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ARTICLES/ARTÍCULOS

Hedges of the Second Republic: firms, equity investors and political uncertainty in a nascent democracy, 1930–1936

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Abstract

We study how Spanish equity investors assessed firms' exposure to political risk during the regime change of the 1930s. We show that shifts in political uncertainty regularly predicted a general deterioration of future investment opportunities in the stock market. However, we also find that firms differed in their sensitivity to uncertainty, reflecting important differences in their perceived exposures to political risk. The negative impact of uncertainty was significantly milder for firms with political connections to republican parties. The price of some stocks increased in periods of heightened uncertainty, thus allowing investors to hedge against reinvestment risk. In the case of firms that became targets of hostile political actions, we observe that investors frequently adjusted their assessment of individual stocks to changes in firm-specific political circumstances. Over the whole period of the Second Republic, investors' systematic preference for safer equity hedges led to a continuous decline in the price of stocks perceived as more exposed to political risk.

Keywords: political uncertainty; political risk; politically connected firms; equity returns; risk factors; hedging strategies; Spain; interwar period

JEL Codes: G11; G12; N24; D81

Resumen

Este artículo estudia cómo los inversores españoles en renta variable evaluaron la exposición de las empresas al riesgo político durante el cambio de régimen de los años treinta. Mostramos que repuntes en la incertidumbre política predijeron con regularidad un deterioro general de las oportunidades de inversión futuras en el mercado accionario. Sin embargo, encontramos también que las empresas diferían en su sensibilidad a la incertidumbre, lo que reflejaba diferencias importantes en la percepción de su exposición al riesgo político. El impacto negativo de la incertidumbre fue significativamente menor para las empresas con conexiones políticas con partidos republicanos. El precio de algunas acciones aumentó en periodos de mayor incertidumbre, permitiendo así a los inversores blindarse contra el riesgo de reinversión. En el caso de las empresas que terminaron siendo objetivos de iniciativas políticas hostiles, observamos cómo los inversores ajustaron frecuentemente su evaluación en función de los cambios intervenidos en las circunstancias políticas

específicas de las empresas. Durante todo el período de la Segunda República, la preferencia sistemática de los inversores por las acciones más seguras, que garantizaban una mejor capacidad de cobertura, se tradujo en una caída continua del precio de las acciones más expuestas al riesgo político.

Palabras clave: incertidumbre política; riesgo político; empresas políticamente conectadas; rendimiento de las acciones; factores de riesgo; estrategias de cobertura; España; periodo de entreguerras

1. Introduction

Firms operate in environments shaped by politics and are exposed to political risk, that is, "those events, actions, processes or characteristics of a socio-political nature that have the potential to—directly or indirectly—significantly and negatively affect the[ir] goals" (Jakobsen, 2012). Sudden political changes may be especially challenging for business, as they increase uncertainty about the possible impact of different sources of political risk on future profitability. For instance, a transition from autocracy to democracy may raise concerns about the longevity of the new regime, the stability of governments, the dynamics of socio-political conflict or the policy preferences of the new rulers. The rise of new parties can also disrupt firms' ability to influence, or extract information about policy-making through established political connections. Moreover, firms connected to, or favoured by the old regime can become targets of political hostility. As a consequence, high levels of political uncertainty increase investors' concerns about firms' future ability to distribute the expected profits.

We study this issue in the historical context of Spain in the 1930s. This period saw the fall of a military dictatorship, a failed attempt to restore a constitutional monarchy, the birth of a fragile democracy and an unprecedented level of mass mobilisation in support of profound economic and social changes. Our main interest is to understand the impact of extreme political uncertainty on how investors assessed firms' exposure to political risk. For that purpose, we exploit the information provided by the coeval equity markets and the press to study their reaction to the arrival of political news. Did they just quit the stock market, fearing a fundamental alteration of the existing socio-economic order? Or did they bet on firms perceived as relatively immune to political risk? If so, which firms did they choose to protect their wealth? And what can we learn from their choices?

Our empirical strategy draws on asset pricing models that incorporate uncertainty as a state variable that influences investors' fundamental decisions. We constructed a news-based monthly measure of political uncertainty and an original dataset of stock prices and dividends covering all equities actively traded on the Madrid Stock Exchange. Our main findings can be summarised as follows. First, shifts in political uncertainty predicted negative aggregate returns in a time horizon of between 3 and 4 months. Second, firms with connections to republican parties were less exposed to this negative impact. Third, the sensitivity of returns to political uncertainty varied across firms and over time. Systematic interventions of Stock Exchange authorities on the market, through temporary price floors and constraints on trading, insured investors against extreme downside risk and contributed to avoid a generalised exit from equities. In months of heightened political uncertainty, the price of stocks less exposed to political risk increased, thus providing a hedge against the expected deterioration of future investment opportunities. However, few stocks were perceived as permanent "hedges", and investors adapted quickly to changes in firm-specific political circumstances, even in the case of firms exposed to hostile political actions. Last, we find that safer "hedge" stocks earned positive future excess returns, while riskier stocks with negative sensitivity to political

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uncertainty earned negative excess returns—a significant departure from asset pricing theory. Our interpretation is that investors pursued a structural (rather than transitory) adjustment of portfolios in favour of hedge stocks and against firms more exposed to political risk, whose prices declined in the long run.

Our paper was inspired by seminal studies on the relationship between potential threats to the capitalist regime and the high volatility of interwar financial markets in the United States and Europe (Schwert, 1989; Bittlingmayer, 1998; Voth, 2002). Our findings contribute to various strands of historical research on the economic and financial consequences of political and policy uncertainty (Mathy, 2016, 2020; Mathy and Ziebarth, 2017; Opitz, 2018; Cortes and Weidenmier, 2019; Leitão *et al.*, 2019; Lennard, 2020; Verdickt, 2020; Battilossi *et al.*, 2022), the value of firms' political connections (Ferguson and Voth, 2008; Braggion and Moore, 2013; Deloof and Vermoesen, 2016; Ortiz Serrano, 2018; Lehmann-Hasemeyer and Opitz, 2019; Do *et al.*, 2023) and investor attitude towards democratisation (Lehmann-Hasemeyer *et al.*, 2014). We also connect to the theoretical and empirical literature on the impact of policy uncertainty and partisan conflict (Bloom, 2014; Baker *et al.*, 2016; Azzimonti, 2018) on investor behaviour and asset returns (Boutchkova *et al.*, 2012; Pastor and Veronesi, 2012, 2013; Brogaard and Detzel, 2015; Bekaert *et al.*, 2016; Bali *et al.*, 2017; Brogaard *et al.*, 2020; Luo and Zhang, 2020; Azzimonti, 2021), and the consequences of political tensions on equity prices and politically connected firms (Fisman, 2001; Siegel, 2007; He *et al.*, 2017; Acemoglu *et al.*, 2018; González and Prem, 2020).

2. Firms' exposure to political uncertainty and equity pricing

In this section, we outline the conceptual framework that will guide our empirical strategy. We draw on a strand of research in empirical finance about the impact of uncertainty on the time series and cross section of equity returns (Brogaard and Detzel, 2015; Bali *et al.*, 2017). Our starting proposition is that firms are exposed to different sources of political risk. They include unstable or polarised political systems (for instance, high executive turnover, lack of democratic accountability or a high level of partisan conflict), poor institutions (corruption or judiciary inefficiency), high levels of socio-political conflicts (both internal and external, including wars) and unfavourable policy actions by governments (from changes in regulation, taxation and spending to outright expropriations and asset seizures) (Julio and Yook, 2012; Bekaert *et al.*, 2014; Lehkonen and Heimonen, 2015; Azzimonti, 2018).

Equity investors can better assess firms' exposure to political risk and its effect on future returns in a stable political environment—that is, when they have adequate information about the predictable range of possible political outcomes and their impact on the distribution of future returns around their expected mean[1]. On the contrary, when this information is inadequate—for instance, because the political environment is highly volatile and unpredictable—investors become "unsure about the correct probability laws" governing future mean returns and their distribution (Anderson *et al.*, 2009, p. 234). This type of political uncertainty[2] increases investors' exposure to reinvestment risk—that is, to "a deterioration in investment opportunities that affects the prospects of long-term investors when they reinvest their wealth in financial markets" (Gonçalves, 2021, p. 2154). As a consequence, it should "move" equity prices as investors use the continuous flow

[1] A textbook example is the political uncertainty periodically generated by elections in a stable democracy with a consolidated party system and a low level of polarisation.

[2] This situation is referred to in the recent literature as "ambiguity" or "Knightian uncertainty" (named after U.S. economist Frank Knight) as opposed to measurable uncertainty or "risk" (Brenner and Izhakian, 2018). An equivalent concept is "bounded subjective uncertainty" (Kobrin, 1978).

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of political news to revise their prior beliefs (Pastor and Veronesi, 2013, pp. 521–522). The testable prediction is that political uncertainty should predict future negative aggregate returns.

In turn, how political uncertainty affects the cross section of returns depends on its diversifiability. If it is perceived as a source of systematic risk, theory predicts that innovations in uncertainty should increase investors' discount rate, leading to a generalised fall in equity prices and an increase in expected returns, as risk-averse investors demand a higher future compensation for bearing more systematic risk (Pastor and Veronesi, 2013). However, there is substantial evidence that sensitivity to uncertainty is higher for firms in industries more dependent on government spending or regulation or with a high level of asset specificity (Belo *et al.*, 2013; Baker *et al.*, 2016; Gulen and Ion, 2016; Kim and Kung, 2017). In this case, theory predicts that risk-averse investors will increase their demand for stocks of firms they perceive as less exposed to political risk, pushing up their prices. On the contrary, stock of firms more exposed to political risk will move in the opposite direction. Hence, some stocks will covariate positively and others negatively with political uncertainty—that is, they will have positive and negative uncertainty betas, respectively. We will test these alternative hypotheses empirically.

Positive beta stocks provide a hedge against future unfavourable states because they increase investors' wealth exactly when expectations about future investment opportunities deteriorate. However, there is a trade-off between this contemporaneous upside wealth effect and a future downside effect. When uncertainty falls and expectations improve, underpriced negative beta stocks will bounce back, generating higher returns that compensate investors for holding riskier assets (Maio and Santa-Clara, 2012; Bali *et al.*, 2017, pp. 472–473)[3]. Hence, a third testable prediction is that hedge stocks should earn in the future lower excess returns (over a safe asset, such as government bonds) than stocks with negative beta—that is, they should earn a negative risk premium[4].

An important insight from the literature is that the impact of uncertainty on equities may vary across states of the economy and financial markets. For instance, some studies suggest that the demand for stocks with positive uncertainty beta is stronger in "bear" stock markets with low investor sentiment (Nartea *et al.*, 2020). This is consistent with the idea that, in bad states, policy changes are more likely and uncertainty about future government actions is higher (Julio and Yook, 2012; Pastor and Veronesi, 2013; Brogaard and Detzel, 2015). However, the impact of this type of uncertainty can be positive if investors expect public intervention to provide a "put" protection that contributes to stabilise asset prices (Pastor and Veronesi, 2013, p. 521). As we discuss later, this insight is especially relevant for our historical study, as a "bear" market dominated during most of the 1930–1936 period and interventions of public authorities on the stock market were systematic and extensive.

