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Producer Prices, Cost-Push-Inflation and Stock Market Returns

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Study Purpose:

- (1) Determine if cost push inflation forces are at work in producer prices
- (2) Producer prices are predictors of price movements in the stock market

Research Method:

Stepwise regression analysis of the 4 stages of producer prices

The Model:

$$S_2 = A + B(S_1)$$

$$S_3 = A + B(S_2)$$

$$S_4 = A + B(S_3)$$

$$FD = A + B(S_4)$$

$$SPY = A + B(FD)$$

$$XLY = A + B(FD)$$

$$XLP = A + B(FD)$$

Where S_1 = Stage 1 Producer Prices

S_2 = Stage 2 Producer Prices

S_3 = Stage 3 Producer Prices

S_4 = Stage 4 Producer Prices

FD = Final Demand Prices

SPY = S&P 500 Index

XLY = Consumer Discretionary ETF

XLP = Consumer Staples ETF

Period of Analysis: 2009-2015

Table 1				
Cost Push Inflation Regressions				
	Stage 1 (x)	Stage 2 (x)	Stage 3 (x)	Stage 4 (x)
	Stage 2 (y)	Stage 3 (y)	Stage 4 (y)	FD (y)
R-Squared	0.875	0.841	0.975	0.986
Intercept	6.55	6.57	26.09	5.64
b-Coefficient	0.917	0.949	0.729	0.941
Standard Error	0.044	0.053	0.015	0.014
t-Statistic	20.52	17.81	48.4	65.54

Table - 10						
Regression Analysis						
Market Indexes						
vs. Final Demand						
2009-2014						
	SPY (y)	FD(x)	XLY(y)	FD(x)	XLP (y)	FD (x)
R-squared	0.81		0.85		0.87	
Intercept	-690.40		-330.69		-154.99	
b-coefficient	7.82		3.53		1.78	
Standard Error	0.49		0.19		0.09	
T-stat	15.90		18.15		18.15	

Conclusion:

Table 1: Based on the R-squares and b-coefficients there is a high passthrough rate for producer prices by stages of production

Table 2: Stock market prices directly covary with final demand prices. Both demand pull and cost push inflation forces are likely at work