

DETERMINANTS OF ACCEPTANCE RATES OF SCRIP DIVIDEND PROGRAMS IN THE GERMAN STOCK MARKET

Julian Heinen *, Jonas Vogt **

* Baden-Württemberg Cooperative State University, Mannheim, Germany

** Corresponding author, Baden-Württemberg Cooperative State University, Mannheim, Germany

Contact details: Baden-Württemberg Cooperative State University, Coblitzallee 1–9, 68163 Mannheim, Germany



Abstract

How to cite this paper: Heinen, J., & Vogt, J. (2026). Determinants of acceptance rates of scrip dividend programs in the German stock market. *Risk Governance and Control: Financial Markets & Institutions*, 16(1), 103–111. <https://doi.org/10.22495/rgcv16i1p9>

Copyright © 2026 The Authors

This work is licensed under a Creative Commons Attribution 4.0 International License (CC BY 4.0). <https://creativecommons.org/licenses/by/4.0/>

ISSN Online: 2077-4303

ISSN Print: 2077-429X

Received: 24.07.2025

Revised: 07.11.2025; 19.12.2025; 27.01.2026

Accepted: 03.02.2026

JEL Classification: G1, G3, C5

DOI: 10.22495/rgcv16i1p9

Structuring corporate actions can be challenging due to the differing expectations and objectives of various stakeholders. In this context, scrip dividends represent an attractive instrument because of the flexibility they offer: shareholders can choose between receiving a cash dividend or additional shares at a previously determined subscription price, which is typically set at a discount to the prevailing market price. For firms considering such programs, the acceptance rate is a key decision metric. Whereas numerous and recent studies exist on other forms of corporate actions, scrip dividends have received comparatively little attention and constitute a largely under-researched field (Dennis & Weston, 2025; Drienko & Khorsand, 2023; Rau et al., 2024). This paper provides the first comprehensive empirical analysis of the factors influencing acceptance rates, based on a novel dataset covering all scrip dividend programs conducted in Germany. Using regression analysis, we find that shareholder concentration, the proportion of domestic investors in the shareholder base, and the discount on newly issued shares have a significant effect on acceptance.

Keywords: Dividend Policy, Scrip Dividends, Funding Strategy

Authors' individual contribution: Conceptualization — J.H.; Methodology — J.V.; Data Curation — J.H.; Investigation — J.H. and J.V.; Writing — J.V. and J.H.; Supervision — J.V.

Declaration of conflicting interests: The Authors declare that there is no conflict of interest.

1. INTRODUCTION

Designing payout policies that balance shareholder preferences and corporate financing needs is a central challenge for publicly listed firms. One instrument to address heterogeneous payout preferences among investors is the use of scrip dividend programs, which allow shareholders to choose between receiving the dividend in cash or in the form of newly issued shares. In the context of scrip dividend programs, firms face substantial uncertainty regarding shareholder acceptance rates. Since acceptance rates directly determine both the amount of liquidity retained by the firm and the extent of equity issuance, understanding the drivers of shareholder participation is crucial for the effective design of such programs.

Despite the growing use of scrip dividends in practice, empirical evidence on the determinants of

shareholder acceptance remains scarce. Existing studies primarily focus on firms' motives for offering scrip dividends, while little is known about why shareholders choose shares over cash. This paper addresses this gap by providing a comprehensive empirical analysis of the factors influencing acceptance rates in scrip dividend programs.

From a broader perspective, firms face diverging and time-variant dividend expectations among investors, which must be reconciled with equally variable liquidity requirements. Moreover, dividends may serve as a signaling mechanism under conditions of information asymmetry (David & Ginglinger, 2016), potentially leading to excessive payouts or the paradoxical need to raise equity capital within the same fiscal year (Fried & Wang, 2019). In this environment, scrip dividends offer a flexible payout instrument that allows firms to

preserve liquidity while accommodating heterogeneous shareholder preferences. However, the effectiveness of such programs critically depends on shareholder participation.

For firms contemplating the launch of a scrip dividend program, acceptance rates therefore represent a pivotal consideration. Low acceptance may render a program inefficient due to fixed administrative costs, while high acceptance can strengthen the firm's equity base without external financing. Herne (2023), for example, documents acceptance rates of 43% in Germany in 2022 and only 25% in 2023, highlighting the economic relevance of understanding participation decisions.

This study directly addresses this issue by conducting the first comprehensive empirical analysis of all 90 known scrip dividend programs implemented in Germany. Using a proprietary dataset compiled from company filings and investor relations documents, we combine firm-specific financial data, market characteristics, and ownership structure information to identify the determinants of shareholder acceptance. Our results show that the discount on newly issued shares and ownership structure significantly influence acceptance rates. By shifting the focus from firms' payout decisions to shareholders' acceptance behaviour, this study extends the payout policy literature and provides practical insights into the design of scrip dividend programs.

