Amadou Sy

http://www.brookings.edu/experts/sya

Amadou is a senior fellow and director of the Africa Growth Initiative (AGI) at the Brookings Institution where he leads policy and research work on how to achieve sustainable and inclusive growth in the continent. Amadou leads efforts to increase AGI's policy impact in Washington and Africa. His work on the Financing for Development agenda has been influential in policy circles and he oversees the Africa Policy Dialogue events, a series of congressional events. He has initiated a series of roundtable bringing together global businesses, NGOs, and government officials to discuss and make recommendations on African issues. He is also the editor of Africa in Focus, AGI's blog series whose readership and geographic coverage have increased to reach an average of 7,600 readers per week.

He has testified at the U.S. Congress and presented his work at international conferences and central banks worldwide and has contributed to blogs, podcasts, webcasts, radio and TV programs. He was quoted in The Atlantic, The Economist, The Wall Street Journal, The New York Times, The Los Angeles Times, The Washington Post, BBC, CBS News, Bloomberg, Newsweek, Foreign Policy, Le Point, El Pais, Business Week, Financial Times, LA Times, Time magazine, Les Echos, Il Sole, O Globo, and El Mundo.

Amadou has published in top academic and practitioner journals, including the *Journal of Banking & Finance* and *IMF Staff Papers, Journal of Fixed Income, and World Economics*. He is also a member of the Editorial Board of the Global Credit Review (National University of Singapore. His policy work won the runner-up 2011 ICFR-Financial Times Prize for best research on financial regulation. He also co-edited a book on the management of natural resources wealth.

Prior to joining Brookings, Amadou has held a variety of positions at the IMF over 15 years, covering more than 20 countries and all the financial crises since 1998. He served as Deputy Chief in the Monetary and Capital Markets Department where he worked on financial and capital markets stability and development missions in Africa, Asia, Europe, and Latin America. Amadou also coordinated the IMF work on stress testing and financial surveillance tools and worked on financial regulation, supervision, and crisis management. At the IMF Institute for Capacity Development, Amadou taught macroeconomics and finance courses to mid- and senior level staff from central banks and ministries of finance in Asia and Africa, as well as the IMF. He also worked on a project to set up a Trust Fund for capacity building in Africa.

Amadou joined the IMF's Research Department during the 1998 Asian crisis where he monitored global capital markets participants, including investment banks, institutional investors, and hedge funds. Amadou then developed an expertise in assessing the stability of financial systems before moving to capital markets development in specific countries, including Islamic finance and sovereign debt management. He also worked on reserves management and helped develop the *Santiago Principles* for sovereign wealth funds.

Amadou holds a Ph.D. in Finance for McGill University and is a CFA charter holder as well as a Financial Risk Manager.

COUNTRY WORK EXPERIENCE

Botswana, Brazil, Chile, China, Czech Republic, Democratic Republic of Congo, France, Ghana, Hong Kong SAR, India, Italy, Kenya, Korea, Singapore, Malaysia, Rwanda, Saudi Arabia, Sierra Leone, South Africa, South Korea, Tajikistan (Islamic Development Bank), Tanzania, Thailand, Tunisia, United Arab Emirates (Abu Dhabi), United Kingdom (London), United States (New York and Greenwich, CT.), and West African Economic and Monetary Union (Côte d'Ivoire, Senegal, Mali, Niger, Togo, and BCEAO).

TEACHING EXPERIENCE

Financial Market Analysis, Financial Programming and Policies, Macroeconomic and Fiscal Policies, Economic and Financial Stability, Extracting Information from Financial Markets, Macroeconomic Policies in Natural Resource Rich Countries (developed with R. Arezki), Monetary and Financial Policies

PROFESSIONAL EXPERIENCE

The Brookings Institution

Senior Fellow and Director, Africa Growth Initiative, 2013-to date Consultant, African Development Bank and United Nations (OSAA), 2015

International Monetary Fund (IMF)

Economist, Senior Economist, Deputy Division Chief, 1998-2013

McGill University, Montreal, Canada

Faculty Lecturer, Research and Teaching Assistant, Faculty of Management, Canada 1992 -1997

EDUCATION and CONTINUING EDUCATION

Ph. D. Finance Department, McGill University, Montréal, Canada 1998 Master of Science, Finance, HEC Montréal, Canada 1992 Bachelor of Commerce, Finance, HEC Montréal, Canada 1993

