent down cycle is steeper than that experienced during the 1998 to 2001 period, dropping 96 bps per month from August 2006 to April 2008; compared to 76 bps per month from May 1999 to April 2001.

Geo	Peak		Trough		Total Change (in bps)	Months	Bps per Month
	Month	YOY % Change	Month	YOY % Change			
Northeast	Aug-06	19.9%	Apr-08	0.8%	1910	20	96
	May-99	18.0%	Apr-01	0.6%	1740	23	76

- The relationship (correlation) between the YOY percent change for the Northeast (New York-Boston and Washington D.C.-Baltimore-Richmond-Philadelphia metro groups) index and total national non-farm employment is weak-moderate significant; and total Northeast, New York-Boston and Washington-Baltimore-Richmond-Philadelphia non-farm employment is moderate-significant.

YOY % Change		Multiple R	T-statistic	Correlation
SPCREX Index	Economic Indicator			
Northeast	National	0.17	2.1	Weak-to-Moderate
	Northeast Region	0.28	3.7	Moderate
	New York-Boston Metro Group	0.24	3.2	Moderate
	Wash-Balt-Rich-Phili Metro Group	0.31	4.1	Moderate



Northeast	Date	YOY % Change	Non-farm Empl.	Date	YOY % Chg.	NE Region Empl.	Date	YOY % Chg.
Peak	May-99	18.0%	Peak	Jan-00	2.6%	Peak	Jun-00	3.2%
Trough	Apr-01	0.6%	Trough	Mar-02	-1.6%	Trough	Dec-01	-1.7%
Peak	Aug-06	19.9%	Peak	Mar-06	2.1%	Peak	Dec-06	1.7%
Trough	Apr-08	2.6%	Trough	Apr-08	0.3%	Trough	Apr-08	0.8%

NE-NY Boston Empl.	Date	YOY % Change	NE-Wash et al Empl.	Date	YOY % Change
Peak	May-00	2.8%	Peak	Jun-00	3.3%
Trough	Jan-02	-2.5%	Trough	Dec-01	-0.6%
Peak	Dec-06	1.7%	Peak	Mar-06	2.0%
Trough	TBD	TBD	Trough	TBD	TBD

- As indicated in the table below, YOY percent change in the Northeast index led the peak in the business cycle (as measured by national non-farm employment) by 8 months in the prior cycle; and lagged the peak in the business cycle by 5 months in the current cycle. When comparing YOY index peaks to the Northeast region and New York-Boston non-farm employment, the index led by 12 months in the previous cycle and 4 months in the current cycle.
- In the prior cycle, YOY percent change for the Northeast index led the trough in the business cycle (national non-farm employment) by 11 months. It is yet to be seen if the index leads the decline phase and troughs prior to the current business cycle, but currently the peak and rate of decline seems to be leading the Northeast business cycle.

Index Cycle Phase	NE-to-Non-farm Employment Date Variance	NE-to-NE Region Employment Date Variance	NE-to-NE-NY-Boston Employment Date Variance	NE-to-NE-Wash et al Employment Date Variance
Peak (May 1999)	-8 months	-13 months	-12 months	-13 months
Trough (Apr 2001)	-11 months	-8 months	-9 months	-8 months
Peak (Aug 2006)	+5 months	-4 months	-4 months	+5 months
Trough (Apr 2008)	0 months	0 months	TBD	TBD

- Overall, it appears that the Northeast index was a leading indicator in the prior cycles, and could be more of a leading-coincident indicator in the current business cycle.