Beyond its empirical contribution, this study also complements the broader literature on payout policy by shifting the focus from firms' dividend decisions to shareholders' participation behaviour. While prior research has predominantly examined why firms choose specific payout instruments, considerably less attention has been paid to how investors respond to these choices. By emphasizing acceptance decisions in a flexible payout setting, our analysis contributes to a more nuanced understanding of dividend policy as a joint outcome of firm design and investor preferences.

The remainder of the paper is organized as follows. Section 2 reviews the related literature and develops the hypotheses. Section 3 outlines the data and the research methodology. Section 4 presents the empirical results. Section 5 discusses the main findings. Section 6 concludes the paper.

2. LITERATURE REVIEW AND BACKGROUND

2.1. Scrip dividends

Offering shareholders the option to choose between a cash and a stock dividend is, in principle, permissible in many jurisdictions. However, the specific regulatory frameworks governing such instruments vary significantly across countries. It is important to distinguish scrip dividends from United States (U.S.) style dividend reinvestment plans (DRIPs), which are more commonly utilized by retail investors. In a DRIP, the cash dividend is automatically reinvested in the company's shares via secondary market purchases, without the issuance of new shares or distribution of treasury stock (David & Ginglinger, 2016). Since this study focuses exclusively on German firms, we concisely describe the regulatory and legal provisions applicable to the German market. To establish a comprehensive understanding of scrip dividends, our core subject

of investigation, we begin by briefly outlining the legal framework governing their structure and implementation. Particular attention is paid to design elements with fiscal implications, as these are included in our regression model. For a detailed legal discussion, readers are referred to the remarks of Berner (2021).

Scrip dividends may be classified as a hybrid between traditional cash dividends and non-cash (in-kind) distributions. The commonly used term "stock dividend" is thus somewhat misleading, as it disregards the optionality at the heart of the scrip dividend mechanism (Berner, 2021). The design of scrip dividend programs offers considerable flexibility, although the basic approval process aligns closely with that of regular cash dividends. Initially, the general meeting must pass a resolution regarding the appropriation of distributable profits. It is then at the discretion of the executive management to offer a scrip dividend. No special authorization is required (Schlitt & Kreyborg, 2018). The underlying shares may be sourced either from treasury stock or via a capital increase through the issuance of new shares, with the latter necessitating an additional shareholder resolution (Berner, 2021). When issuing new shares, it is standard market practice to utilize authorized share capital to facilitate the necessary capital increase. Authorized capital is approved by the Annual General Meeting and typically remains valid for five years. During this period, the Management Board has the flexibility to execute capital increases up to a predetermined threshold. This grants the firm's management sustained strategic agility throughout the resolution's term, enabling them to execute measures such as scrip dividends efficiently. The issuance and listing of new shares in the context of a scrip dividend are governed by harmonized European Union securities regulations. A full securities prospectus may be waived if the new shares are of the same class and already admitted to trading. In practice, a streamlined document known as a Prospectus Exemption Document (PED) is typically sufficient. For comparison, the prospectus issued by Tourism Union International group (TUI AG) in its 2023 ordinary rights offering spanned 533 pages, whereas the PED for Baader Bank's 2022 scrip dividend consisted of only 11 pages.

From a tax perspective, scrip dividends are treated analogously to cash dividends. When opting for the stock dividend, shareholders typically receive a small cash amount, referred to as the "base dividend", to cover tax liabilities (Berner, 2021). The remaining portion of the distribution is delivered in the form of shares. Alternatively, firms in Germany may, according to section 27 of the German Corporation Tax Act (*Körperschaftsteuergesetz* [KStG]), distribute a tax-exempt dividend from the so-called tax-recognised contribution account, which comprises non-operating capital contributions by shareholders. Since these contributions are separate from the firm's operating income and therefore neutral to profit and loss, the resulting payouts are exempt from immediate taxation (Alber, 2019). Berner (2021), however, highlights the issue of deferred taxation in this context, as tax-exempt scrip dividends reduce the cost basis of the shareholder's total position, potentially leading to higher capital gains taxes upon future sale.

2.2. Literature review

In the context of our research question, which determinants drive acceptance rates of scrip dividend offers, several strands of the literature are relevant. First, we review studies examining firms' tendencies to maintain constant dividend payments that do not fully reflect underlying capital requirements, a behaviour that implies a particularly high relevance of scrip dividend programs. Second, we outline the existing research on scrip dividends. Finally, we discuss the literature on the determinants of the attractiveness of equity investments from an investor perspective to derive an additional hypothesis and control variables for our model for scrip-dividend acceptance rates.