3. Political and economic uncertainty in the nascent Spanish democracy

Political scientists observe that "nascent" democracies, born out of the crisis of autocratic regimes, tend to generate much higher political uncertainty than consolidated democracies, as they lack stable rules for the resolution of conflicts, the structure of political

[3] A formalisation of this analytical framework is presented in Section A.1 of the online Supplementary material.

[4] The same prediction holds in a preference-based theoretical framework. If investors have heterogeneous preferences or expectations about uncertainty, at times of heightened uncertainty, those with higher uncertainty aversion or more pessimistic ambiguity expectations limit or suspend their market participation. In this case, stocks with positive uncertainty beta will be held only by investors less averse to uncertainty or with more optimistic expectations, who demand a lower expected uncertainty premium (Bali *et al.*, 2017, p. 473).

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interaction can evolve unpredictably and the possibility of an authoritarian reversal or a democratic break-down is not trivial (Lupu and Riedl, 2012, pp. 1344–1345). The political environment of interwar Spain reflects these features very well. After the big political surprise of April 1931 (the unanticipated success of republican parties in municipal elections, the voluntary exile of the monarch and the peaceful proclamation of the Republic), the disbandment of dynastic forces and the emergence of new parties and leaders led to an entirely new structure of political competition. Political representation was highly fragmented. Unstable coalitions led to twenty cabinets in 63 months. The snap elections of 1933 and 1936 produced major swings in electoral support. The longevity of the new democratic institutions was highly uncertain. Civil–military relations remained unsettled, with frequent rumours of, and occasional attempts at military coups. The commitment to constitutional rules was weak among parties at the extremes of the political spectrum. The electoral success of regional nationalisms in Catalonia and the Basque Country, and the explicit secessionist goals of Catalan elites, questioned the survival of Spain as a unitary state. Linz (1978) described the political situation of the period as "extremely fluid and unstructured".

The new regime was also torn between opposed economic preferences of social forces and political parties. As in other countries in interwar Continental Europe, the rise of mass politics led to a violent clash of movements opposed to liberal democracy on the left and right ends of the political spectrum. In spite of their profound differences, they embraced the "primacy of politics"—that is, the willingness to use political power to create "a new socioeconomic order" in which the state "could and should control markets without destroying them" (Berman, 2006, pp. 16–17). On the one hand, left parties and workers' unions pursued extensive social reforms in land and labour markets and were open to possible alterations of private property rights through selective expropriations and nationalisations. On the other end, the Catholic right advocated an authoritarian corporatist regime that would bring employers and employees under the control of the state. With rising political polarisation, aggravated by international factors (such as the rise to power of the Nazi party in Germany), the public discourse became increasingly imbued of revolutionary and counter-revolutionary rhetoric, as the "ghost" of a radical political and socio-economic change was invoked or exorcised as a tool of political mobilisation (González-Calleja *et al*., 2015, pp. 357–387, 769–844). At the same time, a state of permanent economic crisis reinforced the mobilisation of the working class. Electoral participation rates ranged between 65 and 70 per cent, trade union density escalated to 30 per cent of active workers and strike rates were the highest in Europe (Domènech and Miley, 2013). Massive waves of collective actions, occasional insurrectional attempts and frequent outbursts of politically- or religion-motivated violence elicited the state's violent reaction, raising fears of a possible radical change of the political and socio-economic regime (Linz, 1978, pp. 187–194)[5].

Uncertainty about economic policies was an important additional dimension. The economy suffered from the international propagation of the Great Depression. In the two years after the fall of the dictatorship of General Primo de Rivera, GDP contracted by 19 per cent, also due to a twin (banking and currency) crisis triggered by the regime change of April 1931 (Betrán and Pons, 2019). The level of economic activity stagnated between 1932 and 1934 and contracted by another 12 per cent until the spring of 1936 (Albers, 2018). The 1931 crisis revived tensions with the Bank of Spain, which in fact had been wrestling with different executives over the stabilisation of the exchange rate since 1928 (Betrán *et al*., 2012; Martín-Aceña *et al*., 2014; Martínez Ruiz and

[5] For a map of key political and socio-economic events in the period 1931–1936 see Table A.1 in the online Supplementary material.

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Nogués-Marco, 2014; Jorge-Sotelo, 2020). The following years were characterised by constant uncertainty about governments' ability to pursue fiscal consolidation and the stabilisation of the exchange rate (facilitated by Sterling's exit from the Gold Standard and finally achieved at the end of 1933 with a peg to the French Franc and the introduction of binding capital controls). At the same time, governments, private banks and the Bank of Spain engaged in a prolonged dispute on the relaxation of monetary policy to revive a depressed economy (Martín-Aceña, 1984, pp. 261–271). The disruption of trade relationships added to the uncertainty in the same period (Betrán and Huberman, 2022, 2024). While the political environment did little to enhance the management of the macroeconomy, economic policy was a significant and separate source of uncertainty for Spanish firms. For this reason, in our empirical analysis we will control for its possible impact.

4. Equity returns and political uncertainty: the dataset

The validity of our theoretical framework rests on the assumption that political uncertainty is a state variable correlated with future investment opportunities. We test this hypothesis empirically. Our proxy for the set of investment opportunities is an equity portfolio of common stocks of twenty-seven Spanish firms regularly traded on the Madrid Stock Exchange. They represent 60 per cent of nominal paid-out capital and provide a balanced representation of the sector-wise composition of the market[6]. In order to identify different phases in the market, Figure 1 plots the 36-month cumulative total return of our capitalisation-weighted market portfolio[7]. The regime transition and the early years of the Republic coincided with a long "bear" market that lasted more than three years and reached its bottom level in October 1931, with a cumulative loss of 50 per cent of its 1928 value. The market remained depressed (with occasional and short-lived recoveries) for the following two years. A sustained recovery became visible only at the end of 1933, in coincidence with the electoral victory of the centre-right coalition. The "bull" market peaked at the end of 1935 and turned into a new crash after the victory of the Popular Front in the general elections of February 1936. The correspondence between political and stock market cycles was emphasised by all coeval observers.

A fundamental characteristic of this period was the continuous intervention of stock exchange authorities (*Junta Sindical*), in coordination with the Ministry of Finance, during periods of acute market stress. As a rule, interventions on equities took the form of selective temporary price caps (*topes*) on firms especially affected by selling. Less frequently, trading of specific stocks was limited to transactions among brokers or temporarily suspended. Such selective restrictions, motivated by the need to "prevent financial panics or overly abrupt changes" (Torrente Fortuño, 1934, p. 37), were often a response to sharp movements driven by adverse political news[8]. This back-stop mechanism on prices operated as a protective "put" option that limited "bad" volatility, thus partially insuring

[6] We excluded only very illiquid stocks that traded less than 10 per cent of the total trading days in the period. Details about the construction of our equity portfolio, the identity of its twenty-seven constituent firms and their representativeness are provided in Section A.2 and Tables A.2 and A.3 of the online Supplementary material. Similar to other historical stock exchanges in their early stage of development, thin trade was a structural characteristic of the Madrid market (Moore, 2010).

[7] A 36-month cumulative return is a widely used measure of "bear" (negative returns) and "bull" markets (positive returns) (Annaert and Mensah, 2014, p. 40).

[8] For instance, in June 1933, after months of tensions within the ruling coalition of left republicans (led by Prime Minister Manuel Azaña) and socialists, the market expected a government crisis, the exit of socialists and the formation of a centrist cabinet. However, the crisis led to a new Azaña government based on a renewed republican–socialist coalition. The negative reaction of investors induced the Stock Exchange committee to reintroduce restrictions on equity trading (see Torrente Fortuño, 1934, p. 45). José Antonio Torrente Fortuño

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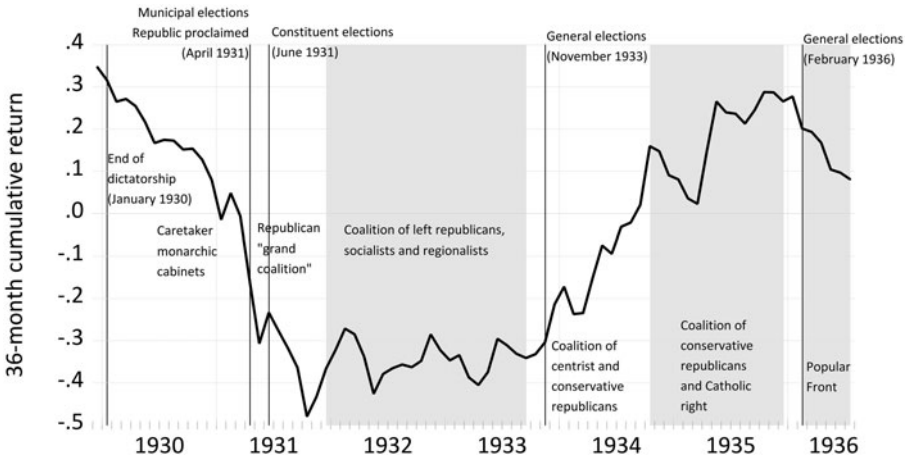

Figure 1. "Bears" and "bulls" in the Madrid stock market, January 1930–July 1936.
This figure shows the 36-month rolling cumulative total return of the capitalisation-weighted equity market portfolio. The zero line signals the transition from "bear" to "bull" markets.

investors against downside risk in periods of heightened uncertainty. It also enhanced the supply of liquidity by the Bank of Spain through collateralised loans against the pledge of corporate securities (Bartolomé Rodríguez, 2017). Restrictions were sufficiently widespread and systematic to be perceived as a permanent management tool and affect investors' expectations[9]. In fact, they were criticised by groups of traders for interfering with the pricing mechanism and limiting their scope for profits from short-selling[10].

To measure political uncertainty, we use news from the coeval press, in line with recent studies (Mathy and Ziebarth, 2017; Lennard, 2020; Verdickt, 2020). Our source is *ABC*, a widely read conservative newspaper published in Madrid. *ABC* reported daily stock market data, published professional stock exchange chronicles and represented a fundamental source of information for investors[11]. Our index is based on count data of keywords systematically associated with news about socio-political conflicts that could make firms' future profitability more unpredictable[12]. The underlying assumption, common to an extensive literature (Alesina and Perotti, 1996; Voth, 2002; Funke *et al.*, 2016; Cortes and Weidenmier, 2019), is that time variations in the arrival of "bad" news identify periods during which investors perceived a heightened level of political uncertainty. Our index (expressed in standard deviations) is shown in Figure 2. A structural break is clearly visible at the end of 1930, in coincidence with the first revolutionary mobilisation of

was the author of the stock market chronicles of the Catholic newspaper *El Debate* and published annually a summary of them in a very popular investor handbook (*Guía del Bolsista*).