IMF Management Training 2008-2013

IMF Management Development Center 2010

MIT, Summer Professional Program 2003

Financial Risk Manager Certification (FRM), Global Association of Risk Professionals 2002 CFA Charter holder, CFA Institute 2001

HONORS and RECOGNITIONS

Invitation to the Orange Data for Development Senegal Challenge, MIT Medialab, 2015 Outstanding Performance Assessment, International Monetary Fund, 2013, 2006, and 2005

ICFR-Financial Times Research Runner-Up Prize for Best Research in Financial Regulation 2012

Certificate of Appreciation, UAE Securities & Commodities Authority 2011

Lunch with IMF's First Deputy Managing Director, Mr. John Lipsky 2009

Lunch with IMF's First Deputy Managing Director, Stanley Fisher 2000

Dissertation Fellowship, McGill University, Montreal 1997

Selection, FMA Doctoral Consortium, New Orleans, LA 1996

Merit Scholarship, Ministry of Education, Sénégal 1987-1996

First Prize in English Concours Général awarded by the President of Sénégal, Abdou Diouf 1985

Bronze, Gold, Silver Medals, National Judo Championship, Senegal 1984–1986

LANGUAGE SKILLS: English, French, and Wolof (all fluent), German and Spanish (basic), Japanese (very basic)

COMPUTER SKILLS: Bloomberg, Reuters, Dealogic, Datastream, Bankscope, Eviews, Stata

REFEREE: African Development Review, Economic Letters, Financial Management, International Review of Financial Analysis, Journal of Emerging Market Finance, Journal of Banking and Finance, Journal of Empirical Finance, European Journal of Operations Research, Emerging Markets Review, and the Scottish Journal of Political Economy

SELECTED PUBLICATIONS

SSRN: http://outatpapers.ssrn.com/sol3/cf_dev/AbsByAuth.cfm?per_id=241460

REPEC: http://ideas.repec.org/e/psy16.html

ResearchGate: http://www.researchgate.net/profile/Amadou_Sy

ONGOING RESEARCH

"Determinants of FDI to Africa" with C. Gueye and F. Rakotondrazaka

"FDI and Governance in Africa" with M. Sow

REFEREED PUBLICATIONS

- "Financing Africa's Infrastructure Deficit: From Development Banking to Long-Term Investing" with R. Arezki, under revision for *the Journal of African Economies*
- "How Did Markets React to Stress Tests? with B. Candelon, forthcoming IMF/WP/15/75

 http://www.imf.org/external/pubs/cat/longres.aspx?sk=42831.0 under submission
- "The Macroeconomic Implications of Infectious Disease Outbreaks: The 2014 Ebola Virus Outbreak in West Africa" Spring/Summer 2015, **Brown Journal of World Affairs**
- "Trends and Developments in the Sub-Saharan International Sovereign Bond Market" March 2015

 Revue d'Economie Financière, No 116, Paris, France and

 http://www.brookings.edu/research/papers/2015/03/trends-developments-african-frontier-bond-markets-sy
- "Beyond Aid—How Much Should African Countries Pay to Borrow?" 2014 with C. A. Gueye,

 Journal of African Economies, November 2014

 http://jae.oxfordjournals.org/content/early/2014/11/20/jae.eju026.abstract
- "Four Instruments to Strengthen Financial Integration in Africa," 2014, **FERDI Working Paper**http://www.ferdi.fr/fr/node/1647%22 and **Bulletin de la Banque de France No198, 4e**trimestre 2014
- "US Interest Rates and Emerging Market Bond Yields: A Changing Relationship?" 2013, with C. A. Gueye, *Journal of Fixed Income*, vol.22, No. 4
- "Credit Rating News and Spillover Effects," with R. Arezki and B. Candelon, 2011, IMF/WP/11/68
- "Regulating Credit Rating Agencies: Where To Now?" 2011, *Journal of Financial Transformation*, 31, pp. 141-50

[&]quot;Assessing Tax Laziness in Resource-Rich Countries" with G. Vuletin

[&]quot;Managing External Risks to Sustain Growth in Africa" with E. Talvi

[&]quot;What do SWIFT data say about Africa" with R. Goyal

[&]quot;Building an African Sentiment Index" with R. Goyal

[&]quot;Economic Policies for Africa"

