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Investment Analysis¹

Lecture 1: Introduction

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¹These lecture slides are based loosely on the set of lectures by Professor Raymond da Silva Rosa.

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Introduction

- What is the point of these lectures?
 - Build an analytical framework to analyse investment markets critically and coherently.
 - There is so much information (or noise?) out there when it comes to finance and markets.
 - We need to build skills and confidence to filter out noise from the signal.
 - This is not easy, and will take years to develop. But we need to all make a start somewhere.

Introduction

Fed moves closer to decision on 'tapering' massive stimulus

US central bank says it has made 'progress' towards its inflation and employment goals



<https://www.ft.com/content/6b5992d3-967e-4a63-b159-a398654d6199>

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The image is a composite of two photographs. On the left, a man wearing a white cap and a face mask is working on the side of a silver car in a factory setting. On the right, a close-up of a yellow euro banknote is shown, featuring the large, stylized euro symbol.

The Big Read Eurozone economy + Add to myFT

Covid realities temper optimism around eurozone growth

The bloc's GDP is expected to increase at its fastest rate in two decades, but there are fears governments could cut support too soon

<https://www.ft.com/content/67a7084b-f685-47f3-92fb-0f221b9029aa>

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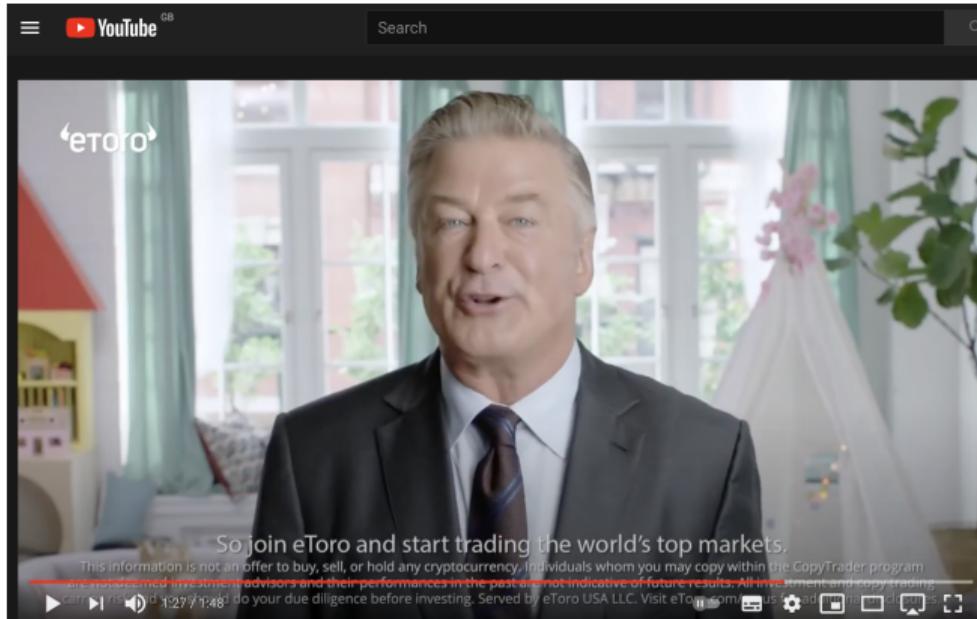
Conclusion

Crypto Price Prediction: Bitcoin 'To Overtake' The Dollar By 2050 And Soar To \$66,000 By The End Of 2021

"We're standing in the midst of the institutionalization of bitcoin," said Arcane Crypto analyst Vetle Lunde who forecast a \$120,000 bitcoin price by the end of 2021 and thinks bitcoin will be worth \$300,000 at the end of 2025 and \$500,000 in 2030. "More funds are joining the space, the first country has adopted bitcoin as legal tender, and we have several exchange-listed companies now owning bitcoin. I believe this trend will continue onwards."