The notion that dividend payout ratios are not determined solely by financing needs, but are instead strongly influenced by factors such as investor preferences and interpretations of dividend policy, is well documented in the academic literature and underscores the high relevance of scrip dividends as a capital market instrument. Lintner (1956) was among the first to show that firms are reluctant to adjust dividends in direct response to fluctuations in annual earnings or investment requirements. Instead, they tend to engage in "dividend smoothing". This finding has since been substantiated by Brav et al. (2005) and Leary and Michaely (2011), who argue that dividend payments carry a signaling function, conveying information about a firm's otherwise unobservable fundamentals to the market. Dennis and Weston (2025) document that many firms choose prominently rounded dividend amounts — simple numbers like 25, 50, or 75 — rather than tailoring their payouts to underlying capital requirements. Drienko and Khorsand (2023) document that extended periods of unchanged dividends are associated with increasing informational opacity, implying a widening information gap between corporate insiders and outside investors. Balli et al. (2022) show that cross-listings can further reinforce firms' tendency to engage in dividend smoothing. Tigero et al. (2023) analyse the impact of ownership concentration on dividend smoothing for Latin America. Larkin et al. (2017) propose that different investor groups hold heterogeneous preferences regarding dividend stability. Baker and Wurgler (2004) further provide empirical evidence that fluctuating investor preferences significantly influence the dividend policies of U.S. corporations. Complementarily, Cave and Lancheros (2024) demonstrate that a firm's dividend policy can be affected by peer firms in its geographical vicinity, even in the absence of direct capital constraints. Moreover, numerous studies reveal that firms frequently fail to align dividend payments with long-term financing strategies. As shown by Fried and Wang (2019, 2021), a substantial portion of dividend payouts in both the U.S. and Europe is effectively financed through the simultaneous issuance of new equity. Farre-Mensa et al. (2024) support this finding by showing that in 43% of the U.S. firms in their sample, capital was raised in the same fiscal year as the dividend payment. In the majority of cases, this capital took the form of debt, although equity issuance was not uncommon. Taken together, these studies establish that dividend policy reflects a complex interplay between financial constraints, investor expectations,

and market signaling effects. However, they focus primarily on the firm's decision to pay dividends, not on the investor's decision to accept or reinvest them. This distinction is crucial for understanding the dynamics of scrip dividends, which transfer a key part of the payout decision to shareholders themselves.

While dividend policy has been widely studied, the specific topic of scrip dividends remains largely unexplored. Existing research, largely based on earlier studies, primarily focuses on the motivations behind implementing scrip dividend programs. For instance, Lasfer (1997a) finds no evidence that British firms use scrip dividends primarily due to constrained cash flows coupled with strong growth prospects. In a related survey, Lasfer (1997b) reports that most British chief executive officers (CEOs) viewed favourable tax treatment as the primary driver for implementing scrip dividends. David and Ginglinger (2016), focusing on French companies, observe that scrip dividends are often used to reduce leverage while simultaneously lowering cash outflows, with no negative perception by capital markets, unlike direct cash dividend cuts. Similarly, Feito-Ruiz et al. (2020) document that U.S. companies adopted scrip dividends after the 2008 financial crisis, particularly when high leverage restricted access to external debt markets. Blanco-Alcántara et al. (2022) demonstrate that European banks employed scrip dividends to meet stricter capital requirements while maintaining stable dividends. Taken together, these studies suggest that while the motivations for adopting scrip dividends are varied and firm-specific, the common denominator is often a need to reconcile capital preservation with investor preferences, especially where reductions in cash dividends may be negatively perceived by the market. In addition to research on firm motivations, Berner (2021) offers a comprehensive analysis of the German scrip dividend market, including a legal framework that combines both national and European perspectives and points out in his article that large shareholders can significantly influence outcomes through their voting power. Direct communication between management and significant shareholders before the offering may enhance alignment and predictability. This consideration motivates our first hypothesis:

H1: Higher ownership concentration positively affects acceptance rates.

Schlitt and Kreyborg (2018) explain that regulatory constraints often require companies to exclude foreign shareholders from the equity option, offering them only a cash alternative instead, leading to our second hypothesis.

H2: A higher proportion of domestic shareholders positively affects acceptance rates.

Independent of prior literature, we also hypothesize that the magnitude of the "discount" on new shares is a relevant factor. This discount arises when the implied subscription price, calculated from the volume-weighted average stock price during the subscription period, is lower than the prevailing secondary market price.

H3: A larger discount on newly issued shares increases acceptance rates.

Although these studies provide valuable insights into the firm-side motivations for offering scrip dividends, they largely neglect the shareholder perspective. The determinants of whether investors actually choose the stock alternative remain unexplored. Moreover, the empirical evidence is fragmented across different jurisdictions and time periods, making cross-study comparison difficult. This lack of integrated analysis underscores the need for systematic research focusing on acceptance behaviour.

In addition, most prior work predates recent changes in corporate payout practices and regulatory environments. The growing emphasis on capital flexibility, post-crisis liquidity management, and sustainability-oriented financing suggests that the traditional motives identified in earlier studies may no longer fully explain current patterns of scrip dividend adoption. Consequently, an updated empirical investigation is required to assess whether and how shareholder behaviour has evolved in this context.

Before we present our model, we review parts of the literature that examine the fundamental question of which factors influence the attractiveness of investments in newly issued equity from an investor perspective. These findings are particularly relevant in the context of scrip dividends, as shareholders effectively face an equity investment decision when choosing shares over cash.

