The Value of Cronyism: Insider Trading in the Teapot Dome Affair

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Abstract

We study the stock market reaction to the Teapot Dome affair during the Harding administration of the early 1920s, in which oil industry moguls bribed a cabinet member for the illegal leasing of federal naval oil reserves. Using weekly stock price data, we find a significant response to public revelation of Sinclair Consolidated's leases; however, we also find that insiders had incorporated most of the news into share prices prior to the surprise news break. Other key events show insignificant price responses to news. Overall, Sinclair's top shareholders achieved considerable excess returns to their illicit activity—totalling around $242 million (inflation-adjusted) in the market value of their equity.

JEL classification: G14, N22, N82

Keywords: Event studies, information acquisition, insider trading, corporate history, history of financial markets

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1 Introduction

Cronyism is a central failing of many political-economic systems. Often linked to authoritarian, oligarchical systems, the U.S. has its own checkered history of cronyism as well. One of the most renowned U.S. political scandals, the Teapot Dome affair, exposed the cronyism and corruption of President Warren Harding's administration of the early 1920s.[1] The episode began in late 1921 with the bribery of Secretary of the Interior Albert B. Fall by two oil tycoons—Harry F. Sinclair of Sinclair Consolidated Oil Corporation and Edward L. Doheny of Pan American Petroleum and Transport Company—for the illegal leasing of federal naval oil reserves. These below-market price leases promised to yield excess profits to the oil companies involved and thereby to the administration's cronies who owned shares in the firms. Teapot Dome resonates today, as critics have compared several members of President Donald Trump's cabinet to Harding's kleptocrats. In particular, a number of popular news outlets have recently published opinion pieces that draw parallels between (former) Secretary of the Interior, Ryan Zinke, and Secretary Fall on the basis of alleged misconduct in the handling of awarding extraction rights and work contracts for federal land usage.[2]

A key difference between the 1920s and today is the ability of political cronies to legally cash in on their insider status in publicly-traded corporations. Since the Teapot Dome affair predates the onset of Depression-era financial regulation—especially the creation of the Securities and Exchange Commission (SEC) and its regulation of insider trading—the affair's events provide a lens for examining how firm insiders trade on private information and how market frictions might prevent them from fully profiting from their insider status. In particular, because of the availability of Senate hearing investigations that chronicled the timeline of the entire scandal, and because of the widely-circulated contemporary newspaper

[1] Fall was a member of the so-called "Ohio Gang"—a group of Harding's friends who supported his presidential campaign and were subsequently appointed to positions in his cabinet for which they had limited qualifications (McCartney 2008).

[2] Among the most notable of these outlets are: *Bloomberg News*, *Time*, *The New York Times*, and *MSNBC*.

accounts, the Teapot Dome affair provides an unusually detailed case with which to study the incorporation of "news" into asset prices in the presence of legal insider trading.

We employ an event study framework to determine the extent to which the affair's developments affected the shareholder wealth of oil firms. In particular, we focus our analysis on the timeline of the scandal's major player, Sinclair Consolidated.[3] From its beginnings in 1921 to its resolution in 1924, we investigate the effects of eight major events that presumably revealed new information—public or private—about the fundamentals of Sinclair Consolidated and its largest competitors in the oil industry.[4] Studies of earnings surprises in more recent times view significant post-announcement stock price reactions as evidence that insider trading restrictions constrain the incorporation of news into market valuations (Battalio and Mendenhall 2005; Campbell, Ramadorai, and Schwartz 2009; Kothari, Lewellen, and Warner 2006).

In contrast, our findings suggest that insider trading was a powerful force during the time period, as we observe little or no stock price reactions to most public news arrival for events that plausibly held information relevant to future cash flow expectations for oil firms. These results are robust to multiple event study tests and estimation techniques. Interestingly, we find that market frictions—namely, fear of discovery by Congress, legal authorities, and possibly other investors—limited firm insiders' ability to fully capitalize on private information before the newspapers released the information publicly. Nonetheless, Sinclair's top shareholders achieved considerable excess returns to their illicit activity—totalling around $242 million (inflation-adjusted) in the market value of their equity. Our analysis of insider trading in this less-regulated setting provides evidence that markets of the pre-SEC era more closely resembled strong form efficiency than they do today, but they also permitted insiders to front-run the public in profiting off of crony connections.

[3]News arrival for Pan American is not discernible enough to extract useful insights.

[4]Gentzkow, Glaeser, and Goldin (2006) study the role of news arrival in shaping public opinion about the Teapot Dome scandal and adopt the 1921-1924 period as the scandal's pre-resolution period.

The remainder of the paper is organized as follows. Section 2 provides the historical background of the Teapot Dome affair. Section 3 presents our event study framework. Sections 4 and 5 describe the data and the event selection process, respectively. Section 6 reports results. The paper concludes with a brief discussion in Section 7.

2 Historical background

In the early twentieth century, the mass production of gasoline-fueled automobiles by Ford Motor Company and General Motors Corporation popularized car ownership among the American middle- and upper-class. On average, only one out of every 10,000 Americans owned a car in 1900; that number grew to 870 out of 10,000 by 1920. World War I accelerated the development of gasoline-powered vehicles: motor vehicles, tanks, and airplanes. The U.S. was the largest supplier of oil to the Allies, producing 70% of the world's oil supply at the time (Black 2014). Moreover, American oil consumption grew by 53% between 1915 and 1919 (Pogue 1921).

