

# COUPS, CORPORATIONS, AND CLASSIFIED INFORMATION\*

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We estimate the impact of coups and top-secret coup authorizations on asset prices of partially nationalized multinational companies that stood to benefit from US-backed coups. Stock returns of highly exposed firms reacted to coup authorizations classified as top-secret. The average cumulative abnormal return to a coup authorization was 9% over 4 days for a fully nationalized company, rising to more than 13% over sixteen days. Pre-coup authorizations accounted for a larger share of stock price increases than the actual coup events themselves.

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\*We would like to thank Martin Berlin, Remeike Forbes, Nathan Lane, Zihe Liu, Ettore Panetti, Andre Shepley, and Laurence Wilse-Samson for excellent research assistance. Frans Buelens helped us greatly in obtaining data. Noel Maurer shared his list of U.S. multinational expropriations with us. Oliver Boguth provided us historical data on three Fama-French factors. Marcos Chamon, Stefano DellaVigna, Ray Fisman, Eric Freeman, David Gibbs, Lena Nekby, Torsten Persson, John Prados, Gerard Roland, and seminar participants at CEMFI, Hampshire College, LSE, IIES, NBER Political Economy Summer Institute, the New School, NYU, the Santa Fe Institute, the Stockholm U. Economics Department, the Stockholm School of Economics, UC Berkeley, UC Riverside, the U. of Michigan at Ann Arbor, the U. of Oslo, and the U. of Warwick all provided helpful comments.

There is no effect in the case of the widely publicized, poorly executed Cuban operations, consistent with abnormal returns to coup authorizations reflecting credible private information. We also introduce two new intuitive and easy to implement nonparametric tests that do not rely on asymptotic justifications.

JEL Codes: F50, G14

Keywords: Coups, Event Studies, Political Economy

## I Introduction

Covert operations conducted by intelligence agencies were a key component of superpower foreign policy during the Cold War. For the U.S., many of these operations had the expressed goal of replacing “unfriendly” regimes - often ones that had expropriated multinational corporate property - and were planned under extreme secrecy. Since corporate property was always restored after a successful regime change, these operations were potentially profitable to nationalized companies. If foreknowledge of these operations was truly secret, then pre-coup asset prices should not reflect the expected future gains. However, this paper shows that not only were U.S.-supported coups valuable to partially nationalized multinationals, but in addition, asset traders arbitrated supposedly “top-secret” information concerning plans to overthrow foreign governments.

Specifically, we estimate the effect of secret United States, as well as allied, government decisions to overthrow foreign governments on the stock prices of companies that stood to benefit from regime change. We consider companies that had a large fraction of their assets expropriated by a government that was subsequently a target of a U.S.-sponsored covert operation aimed at overthrowing

the regime. Using timelines reconstructed from official CIA documents, we find statistically and economically significant effects on stock prices both from the regime change itself and from “top secret” authorizations. Total stock price gains from coup authorizations were 3 times larger in magnitude than price changes from the coups themselves. We thus show that there were substantial economic incentives for firms to lobby for these operations. While we are unable to discern precisely who was trading, or whether these economic incentives were decisive for US policymakers (versus political ideology or geopolitics), we *do* show that regime changes led to significant economic gains for corporations that stood to benefit from U.S. interventions in developing countries.

Our findings complement other evidence in empirical political economy that large, politically connected firms benefit from favorable political regimes (Faccio 2006; Fisman 2001; Knight 2006; Snowberg *et al.* 2007). However, we show that firms benefit not only from publicly announced events but also from top-secret events, suggesting information flows from covert operations into markets. Our results are consistent with recent papers that have used asset price data to show that companies can profit from conflict (DellaVigna and La Ferrara 2008; Guidolin and La Ferrara 2007). We also provide evidence that private information generally leaks into asset prices slowly over time. This is consistent with both private information theories of asset price determination (Allen *et al.* 2006) and the empirical literature on insider trading (Meulbroek 1992). We differentiate our work from the prior work on insider trading in so far as the private information being traded on concerns government policy, and not company decisions or other information generated within the company.

The theoretical literature on coups in economics has emphasized the role of domestic elites (Acemoglu and Robinson 2006). However, anti-democratic political transitions have often been instigated, planned and even partially executed from abroad, most notably by the U.S. and the former Soviet Union during the Cold War. Operating under the threat of nuclear war, direct conflict between the two superpowers was replaced by covert and proxy operations to install supporting regimes (Chomsky 1986; Kinzer 2006). According to Easterly *et al.* (2010), 24 country leaders were installed by the CIA and 16 by the KGB since the end of the Second World War.

Our paper also makes a methodological contribution to hypothesis testing in event studies. The structure of our event study allows us to improve on existing nonparametric tests. Nonparametric tests used in event studies do not use exact small sample distributions but rather tests with faster asymptotic convergence to a normal distribution (Campbell *et al.* 1997; Corrado and Zivney 1992). We introduce two new small sample tests motivated by Fisher's exact test that are valid without asymptotic justifications.

Section 2 of this paper discusses the history of U.S. covert interventions, with background on each of the coups in our sample. Section 3 describes the data and our selection of companies and events. Section 4 outlines our estimation strategies and Section 5 reports our main results along with a number of robustness checks and small sample tests. Section 6 provides an interpretation of our main results; we decompose coup gains to a multinational into public and private components. We conclude in Section 7.

## II Background and History

The Central Intelligence Agency was created in 1947 under the National Security Act of July 26. The act allowed for “functions and duties related to intelligence affecting the national security,” in addition to intelligence gathering (Weiner 2007). Initially, the scope of the CIA was relegated to intelligence, though a substantial and vocal group advocated for a more active role for the agency. This culminated in National Security Council Directive No. 4, which ordered the CIA to undertake covert actions against communism. In the United States, covert operations designed to overthrow foreign governments were usually first approved by the director of the CIA and then subsequently by the President of the United States (Weiner 2007).

After Eisenhower’s election in 1952, Allen Dulles was appointed director of the agency. Under Dulles, the CIA expanded its role to include planning and executing overthrows of foreign governments using military force. All but eight of the CIA operations listed in Table I, including four of the five studied in this paper, began during Dulles’ reign as CIA director under the Eisenhower administration. Allen Dulles was supported by his brother, John Foster Dulles, who was the contemporaneous Secretary of State. The Dulles brothers together wielded substantial influence over American foreign policy from 1952 to 1960.

In 1974, partly due to public outcry over the U.S. involvement in the military coup in Chile, the Hughes-Ryan Act increased congressional oversight of CIA covert operations. In 1975, the U.S. legislature formed subcommittees to investigate American covert action. Afterwards, the intensity and scope of U.S. covert actions fell substantially (Johnson 1989). The height of covert CIA activity lasted slightly more than twenty years, encompassing the period between 1952 and 1974.

Our sample of coups includes five such covert attempts. The first one occurred in Iran in August, 1953, when the CIA, joint with the UK's MI6, engineered a toppling of Prime Minister Mossadegh. Mossadegh had nationalized the oil fields and refinery at Abadan, which were the property of the Anglo-Iranian Oil Company, itself a partially publicly owned company of the UK government. In Guatemala, the CIA overthrow of Jacobo Arbenz Guzman in June, 1954 occurred after the Arbenz government had nationalized most of United Fruit's assets in Guatemala. Next, in 1960 and 1961, both the United States and Belgium engaged in independent operations to politically neutralize the government of Patrice Lumumba in the Congo. Lumumba had refused to allow Katanga, a copper rich enclave controlled by the Belgian multinational Union Minière, to secede and avoid taxation and potential nationalization. In Cuba, the Castro government nationalized all US property in 1960, one year before the failed Bay of Pigs coup attempt in April, 1961. Finally, the Chilean nationalization of copper and other foreign owned assets began under the Frei government but proposed compensation was substantially lower and nationalizations more frequent after the Allende government came to power in late 1970. Allende was in office less than 3 years before he was killed during a coup on September 11, 1973. In Online Appendix A, we provide a more detailed synopsis of each coup, focusing on the nature of the pre-coup regime, the motivations behind the expropriations, the foreign responses, and the resolution of the coup.

The qualitative evidence on links between business and coup planners is substantial. First, much of the early CIA leadership was recruited from Wall Street. A 1945 report on the CIA's precursor by Colonel Richard Park claimed that the "hiring

and promotion of senior officers rested not on merit but on an old boy network from Wall Street” (Weiner 2007, p. 7). Secondly, there was direct contact between the companies that had been nationalized and the CIA. For example, at the time of the coup planning against Arbenz, three high ranking members of the executive branch of government had strong connections with the United Fruit Company. Alan Dulles, a former member of the board of directors of the United Fruit Company, was Director of the CIA. Thomas Dudley Cabot, held at different times the positions of Director of International Security Affairs in the State Department and CEO of the United Fruit Company. His younger brother, John Moore Cabot, was secretary of Inter-American Affairs during much of the coup planning in 1953 and 1954. Besides the fact that Anglo-Iranian was a majority state-owned company, the company met with CIA agent (and later historian) Kermit Roosevelt, who alleged in his 1954 history that the initial plan for the coup was proposed by the Anglo Iranian Oil Company. In Belgium, the royal court and the powerful bank Société Générale tied together a social and financial network of colonial officials and businesses. De Witte writes that “the incontrovertible political conclusion is that the political class, including the [Belgian] court, had a direct material interest in the outcome of the Congo crisis” (De Witte 2001, p. 37). Most directly, the minister of African Affairs, a key instigator and planner of Operation Barracuda, Harold d’Aspremont-Lyden was the nephew of Gobert d’Aspremont-Lyden who was an administrator for Union Minière. The Senate Church Committee reported that the CIA held meetings with U.S. multinationals involved in Chile on a regular basis, even to the point of ITT (whose board included John McCone, a former director of the CIA) notoriously offering the CIA \$1 million to overthrow Allende’s

government (Weiner 2007). In short, social links between the government officials responsible for the coups and financial interests are well-documented. Secret plans for regime change could have easily made it into the ears of financial actors who, even if not directly connected to the affected companies, could arbitrage this information on the market.

Our results are consistent with the presence of both direct information leakage between political decision makers and the companies that stood to benefit, as well as indirect information flows to the market. We are unable to produce definitive evidence on the identity of the traders, or pinpoint the exact source of the information leakage.

### **III Data**

We focused on the set of all CIA coups where a) the CIA attempted to effect regime change, b) the relevant planning documents have been declassified, and c) the government had expropriated property from a publicly listed multinational. The details of how we obtained a comprehensive list of coups, declassified documents, and expropriations are described in Online Appendix B. We are left with 5 coups where all three of our criteria are satisfied: Iran, Guatemala, Congo, Cuba, and Chile. Online Appendix A provides detailed historical background for each of these coups.

We first extract all of the authorization events from the timelines. These are restricted to events where either a coup was explicitly approved by the head of a government or ministry (the President of the United States, Prime Minister of the United Kingdom, or the Ministry for African Affairs in Belgium), the head



of an intelligence agency (the CIA or the MI6 ), or where US \$1 million or more was allocated to the overthrow of a foreign government. In the case of Congo, we include the date of the assassination of Lumumba, which happened in secrecy and was not known publicly for close to one month. Authorization events are coded as “good”(+1) or “bad”(-1) depending on whether they increase or decrease the likelihood of a coup. Our selection and coding of authorization events is presented in Table II.

We also extract public events from the official timelines for use as controls in some specifications. Public events are restricted to dates where company assets are nationalized or regime transitions and consolidations occur. The public events are coded as “good”(+1) or “bad”(-1), where “good” events are those which are likely to increase the stock price and ”bad” events are ones which are likely to cause a decline in the stock price. The public events and their coding are listed in Online Appendix Table AI. Table VII lists the dates of the regime changes themselves.

In addition to the data on the events, we also construct a dataset of daily stock returns for publicly traded companies that were expropriated by the regimes that were then overthrown by the CIA. Using a variety of sources, also documented in Online Appendix A, we obtain the lists of companies expropriated in each country. For each of these companies, we obtain the amounts expropriated from various sources and daily stock market data, either from CRSP or from archival sources. We define the exposure of a company to be the value of the assets expropriated divided by the average market capitalization in the year prior to the nationalizing regime coming into power. We also use market-level daily Fama-French four factors: excess return of the NYSE, high minus low (book to price ratio), small

minus big (market capitalization), and momentum. For years prior to 1962, we obtained the daily HML and SMB factor data series from Oliver Boguth, and we constructed the daily momentum factor ourselves. Post 1962 data on the factors come from Ken French’s website. Additionally, we used a Perl script to generate a daily count of the number of *New York Times* articles mentioning both the name of the country and the country’s leader in the New York Times. Summary statistics of the main variables are presented in Table III.

## IV Methodology

Our main hypothesis is that authorization events result in an increase in the stock price of the affected company over the days following the event. We consider cumulative abnormal returns after the authorization events. In contrast to public events, we expect stock price reactions to top-secret events to potentially diffuse slowly. Our benchmark specification estimates a 4-day return starting at the event date, though we consider alternative specifications ranging from 1 to 21 days. We employ two different estimation strategies: a regression using the augmented Fama-French four factor model, and a new set of distribution-free small sample tests.