Womack (1996) documents a positive correlation between analyst recommendations and short-term stock demand, a relationship confirmed even in less liquid markets by Murg et al. (2016). This leads to our next hypothesis.

H4: Favourable analyst sentiment positively affects acceptance rates.

Other well-documented predictors of stock demand or price performance include valuation multiples such as dividend yield, the price-to-book

ratio, and the moment effect (Fama & French, 1988; Fama & French, 1995; Jegadeesh & Titman, 2001; Wiest, 2023). Traut (2023) documents the negative correlation between stock volatility and future market-adjusted returns. Bhandari (1988) finds a negative association between debt-to-equity ratios and future stock returns. A low equity ratio could simultaneously signal capital constraints and a heightened need for equity retention, potentially increasing shareholder willingness to forego cash payouts. Newer research shows, for instance, that institutional quality is highly relevant for a company's cost of capital (Banerjee et al., 2022). Rau et al. (2024) show that board gender diversity is an important determinant of investor demand, particularly in the context of initial public offerings.

3. DATA AND RESEARCH METHODOLOGY

3.1. Data and sample selection

Our dataset comprises 85 scrip dividend programs conducted by 31 German firms between 2009 and 2024. Data were collected from company filings, investor relations announcements, annual reports, and Bloomberg. Of the 90 known programs, five were excluded due to incomplete or inconsistent information. Acceptance rates were manually extracted from investor communications or calculated from disclosed figures in annual reports. To supplement firm-level financial data, we obtained return and volatility information from Yahoo Finance.

Table 1 provides an overview of all identified scrip dividend programs conducted in Germany between 2009 and 2024, including the respective acceptance rates. The table highlights the diversity of issuers across sectors and time periods and demonstrates the comprehensiveness of our dataset.

Table 1. Overview of all programs and the respective acceptance rates (Part 1)

<i>Programs</i>	<i>2009</i>	<i>2012</i>	<i>2013</i>	<i>2014</i>	<i>2015</i>	<i>2016</i>	<i>2017</i>
Alstria Office REIT-AG	44.4%						
Baader Bank AG							
Blue Cap AG							
Branicks Group AG (prev. DIC Asset AG)							
CR Capital AG							
Dt. Lufthansa AG						11.8%	14.4%
Dt. Rohstoff AG							
Dt. Telekom AG			38.0%	45.0%	49.0%	41.0%	49.0%
Dt. Wohnen SE							
E.ON SE				37.0%	37.0%		33.0%
Encavis AG (prev. Capital Stage AG)				57.0%	80.0%	5.7%	53.3%
Ernst Russ AG							
FCR Immobilien AG							
Fresenius SE & Co. KGaA							
Grenke AG (prev. Grenkeleasing AG)				39.4%		17.5%	
H&R GmbH & Co. KGaA							
Hamburger Hafen und Logistik AG							
Hamborner Reit AG							
KTG AGRAR AG					10.3%		
KTG Energie AG					14.2%		
LEG Immobilien AG							
Mediantis AG				92.5%	93.0%	94.8%	
Mensch und Maschine Software SE					55.4%	52.8%	56.8%
Patrizia SE							
Publity AG							
Softing AG				60.0%			
Ultrasonic AG		76.1%	18.4%				
Umweltbank AG							35.2%
VIB Vermögen AG							
Vonovia SE							49.9%
Wüstenrot & Württembergische AG				85.9%			

Table 1. Overview of all programs and the respective acceptance rates (Part 2)

<i>Programs</i>	<i>2018</i>	<i>2019</i>	<i>2020</i>	<i>2021</i>	<i>2022</i>	<i>2023</i>	<i>2024</i>
Alstria Office REIT-AG							
Baader Bank AG				67.1%	67.8%		
Blue Cap AG						70.0%	
Branicks Group AG (prev. DIC Asset AG)	44.0%	50.0%	40.3%	47.3%	40.5%	6.1%	
CR Capital AG			72.7%	80.0%	82.6%	83.0%	
Dt. Lufthansa AG	21.0%						
Dt. Rohstoff AG		12.0%			10.0%		
Dt. Telekom AG							
Dt. Wohnen SE	31.0%	28.0%					
E.ON SE							
Encavis AG (prev. Capital Stage AG)	38.3%	54.4%	61.5%	42.9%	29.7%		
Ernst Russ AG						71.0%	3.0%
FCR Immobilien AG						55.0%	
Fresenius SE & Co. KGaA					40.0%		
Grenke AG (prev. Grenkeleasing AG)			34.4%				
H&R GmbH & Co. KGaA	72.8%						
Hamburger Hafen und Logistik AG			73.3%	71.8%			
Hamborner Reit AG			25.7%	24.8%			
KTG AGRAR AG							
KTG Energie AG							
LEG Immobilien AG			33.0%	32.0%	38.0%		15.6%
Mediantis AG							
Mensch und Maschine Software SE	42.6%	40.5%	40.1%	38.6%	39.4%	35.5%	33.5%
Patrizia SE	9.0%						
Publity AG		78.0%					
Softing AG							
Ultrasonic AG							
Umweltbank AG	50.0%		55.0%		43.2%	48.8%	
VIB Vermögen AG				30.0%	67.6%		
Vonovia SE	40.9%	46.0%	40.7%	49.2%	47.8%	45.0%	31.0%
Wüstenrot & Württembergische AG							

Source: Authors' elaboration.

