

## Francis E. Warnock

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### CURRENT POSITIONS

**Darden Graduate School of Business, University of Virginia, Charlottesville VA**  
Paul M. Hammaker Research Associate Professor of Business Administration

**National Bureau of Economic Research, Cambridge MA**  
Faculty Research Fellow

**Federal Reserve Bank of Dallas, Dallas TX**  
Senior Fellow, Globalization and Monetary Policy Institute

**Institute for International Integration Studies, Trinity College Dublin, Dublin Ireland**  
Research Associate

### EDUCATION

University of North Carolina at Chapel Hill	1994-1999	Ph.D. in Economics
Johns Hopkins University	1984-1989	B.A. in Quantitative Studies Minor in German
Universtität Wien	1987-1988	
Goethe Institut	1987	

### EMPLOYMENT HISTORY

#### ACADEMIC

**Darden Graduate School of Business, University of Virginia, Charlottesville VA**  
Paul M. Hammaker Research Associate Professor of Business Administration, 2009 – present.  
Associate Professor of Business Administration, 2005 – 2009.  
Visiting Associate Professor, 2004 – 2005.

Outstanding Faculty Award, 2008

Designed and teach the First Year Elective [Global Financial Markets](#), which provides First Year students with macro-finance training just prior to their summer internships.

Co-led, with Veronica Cacdac Warnock, the first three [Global Business Experience: South Africa](#) courses. The course consists of a pre-trip briefing book or group presentations; 8 days in South Africa meeting with the largest companies, smallest entrepreneurs, and government; and group presentations on the final day in South Africa.

Co-lead, with Saras Sarasvathy and Veronica Cacdac Warnock, the research seminar [Markets in Human Hope](#). The aim of MHH is to create product and financial markets where they currently do not exist. Examples of recent projects include cell phone banking in Haiti and underserved areas of the US; an entrepreneurial approach to providing housing to low income households in West Virginia; bringing business sense to corporate social responsibility; a microfinance fund; fostering entrepreneurship in Tibet; and work on the housing finance sector in Nigeria.

Other Courses: UVA's Semester at Sea, Fall 2008 (COMM 470Z International Investments and COMM 472Z International Finance)

**Georgetown University, Washington DC**

Adjunct Assistant Professor. Walsh School of Foreign Service, 2001-2004. Department of Economics, 2000.

**Department of Economics, University of North Carolina at Greensboro, Greensboro NC**

Lecturer, 1997-1998

**Department of Economics, University of North Carolina at Chapel Hill, Chapel Hill NC**

Senior Teaching Fellow, 1996 - 1998. Graduate Assistant, 1995 - 1996. Instructional Assistant, 1994-1996. Best Teaching Assistant Award, 1996.

NON-ACADEMIC

**Board of Governors of the Federal Reserve System, International Finance Division, Washington DC**

Division: International Finance Specialization: International Capital Flows

Senior Economist, October 2004 – September 2005. Economist, May 1999 - October 2004.

Dissertation Fellow, September 1998 - December 1999.

**Friends of Malawi**

Treasurer, 2001-2004. FOM is a 1000-member non-profit that funds small projects in Malawi.

**A. Gary Shilling & Co., Springfield, NJ**

Economist, 1993-1994

**Thyolo Secondary School, Thyolo, Malawi (East Africa)**

Peace Corps Volunteer/Teacher, 1991-1993

**Haver Analytics, Inc., New York NY**

Database Manager, 1990-1991

**Friedberg Mercantile Group, New York NY**

Commodity Trading Advisor, 1988-1989

CONSULTANT/SHORT-TERM RESEARCH POSITIONS

**World Bank/IFC, Washington DC**

Consultant, 2007-present. “External investor base and capital flows to EMEs: sources, instruments and challenges”. Part of the Global Emerging Markets Local Currency Bonds (GEMLOC) initiative to develop local currency bond markets.

**Inter-American Development Bank, Washington DC**

Consultant, 2008-present. Projects on (i) countries’ external capital structure and (ii) housing finance in Latin America.

**Development Innovations Group, Bethesda MD**

Consultant, 2007-present. “Scoring the Newly Banked in South Africa”.

A large portion of the world’s population cannot access a mortgage. Instead, they are served by housing micro lenders (HMLs) who specialize in smaller, non-collateralized home loans. Can HMLs be profitable and sustainable? In this current project partially funded through the Gates Foundation, Veronica Cacadac Warnock and I—with partners [Development Innovations Group](#), [FinMark Trust](#), and many lenders and government entities in South Africa—explore whether a non-standard credit scoring system can improve the risk assessment (and, by extension, profitability) of housing micro lenders. For a short description of the project, see [Why Credit Scoring for Housing Micro Lenders?](#) in *Access Housing* 2007 No. 7 pgs. 6-7 (FinMark Trust).