### A Regression Method

For the regression method, we regress a company’s stock price return on an indicator for authorization events interacted with the company’s exposure. We also control for four Fama-French factors (excess return of the NYSE, SMB, HML, and momentum):

$$(1) \quad R_{ft} = \mathbf{X}_t \boldsymbol{\beta}_f + \gamma_c E_{ft}(k) + \epsilon_{ft}$$

where  $R_{ft}$  is the one day raw stock return for firm  $f$  between the closing price at date  $t - 1$  and the closing price at date  $t$ , and  $\mathbf{X}_t$  is the vector of factors.  $E_{ft}(k)$  is a variable which takes on the value of a company's exposure for a  $k$  day period beginning with an authorization day, and zero otherwise. The average daily abnormal return over the  $k$  day period is  $\gamma_c$ . The cumulative abnormal return is  $k\gamma_c$ <sup>1</sup>. We consider values of  $k$  ranging from 1 to 21. In our multiple country regressions, we report the mean of the country-specific coefficients  $\frac{\sum_c \gamma_c}{|c|}$ . Our sample is the time period starting exactly one year before the nationalizing regime comes to power until the day before the beginning of the coup. The standard error for the cumulative abnormal return is given by the maximum of robust standard errors, standard errors clustered on date, and standard errors clustered on company.

## B Small Sample Tests

One problem with the regression method as well as traditional event studies is that the distribution of abnormal returns is often non-normal, and the number of events is often small. As a result, use of conventional standard errors may produce an incorrect test size. We provide two non-parametric small sample tests based on the sign and rank tests used in the literature. Unlike the conventional rank and sign tests, however, we use “exact” distributions that do not rely on asymptotic

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<sup>1</sup>Note that this is a standard approximation to  $(1 + \gamma_k)^k - 1$

justifications.

The standard rank and sign tests are motivated by the observation that these test statistics converge much faster to a normal distribution than the mean. Others have noted that the sign test has an analogue to Fisher’s exact test, which uses the binomial distribution to calculate a distribution-free test for significance, which we also implement. We extend this idea to the rank test, noting that the rank has a uniform distribution, and thus also permits a distribution-free test for the average rank.

We begin by estimating a market model with the four factors in an “estimation window” that is prior to any coup-related events. Our estimation window is two calendar years in length and begins three years before the nationalizing regime comes to power. We estimate firm-specific cumulative abnormal returns for 4–day windows starting with authorization dates. We weight these CARs by company exposure and form country-portfolio specific CARs. The overall CAR takes a simple average of returns over country-portfolios.

We first generalize the sign test by considering the number of events that have a  $k$  day  $CAR$  greater than a given percentile  $p$ , where  $p$  is computed using  $k$  day  $CARs$  in the estimation sample from country  $c$ . When cumulative abnormal returns are independently distributed across countries and events, the one-sided probability of getting  $m_p$  or more abnormal returns above the  $p^{th}$  is:

$$(2) \quad 1 - \sum_{i=m_p}^M \binom{M}{i} p^i (1-p)^{M-i}$$

where  $M$  is the total number of events. This is the p-value of the one-sided Binomial sign test. Since the  $p^{th}$  percentile return is estimated based on a finite

estimation sample, and multiple events within the same country use the same estimated  $p^{th}$  percentile cutoff, this may induce a cross-event correlation in the measured percentiles within countries. Therefore, besides calculating the  $p$ -value analytically using equation (2), we also follow the literature on randomization inference (Andrews 2003; Conley and Taber [forthcoming]) and simulate our test statistic. First we draw  $T_C$  percentiles from a uniform distribution, where  $T_C$  is the size of country  $C$ 's estimation window. We then draw  $M_C$  additional returns, where  $M_C$  is the number of events, from a uniform distribution.<sup>2</sup> We then estimate the  $p^{th}$  percentile return from the  $T_C$  draws. Next, we count the number of  $M_C$  draws above the  $p^{th}$  percentile of the  $T_C$  draws. We do this for all five countries and then compute the average number of event returns above the  $p^{th}$  percentile, and repeat this procedure 10,000 times to estimate the simulated counterpart to equation (2).

Finally, parallel to the Binomial test developed above, we construct an analogue of the rank test (Corrado 1989; Campbell *et al.* 1997) exploiting the independence of events in our country portfolio sample to obtain exact inference. We rank each of our events relative to the distribution of abnormal returns in the estimation window. We then convert the rank into a percentile. Noting that, for i.i.d. variables, percentile is uniformly distributed, we compute the CDF for the sum of the percentiles of  $M$  independently and uniformly distributed random variables over the interval  $[0, 1]$ .<sup>3</sup> Without loss of generality, we assume that the mean percentile  $m \geq 0.5$ . Given the symmetry of the cumulative distribution function,

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<sup>2</sup>Both the Binomial and the Uniform tests can be shown to be independent of the distribution of the return draws for all distributions. A proof of this is available from the authors upon request.

<sup>3</sup>This test was suggested, but not pursued, by Corrado (1989).

the one-sided  $p$ -value of getting a percentile rank greater than  $m$  is then:

$$(3) \quad 1 - \sum_{j=0}^M \left( \frac{(-1)^j (m-j)^M \mathbf{1}(m \geq j)}{j!(M-j)!} \right)$$

We derive test statistics using the analytical equation from equation (3). However, similar to the Binomial test, we also simulate the distribution of average ranks. We report the modified sign and rank test results by country as well for the successful coups and the full sample. Finally, for the purpose of comparison, we also report asymptotic standard errors using the standard deviations of returns in the estimation window (Campbell *et al.* 1997).

## V Results

### A Baseline Results

In Table IV, we report the cumulative abnormal returns for authorization events interacted with exposure over periods ranging from 1 to 16 days in length. We use  $(0, k-1)$  to denote the  $k$ -day period beginning with the day of the event. We find clear evidence that stock prices react positively to authorization events. Row 1 of Table IV shows that, in the pooled sample of all companies, the average 4 day stock price return for an authorization event is 9.4% with a standard error of 2.7%. This implies that a hypothetical company that had all its assets expropriated could be expected, on average, to experience roughly a 9.4% increase in its stock price within the four days following the secret authorization of a CIA coup. The cumulative abnormal returns are generally significant at the 1% level for the all

country sample from 4 through 13 days after the event. The abnormal returns continue to increase between days 4 and 16 after the event, consistent with the hypothesis that private information is incorporated into asset prices with a delay.

In Row 2, we restrict attention to the set of 4 successful coups (i.e., excluding Cuba), and the corresponding estimates are consistently larger by around 25%-30%. The sample size drops substantially due to the large number of expropriated firms in Cuba. In Row 3, we restrict attention to the events that were authorizations (and deauthorizations) of coups that were later cancelled. The mean effect increases somewhat in magnitude (13.4% after 4 days), reaching a maximum of 19.7% at 10% significance after 16 days. We interpret the results on the cancelled coups to provide additional evidence that the stock price reactions reflected changes in beliefs due to the authorizations themselves, and not the expected coup or trends leading up to the coup<sup>4</sup>.

Rows 4-9 show the results for separately for each country. For Chile, the effect is positive by the fourth day after the authorization event, but small and insignificant. It also stays small through the longer horizons considered. In Row 5, we consider Congo, which exhibits a large 16.7% effect on the day of an authorization event. The cumulative abnormal return increases to 22.7% after 4 days and then stabilize, becoming statistically insignificant after 10 days. In Row 6, we restrict attention to the events in the Congo sample that were decisions made by Belgian officials, as the affected company was Belgian and the operation was independent of the United States. Effects in this sample are even larger, with

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<sup>4</sup>Although not reported in the table, if we further restrict attention to the deauthorization events themselves, the stock price of a fully-exposed company fell by 11.7% within four days of a deauthorization, which further confirms this interpretation.

an immediate 27.3% effect after the event, rising to a 5% significant 46.2% after 16 days.

Row 7 shows the results for Cuba. There are two operations and thus two sets of events in Cuba. The first is the failed Bay of Pigs invasion. The second is Operation Mongoose which was started after the Bay of Pigs but was ultimately cancelled. More details about the Cuban operations are available in Online Appendix A. There is virtually no effect in the Cuba subsample even after 16 days and, though not reported in the tables, for both operations considered individually. The qualitative evidence suggests two possible reasons for the absence of an effect in Cuba: (1.) Due to the high degree of public aggression from the United States towards Cuba, including numerous bombing missions, the coup was already commonly believed to be in planning and thus information about top-secret authorizations were not considered “news” by financial market actors.<sup>5</sup> (2.) Traders were pessimistic about success, partially owing to a combination of incompetence and lack of political commitment towards the coup by the Kennedy Administration. Though we are not able to convincingly reject either explanation, we do provide additional evidence later in the paper that some traders did believe in the possibility of a successful Bay of Pigs operation.

Rows 8 and 9 show the results for Guatemala and Iran, respectively. Guatemala shows an immediate and significant 4.9% increase, which continues to grow to 16.5% after 4 days and 20.5% after 7 days, also significant at 5% confidence. After this, the coefficient in the Guatemala subsample is not statistically significant, although the point estimate generally remains large. In the Iran subsample, we do

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<sup>5</sup>“When Kennedy reads the [NYT] story he exclaims that Castro doesn’t need spies in the United States; all he has to do is read the newspaper”.(Wyden 1979)



not see an immediate reaction to the event, but we do see a significant 7.4% effect after 4 days, increasing to 10.3% after 7 days and continuing to increase to 20.2% at 16 days, all significant at the 1% or 5% level. Overall, our country results shows that in the three out of the five countries with statistically significant effects, the results were visible and clear within 4 days. However, in all these cases, the effects tended to grow over the following days, consistent with slow diffusion of private information into asset prices.

The effects reported in Table IV are for a hypothetical company that was fully nationalized. To obtain the average effect for the sample of companies in a given country, we would need to multiply the coefficient by the mean exposure for companies in that country. The average exposure in the sample was 17.9%, so Column 2 of Table IV implies that the cumulative return in the sample companies was 1.6% after four days. As a specific example, Union Minière had 33.8% of its overall assets exposed, which implies that the cumulative abnormal return in the Congo subsample was 7.6% after 4 days. Similarly, United Fruit had 14.8% of its assets exposed, which implies a 2.4% return over 4 days. Finally, Anglo-Iranian had 31.0% of its assets nationalized in Iran, and so the implied cumulative 4 day increase following an authorization event for that company was 2.3%.

Figure I provides graphical evidence, parallel with Table IV, on abnormal returns around an authorization event, with 95% confidence intervals shown. We compute cumulative abnormal returns  $CAR(k)$  using the regression method aggregated across events for each of the 20 days prior to as well as following an event. For the 20 days prior to the event, we aggregate backwards starting at the event date (date 0), so  $CAR(-k)$  is the cumulative abnormal return between dates  $-k$  and

0. For returns starting prior to date 0, we also include as a control an indicator for a 10-day period after an authorization date, in the case when the events are sufficiently close together that cumulative returns *prior to* one authorization event includes returns that *follow* another authorization event. The only country where the windows overlap is Iran, and none of the other figures look different if we do not account for the overlap in  $CAR(k)$  and  $CAR(-k)$  windows when cumulating over days prior to the event. For our full sample, cumulative abnormal returns become significant at a 5% level on the day of an event and remain significant. The rise over this period is generally monotonic until day 16, and seems to be permanent. Considering returns prior to the event date, however, the  $CAR(-k)$ 's show no trends and are never significant. We conclude that there was no pre-existing trend in the stock price prior to an event, suggesting that the CIA did not authorize coups in response to drops in the value of connected companies or pre-existing political trends that would also be priced into the stock return. Figure II shows the  $CAR$  graphs separately by country. As expected, individual country time paths are more imprecise due to sample size limitations, with consistently significant results only in Congo, Guatemala and Iran. There is no evidence of a persistent and significant pre-trend in any of the individual countries. Overall, the evidence on timing shows that authorization events led to positive asset price movements - usually with some lag.

## B Robustness

Our benchmark specification (Column 2 of Table IV) shows that abnormal returns were positive and significant in the four days following an authorization event.

However, this could be due to downturns in the broad market, contemporaneous information about public events, or positive industry-specific shocks. To show that the positive abnormal returns reflect changes in company-specific returns, we consider a number of robustness checks in Table V. All are estimated for the pooled sample, the set of successful coups, and separately by country. We compute cumulative abnormal returns over a 4 day period following an authorization event. Except for columns 1 and 5, all specifications include the four Fama-French factors interacted with a company dummy (or country-specific company dummies for multi-country regressions) as controls. As in Table IV, we report the coefficient on the authorization dummy interacted with the company's exposure, multiplied by the number of days in the window (4 in this case); multicountry estimates average the coefficients across the countries.

First, we regress raw returns, unadjusted by any of the market factors, on our authorization events. We confirm that the cumulative abnormal return effects were due to increases in the affected company's stock prices, and not due to changes in market-level movements. Column 1 of Table V shows a 4-day cumulative abnormal return of 9.5%, virtually identical to our benchmark specification.

Top-secret decisions to overthrow foreign governments may have coincided with public events in the targeted countries. This could bias our estimates, reflecting the effect of public news rather than private information. In Column 2 we control for the number of articles in the *New York Times* mentioning both the country and the country leader by name, as well as other public events; these are nationalizations of foreign owned property as well as electoral transitions and consolidations which are also mentioned in the timelines, all listed in Online Appendix Table AI. We

multiply these measures with company exposure and the country dummies, and include them as controls in our main specification. The coefficient in the pooled sample is only slightly smaller than the one in the main specification, and still shows a 7.2% 4-day return which is significant at the 1% level. In Column 3 we drop all dates where the *New York Times* had at least one article mentioning both the country and the leader by name (Meulbroek 1992). Since most days have at least one political article about the coup countries, we lose over 2/3 of our sample in this specification, making this a strong test. However, our effect actually becomes stronger despite the country with the largest baseline effect, Congo, dropping out of the sample. The mean effect in the pooled country sample is 12.5% return over four days and still significant at the 1% level. Congo is very prominently covered in the news, and hence does not have any events that are not contemporaneous with some *New York Times* coverage. While all the countries lose observations from the sample restrictions, the estimates for Chile and Iran are actually larger than in the baseline specification, and the coefficients for Guatemala and Iran are still significant at least the 5% confidence level. Cuba only has one authorization date that has no contemporaneous New York Times articles about Cuba and Castro, reflecting the extensive leakage of the Bay of Pigs operation as well as general news interest in Cuba over the sample period. The scaling back of the second operation, Mongoose, on February 2, 1962, does indeed fall on a news free day. While not significant, the positive and relatively larger coefficient on this subsample is consistent with our interpretation that secret (de)authorizations do cause decreases in stock prices when they actually constitute “news.”