3.2. Variable definitions and sources

We analyze eleven variables expected to influence shareholder acceptance in scrip dividend programs. Table 2 summarizes the variables, their abbreviations, measurement approaches, and data

sources. We focus on our four core hypotheses derived from our theoretical framework, while all remaining variables are included as control variables to account for standard firm and market characteristics.

Table 2. Overview of all variables

<i>Variable</i>	<i>Abbreviation</i>	<i>Description/Measurement</i>	<i>Source</i>
Acceptance rate	<i>AccR</i>	% of shareholders opting for stock over cash	Company reports
Equity ratio	<i>EqR</i>	Equity / total assets	Annual reports
Market capitalization	<i>MCap</i>	Market capitalization	Bloomberg
Discount	<i>Disc</i>	Discount of subscription price vs. secondary market price	IR documents
Ownership concentration	<i>Conc</i>	Share of top four shareholders in total equity (%)	Investor filings
Domestic shareholders	<i>ShareGer</i>	Share of German-based shareholders (%)	Investor filings
Analyst recommendations	<i>Recom</i>	Share of positive in total analyst recommendations (%)	Bloomberg
Momentum	<i>Mom</i>	Six-month cumulative return prior to the offering	Yahoo Finance
Volatility	<i>Vol</i>	Std. dev. of daily returns during the subscription period	Yahoo Finance
Tax treatment	<i>Tax</i>	Dummy = 1 if tax-exempt distribution from the contribution account	Company documents
Dividend yield	<i>DivYld</i>	Dividend per share / market price	Annual reports
Price-to-book ratio	<i>P/B</i>	Market value / book value of equity	Bloomberg

Source: Authors' elaboration.

In cases where the share of *ShareGer* was unavailable (8 programs), we replaced missing values with the sample median, following standard practice to preserve data consistency while minimizing bias. The final sample shows substantial

heterogeneity across firms and programs, with *AccR* ranging from 3% to 86% and *Disc* from -0.8% to 56%.

Descriptive statistics in Table 3 indicate considerable variation across firms and years. Average acceptance is 43.5%, with *Disc* averaging 6%, and *Conc* at 39%.

Table 3. Descriptive statistics for all metric variables

Variable	Average	Std. dev.	Min.	Max.
AccR	0.435	0.199	0.030	0.859
EqR	0.384	0.192	0.020	0.976
MCap	828	17237	76	76880
Disc	0.060	0.108	-0.008	0.560
Conc	0.392	0.198	0.014	0.958
ShareGer	0.509	0.318	0.032	0.997
Recom	0.685	0.291	0.000	1.000
Mom	0.104	0.277	-0.300	1.142
Vol	0.018	0.010	0.000	0.057
DivYld	0.034	0.020	0.003	0.133
P/B	2.376	2.797	0.410	13.550

Source: Authors' elaboration.

3.3. Model specification and methodology

Since the dependent variable (*AccR*) is a proportion bounded between zero and one, we employ a beta

$$AccR_i \sim Beta(\mu_i, \phi_i) \tag{1}$$

This also implies that the expected value μ_i is restricted to values between zero and one and therefore cannot be modeled using a standard linear regression framework. Instead, we apply a logit link

$$logit(AccR_i) = \beta_0 + \beta_1 EqR_i + \beta_2 \log(MCap_i) + \beta_3 Disc_i + \beta_4 Conc_i + \beta_5 ShareGer_i + \beta_6 Recom_i + \beta_7 Mom_i + \beta_8 Vol_i + \beta_9 Tax_i + \beta_{10} DivYld_i + \beta_{11} P/B_i \tag{2}$$

This modeling approach bears similarities to logistic regression. However, while logistic regression assumes a binomial distribution and restricts the dependent variable to binary outcomes, beta regression allows for a continuous dependent variable bounded between zero and one, which is essential in our setting.

regression model following Ferrari and Cribari-Neto (2004). This approach assumes that the *AccR* of a scrip dividend program is drawn from a beta distribution with support on the open interval (0,1):

function to the conditional mean, which maps values from the unit interval onto the entire real line, $(-\infty, +\infty)$. The general model specification for the conditional mean is given by:

In addition to modeling the conditional mean, we estimate an extended specification in which we explicitly allow the dispersion around the mean to vary across observations. In particular, we model the precision parameter of the beta distribution as a function of firm size and stock price volatility using a log link function:

$$\log(\phi_i) = \gamma_0 + \gamma_1 \log(MCap_i) + \gamma_2 Vol_i \tag{3}$$

To assess whether modeling covariate-dependent precision improves model fit, we conduct a likelihood-ratio test comparing the extended specification to a restricted model assuming constant precision. The results strongly reject the null hypothesis of constant precision, justifying the use of the extended model.