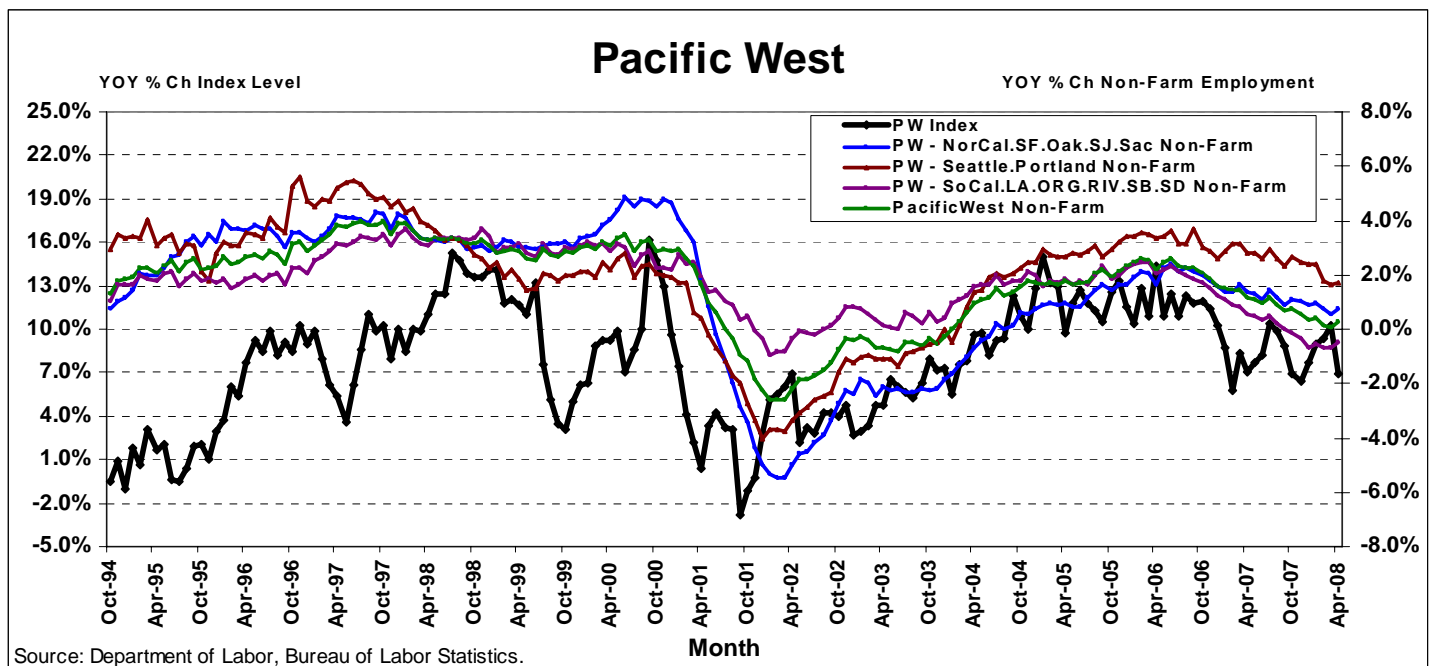
Pacific West Regional Index (SPXCUSPW)

- The slope and volatility of returns in the current decline phase of the Pacific West commercial real estate cycle was significantly less than that experienced in the prior cycle, dropping 37 bps per month from January 2005 to February 2007; compared to 158 bps per month from September 2000 to September 2001.

Geo	Peak		Trough		Total Change (in bps)	Months	Bps per Month
	Month	YOY % Change	Month	YOY % Change			
PacificWest	Jan-05	15.0%	Feb-07	5.8%	920	25	37
	Sep-00	16.2%	Sep-01	-2.8%	1900	12	158

- The relationship (correlation) between YOY percent change in the Pacific West (Northern California: San Francisco-Oakland-San Jose-Sacramento; Southern California: Los Angeles-Orange County-Riverside-San Bernardino-San Diego; and Pacific Northwest: Seattle-Portland) index and total national non-farm employment is moderate-significant; total Pacific West regional non-farm employment, moderate-strong-significant; total Northern California non-farm employment, moderate-significant; total Southern California non-farm employment, moderate-strong-significant; and total Pacific Northwest non-farm employment, moderate-strong-significant.

