

# Research Summary

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## 1 Dynamics of Consumption and Saving

The first strand of my research explores various aspects of the dynamics of consumption and saving, *both from the aggregate point of view and focussing on household heterogeneity.*

My new work on the US personal saving rate is motivated by its persistent rebound in the past three years and by considerations about its expected future path. In particular, Carroll and Slacalek (2009), Carroll, Slacalek, and Sommer (in progress) and Slacalek and Sommer (in progress) use theoretical and empirical models of saving to estimate the effects of three factors: a substantial drop in asset prices, an extraordinary increase in financial and macroeconomic uncertainty and a considerable tightening of credit supply. The results suggest that the first two factors played an important role during the Great Recession and that the U.S. personal saving rate will likely remain for a considerable time in the neighborhood of the 5–7 percent range.

Carroll, Slacalek, and Tokuoka (2011b) solve, simulate and estimate a model with aggregate and idiosyncratic uncertainty and (modest) heterogeneity in discount factors, which can realistically match the observed wealth distribution in the U.S. In contrast to much of the previous theoretical literature, the model implies substantially higher and substantially more plausible average marginal propensity to consume out of transitory income shocks of roughly 0.3. The model can be used to answer questions about e.g. the distributional effects of an economic stimulus program.

While consumption growth in *macro* data has a substantial positive autocorrelation, in *micro* data it is close to a white noise. Carroll, Slacalek, and Tokuoka (2011c) propose a model that reconciles this stylized fact by introducing consumers with sticky expectations about macroeconomic developments. These people have individually random walk consumption similarly to Hall (1978). However, aggregating these consumers results in substantial autocorrelation in aggregate consumption growth.

Carroll, Slacalek, and Sommer (forthcoming) estimate the degree of ‘stickiness’ in aggregate consumption growth for thirteen advanced economies. We find that, after controlling for measurement error, consumption growth has a high degree of autocorrelation, with a stickiness parameter of about 0.7 on average across countries. The sticky-consumption-growth model outperforms the random walk model of Hall (1978), and typically fits the data better than the popular Campbell and Mankiw (1989) model, though in a few countries the sticky-consumption-growth and Campbell–Mankiw models work about equally well.

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## **2 Housing and the Wealth Effect on Consumption**

In a series of papers I estimate the effect of changes in wealth on personal consumption in the US and international data, using a new econometric methodology based on the stickiness of aggregate consumption growth.

Carroll, Otsuka, and Slacalek (2011a) estimate in US data that the immediate marginal propensity to consume from a \$1 change in housing wealth is about 2 cents, with an eventual effect of 9 cents, substantially larger than the effects of shocks to financial wealth. Slacalek (2009) finds in a panel of 16 countries that the eventual marginal propensity to consume out of total wealth is typically around 5 cents. There are substantial differences among individual countries: the wealth effects are more powerful in market-based, Anglo-Saxon and non-euro area economies. The effect of housing wealth is somewhat smaller than that of financial wealth for most countries, but not the US and the UK. The housing wealth effect has risen substantially after 1988 as it has become increasingly easier to borrow against housing wealth.

## **3 Expectations**

Finally, my research investigates the behavior of expectations of various economic agents about macroeconomic variables.

Döpke, Dovern, Fritsche, and Slacalek (2008b) estimate the sticky information Phillips curve model of Mankiw and Reis (2002) using survey expectations of professional forecasters from four major European economies. Our estimates imply the inflation expectations in France, Germany and the United Kingdom are updated about once a year, in Italy about once each six months.

In Döpke, Dovern, Fritsche, and Slacalek (2008a) we use survey data to estimate a simple model of household inflation expectations in four major European economies. We argue that household inflation expectations are adequately captured with a model of Carroll (2003) in which households occasionally update information about inflation using experts' predictions. The learning intensity is estimated to be about once in 12–18 months.

Dovern, Fritsche, and Slacalek (forthcoming) investigate determinants of disagreement (cross-sectional dispersion of forecasts) about six key economic indicators in the Consensus Economics dataset with individual expert forecasts from G7 countries. Disagreement about real variables (GDP, consumption, investment and unemployment) has a distinct dynamic from disagreement about nominal variables (inflation and interest rate). Disagreement about real variables intensifies strongly during recessions, including the current one (by about 40 percent in terms of the interquartile range). Disagreement about nominal variables rises with their level, has fallen after 1998 or so (by 30 percent), and is considerably lower under independent central banks (by 35 percent). These findings suggest that more credible monetary policy can substantially contribute to anchoring of expectations about nominal variables; its effects on disagreement about real variables are moderate.

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