As an additional robustness check, we estimate alternative specifications assuming constant precision and report heteroskedasticity-robust (sandwich) standard errors. The qualitative interpretation of the results remains unchanged. Furthermore, we estimate a reduced model that excludes standard investment characteristics, namely dividend yield, book-to-price ratio, and momentum, to examine whether the coefficients related to our hypotheses are sensitive to the inclusion of these controls.

Finally, to facilitate interpretation, we report average marginal effects, which quantify the impact of a marginal change in an explanatory variable on the expected *AccR* rather than on the logit scale. All models are estimated by maximum likelihood, and

standard errors are computed accordingly. We additionally report variance inflation factors (VIFs) to ensure multicollinearity is not an issue.

4. RESULTS

We started by comparing our models with and without a modelled precision term. Allowing for covariate-dependent precision significantly improves model fit ($p < 0.001$), and the null hypothesis of constant precision is rejected. Based on a likelihood-ratio test, we reject the null hypothesis that the model fits no better than an intercept-only specification ($p < 0.001$). Interpreting the results based on robust standard errors does not alter our key findings. We also report average marginal effects evaluated on the response scale, as the coefficient estimates refer to changes in the logit of the acceptance rate, whereas our primary interest lies in the effect of a change in an explanatory variable on the expected acceptance rate.

Table 4. Estimation for a model with precision

Term	Estimate	Std. error	Z-value	Pr(> z)	Pr(> z) robust	Marginal effect
(Intercept)	-1.324	1.156	-1.145	0.252	0.390	
EqR	31.173	57.007	0.547	0.584	0.147	7.228
MCap	0.023	0.045	0.512	0.609	0.473	0.005
Disc	2.832	1.013	2.795	0.005	0.005	0.657
Conc	1.161	0.389	2.982	0.003	0.004	0.269
ShareGer	0.561	0.241	2.329	0.020	0.021	0.130
Recom	0.374	0.273	1.371	0.170	0.392	0.087
Mom	0.045	0.287	0.156	0.876	0.787	0.010
Vol	-13.110	8.229	-1.593	0.111	0.011	-3.040
Tax	-0.319	0.151	-2.106	0.035	0.020	-0.075
DivYld	-2.958	4.109	-0.720	0.472	0.011	-0.686
P/B	-0.028	0.031	-0.921	0.357	0.357	-0.007

Source: Authors' elaboration.

The model fits the data well, and all VIFs shown in Table 5 remain below 2, indicating that multicollinearity is not a concern.

Table 5. Variance inflation factors

Term	VIF values
EqR	1.88
MCap	1.60
Disc	1.69
Conc	1.32
ShareGer	1.30
Recom	1.52
Mom	1.31
Vol	1.23
Tax	1.72
DivYld	1.54
P/B	1.68

Source: Authors' elaboration.

Table 6 shows the results for a reduced model without typical investment multiples (*DivYld*, *P/B*, *Mom*). We can see that our central results are quite robust towards these changes in the model structure.

Table 6. Estimation for a reduced model with precision

Term	Estimate	Std. error	Z-value	Pr(> z)
(Intercept)	-1.068	1.120	-0.954	0.340
EqR	18.110	55.033	0.329	0.742
MCap	0.010	0.043	0.235	0.814
Disc	3.000	0.958	3.133	0.002
Conc	1.090	0.383	2.843	0.004
ShareGer	0.478	0.230	2.080	0.038
Recom	0.317	0.261	1.218	0.223
Vol	-14.650	8.102	-1.808	0.071
Tax	-0.352	0.142	-2.489	0.013

Source: Authors' elaboration.

Our interpretation of the results is based on the extended specification with covariate-dependent precision. The results indicate that programs offering larger *Disc* experience significantly higher *AccR*, suggesting that shareholders respond positively to more favourable subscription conditions. Increasing the *Disc* rate by one percentage point increases the expected *AccR*, ceteris paribus, by 65.7 basis points. Likewise, higher *Conc* is associated with higher *AccR*s, consistent with the notion that large or institutional investors coordinate with management and are more willing to support equity-based payouts. If the combined ownership share of the four largest

investors increases by one percentage point, the expected *AccR* rises, ceteris paribus, by 26.9 basis points. A higher share of domestic investors is also associated with higher acceptance rates. Increasing the share of domestic investors by one percentage point raises the expected *AccR* by 13 basis points.

Taken together, these findings imply that larger *Disc*, more concentrated ownership structures, and a higher share of domestic investors increase participation in scrip-dividend-programs.

5. DISCUSSION

Our results confirm our hypothesis that economic considerations play a central role in investors' acceptance decisions. In particular, the offered discount rate has a significant effect on the acceptance rate. We further find support for the hypothesis that higher ownership concentration, as well as a larger share of domestic (German) investors are associated with higher expected acceptance rates. In contrast, valuation metrics, analyst sentiment, and capital structure variables do not appear to be statistically significant.