One potential explanation for our findings is price momentum around the

authorization dates. This may either reflect pre-existing information flows or trading activities unrelated to coup planning. We include a control that interacts the exposure measure with a dummy that is equal to 1 in a 20 day window around each authorization event. This specification tests whether the abnormal returns are higher in the 4 days right after an authorization than in the average of the 20 day period surrounding each authorization event. Column 4 of Table V shows that the four-day abnormal return is 9.9%, actually slightly higher than our benchmark, and statistically significant at the 1% level. Pre-existing price trends do not explain our results.

We also consider two placebos. In Column 5 of Table V we regress NYSE index returns on our private information variable, omitting the other three factors. Our pooled estimate is equal to 0.02% and is insignificant. None of the country specific regressions are significant at the 10% either. In column 6 of Table V, we use daily stock returns from a matched company, where the match is constructed by taking the company closest in the Mahalanobis metric (constructed from market capitalization and market beta) within each 3-digit industry code, subject to having data available for all of the authorization dates. The matched companies are listed in Online Appendix Table AII. This placebo is also insignificant in the pooled sample as well as all the subsamples, suggesting that our effects are not driven by industry specific shocks.

Finally, we consider the effect of authorizations on the log of trading volumes for the set of countries for which data is available. In both the pooled samples as well as the individual country regressions, our event variable is positive and significant. This is true even in Chile and Cuba, where the effect on returns was

insignificant. The finding of increased trading in the four days including and just after authorization days is consistent with theoretical predictions of heterogeneous belief models (Wang, 1994) of stock trading as well as prior empirical work on the volume impacts of insider trading (Cornell and Sirri 1992).

### C Time-Shifted Placebos

As additional evidence that our effects are not an artifact of the data, we re-estimate our main specification on a set of placebo dates. We take our 4 day cumulative abnormal returns and shift our authorization events forwards as well as backwards by 5, 10, 15, 20, 25, 30, 35, and 40 days. For an  $s$  day shift, we estimate:

$$(4) \quad R_{ft} = \mathbf{X}_t \boldsymbol{\beta}_f + \gamma_{c,s} E_{ft+s}(4) + \epsilon_{ft}$$

As in our baseline specification, we report the mean cumulative 4-day return across countries:  $\frac{\sum_c \gamma_{c,s}}{|c|}$ . We exclude all days with other authorizations, public events, or that occur during the coup itself. We graph our estimates against the number of days shifted in figure III.

Out of the 19 time-shifted regressions,  $\gamma_s$  is only significant for  $s = 0$ , our benchmark specification with cumulative abnormal return of approximately 9.38% for a fully exposed company, which is significant at the 1% level. None of the 18 other dates have a magnitude above 4% and none of them are significant at even the 10% level. The placebo estimates reinforce that our baseline estimates are not due to local serial correlation in returns. The pattern of no abnormal returns before a decision, sizeable abnormal returns just after a decision, and smaller possible abnormal returns in the medium run after a decision is consistent with

our hypothesis of secret authorization events causing an increase in the stock price.

#### D Small Sample Tests

In Table VI, we present the results from our small sample tests. First, we present the four day *CARs* of country portfolios, based on out-of-sample estimates. The *CARs* here represent the actual (exposure weighted) change in stock prices for affected companies in a given sample, while the regression coefficients represent the effects for a hypothetical company that was fully exposed. For comparability, the regression coefficients would need to be multiplied by mean exposure levels, although the comparability is inexact due to how exposures are treated in the two cases. The results are listed in Row 1 of Table VI. For the full sample, the average four day weighted *CAR* was 2.6%. The estimate is statistically significant at the 1% level using asymptotic standard errors.

Turning to our small sample tests, we find that 18 out of the 22 events in the full country sample have returns greater than the median return in the “estimation window” (i.e., the year prior to any nationalization event), producing a one-sided probability value under the null hypothesis of 0.35%.<sup>6</sup> 13 of those events have returns above the 80<sup>th</sup> percentile, which would occur by chance alone with probability less than 0.02%. Eight of the events have returns greater than the 90<sup>th</sup> percentile, which have an associated probability value of 0.11% under the null. Finally, the average rank of all 22 events is 0.74, which would be obtained by chance with a probability less than 0.06%. When we consider the set of four successful coups, the conclusion is strengthened. The probability values associated

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<sup>6</sup>In the text, we report the higher of the analytical and simulated probability values. Both are reported in the table. All reported probability values are one-sided.

with the Uniform rank test, as well as the Binomial sign tests (for 50<sup>th</sup>, 80<sup>th</sup> and 90<sup>th</sup> percentiles) are all under 0.1%.

Due to small sample size, the individual country tests have low power and thus p-values are larger. Congo and Guatemala consistently produce probability values under 10% for all the tests, and smaller for most. Iran produces probability values ranging between 3% and 14% except for the 90<sup>th</sup> percentile, while Chile ranges from 5% and 33%. Finally, consistent with our results above, Cuba shows no systematic increase in returns following authorization events. For example, only three out of the six events show positive returns, while the rest are negative.

Our results also show heterogeneity across events. While there does not seem to be a substantial reaction to a few events, most show positive reactions. And many show reactions that were very strong, as exemplified by the fact that 8 out of 22 events are above the 90<sup>th</sup> percentile in returns.

Overall, our modified sign and rank tests provide strong evidence that the 4-day returns after authorization events are, on average, highly statistically significant, and our conclusions are not driven by the size of our sample and non-normal distribution of returns. Also, they show us that there are reactions to some events and not to others. However, when there is a reaction, the effect is strong and unmistakable.

## VI Assessing the Gains from Coups

We also estimate abnormal returns for the coup attempts themselves using our main specification. We do this for two reasons. First, we want to test if these companies were affected by the actual coup attempts, confirming that companies



were benefitting from the anticipated regime change. Second, we want to compare the direct effect of the coup itself to the total net rise due to pre-coup authorizations.

We look at two estimates of the effect of the coup: abnormal returns during the coup window and abnormal returns on the first day of the new regime. We define the coup window as the period from and including the first day of the coup to and including the first day of the new regime (the last day of the coup attempt in the case of Cuba). These dates are listed in Table VII.

Over the duration of the coup, the average cumulative return across countries was 12.1%. The result is slightly higher at 13.4% when we restrict attention to the successful coups. The first day of the new government measure is slightly lower for both the full as well as successful coups samples at 10.0% and 11.8% respectively.

The individual country estimates are also relatively similar across the two measures for most of our sample. Chile and Congo's coups are both one day events, and so the effect is identical across measures: 6.1% and significant at the 5% level for Chile and 8.7% and insignificant at conventional levels for Congo. The effects for Cuba are near -5% for both measures. The first day of the new government effect is significant at the 1% level, reinforcing that there is belief in the possibility of a successful coup in Cuba<sup>7</sup>. The coup window effect is larger for Iran than the first day of the new government. The coup window effect, 18.8%, is significant at the 10% level; the first day of the new government effect is substantially smaller at 7.0%. For Guatemala, the sign actually flips. The coup window effect for Guatemala is actually negative and somewhat sizeable. The first day of the new

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<sup>7</sup>In a prior version of the paper, we also included an estimate of the return on the first day of the coup. For Cuba, the estimate was positive and significant, reinforcing the view that some traders thought that a successful coup was possible.

government effect, however, is quite a bit larger and positive in sign. The two numbers are -10.3% and 22.7%, the latter number being statistically significant at the 1% level. We attribute the stock price fall over the coup window to the fact that the junta which initially took power when Arbenz resigned did not support the return of assets to United Fruit. Further exacerbating the uncertainty around United Fruit assets, the eleven days following Arbenz's resignation saw four interim governments come to power. Finally, the candidate backed by the CIA, Castillo Armas, took power (Glejises 1991). Despite the uncertainty, Armas eventually returned United Fruit assets.

We now compare the magnitudes of the net authorization events to the coup event effects. We use the country-specific 13 day *CARs* in order to compute the value per authorization for each country. The longer horizon return is used in order to capture the full asset price change due to a leaked authorization. The total rise in the stock price due to authorizations is then just one plus the return to an authorization raised to the power of the net number of events<sup>8</sup> plus the return over the coup window:

$$(5) \quad (1 + R_{C,Auth})^N (1 + R_{Coup})$$

where  $R_{C,Auth}$  is the thirteen day cumulative abnormal return in country  $C$ ,  $N$  is the net number of authorization events, and  $R_{Coup}$  is the cumulative abnormal

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<sup>8</sup>In the case of Guatemala, the number of net events is two out of total four events since one event was an aborted coup and thus counted as negative; in the case of Congo, the number of net events is one, because out of five events, two are negative; in the case of Cuba, the net events is two because two of the six events are negative. For the pooled country samples, we use the mean number of events across countries as the net events. Thus gives us 2.6 for the full country sample and 2.4 for the successful coups sample.

return in country  $C$  on the first day of the new regime. We use the return on the first day of the new government because, due to the length of the coup in Guatemala and the ensuing political instability after the end of the Arbenz regime, there is a net negative change in the stock price over the exact coup window.

The results are listed in Table VII. While we can combine the effects of the authorization events and the coup itself in most of the countries, the failure of the operation in Cuba makes interpretation of the resulting comparison difficult. Thus we interpret the Cuba numbers as the relative magnitude of stock price movements from the coup event and the authorization events. The inclusion of Cuba in our cross-country sample also makes the full sample decomposition difficult to interpret. Although we report both the Cuba decomposition and full sample decomposition, we focus on the successful coup sample and the other 4 countries.

If we assume the only source of coup-related asset price movements are our events, together with the coup itself, we can estimate the total gains from the coup. The average gain per authorization in the all country sample is 12.0%, and the mean return on the first day of the post-coup regime is 10.0%. For the set of successful coups, the gains from authorization events were roughly three times that from the coup events; 75.5% of the relative gains come from authorization events. By country, the total gains from the coup ranged greatly. For a fully exposed company, the returns range from 14.1% in Chile to 77.1% in Guatemala. We also compute that the relative percentage benefit of the coup attributable to ex-ante authorization events, which amounted to 55.0% in Chile, 66.1% in Guatemala, 72.4% in Congo, and 86.9% in Iran. Overall, much of the gains from the coup occurred before the coup itself due to speculation from top-secret information. This

suggests that estimates of the value of the coup to a company that only considered the stock price reaction to the coup itself would be dramatically understated.

## VII Conclusion

Covert operations organized and abetted by foreign governments have played a substantial role in the political and economic development of poorer countries around the world. We look at CIA-backed coups against governments which had nationalized a considerable amount of foreign investment. Using an event-study methodology, we find that private information regarding coup authorizations and planning increased the stock prices of expropriated multinationals that stood to benefit from the regime change. The presence of these abnormal returns suggests that there were leaks of classified information to asset traders. Consistent with theories of asset price determination under private information, this information often took some time to be fully reflected in the stock price.

We find that coup authorizations, on net, contributed substantially more to stock price rises of highly exposed companies than the coup events themselves. This suggests that most of the value of the coup to the affected companies had already been anticipated and incorporated into the asset price before the operation was undertaken.

Our results are robust to a variety of controls for alternate sources of information, including public events and newspaper articles. They are also robust across countries with the exception of Cuba. The anomalous results for Cuba are potentially due to public information leaks and inadequate organization that surrounded that particular coup attempt. Our results are consistent with evidence in political

science that business interests exert disproportionate influence on foreign policy (Jacobs and Page 2005), as well as historical accounts which suggest that protecting foreign investments was a motivation for undertaking regime change (Kinzer 2006). However, further empirical research is needed to uncover whether or not economic factors were decisive determinants of U.S. government decisions to covertly overthrow foreign governments.

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Table I  
Coups Selection

Project	Country	Year	Planning Docs Declassified	Description	Coup	Exprop.
Ajax	Iran	1953	Yes	Coup against Mossadeq	Yes	Yes
FU/Belt	Chile	1970-73	Yes	Coup against Allende	Yes	Yes
Bloodstone	Germany	1946	No	Recruitment of Nazis	No	No
Brushfire	US	1955	Yes	Propaganda at Universities	No	No
Camelot	Chile	1960s	No	Funded Anthro. Research	No	NA
ST/Circus	Tibet	1955	No	Trained Tibetan Rebels	Yes	No
Democracy	Nicaragua	1985	No	Anti-Sandinista Operations	No	Yes
IA/Feature	Angola	1975	No	Supported Savimbi	No	Yes
Fiend	Albania	1949	No	Insurgency	Yes	No
Fortune/PB/Success	Guatemala	1952-54	Yes	Coup Against Arbenz	Yes	Yes
PM/Forget	All over	1950s	No	Pro-U.S. Media Distortion	No	NA
Haik	Indonesia	1956/57	No	Military Support for Rebels	Yes	Yes
HardNose	Vietnam	1965	No	Disrupt Viet Cong Supplies	No	No
Momentum	Laos	1959	No	Trained Hmong in Laos	No	No
Mongoose	Cuba	1961	Yes	Post-Bay of Pigs Operations	No	Yes
Opera	France	1951	No	Electoral Manipulations	No	No
Paper	China	1951	No	Invasion from Burma	No	No
Stole	N. Korea	1950/51	No	Sabotage	No	No
Tiger	Syria	1956	Yes	Assassination Attempts	No	No
Washtub	Guatemala	1954	Yes	Anti-Arbenz Propaganda	No	Yes
Wizard	Congo	1960	Yes	Lumumba Assassination	Yes	Yes
Zapata	Cuba	1960-61	Yes	Bay of Pigs	Yes	Yes

Notes: (1.) Project is the name of the operation, (2.) Country is the target country of the operation, (3.) Year is the year when the operation was carried out, (4.) Planning documents records yes if the planning documents are publicly available, (5.) Description is a description of the operation, (6.) Coup is recorded as yes if a coup was planned as part of the operation and no otherwise, and (7.) Exprop. refers to whether or not the regime nationalized (or expropriated) property from multinational firms operating within the country.

