RESEARCH AND STATISTICS GROUP

FEDERAL RESERVE BANK OF NEW YORK

# RESEARCH ANALYST PROGRAM

WWW.NEWYORKFED.ORG/RESEARCH

From left: Philip Mulder, Jacob Conway, and Alexander Kroeger

# ECONOMIC RESEARCH AT THE FEDERAL RESERVE BANK OF NEW YORK

Economists at the New York Fed conduct innovative research and provide policy-oriented analysis to help guide the Federal Reserve's assessment of the economy and the formulation of monetary policy—and there's an opportunity for you to play a role.

Each year the Bank seeks roughly twenty exceptional college graduates with a strong background in economics, mathematics, and statistics to work as Research Analysts (RAs). Many of these new hires have previously worked as interns in the New York Fed's Undergraduate Summer Analyst Program.

"I CAN VOUCH FOR THE DRAMATIC IMPROVEMENT IN MY PROGRAMMING AND DATA ANALYSIS SKILLS SINCE STARTING AT THE FED."

- Eilidh Geddes
Capital Markets

## ABOUT THE POSITION

RAs are primarily responsible for:

- **Assisting economists in the analysis of current public policy issues and events**
RAs help economists conduct current analysis and other short-term research on monetary policy, bank regulation, payments systems, financial markets, and the state of the U.S. and global economies. Current analysis often culminates in reports or presentations to the Bank's president and senior management.

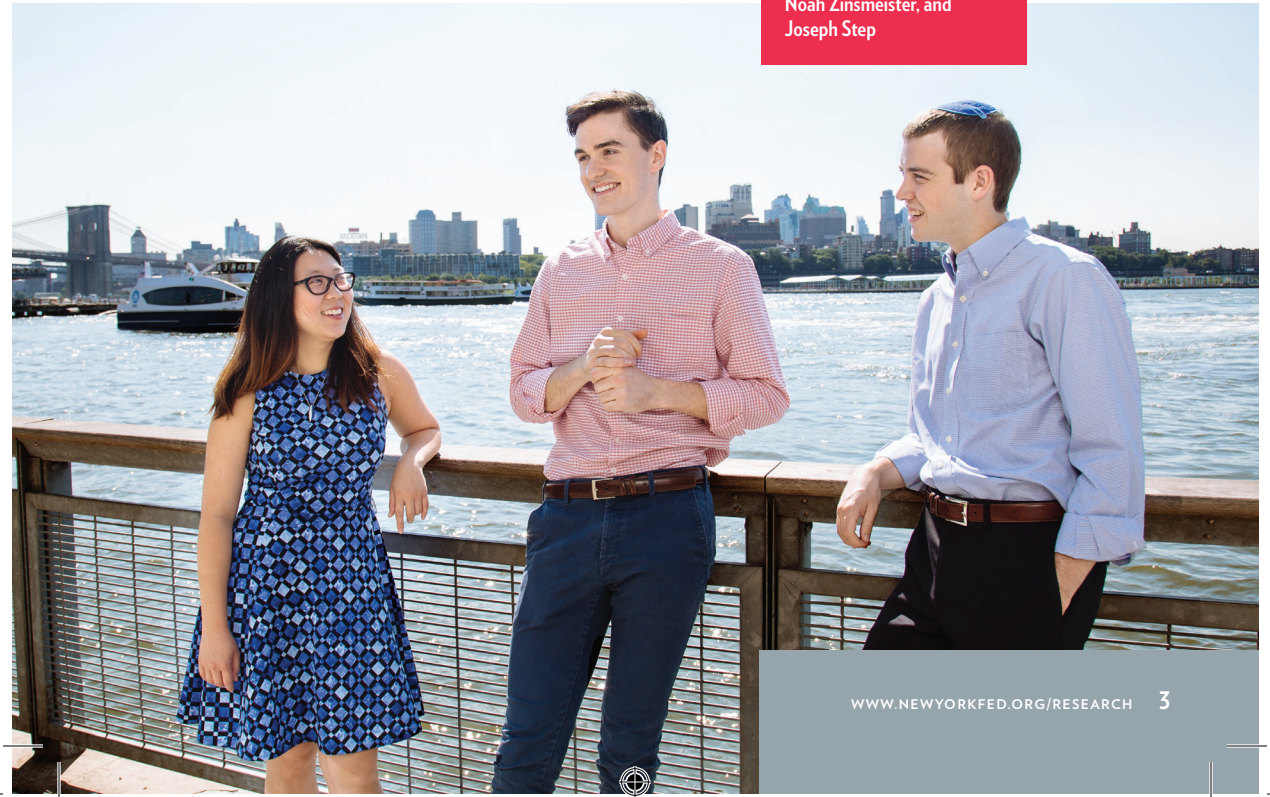
- **Assisting economists in long-term, academically oriented research projects**
RAs help economists plan and execute long-term research on a wide range of applied and theoretical topics. Many RAs have the opportunity to coauthor scholarly articles.