YOY % Change		Multiple R	T-statistic	Correlation
SPCREX Index	Economic Indicator			
PacificWest	National	0.29	3.9	Moderate
	PacificWest Region	0.41	5.7	Moderate-to-Strong
	Northern California Metro Group	0.36	4.9	Moderate
	Southern California Metro Group	0.38	5.2	Moderate-to-Strong
	Pacific Northwest Metro Group	0.41	5.7	Moderate-to-Strong



PacificWest	Date	YOY % Change	Non-farm Empl.	Date	YOY % Change	PW Region Empl.	Date	YOY % Change
Peak	Jul-99	15.2%	Peak	N/A	N/A	Peak	Jul-97	4.0%
Trough	Oct-99	3.1%	Trough	N/A	N/A	Trough	N/A	N/A
Peak	Sep-00	16.2%	Peak	Jan-00	2.6%	Peak	N/A	N/A
Trough	Sep-01	-2.8%	Trough	Mar-02	-1.6%	Trough	Mar-02	-2.6%
Peak	Jan-05	15.0%	Peak	Mar-06	2.1%	Peak	Jun-06	2.6%
Trough	Feb-07	5.8%	Trough	Apr-08	0.3%	Trough	Mar-08	0.1%

PW-NorCal Empl.	Date	YOY % Change	PW-Seattle Empl.	Date	YOY % Change	PW-SoCal Empl.	Date	YOY % Change
Peak	Dec-97	4.3%	Peak	Nov-96	5.6%	Peak	Nov-98	3.7%
Trough	Dec-98	2.9%	Trough	N/A	N/A	Trough	N/A	N/A
Peak	Jun-00	4.9%	Peak	N/A	N/A	Peak	N/A	N/A
Trough	Feb-02	-5.5%	Trough	Dec-01	-4.0%	Trough	Jan-02	-0.9%
Peak	Jun-06	2.4%	Peak	Sep-06	3.7%	Peak	Feb-06	2.5%
Trough	TBD	TBD	Trough	TBD	TBD	Trough	TBD	TBD

- As indicated in the table below, YOY percent change in the Pacific West index lagged the peaks in the business cycle (as measured by non-farm employment) by roughly 15 months in the prior cycle; and led the peak in the business cycle by roughly 2 months in the current cycle.
- In the prior cycle, YOY percent change for the Pacific West index led the trough in the business cycle (non-farm employment) by 5 months on average. It is yet to be seen if the index leads the decline phase and troughs prior to the current business cycle, but currently it appears that none of the indicators, or index, is seeing a rapid deceleration or trough.

Index Cycle Phase	PW-to-Non-farm Employment Date Variance	PW-to-PW Region Employment Date Variance	PW-to-PW-NorCal Employment Date Variance	PW-to-PW-Seattle Employment Date Variance	PW-to-PW-SoCal Employment Date Variance
Peak (Jul 1999)	N/A	+24 months	+19 months	+32 months	+8 months
Trough (Oct 1999)	N/A	N/A	+10 months	N/A	N/A
Peak (Sep 2000)	+8 months	N/A	+3 months	N/A	N/A
Trough (Sep 2001)	-6 months	-6 months	-5 months	-3 months	-4 months
Peak (Jan 2005)	-14 month	-16 months	-16 months	-19 months	-13 months
Trough (Feb 2007)	-14 months	-13 months	TBD	TBD	TBD

- Overall, it appears that the Pacific West index was more of a lagging-coincident indicator in the prior cycles, and could be more of a leading-coincident indicator in the current business cycle.

