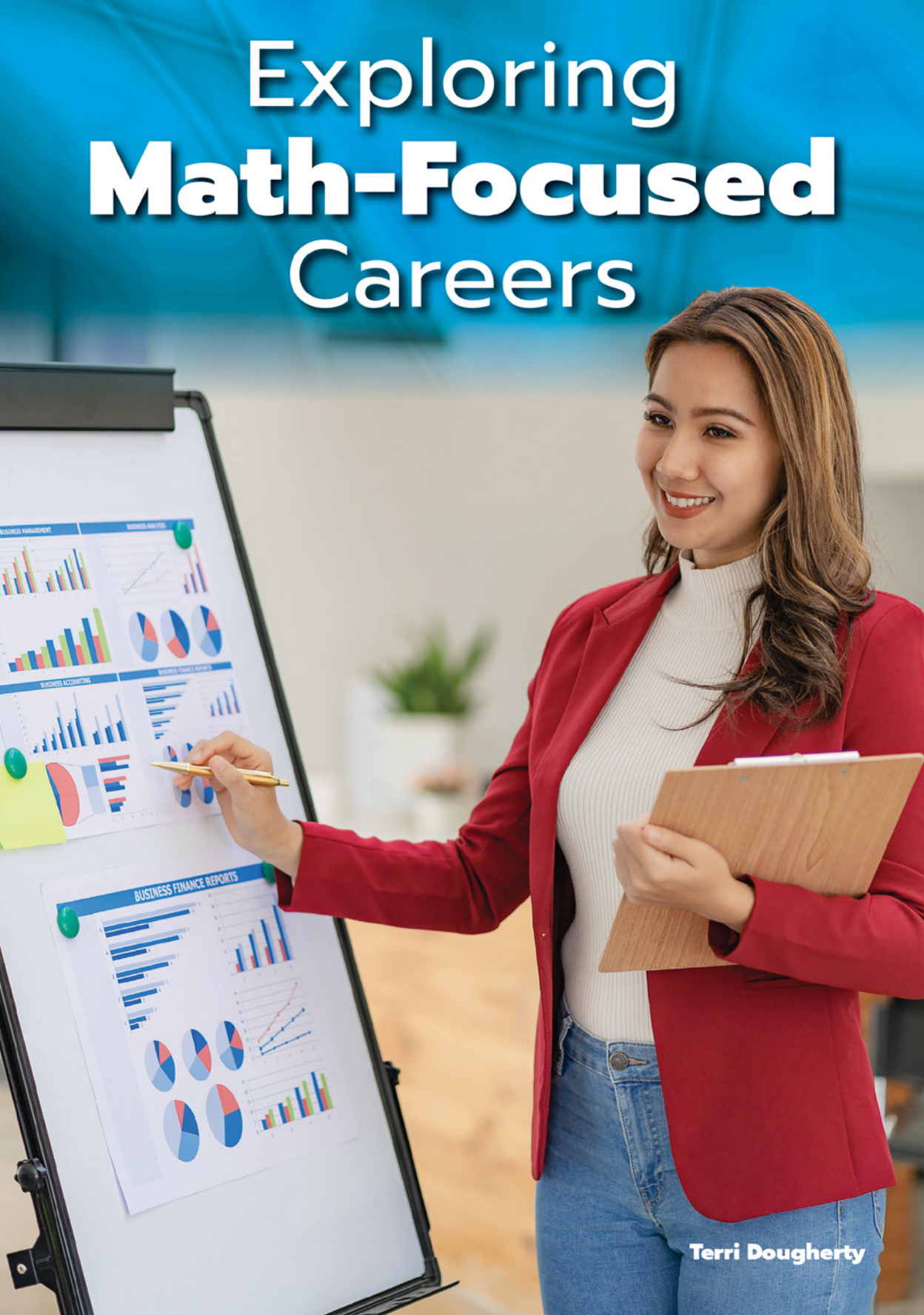
Exploring Math-Focused Careers



Terri Dougherty

About the Author

Terri Dougherty has written more than one hundred books for children and young adults. She loves exploring new areas and has written about a variety of topics. She lives in Appleton, Wisconsin, with her husband, Denis. They enjoy hiking, biking, and traveling, especially visiting their three grown children.