The rising demand for oil in the 1910s continued into the following decade. Oil companies quickly capitalized in response: the total assets of the oil industry's top 10 firms more than tripled between 1917 and 1925—from $1.1 billion to $4.7 billion (Ansell 1998). The most ambitious oil firms of the early twentieth century aimed to grow their businesses by vertically integrating across production and distribution phases. Companies that operated in all or most of the phases—including exploration, production, refining, and marketing—earned the moniker, "majors." By the early 1920s, the largest majors were either already serving or growing to serve the national market (Leven and Pirson 1942). The market for oil in the early 1920s was nearly competitive. Firms in this period competed over access to promising oil fields and strategically-located pipelines, with the oligopolistic Standard Oils of the early 1910s no longer dominating the industry. Sinclair Consolidated and Pan American were

the second- and ninth-largest American oil companies by total assets, respectively, at the scandal's beginnings (Table 1; Ansell 1998).

[Table 1 here]

To guarantee a domestic supply of oil for naval ships, President William Taft established several federally-owned naval oil reserves in 1910. President Woodrow Wilson added the Teapot Dome site, one of the largest and most promising oil fields in the nation, to this list in 1915. A tumultuous debate over the political allocation of mineral rights ensued for the next decade, resolved at last by the passage of the Mineral Leasing Act of 1920. Among many other provisions, the Mineral Leasing Act of 1920 enabled the Secretary of the Interior to issue (non-competitive) small-tract and (competitive) large-tract federal land leases. An amendment to the Navy's funding bill in June 1920 transferred the control of the federal naval oil reserves from the Interior Department to the Secretary of the Navy. Just two months after taking office, on May 31, 1921, President Harding signed an executive order to return control of the reserves back to the Interior Department, headed by newly-appointed Interior Secretary Fall (Noggle 1957). *The New York Times* (*NYT*) ran a small notice of the executive order on page 12 the next day, noting that only Reserve 1, in California, was to permit leasing of drilling rights.

In December 1921, just six months after Secretary Fall gained control of the naval reserves, Harry F. Sinclair and Edward L. Doheny began to engage separately in bribery talks with Fall. Their talks quickly materialized into formal agreements, with Sinclair gaining exclusive production rights to the Teapot Dome site (Naval Petroleum Reserve No. 3) and beginning production by the end of 1922. Doheny gained rights to the Elk Hills and Buena Vista fields (Reserves Nos. 1 and 2, respectively). The lease agreements remained secret for several months, until the *Wall Street Journal* (*WSJ*) and the *NYT* broke the story of the leases on April 14, 1922. Once public, the Teapot Dome lease immediately prompted suspicion, and the Senate launched an investigation into the matter the day after the lease's announcement.

The Supreme Court ultimately voided the Teapot Dome lease in 1927. Despite Doheny's acquittal, Fall and Sinclair were sentenced to prison for their involvement in the scandal or for obstructing investigation into it (McCartney 2008). Available sources reveal more details about Sinclair's timeline than Doheny's, thus we focus our analysis on the events in his timeline. Section 5 further details the relevant chronology.

Scholars in history, law, and political science have largely paved the existing research avenues surrounding the affair. Bates (1955) reviews the political implications of Teapot Dome on the 1924 presidential election, which resulted in Republican victory despite significant negative publicity for the scandal's implicated participants, most of whom belonged to Harding's administration. Recounting Teapot's chronology, Stratton (1957) and Noggle (1957) provide evidence that the affair was not borne out of the corrupt political machinery of Harding's administration, but that it was instead a result of Fall's own business relationships. Waller (1962) argues that the massive influx of political inquiries by major oil companies regarding the affair accelerated early congressional investigation into the affair's scandalous elements. Libecap (1984) analyzes the interaction between the Mineral Leasing Act of 1920 and the leasing of the Teapot Dome lands, positing that the former set the stage for Fall's exploitation of the latter. Moreover, Libecap contends that Fall's large leases were more socially efficient than the alternative (i.e., combining small leases) because of their conservation potential. These (mostly) qualitative studies, along with an abundance of newspaper articles and Senate investigation reports, provide a wealth of insight into the affair's setting.

3 Event study framework

Few papers study the effect of news arrival on the capital markets in the absence of insider trading regulation. Elmendorf, Hirschfeld, and Weil (1996) find that much of the variability in bond prices in the United Kingdom from 1900-1920 cannot be explained by news arrival

of important events. Leeth and Borg (2000) show that shareholders for target firms averaged impressive abnormal returns following merger announcements in the 1920s U.S., although they are wary to credit these gains to the absence of insider trading prohibitions. Mullin (2000) examines stock market reactions to the regulatory changes of 1910-1917 in the U.S. railroad industry, finding that stock prices reflected previously-unqualified claims that many of these regulatory actions undermined railroad profitability. Investigating the effect of innovation on the stock market, Nicholas (2008) claims that the 1920s stock market run-up can be partially explained by the response of market prices to patent capital. Each of these papers uses familiar event study methods to examine the relationship between news arrival and asset prices in the unregulated era; to our knowledge no study, however, has analyzed how the trading of private news by firm insiders influenced stock price reactions in this same period.

Under strong form EMH, asset prices immediately incorporate all relevant public and private information. We assume that, in the early 1920s, prior to the creation of the SEC and its regulation of insider trading, markets should have exhibited close to strong form efficiency.

