Wesleyan University

Revisiting The 1929 Wall Street Crash:

Industry-Specific Trends and Aggregate Behavior in the U.S. Stock Market (1926-1935)

Department of Economics, Quantitative Analysis Center Summer Apprenticeship '21

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INTRODUCTION

In 1929, a decade's worth of rapid economic expansion came to be punctuated by a singular event that heralded the dark ages of the Great Depression.

Before the crash of 1929, the twenties saw a period of immense technological progress that allowed for the mass production of consumer goods at an unprecedented scale. The resulting boom of the U.S. stock exchange popularised the practice of buying on margin, creating a culture of manic investing and rampant speculation, furthering the market's relentless upward trend. Though opinions still differ on what exactly caused the crash of 1929, economists agree that it was a combination of easy access to credit, overvalued stocks, burgeoning debt, and large, illiquid bank loans that ultimately burst the financial bubble.

Known as the worst economic event to have taken place since the dawn of industrialization, much research has been dedicated to mapping out the boom-bust behavior of the overall U.S. stock market in the 1920s and 30s. Yet, there is a lack of academia expounding on the sector-specific trends constituting the overall market.

This study presents a visualization of custom made indices showcasing the rise and fall of various industries for both preferred and common shares quoted on the American stock exchanges from 1926 to 1935. The study aims to clarify the timing and scale of activities across various sectors and investigate how those trends aggregated the behavior of the U.S. stock market across a nine year span surrounding the crash.

METHODOLOGY

DATA SOURCING

Center for Research in Security Prices

- Established in 1960 in the Booth School of Business, University of Chicago
- Largest, most comprehensive historical databases in stock market research.

DATA SIZE **[n=2018031]**

U.S. daily stock file indices 1926—1935

- **952** securities, **794** holding companies
- Variables of Interest: *PERMCO, PERMNO,* Company Name, Price, Volume, Shares Outstanding, *SICCD*, Weighted Returns w/ dividends

MARKET WEIGHTING

► market value = price * shares outstanding

► market cap = market value/Σ market value

► market share = market cap * 100%

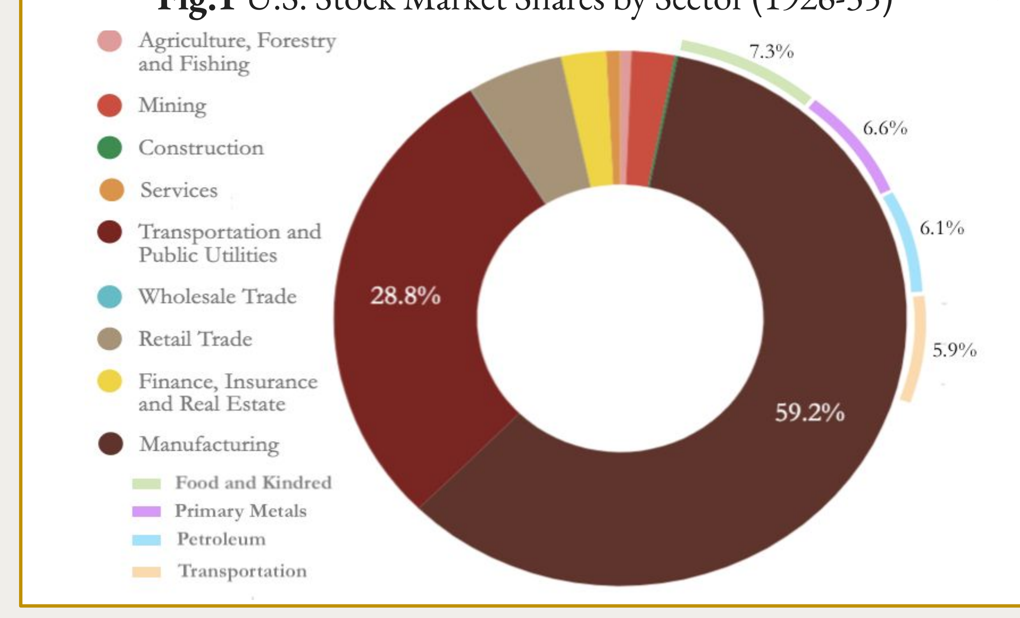
CREATING CUSTOM INDICES

► Index Day 1 = 100

► Index Day n = Index n-1 * [1 + (returns-A * marketcap-A) + (returns-B * marketcap-B) + (returns-C * marketcap-C)...