[&]quot;Big Data and Urban Mobility" with T. Fetzer

- "Managing the Risk of Credit Rating Downgrades: Lessons for Investors from Recent Crises," 2011, Global Credit Review, http://rmi.nus.edu.sg/gcr/2011volume1.php
- "How Risky are Risk-Weighted-Assets? Evidence from the Financial Crisis" 2012, with S. Das, IMF/WP/12/36
- "Government Securities Markets in the West African Monetary Union: A Review," 2010, *African Development Review*, Vol. 22, No. 2
- "The Systemic Regulation of Credit Rating Agencies and Rated Markets," 2009, *World Economics*, **10 (4)**, www.world-economics-journal.com,
- "Islamic Bond Issuance: What Sovereign Managers Need to Know" 2008, with A. Jobst, P. Kunzel, and P. Mills, International Journal of Islamic and Middle Eastern Finance and Management, pp. 330-344
- "Distance to Default in Banking: A Bridge Too Far?" 2007, with Jorge Chan Lau, *Journal of Banking Regulation*, 9, pp. 14 24, Nov 2007, www.palgrave-journals.com
- "Managing the Interest Rate Risk of Indian Banks' Government Securities Holdings," *Economic And Political Weekly*, March 31-April 6, 2007, pp. 1211-1217, Vol XLII No 13, Mumbai, www.epw.org.in
- "Financial Market Integration in the WAEMU," 2007, *Journal of Financial Transformation*,
 Monetary Union –Vol 19 April 2007, www.capco.com and in "The CFA Franc Zone:
 Common Currency, Uncommon Challenges," 2008, the CFA Franc Zone, edited by A. Gulde-Wolfe and C. Tsangarides, IMF
- "Fuller Capital Account Convertibility: Implications for Risk Management in India," 2007, **The****Analyst*, ICFAI, India, October
- "Predicting Sovereign Debt Crises: Are Defaults Still Adequate?" 2007, with A. Pescatori, *IMF Staff***Papers**, Volume 54/2, www.palgrave-journals.com
- "Were the bid-ask spreads in the FX market excessive during the Asian crisis?" 2006, with T. Becker, International Review of Financial Analysis, 15/4-5. pp.434-49, <u>www.elsevier.com</u>
- "Emerging Market Bond Spreads and Credit Ratings: Reconciling Market Views Economic Fundamentals" 2002, *Emerging Markets Review*, December, <u>www.elsevier.com</u>
- "The Role of Mature Market Mutual Funds in Emerging Markets" with Li Lian Ong, 2004, **IMF**Working Paper, IMF/WP/04/133
- "Rating the Rating Agencies: Debt Crises or Currency Crises," 2004, *Journal of Banking and Finance*, 28, pp. 2845-67, www.elsevier.com
- "A Signaling Model of Currency Board Credibility," with Maria L. Oliva and Luis A. Rivera-Batiz, Review of International Economics, November 2001, www.roie.org

POLICY PAPERS

- "Developing the Sovereign Debt Market in the West African Monetary Union," forthcoming, with J. Balima and S. Kamga, **African Development Bank**
- "Leveraging African Pension Funds for Financing Infrastructure Development," forthcoming, **United**Nations Office of the Special Advisor on Africa (OSAA)
- "Foresight Africa: Top Priorities for the Continent in 2016," January 2016, **Brookings**http://www.brookings.edu/research/reports2/2016/01/foresight-africa-top-priorities
- "Africa: Financing Adaptation and Mitigation in the World's Most Vulnerable Region" December 2015 in COP 21 at Paris: The issues, the actors, and the Road Ahead on Climate Change, **Brookings**
- Institution, http://www.brookings.edu/research/reports2/2015/11/17-paris-climate-talks "Three Trends in Indo-African Trade and Investment" with A. Westbury, October 2015 in India and

