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THE VALUE OF POLITICAL
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ABSTRACT

Betting on Hitler - The Value of Political Connections in Nazi Germany*

We examine the effect of close ties with the NSDAP on the stock price of listed firms in 1932-33. We consider not only links between the National Socialists and executives, as was common in earlier work, but also with supervisory board members – whose importance is hard to overestimate in the case of German industry. One implication of our work is that, weighted by stock market capitalization in 1932, more than half of listed firms on the Berlin stock exchange had substantive links with the NSDAP. Crucially, stock market investors recognized the value of these links, sending the share prices of connected firms up as the new regime became firmly established. While the market as a whole rose after Hitler's accession to power, firms with board members known to favour the party (or backing it financially) outperformed the market by 5-10% between January and May 1933. We show that this finding is robust to a range of additional control variables and alternative estimation techniques.

JEL Classification: E60, G14, G18 and N24
Keywords: market efficiency, Nazi party, political connections and stock market returns

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What is the value of political connections? Numerous studies have grappled with this issue. Recently, scholars have used event-study methods to analyze this question in the context of the East Asian financial crisis. Because it was unexpected, it offered a natural experiment to test the value of patronage by Suharto in Indonesia, and by Mahathir or Anwar in Malaysia.[1] Since the pioneering studies by Fisman, Johnson and Mitton, the literature has evolved quickly.[2] Yet one of the key events in the history of the 20th century has not been examined – the Nazi rise to power. While big business and its contributions to the party have attracted considerable attention, and the extent to which major firms such as Mercedes-Benz and IG Farben profited from slave labor has been examined closely, the value of connections with the new regime in 1933 has not been analyzed.

As Fisman noted, the more centralized an economic system, the greater should be the value of close links with the political elite. The case of Germany in 1933 is instructive in this regard. While the Weimar Republic's federal structure might have been a stumbling block to the centralization of economic policymaking, it quickly became clear that the new government was making a bid for absolute power throughout the Reich – facilitated by the *Preußenschlag* of 1932, when the federal government took over the running of Prussia, the largest member state. The Nazis and their allies in the coalition that had brought Hitler to power on January 30, 1933, were also calling for more central coordination of economic policy, so that observers must have been clear on the potential value of close links with the new party as it became firmly established.

The traditional historiography devoted considerable attention to the NSDAP's fundraising prior to its 'seizure of power'. Following the conviction of leading figures such as Friedrich Karl Flick, Alfred Krupp, and I.G. Farben executives during the Nuremberg trials, much of the literature took it for granted that major German firms had financed the Nazi party's rapid rise after 1930. Autobiographies of leading figures and refugees, such as Fritz Thyssen's *I Paid Hitler* reinforced this impression.[3] Testimony from senior Weimar officials who had fled the country, prominent foreign

[1] Fisman 2001; Johnson and Mitton 2003.
[2] Faccio 2003, Faccio, Masulis and McConnell 2004.
[3] Thyssen, Saerchinger and Reves 1941, Heiden, Manheim and Guterman 1944.

diplomats, and reports from some foreign journalists only strengthened that impression.[4]

From the late 1960s onwards, this consensus was challenged by Henry A. Turner. His *German Big Business and the Rise of Hitler* argued that before 1933, contributions were few and far between, and that only a handful of prominent business leaders had made substantial donations.[5] The party, according to Turner, was largely self-financing. More importantly, what industrial support there was resulted more from a desire to 'hedge bets' than any from any fervor for the Nazi cause. Political contributions were given to all right-wing parties, and it was only as a result of the Nazi party's electoral success after 1929 that some of the payments found their way to the NSDAP. While some authors have questioned Turner's reading of the evidence, the consensus now is that the links between big business and the Nazi party were much more tenuous and ambiguous than had previously been assumed.[6]

In this paper, we deliberately take an agnostic view about the actual level of financial support by big business for the NSDAP. Instead of examining the minutiae of payments made and meetings held, we "follow the money" and analyze the changes in stock market valuations that followed the Nazi's seizure of power. If close political ties with the new regime – as perceived by German stock market investors in 1933 – were valuable to the firms in question, their share prices should outperform the rest of the market. In defining the group of possible Nazi sympathizers, we essentially accept the revisionist case: All businessmen whose affiliations have been questioned in the literature (such as Reusch and Silberburg) are excluded from our analysis.[7] We thus try to offer an answer to the question – how much was it worth to have close connections with the Nazi party? The answer is – a great deal. Affiliated firms outperformed the stock market by 5 to 10 percent, thus accounting for a large part of the rise in total market value.

The rest of the paper is structured as follows. Section I offers a brief summary of the NSDAP's rise to power, and argues that a look at the cross-sectional evidence is necessary to shed further light on the link between big business and the Nazi party.

[4] Heiden, Manheim and Guterman 1944; Brüning 1970, Dodd and Dodd 1941.
[5] Sharp criticisms are articulated by Stegmann 1977, Stegmann 1973.
[6] Cf. Winkler 1993.

Section II describes our data on stock prices and defines connected firms for the purposes of our analysis. We present our main results in Section III and discuss interpretations of our findings. The next section looks at issues of robustness. The conclusion examines the implications of this paper's main results.

I. Hitler's Rise to Power

In November 1923, the National Socialist German Workers Party (NSDAP) staged an unsuccessful putsch in Munich. Key figures, including Adolf Hitler himself, were imprisoned. Thereafter, the party pursued a strategy of legitimacy, attempting to gain power through the electoral process. For most of the 1920s, its chances of doing so seemed slim. While membership exceeded 100,000 by 1928, the party polled only a disappointing 2.6 percent of all votes in the May elections to the Reichstag in the same year. In the spring of 1930, the last Social Democratic–led coalition with a parliamentary majority fell apart over the Reich's budget deficit and increased unemployment contributions. Afterwards, minority governments had to use the President's special powers to push through legislation. As the economic crisis deepened after 1929 and partly as a result of agitation against the Young Plan, the NSDAP gained its first major success in the national elections of 1930, polling 18 percent of votes cast – thus gaining the second-largest number of seats in parliament. The party's membership soared, reaching 800,000 by 1931. In the Spring of 1932, the Brüning government fell. President Hindenburg thereupon appointed another minority cabinet, headed by Franz von Papen. In the summer election of 1932, the party received 37 percent of all votes, winning the largest number of delegates in the Reichstag. Because Hitler insisted on becoming chancellor, the NSDAP did not enter into government. Elections in November, 1932, brought the first major setback for the Nazis, as their vote slipped and they lost 34 seats, while the Communist vote surged. After von Papen stepped down as Chancellor, Hindenburg briefly appointed General von Schleicher in his place. But, famously, Schleicher was unable to widen his political support and resigned. On the promise to establish a broad coalition of the right, President Hindenburg finally gave in to massive pressure on January 30, 1933, and appointed Hitler as head of government.

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[7] One partial exception, Albert Vögler of United Steel, is discussed below.

