The background is a collage of various sketches by Leonardo da Vinci. In the top left, there is a sketch of a domed building, possibly a church or fortress. To its right are several sketches of flowers and plants. In the top right, there are sketches of mechanical devices, including what looks like a pump or a mill. In the bottom left, there is a sketch of a horse. In the bottom right, there is a sketch of a landscape with a building. In the center, there is a sketch of a spiral or a fan-like mechanism. The text "Project 10: Protecting american investors?" is overlaid on the center of the image.

Project 10: Protecting american investors?



Ben Chen
Econ '22



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Sociology '23



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Math + CS '23



Ben Clayman
Econ + CS '22



Alyssa Russell
History PhD Student

Hello!

We are Project Team 10



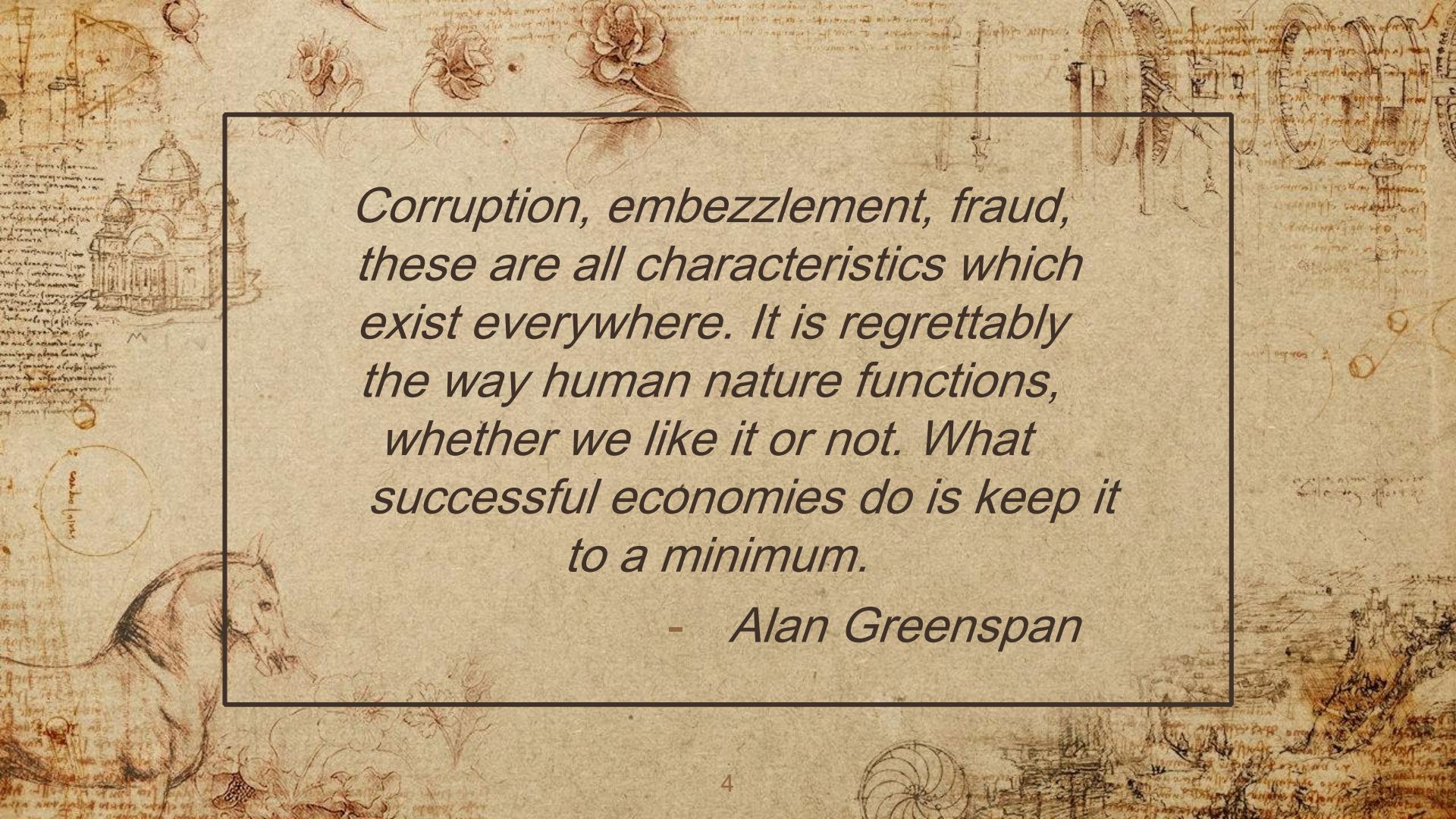
Ed Balleisen
Professor of History



1.