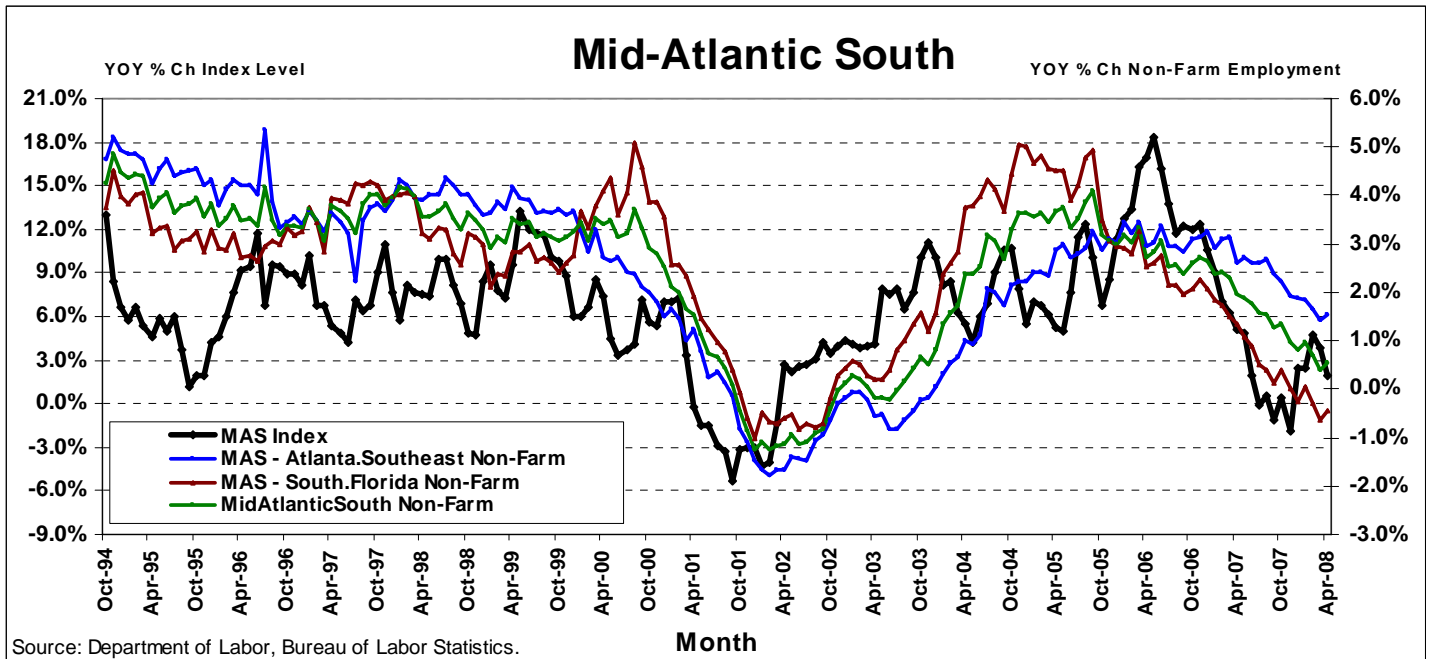
Mid-Atlantic South Regional Index (SPXCUSMS)

- YOY appreciation rate deceleration reflected in this most recent down cycle was steeper than that experienced during the 1999 to 2001 period, dropping 112 bps per month from peak-May 2006 to trough-November 2007; compared to 56 bps per month from May 1999 to September 2001.

Geo	Peak		Trough		Total Change (in bps)	Months	Bps per Month
	Month	YOY % Change	Month	YOY % Change			
MidAtlanticSouth	May-06	18.3%	Nov-07	-1.9%	2020	18	112
	May-99	13.3%	Sep-01	-5.3%	1860	33	56

- The relationship (correlation) between YOY percent change in the Mid-Atlantic South (South Florida: Miami-Jacksonville-Orlando-Tampa Bay; Atlanta Et.Al.: Atlanta-Charlotte-Raleigh-Durham-Memphis-Nashville) index and total national non-farm employment, Mid-Atlantic South regional non-farm employment, South Florida non-farm employment, and Atlanta Et.Al. non-farm employment is strong-significant.