## DAY-TO-DAY ACTIVITIES INCLUDE:

- Performing econometric, computational, and analytical research intended for inclusion in Bank publications as well as academic journals
- Programming in statistical packages, such as SAS, Stata, MATLAB, R, and Julia
- Running financial, banking, macroeconomic, and international forecasting models
- Reviewing and organizing economic and financial data
- Compiling and assessing information from academic journals, market sources, and government reports
- Writing or assisting with reports and presentations on current economic and financial conditions and policy issues
- Developing spreadsheet/web macros and programs to facilitate and improve data manipulation and analysis
- Preparing background materials for and assisting in the formulation of senior management briefings
- Attending presentations given by New York Fed economists and visiting scholars

### HARRY WHEELER
**International Research**

Working closely with economists and other RAs has taught me the ins and outs of the research process: what types of questions to ask, what sources of data to use, what type of models to employ to answer the questions under consideration, and how to present the results in a meaningful way. Being given the responsibility to contribute to these issues personally, as well as learning how to organize and develop research projects, has provided me with indispensable tools for future research after the Fed.



From left: Michelle Jiang, Noah Zinsmeister, and Joseph Step

Clockwise from left: Nicole Dussault, Luis Armona, Rui Yu, and Katherine Di Lucido

# BENEFITS AT A GLANCE

- Competitive starting salary
- Flexible work schedule
- Tuition assistance
- Matching 401(k) savings plan
- Health, dental, and vision insurance
- Commuter benefits

### TUITION ASSISTANCE PROGRAM

Research Analysts receive generous tuition reimbursement for coursework and degree programs at nearby universities—including Columbia and NYU. The New York Fed's strong emphasis on work/life balance helps ensure that RAs have the time they need to pursue coursework in economics, mathematics, statistics, finance, or related fields.

# JOB REQUIREMENTS

### RESEARCH ANALYSTS

- Bachelor's degree in economics, mathematics, statistics, or a related field
- Experience with large databases and statistical packages (for example, SAS, Stata, and MATLAB)
- Strong analytical and decision-making abilities
- Ability to provide effective verbal and written analysis
- Legal authorization to work in the United States on a multiyear basis for other than practical training purposes

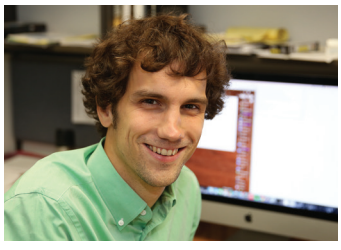
### UNDERGRADUATE SUMMER ANALYSTS

- Completion of at least the sophomore year of college by the beginning of the internship
- Demonstrated interest in banking, business, economics, public policy, risk management, or finance with a strong academic record
- Excellent interpersonal and written communication skills

## EXPERIENCE THAT COUNTS

"BEING AN RA AT THE NEW YORK FED AFTER COLLEGE WAS ONE OF THE BEST DECISIONS I MADE TO PREPARE FOR A PH.D. IN ECONOMICS. THE HANDS-ON EXPERIENCE OF EMPIRICAL WORK PREPARED ME TO IMMEDIATELY START WORKING ON MY OWN RESEARCH AS SOON AS I STARTED GRADUATE SCHOOL."

- Paul Goldsmith-Pinkham
New York Fed Economist



# A CAREER PATH

Research Analysts have gone on to enter prestigious academic programs and accept challenging positions in business and nonprofit organizations.