At the 5% level, we test the null (i.e., the event has no effect on stock returns) against the two-sided alternative for each event. These stock market reactions can be estimated in an event study. We adopt a regression framework similar to that employed in Mullin, Mullin, and Mullin (1995), computing expected return for security i at time t according to the capital asset-pricing model (CAPM): $E(R_{it}) = \alpha_i + (1 - \beta_i)R_{ft} + \beta_i R_{mt}$, where R_{ft} is the risk-free rate and R_{mt} is the return to the market portfolio at time t.

To evaluate event effects, we include a binary indicator variable that takes a value of 1 on an event week and 0 otherwise. Thus, for weeks $t = 1, ..., T$, we estimate the model:

$$R_{it} - R_{ft} = \alpha_i + \beta_i(R_{mt} - R_{ft}) + \sum \delta_{is} D_{st} + \varepsilon_{it}, \tag{1}$$

where

$$R_{it} = \text{return on firm } i\text{'s common stock for week } t$$

$$R_{ft} = \text{risk-free rate in week } t$$

$$R_{mt} = \text{return on market portfolio in week } t$$

$$D_{st} = \text{binary indicator variable}$$

$$\varepsilon_{it} = \text{error term.}$$

The specification of primary interest to our study is that which estimates abnormal returns for Sinclair Consolidated on the event dates of interest. For robustness, we estimate this main specification with two reference portfolios: the contemporary Dow industrial index and a portfolio of "rival" oil firms similar in size and market share to Sinclair Consolidated.

4 Data and sample description

We perform our event analysis using weekly (Friday) stock price data from January 1921 to December 1924, which we collected from *The New York Times* and *The Wall Street Journal*. We adjust returns for dividends and stock splits. We compute our own estimate of the Dow Jones Industrial Average (DJIA). We also recorded stock prices for all majors in the oil industry that traded on the NYSE for the entirety of the time period of interest.[5] Finally, we use the weekly average rate on the prime commercial paper rate as a proxy for the risk-free rate of return.[6]

The analysis includes the following portfolios:

[5] In the early 1920s, the New York Curb Market traded many components of Standard Oil, along with other miscellaneous oil stocks. Only six of these stocks traded on the Curb for the entirety of the time period of interest, and all of them were thinly traded (i.e., having a weekly trading volume lower than 1,000 shares) for a stretch of one month or longer. Thus, we are unable to include these additional oil firms in our analysis.

[6] Treasury bills, which are usually used as a proxy for the risk-free rate, were only introduced by the Treasury in 1929.

1. equally-weighted DJIA portfolio (market index);

2. Sinclair Consolidated (single-firm) portfolio; and,

3. equally-weighted portfolio of oil producers traded on the NYSE (i.e., "Rivals").[7]

The data series contains a total of 208 weekly observations for each portfolio. Only stocks with complete returns over the entire sample period are considered. (Of the oil producers traded on the New York Stock Exchange, nine possess complete weekly returns over the entire sample period. Of the 20 components forming the DJIA, we use 17 to construct our index.[8]) Table 2 reports summary statistics for the weekly returns for each of the three portfolios over 1921-1924.

[Table 2 here]

Figure 1 plots the weekly share price for Sinclair Consolidated over 1921-1924. Figure 2 plots weekly returns for Sinclair Consolidated and the Rivals over the same period. The correlation coefficient between weekly returns for Sinclair Consolidated and the Rivals portfolio over the 1921-1924 period is 0.74, which suggests that certain industry-level factors affect all oil firms. This observation, coupled with the nearly competitive nature of the oil industry during the period of interest (Section 2), motivates our study of the Rivals alongside Sinclair Consolidated.

[Figures 1 and 2 here]

[7] All oil producers in our analysis are considered majors (by the definition given in Section 2), as is Sinclair Consolidated.

[8] American Car & Foundry and Western Union Telegraph are two DJIA components that did not have a complete return history over the sample period. We also exclude Texas Company, the only oil firm in the DJIA, from our DJIA index because of its inclusion in our Rivals portfolio.

5 Event selection

Table 3 describes the individual events. The chronology in McCartney (2008) provides the starting point for event candidates, and we selected those events that met the following criteria: absence of event clustering, relevance to the affair, and news value. Finally, we assigned event dates based on their publication date in the *New York Times* or the *Wall Street Journal*.

[Table 3 here]

PRESDEATH is the only event which could be a surprise to both public and private market participants (i.e., an event containing new and important valuation information), so we expect significant reactions for this event only. In particular, under the assumed strong form of market efficiency, we expect *PRESDEATH* to negatively affect Sinclair Consolidated and the Rivals, since the Harding administration was particularly friendly towards "Big Oil." One might also expect that *WSJBREAK* is a surprise event, since the *WSJ* published their article detailing the lease ahead of insider expectations.[9] However, under strong form EMH, the information contained in the story was known to insiders since *SECRETMEET*.

6 Results

Table 4 reports our regression results. We find that the only significant stock market reaction occurs for Sinclair Consolidated when the *WSJ* broke the news of the lease (*WSJBREAK*), at which point abnormal returns are significant at the 5% level. This likely indicates that insiders had not yet fully capitalized on all possible returns before the *WSJ*'s report. Further, the result for *WSJBREAK* is corroborated via a separate asymptotically-powerful test for Sinclair Consolidated (Appendix A) and via another common event study test for the Rivals

[9]The *NYT* also published a story about the lease on the same date as *WSJBREAK*. Most surveys of the chronology of Teapot Dome (e.g. McCartney 2008) credit the *WSJ* as breaking news of the lease.