[9] The same restrictions were also imposed on the official stock exchanges of Barcelona and Bilbao, according to Torrente Fortuño.

[10] "Those interventions [...] raised frequent protests by speculators, who saw their activity limited exactly when it could be more intense. The Stock Exchange committee, however, considered that the general interest should prevail over that of a speculative trading pit" (Torrente Fortuño, 1934, p. 37).

[11] *ABC*'s stock market chronicles were authored by highly reputed professionals. Its financial editor was Carlos Caamaño y Orcasitas, a founder of *La Semana Financiera*, a popular weekly investor magazine, and chief editor of the Yearbook of the Madrid Stock Exchange (*Anuario Oficial de Valores de la Bolsa de Madrid*).

[12] They include chaos (*caos*), disorder (*desorden*), expropriation (*expropiación*), revolution (*revolución*), general strike (*huelga general*), violence (*violencia*) and their derivatives. We standardise counts of individual news series and use principal component analysis to aggregate them. For full details on the construction and validation of the index, see Section A.3 and Figures A.1 and A.2 of the online Supplementary material.

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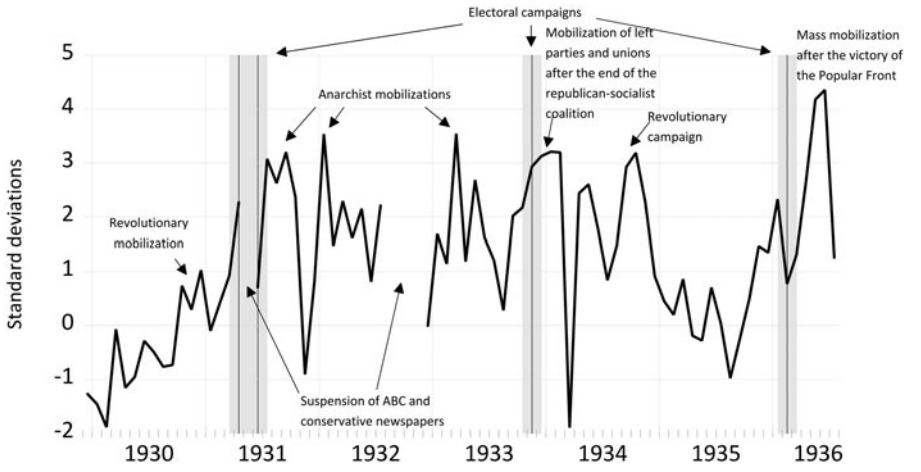

Figure 2. Political uncertainty index.
This figure shows our index of political uncertainty based on *ABC* news. Values for May 1931 and August-November 1932 are missing due to the suspension of publication of *ABC* and other conservative newspapers by the government. The index is based on the first principal component of standardised individual time series of political "bad" news. Grey areas indicate months around the municipal elections of April 1931, the constituent elections of June 1931 and the general elections of November 1933 and February 1936.

republican parties. We can also observe that the level of uncertainty remained high and persistent throughout the period[13]. Peaks of the index were often clustered and coincided with important socio-political processes, such as electoral campaigns and waves of collective action.

Importantly, coeval chronicles clearly identified socio-political factors as key determinants of investors' behaviour. For instance, in January 1932 (index value 3.5), *ABC* noted that "political directives and social manifestations are the two factors that exercised the most direct influence. ... In hard and turbulent periods, [securities markets] are not in control of their own resources, but are slaves of external events" (10 January 1932). One year later, in March 1933 (index value 3.5), the sentiment of *ABC*'s commentators was that "Spanish stock exchanges [...] have become intoxicated by politics" (19 March 1933). In the same vein, during the electoral campaign of 1933 (index value 2.9) they wrote: "The stock exchange has an overly great concern for the electoral process [...] and [...] in spite of the occurrence of other events, they are neglected and the outlook of the elections remains preponderant [...] This attitude is not surprising, because our generation never experienced such an intense political and social struggle" (29 October, 1933). While their views were not necessarily unbiased (*ABC* was a monarchic newspaper very hostile to left republicans and socialists, and its publication was from time to time suspended by the government), García-Uribe *et al.* (2024) find that indices of socio-economic conflict based on news from *ABC* and *La Vanguardia* (a moderately pro-Republic newspaper published in Barcelona) are virtually identical and explain most of the economic policy uncertainty of the period.

5. Did political uncertainty predict future returns?

In this section, we test whether political uncertainty was correlated with future investment opportunities, proxied by aggregate equity market returns. We use in-sample

[13] The mean value of the index is 1.2 and its autoregressive coefficient is 0.52 over the whole period.

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predictive regressions for different time horizons in the following multivariate empirical specification:

$$r_{mkt,m+q} = \alpha_q + \beta^{POL}_{mkt,q} POL_m + \gamma_q X_m + \varepsilon_{mkt,m+q} \quad (1a)$$

$$r_{mkt,m,m+q} = \alpha_q + \beta^{POL}_{mkt,q} POL_m + \gamma_q X_m + \varepsilon_{mkt,m,m+q} \quad (1b)$$

where $r_{mkt,m+q}$ is the market portfolio total return q months ahead, $r_{mkt,m,m+q} = r_{mkt,m+1} + \cdots + r_{mkt,m+q}$ is the continuously compounded cumulative total return over q months, *POL* is our index of political uncertainty, X is a set of control state variables, q is the forecasting horizon (from 1 to q months) and $\varepsilon_{mkt,m+q}$, $\varepsilon_{mkt,m,m+q}$ are forecasting errors with zero conditional mean. The coefficient of interest is $\beta^{POL}_{mkt,q}$ which indicates whether innovations in uncertainty predict positive or negative future returns.

In the benchmark regressions, the first set of control state variables includes three risk factors—size, value and momentum—in line with Fama–French models recently used also in the historical literature (Annaert and Mensah, 2014; Ye and Turner, 2014). The size factor is the 1-month ahead excess return of a portfolio of small over large stocks. The value factor is the excess return of a portfolio of high over low dividend yield stocks. The momentum factor is the excess return of a portfolio of winning over losing stocks in the last 6 months[14]. To ensure that *POL* does not capture the impact of poor economic prospects or other sources of economic uncertainty not directly related to socio-political processes, we also control for three additional state variables. The first one is the aggregate dividend-to-price ratio, a broad indicator of business conditions which has been found to predict returns over various time horizons in different historical contexts robustly (Maio and Santa-Clara, 2012; Golez and Koudijs, 2018). We also include the government bond yield as a key indicator of the nominal interest rate in the money market, which is also found to have predictive ability over short-term time horizons (Rapach *et al.*, 2005; Ang and Bekaert, 2007). For this purpose, we use the yield of internal perpetual bonds (*deuda perpetua interior 4%*), a safe financial instrument widely used as a source of liquidity at the discount window of the Bank of Spain. Finally, we control for the possible impact of market liquidity on future returns. Our measure of liquidity is the aggregate market turnover constructed on the base of daily data as the monthly total number of stocks traded divided by the number of stocks admitted to trade on the stock exchange[15].

Table 1 summarises the benchmark estimates of the $\beta^{POL}_{mkt,q}$ coefficient both for cumulative and non-cumulative aggregate returns. As it is standard in the empirical finance literature, we use Newey and West standard errors with pre-whitened series up to q lags, which are robust to heteroscedasticity, auto and serial correlation in the residuals. We find that political uncertainty was a strong predictor of future market returns at short time horizons. One standard deviation increase in *POL* predicts a statistically significant and negative (non-cumulative) monthly return of −0.6/−0.7 per cent in the following three months[16], with a cumulative effect up to −2.1 per cent. This implies that peaks

[14] For details on their construction and their time series, see Section A.4 and Figure A.3 of the online Supplementary material.

[15] Table A.4 of the online Supplementary material shows descriptive statistics of all variables used in the regressions.

[16] As a robustness check, we control for the impact of political uncertainty at $t + 1$ and $t + 2$ on non-cumulative returns at $t + 3$. We still find a negative and significant impact of political uncertainty at t, although the magnitude of the estimated coefficient decreases by ca. 50 per cent.

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Table 1. Predictive power of political uncertainty: benchmark results

Time horizon	Contemp.	1 month	2 months	3 months	6 months	12 months
Dependent variable	Total return on capitalisation-weighted market portfolio					
	(1)	(2)	(3)	(4)	(5)	(6)
Non-cumulative	−0.004	−0.007***	−0.006***	−0.007**	0.004	0.004
	(0.002)	(0.003)	(0.002)	(0.003)	(0.005)	(0.006)
Cumulative			−0.010***	−0.021***	−0.013	0.013*
			(0.003)	(0.007)	(0.008)	(0.008)
N	74	73	72	71	68	64

The table reports $\beta^{POL}_{mkt,q}$ coefficients from a generalised linear model in which we regress monthly returns, first non-cumulative (top quadrant) then cumulative (bottom quadrant), of the capitalisation-weighted market portfolio up to 12 months ahead on our index of political uncertainty, for the period from January 1930 to July 1936. Controls include the size, value and momentum factors, the market dividend yield, the bond yield and an aggregate measure of market liquidity (turnover ratio). Newey–West standard errors are reported in parenthesis.

*** ** and * denote statistical significance at 1, 5 and 10% levels, respectively.

of political uncertainty (max value 4.36) predicted a cumulative loss up to −9.2 per cent 3 months ahead. At longer time horizons, the effect gradually wore out and was eventually reversed, with a predicted monthly return of 0.4 per cent and a cumulative return of 1.3 per cent 12 months ahead[17].

As a second step in our analysis, we run various robustness checks to exclude that our measure of political uncertainty captures other confounding state variables. First, we include dummies for pre-election, election and post-election months to control for the possible impact of uncertainty generated by the municipal elections of April 1931 and the general elections of June 1931, November 1933 and February 1936. In the same vein, we include dummies for months that preceded, or coincided with cabinet crises. We also use dummies to capture months of political emergency, such as states of war and alarm declared in coincidence with internal crises such as outbursts of violence after the proclamation of the Republic (April–July 1931), the attempted military coup of August 1932 and the revolutionary insurrection of October 1934. In a second specification, we include three additional monthly indicators based on news from *ABC*: an index of news related to key macroeconomic policy issues, such as exchange rate, fiscal and monetary policy; an index of trade policy news and an index of news related to the possible break-up of Spain as a unitary state, such as the proclamation of an independent Catalan Republic (April 1931 and October 1934) and the parliamentary debate on the controversial statute of autonomy for Catalonia (finally approved in September 1932)[18]. We also control for the possible impact of international political instability. We use the International Crises Behaviour (ICB) dataset to construct monthly measures of political disaster risk (Berkman *et al.*, 2011) based on the number of international political crises, both at a global level and in Europe, adjusted for characteristics such as the intensity of armed

[17] For further robustness, we also modelled the political uncertainty index as an AR(1) process (as in Berkman *et al.*, 2011) and used its residuals as a proxy for unexpected uncertainty in the predictive regressions. We obtained the same negative coefficient for cumulative returns (with some loss of significance) and a larger negative coefficient for non-cumulative returns (with no loss of significance).