EXPLORATORY DATA

Fig.1 U.S. Stock Market Shares by Sector (1926-35)



The adoption of automotive assembly plants following the end of WWI revolutionized American manufacturing. An invention by famous American industrialist Henry Ford, the moving assembly line reduced labor costs, fueling industrial development and mass production across many relevant industries whose subsequent growth played a vital role in bringing about the high levels of consumption that fueled the stock market boom in the late 1920s.

At a glance, the U.S. stock market from 1926 to 1935 is represented most significantly by the manufacturing as well as transportation and public utilities sectors. They comprise **59.2%** and **28.8%** of the total market share, respectively. Within the manufacturing industry, notable subdivisions include food and kindred (7.3%), primary metals (6.6%), petroleum (6.1%), and transportation (5.9%).

INDEXES

Fig.2 Cap-weighted U.S. Stock Market Index

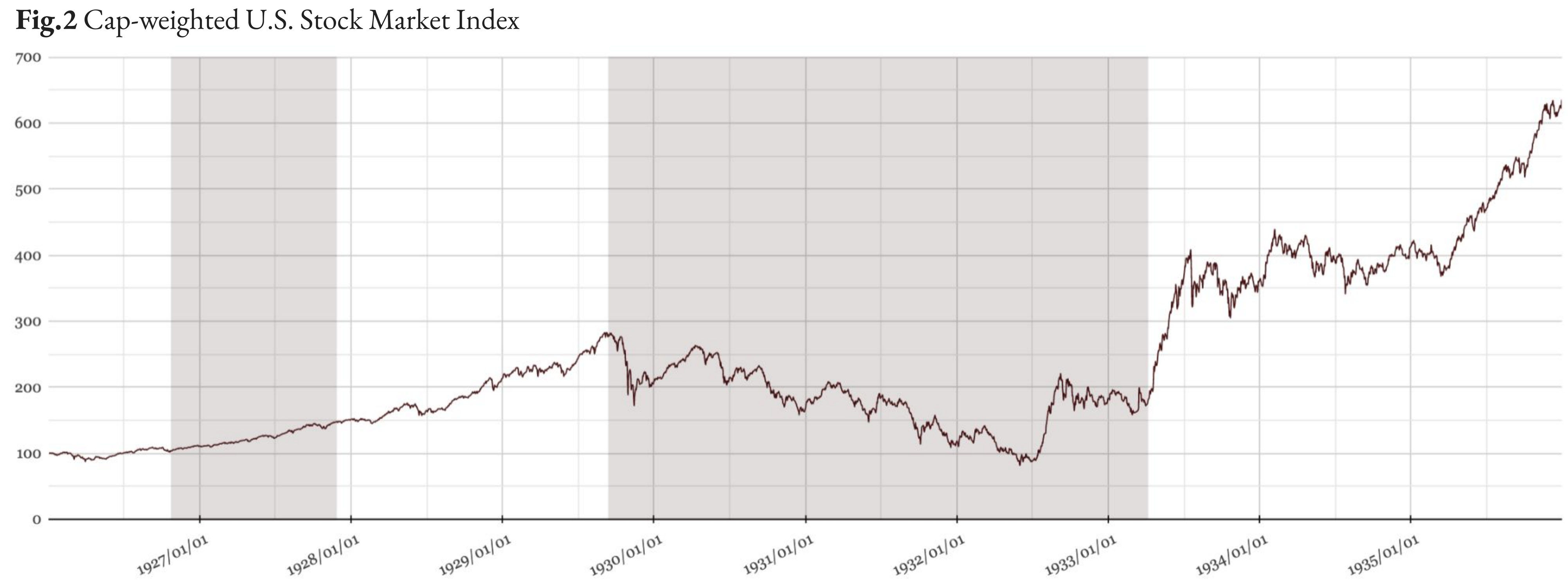
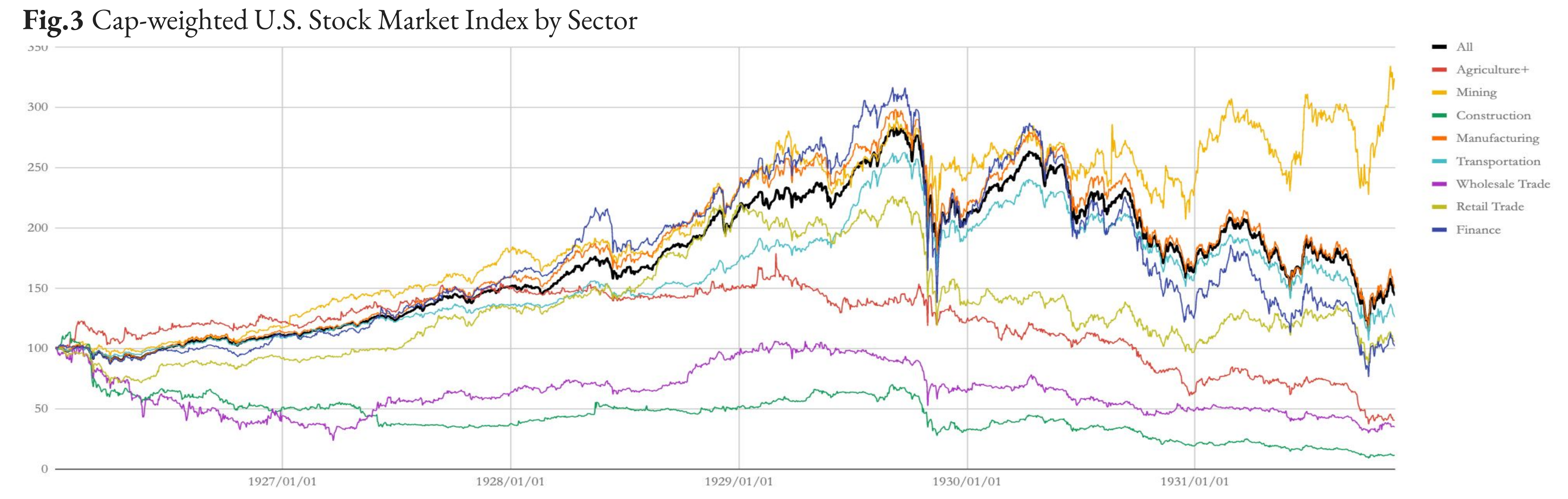