Printed in the United States

For more information, contact:
ReferencePoint Press, Inc.
PO Box 27779
San Diego, CA 92198
www.ReferencePointPress.com

Picture Credits:

Cover: SaiArLawKa2/Shutterstock.com
10: Fizkes/Shutterstock.com
19: Gorodenkoff/Shutterstock.com
26: Andrey_Popov/Shutterstock.com
35: Monkey Business Images/Shutterstock.com
42: ZUMA Press Inc/Alamy Stock Photo

LIBRARY OF CONGRESS CATALOGING-IN-PUBLICATION DATA

Names: Dougherty, Terri, author.
Title: Exploring math-focused careers / by Terri Dougherty.
Description: San Diego, CA : ReferencePoint Press, Inc., 2025. | Includes bibliographical references and index.
Identifiers: LCCN 2024000703 (print) | LCCN 2024000704 (ebook) | ISBN 9781678207960 (library binding) | ISBN 9781678207977 (ebook)
Subjects: LCSH: Mathematics--Vocational guidance--Juvenile literature.
Classification: LCC QA10.5 .E96 2025 (print) | LCC QA10.5 (ebook) | DDC 510.23--dc23/eng/20240201
LC record available at https://lccn.loc.gov/2024000703
LC ebook record available at https://lccn.loc.gov/2024000704

CONTENTS

FINANCIAL ANALYST

What Does a Financial Analyst Do?

Marcus Gadson keeps a close eye on factors that could impact the finances of his employer, a medical care company. He looks for factors that work in the company's favor as well as those that pose a threat. These insights are needed because he makes recommendations that influence the company's decisions about spending and because he is responsible for managing its cash flow. Gadson began his career as a financial analyst but eventually rose to the level of finance director.

When Jessica Martin was a junior financial analyst, she provided meaningful data and information to others in the business. After rising to the level of manager of financial planning and analysis, she became responsible for creating financial forecasts. At the end of each month, she looks at how much money the company has brought in and how much it is spending. She uses that data and other information to predict where the company is heading. Martin also created a software tool that the company uses for budgeting as well as making financial forecasts. Accuracy is important to her work, so Martin had to ensure

A Few Facts

Number of Jobs
376,100

Pay
Median annual salary of $95,080

Educational Requirements
Bachelor's degree

Personal Qualities
Analytical skills, good communicator, decision-making skills, attention to details

Work Settings
Office; may travel to visit clients

Future Job Outlook
8 percent growth projected through 2032

that the program would pull in the correct data from the company's recordkeeping system.

Matt Stucky invests money for clients of Northwestern Mutual, a financial services company. The firm has dozens of analysts who specialize in different types of investments around the world. Stucky's area of expertise is US companies. "Our goal is to deliver long-term growth that meets or exceeds the benchmark of that client's strategy," says Stucky, a chief portfolio manager for the company. "That's what we attempt to do day in and day out."[23]

Financial analysts help businesses and individuals make wise financial decisions. They conduct research, use data and software tools, and create financial models and forecasts. They may also do budgeting, evaluate financial information, and study economic trends. They use financial statements, meetings with company officials, and an analysis of a company's management team to help them make investment choices. They share their findings in written reports and present information to coworkers and clients.

A Typical Workday

Stucky begins his day by checking his email and reading news recaps and earnings reports. Financial analysts need to be aware of what is going on in the world because events could affect investments or a company's finances. "I want to be as informed as I can be on the positions that are driving my portfolio's performance,"[24] he explains.

He then spends time analyzing a potential investment to see whether it is worthy of a deeper dive by his team, which is a two- or three-week process. "I always have to be looking at the investment landscape and doing that work to stay on top of the opportunities that are out there," Stucky says. Communication with team members is also part of his day, as they debate investments in the company's portfolio. "Having colleagues you trust can get you to the place where you'll make the right decision,"[25] he maintains.

Adapting in Changing Times

"We live and work in interesting times. The environment around us is constantly changing, and we need to be able to adapt—quickly. . . . I won't claim to know everything or be an expert on each aspect of finance and [financial planning and analysis], but I do have a thirst to constantly improve and expand."