Table II  
Authorization Event Selection

Date	Country	Description	Good	Cancelled
September 15, 1970	Chile	Nixon Authorizes Anti-Allende Plan (Incl. Poss. Coup)	Y	N
January 28, 1971	Chile	40 Committee Appropriates \$1.2 Million	Y	N
October 26, 1972	Chile	40 Committee Appropriates \$1.4 Million	Y	N
August 20, 1973	Chile	40 Committee Appropriates \$1 Million	Y	N
August 18, 1960	Congo	Eisenhower Endorses Lumumba's Elimination	Y	Y
September 12, 1960	Congo	Belgian Operation Barracuda Begins	Y	Y
October 11, 1960	Congo	Operation Barracuda Cancelled	N	Y
December 5, 1960	Congo	CIA Stops Operation	N	Y
January 18, 1961	Congo	Lumumba Secretly Killed	Y	N
March 17, 1960	Cuba	Eisenhower Approves Plan to Overthrow Castro	Y	N
August 18, 1960	Cuba	Eisenhower Approves \$13 Million to Overthrow Castro	Y	N
January 30, 1961	Cuba	Kennedy Authorizes Continuing Bay of Pigs Op	Y	N
November 4, 1961	Cuba	Operation Mongoose Planning Authorized	Y	Y
February 26, 1962	Cuba	Operation Mongoose Scaled Back	N	Y
October 30, 1962	Cuba	Operation Mongoose Cancelled	N	Y
August 18, 1952	Guatemala	DCIA Approves PBFortune (Coup to Overthrow Arbenz)	Y	Y
October 8, 1952	Guatemala	PBFortune Halted	N	Y
December 9, 1953	Guatemala	DCIA Approves PBSuccess (Coup to Overthrow Arbenz)	Y	N
April 19, 1954	Guatemala	Full Approval Given to PBSuccess	Y	N
June 19, 1953	Iran	CIA/MI6 Both Approve Coup	Y	N
July 1, 1953	Iran	Churchill Approves Coup	Y	N
July 11, 1953	Iran	Eisenhower Approves Coup	Y	N

Notes: (1.) Date is the date of the event, (2.) Country is the target country of the coup attempt, (3.) Description gives a brief description of the event, (4.) Good is coded as Y if the event should raise the share value of the company and N if the event should lower the share value of the company, (5.) Cancelled is coded as Y if the operation was cancelled and N if it was executed, (6.) The 40 Committee was the subgroup of the executive branch National Security Council responsible for authorizing covert actions after 1964.

Table III  
Summary Statistics

Variable										
Company	Country	N	4-Digit SIC	Market Cap	Exprop. Value	Exposure	Mean (Raw Return)	SD (Raw Return)	Volume	Daily Avg. NYT Stories
Anaconda Co	Chile	2224	3333	4.80E+08	3.20E+08	0.6666	0.0000	0.0234	24298.61	0.5494
Bethlehem Steel Corp	Chile	2225	3312	9.79E+08	2.50E+07	0.0255	0.0002	0.0177	36475.6	0.5494
Cerro Corp	Chile	2224	1031	1.53E+08	1.41E+07	0.0923	-0.0001	0.0231	11858.5	0.5494
General Tire & Rubr Co	Chile	2225	3011	3.29E+08	1.20E+07	0.0365	-0.0002	0.0188	14514.7	0.5494
International Tel & Teleg Corp	Chile	2223	3662	2.57E+09	1.07E+08	0.0417	0.0000	0.0183	61939.7	0.5501
Kennecott Copper Corp	Chile	2225	3331	1.33E+09	2.17E+08	0.1633	0.0002	0.0194	31554.1	0.5494
Union Miniere	Congo	1124	1021	1.85E+11	6.25E+10	0.3379	-0.0009	0.0268		0.8823
American Sugar Refng Co	Cuba	2085	2061	5.84E+07	5.52E+07	0.9452	0.0007	0.0167	709.2	2.6749
Canada Dry Corp	Cuba	2088	2090	4.90E+07	1.11E+06	0.0227	0.0003	0.0127	1949.1	2.6733
Coca Cola Co	Cuba	2087	2090	6.05E+08	1.87E+07	0.0310	0.0005	0.0115	2301.3	2.6592
Colgate Palmolive Co	Cuba	2087	2841	2.79E+08	9.88E+06	0.0354	0.0006	0.0167	3880.8	2.6740
Continental Can Inc	Cuba	2089	3411	5.55E+08	6.07E+06	0.0109	-0.0001	0.0165	4590.7	2.6696
Freeport Sulphur Co	Cuba	2089	1477	2.26E+08	6.02E+07	0.2658	0.0002	0.0171	2730.5	2.6725
International Tel & Teleg Corp	Cuba	2087	3662	5.40E+08	8.90E+07	0.1649	0.0005	0.0206	11711.5	2.6714
Lone Star Cement Corp	Cuba	2087	3272	2.52E+08	1.69E+07	0.0672	0.0001	0.0163	3543.9	2.6716
Swift & Co	Cuba	2088	2011	2.44E+08	4.05E+06	0.0166	0.0000	0.0127	2607.2	2.6738
United Fruit Co	Cuba	2088	2062	3.03E+08	5.88E+07	0.1941	-0.0002	0.0165	7255.9	2.6733
Woolworth F W Co	Cuba	2088	5331	5.58E+08	6.26E+06	0.0112	0.0002	0.0106	3537.8	2.6655
United Fruit Co	Guatemala	3469	120	5.31E+08	7.83E+07	0.1475	0.0001	0.0116	3412.3	0.2170
Anglo-Iranian	Iran	2391	2910	7.46E+09	2.31E+09	0.3103	0.0006	0.0204		0.7525

Notes: (1.) Summary statistics by country and company are shown over the event window, (2.) N gives the number of observations for the majority of listed variables for a given company in a given country; in some cases, particular variables are missing for a few days for a given company/country, (3.) Market Cap is the average price times the outstanding shares starting two years before the nationalizing regime comes to power and ending one year before the nationalizing regime comes to power, (4.) Expropriated Value is the dollar amount of the assets that were expropriated from the company by the coup country government, (5.) Exposure is the ratio of nationalized to total assets for the company/country, (6.) Raw returns and volume are at the daily level, (7.) Daily Average NYT Stories are daily counts of articles in the New York Times which mention both a country and the country's leader by name.

Table IV  
Effect of Secret Coup Authorizations on Stock Returns

Main Effects - Cumulative Abnormal Returns

	(0,0)	(0,3)	(0,6)	(0,9)	(0,12)	(0,15)
All Coups	0.0435 (0.0162)*** 22157	0.0938 (0.0270)*** 22157	0.0990 (0.0345)*** 22157	0.1055 (0.0390)*** 22157	0.1204 (0.0424)*** 22157	0.1342 (0.0522)** 22157
Successful Coups	0.0551 (0.0201)*** 8555	0.1208 (0.0336)*** 8555	0.1274 (0.0425)*** 8555	0.1309 (0.0481)*** 8555	0.1459 (0.0523)*** 8555	0.1640 (0.0647)** 8555
Cancelled Coups	0.0729 (0.0337)** 15257	0.1341 (0.0546)** 15257	0.1414 (0.0681)** 15257	0.1359 (0.0730)* 15257	0.1564 (0.0777)** 15257	0.1971 (0.1018)* 15257
Chile	-0.0095 (0.0066) 6091	0.0172 (0.0274) 6091	0.0003 (0.0373) 6091	0.0214 (0.0491) 6091	0.0183 (0.0510) 6091	0.0104 (0.0620) 6091
Congo	0.1667 (0.0771)** 421	0.2270 (0.1196)* 421	0.2014 (0.1335) 421	0.2429 (0.1426)* 421	0.2283 (0.1546) 421	0.2581 (0.1719) 421
Congo-Belgium events	0.2730 (0.0794)*** 421	0.2632 (0.1895) 421	0.3179 (0.1972) 421	0.4260 (0.2029)** 421	0.3914 (0.2182)* 421	0.4622 (0.2260)** 421
Cuba	-0.0030 (0.0079) 13602	-0.0141 (0.0125) 13602	-0.0147 (0.0178) 13602	0.0039 (0.0202) 13602	0.0183 (0.0222) 13602	0.0147 (0.0263) 13602
Guatemala	0.0491 (0.0203)** 1234	0.1650 (0.0530)*** 1234	0.2049 (0.0896)** 1234	0.1365 (0.1136) 1234	0.2011 (0.1274) 1234	0.1859 (0.1662) 1234
Iran	0.0144 (0.0110) 809	0.0739 (0.0184)*** 809	0.1030 (0.0428)** 809	0.1229 (0.0385)*** 809	0.1359 (0.0349)*** 809	0.2017 (0.0792)** 809

Notes: (1.) For single country regressions, the reported coefficient is on an indicator for authorization events interacted with company exposure, multiplied by the length of the window, (2.) Multi-country regressions report the mean of the country coefficients, (3.) All regressions control for an interaction of a company dummy (or country-specific company dummy for multi-country regressions) with the four Fama-French factors, (4.) All dates where a company changed its name or changed its outstanding shares by more than 5% were dropped, (5.) One day price changes greater than 50% in magnitude were dropped, (6.) "Successful coups" excludes Cuba, (7.) "Cancelled coups" only uses authorizations and deauthorizations of coups that were eventually cancelled, (8.) Column numbers at the top in parentheses denote the number of days before and after the authorizations which are included as part of the dummy variable for the authorization event, e.g., (0,3) refers to the return between the event date and three days after the event date, (9.) Standard errors reported in parentheses are the maximum of clustered by company, clustered by date, and robust, (10.) Statistical significance at 10%, 5% and 1% levels is denoted by \*, \*\*, and \*\*\* respectively.

Table V  
Robustness

	Raw Returns	Public Events/NYT	No NYT News Subsample	Trend Controls	Market Placebo	Matched Placebo	Log Volume
All Coups	0.0947 (0.0282)*** 22157	0.0723 (0.0222)*** 22157	0.1249 (0.0137)*** 7123	0.0989 (0.0034)*** 22157	0.0002 (0.0011) 22157	0.0068 (0.0216) 17239	19.0429 (2.2102)*** 20895
Successful Coups	0.1210 (0.0350)*** 8555	0.0939 (0.0275)*** 8555	0.1153 (0.0332)*** 5224	0.1259 (0.0372)*** 8555	-0.0013 (0.0082) 8555	0.0111 (0.0268) 6670	26.4944 (3.3202)*** 7324
Chile	0.0365 (0.0371) 6091	0.0191 (0.0279) 6091	0.1006 (0.0765) 3530	0.0243 (0.0319) 6091	0.0154 (0.0136) 6091	-0.0149 (0.0317) 4764	20.4970 (0.7534)*** 6091
Congo	0.2274 (0.1180)* 421	0.1202 (0.0909) 421	. . .	0.2532 (0.1282)** 421	-0.0067 (0.0133) 421	-0.0245 (0.0216) 322	. . .
Cuba	-0.0103 (0.0138) 13602	-0.0154 (0.0124) 13602	0.0276 (0.0365) 1899	-0.0098 (0.0144) 13602	0.0066 (0.0088) 13602	-0.0085 (0.0145) 10569	4.1386 (2.5058)* 13571
Guatemala	0.1394 (0.0628)** 1234	0.1648 (0.0530)*** 1234	0.1373 (0.0603)** 1068	0.1909 (0.0621)*** 1234	-0.0311 (0.0224) 1234	0.0255 (0.0916) 965	32.4391 (12.5956)** 1233
Iran	0.0806 (0.0189)*** 809	0.0738 (0.0189)*** 809	0.1061 (0.0137)*** 398	0.0359 (0.0305) 809	0.0171 (0.0146) 809	0.0528 (0.0400) 619	. . .

Notes: (1.) Estimates are on (0,3) returns, (2.) For single country regressions, the reported coefficient is on an indicator for authorization events interacted with company exposure, multiplied by the length of the window (i.e., 4), (3.) Multi-country regressions report the mean of the country coefficients, (4.) Except for the "Raw returns" and "Market Placebo" specifications, regressions control for an interaction of a company dummy (or country-specific company dummy for multi-country regressions) with the four Fama-French factors, (5.) All dates where a company changed its name or changed its outstanding shares by more than 5% were dropped, (6.) One day price changes greater than 50% in magnitude were dropped, (7.) "Successful coups" excludes Cuba, (8.) Public information controls include (a.) an exposure-interacted country specific effect of the number of New York Times articles mentioning a country and its leader by name and (b.) country-specific interaction between public event dummies and exposure, (9.) No NYT column drops all observations with any New York Times articles mentioning a country and its leader by name on that date, (10.) "Trend controls" control for local trends by including an additional dummy in an 20 day symmetric window around each authorization date, (11.) "Market Placebo" regresses the NYSE return on the exposure-interacted event dates, (12.) "Matched Placebo" replaces each company's stock return with that of the company with the closest market capitalization, factor loadings, and mean and standard deviation of returns within the same 3-digit SIC code, (13.) Log Volume runs the baseline specification with the log of volume as the dependent variable, (14.) Standard errors reported in parentheses are the maximum of clustered by company, clustered by date, and robust, (15.) Statistical significance at 10%, 5% and 1% levels is denoted by \*, \*\*, and \*\*\* respectively.