Fig.3 Cap-weighted U.S. Stock Market Index by Sector



DISCUSSION

Figure 2 is a cap-weighted stock market index for all U.S. stocks from 1926 to 1935. The period was marked by two and a half business cycles, with shaded areas representing contraction and unshaded areas representing expansion. From 1926 to the last quarter of 1929, the market enjoyed a steadily increasing growth rate, increasing three-fold in nominal value before experiencing a downturn in August 1929, followed by a steep crash two months later and eventual recovery to pre-crisis levels in early 1933.

Figure 3 plots the overall cap-weighted index alongside the indexes of all sectors. The role in which heavy industrialization has played on the U.S. stock market is significant—sectors that became positively impacted by the invention of the assembly line experienced the most growth in the period leading up to the crash in 1929. In the mining sector and retail sectors, the demand for raw and processed materials grew as more assembly plants were built and production means grew increasingly capital intensive. Towards the end of 1929, economic prosperity created markets for diamonds and other precious metals was accredited for the further expansion of the mining industry. In the manufacturing sector, technological development meant the broadening use of electricity in common households. This phenomenon birthed markets for new inventions like radios, refrigerators, and vacuum cleaners, lending itself to the growth of the manufacturing and public utility sectors, whose stocks played a vital role in shaping aggregate market behavior. In the transportation sector, automobiles rose to prominence at the expense of passenger rails. In contrast, sectors that remained largely unaffected by the boom and bust of the overall stock market include the agricultural, construction, and wholesale trade sectors, which, although they did not benefit from the technological breakthroughs of the early 1920s, remained relevantly stable throughout the period of recession following the crash.

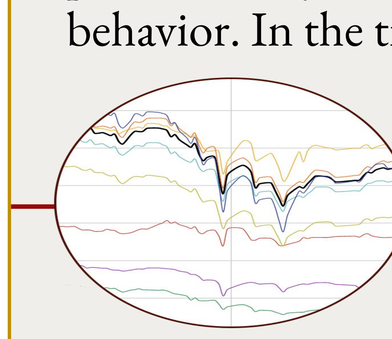


Fig.3.1 (October 1929)

CONCLUSION

Leading up to 1929, the American economy experienced significant development in manufacturing technology and business organization. The prosperity brought about by the new productive capacity of industrial assembly lines boosted investor and consumer confidence, giving rise to a bundle of newly emerging markets for new technologies and luxuries. Thus, it is no surprise that the sectors that failed to reap the benefits of these market changes experienced the least growth during the period of expansion and remained largely anchored to their pre-crisis levels during the period of recession. Notably, these sectors largely provided income-inelastic necessities like food and wholesale items, making them less affected when consumption power drastically declined following the crash.

In summary, the mining, manufacturing, retail trade, and transportation sectors most closely resemble aggregate market behavior while the agriculture, construction, and wholesale trade sectors deviated from overall market trends

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