These findings have important practical implications. Prior to implementing a scrip dividend program, firms should conduct a careful assessment of expected acceptance rates. Short-term market sentiment and current stock valuation appear to be of secondary importance, whereas the composition of the investor base and the provision of an attractive discount on stock dividends play a more decisive role.

While our analysis provides new insights into the determinants of shareholder acceptance, several limitations should be acknowledged. First, although our dataset covers all known scrip dividend programs in Germany, the overall number of observations remains limited. Second, the analysis relies on firm-level and ownership structure data, which prevents a more granular assessment of individual investor behaviour. Future research could address these limitations by incorporating investor-level data or extending the analysis to additional institutional settings as scrip dividend programs continue to gain relevance.

Future studies may extend the analysis by incorporating additional determinants of firm attractiveness from the investor perspective, as identified in the existing literature. Analyses of cross-country differences or investor-level data could also lead to further interesting insights.

6. CONCLUSION

The empirical findings largely support our hypotheses and provide meaningful insights into shareholder behaviour in scrip dividend programs. First, the strong positive relationship between the discount and acceptance rate confirms that offer design directly influences investor participation. This result underscores the importance of setting economically attractive conversion terms to incentivize equity uptake. Second, the positive effect of ownership concentration and the share of domestic investors suggests that managerial communication and coordination with large shareholders can substantially shape program outcomes. This aligns with prior research

emphasizing the influence of blockholders in corporate payout decisions (Berner, 2021).

Overall, these results suggest that both program design (discount) and shareholder composition (ownership structure, investor type) are decisive for the success of scrip dividend initiatives. The findings offer practical guidance for firms seeking to optimize participation rates and contribute to a better understanding of how shareholder preferences interact with corporate capital management tools.

One limitation of this study is its focus on scrip dividend programs offered by German firms, which may limit the generalizability of the results. Future research could examine whether the observed relationships hold in other institutional and regional contexts.

REFERENCES

- Alber, M. (2019). *Körperschaftsteuer in der Unternehmenspraxis: Steuerliche Optimierung für Unternehmer und Unternehmen* [Corporate tax in business practice: Tax optimization for entrepreneurs and companies]. Springer Gabler Wiesbaden. <https://doi.org/10.1007/978-3-658-19961-6>
- Baker, M., & Wurgler, J. (2004). A catering theory of dividends. *The Journal of Finance*, 59(3), 1125–1165. <https://doi.org/10.1111/j.1540-6261.2004.00658.x>
- Balli, F., Agyemang, A., Gregory-Allen, R., & Balli, H. O. (2022). Corporate dividend smoothing: The role of cross-listing. *Journal of Corporate Finance*, 72, Article 102151. <https://doi.org/10.1016/j.jcorpfin.2021.102151>
- Banerjee, R., Gupta, K., & Krishnamurti, C. (2022). Does corrupt practice increase the implied cost of equity? *Journal of Corporate Finance*, 73, Article 102191. <https://doi.org/10.1016/j.jcorpfin.2022.102191>
- Berner, M. (2021). *Scrip Dividends: Rechtstatsächliche Bedeutung und rechtliche Grundlagen* [Scrip dividends: Legal significance and legal basis]. Nomos Verlagsgesellschaft mbH & Company KG. <https://doi.org/10.5771/9783748924821>
- Bhandari, L. C. (1988). Debt/equity ratio and expected common stock returns: Empirical evidence. *The Journal of Finance*, 43(2), 507–528. <https://doi.org/10.1111/j.1540-6261.1988.tb03952.x>
- Blanco-Alcántara, D., Gallud-Cano, J., López-Iturriaga, F. J., & López-de-Foronda, Ó. (2022). Have European banks maintained their payout policy during the crisis? The role of scrip dividends. *International Journal of Finance & Economics*, 27(4), 4619–4632. <https://doi.org/10.1002/ijfe.2391>
- Brav, A., Graham, J. R., Harvey, C. R., & Michaely, R. (2005). Payout policy in the 21st century. *Journal of Financial Economics*, 77(3), 483–527. <https://doi.org/10.1016/j.jfineco.2004.07.004>
- Cave, J., & Lancheros, S. (2024). Local peer influence on dividend payout decisions. *Journal of Banking & Finance*, 164, Article 107206. <https://doi.org/10.1016/j.jbankfin.2024.107206>
- David, T., & Ginglinger, E. (2016). When cutting dividends is not bad news: The case of optional stock dividends. *Journal of Corporate Finance*, 40, 174–191. <https://doi.org/10.1016/j.jcorpfin.2016.07.008>
- Dennis, P. J., & Weston, J. P. (2025). Lazy dividends. *Journal of Corporate Finance*, 95, Article 102858. <https://doi.org/10.1016/j.jcorpfin.2025.102858>
- Drienko, J., & Khorsand, B. (2023). Dividend hibernation and future earnings: When no dividend news is good news. *Journal of Corporate Finance*, 83, Article 102502. <https://doi.org/10.1016/j.jcorpfin.2023.102502>
- Fama, E. F., & French, K. R. (1988). Dividend yields and expected stock returns. *Journal of Financial Economics*, 22(1), 3–25. [https://doi.org/10.1016/0304-405X\(88\)90020-7](https://doi.org/10.1016/0304-405X(88)90020-7)
- Fama, E. F., & French, K. R. (1995). Size and book-to-market factors in earnings and returns. *The Journal of Finance*, 50(1), 131–155. <https://doi.org/10.1111/j.1540-6261.1995.tb05169.x>
- Farre-Mensa, J., Michaely, R., & Schmalz, M. (2024). Financing payouts. *Journal of Financial and Quantitative Analysis*, 60(4), 1586–1624. <https://doi.org/10.1017/S0022109024000231>
- Feito-Ruiz, I., Renneboog, L., & Vansteenkiste, C. (2020). Elective stock and scrip dividends. *Journal of Corporate Finance*, 64, Article 101660. <https://doi.org/10.1016/j.jcorpfin.2020.101660>
- Ferrari, S., & Cribari-Neto, F. (2004). Beta regression for modelling rates and proportions. *Journal of Applied Statistics*, 31(7), 799–815. <https://doi.org/10.1080/0266476042000214501>
- Fried, J. M., & Wang, C. C. Y. (2019). Short-termism and capital flows. *The Review of Corporate Finance Studies*, 8(1), 207–233. <https://doi.org/10.1093/rcfs/cfy011>
- Fried, J. M., & Wang, C. C. Y. (2021). Short-termism, shareholder payouts and investment in the EU. *European Financial Management*, 27(3), 389–413. <https://doi.org/10.1111/eufm.12305>
- Herne, M. (2023). *Scrip dividends in 2023 — Scrip dividend payments continue to decelerate*. S&P Global. <https://cdn.ihsmarket.com/www/pdf/1023/Scrip-dividends-in-2023.pdf>
- Jegadeesh, N., & Titman, S. (2001). Profitability of momentum strategies: An evaluation of alternative explanations. *The Journal of Finance*, 56(2), 699–720. <https://doi.org/10.1111/0022-1082.00342>
- Larkin, Y., Leary, M. T., & Michaely, R. (2017). Do investors value dividend-smoothing stocks differently? *Management Science*, 63(12), 4114–4136. <https://doi.org/10.1287/mnsc.2016.2551>
- Lasfer, M. A. (1997a). On the motivation for paying scrip dividends. *Financial Management*, 26(1), 62–80. <https://doi.org/10.2307/3666240>
- Lasfer, M. A. (1997b). Scrip dividends: The management's view. *European Financial Management*, 3(2), 237–249. <https://doi.org/10.1111/1468-036X.00041>
- Leary, M. T., & Michaely, R. (2011). Determinants of dividend smoothing: Empirical evidence. *The Review of Financial Studies*, 24(10), 3197–3249. <https://doi.org/10.1093/rfs/hhr072>