Table 1: Chronology of key events

1932	May 30	Chancellor Brüning steps down
	July 31	National elections (NSDAP wins 230 seats)
	August 13	Hitler and von Papen visit President Hindenburg; Hitler declines offer of Vice-Chancellorship
	November 6	National elections (NSDAP seats decline from 230 to 196)
	December 2	General von Schleicher appointed Chancellor
1933	January 4	Meeting of von Papen and Hitler in the house of von Schröder in Cologne
	January 30	Hitler appointed Chancellor
	February 27	Reichstag fire
	March 5	National elections (NSDAP obtain 288 of 648 seats)
	March 24	Enabling law (legislation can be enacted without constitutional constraints)
	April 1	Nationwide boycott of Jewish-owned stores starts
	May 2	Unions dissolved

Besides Hitler himself, the new cabinet had only two Nazi ministers, though one, Hermann Göring, also held the crucial post of Prussian Minister of the Interior, which gave the NSDAP control of the police in the biggest German state. Key posts were filled by the major coalition-partner, the German National People's Party (DNVP), some technocrats, and other independent figures of the right, including von Papen, who served as Vice Chancellor. Within days of having taken office, new parliamentary elections for early March were announced. Using the pretext of the Reichstag fire, a brutal crackdown on the Communist party was carried out before the end of February, and the KPD's members of parliament were arrested or murdered. With the police either looking the other way or actively joining them, the SA, SS, and other rightist paramilitary organizations such as the Stahlhelm unleashed a wave of assaults on political opponents of all stripes, including Communists, Social Democrats, trade unionists, and Jews. Freedom of assembly, speech, and the press continued to exist in name only.

The March elections gave the NSDAP 44 percent of the vote. With its "National" coalition partners, the government now commanded an absolute majority. The enabling law, passed with the votes of all parties except the Social Democrats, changed the constitution and allowed laws to be passed without parliamentary approval. With legal constraints largely out of the way, the regime turned to its arch-enemies – the Jews and the unions. A nationally orchestrated boycott of Jewish stores

began in April, and Jews, Social Democrats, and even rightist members of the civil service were purged.[8] The unions were dissolved in early May, and more radical members jailed or sent to concentration camps. By the summer of 1933, Nazi *Gleichschaltung* was nearly complete. All parties except the NSDAP had also been dissolved.

Traditionally, examinations of the link between stock prices and the Nazis' rise to power have focused on market averages. Immediately after the new coalition led by Hitler took office, stocks rallied. As the *New York Times'* correspondent put it on January 31: "The Boerse recovered today from its weakness when it learned of Adolf Hitler's appointment, an outright boom extending over the greater part of stocks… The turnover was large, leading stocks advancing 3 to 5 percent".[9] Stock prices continued to rise after January 1933.[10] Some observers argued that investor enthusiasm for Nazi economic policies and rearmament was responsible for this increase. The consensus view is that this evidence is not convincing, for two reasons. First, the rebound in stock prices began long before there Hitler's accession to office became a political possibility. Second, it is also virtually indistinguishable from the cyclical increase in broad market indices that started in most industrialized countries in the summer of 1932. Figure 1 plots the level of stock indices in France, the UK, Germany, and the US. The German stock market fell by 40 percent between January 1932 and April 1932. By mid-January 1933, immediately before the *Machtergreifung*, it had risen by 43 percent. This was part of a general trend – the S&P-500 in the US had gained 35 percent over the same period. Nor were the increases after the 30th of January 1933 unusually high. By June, the German index had risen by 12 percent since mid-January. The S&P was up 63 percent, the UK FTSE 11 percent, and the French index by 10 percent. As Figure 1 shows, there is little to suggest that stock market investors as a whole cheered the Nazis' rise to power to a significant extent, at

[8] The party had a long history of extra-legal violence against its enemies; but the degree of central coordination was new. Note that international protests and fears of alienating potential allies led Hitler and other top Nazis for a while to attempt to rein in some of the violence. See the discussion especially in Bessel 2004, pp. 26-28.

[9] *New York Times* Feb.1, 1933, p. 29.

[10] News reports from the Berlin bourse often refer to positive reactions to Nazi policies (such as large increases in stock prices for automobile manufacturers after a speech by Hitler at the automobile show in February 1933), but also describe unease at the prospect of fresh elections and possible deadlock in the new government. Cf. *New York Times*, Feb. 12, 1933, p. 47 and Feb. 13, p. C23.

least during its initial phase. We therefore examine the cross-section of returns before and after Hitler's accession to the Reich's Chancellorship.

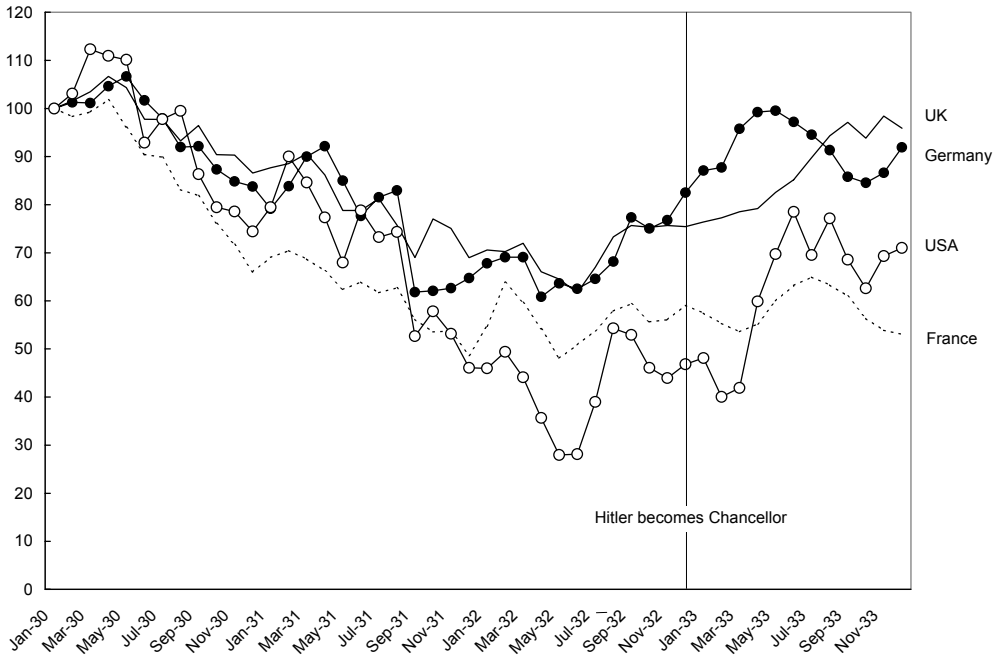

Figure 1: Stock market indices, January 1930-December 1933, UK, Germany, USA, and France

II. Data

A. Stock prices, dividends, and market value

We collected stock price information on individual shares from the official price lists (*Monats-Kursblatt*) published by the Berlin stock exchange. Germany had (and still has) a highly fragmented stock exchange system, with local bourses competing for listings. The Berlin Bourse became by far the most important by the late 19th century, and continued to dominate until 1945.[11] Certain potentially interesting firms, including some from the Ruhr industrial district, are therefore not included in our list because they traded on other exchanges.[12] We begin in April 1932, when the stock exchanges reopened (having been closed after the banking crisis in the summer/autumn of 1931). There are 789 individual firms with quotations at some point in time during the period April 1932 to May 1933. Many observations are missing – trading, especially in the smaller stocks, was often illiquid. We collected

[11] Fohlin 1999. Holtfrerich 1999.

price information for the 10th of each month, or the nearest subsequent trading day. If no price was recorded for an individual firm on that day, we did not include the observation. The *Kursblatt* also gives information on dividend payments by financial year (which normally ran from April to March).