(Appendix B).[10]

[Table 4 here]

Trading volume in Sinclair Consolidated stock increased significantly over the three months between the negotiation of the lease deal and the signing of the contract by Fall. In fact, sales rose from 19,300 shares in the first week of February, 1922 to 96,000 and 60,000 in the first weeks of March and April, respectively. Sinclair Consolidated stock also increased in price over this time period—from $19.88 on February 13, 1922 (*SECRETMEET*) to $29.38 on April 13, 1922 (pre-*WSJBREAK*), amounting to a 48% increase over this time period (Figure 3). Over the same period, the DJIA grew by 14%, and the Rivals grew by 13% (Figure 4). Furthermore, Sinclair Consolidated stock continued to rise in price to $32.75 in the first week of May and $37 in the first week of June, though it did deteriorate to $33.38 by July. Given the absence of other salient news at the time, the ongoing strength in price, especially compared to the Rivals, suggests that shareholders anticipated that Sinclair would earn higher future cash flows as a result of the lease. Figure 5 plots daily returns for Sinclair Consolidated for the *WSJBREAK* event trading day and the three trading days preceding and following it.

[Figures 3, 4, and 5 here]

Sinclair Consolidated insiders very well could have traded on the information of the lease immediately following Fall and Sinclair's private meeting on February 3, 1922 (*SECRETMEET*) to their full extent. However, it would have been particularly dangerous to draw attention to this insider trading behavior, not because of the trading on inside information, but because insiders were trading on information of an illegally-obtained lease. A sudden spike in the trading volume and price of Sinclair Consolidated stock before the public announcement of the lease would have likely raised the suspicion of Congress and legal authorities, and it would have alerted outside investors to a possible profit opportunity, especially

[10]We obtain nearly identical results regardless of whether or not we include the risk-free rate in the model.

in the presence of stable stock prices for other oil firms (relative to the DJIA).

Transcripts and data from Senate investigations into the high cost of oil in 1922 and 1923 allow us to produce some back-of-the-envelope calculations for the growth in shareholder wealth for Sinclair Consolidated insiders related to their trading on insider information (United States 1923). Table 5 reports estimated changes in the market value of shares held by shareholders owning approximately 1% or more of Sinclair Consolidated stock at several points in 1922. These 17 entities—comprised of both individual investors and companies—owned over 30% of Sinclair Consolidated shares at the end of 1922.

[Table 5 here]

Our calculations assume the following:

1. all entities holding 1% or more of all Sinclair Consolidated shares were aware of the lease since *SECRETMEET*; and,

2. the same entities held the same shares of stock at the start and end of 1922.

The first assumption is rather innocuous: the Senate investigations into the Teapot Dome affair report that several of Sinclair's interests were aware of the lease since its conception (McCartney 2008). The second assumption is, of course, imperfect, because the insiders most likely bought up shares to front run the lease announcement and may have sold off a portion to take profits afterwards. Nonetheless, proceeding with our calculations under these assumptions allows us to get an idea of the order of magnitude to which the inside shareholders' wealth appreciated due to their crony status with the Harding administration.

Between the day of *SECRETMEET* and the day before *WSJBREAK*, the total market value of shares held by top shareholders grew by $11.23 million, which, adjusted for inflation would amount to approximately $177.68 million in January 2019.[11,12] Furthermore, the total

[11]We adjust January 1922 dollars for inflation using the Bureau of Labor Statistics' "CPI Inflation Calculator" online tool, retrieved at: https://data.bls.gov/cgi-bin/cpicalc.pl.

[12]Had insiders held the same initial dollar amount in shares of our constructed Rivals portfolio during this period, their shares would have appreciated by only $49.95 million, adjusted for inflation.

market value for these shares increased by $4.29 million (or $63.90 million, adjusted for inflation) between the week before *WSJBREAK* and the week of *WSJBREAK*, implying that insiders could have seized further potential gains up to this amount had they known that the *WSJ* would break news of the lease early.[13] Since the network of Sinclair insiders privy to the information of the lease likely extended beyond just these 17 entities, our calculations should serve as a lower bound for the "value of cronyism" earned by insider trading before *WSJBREAK*.[14]

7 Conclusion

The analysis here underscores the value of insider status, particularly in the context of "crony capitalism" under a corrupt political regime. In particular, Harding used an executive order to overturn a stipulation of a law passed by Congress (just a few months earlier) in order to transfer control of federal oil reserves to Secretary Fall for use in his crony bribery scheme. We find that Sinclair Consolidated insiders profited handsomely from the Teapot Dome lease deal with Secretary of the Interior Fall. The insiders likely traded on positive inside information ahead of outsiders, causing their own share prices to rise as they and their friends accumulated shares. We also find that market frictions (fear of discovery) prevented the insiders from fully incorporating this information, because Sinclair's stock price still rose significantly after the public lease announcement and did so in excess of "rivals" share prices. The lack of significant event effects for the Rivals implies that the events had little impact on those firms' values.

