Knarik Ayvazyan

Born in: 15.07.1984 in Gyumri, Armenia Nationality: Armenian

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EDUCATION Public Policy and Administration, The Fletcher School, Tufts University, Medford United States, *January 2020-June 2021*

Ph.D. in Economics, National Academy of Science, Yerevan, Armenia, 2006-2010
Department of Finance and Accounting
Defended in 2016
Ph.D. thesis titled "Specifics of the Mortgage Market Development in the Republic of Armenia" is supervised by Samson Davoyan (Armenian State University of Economics, Russian-Armenian (Slavonic) University, Yerevan State University)

Master of Science in Economics, American University Of Armenia, Yerevan, Armenia, 2013-2015

Master thesis titled "Global Economic Shock Spillovers to Armenia" is supervised by Vahram Ghushchyan (American University Of Armenia), Aleksandr Grigoryan (American University Of Armenia) and Teresa Daban Sanchez (International Monetary Fund)

Internship, International Monetary Fund's Office of the Resident Representative in Armenia, Yerevan, Armenia, 2014

Within summer internship, my task was to assist the IMF office in strengthening its capacity to monitor and evaluate Armenia's linkages to global and regional economies and build a well-designed and user-friendly database on Armenia's essential trade and financial engagement with neighboring countries and the world. *Supervisor: Teresa Daban Sanchez.*

Diploma of Higher Education (equivalent to Master's Degree), Armenian State University of Economics, Yerevan, Armenia, 2001-2006 Department of Finance and Credit

ACADEMIC Experience	Chairman of the State Examination Commission, Yerevan State University, May-June 2021
	Associate Professor at Armenian State University of Economics, 2016 -present Courses taught: "Efficiency of Banking System", "Monetary Policy", "Macro- Prudential Regulation of Banking System".
	Adjunct Lecturer at American University of Armenia, <i>January-December</i> , 2018 Course taught: Principle of Macroeconomics, Macroeconomic Theory (MSE, ECON 330).
	Lecturer at Armenian State University of Economics, 2006-2009 Courses taught: "Economics", "Banking", "Credit Management"
	Professorship in the Financial and Banking Teaching Center of the Central Bank of Armenia, 2009-2015
PROFESSIONA L	Research Fellow, Davis Center for Russian and Eurasian Studies, Harvard University, January –May 2020
EXPERIENCE	https://daviscenter.fas.harvard.edu
	Head of Research Division, Financial Stability and Regulation Directorate, Central Bank of Armenia, August 2021-present Main responsibilities
	• Supervise and manage a team of researchers
	• Advise the Central Bank's Chairman and Departments on financial stability and macro-prudential policy issues
	Manage the project of design and implementation of Framework for Maintaining Financial Systems Stability
	Financial System StabilityInitiate and develop the macro-financial structural and semi-structural models of
	Armenia
	• Lead research and analytical works for 3 departments of the Financial Stability Directorate including the Financial Stability and Development department, Financial System Regulation department, Consumer Rights Protection and Financial Education Center
	Analyst , Financial System Stability and Development Department, Macro-prudential Policy and Modeling Division, Central Bank of Armenia, <i>September 2016-August 2021 Main responsibilities</i>
	• Developing and updating short term forecasting models of the financial system
	• Analyses and modeling macro-financial linkages with feedback loops
	• Analyses the behavior of financial system participants and exploration of potential systemic risks
	 Development of the DSGE model with financial frictions of the Central Bank of
	Armenia
	Making projections of the main balance sheet components of financial system marticipants based on scenemic readaling and empirical analysis
	 participants based on economic modeling and empirical analysis Estimation of financial cycles and financial condition indexes
	 Close collaboration with representatives of various government agencies and
	international organizations