**Ph.D. programs in economics, finance, or statistics**
Berkeley, Chicago, Columbia, Cornell, Harvard, MIT, Northwestern, NYU, Princeton, Stanford, Yale, Wharton

**Master's programs in public policy**
Berkeley, Chicago, Columbia, Cornell, Harvard, Princeton, Yale

**Master's programs in business administration**
Chicago, Columbia, Harvard, MIT Sloan, NYU Stern, Stanford, Wharton

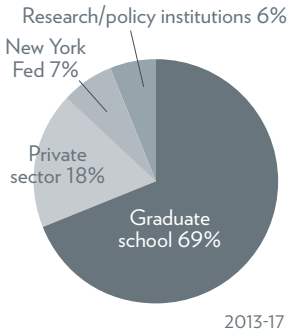
**Federal Reserve Bank of New York**
Chief of Staff's Office, Financial Institution Supervision, Markets Group, Risk Group

**Business**
American Express, BNY Mellon, Goldman Sachs, JPMorgan Chase, Knewton, MKP Capital Management, NERA Economic Consulting

**Nonprofit organizations**
Brookings Institution, Council on Foreign Relations, Innovations for Poverty Action, NBER

**Law and public service**
Berkeley, Chicago, Columbia, Harvard, Michigan, NYU, Yale, IMF, Peace Corps

**THE NEXT STEP**
RA career paths

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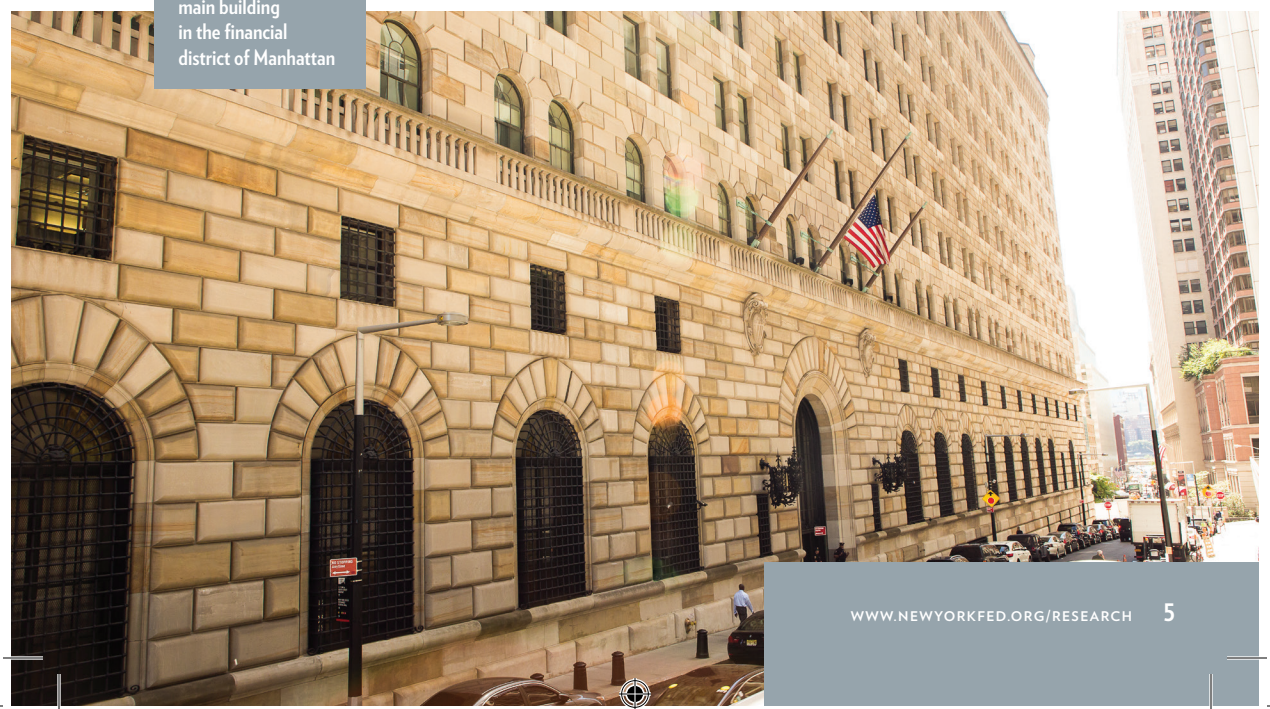

The New York Fed's main building in the financial district of Manhattan

Economist Jason Bram with RAs Preeti Varathan and Rachel Schuh

# AREAS OF RESEARCH

Research Analysts work with economists in seven areas within the Research Group on both policy-oriented analysis and long-term research. RAs generally stay in the position for two years.