In addition to providing the first quantitative analysis of the stock investor impacts of the Teapot Dome affair, the results contribute to the broader literature in finance, economic

[13]Had insiders held the same initial dollar amount in shares of our constructed Rivals portfolio during this period, their shares would have appreciated by only $6.62 million, adjusted for inflation.

[14]The Senate investigation into the scandal called dozens of witnesses to testify, ultimately revealing that many people close to either Sinclair or Fall were aware of the lease before its public announcement (United States 1924).

history, and political economy. First, the results point to a relatively strong form of market efficiency under a legal insider trading regime. At the same time, the study offers a prime example of how anti-democratic executive action, coupled with opaque government contracting, leads to front-running at the expense of outsiders. This case therefore also presents a counter-argument to legalized insider trading in that constraints on such trading might mitigate the profiteering available to insiders in crony schemes.

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Tables

Table 1: Largest American oil companies by total assets (in $1,000s)

Rank	1917		1921		1925	
1	Standard Oil N.J.	574,149	Standard Oil N.J.	1,115,940	Standard Oil N.J.	1,369,170
2	Standard Oil N.Y.	204,338	**Sinclair Consolidated**	342,424	Standard Oil N.Y.	532,961
3	The Texas Co.	144,585	The Texas Co.	335,990	**Sinclair Consolidated**	447,965
4	Gulf Oil Corp.	142,963	Standard Oil N.Y.	333,242	Gulf Oil Corp.	427,610
5	Standard Oil Ind.	126,935	Standard Oil Ind.	305,676	Standard Oil Ind.	406,060
6	Standard Oil Cal.	126,923	Standard Oil Cal.	276,733	The Texas Co.	397,638
7	Magnolia Pet.	122,822	Gulf Oil Corp.	272,774	Standard Oil Cal.	373,723
8	Prarie O. & G. Co.	102,605	Prarie O. & G. Co.	130,906	Union Oil Co.	302,454
9	**Sinclair Consolidated**	93,804	Pan Am. P. & T. Co.	111,213	Magnolia Pet.	212,828
10	Mexican Pet. Co.	83,034	Atlantic Ref.	111,077	Pan Am. P & T. Co.	189,119

Source: Ansell 1998

Table 2: Portfolio return summary statistics

	Mean	*SD*	*Skew*	*Kurt*	*Min*	5%	25%	*Median*	75%	95%	*Max*	*n*
DJIA	0.31	2.44	-0.01	3.45	-8.07	-3.68	-1.32	0.26	1.92	3.95	7.06	208
Rivals	0.11	4.29	0.36	3.79	-10.21	-6.96	-2.85	-0.25	2.85	7.49	17.45	208
Sinclair Consolidated	-0.03	5.32	0.44	3.62	-13.36	-8.50	-3.05	-0.59	2.87	9.21	17.46	208

Table 3: Event descriptions

Variable name	Date	Description
EXECORDER	May 31, 1921	President Harding signs Executive Order 3474 allowing Secretary Fall to administer naval reserves for the Secretary of the Navy.
SECRETMEET	Feb. 3, 1922	Unbeknownst to the public, Sinclair, Fall and others meet in Fall's office to outline the official terms to an agreement (following their unofficial meetings to discuss these terms in Dec., 1921 and Jan., 1922).
WSJBREAK	Apr. 14, 1922	The *WSJ* breaks news of Sinclair Consolidated's lease of Teapot Dome from the Department of the Interior. (This leak was unexpected by almost everyone. Sinclair Consolidated insiders and officials within the Department of the Interior had planned on publicizing the lease on their own accord in late Apr., 1922, but the news broke two weeks earlier than planned.)
FALLRESIGN	Mar. 4, 1923	Fall resigns from Harding's cabinet, presumably due to bribery allegations arising from the Teapot Dome affair.
PRESDEATH	Aug. 2, 1923	Harding dies unexpectedly.
FALLWITNESS	Oct. 23, 1923	Fall testifies as first witness in Senate investigation.
AGRESIGN	Mar. 28, 1924	Attorney General Daugherty, who was alleged to have been complicit in the Teapot Dome bribery, is asked by President Coolidge to resign from his position.
CRIMINDICT	Jun. 30, 1924	Doheny, Sinclair, and Fall are served with a criminal indictment charge of conspiracy to defraud the nation.

Source: McCartney 2008, *The New York Times*, *The Wall Street Journal*

Table 4: Estimated event effects
This table reports the regression results for our main model. Specification (1) regresses Sinclair Consolidated return (in excess of the risk-free rate) on DJIA return (also in excess of the risk-free rate). Specification (2) is similar to (1), but instead employs the Rivals as the market index. Specification (3) regresses the return of the Rivals portfolio on the DJIA market index. Event effects are reported only for the first three of eight events, as these occur before the lease announcement, and thus are most susceptible to insider trading.