- Africa: Forging a Strategic Partnership, **Brookings**, http://www.brookings.in/wp-content/downloads/indiaandafrica.pdf
- "Emerging from Crisis: the Role of Economic Recovery in Creating a Durable Peace for the Central African Republic," October 2015 with A. Copley, **Brookings**, Global Views http://www.brookings.edu/research/papers/2015/10/emerging-crisis-central-african-republic-sy-copley
- "Big Data and Sustainable Development: Evidence from the Dakar Metropolitan Area in Senegal" with T. Fetzer, April 2015, **Brookings** http://www.brookings.edu/blogs/africa-in-focus/posts/2015/04/23-big-data-mobile-phone-highway-sy
- "Financing African Infrastructure: Can the World Deliver?" March 2015, with J. Gutman and S. Chattopadhyay, **Brookings**, Global Economy and Development http://www.brookings.edu/research/reports/2015/03/financing-african-infrastrastructure-gutman-sy-chattopadhyay
- "Private Capital Flows, Official Development Assistance, and Remittances to Africa: Who Gets What?" May 2015, with F. Rakotondrazaka-Maret, **Brookings**, Global Views http://www.brookings.edu/research/papers/2015/05/private-capital-flows-sy-rakotondrazaka
- "Is Africa at a Historical Crossroads to Convergence?" October 2014, in **Think Tank 20**, "Growth, "Convergence and Income Distribution: The Road from the Brisbane G-20 Summit" pp.11-21, http://www.brookings.edu/research/reports2/2014/11/think-tank-20
- "U.S. and EU Strategies for Engaging with Africa," October 2014, **Atlantic Currents**, German Marshall Fund ofcthe United States and OCP Policy Center, pp.81-97 http://www.gmfus.org/archives/atlantic-currents-2014/
- "What Does Good Regulation Look Like? With N. Sacasa and C. Pazarbasioglu, **2011 ICFR-Financial Times Research Runner-Up Prize**
- "Beyond the Curse: Policies to Harness the Power of Natural Resources," 2012 w. R.Arezki and T. Gylfason, Editors, **IMF Book**, Washington D.C.
- "The Economics of Sovereign Wealth Funds," w. T. Ekeli, in "Beyond the Curse: Policies to Harness the Power of Natural Resources" Edited by R. Arezki, T. Gylfason, and A. Sy, **IMF** Washington D.C.
- "Setting Up a Sovereign Wealth Fund: Some Policy and Operational Considerations," 2008 with U.

 Das, Y. Lu. and C. Mulder, "New Perspectives on Sovereign Asset Management" Edited By Malan Rietveld, Central Banking Publications
- "CEMAC: From a Monetary Union to Financial Integration," with C. Durand, in "Building Monetary and Financial Systems: Case Studies in Technical Assistance," edited by Charles Enoch et Al., 2007, IMF
- "Privatization Options," 1997, with Vihang R. Errunza and Sumon Mazumdar, *The Blackwell Encyclopedic Dictionary of Finance*, Blackwell Publishers, re-edited in 2005.
- "Sovereign Ratings and Financial Crises," 2004 in "Sovereign Risk and Financial Crises," Eds. Michael Frenkel. Alexander Karmann and Bert Scholtens, Springer Publ.

SELECTED IMF COUNTRY REPORTS

"Optimal Bank Capital Regulation," with C. Pazarbasioglu and N. Sacasa, 2013, mimeo Italy Financial System Stability Assessment, Deputy mission chief, September 2013, IMF France Financial System Stability Assessment, Mission member, December 2012, IMF "The Business Model of French Banks: Implications for Financial Stability," 2012, IMF "Managing Volatility in Low Income Countries," contributor, 2011, IMF

"The Impact of Basel III on French Banks and its Economy," 2011, IMF

"The Quest for Higher Growth in the WAEMU," African Regional Economic Outlook, 2010, IMF