## CAPITAL MARKETS

**Focus:** Asset pricing; market microstructure; the interaction between markets, institutions, and the macroeconomy

**Select Research Topics:**

- estimation of risk premia in stock, bond, real estate, and derivatives markets
- interaction between the balance sheets of financial institutions and market liquidity
- financial market stress, volatility, and the measurement of systemic risk
- macroprudential policy and monetary policy

NEW YORK FED RAs HAVE A STRONG TRACK RECORD OF OBTAINING FELLOWSHIPS, INCLUDING THIRTEEN FROM THE NATIONAL SCIENCE FOUNDATION IN 2015-17.

## FINANCIAL INTERMEDIATION

**Focus:** A range of issues relating to the behavior of financial institutions and the corresponding implications for borrowers, the health of the financial services industry, and the economy

**Select Research Topics:**

- stability of financial markets and institutions
- banking and the real economy
- financial system regulation and capital requirements
- corporate finance and corporate governance
- securitization and structured finance
- consumer finance protection and regulation

## INTERNATIONAL RESEARCH

**Focus:** Open-economy macroeconomics, global finance, and trade; the monitoring and analysis of economic developments in industrialized countries; a range of international economic policy questions

**Select Research Topics:**

- macroeconomic spillovers and policy interdependence
- capital mobility and financial integration
- European and Japanese economic issues
- commodity prices

## MACROECONOMIC AND MONETARY STUDIES

**Focus:** Analysis of current national economic, fiscal, and monetary conditions; monetary policy guidance for senior management

**Select Research Topics:**

- forecasting and policy analysis using DSGE models
- estimates of the natural rate of interest and their use in monetary policy
- monetary policy and inequality
- international spillovers and policy coordination at the zero lower bound

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### ERICA MOSZKOWSKI
**Macroeconomic and Monetary Studies**

My biggest project has been to redesign and re-implement our team's model in Julia, a new open-source computing language. I was extremely fortunate to have the opportunity to present that work at JuliaCon, a conference held at MIT.

As an RA with a computer science degree, I find it exciting to spend every day working with a cutting-edge technology and to participate in the development of high-quality open-source code for the academic economics community. Who says economists can't be tech-savvy?

AREAS OF RESEARCH (CONTINUED)

- nowcasting and forecasting using large macroeconomic data sets
- models of the boom and bust in debt and house prices
- labor market churn, job and worker flows

"AS SOMEONE INTERESTED IN PURSUING A PH.D. IN ECONOMICS, I'VE LEARNED HOW TO MANAGE THE MANY STAGES OF LONG-TERM RESEARCH PROJECTS BY WORKING ALONGSIDE ACADEMIC ECONOMISTS."

-Philip Mulder
Money and Payments Studies

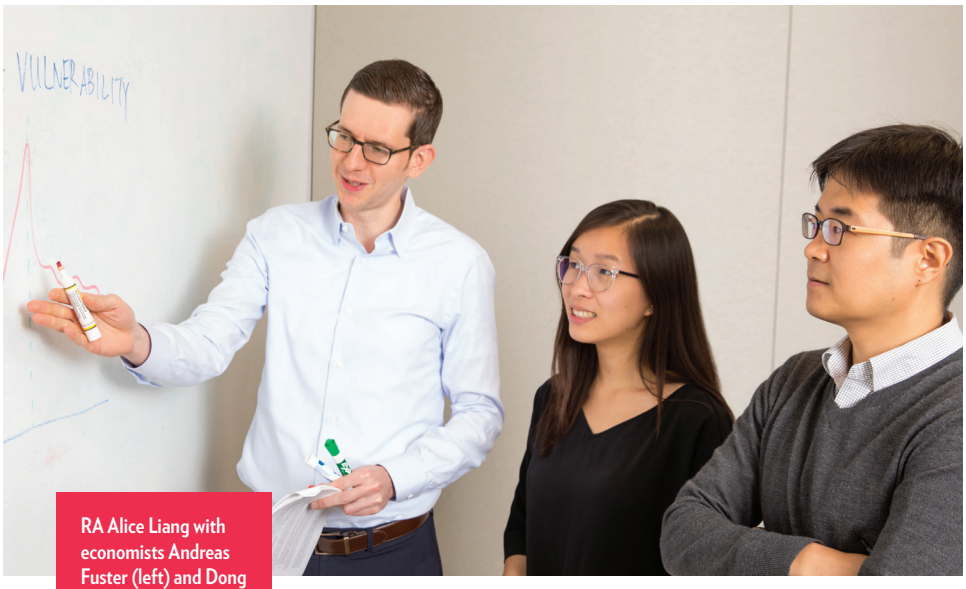
## MICROECONOMIC STUDIES

**Focus:** Topics in applied microeconomics, including labor economics, public finance, consumer finance, and housing, urban, and health economics; construction and analysis of a wide array of micro data sets through the application of microeconomic theory and state-of-the-art econometric techniques

**Select Research Topics:**

- consumption, household balance sheets, and consumer credit
- macroeconomic and labor market impacts of health policy, including the Affordable Care Act
- skill and locational mismatch in the labor market
- survey measurement of household inflation expectations
- evaluation of tax and labor market reforms

The RA program benefits from a strong sense of community.




