

**(26) Ludwig, Alexander, Sløk, Torsten. "The Impact of Changes in Stock Prices and House Prices on Consumption in OECD Countries." IMF Working Paper 02/01, 2002.**

The paper investigates the relative importance of the stock market wealth and housing wealth as determinants of private consumption using data for 16 OECD countries that are grouped into economies with bank based and market based financial systems. This distinction is due to the observations that in the latter, the size of the stock markets are larger, there is a higher degree of stock market participation by households, and stock options as a means of payment is more widespread.

The authors estimate a specification for the entire sample as well as for both groups of countries during 1985-2000, using stock market prices and housing prices as proxies for the wealth components, and where the focus is on total aggregate consumption without distinguishing between the nondurable and durable components. For the combined sample, both the estimated house price elasticity and the stock market price elasticity are positive and significant, while the size of the coefficient estimate on house prices is about half the size of the coefficient estimate on stock market prices, and the difference is significant. Splitting the sample into two groups reveals that the estimated coefficients are roughly similar for the market based economies while they are substantially reduced for the bank-based economies. This indicates that the market-based economies have a higher relative weight than the bank based economies in the combined sample.

To investigate whether the coefficient estimates have changed across time, the same analysis was undertaken for the period 1960-1984, and the results confirm that the estimated stock market prices have increased both for the entire sample as well as for both groups, where the stock market elasticity has been very low and insignificant for the bank based economies during the first observation period, and turned significantly higher during the second observation period for the market based economies. Moreover, the estimates of the housing price elasticities are all negative during 1960-1984, where the change in the sign of the housing price coefficient from negative to positive is a striking evidence for changes in mortgage markets which had made it easier for households to access their housing wealth. The robustness of the housing price estimates with regard to alternative grouping of the data according to homeownership rates found a negative estimate for the first period, however in the second the estimate was positive for the group of countries with relatively high ownership rates and negative for the other group. They then used real stock market capitalization per capita instead of the price data, and found that the additional quantity dimension of the market capitalization data does not affect these estimates but changes the coefficient estimates of the housing prices, which are now higher for the bank based economies. They also translated the elasticities estimated into estimates of marginal propensities to consume out of stock market wealth, and

found that the average of the adjusted long run MPCs is 4.3 cents for the market based economies and 2.6 cents for the bank based economies.

They finally concluded that there is a significant long run impact from stock market wealth to private consumption, consumption adjusts to its long run relationship with lags, the impact from changes in stock prices on consumption is bigger in economies with market based financial systems than in bank based economies, the impact from stock markets to consumption has increased over time for both groups of countries, and finally while the effect of housing prices on consumption is ambiguous the wealth effect has become more important over time. They also stated that a direct wealth effect is not the only explanation for the observed relationship between stock market prices and consumption, an alternative explanation is a role for consumer confidence, where a "decrease in stock prices lead to an increased uncertainty about future income or a decrease in consumer confidence and therefore to a decrease in consumption. If information about decreases in stock market prices increases with the participation of households in the stock market, then the consumer confidence channel is the stronger the more households participate in the stock market in a given country."