Table VI  
Small Sample Tests

		5 Country	Successful Coups	Chile	Congo	Cuba	Guatemala	Iran
Binomial Sign Test	4 Day CAR	0.0262	0.0393	0.0189	0.0768	-0.0086	0.0239	0.0243
	Asymptotic Standard Error	(0.0030)***	(0.0039)***	(0.0149)	(0.0195)***	(0.0076)	(0.0093)**	(0.0165)
	Number of Events	22	16	4	5	6	4	3
	Number Above Median	18	15	3	5	3	4	3
	P-Value: Analytical	0.0022***	0.0003***	0.3125	0.0313**	0.6563	0.0625*	0.1250
	P-Value: Simulated	0.0035***	0.0006***	0.3294	0.0355**	0.6602	0.0688*	0.1357
	Number Above 80th Percentile	13	12	2	5	1	3	2
	P-Value: Analytical	0.0001***	0.0000***	0.1808	0.0003***	0.7395	0.0272**	0.1040
	P-Value: Simulated	0.0002**	0.0000***	0.1921	0.0005***	0.7403	0.0314**	0.1033
	Number Above 90th Percentile	8	8	2	3	0	3	0
P-Value: Analytical	0.0009***	0.0001***	0.0523*	0.00856***	1.0000	0.0037***	1.0000	
P-Value: Simulated	0.0011**	0.0003***	0.0502*	0.0126**	1.0000	0.0059***	1.0000	
Uniform Rank Test	Mean Rank	0.7440	0.8195	0.6417	0.9350	0.4418	0.8803	0.8211
	P-Value: Analytical	0.0000***	0.0000***	0.1700	0.0000***	0.6852	0.0022***	0.0257**
	P-Value: Simulated	0.0006***	0.0000***	0.1766	0.0001***	0.6952	0.0033***	0.0261**

Notes I: (1.) This table reports 4 Day Cumulative Abnormal Returns using (exposure weighted) company portfolios for individual countries, (2) Multi-country estimates report averages of country portfolio returns, (3) Asymptotic standard error is computed using standard deviations of returns in the estimation sample; (4) , and \*, \*\*, and \*\*\* denote statistical significance using asymptotic inference at the 10%, 5% and 1% levels, respectively, (5) "Successful Coups" excludes Cuba.

Notes II (For the Binomial Sign Test): (1.) "Number above the median" (and 80th and 90th percentiles) reports the number of 4-day events above the median (and 80th and 90th percentile) of the abnormal return distribution in the estimation window, (2.) "P-Value: Analytical" reports the associated P-Value using the Binomial Distribution to give the probability of having at least X number of events above the cutoff (median or 80th or 90th percentile), (3.) "P-Value: Simulated" reports the p-value for a simulated distribution of having at least X number of events above the cutoff (median or 80th percentile or 90th percentile) out of Y total events, accounting for the cutoff value being estimated using the actual number of days in the estimation sample.

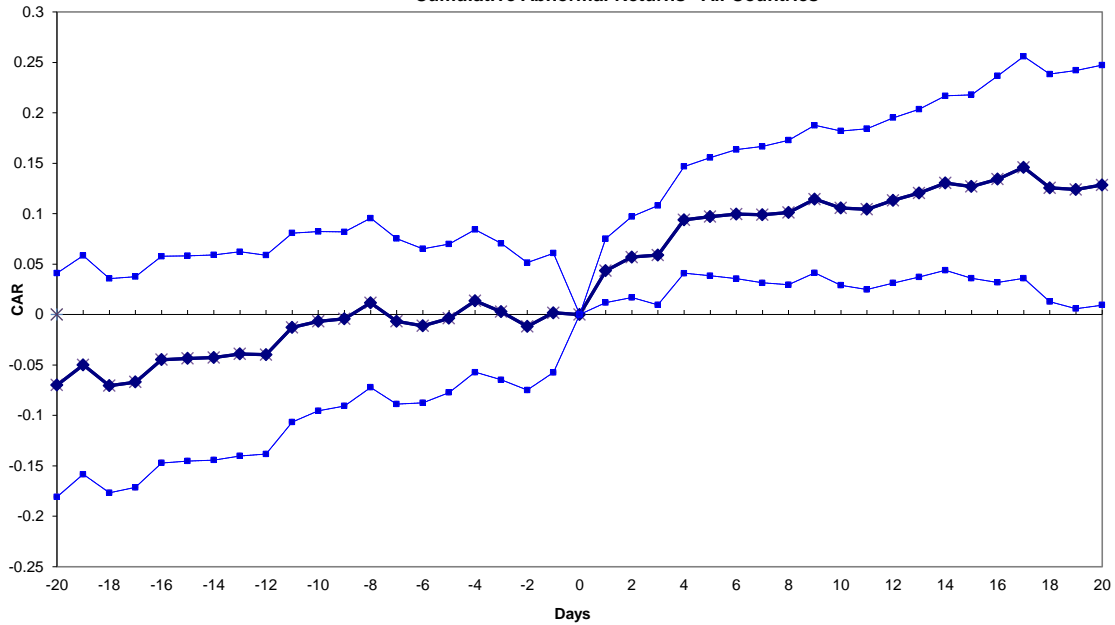
Notes III (For the Uniform Rank Test): (1.) "Mean rank" is the average percentile rank of abnormal returns for events relative to the estimation window, (2.) "P-Value: Analytical" uses the uniform distribution to calculate the probability of having an average rank of K events greater than or equal to M, (3.) "P-Value: Simulated" reports the p-value for a simulated distribution of having an average of K events having rank greater than or equal to M, accounting for the ranks being estimated using the actual number of days in the estimation sample.

Table VII  
Gains From Coup and Authorization Events

	Coup Begin	Coup End	Coup Window	First Day of New Government	12 Day Auth. Effect	Total Gain from Auth. Events	Total Gain from Auth and First Day New Gov	Relative Gain From Auth. Events
All			0.1211 (0.0463)*** 22173	0.1004 (0.0259)*** 22165	0.1204	0.3136	0.4455	0.7575
Top 4			0.1335 (0.0603)** 8571	0.1179 (0.0419)*** 8563	0.1459	0.4248	0.5928	0.7828
Chile	9/11/1973	9/11/1973	0.0613 (0.0250)** 6097	0.0613 (0.0250)** 6097	0.0183	0.0750	0.1410	0.5503
Congo	2/5/1961	2/5/1961	0.0869 (0.0947) 421	0.0869 (0.0947) 421	0.2283	0.2283	0.3350	0.7242
Cuba	4/15/1961	4/20/1961	-0.0445 (0.0283) 13602	-0.0546 (0.0141)*** 13602	0.0183	0.0370	-0.0196	-2.1047
Guatemala	6/19/1954	6/28/1954	-0.1030 (0.1737)	0.2274 (0.0704)*** 1235	0.2011	0.4426	0.7706	0.6606
Iran	8/15/1953	8/20/1953	0.1875 (0.1054)* 813	0.0703 (0.0526) 810	0.1359	0.4657	0.5686	0.8689

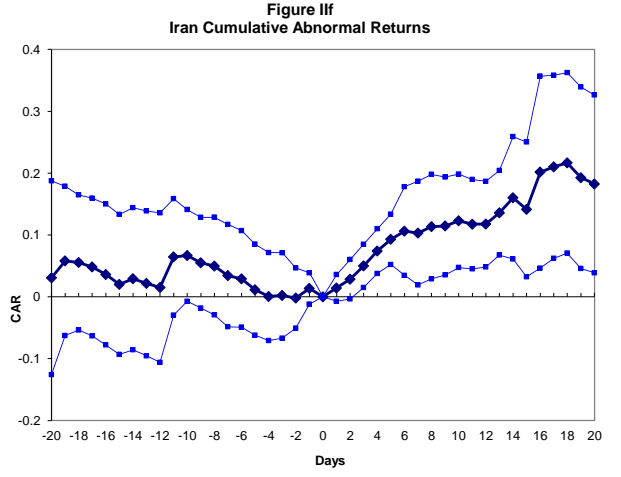
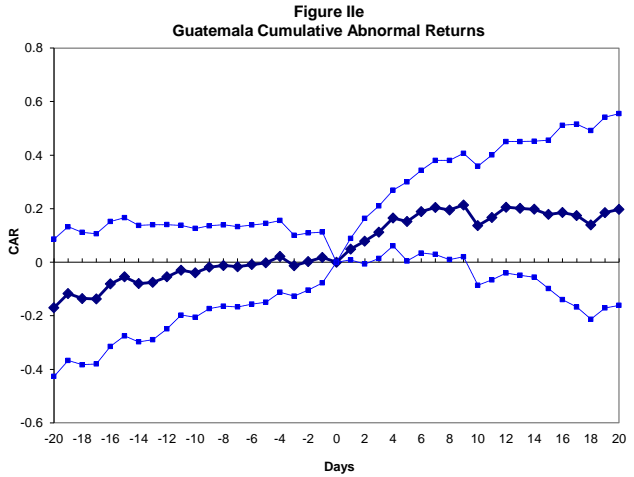
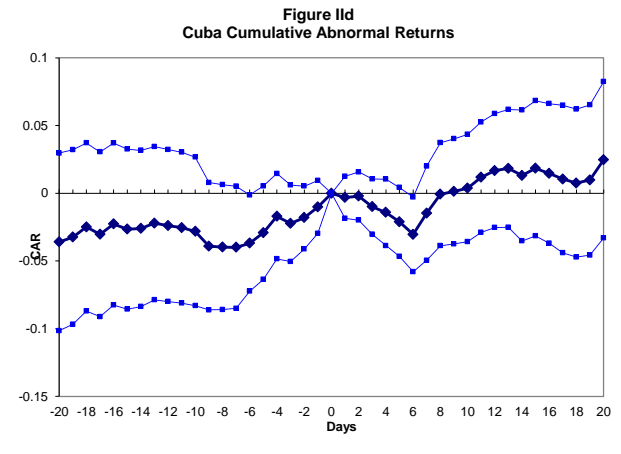
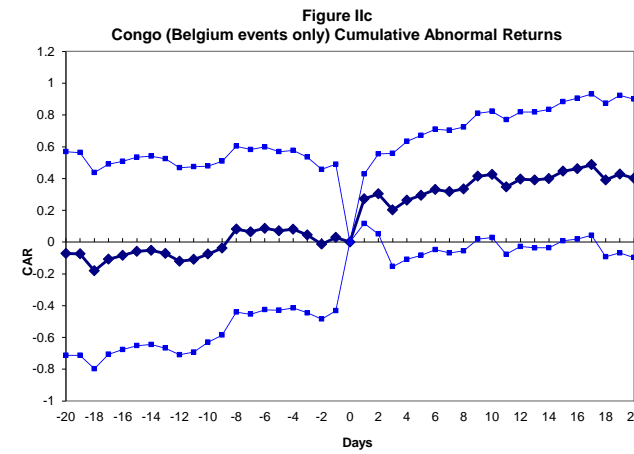
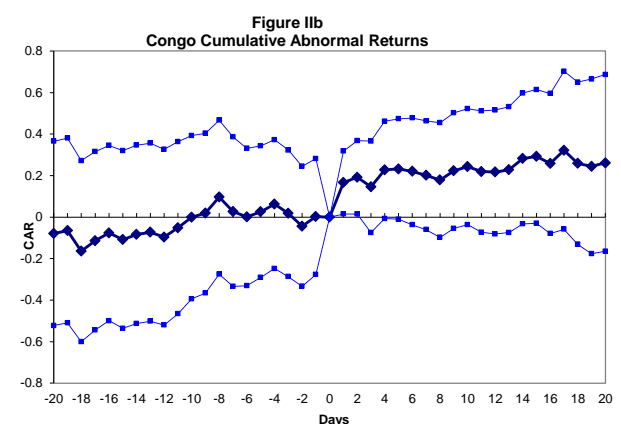
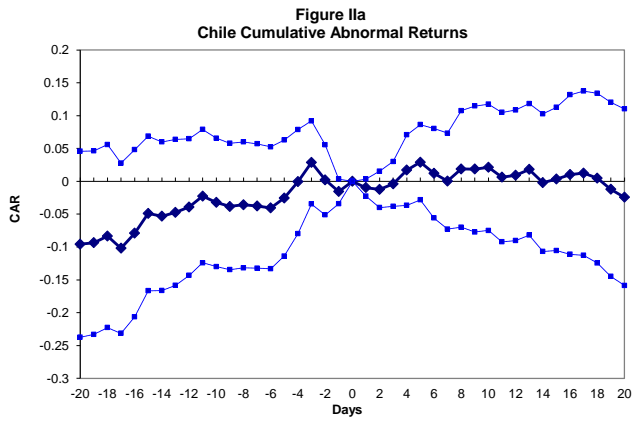
Notes: (1.) For single country regressions, the reported coefficient is on an indicator for the relevant coup period interacted with company exposure, multiplied by the length of the relevant coup period, (2.) Multi-country regressions report the mean of the country coefficients, (3.) The coup window is defined as the full length of time between beginning and end of the coup, the first day of the coup, or the first day of the new government after the coup (in the case of Cuba this is the first day after the end of the invasion), (4.) All regressions control for an interaction of a company dummy (or country-specific company dummy for multi-country regressions) with the four Fama-French factors, (5.) All dates where a company changed its name or changed its outstanding shares by more than 5% were dropped, (6.) Since Cuba's coup was unsuccessful, the stock price changes are negative, (7.) Standard errors reported in parentheses are the maximum of clustered by company, clustered by date, and robust. (8.) Statistical significance at 10%, 5% and 1% levels is denoted by \*, \*\*, and \*\*\* respectively. (9.) Per event authorization event gain is the cumulative abnormal return over a thirteen day period for a company in a country estimated individually, (10.) Total gains from authorization events is one plus the abnormal return to the power of the number of net events; in the case of Guatemala, the number of net events is 2 out of total 4 events since one event was an aborted coup and thus counted as negative; in the case of Congo, the number of net events is 1, because out of 5 events, two are negative; in the case of Cuba, the net events is 2 because 2 of the 6 events are negative, (11.) The multi-country decomposition raises one plus the estimated mean multi-country effect to the power of the average number of events across the relevant countries and uses the relevant multi-country first day of new government estimate for the gain from the coup event, (12.) The total gain from authorization plus coup events is the cumulative gain from the authorization events times one plus the gain from the first day of the new government, (13.) The relative gain from authorization events is the share of the total gain from the coup (including pre-coup stock market rises) due to authorization events.