**European Central Bank, Frankfurt Germany**

Consultant, 2007. International Policy Analysis Division.

**Hong Kong Monetary Authority, Hong Kong**

Research Fellow, 2006

**International Monetary Fund, Washington DC**

Consultant, 2005 – 2006. Wrote paper for Article IV Consultation for the United States.

Contributed to the April 2006 *World Economic Outlook*.

## PUBLICATIONS

- Curcuru, S., T. Dvorak, and F. Warnock, forthcoming, Decomposing the U.S. External Returns Differential. *Journal of International Economics*.
- Warnock, Veronica Cacdac, and Francis E. Warnock, forthcoming, International Capital Flows and U.S. Interest Rates, *Journal of International Money and Finance*. Featured in *NBER Digest*, *Barrons*, *Wall Street Journal*, *The Economist*, *Reuters*, National Public Radio, *International Herald Tribune*, ICICI Bank's *Market Watch*, WST Asset Management's *Quarterly Commentary*, BNK Advisory Group's *Quarterly Report*, Multnomah County (Oregon) *Economic and Revenue Forecast*, FPA New Income *Annual Report*, MB Financial Bank *Monthly Economic and Financial Commentary*, UBS Investment Research, Thornburg Investment Management *Market Commentary*, Macroeconomic Advisers *Monetary Policy Insights*, *Philadelphia Inquirer*, *NCPA*, *Seattle Times*, *Akron Beacon*, *Kansas City Star*, *Boston Globe*.
- Leuz, Christian, Karl Lins, and Francis E. Warnock, 2009, Do Foreigners Invest Less in Poorly Governed Firms?, *Review of Financial Studies* 22(8): 3245-3285.
- Kho, Bong-Chan, Rene M. Stulz, and Francis E. Warnock, 2009, Financial Globalization, Governance, and the Evolution of the Home Bias, *Journal of Accounting Research* 47: 597-635. Earlier versions released as NBER Working Paper 12389 (July 2006) and Federal Reserve Bank of Dallas Globalization and Monetary Policy Institute Working Paper No. 12 (May 2008). Featured in *New York Times*.
- Curcuru, Stephanie E., Charles Thomas, and Francis E. Warnock, 2009, Current Account Sustainability and Relative Reliability. in J. Frankel and C. Pissarides (ed) *NBER International Seminar on Macroeconomics 2008*. University of Chicago Press, pgs 67-109.
- Curcuru, Stephanie, E., Tomas Dvorak, and Francis E. Warnock, 2008, Cross-Border Returns Differentials, *Quarterly Journal of Economics* 123(4): 1495–1530.
- Warnock, Veronica Cacdac, and Francis E. Warnock, 2008, Markets and Housing Finance, *Journal of Housing Economics* 17: 239-251.
- Harvey, C., M. Lipson, and F. Warnock, 2008, Darden Conference Issue: Capital Raising in Emerging Economies (Guest Editorial). *Journal of Financial Economics* 88: 425-429.
- Edison, Hali, and Francis E. Warnock, 2008, Cross-Border Listings, Capital Controls, and Equity Flows to Emerging Markets, *Journal of International Money and Finance* 27: 1013-1027.
- Warnock, Francis E., 2008, The Impact of a Disorderly Resolution of Global Imbalances on Global Wealth, *Economic Notes - Review of Banking, Finance and Monetary Economics* 37(3): 345–379. Earlier version, entitled “How might a disorderly resolution of global imbalances affect global wealth?”, was prepared for the 2006 IMF Article IV Consultation for the US and featured by *Reuters* (twice), *National Post*, *Gulf Times (Qatar)*, and *IMF Survey*.
- Burger, John D., Veronica Cacdac Warnock, and Francis E. Warnock, 2008, Ingredients of a Well-Functioning Capital Market, *Korea's Economy 2008* (Korea Economic Institute), vol. 24: 31-38.
- Burger, John D., and Francis E. Warnock, 2007, Foreign Participation in Local-Currency Bond Markets, *Review of Financial Economics* 16: 291-304.
- Freund, Caroline, and Francis E. Warnock, 2007, Current Account Deficits in Industrial Countries: The Bigger They Are, The Harder They Fall? in R. Clarida, ed. *G7 Current Account Imbalances: Sustainability and Adjustment*. University of Chicago Press, 133-162. Featured by Goldman Sachs Economics, Merrill Lynch's *Global FX Strategist*, *Investors Chronicle*, *Kansas City Star*.
- Warnock, Veronica Cacdac, and Francis E. Warnock, 2007, Why Credit Scoring for Housing Micro Lenders? *ACCESS Housing* No. 7: 6-7 (FinMark Trust).