Introduction

*The Problem of Asymmetric
Information in Investment
Markets*



*Corruption, embezzlement, fraud,
these are all characteristics which
exist everywhere. It is regrettably
the way human nature functions,
whether we like it or not. What
successful economies do is keep it
to a minimum.*

- Alan Greenspan

Historical Background

- ✦ Fraud: Prevalent in 19th century US
- ✦ The idea of investor protection
 - ✧ Financial press and literature
 - ✧ Third-party monitors
 - ✧ Government regulatory policy

Our Purposes

- ✦ Investigate evolving structure and content of **financial advice** to US investors
- ✦ **Time period** : early 20th century to the birth of the Internet

Initial Research Questions

- ✦ What was the effect of the business cycle on the nature of financial advice?
- ✦ How quickly were financial innovations integrated into financial advice?
- ✦ How, if at all, did advice aimed at specific social groups based on race, gender, and class differ?

The background of the slide is a detailed reproduction of a page from Leonardo da Vinci's notebooks. It features various sketches in brown ink on aged, yellowed paper. On the left, there is a drawing of a domed building, possibly a church or fortress. In the center, there are several anatomical sketches of flowers and leaves. On the right, there are mechanical drawings of gears and a large wheel. At the bottom left, there is a drawing of a horse's head and neck. At the bottom center, there is a circular diagram with concentric circles and radial lines. At the bottom right, there is a drawing of a landscape with a castle or fortress on a hill. The text '2. Research Methods' is overlaid on the central part of the page, and 'Data Scraping and Sources' is written below it in a smaller font.

2.

Research Methods

Data Scraping and Sources

Data Scraping methodology

- ✦ Main Database: ProQuest Historical Newspapers
- ✦ Download PDFs from ProQuest
- ✦ Convert PDFs to texts via OCR (optical character recognition)

Data Scraping

ProQuest Historical Newspapers: Los Angeles Times

[Basic Search](#) [Advanced Search](#) [Publications](#) | [Change databases](#)

Advanced Search

[Command Line](#)

[Field codes](#)

[Search tips](#)

invest*

in

Anywhere

AND

hazel zimmerman

in

Author — AU

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Types of Data Sources

Mainstream Newspapers/Mag s

Chicago Daily
Tribune
Los Angeles Times
Washington Post
Wall Street
Journal
New York Times
Barron's

Black Newspapers

The Baltimore
Afro -American
Philadelphia
Tribune

Women Magazines

Good
Housekeeping
Better Homes and
Gardens
"Chats with
Women" in Los
Angeles Times

Individual Columnists

Sylvia Porter
William Doyle

Timeline of Our Sources

1900 1910 1920 1930 1940 1950 1960 1970 1980 1990 2000



Start Date ■ Duration

Column selection Criteria

- ✦ Represent different demographics
- ✦ Consistently published
- ✦ Meet our rubric for relevance

Data cleaning

- ✦ Abbyy FineReader and OCR
- ✦ Potential complications

Untitled project [1] - ABBYY FineReader PDF 15 OCR Editor

File Edit View Recognize Area Tools Help

New Task Open Scan 1 / 1 ↑ ↓ Recognize English W Save Plain text Verify

PAGES Edit Image Save Page Select Hand Tool Delete Recognize Page Analyze Page Text Picture Table

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Style Editor B I U x² x₂ Find Redact

The Tribune Investors' Guide
Chicago Daily Tribune (1872-1922); Mar 19, 1917; ProQuest Historical Newspapers: Chicago Tribune pg. 17

The Tribune Investors' Guide
Answers to inquiries are based upon information which THE TRIBUNE believes reliable, fair, and unprejudiced, but beyond the exercise of care in securing such information. THE TRIBUNE assumes no responsibility.

Inquiries must bear the signature and address of writer in order to receive attention. Answers thought to be of public interest will be published. If an answer is not of general interest it will be mailed closed. Address Guide.

with which it proposes to equip MR. and repair cars and later, after passenger cars. It has a plan which it values at \$180,000. The directorship financed it thus far. Now \$500,000 of stock is to be offered for sale to raise working capital. The directorship is a reputable backing. Of course, it is highly speculative at its present stage.