—Jessica Martin, manager of financial planning and analysis

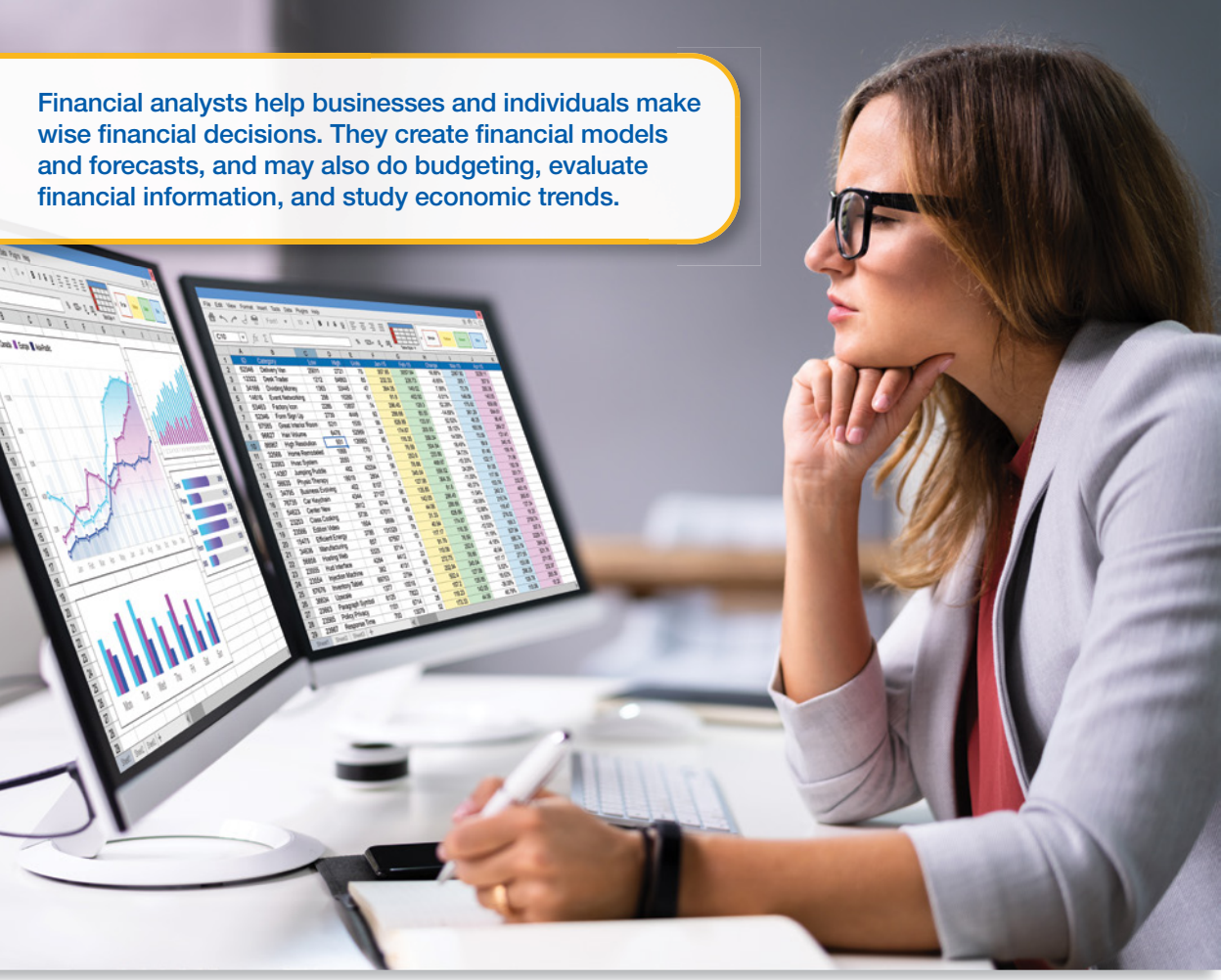
Quoted in Association of Financial Professionals, "FPAC Profile: Welcome to the Dark Side," Certified Corporate Financial Planning & Analysis Professional. https://fpacert.afponline.org.

As a chief portfolio manager, Stucky has other team members who report to him. A junior analyst's tasks may include gathering data, researching companies, entering information into a spreadsheet, and preparing PowerPoint presentations. A senior analyst might then deliver that investment presentation to clients. Stucky also has media responsibilities that involve doing interviews with print, radio, and television journalists. "To do that effectively, I have to have a good view of my own and the firm's view of where the economy is going and why,"[26] he says.

A financial analyst's day may be long, with work extending into the evening to review financial reports and prepare for the next day's meetings. Stucky typically works fifty to fifty-five hours a week, although he notes that an analyst's workweek may be as long as seventy or eighty hours to meet the needs of clients.

Education and Training

Financial analysts usually have a bachelor's degree, often in business, finance, or economics. An employer may prefer a job candidate to have a master's degree. As they advance in their careers,



they may become portfolio managers. This involves selecting investments for a company's portfolio of assets. Stucky was a finance major in college and minored in economics. After college he earned his master's in business administration before getting his first job as an analyst.

A financial analyst needs a license to sell financial products. Most are licensed by the Financial Industry Regulatory Authority. To be licensed, an individual must be sponsored by an employer, so these licenses are obtained after starting a job.

Financial analysts can also be certified, and this may help them advance in their careers. The CFA Institute offers the chartered financial analyst (CFA) certification. To be certified, an analyst must have a degree, acquire several years of work experience, and

Find Out More

Association for Financial Professionals (AFP)

www.afponline.org

The AFP offers certified treasury professional and FPAC credentials. Its website explains the advantages of certification, specifies who is eligible to be certified, and offers information about how to prepare for an exam. It also includes an overview of what the exam is like.