YOY % Change		Multiple R	T-statistic	Correlation
SPCREX Index	Economic Indicator			
MidAtlanticSouth	National	0.51	7.6	Strong
	MidAtlanticSouth Region	0.52	7.7	Strong
	South Florida Metro Group	0.49	7.1	Strong
	Atlanta et al. Metro Group	0.47	6.7	Strong



Mid-Atlantic South	Date	YOY % Change	Non-farm Empl.	Date	YOY % Change	Region Empl.	Date	YOY % Change
Peak	May-99	13.3%	Peak	Jan-00	2.6%	Peak	Jan-98	4.2%
Trough	Sep-01	-5.3%	Trough	Mar-02	-1.6%	Trough	Mar-02	-1.2%
Peak	May-06	18.3%	Peak	Mar-06	2.1%	Peak	Sep-05	4.1%
Trough	Nov-07	-1.9%	Trough	Apr-08	0.3%	Trough	Mar-08	0.4%

MAS-Atl Employment	Date	YOY % Change	MAS-South FL Empl.	Date	YOY % Change
Peak	Jul-98	4.4%	Peak	Aug-00	5.1%
Trough	Feb-02	-1.8%	Trough	Dec-01	-1.0%
Peak	Jun-06	3.4%	Peak	Dec-04	5.0%
Trough	Mar-08	1.4%	Trough	Mar-08	-0.6%

- As indicated in the table below, YOY percent change in the Mid-Atlantic South index led the peak in the business cycle (as measured by national and South Florida non-farm employment) by 8 and 15 months in the prior cycle; and lagged the peak in the business cycle by 2 and 17 months in the current cycle, respectively. When compared to regional and Atlanta Et. Al. metro group employment trends, the index lagged at the prior peak, but was more coincident at the current peak.
- In the prior cycle, YOY percent change for the Mid-Atlantic South index led the trough in the business cycle (non-farm employment across all geographies) by 5 months on average. It appears, but yet to be confirmed, that the index led the decline phase and troughed prior to the current business cycle.

Index Cycle Phase	MAS-to-Non-farm Employment Date Variance	MAS-to-MAS Region Employment Date Variance	MAS-to-MAS-Atl Employment Date Variance	MAS-to-MAS South FL Employment Date Variance
Peak (May 1999)	-8 months	+16 months	+10 months	-15 months
Trough (Sep 2001)	-6 months	-6 months	-5 months	-3 months
Peak (May 2006)	+2 months	+8 months	-1 month	+17 months
Trough (Nov 2007)	-5 months	-4 months	-4 months	-4 months

Overall, it appears that the Mid-Atlantic South index was a leading indicator at both peaks and troughs of the prior business cycle, and could be more of a leading-coincident indicator in the current decline-trough phase of the business cycle.