- Burger, John D., and Francis E. Warnock, 2006, Local Currency Bond Markets, *IMF Staff Papers* 53: 115-132. Featured in the IFC's *Sustainable Investor*.
- Burger, John D., and Francis E. Warnock, 2006, Foreign Participation in Emerging Asian Bond Markets, *Korean Economy 2006* (Korea Economic Institute).
- "The Impact of Petrodollars on U.S. and Emerging Market Bond Yields," with Laura Kodres, in the IMF's April 2006 *World Economic Outlook* ( Box 2.3). Featured in *Fund Strategy Magazine*.
- Faucette, Jillian E., Alex Rothenberg, and Francis E. Warnock, 2005, Outflows-Induced Sudden Stops, *Journal of Policy Reform* 8: 119-130.
- Warnock, Francis E., 2005, Drawing on American Experience: How Have U.S. Investors Fared with their Allocations to Foreign Equity? *Canadian Investment Review* (Summer 2005).
- Ahearne, Alan, William Grier, and Francis E. Warnock, 2004, Information Costs and Home Bias: An Analysis of U.S. Holdings of Foreign Equities, *Journal of International Economics* 62: 313-336.
- Edison, Hali, and Francis E. Warnock, 2004, U.S. Investors' Emerging Market Equity Portfolios: A Security-Level Analysis, *Review of Economics and Statistics* 86: 691 - 704. Featured in *Dow Jones Capital Markets Report*.
- Warnock, Francis E. and Chad Cleaver, 2003, Financial Centers and the Geography of Capital Flows, *International Finance* 6(1): 27-59. Featured in the *Wall Street Journal*, *Wall Street Journal Europe*, *Wall Street Journal Asia*, Morgan Stanley's *Global Economics Forum* (twice), *Dow Jones Capital Markets Report*, *Reuters*.
- Warnock, Francis E., 2003, Exchange Rate Dynamics and the Welfare Effects of Monetary Policy in a Two-Country Model with Home-Product Bias, *Journal of International Money and Finance* 22: 343-363.
- Edison, Hali, and Francis E. Warnock, 2003, A Simple Measure of the Intensity of Capital Controls, *Journal of Empirical Finance* 10(1/2): 81-103.
- Holland, Sara, and Francis E. Warnock, 2003, Firm-Level Access to International Capital Markets: Evidence from Chilean Equities, *Emerging Markets Review* 4(1): 39-51. Featured in *Dow Jones International News*.
- Warnock, Francis E., 2002, Home Bias and High Turnover Reconsidered, *Journal of International Money and Finance* 21: 795-805.
- Warnock, Francis E. and Molly Mason, 2001, The Geography of Capital Flows: What We Can Learn from Benchmark Surveys of Foreign Equity Holdings, *Emerging Markets Quarterly* 5(1): 15-29.
- Grier, William, Gary Lee, and Francis E. Warnock, 2001, The U.S. System for Measuring Cross-Border Investment in Securities: A Primer with a Discussion of Recent Developments, *Federal Reserve Bulletin* 87: 633-650.
- Warnock, Francis E., 2000, U.S. International Transactions in 1999, *Federal Reserve Bulletin* 86: 301-314.

#### UNPUBLISHED POLICY PIECES

- "The Impact of East Asian Reserves Accumulation and U.S. Interest Rates," Testimony for the U.S-China Economic and Security Review Commission's Hearing "China's Financial System and Monetary Policies: The Impact on U.S. Exchange Rates, Capital Markets, and Interest Rates" (August 2006).
- "Financial Globalization," prepared for G20/World Economic Forum/RBWF Forum (September 2007).

## WORKING PAPERS

- van Wincoop, Eric, and Francis E. Warnock, 2006, Is Home Bias in Assets Related to Home Bias in Goods? second round *Journal of International Money and Finance*.
- “Look at Me Now: What Attracts U.S. Shareholders?” with John Ammer, Sara Holland, and David Smith, NBER Working Paper 12500 (August 2006). Revised version released as “Why Do U.S. Cross-Listings Matter?” Federal Reserve Board International Finance Discussion Paper 930 (May 2008). Featured in *Financial Times*, *New York Times*. Third round *Journal of Accounting Research*.
- “Sudden Flight and True Sudden Stops” with Alex Rothenberg, NBER Working Paper 12726 (Nov 2006). Submitted to *Review of International Economics*
- “International Diversification at Home and Abroad,” with F. Cai, NBER Working Paper 12220 (May 2006; updated May 2008). Featured in *NBER Digest*. Third round at *Journal of International Economics*.
- “External Capital Structures for Managing Oil Price Volatility and Currency Mismatches,” with J. Burger, A. Rebucci, and V. Warnock

## CASE STUDIES AND TECHNICAL NOTES

For descriptions, see [web site](#).