[18] Details on their construction are provided in Section A.5 and Figure A.4 of the online Supplementary material.

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violence and the involvement of Great Powers[19]. Finally, we add monthly variations in available macroeconomic indicators, such as GDP, wholesale prices, imports, exports and the exchange rate (the gold value of the peseta)[20].

Table 2 summarises the results for cumulative returns at a time horizon of 3 months. They confirm the previous findings. A one-unit innovation in political uncertainty predicts a cumulative negative return between −1.5 and −2.3 per cent. Dummies for electoral campaigns also predict cumulative negative returns 3 months ahead up to −8.9 per cent. On the contrary, we do not find any significant impact of other economic policy or political news, internal states of exception or international political crises[21]. Overall, this evidence strongly corroborates the predictive power of the dimensions of domestic political uncertainty captured by our news-based index[22].

As a last step, we test the heterogeneity of the predicted impact of political uncertainty across firms. As suggested by an extensive literature, firms use political connections to extract private information, influence policy-making or demand protection (Faccio, 2006). These resources are especially valuable in periods of uncertainty, as they diffuse political risk and mitigate its negative effect—for instance, by allowing firms to access privileged information about policy changes (Liu *et al*., 2021). At the same time, political transitions could damage firms connected to the overturned regime (Dang and So, 2018). In this perspective, firms connected to ruling parties of the Second Republic should have been less affected by shifts in political uncertainty, while firms connected to monarchic parties, or to political forces of the previous regimes, could be especially exposed to it.

To test those hypotheses formally, we reconstructed the biographies of the 467 directors sitting on the boards of our twenty-seven firms between January 1930 and July 1936. We identified fifty-five "politicians" (11.8 per cent of total), broadly defined as directors with political offices as MPs (elected and candidate), ministers or members of party elites during the Republic. We also found 110 "former politicians" connected to previous regimes (23.5 per cent of total), that is, MPs, senators, ministers or leaders of pre-1923 parties; and ministers, political officers and members of the unelected corporatist assembly (*Asamblea Nacional Consultiva*) during the dictatorship. Table 3 provides details about their political profiles[23].

We measure at monthly frequency the intensity of each firm's political connections as the share of seats occupied by "politicians" and "former politicians" and interact this measure with the political uncertainty index in a panel regression to test its impact on the cross section of future returns[24]. Table 4 summarises the results for cumulative returns at a 3-month horizon. Firms with political connections to republican parties

[19] Details on the ICB dataset (https://sites.duke.edu/icbdata/) and the construction of our measures are provided in Section A.6 and Figure A.5 of the online Supplementary material.

[20] Series on GDP, wholesale prices, imports and exports are from Albers (2018), Interwar Macro Panel Dataset (https://www.openicpsr.org/openicpsr/project/105160/version/V1/view). Exchange rate series from Martínez Méndez, Pedro (2021). *Tesoro y Banco de España (1900–1936).* Versión 1 [dataset], *Repositorio institucional del Banco de España* (https://repositorio.bde.es/handle/123456789/15611).

[21] The most relevant European crises in the 1930s were the attempted Nazi Putsch in Austria, the assassination of King Alexander of Yugoslavia and the outbreak of the Italian colonial war in Ethiopia. If any, they were associated with positive cumulative returns. This might be explained by their clustering in a period (from late 1934 to late 1935) characterised by a significant fall in domestic political uncertainty and a generalised recovery of the stock market.

[22] Full regression results for cumulative returns are shown in Table A.5 of the online Supplementary material.

[23] Details on methods and sources are provided in Section A.7 of the online Supplementary material.

[24] Descriptive statistics of firms' political connections are summarised in Table A.6 of the online Supplementary material. Using the absolute number of directors gives identical results. Since there is a margin of uncertainty about the exact date of change in the board composition, we ran several regressions using lags and leads of political connections up to 6 months; the results did not change.

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Table 2. Predictive power of political uncertainty: controls

Time horizon	3 months				
Dependent variable	Cumulative return				
	(1)	(2)	(3)	(4)	(5)
Political uncertainty	−0.016***	−0.016**	−0.023***	−0.021***	−0.015***
	(0.005)	(0.007)	(0.008)	(0.007)	(0.005)
Election	−0.030	−0.033			−0.034
	(0.042)	(0.035)			(0.039)
Pre-election	−0.068**	−0.089*			−0.089***
	(0.033)	(0.051)			(0.028)
Post-election	−0.063***	−0.023			−0.021
	(0.021)	(0.016)			(0.027)
Government crisis	0.024	0.034***			0.031*
	(0.018)	(0.005)			(0.017)
Pre-government crisis	−0.002	0.007			0.005
	(0.009)	(0.005)			(0.016)
State of war	0.002	−0.009			−0.010
	(0.020)	(0.025)			(0.018)
State of alarm	−0.012	−0.020			−0.021
	(0.024)	(0.016)			(0.019)
Economic policy news			−0.005	0.001	0.000
			(0.003)	(0.006)	(0.007)
Trade policy news			0.001	−0.006	−0.002
			(0.002)	(0.007)	(0.006)
Catalan news			0.000	0.001	−0.001
			(0.003)	(0.002)	(0.002)
International political risk			0.016**	0.010	0.001
			(0.008)	(0.011)	(0.010)
R^2	0.60	0.73	0.55	0.66	0.73
Obs.	71	71	71	71	71
Additional controls:					
(a) risk factors (size, value, momentum), market dividend yield, bond yield, market liquidity	Yes	Yes	Yes	Yes	Yes
(b) GDP, price index, imports, exports, exchange rate	No	Yes	No	Yes	Yes

The table reports $\beta^{POL}_{mkt,q}$ and other coefficients from a generalised linear model. We regress monthly cumulative returns of the capitalisation-weighted market portfolio 3 months ahead on our index of political uncertainty, dummies for election, pre-election, post-election, government crisis and pre-government crisis months, months of internal emergency (state of war and state of alarm), other news-based indices and international political crises for the period from January 1930 to July 1936. In all regressions controls include the size, value and momentum factors, the market dividend yield, the bond yield and a measure of market liquidity. In columns (2), (4) and (5), we also control for the monthly change of (log) GDP, wholesale prices, imports, exports and the peseta/gold exchange rate. Newey–West standard errors are reported in parenthesis.

*** ** and * denote statistical significance at 1, 5 and 10% levels, respectively.

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Table 3. "Political" directors

	Republican parties	Monarchic and traditionalist parties	Catholic right (CEDA)	Regional nationalist parties	Socialist party	**Total**	Share of total directors (467)
Political directors (narrow definition)	23	5	4	4	3	**39**	**8.4%**
o/w "new"	*17*	*0*	*2*	*2*	*3*	*24*	*5.1%*
o/w "old"	*6*	*5*	*2*	*2*	*0*	*15*	*3.2%*
Political directors (broad definition)	27	13	6	6	3	**55**	**11.8%**
o/w "new"	*19*	*4*	*2*	*3*	*3*	*31*	*6.6%*
o/w "old"	*8*	*9*	*4*	*3*	*0*	*24*	*5.1%*
Directors appointed by the government						**55**	**11.8%**
o/w without political connection						*35*	*7.5%*
o/w with political connection	*16*	*1*	*0*	*0*	*3*	*20*	*4.3%*
Foreign directors						**75**	**16.1%**
	Liberal party	Conservative party	Regional national parties	Republican parties	Socialist party	**Total**	Share of total directors (467)
Politicians of the Restoration (pre-1923)	29	57	12	3	1	**102**	**21.8%**
o/w with positions 1923–30	*3*	*9*	*0*	*0*	*1*	*13*	*2.8%*
o/w with positions 1930–1931	*1*	*7*	*1*	*0*	*0*	*9*	*1.9%*
o/w with positions post-1931	*6*	*11*	*4*	*1*	*0*	*22*	*4.7%*
"New" politicians of the dictatorship						**8**	**1.7%**

The table summarises the profile of directors with political positions during the Second Republic (after April 1931) (top quadrant) and previous political regimes (Monarchy before September 1923, Dictatorship between September 1923 and January 1930, transition period January 1930–April 1931) (bottom quadrant). The narrow definition of "political directors" includes only MPs and ministers affiliated to political parties of the republican regime; the broad definition includes also local and national party leaders with no seats in Parliament or ministerial responsibilities. "New" connote directors with no political positions before April 1931; "old" those with pre-existing political experiences. "Directors appointed by the government" are official representatives in firms in which the state was a shareholder or had the legal power to appoint some directors; those without political connections were usually members of public administrations, including the army.

Table 4. Predictive power of political uncertainty: political connections

Time horizon	3 months				
Dependent variable	Cumulative returns (panel)				
	(1)	(2)	(3)	(4)	(5)
Political uncertainty	−0.015***	−0.021***	−0.021***	−0.021***	−0.023***
	(0.002)	(0.005)	(0.006)	(0.006)	(0.006)
Interactions of political uncertainty with political and business connections					
Republican parties		0.079**	0.071**	0.067**	0.094**
		(0.033)	(0.032)	(0.031)	(0.040)
Socialist party		0.141	0.115	0.117	0.093
		(0.135)	(0.138)	(0.137)	(0.132)
Regional nationalist parties		0.045	0.045	0.074	0.505
		(0.083)	(0.102)	(0.097)	(0.305)
Monarchic parties		0.043	0.046	0.049	0.077
		(0.030)	(0.031)	(0.029)	(0.045)
Catholic right (CEDA)		−0.029	−0.028	−0.056	0.112
		(0.127)	(0.127)	(0.127)	(0.112)
Conservative party (pre-1923)		0.001	−0.001	0.002	−0.014
		(0.009)	(0.010)	(0.001)	(0.017)
Liberal party (pre-1923)		0.027	0.025	0.032	0.016
		(0.025)	(0.026)	(0.026)	(0.028)
Dictatorship (1923–1930)		0.030	0.021	0.027	0.043
		(0.042)	(0.050)	(0.055)	(0.052)
Foreign shareholders			−0.003	0.001	−0.000
			(0.016)	(0.016)	(0.016)
State administrations			0.046	0.039	0.101**
			(0.043)	(0.045)	(0.041)
No. of observations	1917	1917	1917	1905	1917
Benchmark controls	Yes	Yes	Yes	Yes	Yes
Interactions of political uncertainty with					
Stock time-varying characteristics	No	No	No	Yes	No
Other political and business connections	No	No	No	No	Yes

The table reports results from predictive panel regressions for the cross section of firms. We regress monthly cumulative returns of individual firms 3 months ahead on our index of political uncertainty, and the interaction between uncertainty and a measure of political and business connections based on the share of board seats occupied by "political" directors, foreign directors and representatives of state administrations. Benchmark controls include the market, size, value and momentum factors, the market dividend yield, the bond yield, market liquidity and dummies for election, pre-election, post-election, government crisis and pre-government crisis months, for the whole period from January 1930 to July 1936. Stock time-varying characteristics include size, dividend yield, momentum, volatility and liquidity. Other political and business connections include personal connections to influential political figures (Francesc Cambó, Álvaro Figueroa Conde de Romanones) and financial groups (Banco Urquijo). Newey–West standard errors are reported in parenthesis.

