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Video Segment 1: How Data Analytics Fits with Finance

"You can trace back the relationship of analytics to finance quite literally centuries."
– Dr. Michael Roberts

NOTE-TAKING GUIDE

An important first step of any educational exploration is to understand who is leading you on the journey and why. As you begin to explore the Analytics of Finance videos with Wharton Global Youth, gain context by briefly defining these key components:

The Wharton School:

Beyond Business 2022:

Dr. Erika James:

Dr. Michael Roberts:

Dr. Daniel Taylor:

Bonus: Global Youth has built previous Explore Business mini-sites around what 2 other themes?

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Analytics is shaping finance in new and nuanced ways. Jot down some notes about how data analytics is impacting the following (don't forget to refer to the vocab list below to get a better understanding of these terms):

Capital Markets:

Main Street:

Households:

Bad Actors:

Regulatory Detection:

Dr. Michael Roberts says, "We're just trying to get the value of a company or an asset based on what we think is going to happen in the future." How are data and predictive models advancing this goal?

Dr. Daniel Taylor says, "Analytics is separating signal from noise." Briefly, how does he explain this in the video?

Reflection: Are you an investor? Do you manage your finances? Where and how does data analytics fit into your financial life?

THE LANGUAGE OF BUSINESS
(Linked terms are defined in the Wharton Global Youth Video Glossary)

Acquisition

Asset Allocation

Assets

Bank

Budget

Buyout

Capital Markets

Company

Computer Science

Corporate Finance

Corporation

Credit

Data

Data Mining

Divested Business

Economics

Economist

Economy

Financial Accounting

Financial Services

Fintech

Hedge Fund

Investment Banker

Investment Portfolio

Investor

Liquidity

Merger

Regulations

SEC or Securities & Exchange Commission

Shareholder

Statistician

Stock Exchange

Technological Innovation

Valuation

Academic Research: Research conducted by faculty at a university like Penn that focuses on creating new ideas and perspectives. Academic researchers read all the existing studies and papers examining a specific topic or theory and then see where they can add value with new experimentation and insight.

Accounting Fraud: A business scandal that involves manipulating the finances of a company in some way – often for personal financial gain.

Advanced Predictive Model: A statistical technique that uses data from past and present to predict future behavior.

Algorithm: A procedure used for solving a problem or performing a computation. Each algorithm is programmed as a step-by-step process for performing calculations and data processing.

Analytics (or Data Analytics): The systematic computational analysis of data or statistics. It is used for the discovery, interpretation, and communication of meaningful patterns in data.

Artificial Intelligence or AI: Intelligence demonstrated by machines (computers), rather than humans.

Auditor: A person who conducts an audit, which is an independent examination of financial information for a company.

Bad Actor: In this case, a businessperson who is doing something illegal or fraudulent related to finances.

Beyond Business: An ongoing conversation at the Wharton School of the University of Pennsylvania that explores the most complex and pressing issues impacting individuals and organizations across the world. Each year Wharton Global Youth creates Explore Business mini-sites around different Beyond Business themes.

Big Data: Large datasets that can be analyzed computationally to reveal patterns and trends.

Capital Budgeting: A company's planning process to determine whether long-term investments, like building a new factory, are worth the up-front funding of cash. The company can then determine how to allocate its resources for capital-intensive projects.

Capital Raising: The process a business goes through to raise money, such as a start-up company getting rounds of venture capital financing.

Crisis Leadership: When a leader (think company president) responds to a company's challenges and finds ways to prevent them from happening in the future.

Daniel Taylor: A Wharton School Professor of Accounting and Director of the Wharton Forensic Analytics Lab.

Data Democratization: Making data accessible to everyone and educating them on how to work with the data, even if they are not technical.

Data Science: The study of data to gather meaningful insights for business.

Discounted Cash Flow (DCF): A valuation method that estimates the value of an investment using its expected future cash flows.

Due Diligence: Conducting a detailed examination of a company's financial records and business transactions before entering an agreement or deal.

Erika James: Dean of the Wharton School with research interests in crisis leadership, workplace diversity and management strategy.

Finance: An industry or area of study having broadly to do with money and economics.

Financial Market: The market in which people trade financial securities, like stocks and bonds.

FINRA: The Financial Industry Regulatory Authority oversees U.S. broker-dealers to protect investors.

Government Enforcement Agency: In this case, U.S. agencies that enforce laws. The Securities & Exchange Commission, for example, enforces laws against financial market fraud.

Inferential Model: Inferential modeling is a data-science approach that seeks to infer or draw conclusions from data.

Insider Trading: Buying and selling stocks in the stock market based on confidential information that gives you an advantage.

Machine Learning: Using and developing computer systems that learn and adapt by using algorithms and statistical models to analyze and understand patterns in data.

Main Street: A term used by economists to refer to America's independent small businesses.

Market Multiple: One number that summarizes the relationship between the market value of a company's stock and some fundamental quantity, like its earnings or sales.

Mergers & Acquisitions (M&A): An area of finance that refers to the consolidation of companies or their assets through financial transactions; companies merge with each other or one company acquires another.

Michael Roberts: A Wharton School Professor of Finance.

Non-financial firm: A company that produces goods and services for the market but is not in the business of finance.

Predictive Model: Data-mining technology that uses a statistical technique to predict future behavior.

Price Informativeness: Stock price informativeness shows the amount of information about future earnings at a company that is embedded in its stock price.

Retirement Savings: Money that you save for retirement, often using employer benefits like a 401(k).

Social Scientist: An expert in human society and social relationships, including economics.

Statistical Modeling: The process of applying statistical analysis to a set of data.

Transaction Cost: The total cost of a making a particular transaction.

The Wharton School: The Wharton School, also referred to as just Wharton, is the business school of the University of Pennsylvania, a private Ivy League university based in Philadelphia, Pennsylvania. Wharton is a world leader in business education and a hub for academic research in all areas of business.

White Collar Crime: Crime committed by a person, business or other entity that is financially motivated, such as insider trading, accounting scandals, securities fraud and Ponzi schemes.

EXPLORE MORE IN OUR ONLINE BUSINESS JOURNAL

3 Things to Know about the Direction of Data Analytics