We used the 1932 edition of the *Handbuch der deutschen Aktiengesellschaften* for details on capital structure (number and type of shares outstanding).[13] Market capitalization was calculated as the total number of ordinary share equivalents times the share price in December 1932 (thus giving a greater weight to preference shares if they carried a higher par value).

B. Definition of connected firms

We identified businessmen and firms as "connected" to the NSDAP if they met either of two criteria. Firstly, if business leaders or firms contributed to the party or to Hitler or Göring, they qualify as "connected" – as long as all authorities agree.[14] If the contributions are disputed, we drop the contributor, no matter how weak the objection may be.[15] Secondly, certain businessmen provided important political support for the Nazis at crucial moments, serving on (or helping to finance) various groups that advised the party or Hitler on economic policy. We also count these latter as "connected."

The first group includes early contributors such as Thyssen and Kirdorf, whose financial support – if not their "importance" – is not in dispute. It also includes the financiers and industrialists who participated in the famous meeting of February 20th, 1933, at Göring's residence in Berlin. After giving a fiery speech in which he railed against the evils of Communism and declared private enterprise to be incompatible with democracy, Hitler left the conclave. Göring laid out the plans for winning the upcoming national elections, which, he indicated, would be the "last for the next five

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[12] Since their alleged link with the NSDAP is even closer than in many of the cases that we are investigating, we assume that their inclusion would have strengthened our findings.

[13] The *Handbuch* came out in several volumes, on a rolling basis throughout the year. In a few cases we also consulted other business reference volumes such as *Salings*.

[14] This definition is intended to exclude contributions to Georg Strasser and his circle.

[15] Albert Vögler was definitely a contributor to the *Arbeitsstelle Schacht*. Turner disputes the significance of his involvement. In order to define our variables consistently, we include him in the list of connected industrialists. We also include von Stein, Schroeder's partner, for the same reason. If this is in error, it should make it harder for us to find a significant effect of assocation – we are effectively stacking the odds against finding a clear effect of Nazi connections.

years, probably even for the next hundred years." Schacht then presided over the establishment of a campaign fund of totaling three million Reichsmarks for the electoral campaign.[16]

In the second group are several groups of businessmen whose ties to the party predated Feb. 20. One includes the signers of the famous petition to Reich President Hindenburg, urging him to 'entrust[…] the leader of the largest national group with the responsible leadership of a Presidential Cabinet' – i.e., to appoint Hitler as Chancellor.[17] Laying aside the much disputed question about whether some important businessmen who did not sign the petition actually agreed with it, it is obvious that the actual signatories were providing significant political support to the Nazis, especially since the party's vote had just declined.[18] They qualify as "connected" according to our second criterion. [19]

We also include the members of the *Keppler Kreis* and the *Arbeitsstelle Schacht* in this group. The former was organized by Wilhelm Keppler, a former chemical company executive, with the explicit aim of creating stronger links between big business and the National Socialist Party, and of influencing the latter's economic policies. The *Arbeitsstelle Schacht* was organized by the former Reichsbank President Hjalmar Schacht who successfully claimed responsibility for the Mark's stabilization in 1924 and carried commensurate prestige. The businessmen who financed Schacht's circle included some of the biggest names in German business, including Albert Vögler of Vereinigte Stahl, Krupp von Bohlen, Fritz Springorum, Emil Georg von Stauss (who first introduced Schacht to Göring), Rosterg of Winterhall, and Kurt von Schröder.[20] Because of Henry Turner's objections, we have excluded Paul Reusch and

[16] The fact of the meeting and the identity of most of the participants are not in serious dispute, but many details have been controverted, ever since Nuremburg. What is clear is that a group of businessmen, evidently selected because they were seen as likely contributors, was asked to provide substantial financing at a critical juncture and many did. Subsequent correspondence by participants makes claims of 'extortion' less likely, as does the fact that some major businesses either did not attend or did not contribute. Cf. Turner 1985,Stegmann 1973.
[17] Manvell and Fraenkel 1974, p. 74-5.
[18] See the discussion in Turner 1985 and Stegmann 1973, Stegmann 1977. Again, we use only the undisputed signers.
[19] In contrast to the "original supporters," who had overlapping ties to Hitler himself or other senior Nazis such as Göring, the Feb. 20 conclave had an obvious corporate character. We therefore treat the firms rather than the individuals as the beneficiaries and do not attempt to link them to other firms.
[20] Cf. Turner 1985, and Stegmann 1973, Stegmann 1977.

Krupp from our calculations below, though we think the case for including both is strong.

Traditional accounts of big business involvement with the Nazi party have focused extensively on the relationship between General Directors or other members of the executive board (*Vorstand*) and party figures.[21] We pursue a more comprehensive and systematic approach here. The role of the supervisory board (*Aufsichtsrat*) in the organization of German industry is hard to overestimate. The *Aufsichtsrat* has the power to appoint and fire executives, acting on behalf of the shareholder assembly.[22] Part of its remit is to check on the financial reporting of joint-stock companies, and consultation with its principal members before major decisions is common. In contrast to Anglo-Saxon boards, executives from the *Vorstand* are ordinarily not members of the supervisory board. Far from being an ineffectual rubber-stamping institution, supervisory boards offered central positions of power, and many of the leading businessmen in Germany did (and still do) accept multiple appointments. Universal banks exerted their influence habitually through seats on the board – Gerschenkron called the supervisory board in Germany the "most powerful organ… within corporate organizations".[23]

We traced the *Aufsichtsratsmandate* (positions on supervisory boards) of original contributors such as Thyssen and Kirdorf plus the names derived from the Hindenburg Petition, the *Keppler Kreis* and the *Arbeitsstelle Schacht.* Taken together these individuals define a group of Nazi "original supporters" with credible personal ties to new leadership.[24] We checked each of these against the listings of Members of the Supervisory Board taken from the 1932 edition of the *Handbuch der deutschen Aktiengesellschaften*. The *Handbuch* gives information on members and their functions (chair, vice-chair, or ordinary member of the board). We coded more influential positions on the *Aufsichtsrat* (chair, vice-chair) differently from ordinary membership. To check if the value of a tie was affected by the extent of an individual's interest in the firm, we distinguished between "primary" and "secondary"

[21] Turner 1985.
[22] Passow 1906.
[23] Gerschenkron 1962. The banks' power is examined more closely by Fohlin 1999.
[24] Newspaper coverage of some of these individuals was extensive; such acts as the attempt to recruit signatures on the petition to Hindenburg certainly identified others to wider circles of the business community.

connection. For industrialists, "primary" connections are firms in which they owned controlling interests or had major ownership stakes in. All their other *Aufsichtsrat* positions we coded "secondary." For managers from universal banks, we count "primary" ties as those to firms on the board of which they served as Chair or Vice Chair; otherwise the tie was "secondary." For investment bankers and other individuals for whom there is no evidence of major share ownership (including some signers of the petition to Hindenburg), the distinction makes little sense. Such interests most closely resemble the "secondary" ties of the bankers and industrialists, in the sense that there is nothing in the record that indicates that they reflected large stockholdings or control of shares.