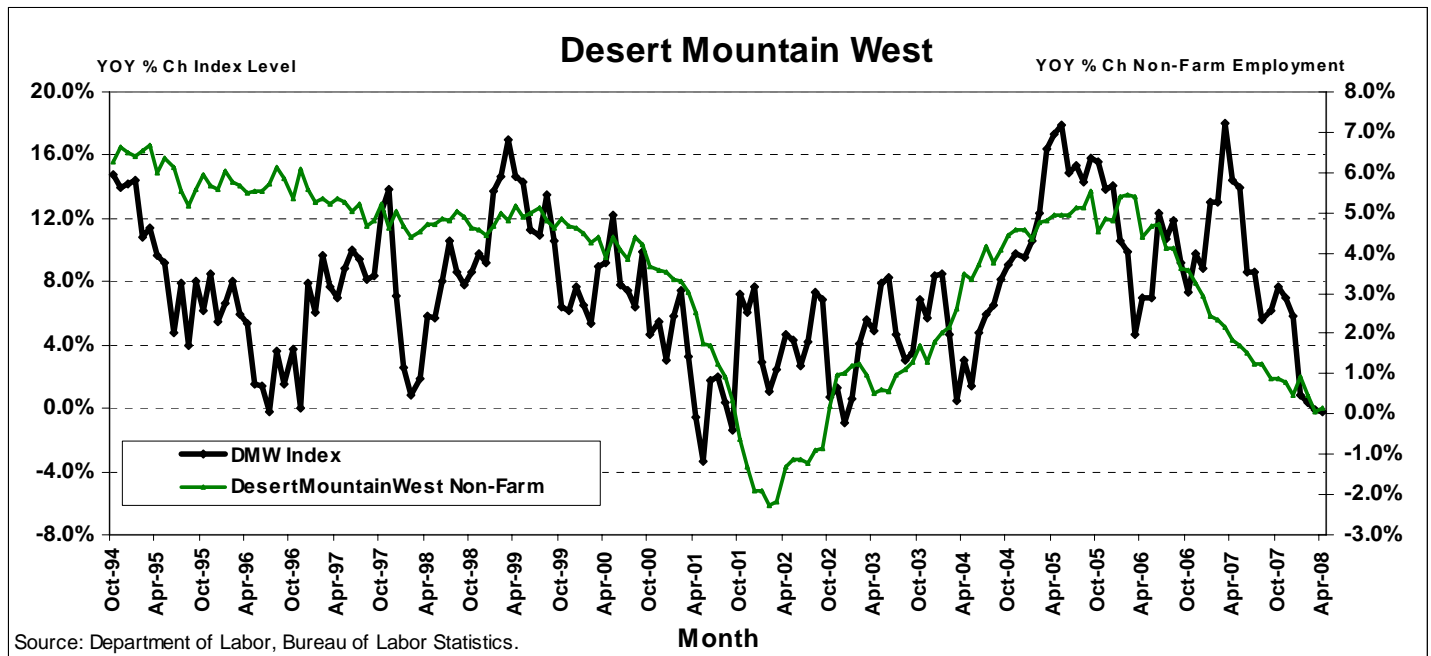
Desert Mountain West Regional Index (SPXCUSDM)

- Volatility in amplitude during the current market cycle is significantly more than that experienced in the prior cycle. YOY appreciation rate deceleration reflected in this most recent down cycle is steeper than that experienced during the 1999 to 2001, and 2005 to 2006 periods. Dropping 141 bps per month from peak-March 2007 to trough-April 2008; compared to 78 bps per month from March 1999 to May 2001; and 132 bps per month from May 2005 to March 2006.

Geo	Peak		Trough		Total Change (in bps)	Months	Bps per Month
	Month	YOY % Change	Month	YOY % Change			
DesertMountainWest	Mar-07	18.1%	Apr-08	-0.2%	1830	13	141
	May-05	17.9%	Mar-06	4.7%	1320	10	132
	Mar-99	16.9%	May-01	-3.3%	2020	26	78

- The relationship (correlation) between YOY percent change in the Desert Mountain West (Phoenix-Las Vegas-Denver) index and total national, and regional, non-farm employment is moderate-strong.

YOY % Change		Multiple R	T-statistic	Correlation
SPCREX Index	Economic Indicator			
DesertMountainWest	National	0.45	6.4	Moderate-to-Strong
	DesertMountainWest Region	0.42	5.8	Moderate-to-Strong



Desert Mountain West	Date	YOY % Change	Non-farm Empl.	Date	YOY % Change	DMW Employment	Date	YOY % Change
Peak	Mar-99	16.9%	Peak	Jan-00	2.6%	Peak	Mar-95	6.7%
Trough	May-01	-3.3%	Trough	Mar-02	-1.6%	Trough	Feb-02	-2.3%
Peak	May-05	17.9%	Peak	N/A	N/A	Peak	N/A	N/A
Trough	Mar-06	4.7%	Trough	N/A	N/A	Trough	N/A	N/A
Peak	Mar-07	18.1%	Peak	Mar-06	2.1%	Peak	Feb-06	5.5%
Trough	Mar-08	-0.2%	Trough	Apr-08	0.3%	Trough	Mar-08	0.1%

- As indicated in the table below, YOY percent change in the Desert Mountain West index led the peak in the business cycle (as measured by national non-farm employment) by 10 months in the prior cycle; and lagged the peak in the business cycle by 12 months in the current cycle. When compared to regional-metro group employment trends, the index lagged by 48 months at the prior peak and 13 months at the current peak.
- In the prior cycle, YOY percent change for the Mid-Atlantic South index led the trough in the business cycle (non-farm employment across national and regional geographies) by 10 months on average. It has yet to be confirmed if the index and regional business cycle has troughed.