***, ** and * denote statistical significance at 1, 5 and 10% levels, respectively.

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were significantly less affected; for a firm with a 10 per cent share of seats occupied by republican directors, the predicted fall from one-unit increase in political uncertainty was up to 41 per cent lower (−1.4 instead of −2.3 per cent) than a firm with no political connections. We do not find comparable systematic effects for other board characteristics, such as connections to other parties, foreign shareholders or to the state through representatives of public administrations. In turn, there is no evidence of a more negative impact from connections to monarchic parties or past regimes. The results hold if we control for time-varying firm characteristics (size, dividend yield, volatility) and other types of political or business connections[25].

It is important to add here that only a small minority of firms benefited from the stabilising properties of connections to republican parties. In fact, the presence of "republican" directors was heavily concentrated in three firms in which ruling parties had the legal power to appoint government representatives: the Bank of Spain, the oil company CAMPSA and the telephone company Telefónica—all firms with long-term special contracts with the government and monopolistic privileges in their respective sectors[26]. We will further explore their role in the following sections.

6. Did sensitivity to political uncertainty vary across firms?

We now move on to study whether investors perceived political uncertainty as a source of non-diversifiable systematic risk. For each stock we regress its monthly return on the contemporaneous and lagged value of the political uncertainty index, *POL*, and a set of control factors[27]. The sensitivity of each stock i to a one-unit increase in political uncertainty at month m is $(\beta^{POL}_{i,m} + \beta^{POL}_{i,m-1})$, that is, the sum of its contemporaneous and lagged β^{POL} from the following multivariate regression:

$$R_{i,m} = \alpha_{i,m} + [\beta^{POL}_{i,m} \cdot POL_{i,m} + \beta^{POL}_{i,m-1} \cdot POL_{i,m-1}] + [\beta^{X}_{i,m} \cdot X_{i,m} + \beta^{X}_{i,m-1} \cdot X_{i,m-1}] + \varepsilon_{i,m} \quad (2)$$

where X is a vector of additional risk factors that could affect returns and β^X measures the corresponding stock exposure. They include the market, size, value and momentum factors, and the aggregate market liquidity. Regressions for the entire period from January 1930 to July 1936 reveal a significant dispersion in the average β^{POL}, ranging from +0.86 to −0.59%. However, the width of confidence intervals also suggests that estimates are not very precise in most cases[28]. This can be due to the fact that firms' sensitivity changed over time—a plausible hypothesis given the volatility of the political environment.

To explore this issue further, we estimate time-varying exposures of our twenty-seven stocks using 24-month rolling windows[29]. Figure 3 plots the time series of the median

[25] We also control for the presence of directors personally connected to influential political figures, such as Francesc Cambó and Álvaro Figueroa, Conde de Romanones, or to Banco Urquijo, a leading bank at the head of a large and diversified industrial group.

[26] A complete list of "republican" directors and their party affiliation is reported in Table A.7 of the online Supplementary material.

[27] In line with standard practice of beta estimates in historical studies (Annaert and Mensah, 2014; Ye and Turner, 2014), adding a lag to the explanatory variables reduces the possible bias generated by thin trading.

[28] Results are presented in Table A.8 of the online Supplementary material.

[29] The first estimate of rolling sensitivity corresponds to January 1930 and is based on a 24-month window starting in February 1928. Since five of our constituent stocks were admitted to trading in Madrid for the first time between 1927 and 1929, a 24-month window allows us the minimise the loss of information while ensuring a sufficiently long sample for the estimation of uncertainty betas in the period of interest. This choice is in line with the recent literature. For instance, Bali *et al.* (2017) estimate economic uncertainty betas over a rolling window of 60 months and require at least twenty-four observations using monthly data for the U.S. equity

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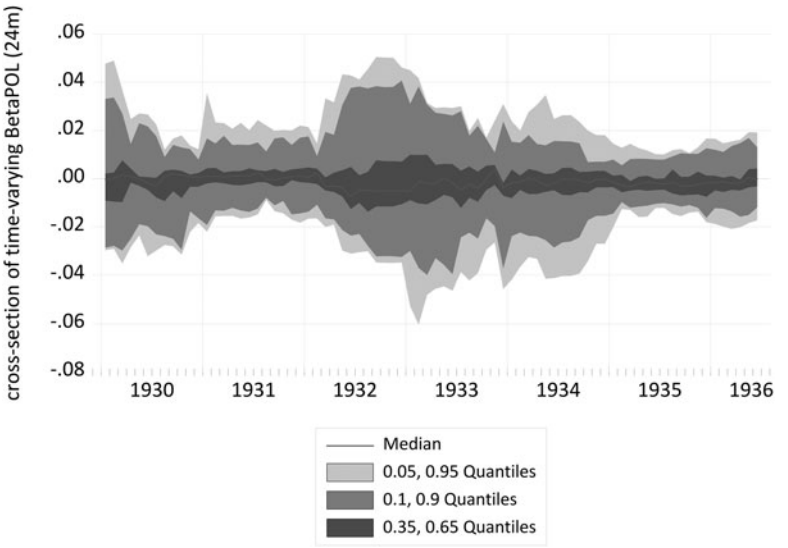

Figure 3. Cross-sectional distribution of firm-specific sensitivities to political uncertainty, 1930–1936.
This graph shows for each month the median value of estimated time-varying sensitivities to political uncertainty of the twenty-seven firms included in the equity market portfolio, and the values corresponding to different quantiles of its cross-sectional distribution.

value of the estimated rolling sensitivities, and the upper and lower bounds of different quantiles of its cross-sectional distribution. The data show the presence of positive and negative β^{POL}, with significant variations in their dispersion over time. This suggests that investors did not respond to heightened political uncertainty by exiting the market indiscriminately, but adjusted the composition of their equity portfolio. The range of extreme quantiles was significantly larger in the "bear" market of 1932–1934, confirming the hypothesis that sensitivity to uncertainty was especially strong in "bad" states of the financial market.

To assess which firms were perceived by investors as better and worse hedges against political uncertainty, Figure 4 shows for each stock the correlation between its median time-varying sensitivity and its percentage of positive β^{POL} over the total number of rolling estimates[30]. The upper right quadrant includes stocks with a positive average β^{POL} and more than 60 per cent of positive estimates; the bottom left quadrant identifies stocks with a negative average β^{POL} and more than 60 per cent of negative estimates. The median β^{POL} measures the typical contemporaneous response of monthly returns to one unit increase in *POL*; for instance, in the two extreme cases of the insurance company *Unión y Fénix* and the chemical company *Explosivos*, it implies a 1.9 per cent increase and a 1.8 per cent decrease, respectively.

Data suggest that, during months of heightened political uncertainty, investors bid up the prices of few selected firms. On the one hand, they were firms traditionally perceived as safe long-term investments, such as the Bank of Spain, a privately owned and highly profitable bank of issue with a sizable commercial business (Robledo, 1988) and *Unión y Fénix*, a French-Spanish company with a leading position in the cartelised and highly

market. More recently, Nartea *et al.* (2020) use a rolling window of 12 months for the Australian equity market in the period 1998–2017.

[30] We prefer to use the median rather than the mean values due to the high presence of outliers in estimated sensitivities for most of the firms.

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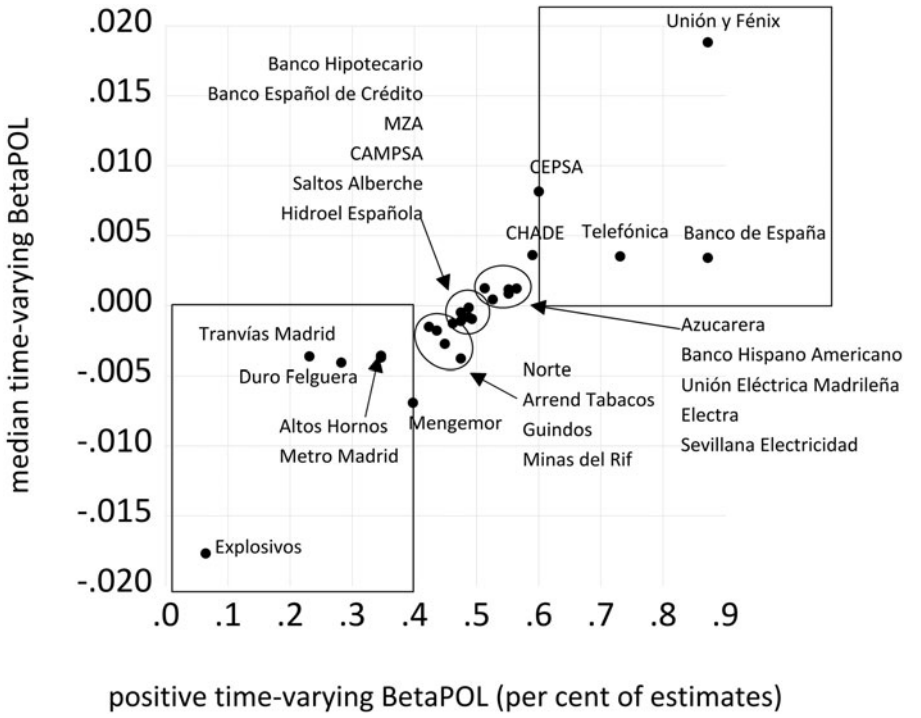

Figure 4. Hedges vs. non-hedges, 1930–1936.
This graph shows for each firm included in the equity market portfolio the correlation between average time-varying sensitivity to political uncertainty (based on median value of rolling estimates) and the unconditional probability of positive estimates. Values for *Banco Central* are excluded since the stock was suspended from trading for long periods between 1931 and 1936.

profitable insurance industry (Pons Pons, 2003). On the other hand, other "hedge" stocks were young firms created in the 1920s in emerging sectors, with strong market power and international connections. They included *CHADE*, a multinational electric public utility with a dominant position in Argentina, controlled by the Brussels-based holding SOFINA and with close political connections to Catalan nationalism (Cabana, 2015; Dalla-Corte Caballero, 2017); *Telefónica*, controlled by the U.S. multinational ITT, participated by large Spanish banks and with a monopolistic contract with the state granted by the dictatorship in 1924 (Álvaro Moya, 2007) and *CEPSA*, the only Spanish oil refining firm, with oil fields in Venezuela, modern refineries in the Canary Islands, access to supply from foreign oil multinationals and a privileged contract with *CAMPSA*, controlled by a consortium of Spanish banks, with a minority participation by the state and a monopoly contract for the commercialisation of oil products granted by the dictatorship (Tortella, 2003; Tortella and Quiroga, 2022).