RA Alice Liang with economists Andreas Fuster (left) and Dong Beom Choi (right)

## MONEY AND PAYMENTS STUDIES

**Focus:** The infrastructure at the heart of the financial system, including the interbank and money markets—such as the federal funds market, the repo market, and other over-the-counter markets—as well as payments and settlement systems

**Select Research Topics:**

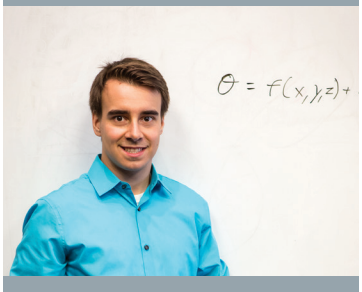
- functioning of interbank lending markets
- effects of the Federal Reserve's liquidity facilities on interbank markets and short-term interest rates
- implementation of monetary policy
- bank runs and crises of confidence in financial markets
- systemic risk and liquidity in large-value payments systems

## REGIONAL ANALYSIS

**Focus:** Regional economics, with an emphasis on issues of interest to the Second District of the Federal Reserve System

**Select Research Topics:**

- human capital and local economic development
- microfoundations of urban agglomeration economies
- regional wage inequality
- the geography of the housing boom and bust
- the labor market for recent college graduates after the Great Recession




### JACOB CONWAY
**Financial Intermediation**

While working on various projects, I have also been able to attend frequent presentations of academic papers by Fed economists and visiting professors, take classes at NYU paid for by the Fed's tuition assistance program, and work with and learn from my fellow RAs and the brilliant economists at the Fed. In so doing, I have improved my coding and analytical skills, familiarized myself with data sources and economic topics, and networked with current and future economists, all of which have better prepared me for economics Ph.D. programs and a career in economic research.

Maya Bidanda at the World Trade Center transportation hub, the Oculus

# SELECT PUBLICATIONS COAUTHORED BY RESEARCH ANALYSTS

THE *LIBERTY STREET ECONOMICS* BLOG PROVIDES RAs WITH FREQUENT OPPORTUNITIES TO COAUTHOR RESEARCH WITH NEW YORK FED ECONOMISTS.

## FEDERAL RESERVE BANK OF NEW YORK PUBLICATIONS

### MACROECONOMICS AND GROWTH

Robert Rich, Joseph Tracy, and **Ellen Fu**. 2016. "U.S. Real Wage Growth: Slowing Down with Age." *Liberty Street Economics* blog, September 28.

Marco Del Negro, Marc Giannoni, and **Micah Smith**. 2016. "The Macro Effects of the Recent Swing in Financial Conditions." *Liberty Street Economics* blog, May 25.

### INTERNATIONAL

Mary Amiti, Caroline Freund, and **Tyler Bodine-Smith**. 2017. "Why Renegotiating NAFTA Could Disrupt Supply Chains." *Liberty Street Economics* blog, April 18.

Thomas Klitgaard and **Harry Wheeler**. 2017. "The End of China's Export Juggernaut." *Liberty Street Economics* blog, April 12.

**Emily Eisner**, Antoine Martin, and Ylva Søvik. 2016. "How Do Central Bank Balance Sheets Change in Times of Crisis?" *Liberty Street Economics* blog, February 4.

### MICROECONOMICS

Julia Fonseca, **Katherine Strair**, and Basit Zafar. 2017. "Access to Credit and Financial Health: Evaluating the Impact of Debt Collection." *Staff Reports*, no. 814, May.

**Luis Armona**, Rajashri Chakrabarti, and Michael Lovenheim. 2017. "How Does For-Profit College Attendance Affect Student Loans, Defaults, and Earnings?" *Staff Reports*, no. 811, April.

Beverly Hirtle, Anna Kovner, and **Samantha Zeller**. 2016. "Are Stress Tests Still Informative?" *Liberty Street Economics* blog, April 4.