Table 2: Descriptive statistics

		connected	unconnected
Mean stock market capitalization, December 1932, in Mio. RM		50.45	12.0
Weight by capitalization in total		0.555	0.455
Mean dividend yield		0.032	0.03
Proportion of firms with zero dividend		0.55	0.60
Mean log return	September 32-January 33	0.121	0.121
	January 33 - May 33	0.178	0.123
N		91	698

In total, we have 91 connected firms in our sample, but not all of these have recorded share prices and/or market capitalizations. They differ from unconnected firms in a number of important ways. First, they were markedly larger – their average market capitalization of 50.5 million RM was more than four times higher than that of unconnected firms. This appears to be in line with contemporary comments that mainly saw very large businesses as having an interest in influencing politics, perhaps because a larger proportion of any possible gain would accrue to them. Weighted by market capitalization, more than half of the firms listed on the Berlin stock market had Nazi-connected members on the board who organizationally supported the NSDAP at one stage or another, or offered financial help. This factor alone suggests that connections between the party and big business were closer than some of the recent literature has accepted. In terms of dividend yield, the two groups are quite similar – both had a sample mean of 3%. Also, the proportion of firms showing a

dividend of zero is close, with over half of all firms in both groups not making any payments to shareholders during the final years of the Great Depression. Prior to Hitler's rise to power, both groups showed almost identical log returns, driven by a cyclical recovery – a rise by a little over 0.12 during the four months period from September 1932 to January 1933. During the four months after January 1933, however, the connected firms show markedly higher returns – a difference of 0.055 in mean returns. The next section explores the extent to which we can document a systematic relationship between above-average stock returns and affiliation with the Nazi party.

III. Results

In this section, we estimate the value of a Nazi affiliation for listed firms. We evaluate the effect on the cross-section of returns between January and May 1933, compare it to the returns in 1932, and perform a number of robustness checks.

A. Main findings

For our technique to pick up the benefits of having Nazi-affiliations, we need to use a starting date before the NSDAP's entry into government was public knowledge (or a foregone conclusion for most astute observers). We settled on the 10th of January as a convenient date – almost two weeks before Hitler became Chancellor.[25] Given the volatile politics of Germany at the time and the uncertainty surrounding President Hindenburg's intentions (whose intense personal dislike of Hitler was widely known), this should ensure that only very few market participants could have correctly anticipated the composition of the next government.[26]

The rising tide of Germany's recovering economy lifted all boats, and investors may have cheered the appearance of a more broadly-based government (Figure 1). In addition, firms that supported the Nazis financially or had business leaders with strong links to the NSDAP on their boards, exhibited share-price increases that were almost 1.5 times the general rise in the market. Figure 1 shows the distributions. The modal return on Nazi-affiliated firms was about 12 percent higher than for unconnected firms.

[25] We also checked the results if we substitute mid-December as a starting date; they are unchanged.
[26] Turner 1996.

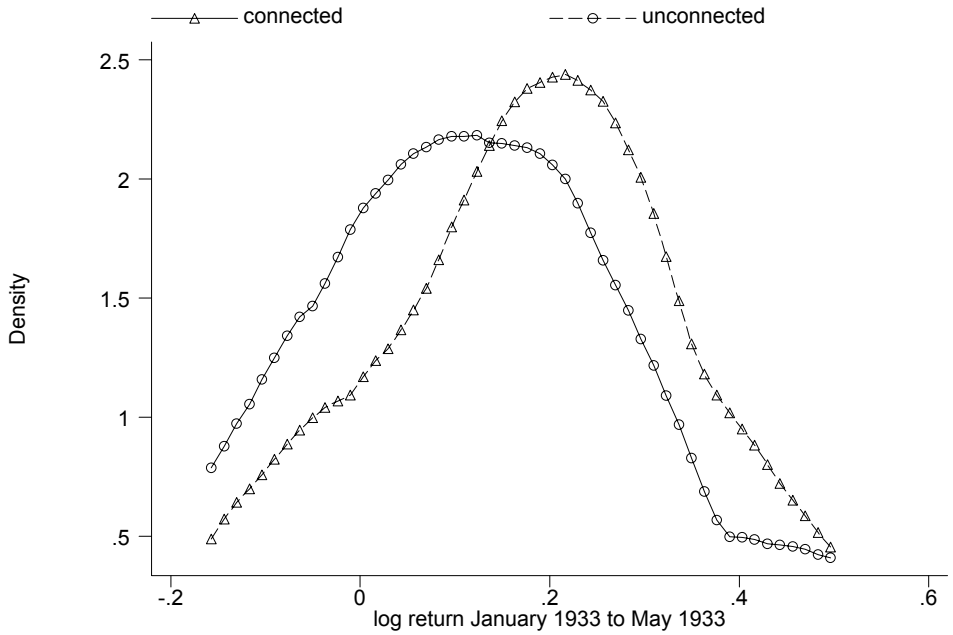

Figure 2: Distribution of log returns, January-May 1933, connected and unconnected firms

As a first step, we perform some non-parametric analysis. While unaffiliated firms had a 47:53 chance of outperforming the market, the odds for connected firms were 66:34. We report probit regressions of the probability of outperforming the market in the appendix. While there is no evidence that affiliated firms did better during the period prior to the *Machtergreifung*, the same is not true after January 1933, when Nazi-affiliated firms have much higher chances of outperforming – and this is not simply a result of other observable characteristics, such as market capitalization.

Table 3: OLS regressions (dependent variable: log returns May 32 – January 33; January 33-May 33)

Regression	1	2	3	4	5
	10.9.1932-10.1.1933				
Nazi	0.005	-0.031	-0.0399	-0.0399	-0.049
	[0.21]	[1.1]	[1.34]	[1.34]	[1.3]
LnMarketCap		0.014**	0.016**	0.016**	0.02***
		[2.4]	[2.56]	[2.56]	[2.6]
DividendYield			0.25	0.25	0.32
			[0.8]	[0.8]	[0.8]
Jewish-owned				-0.007	-0.01
				[0.15]	[0.2]
Constant	0.11	0.12	0.11	0.11	0.11
	[10.9]	[8.8]	[6.9]	[5.8]	[5.4]
Adj. R^2	0.001	0.02	0.03	0.02	0.03
N	385	233	208	208	208
Regression	6	7	8	9	10
	10.1.1933-10.5.1933				
Nazi	0.052**	0.0589**	0.078***	0.078***	0.08***
	[2.2]	[2.3]	[2.97]	[2.97]	[2.8]
LnMarketCap		-0.01*	-0.0079	-0.008	-0.008
		[1.83]	[1.34]	[1.34]	[1.2]
DividendYield			-0.61*	-0.599*	-0.86*
			[2.01]	[1.95]	[2.1]
Jewish-owned				0.009	-0.02
				[0.25]	[0.4]
Constant	0.12***	0.134***	0.146***	0.145***	0.157***
	[12.3]	[10.5]	[8.9]	[8.7]	[7.3]
Adj. R^2	0.0144	0.028	0.0675	0.0677	0.0681
N	322	244	218	218	218

Note: t-statistics in parentheses. Standard errors are based on Huber-White hetereoscedasticity-consistent estimates.
*, **, *** indicate significance at the 90, 95, and 99% level of confidence.
The dependent variable in eq. 1-4 and 6-9 is winsorized with a cutoff of 0.95 and 0.5.