**Figure I**  
**Cumulative Abnormal Returns - All Countries**



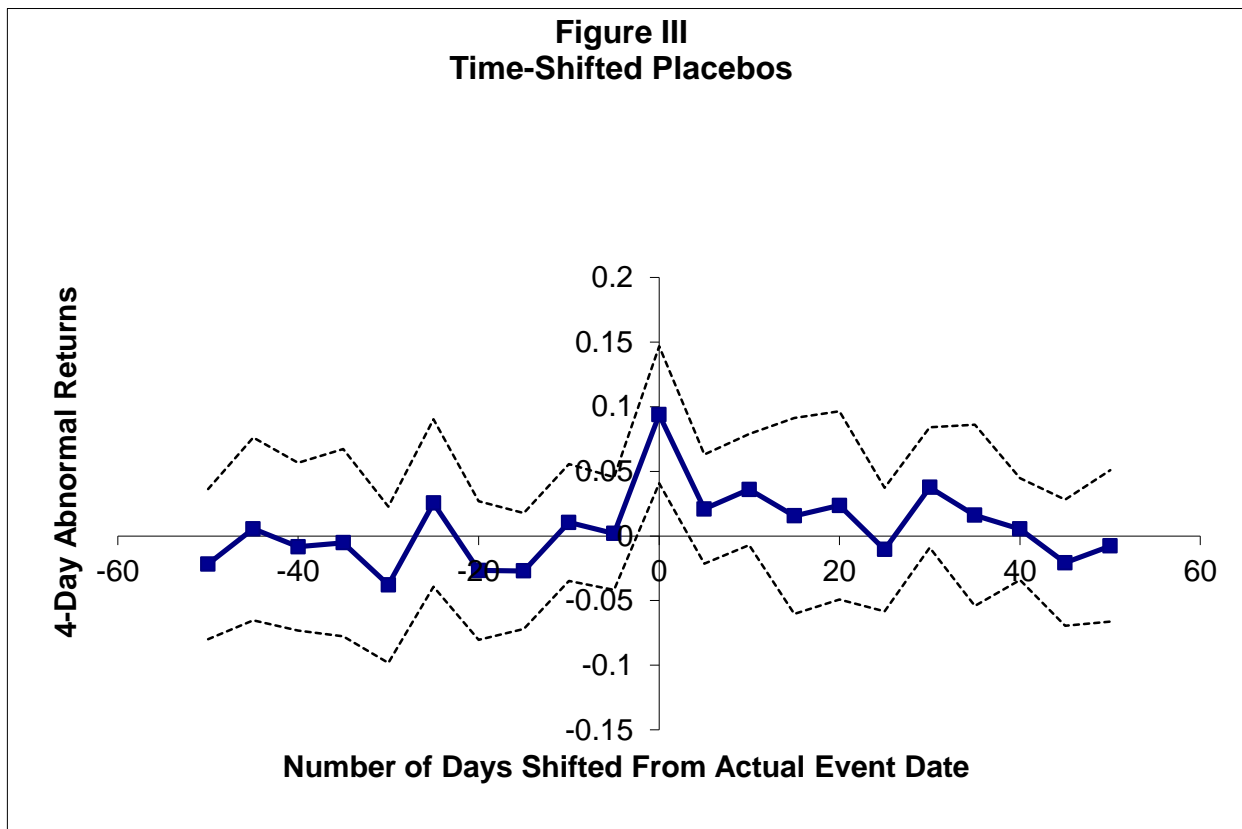
Notes: (1.) The thicker line (and the diamond symbols) represent the average of country-specific coefficients on an indicator for authorization events interacted with company exposure, multiplied by the length of the window, (2.) The horizontal axis labels denote the number of days before or after the authorizations which are included as part of the dummy variable for the authorization event, e.g., 4 refers to the return between the event date and four days after the event date while -4 refers to the return between four days prior to the event date and the event date, (3.) All regressions control for an interaction of a country-specific company dummy with the four Fama-French factors, (4.) All dates where a company changed its name or changed its outstanding shares by more than 5% were dropped, (5.) One day price changes greater than 50% in magnitude were dropped, (6.) The thinner lines (and square symbols) represent the 95% confidence interval using standard errors that are the maximum of clustered by company, clustered by date, and robust.





Notes: (1.) The thicker line (and the diamond symbols) represent the coefficients on an indicator for authorization events interacted with company exposure, multiplied by the length of the window, (2.) The horizontal axis labels denote the number of days before or after the authorizations which are included as part of the dummy variable for the authorization event, e.g., 4 refers to the return between the event date and four days after the event date while -4 refers to the return between four days prior to the event date and the event date, (3.) All regressions control for an interaction of a company dummy with the four Fama-French factors, (4.) All dates where a company changed its name or changed its outstanding shares by more than 5% were dropped, (5.) One day price changes greater than 50% in magnitude were dropped, (6.) The thinner lines (and square symbols) represent the 95% confidence interval using standard errors that are the maximum of clustered by company, clustered by date, and robust.

**Figure III  
Time-Shifted Placebos**



Notes: (1.) We plot (the thick line) the average of country-specific coefficients for a regression of daily stock returns on an indicator for authorization events interacted with company exposure and multiplied by the four day window including and after an authorization event, (2.) The horizontal axis labels denote the number of days by which we shift the authorization date, e.g., 20 represents the four day return if we shift the authorization day forward by 20 days, while -20 represents a four day return if we shift the authorization date backwards by 20 days, (3.) All regressions control for an interaction of a country-specific company dummy with the four Fama-French factors, (4.) All dates where a company changed its name or changed its outstanding shares by more than 5% were dropped, (5.) One day price changes greater than 50% in magnitude were dropped, (6.) The dashed line represent the 95% confidence interval using standard errors that are the maximum of standard errors clustered by company, clustered by date, and robust.

# Online Appendix

## A Historical Background on each Coup

### I Iran 1953

“Anglo-Iranian Rises on News of Mossadegh’s Fall” - August 20, 1953 *New York Times* Headline.

In 1951, Muhammed Mossadegh campaigned for prime minister on a platform of ending British ownership of Iranian oil. The Iranian parliament (the Majlis) had passed a measure supporting nationalization on March 25, 1951. Mossadegh was elected Prime Minister by the Majlis on April 28, 1951. His assumption of power on April 28 was followed quickly by a nationalization of Anglo-Iranian oil assets on May 1, 1951. Initially commanding a great deal of popular support, Mossadegh threatened the power of the Shah. The Shah dismissed Mossadegh on July 18th, 1952, only to reinstate him 5 days later after a barrage of popular protest. However, support for Mossadegh fell by the middle of 1953. The Truman administration had attempted to broker

a deal between the British and the Iranian government. With the advent of the Eisenhower administration, however, the U.S. government's interests in overthrowing Mossadegh increased. In late 1952, the British MI6 found an ear receptive to the idea of overthrowing Mossadegh in Allen Dulles, and final coup plans were jointly approved by the CIA and MI6 on June 18, 1953.

Churchill approved the coup plan on July 1, 1953, with Eisenhower's endorsement following 10 days later.<sup>1</sup> The United States and the United Kingdom spent hundreds of thousands of dollars on lobbying politicians and hiring crowds of demonstrators (Gasiorowski and Byrne 2004). They also convinced the Shah to dismiss Mossadegh and assume power directly. On August 16th, the coup began, but failed owing to logistical and planning problems. However, anti-Mossadegh protests and violence over the next few days culminated in Mossadegh's overthrow on August 19, 1953 (Kinzer 2004).

## II Guatemala 1954

“The overthrow of the Communist-dominated government of Guatemala, while causing a cessation of shipments from that country for a period of about 3 weeks, was a decidedly favorable development which will have far-reaching effects in the future.”- 1954 United Fruit Shareholder's Report

Guatemala has been historically marked by a high degree of political and

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<sup>1</sup>Our primary timeline on CIA/M16 activities in Iran comes from the *New York Times* construction of a timeline based on Wilber(1954) (declassified 2002), available at: <http://www.nytimes.com/library/world/mideast/041600iran-cia-index.htm>

economic inequality (Mahoney 2002; Dunkerley 1985). The center-left Arevalo regime that came to power in 1945, following the first free elections in the country, immediately provoked the anger of the coffee planters by striking down the most repressive of the labor regulations. The 1951 successor government, led by Jacobo Arbenz, had a policy platform centered around a comprehensive land reform and modernization plan. The leftist government thus threatened both the domestic coffee landlords as well as the United Fruit company, which owned over 40% of Guatemala's land, along with all the banana processing plants, virtually all of the shipping ports, and most of the railroads in the country (Gleijeses 1991).

On June 17, 1952, the agrarian reform bill was passed, and redistribution began on August 7 of the same year. The land reform bill also encouraged peasant land occupations, which were violently suppressed by landowners. On December 12, 1952, workers at the Tiquisate plantation filed for 55,000 acres to be expropriated from United Fruit under the agrarian reform bill. United Fruit petitioned the Supreme Court, which demanded a stay on all land confiscation and redistribution. In response, the Arbenz-dominated congress voted to impeach the Supreme Court. On February 25, 1953, the Guatemalan government expropriated 234,000 more acres from United Fruit, and subsequently another 173,000 acres in the following year.

The United States foreign policy establishment, prodded by United Fruit's intense public relations and lobbying effort, reacted to the 1952 implementation of the Arbenz land reform as evidence that the country was becoming communist.

Allen Dulles, then Deputy Director of the CIA, promoted the coup vigorously to Director of Central Intelligence (DCI) Walter Bedell Smith and President Harry Truman (Schlesinger and Kinzer 2005). On August 18, 1952, Operation PBFortune was approved by Bedell Smith, only to be halted on October 8, 1952, as potential leaks of the coup plot were discovered. However, with the advent of the Eisenhower government, Allen Dulles was promoted to DCI, and approved a new plan to overthrow Arbenz on December 9, 1953. Full approval was given by Eisenhower given on April 19th, 1954 (Cullather 1999)<sup>2</sup>.

The coup was launched on June 19, 1954 when US-backed Castillo Armas and his force of 150 troops invaded Guatemala from Honduras. While at first the coup was unsuccessful, after 9 days, on June 28, 1954, the Arbenz government capitulated (Immerman 1983).

### III Cuba 1961-1962

“Stock prices, like bond prices, advanced at first in sympathy, and then declined with disagreement over the unsuccessful invasion attempt. For instance, on the big board, Cuban American Sugar, largely American owned, and with some diversification in this country, rose  $4\frac{3}{8}$  points to  $23\frac{3}{4}$ , a new high for the year, but closed on Friday at  $19\frac{3}{4}$ .” - April 23, 1961 *New York Times* article.

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<sup>2</sup>Also see Cullather’s declassified 1994 CIA timeline, our source for events, which is available at: <http://www.gwu.edu/~nsarchiv/NSAEBB/NSAEBB4>

On January 1, 1959, the Cuban dictator, Fulgencio Batista, fled Cuba to the Dominican Republic. On January 3rd, the new government was set up and on January 8 of 1959, Fidel Castro's march through Havana signalled that the Cuban revolution was a *fait accompli*.

Following an initially lukewarm reaction from the United States, and a friendly U.S. tour by Castro in April of the same year, relations chilled quickly when Castro obtained 100 advisors from the USSR and expropriated all foreign (largely U.S.) landholdings in May, 1959. Covert plans to overthrow Castro began in the fall of 1959, modelled on the Guatemalan intervention and with many of the same CIA officers involved<sup>3</sup>. On March 17, 1960, Eisenhower gave presidential approval to the CIA's plan, and later authorized 13 million dollars towards the overthrow of the Castro regime. The date of the coup was set for August 19, 1960. The plan involved a small group of trained Cuban exiles who would invade, establish a beachhead, and draw support in the countryside, eventually deposing Castro. Publicly, the U.S. responded to the increased closeness of the Castro government with the Soviet Union by progressively increasing economic sanctions and diplomatically ostracizing the new Cuban government. In retaliation, the Cuban government began nationalizing other U.S. held assets in Cuba on August 5, 1960 and continued through October of the same year (Dominguez, 1993).