	Macroeconomist, Monetary Policy Department, Real Sector Analysis and
	Forecasting Division, Central Bank of Armenia, 2009-2016
	Main responsibilities
	 Coordinating the forecast process on a rotational basis
	 Developing and updating Near term forecasting models and satellite models of CBA FPAS
	 Development of the core Quarterly Projection Model of the Central Bank of Armenia Analyses of aggregate supply components and branches of the economy and their interrelation with other sectors and indicators Making projections of the real and price variables of GDP and value-added by
	branches based on economic modeling and empirical analysisElaborating real sector part of the monetary policy program and quarterly inflation
	report
	Estimation of Output gap
	Close collaboration with representatives of various government agencies and international organizations
	Macroeconomist, Monetary Policy Department, Financial Programming and Forecasting Division, Central Bank of Armenia, 2007-2009 <i>Main responsibilities</i>
	Analyses and forecasting of monetary indicators
	Participation in the inflation forecasting process
	Construction of monetary policy transmission model for Armenia <u>https://www.cba.am/en/sitepages/default.aspx</u>
WORKING PAPERS	"Estimation of Armenian Financial Cycle Index" with Ashot Sargsyan, Hayk Sargsyan CBA WP, Yerevan, 2019
	"Estimation of Financial Condition Index for RA" with Ashkhen Rafaelyan, <i>CBA WP</i> , Yerevan, 2017
	Available at https://www.cba.am/AM/panalyticalmaterialsresearches/FCI_WP.pdf
	"Spillovers from Global and Regional Shocks to Armenia" with Teresa Daban Sanchez, Authorized for distribution by Mark A. Horton, <i>IMF WP</i> , 2015
	Available at https://www.imf.org/external/pubs/ft/wp/2015/wp15241.pdf
	"Estimating the New Keynesian Output Gap For Armenia via a Bayesian Approach", <i>CBA WP</i> , Yerevan, 2015
	Available at <u>https://www.cba.am/EN/panalyticalmaterialsresearches/Bayesian-</u> Estimation-2015_WP_2.pdf
	"Estimating Output Gap for Armenian Economy: Structural and Statistical Approaches", <i>CBA WP</i> , Yerevan, 2010
	Available at https://www.cba.am/AM/panalyticalmaterialsresearches/2010_WP_2.pdf
RESEARCH PAPERS, PUBLICATIONS	"The Role of Technological Progress In Promoting Sustainable Development" with Manishak Grigoryan, <i>Alternative Quarterly Journal</i> , Yerevan, 2020 # 2 April- June 2020, pages 235-239
	Available at <u>http://alternative.am/wp-</u> content/uploads/2020/07/%D4%B1%D5%BA%D6%80%D5%AB%D5%AC- %D5%80%D5%B8%D6%82%D5%B6%D5%AB%D5%BD-2020.pdf
	"Armenia: the dangers of lifting lockdown when R is still above 1" with Armine

"Armenia: the dangers of lifting lockdown when R is still above 1" with Armine Grigoryan, LSE, July 1^{st} , 2020

Available at <u>https://blogs.lse.ac.uk/covid19/2020/07/01/armenia-the-dangers-of-lifting-lockdown-when-r-is-still-above-</u> <u>1/?fbclid=IwAR1WHIPKsTEuJeKXrohNOsFbZFr9P7uz9UdCLFJWu4PG41SZqkNu3</u> <u>sOsBwo</u>

"Principal of Macroeconomics Teaching Manual", Armenian State University of Economics, Gyumri, 2019, 72 pages, ISBN 978-9939-0-3210-8

"Assessment of Comparative Efficiency Based on Integral Index of Reforms: Evidence From Transcaucasian Republic", with S. Davoyan, L. Galoyan, R. Kurghinyan *Available at SSRN*

https://ssrn.com/abstract=3490480 or http://dx.doi.org/10.2139/ssrn.3490480

"The credit-to-GDP gap: Evidence from Armenia". 27th International Scientific Conference on Economic and Social Development, Rome, 1-2 March 2018 *Available at*

https://bib.irb.hr/datoteka/931245.8. Zbornik_radova_konferencija_Rim.pdf#page= 142

"The Identification of Risk Factors Underlying the Calculation of Car Insurance Payments in Armenia" with Gayane Barseghyan, *Development of Economy and Society: Challenges and Opportunities of 21st Century, N27 Scientific Conference Of ASUE*, Economist, 2018, pages 334-341 *Available at* https://asue.am/upload/files/Gitajoxovi-nyuter.pdf

"Effective Public Debt Consolidation Issues In Highly Indebted Countries", with Hayk Sargsyan, Armenian Economic Association, Vol.3 (2017) Available at <u>http://www.aea.am/files/papers/a2017_2.pdf</u>

"Estimating Disaggregated Output Gap: Evidence from Armenia" Armenia. Finance and Economy, Limush, Yerevan, # 9-10 (205-206) / December 2017

"The Incentives of Asset Securitization", Armenia. Finance and Economy, Limush, Yerevan, #11-12 (183-184) / January 2016

"The Asset Securitization for Emerging Countries: Opportunity or challenge?" *Alternative Quarterly Journal*, Limush, Yerevan, 2015 # 4 / October-December 2015

"Global Equilibrium Model of Securitization", *Alternative Quarterly Journal*, Limush, Yerevan, 2015 # 4 / October-December 2015

"The Effects of Securitization on Armenian Banking System: Quantity Estimations", *Armenia. Finance and Economy*, Limush, Yerevan, #5 (143) / May 2012

"The Issues of Armenian Mortgage Market Creation and Future Development", *Changing Trends of Global Economy and Challenges of Armenia, Scientific Conference*, Dpir, Gyumri, 2012