Table 3 explores the effect of being NSDAP-affiliated on the cross-section of returns using simple OLS estimation. For the period prior to Hitler's accession to power, the naïve regression of returns on our Nazi dummy does not suggest benefits for connected firms. Table 3 shows the impact of being affiliated with the NSDAP, for two four-month periods – September 32 to January 33, and January 33 to May 33. In line with common practice in the analysis of cross-sectional stock returns, we winsorize the dependent variable (regressions 1-4, 6-9) to reduce the effect of

outliers.[27] For the first period, there is no evidence of connected firms outperforming the stock market as a whole. This finding is robust to including the dividend yield and the log of market capitalization as control variables. There is also no significant effect from being Jewish-owned. Using the untransformed dependent variable does not affect results (eq. 5). This is what the history of the period would lead us to expect. The November elections went badly for the Nazi party, and caused an internal crisis. Also, the appointment of General von Schleicher (who tried to lure the left-wing of the party into a coalition) seemed to rule out any entry into government in the near future. We conclude that, for the period prior to Hitler's *Machtergreifung*, connected firms did not benefit from the value of their links with the NSDAP.

Table 3 also documents significant outperformance over the period from mid-January to mid-May. The baseline specification suggests that having either a Nazi board member, being a signatory of the public statements of support for the NSDAP, or participating in key meetings between business leaders and the National Socialists' top brass had substantial pay-offs, at least in the eyes of stock market investors. Nazi-affiliated firms saw their prices increase by 5 percent more than the rest. Controlling for additional characteristics strengthens the result. Firms with large market capitalizations were more likely to be Nazi-affiliated, but size alone did not aid in the recovery of stock prices. Regression (2) shows that firms with higher market capitalizations underperformed, if not significantly so. High dividend yields were also not rewarded during the period, but again, the coefficient on lending support to the NSDAP increases to 0.08. In the winsorized equation (4), Jewish-owned firms do not underperform the market, but there is some evidence of a negative effect when the untransformed log returns are used as a dependent variable. Due to the small sample size (there are only 27 firms that we classify as Jewish-owned), we cannot rule out that the stock prices of Jewish firms suffered, but there is no conclusive evidence to support such a claim in our statistical results. Part of the problem may be that information on majority shareholders is much more complete for the largest firms.[28] If the insignificant result is not a consequence of measurement error, it may seem puzzling. Possibly, the market simply reflected expectations of a smooth transfer of ownership from the Jewish to Aryan investors. While some short-term upheaval may

[27] Baker, Stein and Wurgler 2003.
[28] We relied extensively on Mosse 1989, who only covers larger firms comprehensively.

be associated with wresting control from existing owners, investors may not have expected a major impact on profitability. Eq. (5) reports the unwinsorized results, which are almost identical to those from the truncated dependent variable.

B. Results over time

As a next step, we estimate the returns to being Nazi-affiliated and Jewish-owned in consecutive cross-sections. Returns are always the log difference of the RM value of shares on the 10th of each month until the 10th of the following month. Table 4 shows that the extent of outperformance by connected firms varied over time. For the period before January 1933, there is only weak evidence that political events mattered for the cross-section of stock returns. Between mid-July and mid-Sept 1932, the electoral success of the NSDAP – and the increasing probability of its entry into government – seem to have raised the value of party connections, but the positive coefficient on the Nazi dummy variable is not significant. There are also no consistently significant results for Jewish-owned firms, a few exceptions not withstanding.

For 1933, the more detailed evidence in Table 4 suggests that outperformance of connected firms between January and May 1933 was not continuous, but concentrated in two months – from mid-January to mid-March. Immediately after Hitler's accession to power, the stock market rewarded connected firms. In both months, the outperformance amounts to approximately 3 percentage points. While the Weimar Republic's record of unstable cabinets might have left many observers wondering in January and February if the new government was going to last, few could have had such doubts by mid-March. As Robert Crozier Long, the *New York Times'* Berlin correspondent observed:[29] "The German business community received the new of Hitler's electoral victory calmly. Some business men even expressed enthusiasm, and a rather wild advance occurred on the Berlin Boerse, in which leading stocks gained 15 to 25 points within three days." After the Reichstag elections, NSDAP and Kampffront Schwarz-Weiß-Rot had a parliamentary majority. Perhaps more importantly, the massive crackdown on the Communists after the Reichstag fire in

[29] *New York Times*, March 13, p. 24. Another report from the same day reports on "Week's Violent Rise in Stocks at Berlin", and emphasizes the high trading volume (p. 24). By March 27, the *New York Times* reported that the three-week-long stockmarket boom was coming to an end due to profit-taking and growing dissatisfaction with lack of progress in terms of economic policy. *New York Times*, March 27, 1933, p. 23.

late February and the intimidation and relentless propaganda in the run-up to the election made it abundantly clear that a new, authoritarian regime had taken hold. Also, in the meeting on February 20th, Hitler and his associates had tried to reassure business leaders, distancing themselves from the social-revolutionaries in the party. Between mid-March and mid-April, little additional information seems to have arrived that would have enthused stock market investors about Nazi-connected firms. By late May, the destruction of the labor movement in all its forms had become a reality, but the gains for connected firms are not tightly estimated. According to our estimates, the stock market rewarded connected firms with a return of approximately 5.5 percent for the period January to May 1933.

Jewish-owned firms underperform in January-February, but the coefficient is not tightly estimated. After the start of the nationwide boycott of Jewish stores in April – often associated with violent acts committed by the SA as well as scenes of public humiliation and physical attacks on Jews – we find declining share values. All non-Arians were banned from public office. Observers noted that, when anti-Jewish activities erupted, all stocks declined, and that Jewish department stores were particularly hard-hit.[30] The average value of shares in Jewish-owned firms fell by 6 percent.

Table 4: Coefficients on Nazi dummy and Jewish-owned dummy, month-by-month.

1932	NS-affiliated	Jewish-owned	**1933**	NS-affiliated	Jewish-owned
May-June	0.039*	-0.03	Jan-Feb	0.029***	-0.015
	[1.9]	[1.1]		[2.8]	[0.97]
June-July	-0.013	0.049*	Feb-Mar	0.031***	0.014
	[0.7]	[1.96]		[2.9]	[0.8]
July-Aug	0.023	0.02	Mar-Apr	0.005	-0.06**
	[1.3]	[0.7]		[0.28]	[2.3]
Aug-Sept	0.018	0.023	Apr-May	0.02	-0.007
	[0.07]	[0.6]		[1.2]	[0.3]
Sept-Oct	-0.036	-0.04*			
	[1.7]	[2.0]	Jan-May	0.055**	-0.039
Oct-Nov	0.0026	0.012		[2.3]	[1.11]
	[0.25]	[0.7]			
Nov-Dec	0.03*	-0.016			
	[1.99]	[0.8]			
Dec-Jan	0.011	0.04			
	[0.8]	[1.7]			

Note: *, **, *** indicate significance at the 90, 95 and 99% level, respectively. The log return for the period January to May 1933 is not equal to the sum of log returns, since sample composition varied.

C. Type of Affiliation

Industrial firms with a clearly dominant owner linked to the party we classified as having "primary" ties. Firms with Chairs or Vice Chairs of the Aufsichtsrat who were connected with the Nazis are in the same category. By contrast, when the tie came through board members who were not major shareholders or bankers dominating the formal hierarchy of the board, we described the link as 'secondary'. Institutional

[30] *New York Times*, April 3, 1933, p. 23.

connections (such as those produced by the Feb. 20 meeting), where the firm as a unit were invited rather than particular contributors, are best placed in their own category. We can now compare the effects of each type of tie on firms' stock prices.