	(1) Sinclair $- R_f$	(2) Sinclair $- R_f$	(3) Rivals $- R_f$
DJIA $- R_f$	1.0700***		1.0361***
	(8.01)		(10.39)
Rivals $- R_f$		0.9168***	
		(15.45)	
EXECORDER	-3.0078	1.5460	-5.4032
May 31, 1921	(-0.65)	(0.43)	(-1.56)
SECRETMEET	-0.0379	-0.4882	0.4493
Feb. 3, 1922	(-0.01)	(-0.14)	(0.13)
WSJBREAK	11.5754*	11.3286**	0.3554
Apr. 14, 1922	(2.51)	(3.17)	(0.10)
Constant	-0.3362	-0.2625	-0.1774
	(-0.99)	(-1.02)	(-0.70)
Observations	208	208	208

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 5: Market values for shares held by top Sinclair Consolidated shareholders ($millions) as of December 31, 1922
This table displays the market values for Sinclair Consolidated shareholders owning 40,000 shares or more (about 1% of all shares) as of December 31, 1922. These data are used to compute our Section 6 back-of-the-envelope calculations for gains in shareholder wealth for Sinclair Consolidated insiders resulting from their insider trading between *SECRETMEET* and *WSJBREAK*. Inflation-adjusted values are in terms of the buying power of January 1922 dollars indexed to January 2019 (as determined by the Bureau of Labor Statistics' "CPI Inflation Calculator").

		Market value ($millions)				
			SECRETMEET	pre-*WSJBREAK*	*WSJBREAK*	
Name	Shares	Dec. 30, 1921	Feb. 3, 1922	Apr. 13, 1922	Apr. 21, 1922	Dec. 29, 1922
H. P. Whitney	183,470	3.88	3.65	5.39	6.05	6.15
H. F. Sinclair	121,300	2.56	2.41	3.56	4.00	4.06
Chas D. Banley & Co.	107,670	2.27	2.14	3.16	3.55	3.61
The Hyva Corporation	86,500	1.83	1.72	2.54	2.85	2.90
F. Sathern	81,515	1.72	1.62	2.39	2.69	2.73
Harris, Winthrop & Co.	79,974	1.69	1.59	2.35	2.64	2.68
W. H. Goadby & Co.	77,055	1.63	1.53	2.26	2.54	2.58
Wrenni Bros. & Co.	66,024	1.39	1.31	1.94	2.18	2.21
E. F. Hutton & Co.	61,291	1.29	1.22	1.80	2.02	2.05
John Mooney	50,656	1.07	1.01	1.49	1.67	1.70
Charles V. Burns	50,000	1.06	0.99	1.47	1.65	1.68
Logan & Bryan	48,470	1.02	0.96	1.42	1.60	1.62
Post & Flagg	44,894	0.95	0.89	1.32	1.48	1.50
Thomson & McKinnon	41,993	0.89	0.83	1.23	1.39	1.41
A. A. Housman & Co.	41,482	0.88	0.82	1.22	1.37	1.39
W. J. Wollman & Co.	40,099	0.85	0.80	1.18	1.32	1.34
Total	1,182,393	24.98	23.50	34.73	39.02	39.61
Total (inflation-adjusted)	1,182,393	372.06	350.01	517.28	581.17	589.96

Source: United States 1923

Figures

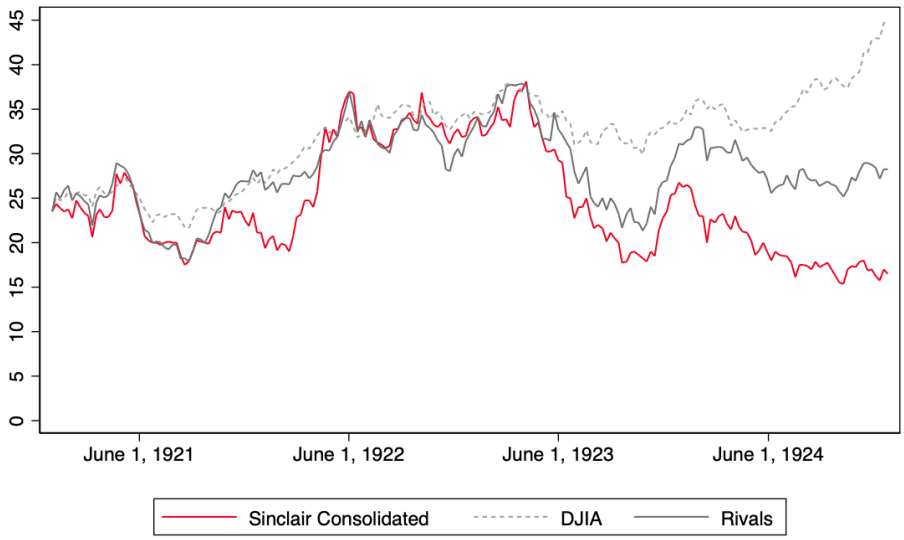

Figure 1: Portfolio weekly stock price ($), 1921-1924
DJIA and the Rivals portfolio are indexed to Sinclair Consolidated's price at the start of the series displayed.