Index Cycle Phase	DMW-to-Non-farm Employment Date Variance	DMW-to-DMW Employment Date Variance
Peak (Mar 1999)	-10 months	+ 48 months
Trough (May 2001)	-10 months	-9 months
Peak (May 2005)	N/A	N/A
Trough (Mar 2006)	N/A	N/A
Peak (Mar 2007)	+12 months	+13 months
Trough (Mar 2008)	-1 month	0 months

- Overall, it appears that the Desert Mountain West index was a leading indicator in the prior cycles, and could be a leading-coincident indicator in the current business cycle.

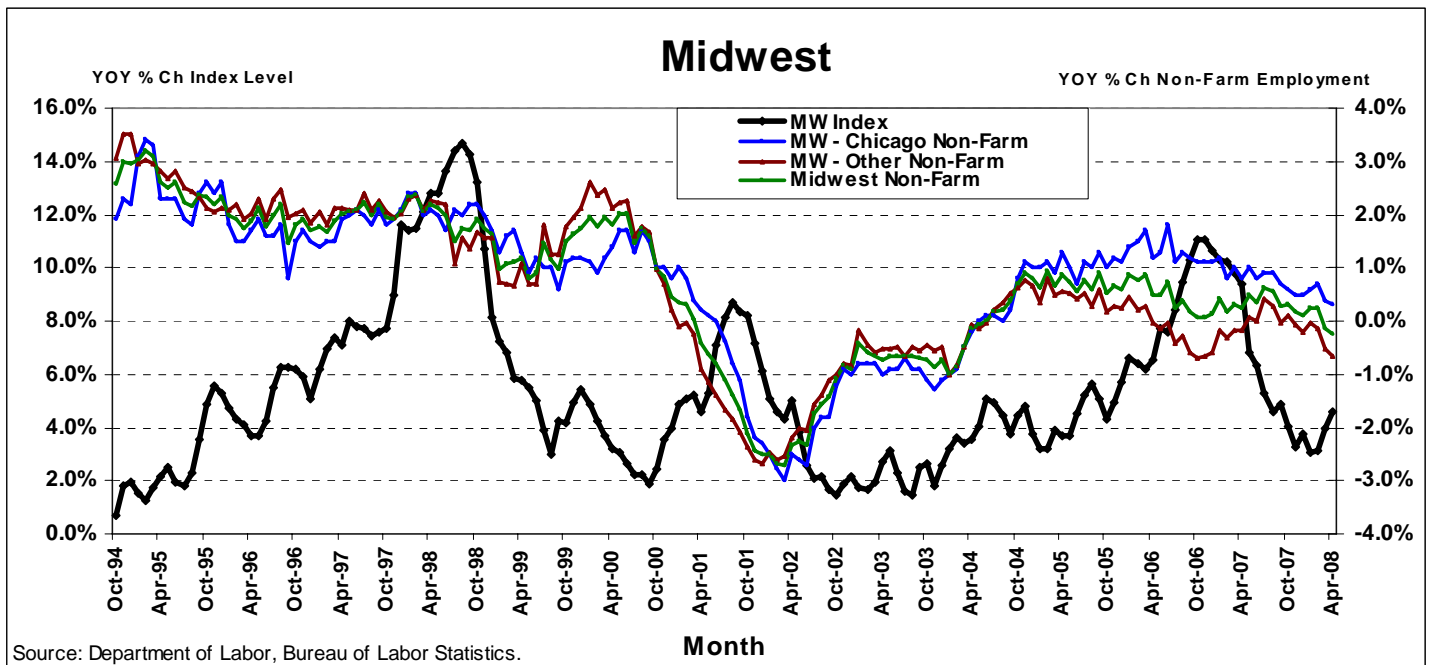
Midwest Regional Index (SPXCUSMW)