Table 5: Returns by type of affiliation

	Mean log return, Jan-May 1933	N
(i) Primary tie	0.163	28
(ii) Member of the board with "secondary" tie	0.18	30
(iii) Institutional support	0.202	15
(i) only	0.154	17
(ii) only	0.199	19
(iii) only	0.22	4

Having dominant board members with "primary" ties to the new party in government yielded returns, but they were not greater than those that came from having an ordinary Aufsichtsrat with NS-connections. Institutional support generated somewhat higher returns, but these firms were also quite likely to have individuals on the board who already had ties to the Nazis – 13 of the 17 firms with connected board members signed appeals, joined the Keppler Kreis, or contributed to the party's coffers on February 20th. None of the effects traced in Table 5 are statistically significantly different from each other. It therefore appears that being seen as affiliated in one form or another was key for the market; the exact form mattered much less.

IV. Robustness

A. Alternative estimators

It is well-known that stock returns do not follow a normal distribution.[31] To avoid the possibility of a few outliers influencing our results, we use Huber-Biweight robust regressions that reduce the impact of observations with large residuals, as well as median regressions that minimize absolute deviations instead of the square of residuals.[32] Table 6 reports the results of re-estimating the baseline regression including the full set of controls. Again, for the period before January 1933, Nazi-connected firms show similar returns to other firms in our sample. It is when we turn

[31] Campbell, Lo and MacKinlay 1997.
[32] Koenker and Hallock 2001.

to the period from January-May 1933 that we find significantly higher returns for affiliated companies. The estimated impact is at the high end of the results obtained in Table 3, with quantile regressions suggestion a median outperformance of 10 percent over the period. The importance of the dividend yield is not robust to the use of alternative estimators. The proportion of the total variance explained is never high.[33]

Table 6: Baseline regression – robustness tests

Regression	1	2	3	4
	Sept. 32-Jan. 33		Jan. 33 – May 33	
	Quantile	Robust	Quantile	Robust
Nazi	-0.023	-0.03	0.1***	0.09***
	[0.65]	[1.0]	[2.96]	[3.1]
LnMarketCap	0.01	0.015**	-0.016**	-0.009
	[1.4]	[2.4]	[2.2]	[1.38]
DividendYield	0.17	0.28	0.48	-0.44
	[0.5]	[0.9]	[1.3]	[1.4]
Jewish-owned	-0.017	-0.05	0.01	0.04
	[0.3]	[0.1]	[0.3]	[0.6]
Constant	0.12***	0.097***	0.15***	0.136***
	[5.94]	[6.1]	[8.2]	[8.3]
Pseudo-R^2	0.0134		0.036	
N	208	208	218	218

Note: *, **, *** indicate significance at the 90, 95 and 99% level, respectively.

The robustness of the results on a monthly basis is investigated in Table 7. We again find a small negative effect in October 1932 for affiliated firms, while the effects for Jewish-owned firms are never estimated precisely. The results for the period January to May 1933 are identical or larger than under OLS, and the pattern of monthly returns is very similar, too. For the Jewish-owned firms, we again find that between March and April, returns were significantly negative. For the period as a whole, we do not find a negative result, perhaps because investors worried less about questions of majority ownership as soon as it became clear that Jewish business influence was being forced out of most companies.

[33] In line with common practice, we do not report the R^2 for the robust estimation results.

Table 7: Robustness tests: Results month-by-month

	NS-affiliated		Jewish-owned			NS-affiliated		Jewish-owned	
	Robust	Median	Robust	Median		Robust	Median	Robust	Median
1932					**1933**				
May-June	0.035*	0.02	-0.04	-0.051*	Jan-Feb	0.028**	0.027*	-0.012	-0.02
	[1.8]	[1.1]	[1.6]	[1.9]		[2.3]	[1.94]	[0.7]	[-1]
June-July	-0.018	0.0017	0.05	0.04	Feb-Mar	0.034**	0.03***	0.015	0.025
	[0.9]	[0.08]	[2.1]	[1.56]		[2.8]	[4.1]	[0.9]	[2]
July-Aug	0.013	0.08	-0.002	0.011	Mar-Apr	0.01	0.005	-0.1***	-0.067**
	[0.9]	[0.8]	[0.1]	[0.55]		[0.7]	[0.3]	[3.95]	[2.5]
Aug-Sept	-0.005	-0.008	0.035	0.04	Apr-May	0.015	-0.007	-0.01	-0.013
	[0.2]	[0.2]	[0.9]	[0.6]		[0.9]	[0.5]	[0.4]	[0.5]
Sept-Oct	-0.03*	-0.026*	-0.045*	-0.036					
	[1.9]	[1.8]	[2.1]	[1.74]	Jan-May	0.06**	0.08***	-0.027	-0.06
Oct-Nov	0.004	0.2	0.005	0.013		[2.4]	[2.7]	[0.7]	[1.4]
	[0.4]	[1.9]	[0.3]	[0.8]					
Nov-Dec	0.021	0.012	-0.02	0.004					
	[1.7]	[0.9]	[1.1]	[0.2]					
Dec-Jan	0.015	0.016	0.037	0.043					
	[1.2]	[0.9]	[1.7]	[1.4]					

Note: *, **, *** indicate significance at the 90, 95 and 99% level, respectively.

B. Controlling for risk

Are the higher returns for Nazi-connected firms simply a reward for higher risk? To examine this possibility, we calculate beta coefficients based on the firm-level returns for the period April 1932-January 1933. Prima facie, there is a real possibility that this interpretation is pertinent – connected firms had a markedly higher average beta. To examine this more systematically, we add the beta coefficients to the basic regression setup as an additional explanatory variable for the log return from January to May 1933.[34] Table 3 shows OLS regressions (eq. 1-3) including beta coefficients. The coefficient is never large or significant, and the size and statistical importance of the Nazi dummy survives in all specifications. The same is true when we estimate a median regression (eq. 4). Overall, there is little evidence that higher returns for Nazi-affiliated firms simply rewarded higher risks.

[34] Note that, since we use observations from the 10th of the month, the January values are still unaffected by the *Machtergreifung*.

Table 8: Regressions controlling for beta (dependent variable: log returns January 33- May 33)

Regression	1	2	3	4
Nazi	0.054**	0.078***	0.078***	0.088*
	(2.21)	(2.8)	(2.8)	(1.8)
Beta	0.0007	-0.0008	-0.0009	-0.002
	(0.7)	(0.49)	(0.5)	(0.6)
LnMarketCap		0.005	-0.005	-0.0004
		(0.96)	(0.95)	(0.04)
DividendYield		-0.66**	-0.66**	-0.64
		(2.1)	(2.1)	(1.1)
Jewish-owned			-0.01	0.003
			(0.2)	(0.08)
Constant	0.12***	0.22***	0.22***	0.15
	(10.9)	(2.8)	(2.8)	(1.0)
Adj. R^2	0.012	0.05	0.04	0.03
N	296	212	212	212

Note: *, **, *** indicate significance at the 90, 95 and 99% level, respectively.