On the other hand, political uncertainty penalised firms in mature industries that had benefited from the extensive pro-business interventionism of the dictatorship, based on tariff protection, subsidies, public procurement contracts and ambitious plans of public works (Palafox, 1991, pp. 79–121; Carreras and Tafunell, 2004, pp. 242–251). These include, for instance, the cartelised iron and steel industry (*Altos Hornos* and *Duro Felguera*), the chemical giant *Explosivos* and the cartelised declining lead industry (*Guindos*). Similar cases are *MZA* and *Norte*, two railway giants heavily dependent on state subsidies under the regulatory framework (*Estatuto Ferroviario*) established by the dictatorship in the 1920s, which had prepared the ground for a more direct participation of the state in

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the management of the concessionary companies in view of a future nationalisation (Ortúñez Goicolea, 2008, 2016). On the contrary, we do not find a clear impact of political uncertainty on the publicly regulated electric sector[31].

Importantly, Figure 4 also reveals that many firms returned almost equal numbers of positive and negative estimates. This suggests that investors' perception of their exposure to political risk varied over time, possibly in response to changes in firm-specific political circumstances[32]. In the next section, we discuss this hypothesis for a group of firms which became the target of hostile political action by Republican governments.

7. Firms under political attack: how did investors respond?

In the initial phase of the Republic, some firms became especially exposed to attacks by the new political elites either for their conflicts with the executive (*Banco de España*), their privileged contracts with the state (*Telefónica*, *CAMPSA*, *CEPSA*) or their huge burden on the public finances (*MZA*, *Norte*). Their cases give us the opportunity to observe in more detail how shifts in firm-specific political risk affected investors' perceptions of their hedging properties.

The politically more sensitive cases were the oil and telephone monopolies, stigmatised as the "brainchildren" of the dictatorship. In the case of *Telefónica*, the terms of the 1924 contract, initially accepted by the provisional government in April 1931, were pronounced illegal by a parliamentary commission and referred to the Parliament a few months later. In the middle of acrimonious political debates, secret negotiations and gestures of appeasement, uncertainties were gradually resolved over the course of 1934, when new amicable terms were agreed with the centre-right government of Alejandro Lerroux, leader of the Radical Party and a long-standing "friend" of the company (Álvaro Moya, 2007, p. 80). In a similar fashion, the commercial oil monopoly granted to *CAMPSA* in 1927 had been questioned by republicans and socialists. Uncertainties were magnified by a legacy of unsettled legal controversies (domestic and international) on the expropriation of pre-existing private companies, an international boycott that made the company heavily dependent on Soviet oil[33] and the competitive challenge of *CEPSA*, controlled by a group close to the old regime and interested in gaining direct access to the Spanish market. As a consequence, with the advent of the Republic, many expected a radical reform, or possibly the abolition of the monopoly. On the contrary, the centre-left government gave up initial plans to challenge the *CAMPSA* contract (which provided substantial fiscal revenues to the state) and turned into a strong supporter of the company, which then became a target of political attacks from the right[34]. After the elections of 1933, rumours about a possible revision of the monopoly contract were revived, political interferences in the management of *CAMPSA* increased, and hostilities with *CEPSA* and its political supporters intensified, locking the two

[31] Republican governments confirmed in 1933 the regulated tariffs set by the dictatorship, which guaranteed sustained profitability in an increasingly cartelised sector. Very few electric companies had benefited from subsidies during the dictatorship; temporarily suspended in April 1931 as "harmful to the public interest", they were eventually confirmed and partially disbursed after January 1934 (Bartolomé Rodríguez, 2007, 2011).

[32] This is confirmed by the statistical distribution of cross-sectional rolling sensitivities in Figure A.6 in the online Supplementary material.

[33] This created a situation with sensitive international implications, as the Soviet regime aimed at trading off oil with diplomatic recognition by the republican governments.

[34] For instance, in 1932 the government relaxed CAMPSA's dependence on CEPSA by allowing it to tender international supply contracts of refined products—a decision publicly disputed by CEPSA, who had proposed a long-term exclusive contract.

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companies into a permanent dispute among political factions (Velarde, 2010; Contreras-Pérez and Peña Díaz, 2022; Tortella and Quiroga, 2022).

In the case of the Bank of Spain, the 1921 reform of the banking law, which aimed at converting it into a modern central bank (Pons Brias, 2022), created scope for policy conflicts on the management of the exchange rate, which was formally entrusted to the Ministry of Finance. The final period of the dictatorship and the 1930–1931 transition were dominated by a permanent dispute on the use of gold reserves (which the Bank and its private shareholders regarded as its main asset) for exchange market interventions. In the crisis of 1931, the Bank intervened reluctantly in support of the banking system and most of its directors dissented publicly with the government's stabilisation plans. The conflict precipitated a reform of the banking law that increased the representation of the executive on the board of directors and the share of Bank's profits accruing to the state. The project, loudly resisted by the Bank and its political supporters, was passed in November 1931 in spite of harsh public controversies in the press and the Constituent Assembly. However, the manifest hostility of banking elites cost Indalecio Prieto, a socialist leader, his position at the head of the Ministry, replaced by moderate republican Jaime Carner in December 1931 (Martín-Aceña, 1984, pp. 244–251; Velarde, 2010; Martínez Ruiz and Nogués-Marco, 2014; Jorge-Sotelo, 2020; Martínez Ruiz, 2022).

Railways were another prominent example of the shift in policy risk brought home by the regime change. The regulatory regime approved in 1924 by the dictatorship (*Estatuto Ferroviario*) had led to a semi-nationalisation with high costs for public finances and large benefits for private shareholders of the agonising giants *MZA* and *Norte*. Its formal suspension by an interim government in July 1930 pushed the sector into a legal, regulatory and financial limbo and left to republican governments and political forces a burdensome legacy of permanent (and inconclusive) negotiations on the objectives and costs of a new reform. Until 1933, while companies struggled to guarantee shareholders' compensation in case of nationalisation, the centre-left coalition reinforced government's influence on firms' management, both indirectly (through the *Consejo Superior de Ferrocarriles*) and directly (through state commissioners with the power to veto any deliberation of the directors), in view of a future nationalisation at no cost for the state budget. In 1934–1935, on the contrary, centre-right governments, focused on alleviating the fiscal burden of the existing regime, approved an increase in tariffs and elaborated reform projects more in tune with the requests of the companies, pointing to a favourable redemption of concessions, a rationalisation of the sector, a reorganisation of private companies and a new lease regime. However, the hypothesis of a nationalisation at zero cost resurged in 1936 with the seizure of the defaulting third largest railway company (*Andaluces*) and the proposal of a new co-administration regime, fiercely opposed by companies (Ortúñez Goicolea, 2000, 2008).

Did investors respond to shifts in firm-specific political risk? We find this is actually the case. In the bottom part of Figures 5–8 we show the rolling estimates of sensitivity to political uncertainty for the selected firms. The top part of the graphs also shows sensitivity shocks, obtained as residuals from a regression of the estimated sensitivity on fixed firm and month effects (to get rid of the impact of unobservable time-invariant firm characteristics and common shocks) and a lag of the dependent variable (to account for the persistence of rolling estimates).

In the regime transition of 1930–1931, the hedge properties of the Bank of Spain's stocks were significantly impaired by its conflicts with the Ministry of Finance, which exposed it to political actions that could limit its autonomy and profitability (see Figure 5). On the contrary, its β^{POL} became strongly positive after January 1932; this suggests that investors interpreted the political changes of the end of 1931 as a significant reduction in its exposure to political risk. The appeasement with the Bank also had a positive spillover on the rest of the banking system. In fact, as shown in the same figure, we

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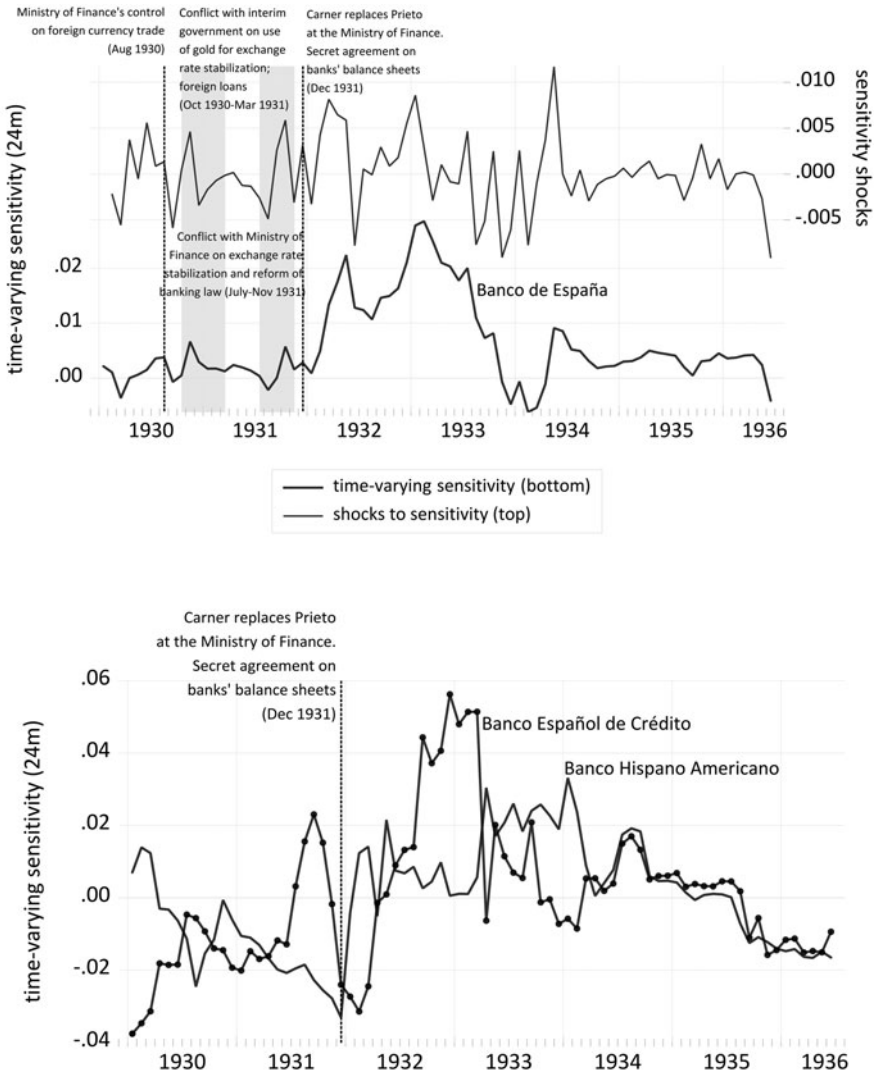

Figure 5. Time-varying sensitivity: the banking sector.
Time-varying sensitivity is based on rolling estimates of β^{POL} on a 24-month moving window. Shocks to sensitivity are the residuals from a pooled regression of the estimated time-varying sensitivities on a constant, firm- and month-fixed effects, and a lag of sensitivity to account for its autoregressive component.

observe in 1932 a similar switch to positive β^{POL} also for private banks (*Banco Español de Crédito*, *Banco Hispano Americano*)[35]. This coincided with important regulatory changes, negotiated behind closed doors by banks and the Ministry of Finance. By temporarily altering accounting rules, the agreement protected banks' official balance sheets from the consequences of the generalised slump of stock market prices accumulated since the advent of the Republic. This intervention not only protected banks' stability in the short run, but also reduced counterparty risk for the Bank of Spain's loans against

[35] Similar behaviour can be observed in the case of the public bank *Banco Hipotecario*. We cannot observe the response of *Banco Central* to political uncertainty since trading of its stocks was suspended most of the time since mid-1931.