CFA Institute

www.cfainstitute.org

This site provides continuing education opportunities for people in financial careers. It has a section for students that compares the purpose and relevance of various credentials. It also describes career opportunities for those who have a CFA designation, such as potential positions in portfolio management, private wealth management, and risk analysis.

Financial Industry Regulatory Authority (FINRA)

www.finra.org

FINRA is a not-for-profit organization authorized by the federal government that oversees financial brokers and dealers. Its goal is to protect investors and ensure the integrity of financial markets. Its website offers a video explaining its role and includes information on the rules it enacts and the guidance it provides to investors. The media center offers a look at news and trends that impact the financial industry.

SOURCE NOTES

Introduction: Limitless Career Options for Math Students

1. Woo Jeon, interview by the author, October 6, 2023.
2. Richard Volpe, interview by the author, September 19, 2023.
3. Volpe, interview.
4. US Bureau of Labor Statistics, "Employment Projections: 2022–2023 Summary," News Release, September 6, 2023. www.bls.gov.
5. Bao-Minh Hoang, interview by the author, October 12, 2023.

Actuary

6. Quoted in Society of Actuaries, "What Is Working as an Actuary Really Like?," Be an Actuary. www.beanactuary.org.
7. Quoted in *U.S. News & World Report,* "Best Jobs: Actuary Overview." https://money.usnews.com.
8. Quoted in Society of Actuaries, "What Is Working as an Actuary Really Like?"
9. Chelsea Adler, "Day in the Life," Inspiring Actuaries, November 28, 2021. https://inspiringactuaries.com.
10. Adler, "Day in the Life."
11. Quoted in Etched Actuarial, "Day in the Life of an Actuarial Analyst (with Keiana Byfield!)," YouTube, February 22, 2022. www.youtube.com/watch?v=EbajGzTHZH8.
12. Adler, "Day in the Life."
13. Quoted in American Academy of Actuaries, "Member Spotlight: Janice Duff," *Contingencies.* https://contingencies.org.
14. Quoted in American Academy of Actuaries, "Member Spotlight: Zerong Yu," *Contingencies.* https://contingencies.org.
15. Quoted in Society of Actuaries, "What Is Working as an Actuary Really Like?"
16. Quoted in Etched Actuarial, "Day in the Life of an Actuarial Analyst (with Keiana Byfield!)."

Economist

17. Quoted in University of Arkansas, "Arkansas Agricultural Economist Seeks Answers to Sustainability," October 9, 2023. https://news.uark.edu.
18. Quoted in Costello Medical, "A Day in the Life of a Health Economist." www.costellomedical.com.

INTERVIEW WITH A FINANCIAL ANALYST

Jeremey Landskron has worked as a financial analyst for more than sixteen years and is currently a research and portfolio analyst at Winch Financial in Appleton, Wisconsin. He answered questions via email.

Q: How did you become a financial analyst?

A: I went to college at the University of Wisconsin–Madison School of Business and obtained a degree in finance, banking, and investments. Typically, a bachelor's degree in finance or economics is the minimum educational requirement to become a financial analyst, although many will have additional education in order to reach a higher role, such as portfolio manager.

While I was in college, I worked in banking as this was the closest role I could get to investments without having a bachelor's degree. Once I graduated from college, I began the next stage of my career as a private equity analyst. This is a specialized type of financial analyst that is narrowly focused on private equity investments. There are a number of types of investments a financial analyst could potentially focus on. Then I moved across the country, and I had many roles, including financial analyst for traditional equity investments rather than private equity. Then I moved back to Wisconsin and began working at Winch Financial as a financial analyst.

A financial analyst's career path depends on a number of things, and that includes the size of the firm that you work for as well as the size of the city you work in. In this career, the bigger the city you work in and the bigger the company you work for, the more opportunities you could have to advance your career path.

There are many benefits to working for a smaller company, including getting to know your coworkers, bosses, and clients

OTHER MATH-FOCUSED CAREERS

- Accountant
- Algorithm engineer
- Artificial intelligence engineer
- Astronomer
- Auditor
- Bioinformatics analyst
- Biotechnology engineer
- Civil engineer
- Computer programmer
- Computer scientist
- Computer systems analyst
- Cryptographer
- Cybersecurity expert
- Data scientist
- Finance officer
- Financial planner
- Geological scientist
- Industrial engineer
- Information security analyst
- Investment and wealth manager
- Machine-learning engineer
- Market research analyst
- Math professor
- Mathematician
- Medical engineer
- Meteorologist
- Patent lawyer
- Software engineer
- Sports statistics analyst
- Statistician
- Survey researcher

Editor's note: The online *Occupational Outlook Handbook* of the US Department of Labor's Bureau of Labor Statistics is an excellent source of information on jobs in hundreds of career fields, including many of those listed here. The *Occupational Outlook Handbook* may be accessed online at www.bls.gov/ooh.

INDEX