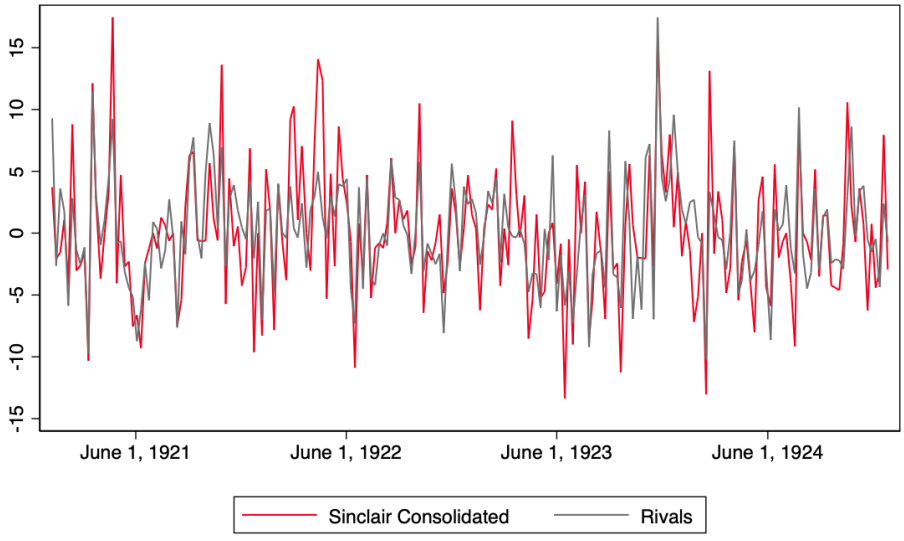

Figure 2: Portfolio weekly returns (%), 1921-1924

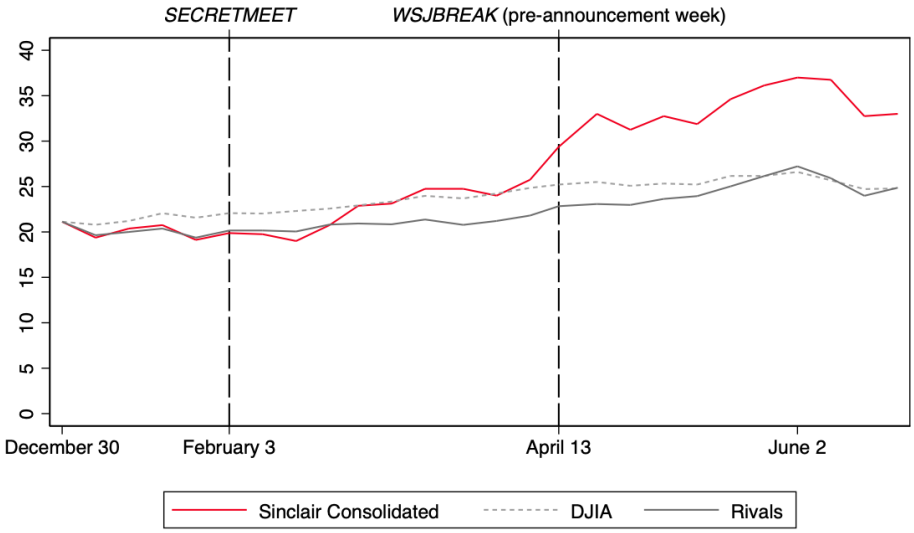

Figure 3: Portfolio weekly stock price ($), January - June 1922
DJIA and the Rivals portfolio are indexed to Sinclair Consolidated's price at the start of the series displayed. NYSE markets were closed on the day of *WSJBREAK* in observation of Good Friday (April 14, 1922). Thus, we reference the week ending on Thursday (April 13, 1922) as the "pre-announcement" week.

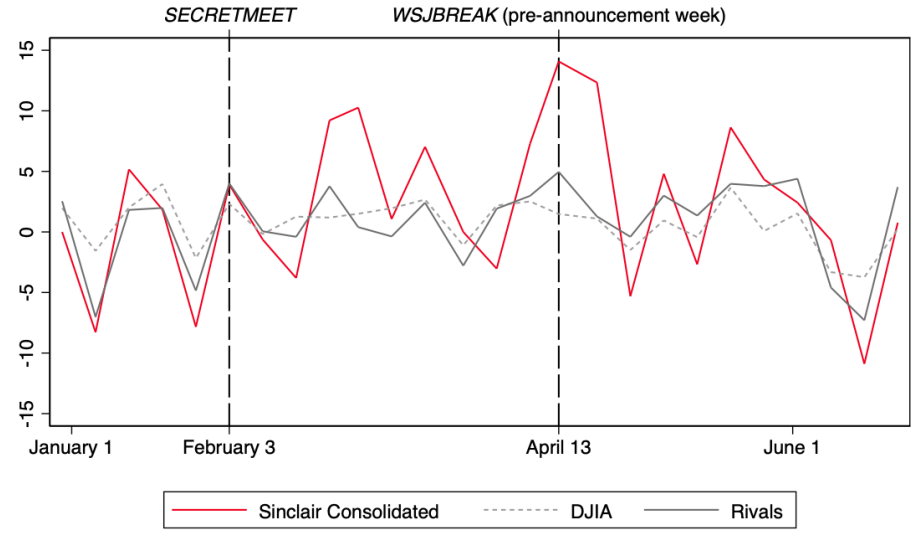

Figure 4: Portfolio weekly returns (%), January - June 1922
NYSE markets were closed on the day of *WSJBREAK* in observation of Good Friday (April 14, 1922). Thus, we reference the week ending on Thursday (April 13, 1922) as the "pre-announcement" week.