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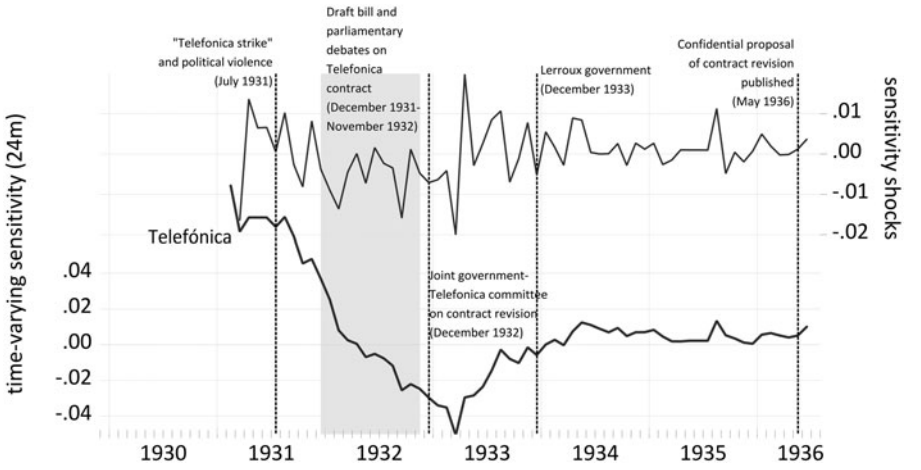

Figure 6. Time-varying sensitivity: Telefónica.
Time-varying sensitivity is based on rolling estimates of β^{POL} on a 24-month moving window. Shocks to sensitivity are the residuals from a pooled regression of the estimated time-varying sensitivities on a constant, firm- and month-fixed effects, and a lag of sensitivity to account for its autoregressive component.

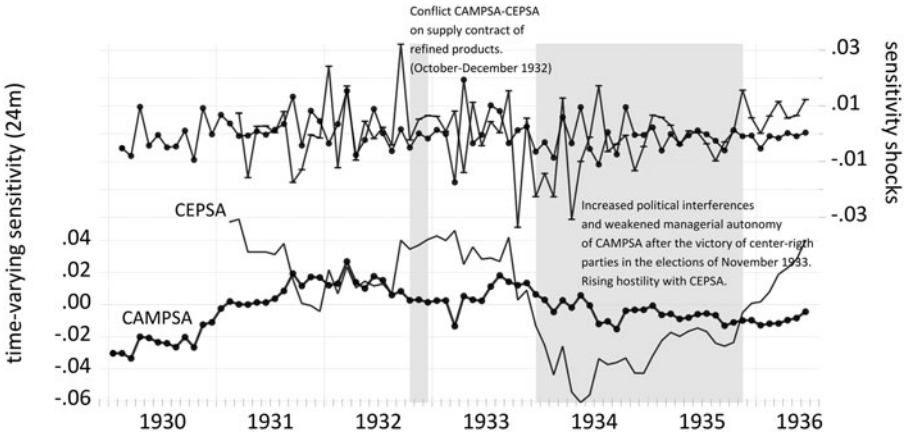

Figure 7. Time-varying sensitivity: oil companies.
Time-varying sensitivity is based on rolling estimates of β^{POL} on a 24-month moving window. Shocks to sensitivity are the residuals from a pooled regression of the estimated time-varying sensitivities on a constant, firm- and month-fixed effects, and a lag of sensitivity to account for its autoregressive component.

collateralised securities (Jorge Sotelo, 2019, pp. 231–248)[36]. Therefore the political appeasement was credibly signalled by a pact on regulatory forbearance that favoured the recovery of public trust in the banking system as a whole[37].

[36] In the public balance sheets for the year 1931, disclosed in the early months of 1932, banks were allowed to record equity holdings at 1930 prices in order to conceal large capital losses, which could endanger their stability. The measure was not announced officially but was certainly known to informed investors. We are grateful to one anonymous referee for drawing our attention to this regulatory intervention.

[37] In fact, since the end of 1931 there was a sustained recovery of bank deposits that continued for the entire period of the Second Republic (Jorge-Sotelo, 2020, p. 105).

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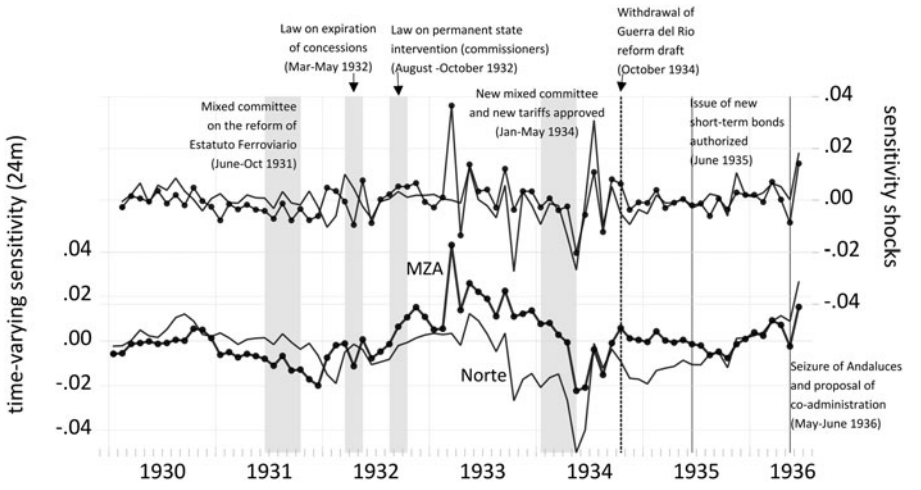

Figure 8. Time-varying sensitivity: railway companies.
Time-varying sensitivity is based on rolling estimates of β^{POL} on a 24-month moving window. Shocks to sensitivity are the residuals from a pooled regression of the estimated time-varying sensitivities on a constant, firm- and month-fixed effects, and a lag of sensitivity to account for its autoregressive component.

Similarly, *Telefónica* stocks switched from positive to negative β^{POL} when the terms of its contract went under attack, but switched back to positive β^{POL} as the appeasement with the "friendly" Radical party was negotiated and finally agreed (Figure 6). The β^{POL} of *CAMPSA* and *CEPSA* moved along opposed and crossing paths until 1933 in response to shifts in their specific (and negatively correlated) political circumstances, but then moved jointly into negative β^{POL} when the struggle of political factions exacerbated interferences and conflicts (Figure 7). In the case of the railway sector, on the contrary, the policy deadlock on the *Estatuto Ferroviario* made investors permanently wary of the hedge properties of *MZA* and *Norte* stocks, even when governments seemed to abandon the implicit threat of a nationalisation without compensation and moved towards a reform more favourable to the interests of the companies and their shareholders (Figure 8)[38].

Overall, the four cases discussed here confirm that our measure of time-varying sensitivity to political uncertainty responded systematically to shifts in firm-specific exposure to political risk. In general, we find that changes in firms' exposure to political risk were quickly reflected in shifts in investors' perception of their hedge properties in periods of heightened political uncertainty.

8. Did hedges earn lower future excess returns?

As explained in Section 2, asset pricing theory predicts that safer "hedge" stocks should earn lower future excess returns compared with riskier stocks with negative sensitivity to political uncertainty. We test this prediction formally by using a portfolio-sorting approach. At the end of each month, m, we rank stocks by their time-varying β^{POL} estimated in the past 24 months, and sort them into tertile portfolios (each composed of nine stocks). The first (third) tertile includes stocks with low (high) β^{POL}. Then, we calculate the return of each portfolio, both equally and value weighted, for holding periods

[38] The only short-lived exception is the positive sensitivity exhibited by MZA stocks in 1932–1933, driven by a positive shock in March 1933, whose origins are difficult to attribute to a specific cause.

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from $m+1$ to $m+12$[39]. This procedure is repeated each month until the end of the sample. Finally, we estimate the average expected performance of the first and third tertile portfolios and that of the hedge portfolio—that is, a portfolio long on high β^{POL} stocks and short on low β^{POL} stocks.

Table 5 summarises the average characteristics of stocks included in the tertile portfolios. In comparison with stocks in the first tertile (low sensitivity), stocks included in the third tertile account on average for a slightly larger share of the overall market portfolio and show higher β^{POL} (by construction), higher market capitalisation and lower negative momentum. On the contrary, we cannot observe any statistically significant differences in the mean of other stock characteristics, such as dividend yield, liquidity or sensitivity to market risk. The fact that high sensitivity stocks do not differ systematically from low sensitivity stocks in terms of liquidity excludes the possibility that hedging was in fact a "flight to liquidity". Looking at the mean cumulative returns of both equally weighted and capitalisation weighted tertile portfolios at different time horizons, we also find that high β^{POL} stocks performed significantly better than median and low sensitivity stocks at any time horizon until 12 months, and show lower volatility and downside risk for holding periods until 6 months[40].

More formally, we estimate the risk-adjusted 1-month ahead excess return of tertile portfolios over government bonds using a four-factor model, which includes the contemporaneous and lagged market factor and the size, value and momentum risk factors. Table 6 shows the unadjusted excess return of value weighted high and low β^{POL} portfolios and the hedge portfolio, their average α (i.e. the risk-adjusted excess return) and the loadings of each risk factor[41]. We find that the risk-adjusted returns for the high and low β^{POL} tertiles are 0.4 and −0.6% in the CAPM model and 0.3 and −0.8% in the four-factor model, with risk-adjusted spreads of 1.0 and 1.1% respectively (all coefficients are statistically significant at the 5 or 1% levels). These results confirm that the risk-adjusted spreads are driven both by the underperformance of low β^{POL} portfolios and the outperformance of high β^{POL} portfolios[42].

The finding of a positive uncertainty premium runs against the theoretical predictions of asset pricing. Our interpretation is that, in a situation of persistently high political uncertainty, investors went systematically long on hedges and short on firms more exposed to political risk. This hypothesis is supported by Figure 9, which shows the correlation between the median β^{POL} of individual stocks and their price in December 1935 (the peak of the bull market of 1934–1935) relative to October 1931 (the bottom of the market slump that followed the proclamation of the Republic in April).