<https://www.forbes.com/sites/billybambrough/2021/07/17/crypto-price-prediction-bitcoin-to-overtake-the-dollar-by-2050-and-soar-to-66000-by-the-end-of-2021/>

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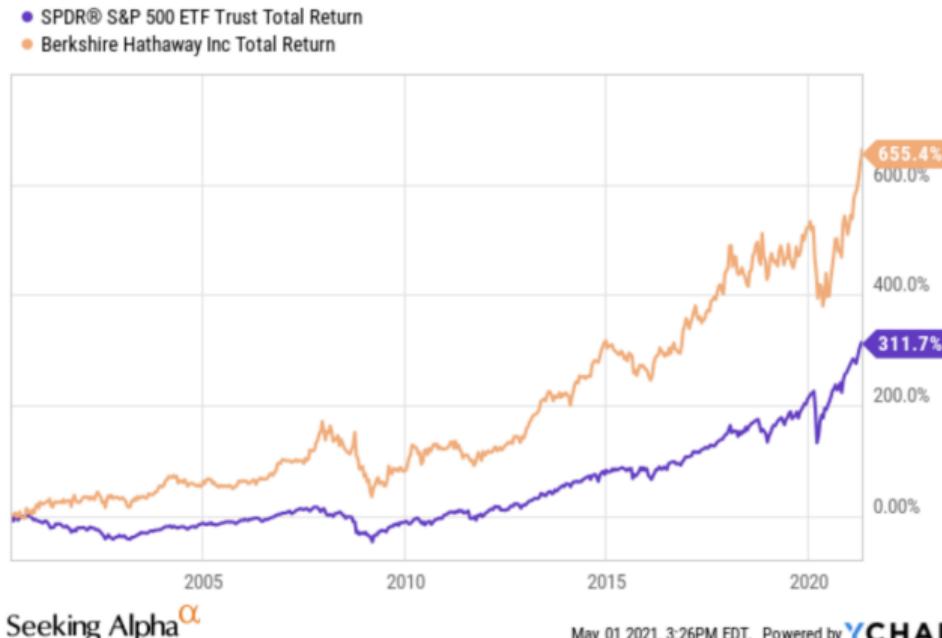
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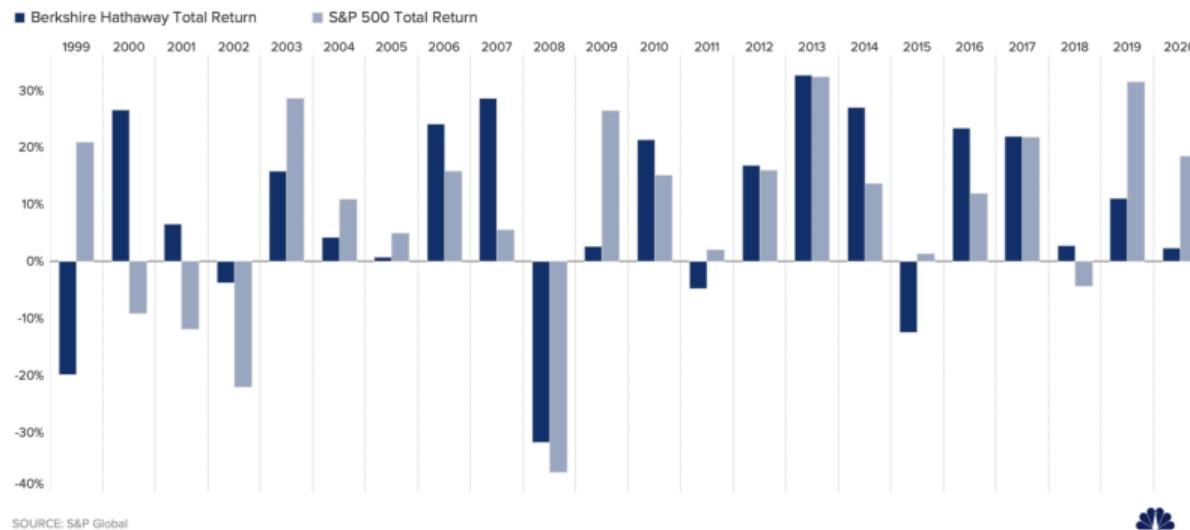