Woolworth.
A. R. M.—The Woolworth company's business has expanded steadily for years and is still growing. As long as this process continues the common stock tends to increase in value. The company has issued \$13,000,000 of preferred stock and \$50,000,000 common. Preferred dividends have been paid to date. Dividends on common started in 1912 at the rate of 4 per cent, increased to 6 in 1913, to 7 in 1915, and to 8 last year. In 1916, 12 per cent was earned on the stock. The report showed 10.01 cents profit on each dollar of sales, the highest yet shown. The latest balance sheet shows tangible assets of \$33.40 under each share of common, compared with \$7.59 in 1912.

Chicago and Northwestern.
Y. E. T.—Chicago and Northwestern stock is selling on a lower level now than formerly, first, for the same reason that nearly all rail stocks are lower because of increasing costs and government regulation that does not permit a corresponding increase of rates. A special reason for the recent tendency to sag was the fact that the company was issuing \$15,250,000 new stock at par. That change, considered as an abstract mathematical proposition, reduced the value of a share by about \$1.75. The road is earning at the rate of 12 or 13 per cent a year on the increased amount of stock.

Railway Motor of America.
D. H.—The Railway Motor Company of America has a patent kerosene motor

Mutual Film.
J. M. E. L. ha Crosset Wis.—The Mutual Film company has furnished its balance sheets of Dec. 31 and Oct. 31 last.

it will be mailed provided stamp is inclosed. Address letters to Investors' Guide.

ital. The undertaking has reputable backing. Of course, it is highly speculative at its present stage.

Zoom Pane 434%

The background of the slide is a detailed reproduction of a page from Leonardo da Vinci's 'Vitruvian Man' manuscript. It features various sketches including a dome-shaped building, a horse's head, a spiral shell, and mechanical gears, all rendered in a classic brown ink on aged paper. The text '3. Potential Findings' is centered in a large, bold, brown font, and 'Data Analysis and Next Steps' is centered below it in a smaller, italicized brown font. A black rectangular border frames the text area.

3.

Potential Findings

Data Analysis and Next Steps

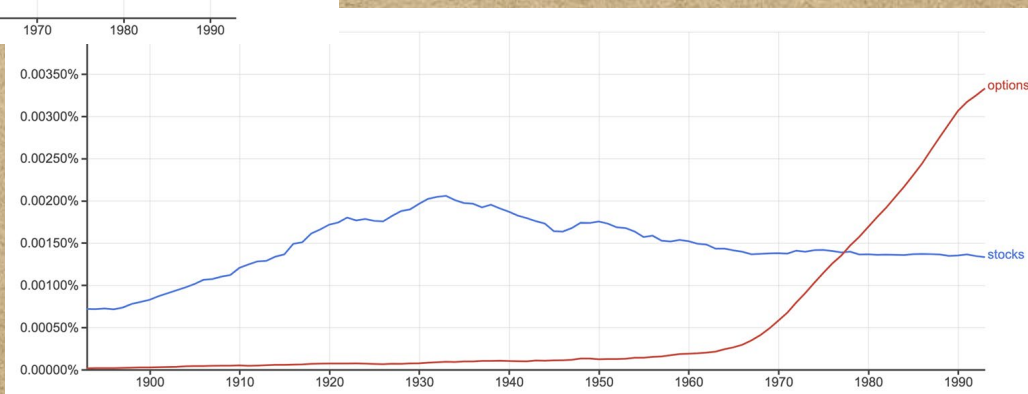
Google Ngram visualizations

Term Frequency (% all Google Books)