"Evaluation of Mortgage Loan Availability in the RA", Armenia. Finance and Economy, Limush, Yerevan, #1 (139) / January 2012

"Long Term Taylor Rule in Armenia", *Development Trends for Armenian Economy* Institutional System, Nahapet, Yerevan, 2009

	"Features of Armenian Economy Exchange Policy" Development Trends for Armenian Economy Institutional System, Nahapet, Yerevan, 2008
	"The Main Problems of Armenian Mortgage Market Developments", Armenian State University of Economy, Armenian Economy Yesterday, Today and Tomorrow Interuniversity Theses of the Scientific Conference, Yerevan, 2006
	"The Foreign Direct Investment in Armenia", Armenian State University of Economy, Theses of the Scientific Conference, Yerevan, 2005
	"Spillover Effects of the Foreign Direct Investment and it's Characteristic Features in Armenia", Yerevan State Institute of Economy, <i>Theses of the Scientific Conference</i> , Yerevan, 2005
	"The Improvement Channels of Direct Investments in Armenia", Armenian State University of Economy, <i>Theses of the Second Scientific Conference of Junior</i> <i>Economists</i> , Yerevan, SEUA (State engineering university of Armenia), 2004
WORK IN	Macroprudential Stress testing model of Armenia.
PROGRESS	Applying CoVaR to measure systemic market risk in the Armenian financial sector.
UNPUBLISHED	"Financial inclusion and poverty: new evidence from Armenia" with Aleksandr Grigoryan and Knar Khachatryan
	A DSGE model with a financial accelerator effect on the Armenian business cycle.
	Assessing the Risks of Systemic Banking Crisis.
AWARDS AND	Associate of the Toronto Centre, September 20, 2017
GRANTS	Certificate for academic excellence award "Central Bankers and Private Bankers Certificate Program" organized by Central Bank of Netherlands and Central Bank of Armenia, <i>May-October</i> ,2017 <i>Instructors:</i> James Stock (Harvard University), Jaume Ventura (Barcelona GSE), Florencio Lopes de Silanes (SKEMA Business School in Finance), Joseph McCahery (Tilburg University)
	IMF best paper award, Armenian Economic Association, June 2017
	The Best Lecturer of the Year, Armenian State University of Economics, June 2008
	Second place winner of the interuniversity scientific conference, June 2005
Seminar, Conferences, Courses, Participation	Machine Learning Certificate of excellence, By Armenian Code Academy, Yerevan, Armenia, <i>February-May 2021</i> .
	"Covid-19 Recovery Challenge", By Imperial Business School, Innovation and Entrepreneurship Club, <i>May 25-29, 2020</i>
	"Monetary Policy Analysis and Forecasting" online course, <i>May 2020</i> Sponsored by IMF, Certificate available at <u>https://courses.edx.org/certificates/a1206fbde3f946adae0b54a68eadcb99</u>
	"EUROPEAN CONFERENCE 2020 The world is Watching", Harvard Kennedy School, Boston, USA, 6-8 March 2020

Economics 2727: Empirical Methods in Financial Economics, Ph.D. level course, by Samuel G. Hanson Adi Sunderam, Harvard Business School, Boston, USA, *January-May* 2020

Research paper "Assessing the Risks of Systemic Banking Crisis."

"Microeconomics", Data, Economics, and Development Policy MicroMasters program, MIT, *September-December 2019* Certificate available at https://micromasters.mit.edu/certificate/course/5ab8dbcd41a850386b5a7afa26b41678

"The 2019 ENTerprise REsearch InNOVAtion Conference" (ENTRENOVA '19) Rovinj, Croatia, September 12-14, 2019

Presented paper "Assessment of Comparative Efficiency Based on Integral Index of Reforms: Evidence from Transcaucasian Republics"

"DSGE Modeling", By Lawrence J. Christiano" CBA, Dilijan, July 29-August 02, 2019

"Macroprudential Policy Modeling for Open Economies", By Enrique G. Mendoza, IMF Washington, *February 20-23, 2019*

"DSGE Modeling", By Lawrence J. Christiano" CBA, Dilijan, July 23-27, 2018

"Vulnerability Diagnostics" Joint Vienna Institute, Wien, *April 16-28, 2018* Funded by IMF and CBA

"Consolidated Supervision", CBA, Dilijan, *October 16-20, 2017* Funded by Global Affairs Canada, IMF and SIDA

"New Keynesian DSGE Models, Financial Frictions and Bayesian Estimation By Lawrence J. Christiano" CBA, Dilijan, *June 5-9, 2017*