### Case Studies:

- Warnock, Francis E., and Marc Chandler, 2009. Global Asset Allocation: Whither the U.S. Dollar? (UVA-F-1591)
- Warnock, Francis E., 2009. Prospective Capital Flows and Currency Movements: US Dollar v. Euro (UVA-F-draft)
- Rodriguez, Peter, and Francis E. Warnock, 2009. Whither the US Economy? (BP-0542)
- Warnock, Francis E., and Marc Chandler, 2008. Long-term FX Strategies in 2008 (UVA-BP-0526)
- Warnock, Francis E., 2008. FX Strategies in 2008: Dollar v. Euro (draft)
- Warnock, Francis E., 2006. FX Strategies in 2006: Dollar v. Yen (UVA-BP-0505, UVA-BP-0505TN)
- Warnock, Francis E., 2006. FX Strategies in 2005: Dollar v. Euro (UVA-BP-0506, UVA-BP-0506TN)
- Warnock, Francis E., 2008. Greenspan’s Conundrum (UVA-BP-0492)
- Warnock, Francis E., 2008. Inflation Targeting in South Africa (UVA-BP-0507, UVA-BP-0507TN)
- Rodriguez, Peter, and Francis E. Warnock, 2008. Vietnam: A New Tiger Earns Its Stripes (UVA-G-0618)
- Warnock, Francis E., and Patrick Conway, 1997. Post-Conflict Recovery in Uganda (World Bank Institute Case #37152)
- Conway, Patrick, and Francis E. Warnock, 1997. Macroeconomic Stability and Income Inequality in Chile (Economic Development Institute)

### Technical Notes:

- Warnock, Francis E., 2008. An Early Warning System of Currency Crises (UVA-BP-0497)
- Warnock, Francis E., 2008. A User’s Guide to the BOP and IIP (UVA-BP-0523)
- Warnock, Francis E., 2008. A Technical Note on the Open Economy ISLM (UVA-BP-0528)
- Warnock, Francis E., 2006. The Determinants of Interest Rates (UVA-BP-0489)
- Warnock, Francis E., 2006. Yield Curve Basics (UVA-BP-0491)
- Warnock, Francis E., 2008. Exchange Rate Models (UVA-BP-0496)
- Warnock, Francis E., 2008. Inflation Targeting (UVA-BP-0495)

## SERVICE TO THE PROFESSION

### Talks in 2008/2009:

- “International Capital Flows and Past and Prospective Returns”. Dutch Central Bank, University of Amsterdam, Dallas Fed, BIS, University of Oregon.

“Financial Globalization and Local Currency Bond Markets” at Bundesbank/German Ministry of Finance Conference on "Bond Markets in Emerging Market Economies and Developing Countries - Financial Globalisation, Vulnerabilities and Data Needs". Frankfurt Germany.

“A Night at the Fed: The US Economy in Crisis”. Houston Area Darden Tuck Alumni Group, Houston TX.

“A Conversation on the Global Economy”. Darden Reunion 2008. Charlottesville VA.

“Cross-Border Returns Differentials”. University of North Carolina, Harvard.

“Decomposition of U.S. External Returns Differential” at IMF Conference on International Macro-Finance. Washington DC.

“Current Account Sustainability and Relative Reliability”  
University of Wisconsin conference on “Current Account Sustainability”. Madison Wisconsin.  
Conference for NBER International Seminar on Macroeconomics 2008. Ljubljana, Slovenia.  
European University Institute symposium “International Risk Sharing and Portfolio Diversification”. Fiesole, Italy.

“Financial Globalization, Governance, and the Evolution of the Home Bias” at JAR Annual Conference. Chicago GSB, Chicago Illinois.

Discussion of Lane and Shambaugh “Financial Exchange Rates and International Currency Exposure” at Deutsche Bundesbank and Institute for Monetary and Financial Stability Institute Conference on “Central Banks and Globalisation”. Bundesbank’s Training Centre, Eltville Germany.

Panel on Key Challenges and Priorities for International and Domestic Investors at Gemloc Advisory Services Roundtable Conference and Workshop. World Bank, Washington DC.