C. Relaxing linearity

The assumption underlying most of the analysis so far has been that there is a linear relationship between stock market returns on the one hand and affiliation with the NSDAP on the other, conditioned by other factors such as market capitalization and the dividend yield. One standard way of relaxing this assumption is to use a matching estimator that compares the share price performance of firms with similar control characteristics, based on a propensity score.[35] Instead of dividing the sample into an arbitrary number of subgroups based on market capitalization or dividend yield, as is standard practice in finance, and comparing the return differences between affiliated and unaffiliated groups, we can use n-dimensional matching to provide a control for the characteristics of firms. The same control variables as used in Table 3 are employed to calculate propensity scores. We use two alternative methods for estimating differences between the matched groups – nearest neighbor matching (with the 3 most similar firms being compared) or a kernel approach.

[35] Abadie, Drukker, Leber Herr and Imbens 2002. We use the matching estimator implemented by Leuven and Sianesi 2003. The propensity scores come from Probit estimation.

Table 9: Matching estimator results: Stock returns

	Treated	Controls	Difference
10.9.32-10.1.33			
Nearest neighbor (3)	0.114	0.141	-0.027 [-0.12, 0.06]
Kernel	0.116	0.163	-0.047 [-0.12, 0.02]
10.1.33-10.5.33			
Nearest neighbor (3)	0.197	0.114	0.083 [0.02, 0.15]
Kernel	0.196	0.114	0.082 [0.02, 0.15]

Note: "Treated" refers to firms predicted to be Nazi-affiliated, "controls" are firms with similar characteristics based on the propensity scores derived from Probit estimates. The 95% confidence interval of the difference (in square brackets) was derived from bootstrap estimation with 100 repetitions.

For the period January-May 1933, the strongly positive effect of Nazi-affiliation is confirmed – the matching estimator results suggest outperformance of 8-9 percent, significant at the 95 percent level of confidence. The period prior to the Nazis' coming to power suggests underperformance, but the result is not significantly different from zero. Overall, the impact of relaxing the linearity assumption is small – we broadly find the same results as under OLS.

D. Controlling for Sectoral Composition

Could it be that the Nazi-affiliated firms did well because they were in industries most likely to profit from road-building, rearmament and autarky-policies? Certainly, for some industrial groups – such as car manufacturers, aircraft producers, weapons manufacturers and firms in the chemical industry – such an argument could be made.[36] We include dummy variables for a number of sectors as additional controls, and examine the impact of being Nazi-affiliated after we have controlled for these effects.

[36] Classifying firms as producing weapons is not straightforward. Civilian production can always be switched to other purposes, and both the Reichswehr and industry are known to have attempted to hide production because of the Versailles Treaty. Neither did we include car production in the weapons category.

Table 10: Robustness tests – sectoral composition

Regression	1	2	3
Estimator	OLS	Quantile regression	Robust regression
Nazi	0.045*	0.076**	0.076***
	(1.65)	(2.1)	(2.54)
LnMarketCap	-0.008	-0.009	-0.07
	(1.56)	(1.35)	(1.3)
Chemicals	0.1***	0.1*	0.11***
	(2.54)	(1.93)	(2.72)
Oil	0.18	0.18***	0.2
	(1.1)	(7.53)	(1.22)
Steel	0.07	0.04	0.09**
	(2.04)	(0.9)	(2.11)
Weapons	0.17	0.16***	0.175
	(1.1)	(8.6)	(1.07)
Machinery	0.03	-0.03	0.027
	(0.77)	(0.5)	(0.55)
Cars	0.2**	0.195*	0.19*
	(2.2)	(1.86)	(1.94)
Machine tools	0.042	0.047	0.11**
	(0.9)	(0.8)	(2.1)
Constant	0.22***	0.249***	0.21***
	(2.94)	(2.44)	(2.6)
Adj./Pseudo- R^2	0.05	0.06	
N	243	243	217

Note: *, **, *** indicate significance at the 90, 95 and 99% level, respectively.

The impact of individual sectors varies with the estimator used. Nonetheless, some findings stand out. Car manufacturers profited disproportionately during the first few months of 1933, no doubt being buoyed by the car-friendly policies of the regime. Steel manufacturers also show some signs of outperformance, but this particular finding is not significant when we examine the conditional median (eq. 2). Chemicals also show a significant effect, over and above that predicted by market capitalization or political connections.

Under all three estimators, we continue to find a significant effect for the Nazi-affiliated dummy variable. It is marginally significant at the 10% level in eq. 1, and highly significant when using robust regression estimation and quantile regression.

E. Excluding contributors from the February 20th meeting

It could be argued that including the firms connected with the NSDAP through contributions at the February 20th meeting is inappropriate – stock returns from January 10th to February 10th are counted as if these firms had already established a close link. These firms did indeed very well indeed – under OLS, they show abnormal returns of 10 percentage points between January and May, compared to the 5-8 percent we estimated for the full set of affiliated firms. In defense of our strategy, we emphasize that the business leaders invited to fundraising party must have been seen as sufficiently close to the movement to be potential contributors.[37] Yet if our argument is correct, we should be able to obtain significant results even without using the returns for those firms which are only counted as "connected" because of the meeting on February 20th. To err on the side of caution, we even exclude those firms that are connected in other ways with the NSDAP, but *also* made it onto our list of supporters because of the fundraising party.

Table 11: Baseline regression – results with and without Feb. 20th contributors

Regression	1	2	3
		Jan. 33- May 33	
	OLS	Robust	Quantile
Nazi	0.064**	0.07**	0.08*
	[2.25]	[2.3]	[1.87]
LnMarketCap	-0.009	-0.01	-0.017**
	[1.4]	[1.5]	[1.9]
DividendYield	-0.56*	-0.53	-0.44
	[1.8]	[1.6]	[0.97]
Jewish-owned	0.02	0.02	0.03
	[0.4]	[0.45]	[0.5]
Constant	0.144***	0.14***	0.15***
	[8.5]	[8.8]	[6.9]
Adj. R^2	0.053		0.028
N	211	211	218

Note: *, **, *** indicate significance at the 90, 95 and 99% level, respectively. Standard errors under OLS are White heteroscedasticity-corrected.

Table 11 re-estimates the baseline regressions using OLS, Huber biweight and quantile regressions. The results are virtually unchanged – the potential *ex post* bias of

[37] It should be noted that that claims have always been widespread that business money flowed to the party in the wake of the Hitler –von Papen meeting at the house of Baron von Schröder on the fourth of January, 1933. See, e.g., the many references in Turner, 1985, pp. 462-63, Notes 23-25. Such contributions would not have begun to pay off until there was reasonable prospect of a new cabinet, but it would certainly have given the firms an institutional tie to the Party.

including contributors from the February 20th meeting is not decisive. As one would expect as a result of smaller sample size, the significance levels are somewhat lower, but the results for the 'affiliated'-dummy are never statistically different from the baseline results.