When Kennedy assumed power in January 1961, he authorized continuation

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<sup>3</sup>Our timeline on CIA activities in Cuba comes from the National Security Archives, available at: <http://www.gwu.edu/~nsarchiv/bayofpigs/chron.html>

of the CIA plan on January 30, 1961, after extensive deliberation with advisors. Having moved up the timetable, the invasion finally began on April 15, 1961, with a diversionary landing and air attacks on airfields, while the actual landing of the exile army occurred on April 17. After three days of fighting, after the last of the invaders were captured by the Cuban military, it became very clear that the invasion was a failure. There is ample speculation as to why the invasion failed. Firstly, there were regular leaks of the plans to the press, forcing the timetable acceleration as well as giving the Cubans plenty of advance warning. The CIA had also falsely predicted a popular anti-Castro uprising following the invasion. In addition, the U.S. operation against Cuba was characterized by a large number of miscommunications and logistical errors (Gleijeses 1995; Weiner 2007; Prados 2006), culminating in Kennedy's decision not to provide air support to the exile invasion force (Kornbluh 1998; Vandenbroucke 1984).

While defeated at Bay of Pigs, the Kennedy administration continued its opposition to the Castro regime. On November 4, 1961, Kennedy authorized General Edward Lansdale to begin planning another military operation against Cuba. However, Kennedy was again reluctant to fully commit U.S. military resources, which leads deputy chief of the Cuba desk Sam Halpern to describe Operation Mongoose as “utter nonsense” (Weiner 2007 p. 125). In addition, it was leaked to the press as well as Castro and the Soviets, as Dobb notes:

“It was, in fact, the worst possible foreign policy combination: aggressive, noisy, and ineffective. It was clear to anybody who paid attention to leaks



in the American press and rumors in the Cuban exile community that the Kennedys were out to get Castro. There was enough substance to Mongoose to alarm Castro and his Soviet patrons into taking countermeasures-but not enough to threaten his grip on power [...] At the end of its first year, Operation Mongoose was shaping up to as an almost perfect failure.” (Dobb 2009, p. 14).

The Cuban missile crisis forced the Kennedy government to call off Operation Mongoose at the end of October, 1962. Relations between Cuba and the United States further deteriorated, with the CIA conspiring regularly to assassinate Castro in the decades following the coup attempt.

#### IV Congo 1960-61

“Katanga Concern Has Record Year. Mining Group Reports Big Copper Rise in ‘60 Despite Disruptions in Congo.” - *New York Times* column headline, Feb 8, 1961.

The Congo became formally independent from Belgium on June 30, 1960.<sup>4</sup> Patrice Lumumba, an ardent Congolese anti-colonial organizer and the Congo’s first prime minister, immediately had two problems on his hands. The first was the secession of Katanga, the copper rich state that had been an enclave of Union Minière d’Haut Katanga. The other was a rebellion of the Congolese military over the preservation of white officers and pre-colonial

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<sup>4</sup>Much of this account is drawn from De Witte (2001), who also provides the chronology that we use to construct events

wage scales. Moïse Tshombe, the leader of Katanga, anticipated the loss of wealth that would come with integration with an independent Congo, as the Belgian government had promised to turn over the shares in Union Minière to the Congolese government. However, the Belgian parliament had also established the legality of Katanga's secession was determined while Congo was still a colony, on June 15th, in the Belgian parliament. To compound things, another province, South Kasai, also declared its independence.

The mineral holdings, including uranium, gold, as well as vast amounts of copper, were a large part of what was at stake in the Congo political crisis. The secession of Katanga was backed by the Belgian government as well as Union Minière, which had extensive connections with the Belgian colonial administration as well as Belgian king Baudouin's court, and thus had access to the 6000 Belgian troops that are stationed in Katanga. Lumumba appealed to the UN security council, which responded by demanding that Belgium evacuate its troops and that UN peacekeepers be stationed in the Congo for military assistance. However, the UN secretary general, Dag Hammarskjöld refused to allow the UN troops to be used to subdue and occupy Katanga. Lumumba then requested the Soviet Union for military assistance to subdue Kasai and Katanga.

The acceptance of Soviet military aid in August finally pushed the CIA to begin planning to eliminate Lumumba. During a national security council

meeting on August 18th, Eisenhower “makes it clear that he favors Lumumba’s removal” (De Witte 2001). The plot, codenamed “Project Wizard,” included deploying a poisoner to the Congo. Meanwhile, the Belgian government was orchestrating its own independent action to eliminate Lumumba, codenamed “Operation Barracuda,” which Colonel Marliere began planning on September 11, 1960.

Meanwhile, the political conditions in the Congo changed very quickly, and President Kasavubu dismissed Lumumba on September 5. While Lumumba rejected the dismissal and obtained a parliamentary vote of confidence, a new actor, army chief Joseph Mobutu declared Lumumba under arrest on September 12th, and enacted a coup d’etat on September 14th. However, it took a full month for Mobutu to encircle Lumumba’s house. On October 10, Mobutu finally cordons off Lumumba’s house, which though still protected by UN troops, effectively kept Lumumba confined to his home. With this arrest, the Belgians subsequently called off the official Operation Barracuda. However, both the Belgians and the Americans were concerned that Lumumba remained a threat, and the CIA operation remained in effect.

On November 27, Lumumba escaped from his house, but was shortly recaptured and imprisoned in the military base at Thysville on December 2nd. Confident that the UN will no longer protect Lumumba from Mobutu, the United States cancelled its operation to assassinate Lumumba. Fearing a

pro-Lumumba soldier's revolt at Thysville, Mobutu's Belgian advisors urged him to transfer Lumumba to Katanga, where he was secretly killed, with Belgian involvement, on January 18th, with his death not publicly announced until February 13th, 1961.

## V Chile 1971-73

“Anaconda was one of those on the plus side, rising  $\frac{7}{8}$  to  $22\frac{7}{8}$ . Its strength was attributed partly to the revolt yesterday in Chile against the Marxist government, which, in 1971, expropriated the holdings of Anaconda and other U.S. companies.” - September 12, 1973 quote from the *Wall Street Journal*

The Allende government that narrowly won elections on September 4, 1970 had already overcome a long series of U.S. and domestic obstacles, beginning in 1958 with Allende's first run for president <sup>5</sup>. Through the Alliance for Progress program, the United States had been heavily involved with Chilean domestic politics, trying to deflate the left-wing FRAP alliance (Sigmund 1977) and more generally create a positive example of a free-market, democratic economy in Latin America. The Christian Democrats, backed by the U.S., handily won the 1964 municipal elections, as well as the 1965 senate elections.

The September 4, 1970 elections were sufficiently close that Allende's ratification

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<sup>5</sup>Our primary timeline on CIA activities in Chile comes from the declassified Church report, available at: [http://www.aarclibrary.org/publib/church/reports/vol7/pdf/ChurchV7\\_13\\_Appendix.pdf](http://www.aarclibrary.org/publib/church/reports/vol7/pdf/ChurchV7_13_Appendix.pdf)

as president required a congressional vote on October 24, 1970, a fact that the first U.S. plan tried to exploit.

Copper was by far the most important industry in Chile. Within 2 months of assuming office, Allende had proposed nationalizing the mines, and on July 11, 1971, the Chilean legislature approved nationalization. While domestic pressure for “Chileanization” of the large copper mines was omnipresent, the Christian Democrats favored a majority shareholder stake for the government, together with generous compensation, and retention of both foreign management and rights of control. This was in contrast to the position of Allende’s FRAP, which demanded outright nationalization and a much smaller compensation package. In particular, on September 28, 1971, the government declared that the copper multinationals had been making “excess profits” since 1946, and deducted this from the compensation package.

The U.S. began plotting for a coup even before Allende formally assumed power, with Nixon authorizing an anti-Allende plan on September 15, 1970. Coup planning and funding authorization after this was delegated to the 40 Committee, which was set up in the wake of the Bay of Pigs failure in order to operate as the mediating body between the upper echelons of the executive branch of the US government and the CIA. The CIA and the State Department began two tracks in the fall of 1970; Track 1, which involved public political support for Allende’s domestic opponents, and Track 2 which involved covert political operations against the government (U.S. Senate, 1975). Track 1 ended with Allende’s ratification by the legislature,

but “Track 2 never really ended.”<sup>6</sup>

On January 28, 1971, the 40 committee appropriated \$1.2 million for the overthrow of the Allende regime. This was followed by an additional \$1.4 million on October 26, 1972. Finally, on August 21, 1973, a few months after Allende managed to strengthen his electoral support in the March 4, 1973 municipal elections, the 40 committee allocated \$1 million to overthrow Allende. While the true extent of CIA participation in the 1973 coup that deposed Allende is unclear, it is known that they supported and had knowledge of Pinochet’s coup plan (Kornbluh 2003). On September 11, 1973, the Allende government was toppled in a military coup.

## B Coup Selection

We selected our sample of coups on the following basis: (1.) a CIA timeline of events or a secondary timeline based upon an original CIA document existed, (2.) the coup contained secret planning events including at least one covert authorization of a coup attempt by a national intelligence agency and/or a head of state / ministry, and (3.) the coup authorization was against a government which expropriated or threatened to expropriate property of at least one exposed multinational firm with publicly traded shares<sup>7</sup>. Table I shows a full list of CIA operations from Prados (2006). The highlighted

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<sup>6</sup>CIA officer Tom Karamessines, cited in (Weiner 2007, p. 315).

<sup>7</sup>It turns out that the third criterion is redundant. All covert coups with available planning documents had at least one publicly listed multinational company with nationalized property.

operations are those that met our criteria, which limited us to 5 coup attempts. Operation Ajax in Iran in 1953 led to the overthrow of Muhammed Mossadegh. Operations PBFortune and PBSuccess in Guatemala in 1952 and 1954 respectively culminated in the overthrow Jacobo Arbenz Guzman. The US unsuccessfully attempted to overthrow the Fidel Castro government in Operation Zapata in 1961. We also include Operation Wizard, which was the attempt to assassinate Lumumba in the Congo, which, while not directly successful, did indirectly result in Lumumba's death. Finally, Operation FU/Belt in Chile, which began in 1970 with a failed assassination attempt of Salvador Allende, contributed to Allende's overthrow in the 1973 coup.

Figure A1 validates our selection of coups using a new source of data. Automatically scraping the CIA electronic reading room search engine,<sup>8</sup> we count the number of secret CIA documents each year that have been declassified as of July 14, 2010 that refer to a particular country. We consider this a crude proxy for CIA interest and involvement, but it is important to note that this is still subject to selection bias in declassification. We then merge that data with the Polity 4 indicator for a regime change, and a list of expropriations of U.S. property provided by Noel Maurer (augmented with Anglo-Iranian in Iran and Union Minière in Congo). We then plot the number of CIA documents. The resulting graph shows the log of the number of CIA documents for each country-year within 1 year of an expropriation and 1 year of a political transition. Our graph suggests that we are indeed

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<sup>8</sup>Available at <http://www.foia.cia.gov>

capturing the instances of political change and expropriation that drew a disproportionate amount of the CIA's interest. The other country-years in the graph, for example Brazil and Indonesia, were regime changes that were roughly contemporaneous with expropriations, and generated substantial CIA interest, but no involvement in the regime change to the best of our knowledge. Only Brazil in 1962, out of the 49 countries in the sample has more CIA documents than the highest interest year for any of the countries in our sample.

We select our treatment companies based upon exposure to nationalization. We follow a four stage procedure. We first examine all the nationalizations in the timelines. If companies are mentioned by name, we include them. Second, we augment this list with lists of nationalized companies from Congressional testimony<sup>9</sup>. Third, we use only publicly listed companies. We obtain lists of publicly listed companies from CRSP for companies listed in US stock exchanges. To this we add (1.) the Anglo-Iranian Oil Company, a British firm whose stock price was listed on the London Stock Exchange in the *New York Times* Finance Section and (2.) Union Minière de Haute Katanga, a Belgian company listed on Antwerp's exchange and which was copied by hand from archives in Antwerp by Frans Buelens. Lastly, we only include companies with accessible exposure data. We compute exposure as the value of assets in the foreign country divided by value of outstanding shares. We

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<sup>9</sup>The US Congress held hearings on Chilean and Cuban nationalizations of assets held by US based multinationals in 1974.



use data on nationalized asset claims where available and gross investments where not available.

We calculate asset exposures using a variety of sources. For Iran, there is only one company. We use compensation amounts reported in Bamberg (2000). For Guatemala, there is also only one company. We make use of United Fruit shareholders reports from 1953 and 1954 and augment them with compensation amounts reported in Gleijeses (1991). For the Congo, we use De Witte (2001). For Cuba, the department of justice maintains a list of all property claims made by U.S. nationals against the Cuban government. We use the amounts claimed in this list to calculate exposures of U.S. corporations in Cuba. For Chilean companies, we obtain expropriation amounts listed in Baklanoff (1975). Details are in the next section.

For each company, we collect a time series consisting of the closing price, a value weighted index of the New York Stock Exchange, the three digit SIC industry code, the number of outstanding shares and where readily available the volume of shares traded<sup>10</sup>. We also extract the daily closing price of a matched company in the same three digit industry as the expropriated company. For a measure of public political information, we also collect the number of *New York Times* articles in a given day that list both the country and the regime leader. A list of companies and summary statistics by company are in online Appendix Table AI.

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<sup>10</sup>We only have volume data for companies listed on US exchanges.

## C Exposures

We compute exposure ratios of multinational corporate assets to nationalization by foreign governments. We use the average value of outstanding shares during the last year of the estimation window as the value of the company. We also compute the value of exposed assets for each company which satisfies our selection criterion. In later years, compensation requests were made by companies to the US government. Where this data is available, we use it. In the case of Iran and Guatemala, we reconstruct asset exposures using available valuations of sub-assets held by the multinational in the country.

