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## NET WORTH AND HOUSING EQUITY

This paper documents the trends in the life-cycle profiles of net worth and housing equity between 1983 and 2004. The net worth of older households significantly increased during the housing boom of recent years. However, net worth grew by more than housing equity, in part because other assets also appreciated at the same time. Moreover, the younger elderly offset rising house prices by increasing their housing debt and used some of the proceeds to invest in other assets. The authors also consider how much of their housing equity older households can actually tap, using reverse mortgages. This fraction is lower at younger ages, such that young retirees can consume less than half of their housing equity. These results imply that “consumable” net worth is smaller than standard calculations of net worth.

*Working Paper 07-33, “Net Worth and Housing Equity in Retirement,” Todd Sinai, The Wharton School, University of Pennsylvania, and NBER, and Nicholas Souleles, The Wharton School, University of Pennsylvania, and Visiting Scholar, Federal Reserve Bank of Philadelphia*

## INCOME TAX REBATES AND CREDIT CARD ACCOUNTS

The authors use a new panel data set of credit card accounts to analyze how consumers responded to the 2001 federal in-

come tax rebates. They estimate the monthly response of credit card payments, spending, and debt, exploiting the unique, randomized timing of the rebate disbursement. They find that, on average, consumers initially saved some of the rebate by increasing their credit card payments and thereby paying down debt. But soon afterward their spending increased, counter to the canonical permanent-income model. Spending rose most for consumers who were initially most likely to be liquidity constrained, whereas debt declined most (so saving rose most) for unconstrained consumers. More generally, the results suggest that there can be important dynamics in consumers’ response to “lumpy” increases in income such as tax rebates, working in part through balance-sheet (liquidity) mechanisms.

*Working Paper 07-34, “The Reaction of Consumer Spending and Debt to Tax Rebates: Evidence from Consumer Credit Data,” Sumit Agarwal, Federal Reserve Bank of Chicago; Chunlin Liu, University of Nevada, Reno; and Nicholas Souleles, The Wharton School, University of Pennsylvania, and Visiting Scholar, Federal Reserve Bank of Philadelphia*

## MEASURING BANK PERFORMANCE: TWO EMPIRICAL APPROACHES

Great strides have been made in the theory of bank technology in terms of explaining banks’ comparative advantage in producing informationally intensive assets and financial services and in diversifying or offsetting a variety of risks. Great strides

have also been made in explaining sub-par managerial performance in terms of agency theory and in applying these theories to analyze the particular environment of banking. In recent years, the empirical modeling of bank technology and the measurement of bank performance have begun to incorporate these theoretical developments and yield interesting insights that reflect the unique nature and role of banking in modern economies. This paper gives an overview of two general empirical approaches to measuring bank performance and discusses some of the applications of these approaches found in the literature.

*Working Paper 08-1, "Efficiency in Banking: Theory, Practice, and Evidence," Joseph P. Hughes, Rutgers University, and Loretta J. Mester, Federal Reserve Bank of Philadelphia, and The Wharton School, University of Pennsylvania*

#### **BANK EFFICIENCY AND STRUCTURE: RECENT RESEARCH**

This paper discusses the research agenda on optimal bank productive efficiency and industrial structure. One goal of this agenda is to answer some fundamental questions in financial industry restructuring, such as what motivates bank managers to engage in mergers and acquisitions, and to evaluate the costs and benefits of consolidation, which is essentially an empirical question. The paper reviews the recent literature, including techniques for modeling bank production and the empirical results on scale economies, scope economies, and efficiency in banking.

*Working Paper 08-2, "Optimal Industrial Structure in Banking," Loretta J. Mester, Federal Reserve Bank of Philadelphia, and The Wharton School, University of Pennsylvania*

#### **INTERNATIONAL TRADE COSTS, INVENTORIES, AND DEVALUATIONS**

Fixed transaction costs and delivery lags are important costs of international trade. These costs lead firms to import infrequently and hold substantially larger inventories of imported goods than domestic goods. Using multiple sources of data, the authors document these facts. They then show that a parsimoniously parameterized model economy with importers facing an (S, s)-type inventory management problem successfully accounts for these features of the data. Moreover, the model can account for import and import price dynamics in the aftermath of large devaluations. In particular, desired inventory adjustment in response to a sudden, large increase in the relative price of imported goods creates a short-term trade implosion, an immediate, temporary drop in the value and number of distinct varieties imported, as well as a slow increase in the retail price of imported goods. The authors' study of six current account reversals following large devaluation episodes in the last decade provides strong support for the model's predictions.

*Working Paper 08-3, "Inventories, Lumpy Trade, and Large Devaluations," George Alessandria, Federal Reserve Bank of Philadelphia; Joseph Kaboski, Ohio State University; and Virgiliu Midrigan, New York University*