**BANKING AND FINANCE**

**Sooji Kim**, Matthew C. Plosser, and João A. C. Santos. 2017. "Macroprudential Policy and the Revolving Door of Risk: Lessons from Leveraged Lending Guidance." *Staff Reports*, no. 815, May.

Donald P. Morgan and **Bryan Yang**. 2016. "Fear of $10 Billion." *Liberty Street Economics* blog, October 3.

**QUANTITATIVE METHODS**

**Abhi Gupta**, **Pearl Li**, **Erica Moszkowski**, Marco Del Negro, and Marc Giannoni. 2017. "Forecasting with Julia." *Liberty Street Economics* blog, May 8.

Tobias Adrian, Richard Crump, Peter Diamond, and **Rui Yu**. 2016. "Forecasting Interest Rates over the Long Run." *Liberty Street Economics* blog, July 18.

**Grant Aarons**, **Daniele Caratelli**, **Matthew Cocci**, Domenico Giannone, Argia Sbordone, and Andrea Tambalotti. 2016. "Introducing the New York Fed Staff Nowcast." *Liberty Street Economics* blog, April 12.

## ACADEMIC JOURNALS, CONFERENCE VOLUMES, AND SCHOLARLY BOOKS

Meta Brown, John Grigsby, Wilbert van der Klaauw, **Jaya Wen**, and Basit Zafar. 2016. "Financial Education and the Debt Behavior of the Young." *The Review of Financial Studies* 29, no. 9 (September): 2490-522.

**Joshua Abel**, Robert Rich, Joseph Song, and Joseph Tracy. 2016. "The Measurement and Behavior of Uncertainty: Evidence from the ECB Survey of Professional Forecasters." *Journal of Applied Econometrics* 31, no. 3 (April-May): 533-50.

**Robert C. Dent**, Fatih Karahan, Benjamin Pugsley, and Ayşegül Şahin. 2016. "The Role of Startups in Structural Transformation." *American Economic Review* 106, no. 5 (May): 219–23.

**Vitaly M. Bord** and João A. C. Santos. 2015. "Does Securitization of Corporate Loans Lead to Riskier Lending?" *Journal of Money, Credit, and Banking* 47, nos. 2-3 (March-April): 415-44.

Meta Brown, **Sarah Stein**, and Basit Zafar. 2015. "The Impact of Housing Markets on Consumer Debt: Credit Report Evidence from 1999 to 2012." *Journal of Money, Credit, and Banking* 47, no. S1 (March-April): 175-213.

### PREETI VARATHAN
**Microeconomic Studies**

While economists typically take the lead on most projects, there is a lot of room for smart and invested RAs to contribute and even produce original work. Even as a Fed intern in Microeconomic Studies the summer before I joined the Bank, I proposed, drafted, and helped finalize questions for a supplemental section of the Survey of Consumer Expectations (SCE), one of the major policy products of the New York Fed. The SCE elicits expectations from a nationally representative sample of American consumers on inflation, labor market variables, and household finance. The survey reaches up to 2,000 people and became the primary data set for my senior thesis.

RESEARCH AND STATISTICS GROUP

# APPLY ONLINE

Recruiting typically begins in late summer for positions the following year.

**GRADUATING COLLEGE SENIORS:**

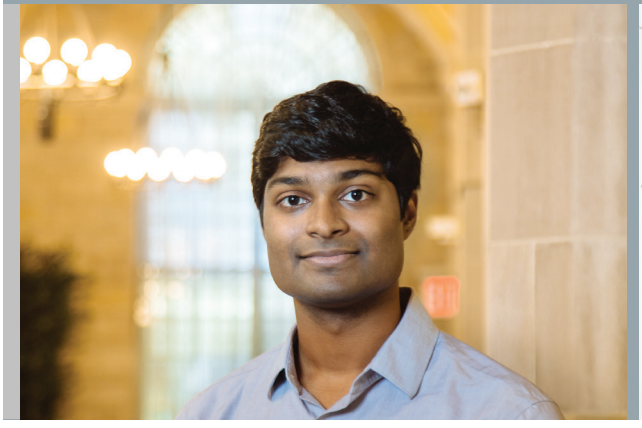
- Explore Research Analyst opportunities at www.nyfed.org/RArecruit.

**UNDERGRADUATES:**

- Learn more about the Summer Analyst Program at www.nyfed.org/interns.

## NEW YORK FED RESEARCH ANALYST APP, AVAILABLE FOR iPHONE

Download on the App Store



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