### I Iranian Companies (Anglo-Iranian Oil Company)

After the coup, the Anglo-Iranian Oil Company (AIOC) received 40% of Iran's oil assets, while the rest went to a consortium of French and American companies. While we do not know exactly how much the oil assets are worth, we can calculate the expected compensation from what AIOC asked from the consortium. Bamberg (1994, p. 501) writes that Fraser, the negotiator for AIOC vis-a-vis the British and American governments, asked for 530 million pounds directly from Iran together with 280 million pounds from the consortium (for the AIOC assets that the consortium was getting), a total of 810 million pounds in compensation.

To compute the total value of the Anglo-Iranian Oil Company, we use 143.7 pounds sterling, the mean share price from January to May of 1950.

Unfortunately, the *New York Times* historical records from “Bonds and Shares on the London Market” does not contain the number of shares outstanding. Nevertheless, we obtain annual share volumes from Howarth *et al.* (2007), which reports 20,137,500 shares outstanding for Anglo-Iranian from 1930 to 1953. Concomitant with the change to British Petroleum, the company split the stock by a factor of 5. This generates a market value of 2.89 billion pounds sterling. We use the 1953 dollar exchange rate (obtained from eh.net) of \$2.81 to obtain 2.31 billion as the value of the expropriated assets and 7.46 billion as the market value.

## II Guatemalan Companies (United Fruit Company)

United Fruit experienced 3 episodes of land expropriation under Decree 900 of the Arbenz government. The first, in March 1953, was the only one for which compensation was formally demanded via the State department. United Fruit asked for “more than 15 million”<sup>11</sup>, which Gleijeses found was 19.35 million, in compensation for roughly 234,000 acres<sup>12</sup> valued at \$83.3 each. The Guatemalan government instead offered \$610,000 in agrarian bonds, paying 3% interest over 25 years, which equals \$1.3 million in total. The total land owned by United Fruit in Guatemala was 550,000 acres, including improved and unimproved lands. Assuming a constant per-acre valuation, we can calculate the value of all of United Fruits land, which we calculate to be  $\$550,000 \times 83.3 = \$45.8$  million.

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<sup>11</sup>United Fruit Company 1954 shareholders report.

<sup>12</sup>FRUS:Foreign Relations, 1952-1954, vol. IV, pp. 1056-1057 (Document 13).

The other major asset of United Fruit in Guatemala was their ownership of railroads, which was also threatened by the Arbenz government, even though no railroads were nationalized. Part of the threat came from modernization projects (e.g. an Atlantic highway) that threatened the profitability of the railroad as a monopoly on long-distance transit. The 1954 shareholders report for United fruit lists that the total value of railways and tramways was US \$29.5 million. United Fruit had 185.17 miles of railways in Guatemala, out of 1,486.31 miles total, and 43.78 miles of tramways out of 181.49 total. Thus, the fraction of their railways in Guatemala is 0.124, and the fraction of tramways is 0.241. Thus, the total rail and tramway fraction in Guatemala is 0.137. Assuming a constant value of rail and tram across countries, we get that the value of rail and tram assets in Guatemala is 29.5 million dollars. Putting these two pieces of information together, we get that the total exposure of United Fruit in Guatemala was US \$45.8 million plus US \$29.5 million, totalling \$75.3 million dollars.

### III Chilean Companies

We calculate the exposure of the Chilean copper companies from Baklanoff (1975), who reports the amounts claimed by each of the copper companies. Baklanoff's source, a Congressional hearing on expropriations in Chile (U.S. Congress 1973), provides lists of other companies nationalized. For the other companies reported as nationalized, we use the NACLA "New Chile" book, which gives the value of investment in 1970 for most foreign companies and

US parent percentage equity, to calculate exposure. The NACLA numbers are obtained from a variety of sources. NACLA lists both the business press (e.g. Forbes) and official Department of Commerce publications, among others. However, it is not possible to determine where each company's investment numbers in Chile comes from. We cross-check the NACLA numbers with the Congressional testimony of ITT's executives as to the worth of their expropriated investments, and find, reassuringly, that ITT's investment in Chile is listed at \$153 million by both sources.

#### IV Cuban Companies

We obtain the amounts expropriated by the Cuban government from the Department of Justice, which provided us with a 1972 list of claims filed by American individuals and corporations with the Foreign Claims Settlement Commission against Cuba for expropriated property. In order to account for inflation, we calculate the mean inflation rate between 1959 and 1972, 3% from the BLS CPI-U index, and used it to calculate the value of the assets in 1959.

#### V Congo Companies (Union Minière)

The negotiations for independence in Congo included the Belgian government transferring Union Minière shares to the newly independent Congolese government. The Katangan secession preempted the actual transfer, as well as exempted Union Minière from any taxes they would have had to pay the new government,

as that all Union Minière assets were in the seceded territory. Thus we use for the expropriated assets the amount that the company paid to the Katangan leader, Moïse Tshombe, in lieu of the tax payments they would have had to make to the newly independent Lumumba government. De Witte (2001, p. 32) gives this number as 1.25 billion francs.

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Online Appendix Table A.I  
Public Event Selection

Date	Country	Description	Good
September 4, 1970	Chile	Allende Wins Election	N
October 24, 1970	Chile	Legislature Votes for Allende	N
December 21, 1970	Chile	Allende Proposes Mine Nationalization	N
July 11, 1971	Chile	Amendment Allowing Nationalization of Copper	N
September 28, 1971	Chile	Excess Profits Subtracted From Nationalization Comp.	N
September 29, 1971	Chile	Chitelco (owned by ITT) Nationalized	N
May 12, 1972	Chile	ITT Expropriation Requested by Allende	N
March 4, 1973	Chile	Allende's Party Get 43% of Vote in Elections	N
June 15, 1960	Congo	Law Allowing Katangan Secession Passed	N
July 11, 1960	Congo	Katanga Secedes	N
September 14, 1960	Congo	President Kasavubu Dissolves Parliament	N
October 11, 1960	Congo	Lumumba Put Under House Arrest	Y
February 13, 1961	Congo	Katanga Announces Death of Lumumba	Y
January 1, 1959	Cuba	Castro Comes to Power in Cuban Revolution	N
August 5, 1960	Cuba	Cuba Nationalizes Electricity, Oil, Telephone, Sugar	N
October 12, 1960	Cuba	Cuba Nationalizes Sugar, Beer, Liquor, Soap	N
October 24, 1960	Cuba	Cuba Nationalizes 166 More Businesses	N
November 11, 1950	Guatemala	Arbenz Elected	N
June 17, 1952	Guatemala	Arbenz Enacts Agrarian Reform Bill	N
August 7, 1952	Guatemala	Distribution of Land Under Agrarian Reform Bill Begins	N
December 12, 1952	Guatemala	Workers File for Expropriation of 55,000 Acres From UF	N
February 5, 1953	Guatemala	Congress Impeaches Court to Fasten Reform	N
February 24, 1954	Guatemala	Guatemala Confiscates 234,000 Acres	N
March 25, 1951	Iran	Iranian Parliament Backs Oil Nationalization	N
April 28, 1951	Iran	Prime Minister of Iran Quits and Mossadeq Elected	N
July 18, 1952	Iran	Ghavam Replaces Mossadeq as Prime Minister	Y
July 23, 1952	Iran	Mossadeq Comes Back As Prime Minister	N
August 4, 1953	Iran	Mossadeq Asks For Parliament to be Dissolved	N

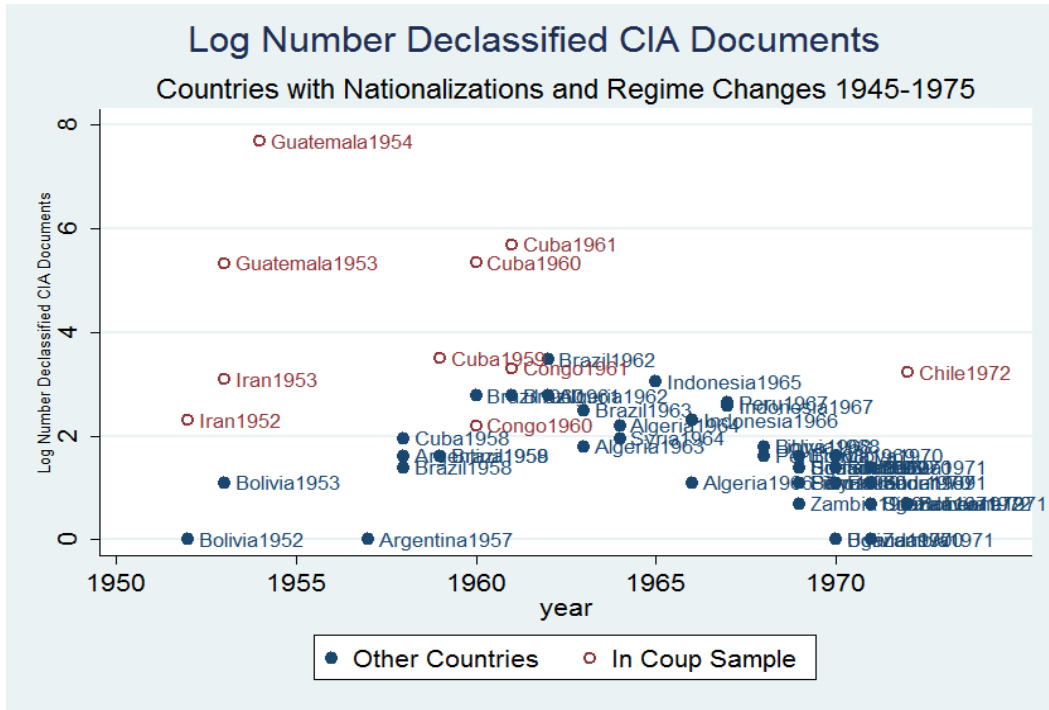
Notes: (1.) Date is the date of the event, (2.) Country is the target country of the coup attempt, (3.) Description gives a brief description of the event, (4.) Good is coded as Y if the event should raise the share value of the company and N if the event should lower the share value of the company.

Online Appendix Table A.II  
Matched Placebo Companies

Treatment/Matched	Country	Company	SIC	Market Cap	Market Beta
T	Cuba	American Sugar Refng Co	206	58400000	0.6700
M	Cuba	Great Westn Sugar Co	206	49800000	-1.1500
T	Chile	Anaconda Co	333	48000000	1.4000
M	Chile	Kaiser Aluminum & Chemical Corp	333	49600000	1.6500
T	Chile	Bethlehem Steel Corp	331	97900000	1.4100
M	Chile	Republic Steel Corp	331	49900000	1.4200
T	Chile	Cerro Corp	103	15300000	0.9800
M	Chile	Dresser Industries Inc	103	17600000	1.4200
T	Iran	Anglo-Iranian	131	746000000	0.4500
M	Iran	Gulf Oil Corp	131	343000000	0.9900
T	Cuba	Coca Cola Co	208	60500000	0.7700
M	Cuba	Distillers Corp Seagrams Ltd	208	48100000	0.9800
T	Cuba	Continental Can Inc	341	55500000	0.6600
M	Cuba	National Can Corp	341	37000000	0.7500
T	Cuba	Freeport Sulphur Co	147	22600000	0.9100
M	Cuba	Texas Gulf Sulphur Co	147	44300000	0.5200
T	Cuba	International Tel & Teleg Corp	359	54000000	1.7200
M	Cuba	Curtiss Wright Corp	359	12800000	1.3900
T	Chile	International Tel & Teleg Corp	359	257000000	1.2700
M	Chile	Curtiss Wright Corp	359	12800000	1.3900
T	Cuba	Lone Star Cement Corp	327	25200000	0.9600
M	Cuba	Flintkote Co	327	8710000	0.9100
T	Guatemala	United Fruit Co	514	53100000	0.7500
M	Guatemala	Kroger Company	514	26000000	0.0700
T	Cuba	United Fruit Co	514	30300000	0.9500
M	Cuba	Kroger Company	514	26000000	0.0700
T	Cuba	Woolworth F W Co	566	55800000	0.6400
M	Cuba	General Shoe Corp	566	11400000	-6.2300
T	Cuba	Canada Dry Corp	208	4900000	0.7500
M	Cuba	Distillers Corp Seagrams Ltd	208	48100000	0.9800
T	Congo	Union Miniere	102	7400000	0.1400
M	Congo	Hudson Bay Mng & Smlt Ltd	102	15500000	0.2200
T	Cuba	Colgate Palmolive Co	284	27900000	1.1900
M	Cuba	Revlon Inc	284	46000000	1.2300
T	Cuba	Swift & Co	671	24400000	0.6800
M	Cuba	Mississippi River Corp	671	12800000	0.7600
T	Chile	General Tire & Rubr Co	306	32900000	1.1100
M	Chile	Associated Oil & Gas Co	306	36600000	1.3900

Notes: (1.)T indicates a company in the main sample, the M below it indicates the corresponding matched placebo, (2.) Country is the target country of the coup attempt, (3.) Market Cap is the average price times the outstanding shares starting two years before the nationalizing regime comes to power and ending one year before the nationalizing regime comes to power.(4.) Market beta is the company's correlation with the NYSE starting 3 years before the nationalizing regime comes to power and ending one year before the nationalizing regime comes to power, (5.) The matched company was found using Mahalanobis matching based upon Market Cap and Market Beta within the same 3 digit industry as the expropriated company.

Online Appendix Figure AI  
 Coup Selection



Notes: (1.) The graph plots the log of the number of declassified CIA documents for all country-years that are within 1 year of a regime change in that country, as measured by Polity IV or within 1 year of an expropriation of US multinational property in that country (as defined in data provided by Noel Maurer), or within 1 year of the nationalization of Anglo-Iranian in Iran or the secession of UMHK territory in Katanga. (2.) Regime changes used in our sample are denoted as open circles, while other regime changes are denoted as closed circles.