"Systemic Macro-Financial Risk Analysis" Joint Vienna Institute, Wien, April 10-14, 2017

Funded by IMF and CBA

"Financial Market Analysis" online course, *February-March 2017* Sponsored by IMF, Certificate available at https://courses.edx.org/certificates/72fdc53cecbd4aafbdf7622150e432ba

"Models for Policy Analysis" Joint Vienna Institute, Wien, October 24-November 04, 2016

Funded by IMF and CBA

"19th central Bank Macroeconomic Modeling Workshop" CBA, Dilijan, Armenia, *September 15-16*

"Macroeconomic Forecasting" online course, *May-July 2015* Sponsored by IMF, Certificate available at <u>https://s3.amazonaws.com/verify.edx.org/downloads/a523aa366cc84e8ea697a350728fa</u> <u>a6f/Certificate.pdf</u>

"Economic Policies for Financial Stability" Joint Vienna Institute, Wien, *March 16-27, 2015* Funded by IMF and CBA "The Use of DSGE Models for Policy Analysis", Paris, *September 28–October 4, 2014* Funded by Bank of France and CBA

"The Use of DSGE Models in the Policy-Making Process", Washington, *June 15-28*, 2014 Funded by IMF and CBA

"Tools and Policies for Inclusive Growth", Joint Vienna Institute, Wien, *November 3-15, 2013* Funded by IMF and CBA

"Macroeconomic Management and Financial Sector Issues", Joint Vienna Institute, Wien, *February 24-March 9, 2013* Funded by IMF and CBA

"Macroeconomic Diagnostics", Joint Vienna Institute, Wien, April 22-March 5,2012 Funded by IMF and CBA

"Advanced Topics in Macroeconometrics", Study Centre of Swiss National Bank, Gerzensee, *February 6-17, 2012* Funded by Swiss National Bank and CBA

"Financial Programming and Policies", Washington, *June 6-July 8, 2011* Funded by IMF and CBA

"Estimation and Forecasting of GDP", Czech National Bank, Prague, *May 8-11, 2011* Funded by CNB and CBA

"Macroeconomic Forecasting", Joint Vienna Institute, Wien, April 25-May 6, 2011 Funded by IMF and CBA

"Modelling and Forecasting" Centre for Technical Central Bank Cooperation, Frankfurt am Main, *March 22-26, 2010* Funded by Deutsche Bundesbank and CBA

"Monetary Policy and Structural Changes" International Banking and Finance Institute, Paris, *November 17-21, 2009* Funded by the Bank of France and CBA

"Applied Econometrics and Analysis of Data-Series" CRRC, Yerevan, 2009 March Funded by CBA

"Changing Capital Flows and Implications for Central Banks", Joint Vienna Institute, Wien, *April 14-17, 2009* Funded by BIS and CBA

"Assessment of Creditors Credibility" Training Center, Central Bank of Armenia, Yerevan, Yerevan, *February 5-8, 2008* Funded by CBA

"The Economic Bases of Antimonopolistic Strategy. International Experience and Armenian Facts" Training Center, Central Bank of Armenia, Yerevan, 2008 May Funded by CBA

"Tax Legislation of Armenia and the challenges of future amendments", Training Center, Central Bank of Armenia, Yerevan, 2008 April

Funded by CBA

	"Development trends for Armenian economy institutional system", Yerevan State Institute of Economy, Gyumri, 2008 Presented paper: "Features of Armenian Economy Exchange Policy".
	"Central Bank of Armenia: Introduction Training", Training Center, Central Bank of Armenia, Yerevan, October-December, 2006
	"Economic issues in Armenia", Armenian State University of Economy, Yerevan, 2006, <i>Presented paper: "The Main Problems of Armenian Mortgage Market Developments"</i> . First place winner of the interuniversity scientific conference.
	"Scientific Conference", Armenian State University of Economy, Yerevan, 2005 Presented paper: "The Foreign Direct Investment in Armenia".
	"Scientific Conference", Yerevan State Institute of Economy, 2004 Presented paper: "Spillover Effects of the Foreign Direct Investment and it's Characteristic Features in Armenia". Second place winner of the interuniversity scientific conference.
	"Scientific Conference of junior economists", SEUA (State engineering university of Armenia), Gyumri, 2004 Presented paper: "The improvement channels of direct investments in Armenia".
Computer Skills	Microsoft Office, Internet, Matlab (IRIS, Dynare), Stata, Python, Eviews, SPSS, Statistical Methods with Excel
Language Skills	Armenian: (native) Russian: (good) English: (good)
INTERESTS	Economic Policy Analysis, Applied Econometrics, Macroeconomic Modelling, Market Research and Analysis, Macroprudential policy implementation, Macro-financial risk analysis, Business news