- Lintner, J. (1956). Distribution of incomes of corporations among dividends, retained earnings, and taxes. *The American Economic Review*, 46(2), 97-113. https://www.quantcorpfin.com/wp-content/uploads/2019/11/Distribution_of_Incomes_of_Corporations.pdf
- Murg, M., Pachler, M., & Zeitlberger, A. C. M. (2016). The impact of analyst recommendations on stock prices in Austria (2000-2014): Evidence from a small and thinly traded market. *Central European Journal of Operations Research*, 24(3), 595-616. <https://doi.org/10.1007/s10100-014-0360-9>
- Rau, P. R., Sandvik, J., & Vermaelen, T. (2024). IPO price formation and board gender diversity. *Journal of Corporate Finance*, 88, Article 102629. <https://doi.org/10.1016/j.jcorpfin.2024.102629>
- Schlitt, M., & Kreyborg, D. (2018). Aktiendividende — Ausgewählte gesellschafts- und kapitalmarktrechtliche Aspekte [Share dividends — Selected aspects of corporate and capital market law]. *Die Aktiengesellschaft*, 63(19), 685-694. <https://doi.org/10.9785/ag-2018-631903>
- Tigero, T., Saens, R., & Castillo, A. (2023). Dividend smoothing and ownership concentration: Evidence from Latin America. *Journal of Corporate Accounting & Finance*, 34(4), 108-121. <https://doi.org/10.1002/jcaf.22639>
- Traut, J. (2023). What we know about the low-risk anomaly: A literature review. *Financial Markets and Portfolio Management*, 37(3), 297-324. <https://doi.org/10.1007/s11408-023-00427-0>
- Wiest, T. (2023). Momentum: What do we know 30 years after Jegadeesh and Titman's seminal paper? *Financial Markets and Portfolio Management*, 37(1), 95-114. <https://doi.org/10.1007/s11408-022-00417-8>
- Womack, K. L. (1996). Do brokerage analysts' recommendations have investment value? *The Journal of Finance*, 51(1), 137-167. <https://doi.org/10.1111/j.1540-6261.1996.tb05205.x>