We observe that by the end of 1935 the price of most hedge stocks (*Banco de España*, *Unión y Fénix*, *CEPSA*, *Telefónica*) had increased between 20 and 100 per cent relative to 1931; on the contrary, the value of most stocks with typical negative β^{POL} was still a fraction (in some cases, a very small one) of its 1931 level[43]. This evidence supports the hypothesis of a structural (rather than transitory) adjustment in the composition of

[39] To exemplify, our first β^{POL} are obtained from a 24-month window starting in February 1927 and ending in January 1930, which is our initial portfolio formation month. Then we rank stocks by β^{POL} to form tertile portfolios and calculate their cumulative returns for 1-month holding period (end of February 1930) up to a 12-month holding period (end of January 1931).

[40] Unadjusted mean returns and other descriptive statistics of tertile portfolios for holding periods from 1 to 12 months are summarised in Table A.9 of the online Supplementary material.

[41] Results for equally weighted portfolios are presented in Table A.10 of the online Supplementary material.

[42] The performance of an equity hedge portfolio compared with alternative investment strategies is presented in Figure A.7 of the online Supplementary material.

[43] The anomaly of *Explosivos* can be explained by the specific speculative characteristics of its stocks, emphasised by coeval observers.

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Table 5. Average characteristics of stocks included in the tertile portfolios

	Share of equity market portfolio	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)
		β^{POL}		β^{MKT}		*Size (mln pesetas)*		*Dividend yield*		*Momentum*		*Liquidity*	
*t*1 (low β^{POL})	0.290***	−0.019***	−0.018***	1.140***	1.132***	143.8***	277.7***	0.044***	0.040***	−0.040	−0.035	0.0036***	0.0029***
	(0.014)	(0.004)	(−0.002)	(0.112)	(0.156)	(8.024)	(21.884)	(0.007)	(0.003)	(0.049)	(0.040)	(0.000)	(0.000)
*t*2	0.367***	−0.000	0.000	0.927***	0.742***	185.2***	442.7***	0.051***	0.048***	−0.021	−0.009	0.0030***	0.0024***
	(0.023)	(0.000)	(0.000)	(0.050)	(0.072)	(16.559)	(45.539)	(0.003)	(0.001)	(0.091)	(0.044)	(0.000)	(0.0002)
*t*3 (high β^{POL})	0.343***	0.021***	0.019***	1.045***	1.119***	170.9***	470.0***	0.042***	0.040***	−0.007	0.008	0.0033***	0.0023***
	(0.022)	(0.003)	(0.003)	(0.115)	(0.125)	(12.928)	(51.575)	(0.003)	(0.004)	(0.181)	(0.055)	(0.000)	(0.0002)
*t*3–*t*1	0.053*	*0.040****	*0.037****	*−0.094*	*−0.013*	*27.1**	*192.3****	*−0.002*	*−0.000*	*0.033****	*0.042***	*−0.0003*	*−0.0005***
	(0.029)	*(0.005)*	*(0.005)*	*(−0.212)*	*(0.270)*	*(14.697)*	*(48.588)*	*(0.005)*	*(0.003)*	*(0.011)*	*(0.018)*	*(0.0002)*	*(0.0002)*
*t*3–*t*2	−0.024	*0.022****	*0.019****	*0.118*	*0.377***	*−14.4*	*27.3*	*−0.009****	*−0.008****	*0.014*	*0.017*	*0.0002*	*−0.0001*
	(0.044)	*(0.003)*	*(0.003)*	*(0.122)*	*(0.144)*	*(21.518)*	*(83.095)*	*(0.002)*	*(0.002)*	*(0.008)*	*(0.015)*	*(0.0003)*	*(0.0003)*

The top section of this table shows the mean values of β^{POL}, market beta, size (market capitalisation), dividend yield and momentum of stocks included in the tertile portfolios sorted by their sensitivity to political uncertainty. The bottom section tests the statistical significance of the differences between tertile 3 portfolio (high β^{POL}) and the other two. Columns (a) refer to equally weighted tertile portfolios, columns (b) to market-capitalisation weighted tertile portfolios.

***, ** and * connote significance at the 1, 5 and 10% levels, respectively.

Table 6. Tertile portfolios' risk-adjusted performance, 1-month holding period

	Excess return ($R_p - R_f$)	CAPM Risk-adjusted excess return (α)	Market factor		Four-factor model Risk-adjusted excess return (α)	Market factor		Size factor		Value factor		Momentum factor	
			Cont.	Lagged		Cont.	Lagged	Cont.	Lagged	Cont.	Lagged	Cont.	Lagged
Market-capitalisation weighted tertile portfolios													
Low β^{POL}	−0.013***	−0.006***	1.266***	0.009	−0.008***	1.119***	0.087	−0.031	0.005	−0.131	0.114	−0.209**	0.001
	(0.004)	(0.001)	(0.089)	(0.053)	(0-001)	(0.119)	(0.083)	(0.099)	(0.061)	(0.088)	(0.079)	(0.098)	(0.050)
High β^{POL}	0.001	0.004**	0.714***	−0.099	0.003**	0.705***	−0.198***	0.132**	0.078	−0.065	−0.169***	−0.018	−0.080***
	(0.003)	(0.002)	(0.063)	(0.065)	(0.001)	(0.068)	(0.060)	(0.065)	(0.057)	(0.103)	(0.063)	(0.062)	(0.021)
Hedge (high–low)	0.014***	0.010***	−0.551***	−0.108	0.011***	−0.413**	−0.285***	0.164	0.073	0.066	−0.283**	0.192	−0.082
	(0.003)	(0.002)	(0.120)	(0.096)	(0.002)	(0.158)	(0.085)	(0.128)	(0.094)	(0.174)	(0.114)	(0.161)	(0.056)

This table shows unadjusted and risk factor-adjusted returns of capitalisation weighted tertile portfolios with high and low sensitivity to political uncertainty, and their hedge spreads, for a 1-month holding period. Newey–West standard errors are reported in parenthesis.

***, ** and * denote statistical significance at 1.5 and 10% levels, respectively.

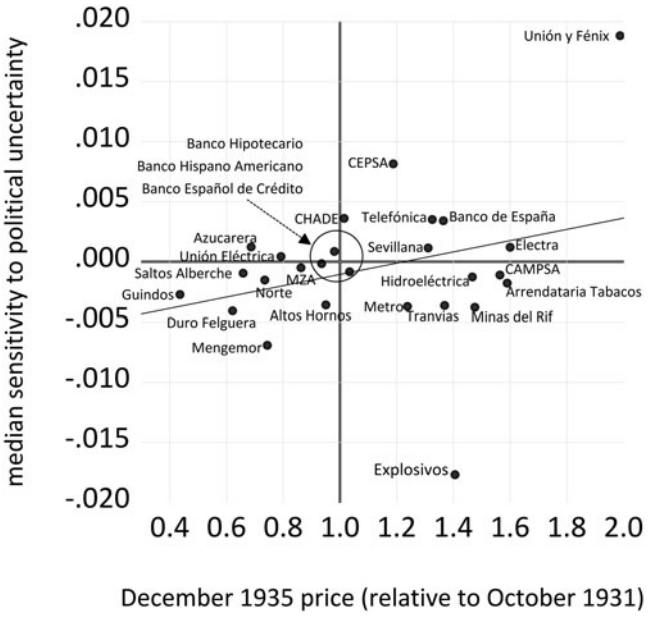

Figure 9. Sensitivity to political uncertainty and long-term price performance.
This figure shows the correlation between the median value of time-varying sensitivity of individual stocks and their price in December 1935 relative to October 1931.

the average investor's portfolio towards firms perceived as less exposed to political risk and against firms with negative sensitivity to uncertainty, whose prices recorded a long-term decline over the period[44]. This also suggests that the protective "put" option offered by public authorities to holders of negative β^{POL} stocks, through price floors and trading restrictions, possibly slowed down but did not prevent the adjustment of risk-averse investors' preferences.

9. Conclusions

The original motivation for this paper was to study the impact of political uncertainty on firms and investors in an important historical episode such as the transition to a democratic regime in interwar Spain. We aimed at exploring three interconnected issues. Did political uncertainty predict a deterioration of future investment opportunities? Was political uncertainty diversifiable across firms? How was political uncertainty priced in the cross section of equity returns? For that purpose, we measured political uncertainty on the base of "bad" political news that could affect firms' future profitability negatively and empirically estimated its impact on the equity market portfolio and the cross section of stock returns in the Madrid stock exchange between 1930 and 1936.

We found that over the whole period political uncertainty had a strong predictive power with respect to future aggregate returns at short time horizons; however, firms in which the government had the legal right to appoint political representatives of republican parties were less affected by the negative impact of uncertainty. We also demonstrated that sensitivity to political uncertainty varied significantly across firms and

[44] In a standard ICAPM model, an alternative explanation for a positive uncertainty premium would require that the downside effect (the loss of future investment opportunities) outweighs the upside effect (the wealth effect of holding safer stocks) in investors' decisions. This implies a risk-seeking average investor, who would respond to uncertainty shocks by selling stocks with low exposure to political risk and buying stocks with high exposure to political risk. This is generally regarded as a "perverse" outcome (Maio and Santa-Clara, 2012, p. 589) and is not supported by our analysis.

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over time. In months of heightened uncertainty, investors found safety in government bonds (Battilossi *et al.*, 2022) but did not exit the equity market indiscriminately. Rather, they continuously assessed firm-specific political circumstances and re-calibrated the composition of their equity portfolio towards "hedge" firms with low exposure to political risk. More frequent "hedges" were typically either firms perceived as traditional safe long-term investments or firms in emerging sectors with strong market power and international connections. On the contrary, political uncertainty penalised firms in mature sectors that had led the modernisation of the Spanish economy and the deepening of the stock market since the early 20th century, but had become more exposed to political risk due to their heavy dependence on state support (iron and steel, mining, lead) or threats of nationalisation (railways). Systematic public interventions on the stock market (through price floors and trading restrictions) possibly slowed down but did not prevent this adjustment. As a consequence, portfolios of safer "hedge" stocks earned higher future excess return than riskier stocks with negative sensitivity to political uncertainty, whose prices declined over the whole period.

It is hard to say to what extent hedging not only responded to the specific political and socio-economic circumstances of the Republic but also signalled a more fundamental reorientation of preferences towards a mixed public–private market economy with a more pervasive and direct role of the state in large firms. However, their behaviour confirms that Spanish investors, after the "surprise" political shocks and the slump of 1931, recovered trust in the market, adapted flexibly to the new political environment and did not perceive an immediate and credible threat of radical political developments that could lead to the destruction of their equity wealth.

Supplementary material. The supplementary material for this article can be found at https://doi.org/10.1017/S0212610924000168.

Data availability. The original dataset used for this article has been deposited in the OpenICPSR data repository (https://doi.org/10.3886/E211822V1) and can be accessed at https://www.openicpsr.org/openicpsr/project/211822/version/V1/view.

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