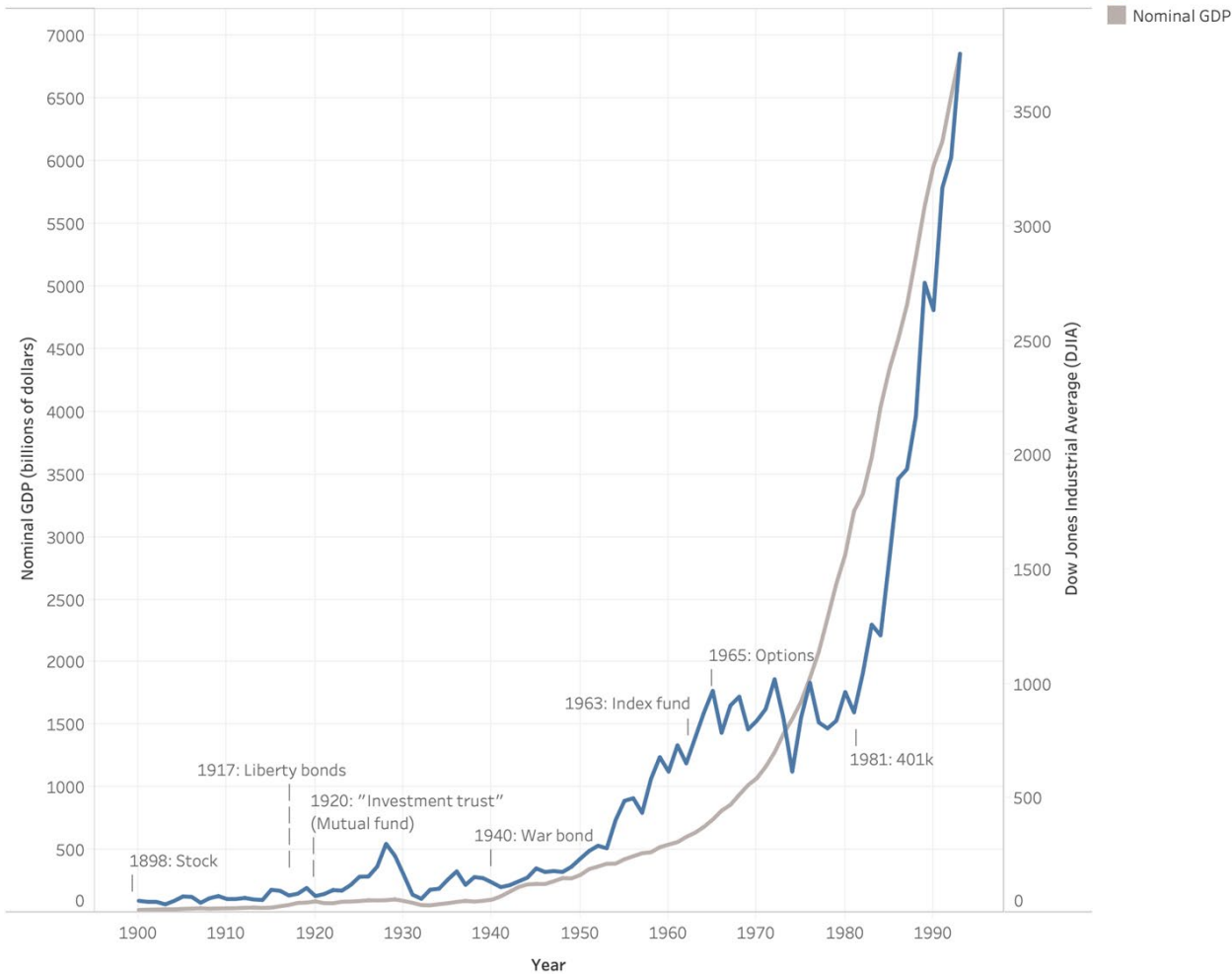


Term Frequency (% all Google Books)

Google Ngram visualizations



Popular introduction of investment instruments at lower points in the stock market

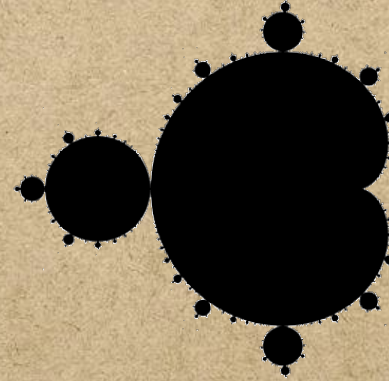


Hypotheses

- ✦ More conservative advice for black newspapers and women's columns
- ✦ Investment innovations generate enthusiasm
- ✦ Types of advice change with business cycle

Data Analysis Methods

- ✦ Topic Modeling
- ✦ Sentiment Analysis
- ✦ Token Analysis



Python textblob package for analysis

Potential challenges

- ✦ OCR mistakes and document legibility
- ✦ Prevalence of certain column entries to investment
- ✦ Obtaining representative data for all time periods

The background of the slide is a detailed reproduction of Leonardo da Vinci's 'Vitruvian Man' drawing. It features the iconic figure of a man inscribed within a circle and a square, surrounded by various sketches of architectural structures, mechanical devices, and anatomical studies. The entire composition is rendered in a fine, brownish-gold line work on a light, aged paper texture.

Questions?