- YOY appreciation rate deceleration reflected in this most recent down cycle was steeper than that experienced during the 1998 to 2000 and 2001 to 2003 periods. Dropping 54 bps per month from peak-October 2006 to trough-January 2008. Compared to 51 bps per month from August 2001 to October 2002; and 51 bps per month from August 1998 to September 2000.

Geo	Peak		Trough		Total Change (in bps)	Months	Bps per Month
	Month	YOY % Change	Month	YOY % Change			
Midwest	Oct-06	11.1%	Jan-08	3.0%	810	15	54
	Aug-01	8.7%	Oct-02	1.5%	720	14	51
	Aug-98	14.7%	Sep-00	1.9%	1280	25	51

- The relationship (correlation) between YOY percent change in the Midwest (Chicago and Other: Cincinnati-Cleveland-Columbus-Detroit-Kansas City) index and total national, and Chicago metro group, non-farm employment is moderate-significant; total Midwest regional non-farm employment is moderate-significant; and Midwest Other total non-farm employment is weak-insignificant.

YOY % Change		Multiple R	T-statistic	Correlation
SPCREX Index	Economic Indicator			
Midwest	National	0.27	3.5	Moderate
	Midwest Region	0.15	2.0	Weak
	Chicago Metro Group	0.30	3.9	Moderate
	Other Metro Group	0.05	0.6	Weak



Midwest	Date	YOY % Change	Non-farm Empl.	Date	YOY % Change	MW Region Empl.	Date	YOY % Chg.
Peak	Aug-98	14.7%	Peak	Jan-00	2.6%	Peak	Feb-98	2.4%
Trough	Oct-02	1.5%	Trough	Mar-02	-1.6%	Trough	Mar-02	-2.7%
Peak	Oct-06	11.1%	Peak	Mar-06	2.1%	Peak	Mar-06	0.9%
Trough	Jan-08	3.0%	Trough	Apr-08	0.3%	Trough	Apr-08	-0.2%

Chicago Empl.	Date	YOY % Change	MW-Other Empl.	Date	YOY % Change
Peak	Feb-98	2.4%	Peak	Jan-00	2.6%
Trough	Mar-02	-3.0%	Trough	Dec-01	-2.7%
Peak	Jun-06	1.8%	Peak	Feb-05	0.8%
Trough	TBD	TBD	Trough	TBD	TBD

- As indicated in the table below, YOY percent change in the Midwest index led the peak in the business cycle (as measured by national non-farm employment) by 17 months in the prior cycle; and lagged the peak in the business cycle by 7 months in the current cycle. The index lagged regional and Chicago employment peaks by 4-to-7 months on average.
- In the prior cycle, YOY percent change for the Midwest index lagged the trough in the business cycle (non-farm employment across all geographies) by 7 months on average. It appears, but yet to be confirmed, that the index led the decline phase and troughed prior to the current business cycle.

Index Cycle Phase	MW-to-Non-farm Employment Date Variance	Region Employment Date Variance	MW-to- MW-Chicago Employment Date Variance	Other Employment Date
Peak (Aug 1998)	-17 months	+6 months	+6 months	-17 months
Trough (Oct 2002)	+7 months	+7 months	+7 months	+10 months
Peak (Oct 2006)	+7 months	+7 months	+4 months	-20 months
Trough (Jan 2008)	-3 months	-3 months	TBD	TBD

- Overall, it appears that the Midwest index was a leading indicator at the peak of the prior business cycles, but a lagging indicator when measured against prior regional and metro business cycles. However, the index could be more of a leading-coincident indicator in the current business cycle, but it has yet to be confirmed if the index and regional business cycle has truly troughed.

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