<https://seekingalpha.com/article/4423498-berkshire-hathaway-versus-s-and-p-500-through-years>

Introduction

Berkshire Hathaway vs. S&P 500

Annual percent change over the past two decades



<https://www.cnbc.com/2021/01/08/how-warren-buffetts-uphill-battle-against-the-sp-500-is-changing.html>

Recommended reading

- Textbooks for these lectures are not necessary. But some recommended texts which you may find helpful are:
 - *Corporate Finance*, Hillier et al., 2020, 4th edition
 - *Investments*, Bodie, Kane, and Marcus, 2021, 12th edition
- Otherwise, it is highly recommended that you keep up to date with topics in international finance and business. Good newspapers or publications include but are not limited to: Bloomberg, The Economist, The Financial Times, The Wall Street Journal, and so on.

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- ① The role of finance: demand & supply
- ② Risk & return
- ③ Modern portfolio theory
- ④ Bonds
 - ① Risk premium
 - ② Term structure of interest rates
- ⑤ Efficient market hypothesis
- ⑥ 2007-08 vs 2020-21: Comparing Crises

The role of finance

“If you ate today, thank a farmer”

- ...but what about people working in the financial sector?
- Why do we not share these sentiments for finance workers?
 - Could it be because firms such as Goldman Sachs pay their employees large sums of money?
 - Is it because they don't “make” anything?

The role of finance

- But if those in finance don't make anything, why are they paid so much? This is an interesting puzzle to consider.

Demand & supply

- There must be a rational explanation for why finance workers get paid so high.
- Could we use economics – and the insights from demand & supply analysis – to explain the high wages and high profit share attributed to the finance sector?

Some puzzles to consider

- Two interesting questions to consider:
 - 1 What does finance contribute to the economy, i.e., why is it so important?
 - 2 Why do people in finance get paid so much?

Risk & return

- Why are returns so important?
- Consider an investment of just \$100 in 1928 in the S&P500. How much would it be worth today?
 - Historical Returns on Stocks, Bonds and Bills: 1928-2020
 - \$592,868.15!

The risk-return relationship

- “High risk; high return”