- Mali Financial System Stability Assessment, Mission chief and lead author, February 2008, IMF
 Niger Financial System Stability Assessment, Mission chief and lead author, October 2008, IMF
 "Generally Accepted Principles and Practices—Santiago Principles," (part of the Secretariat of the International Working Group of Sovereign Wealth Funds), 2008, contributor, www.iwgswf.org
- "Fund's Role in Future Restructurings: Private Capital Inflows to Local Currency Debt Markets in **LICs**" 2007 (*Note to FDMD* with PDR, contributor), IMF
- "Fund's Role in Future Restructurings: Instruments for the Management of Macroeconomic Risks," 2007, (Note to FDMD with RES, contributor), IMF
- "Botswana— Financial System Stability Assessment," co-author and "Botswana—Capital Markets Development *Technical Note*," 2007, IMF
- "Use of Derivatives for Debt Management and Domestic Debt Market Development: Key Conclusions" 2007, Ninth Annual **OECD-World Bank-IMF Global Bond Market Forum**, with H. Blommestein, A. Caputo Silva, U. Das, A. Harwood, G. Horman, and C.Pazarbasioglu,
- "South Africa—Financial Sector Vulnerability," 2005 Selected Issues Paper, Country Report 05/345, IMF
- "Interdepartmental Working Group on Competitiveness in the **CFA-Zone**," Strictly Confidential, contributor, 2005,
- "Rwanda Financial System Stability Assessment" co-authored with B. Laurens and "Rwanda FSAP Stress Tests Technical Note," 2005, IMF
- "Saudi Arabia Financial System Stability Assessment," contributor, August 2005, IMF
- "**Togo**—Bank Restructuring and Fiscal Implications," 2006, *Technical Assistance Report*, with Abdessatar Ouanès, Jose Gijon, and Raymond Bernard, IMF
- "Malaysian Capital Markets," 2004, Selected Issues Paper, Country Report SM/04/18, IMF
- "The South African Capital Markets," 2003, with A. Ilyina and R. Ramaswamy, 2003, IMF
- "Ghana—Access to Foreign Private Capital," Technical Assistance Report with K. Srinivasan, J. Irving, A. Kovanen, and A. Lehman, July 2003, joint AFR/ICM/PDR paper, IMF
- "Tanzania—Access to Foreign Private Capital," Technical Assistance Report with K. Srinivasan, J. Irving, A. Kovanen, and A. Lehman, April 2003, joint AFR/ICM/PDR paper, IMF
- "International Capital Markets: Developments, Prospects and Key Policy Issues" 1998-2000, contributor, IMF

PERIODICALS, BLOGS & PODCASTS

Brookings Blogs (2013-to Date) see http://www.brookings.edu/experts/sya#/?tab=3

- "How financial integration can help regional integration in Africa," International Trade Forum, 2015
- "Policies to Harness the Power of Natural Resources" 2012, w. R.Arezki and T. Gylfason, VoxEU
- "Credit Rating Agencies/Les Agences de Notation du Crédit," Podcast, March 2012
- "Spillover in the US Municipal Bond Markets," 2011 with R. Arezki, B. Candelon, and M. Sy, **Finance and Development**, Washington DC.
- "The Rise of Islamic Finance and Its Potential for Africa," *Podcast*, March 2011, http://www.imf.org/external/pubs/ft/survey/so/pvcast.aspx
- "Bad News Spreads," 2010, Finance & Development, December, Washington D.C.
- "Fuller Capital Account Convertibility: Implications for Risk Management in India," 2007, **The Analyst**, ICFAI, India, October
- "Shari'ah-Compliant Securities Islamic Finance Expanding Rapidly," with Jobst, Andreas, Kunzel,
 Peter, and Paul Mills, 2007, *IMF Survey Magazine*, International Monetary Fund (Sept. 19)
- "Malaysia: Hub of Islamic Capital Markets," 2007, IMF Survey Magazine, IMF
- "Bloomberg: A User's Guide for Financial Sector Surveillance," 2006, IMF

PRESENTATIONS AT INTERNATIONAL SEMINARS, ROUNDTABLES, AND WORKSHOPS

Brookings Events, http://www.brookings.edu/experts/sya#/?tab=4

John Hopkins SAIS A Review of Deborah Brautigam's book "Will Africa Feed China?" November 2015

2nd International Conference on Sustainable Development in Africa, UNU MERIT and CRES, The Role of the CFA franc in the Economic Integration of the West Africa Region, October 2015, Dakar

UN Financing for Development, Leveraging African Pension Funds for Financing Infrastructure

Development, July 2015, Addis Ababa

Ernst & Young Africa Attractiveness Panel, Harvard Club, New York, June 2015 **World Economic Forum,** Think Tank Leaders Forum, "Outlook 2015 on the Regional Agenda for Africa" Cape Town, June 2015

Young African Leadership Initiative (YALI) with Howard University, June 2015, Washington DC **IMF**, Financing African Infrastructure: Can the World Deliver? May 2015, Washington DC **IMF**, US and EU Stress Tests, January 2015, Washington DC

AERC, Resource Funds: Stabilizing, Parking, and Intergenerational Transfer: A Discussion, April 2015, Arusha

ODI, Financing the Future: Fresh Perspectives on Global Development, March 2015, Accra **Harvard Business School**, 17th Annual Africa Business Conference, The Influx of Capital and Development, February 2015