“The Impact of a Disorderly Resolution of Global Imbalances on Global Wealth” at Banca Monte dei Paschi di Siena conference on "The impact of Global Financial Imbalances". Siena, Italy.

Discussion of Thomas Phillippon’s “Why Has the U.S. Financial Sector Grown so Much? The Role of Corporate Finance” and Kristin Forbes’ “Why Do Foreigners Invest in the United States?” at the NBER Summer Institute Corporate Finance Program Meeting, Cambridge MA.

“The Financial Crisis of 2007-???” MV Explorer shipboard community. At sea near Mauritius.

“The Asian Financial Crisis 1997-98 and Relevance to the Current Crisis” MV Explorer shipboard community. At sea between Penang Malaysia and Singapore.

Pre-2008 Academic Presentations:

University of the Philippines, Nykredit Symposium on Housing, Mortgage, and Portfolio Choice (Copenhagen), ECB Conference on Asset Management, Private Equity Firms and International Capital Flows (Dublin), NBER International Finance and Macro Program Meeting (Fall 2007), Western Finance Association Annual Conference (2007), European University Institute, Ente “Luigi Einaudi”, Wharton Impact Conference on International Corporate Governance (2007), HKMA/BIS/CEPR Conference on Bond Market Developments, IMF Annual Research Conference (2006), NBER IFM Meeting, ECB Conference on Financial Globalization and Integration, UVA Economics Seminar, Institute for International Integration Studies, Bank of Canada/UBC Conference on International Financial Markets, International AREUEA (2005), UC Berkeley Conference on Global Imbalances and Asian Financial Markets, NBER Conference on G7 Current Account Imbalances: Sustainability and Adjustment, Maryland Finance Conference, FMA Europe, IMF Workshop, NBER pre-conference on G7 Current Account Imbalances: Sustainability and Adjustment, University of Houston Conference on International Risk Sharing, Universidade do Porto, Universidade Católica Portuguesa, ISCTE Business School, Georgia Tech International Finance Conference, Darden Emerging Markets Finance Conference, Washington Area Finance Association, Kiel Institute/Bundesbank Conference on Multinationals and International Integration, University of Virginia, American Economic Association Annual Conference (2002), Arizona State, Utah, CEPR/Gerzensee Conference on International Capital Flows, IMF Research Seminar, UC Santa Cruz, IMF Global Linkages Conference, UCLA Anderson School (CIBER Brainstorming Conference on International Capital Flows), Kellogg (RFS Conference on Investments in Imperfect Capital Markets), World Bank Conference on Development Economics (2002), Trinity College Dublin, CEPR/London Business School Conference on International Capital

Flows (2001), University of Virginia, University of North Carolina, University of North Carolina – Kenan-Flagler, Washington Area Finance Association, Tor Vergata Rome, Western Economic Association, Southern Economic Association

Pre-2008 Presentations to Practitioners:

Bangko Sentral ng Pilipinas Roundtable on the Property Sector, ECB, Rural Housing Loan Fund Annual Workshop (Johannesburg, South Africa), World Economic Forum (Durban, South Africa), Federal Reserve Bank of New York, IMF Research Seminar, Federal Reserve Bank of Dallas, Banca d'Italia, Hong Kong Monetary Authority Research Seminar, South Africa Reserve Bank (twice), Banking Association of Colombia Annual Conference (Medellin, Colombia), FX Group of New York, Tudor Investment Corp (Greenwich CT), Vienna Research Circle for Asset Management (Vienna, Austria), Macroeconomic Advisers' Quarterly Outlook Conference (New York City), Anglo-American Real Property Institute (Keynote Address), Global Investment Conference (Whistler, Canada), NYSE, Board of Governors of the Federal Reserve System, NYSE Global Equities Conference, Chesapeake Area Economic Educators Meeting, NYSE Conference on Global Equity Markets in Transition

Pre-2008 Presentations to Student and Alumni Groups:

“Housing Microlending in South Africa” (UVA Global Development Organization); “The Life of a Fed Economist” (St. Mary's College, Omicron Delta Epsilon Economics Honor Society)

Referee:

26 academic journals

Session Chair:

Western Economic Association Meeting (2000), Southern Economic Association Meeting (2000)

Program Committee:

Darden Emerging Market Finance Conference (2006-2009), PFN Portuguese Financial Network 2006 Annual Conference, Financial Management Association Annual Meeting (2005-2007), FMA Europe 2005 Annual Meeting

Personal Information

Married to Veronica Cacadac Warnock (Batten Fellow, Darden Business School; Lecturer, UVA School of Architecture; Principal, CW Economics Group)

Web site: <http://faculty.darden.virginia.edu/warnockf/>