Figure: S&P 500 1 Year Return



https://ycharts.com/indicators/sp_500_1_year_return

Figure: US 10-Year Treasury Bond Yields

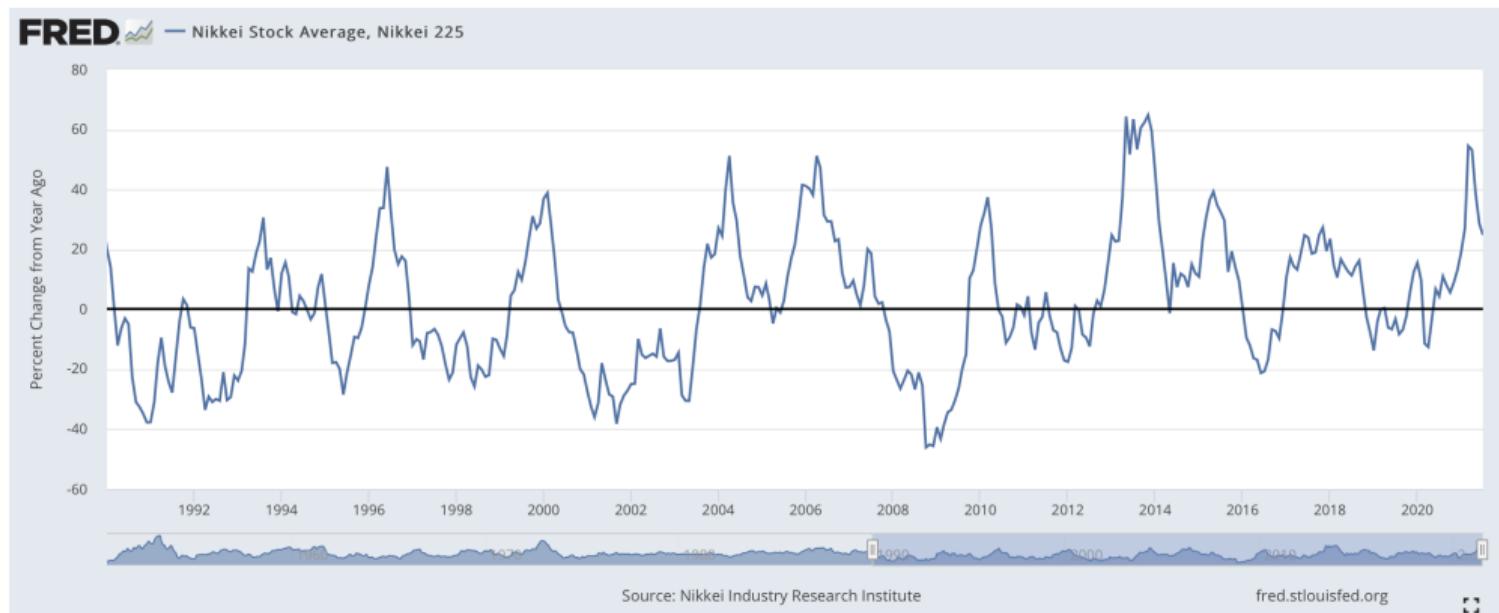


FRED

The risk-return relationship

- But what about countries like Japan?

Figure: NIKKEI-225 Annualised Average Returns



Capital asset pricing model (CAPM)

$$\mathbb{E}R_i = R_f + \beta_i(R_m - R_f),$$

where:

- $\mathbb{E}R_i$ is the expected return of the investment
- R_f is the risk-free interest rate
- β_i is the “beta” of the investment
- R_m is the market rate of return
- $R_m - R_f$ is the **risk-premium**.

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- But is CAPM actually useful?

“CAPM represents a new and different approach to an important task. Financial decision makers can use the model in conjunction with traditional techniques and sound judgment to develop realistic, useful estimates of the costs of equity capital.”

<https://hbr.org/1982/01/does-the-capital-asset-pricing-model-work>

Why should we care about bonds?

- Whether you decide to focus on economics, especially macroeconomics, or you specialise in finance, bonds are very important to understand.
- They form the basis of the idea of “risk-free interest rates”
- They also are a staple of economic theory, especially when it comes to concepts such as inflation, real interest rates, time value of money, and opportunity cost of holding money.
- Bond yield curves are also important signals for an economy.

How easy is to “beat the market”?

- Warren Buffett on the Efficiency-Market Hypothesis (EMH):

“John Kenneth Galbraith once slyly observed that economists were most economical with ideas: They made the ones learned in graduate school last a lifetime.

University finance departments often behave similarly. Witness the tenacity with which almost all clung to the theory of efficient markets throughout the 1970s and 1980s, dismissively calling powerful facts that refuted it “anomalies.””

– Annual Newsletter to report on 2010 performance (February 2011)

- So why do we still teach the EMH?

Some of the drivers of financial crises

- What causes financial crises?
- Can we prevent financial crises?
- How does the 2007-08 Global Financial Crisis (GFC) compared to the 2020 COVID-19 recession?

Conclusion

- We won't focus on "technical details"
- Instead, given time constraints, I want you to walk away with a broad understanding of finance.
- Additionally, I want you to appreciate and consider what areas of finance – and, importantly, economics – you wish to specialise and explore further during your undergraduate and/or postgraduate studies.
- Always feel free to ask me questions! :)