African Union Embassy, Africa's Infrastructure Development, June 2015, Washington DC **Stockholm Institute for Transition Economies**, Africa's Convergence, May 2015, Stockholm **U.S. Africa Command (AFRICOM)**, African Urbanization: Trends, Drivers, and Challenges, April 2015, Frankfurt

US Department of States, Senegal and Guinea Bissau Economic Trends, 2015, Washington DC **G24 Technical Group Meeting,** Financing for Development: Regional Perspectives, Africa, September 2014, Cairo

Washington International School, The Economics of Ebola, 2015, Washington DC **U.S. Congress**, Hearing on Will There Be an African Economic Community, January 2014 **Conrad Hilton Foundation**, Africa: A Continent at the Threshold, January 2014, New York **National Defense University**, Drivers of Conflicts in Africa, February 2014, Washington DC **United Nations** 5th Session of the General Assembly Open Working Group on Sustainable Development Goals: the Role of Finance, New York, November 2013

Wharton Business School. Wharton Africa Business Forum, African Capital Markets, November 2013 **Islamic Development Bank**, Innovative Financing for Development, Dushanbe, Tajikistan, May 2013 **United Nations** 5th Session of the Open Working Group on SDGs, Financing for Development, November 2013, New York

French Embassy in Washington, Africa Rising, Washington DC, May 2013

Brookings AGI, Is Financial Globalization at the Tipping Point in Africa? January 2013

Hong Kong Monetary Authority, 5th Expert Forum on Advanced Stress Testing Techniques, Oct. 2012

IOSCO, Research Methodology for Systemic Risk Research by Securities Regulators, Toronto,
September 2011

Emirates Securities and Commodities Authority, International Coordination of Financial Regulation, Abu Dhabi, January 2011

Association of African Central Banks, Regulatory and Supervisory Challenges from Large and Complex Financial Institutions and Financial Inclusion, Dakar, August 2010

African Development Bank, The IMF's Training Strategy for Africa, July 2010, Tunis **IMF**, Financing Infrastructure in the WAEMU, July 2010, Washington DC

George Washington University, Sovereign Wealth Funds, MBA seminar, November 2009, Washington **National University of Singapore**, Systemic Regulation of Credit Rating Agencies and Rated Markets,

Third Annual Risk Management Conference, July 2009

AMF-Banque de France, Structured Finance Products: What Are the Challenges for Markets and Regulators? October 2008, Paris,

Institutional Investor Institute and Hedge Fund Institutional Forum, Africa and Other Frontier Markets Get on the Map Endowments & Foundations Roundtable, June 2008, Boston

Ninth Annual OECD-World Bank-IMF Global Bond Market Forum, Derivatives and Domestic Debt Market Development, May 2007, Paris

BCEAO, Treasury Bills and Government Bonds Markets in the WAEMU, Dakar, January 2007 **BCEAO**, Financial Integration in the WAEMU, Dakar, November 2005

Bank of Thailand and CCBS, A Framework for Financial Stability and Stress Testing, Bangkok, January 2005

Reserve Bank of India, Indian Banks' Government Securities Holdings: a Risk Analysis, Mumbai, October 2004

Bank Negara Malaysia, Malaysian Capital Markets Developments, Kuala Lumpur, November 2003 Emerging Market Spreads and Sovereign Credit Ratings, **Darden School of Business Administration**, May 2002

IMF/SAFE/People's Bank of China, Early Warning System Models, Washington DC, 2002
IMF/People's Bank of China, International Capital Markets Developments, Washington DC, 2001
International Union of Credit and Investment Insurers, Early Warning Systems, Taipei, 2001, (ranked second best presentation according to the Berne Union Secretariat's survey of participants)

IMF CONFERENCES ORGANIZED

"The Future of Financial Regulation," Opened by MD Lagarde and organized by the Monetary and Capital Markets Department in collaboration with the Center for Financial Policy at the University of Maryland, April 2012

"Natural Resources, Finance and Development: Confronting Old and New Challenges," Opened by MD Strauss-Kahn and organized by the IMF Institute in collaboration with The Bank of Algeria on November 4—5, 2010

PROFESSIONAL MEMBERSHIP AND OTHERS

CFA Society of Washington, 2001-To Date Global Association of Risk Professionals (GARP), 2002-To Date Professional Risk Managers International Association (PRMIA), Supporting Member, 2003-To Date Gentle East Tae Kwon Do, Maryland USA, 2010-To Date