

Macro Economic Activity and Sector Price Movements: A Closer look at the Purchasing Manager's Index (PMI) Data 2004-2013

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Study Objective:

Determine if S&P Sector prices covary Directly with the PMI New Orders index

Research Approach:

- Univariate Regression Analysis
- Time Period: 2004-2013
- Date Frequency: Monthly
- Data Sets

PMI new orders index
10 S&P Sector ETF's
S&P (SPY)

Model Specification:

- $\ln(SC_{it}) = A + B \cdot \ln(NO_t)$
- Where SC_{it} = ith S&P Sector Price at time t
- A = Intercept
- B = regression Coefficient
- NO_t = New Orders at time t
- i = 1-10 S&P Sector ETF's
- t = monthly Time Intervals From 2004-2013

Hypothesis:

$B > 1$, $Tstat > 2$

Table 1 SC f(NO) 04-08											
Sectors											
	SPY	XLP	XLY	XLE	XLF	XLV	XLI	XLB	XLK	XLU	IYZ
Coefficients	0.919016	0.745001	0.404529	3.039797	0.445619	0.52219	1.195457	1.522112	0.800742	1.770105	1.120307
R-squared	0.775657	0.73564	0.265134	0.954468	0.192728	0.568465	0.84761	0.795666	0.564162	0.896064	0.556797
t stat	13.01598	11.67705	4.204615	32.04959	3.420267	8.034193	16.50888	13.81318	7.964121	20.55339	7.845951

Table 2 SC f(NO) 08-14											
Sectors											
	SPY	XLP	XLY	XLE	XLF	XLV	XLI	XLB	XLK	XLU	IYZ
Coefficients	1.628724	1.432859	2.375235	1.587456	1.401809	1.665783	1.903526	1.396714	1.68599	1.004135	1.278765
R-squared	0.786744	0.733002	0.714474	0.829768	0.55117	0.628955	0.811964	0.733217	0.739258	0.829259	0.765648
t stat	16.63401	14.34924	13.69937	19.12005	9.596936	11.27528	17.99612	14.35712	14.58219	19.08561	15.65347

Table 3 SC f(NO) 04-14											
Sectors											
	SPY	XLP	XLY	XLE	XLF	XLV	XLI	XLB	XLK	XLU	IYZ
Coefficients	1.315244	1.429758	1.811764	2.193812	0.213476	1.374236	1.621448	1.426548	1.494934	1.177133	0.96126
R-squared	0.695547	0.673124	0.587352	0.795592	0.004546	0.578961	0.771912	0.766556	0.699454	0.796252	0.407983
t stat	16.96633	16.10798	13.39197	22.14528	0.758577	13.16283	20.64988	20.34072	17.12415	22.1903	9.318354

Finding:

04-08: XLI, XLB, XLU and IYZ had B coefficients > 1

08-14: All B coefficients > 1

04-14: All sectors except XLF and IYZ had B coefficients > 1

SPY: B coefficient after, 08 recession quite strong. Monetary policy a likely factor.

Conclusion: New orders are reliable predictors of sector price movements. The B coefficients are time variant.