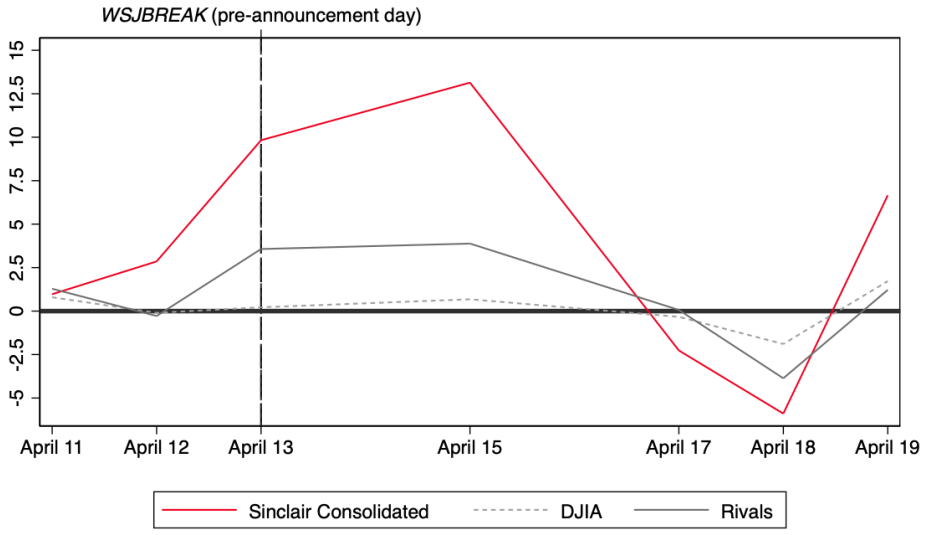

Figure 5: Portfolio daily returns (%) centered around *WSJBREAK*
NYSE markets were closed on the day of *WSJBREAK* in observation of Good Friday (April 14, 1922). Thus, we reference the Thursday prior to *WSJBREAK* (April 13, 1922) as the "pre-announcement" day.

Appendix for

"The Value of Cronyism: Insider Trading in the Teapot Dome Affair"

A Sample Quantile (SQ) test

As a robustness check, we test H_0 for Sinclair Consolidated on *WSJBREAK* using a test designed for single-firm, single-event studies described in Gelbach, Helland, and Klick (2013). The primary advantage of this test over our main specifications and other standard event study methodologies is that it has considerable asymptotic power for single-firm portfolios.

Denote the single-time-unit (i.e., "day-of" or "week-of") event window centered at the event date by [0]. The event timeline, in which the event date is indexed by $\tau = 0$, is illustrated in Figure 6.

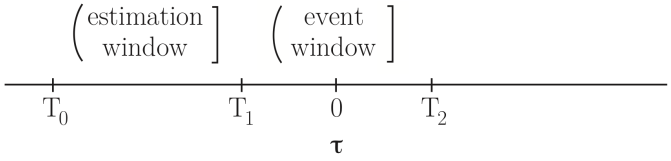

Figure 6: Event timeline

The procedure for the SQ test is as follows:

1. Estimate the market model in the (τ_0, τ_2) period: $R = \alpha + \beta R_m + D\delta + \varepsilon$, where R and R_m represent the return for the given security and the market proxy m (once again, the 17-stock DJIA equal-weighted portfolio), respectively. Here, D is a dummy variable which equals 1 on event dates and 0 otherwise, and δ captures the event effect on returns. Sort $\hat{\varepsilon}$ from least to greatest.

2. Let $c(\pi/2, (T_1 - T_0)) = \lceil \pi/2 \cdot (T_1 - T_0) \rceil$. (In our case, $T_0 = -31$ or -61, $T_1 = 0$, and $T_2 = 0$.) Then find the c-th least and greatest values in $\hat{\varepsilon}$; call these values y_l and y_u, respectively.

3. Reject the null if and only if $\hat{\delta} < y_l$ or $\hat{\delta} > y_u$.

We run the SQ test using 60-week and 30-day estimation windows for *WSJBREAK* and find that our results are robust to this alternate test.

B Cumulative abnormal return (CAR) test

We also test H_0 for the Rivals on *WSJBREAK* using a standard event study approach described in MacKinlay (1997). The test is executed as follows, with notation borrowed from the above description of the SQ test:

1. For any group of firms F_j, estimate the market model for all securities $i = 1, \ldots, N \in F_j$ over the (τ_0, τ_1) period. The model, again nearly identical to that in our main specifications, is given by:

$$R_{i\tau} = \alpha_i + \beta_i R_{m\tau} + \varepsilon_{i\tau}.$$

   Use these estimates to obtain the abnormal return vector, $\hat{\varepsilon}_i$, for each security over the (τ_1, τ_2) period with the equation:

$$\hat{\varepsilon}_{i\tau} = R_{i\tau} - \hat{\alpha}_i - \hat{\beta}_i R_m.$$

2. Define $\hat{\bar{\varepsilon}}$ as the sample average of the N abnormal return vectors. Then, define the cumulative average abnormal return, $\overline{CAR}$, as the sum of all elements of $\hat{\bar{\varepsilon}}$.

3. Estimate the average variance of returns, $\hat{\bar{\delta}}^2$, over the (τ_0, τ_1) period:

$$\hat{\bar{\delta}}^2 = \frac{1}{N^2} \sum_{i=1}^{N} \frac{1}{(T_1 - T_0) - 2} \hat{\varepsilon}' \hat{\varepsilon}.$$

   Then, construct the test statistic, $J_{\pi/2} \equiv \overline{CAR} / \hat{\bar{\delta}} \sim N(0, 1)$ and test H_0 with a Z-test.

We again run this test using 60-week and 30-day estimation windows for *WSJBREAK* and obtain results robust to this alternate test.