F. Extreme bounds analysis

In all previous tables, we provided stepwise variations of the basic regression setup. There may be a real danger that researchers only report the combination of exogenous variables that yields a significant coefficient. We use a form of Leamer-style extreme bounds analysis to safeguard against this potential problem.[38] Using 40,920 possible combinations of regressors – including all 29 sector dummies, the log of market capitalization, the dividend yield, and the Jewish ownership dummy – we obtained a minimum coefficient for the Nazi variable of 0.047 (t-statistic 1.97) and a maximum of 0.12 (t-statistic 2.4).[39] In other words, despite using a very large number of possible combinations of regressors, we consistently find a statistically significant and economically meaningful coefficient. Sala-i-Martin (1997) makes the valid point that the entire distribution of coefficients, and not just the extreme bounds should be used by empirical researchers. Since the stringent Levine-Renelt method raises the bar relative to the Sala-i-Martin approach, our results are a lower bound on the true stability of the effect of party affiliation.

[38] Levine and Renelt 1992.

[39] We use the Impavido do-file for STATA, using the maximum of 4 additional regressions (in addition to the Nazi dummy).

G. Errors-in-variables estimation

Despite all the care that we have taken in analyzing affiliations, it is possible that our key right-hand-side variable – party affiliation – is measured with an error. It is entirely possible that many of the firms in our sample made contributions, but included in our list of "connected" companies because the businessmen involved lacked name recognition, or because the evidence disappeared during or after the war. The group of contributors we do identify is therefore possibly only a subset of the firms that donated money to the NSDAP. To make matters worse, we have no direct way of remedying the problem. On the assumption that the group of firms we classify as 'non-affiliated' contains some firms that did contribute (and were seen to have done so by investors), we probably understate the true value of support for the Nazi cause.

To deal with the issue, we use errors-in-variable estimation, using a plausible range of reliability values.[40] An upper bound of the ratio of noise variance to total variance is probably 0.5. We also use alternative values of 0.25 and 0.1 (Table 12).

Table 12: Errors-in-variable estimation

Regression	1	2	3
		Jan. 33- May 33	
Reliability score	0.9	0.75	0.5
Nazi	0.09***	0.11***	0.18***
	[2.91]	[2.92]	[2.87]
LnMarketCap	-0.009	-0.01*	-0.015**
	[1.4]	[1.7]	[2.2]
DividendYield	-0.58*	-0.55	-0.45
	[1.96]	[1.9]	[1.5]
Jewish-owned	0.009	0.009	0.01
	[0.2]	[0.24]	[0.3]
Constant	0.143***	0.14***	0.13***
	[9.4]	[8.8]	[7.03]
Adj. R^2	0.07	0.08	0.115
N	218	218	218

Note: *, **, *** indicate significance at the 90, 95 and 99% level, respectively. Standard errors under OLS are White heteroscedasticity-corrected.

As expected, the size and significance of the Nazi-affiliation dummy increases. For the least pessimistic reliability scores, we estimate an impact that is very similar to the

[40] Hardin and Carroll 2003.

results of robust estimation. If the noise variance to total variance ratio is higher than 0.25, very large returns to being connected emerge; at 0.5, we would have to infer an outperformance of 18 percent over the period January to May 1933. If we missed connected firms, our results would be even stronger than suggested by the results in earlier sections.

V. Conclusions

Analyzing the political affiliations of German firms in the final years of the Weimar Republic and the early phase of the Nazi dictatorship requires a close look at the nature of connections and consideration of the composition of supervisory boards. Interlocking directorates were and are key for the country's industry's power structure – a phenomenon still referred to as "Germany AG". We use this basic insight to track the influence of contributors to the Nazi party. Amongst the party's supporters we count only those that contributed funds, or offered direct support for the 'movement' or for appointing Hitler chancellor. Tracing them through the contemporary handbooks on German firms, we examined which influential business leaders with ties to the NSDAP served on supervisory boards. Despite the restrictive definitions, we find that 91 firms in our sample of 789 firms were connected. Since these firms were, on average, much larger and more valuable than unaffiliated firms, they accounted for over half of the Berlin stock market's capitalization. This by itself calls into question Turner's conclusion that links between the Nazis and big business were unimportant both quantitatively and in terms of the strength of the association formed.

Lending the Nazi party a helping hand financially or extending political support apparently paid handsome dividends. We cannot say if business profits actually increased as a result of unstinting help during the party's years before the *Machtergreifung*. From the stock market's reaction, however, it is clear that investors expected that the value of political connections was substantial. As uncertainty about the regime's stability was resolved between January 30th and late March, the stock prices of connected firms rallied substantially, outperforming the rest of the market. This result is not driven by outliers or the sectoral composition of donor groups. Most of the excess returns accumulated by March 10th. For the period as a whole up to and including May – when the unions were dissolved – connected firms show outperformance of between 5.5 and 10 percent (depending on the estimator used). Just

as in 1990s Malaysia and Indonesia, the stock market realized the value of political connections when it saw them in Nazi Germany. Interestingly, recently-formed affiliations like the one resulting from the fundraising party in Munich on February 20th, 1933, also boosted the involved firms' fortunes on the stockmarket.

How large was the impact in the aggregate? A capitalization-weighted index of the German stock market would have shown a rise of 15.3 percent over the period January-May 1933 – a gain of 806 million RM in market value. Larger firms were more likely to have NSDAP–connected board members, and constituted slightly more than half of our sample by market capitalization. The value of Nazi-connected firms increased by 510 million RM, 173 to 259 million RM more than they would have done if their returns had been equal to those of unconnected firms. The value of NSDAP affiliations thus contributed 63 percent to the total increase of share prices over the period.[41] Shares prices in Germany may not have been rising more than in other countries, but the largest part of the increase that we do observe reflects the value of political connections with the new party in power – and not general improvements in business conditions. When the N*ew York Times* reported in early June that "a large part of the press cordially endorses the [Nazi economic] program; the Stock Exchange is buoyant and industrial and financial circles apparently are willing to contribute their share to its success," it was not exaggerating.[42] The story merely had the real state of affairs upside down: It was the program's success that was contributing to the shares of industrial and financial circles.

[41] Nazi-affiliated firms are 54.5% of the sample by market capitalization, with an average return of 0.1775; other firms are 45.5% with an average return of 0.123. The weighted average return is 0.153, and 0.545*0.1775=0.0967 is the contribution of connected firms, equivalent to 0.63 of the total weighted gain.

[42] *New York Times,* June 4, 1933, p. 28.

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Appendix

Table 13: Probit regressions (dependent variable = 1 if log returns are above the mean, 0 otherwise)

Regression	1	2	3	4
	10.9.1932-10.1.1933			
Nazi	0.11	-0.19	-0.3	-0.31
	(0.6)	(0.9)	(1.3)	(1.3)
LnMarketCap		0.067	0.8	0.9
		(1.5)	(1.6)	(1.8)
DividendYield			1.7	1.49
			(0.7)	(0.6)
Jewish-owned				-0.32
				(0.9)
Pseudo-R^2	0.001	0.008	0.02	0.02
N	385	233	208	208
Regression	5	6	7	8
	10.1.1933-10.5.1933			
Nazi	0.44**	0.45**	0.65***	0.65***
	(2.3)	(2.2)	(2.8)	(2.7)
LnMarketCap		-0.035	-0.03	-0.04
		(0.8)	(0.7)	(0.9)
DividendYield			-1.7	-1.4
			(0.7)	(0.6)
Jewish-owned				0.32
				(1.04)
Pseudo-R^2	0.013	0.014	0.03	0.03
N	322	244	218	218

Note: t-statistics in parentheses. standard errors are based on Huber-White hetereoscedasticity-consistent estimates. Constant included but not reported.