SILESIAN UNIVERSITY OF TECHNOLOGY PUBLISHING HOUSE

SCIENTIFIC PAPERS OF SILESIAN UNIVERSITY OF TECHNOLOGY 2026
ORGANIZATION AND MANAGEMENT SERIES NO. 246

INCONSISTENCY BETWEEN VALUE CREATION AND GOING CONCERN RISK: LONG-TERM EVIDENCE FROM POLISH ENTERPRISES

Jarosław KACZMAREK

Krakow University of Economics; jaroslaw.kaczmarek@uek.krakow, ORCID: 0000-0002-2554-814X

Purpose: The article addresses the gap in assessing long-term inconsistencies between value creation and going-concern risk. It confronts the assumptions of Value-Based Management with empirical evidence, showing that the value–risk relationship is non-linear and time-varying. The objective is to measure this inconsistency, identify determinants, and classify enterprise structures.
Methodology: The study covers 44,974 non-financial enterprises in Poland during 2007-2025. A designed multifaceted value measure combines shareholder benefits with value added transmitted to the economy, and the logit model integrates determinants of financial security. Other uses include: displacement and ranking methods, taxonomic similarity metrics, normative pattern recognition, and cause-and-effect assessment.
Findings: Shareholder value creation declines in favor of economy-wide value added, temporarily reversing during systemic shocks (e.g., the pandemic). Financial security exhibits a downward, phased trend and heightened volatility during turbulent periods. Security sources move from operational efficiency toward resource mobilization. The initially strong positive value–security correlation weakens and turns negative. Enterprise structures show low similarity and a rare coexistence of high value creation and high security with low volatility.
Research limitations/implications: The analysis is restricted to enterprises with over 9 employees and focuses solely on financial aspects. Annual data may not capture short-term fluctuations. Future research should include sectoral comparisons, shifts in security sources, threshold effects in the value–risk link, and the impacts of policy interventions.
Practical and social implications: Managerial systems should shift focus from shareholder value maximization toward sustainable value creation. Integrating operational, financial, and strategic risk management with liquidity and capital buffers is essential. Short-term performance pressure fosters excessive crisis profits and social tension, reinforcing the need for balanced stakeholder value and stronger governance.
Originality/value: The study provides the first long-term analysis of the full enterprise population, simultaneously using a multifaceted value measure and a logit model of financial security. By integrating value–security assessment with profile and normative pattern analysis, it challenges the linear value–risk paradigm and highlights the role of integrated/sustainable risk-adjusted management.
Keywords: value creation; value-based management; financial security of going concern.
Category of the paper: research paper.

1. Introduction

Value-Based Management (VBM) has become the dominant paradigm in recent decades, assuming the maximization of shareholder wealth as the overriding goal of enterprise financial management. However, aggressive enterprise value creation has a "dark side": beyond a critical threshold, marginal value gains produce disproportionately high risk increments, endangering enterprise sustainability (Roggi, Andersen, 2012). The relationship between enterprise value creation and business risk is dualistic: risk acceptance is essential for value growth, but excessive exposure leads to its destruction and potential bankruptcy.

This challenge is compounded by the temporal dimension: short-term metrics pressure weakens the management of risks that emerge over the long term (Bromiley, McShane, 2015). E.H. Bowman's paradox shows that enterprises with higher strategic risk fail to achieve proportional returns and exhibit inferior long-term performance compared to those with moderate risk (Miller, Waller, 2003). This prompts the question: Does the enterprise value creation–business risk link embody a contradiction or a dialectical coexistence of opposing profiles?

The study investigates the inconsistency between enterprise value creation and business risk via financial effects:

- value creation:
  - for shareholders (internal value created),
  - transmitted to the economic system (external value created),
- financial security of a going concern.

External value created approximates stakeholder value, while the financial security of a going concern counters bankruptcy risk. The financial lens stems from the premise that sustainable development and management yield premium profits and sustainable value as quantifiable financial outcomes. The sample comprises 44,974 enterprises (with over 9 employees) from sections B-N of the Polish Classification of Activities.

Empirical objectives include measuring and evaluating the inconsistency between value creation and the financial security of a going concern, characterizing the population, classifying profiles, and performing comparative analysis. Methodologically, a multifaceted value measure (MVM) and value drivers assess value creation. A logit model quantifies the financial security of a going concern (FSD). Ordering draws on ranking, variability, and normative patterns.

Tested hypotheses are:

H1. The impact of shareholder value and rate of value added on the multifaceted value measure is equivalent and stable.

H2. Changes in the financial security of a going concern are phased, and the distribution and balance of the determinants' forces are constant.

H3. The correlation between value creation and the financial security of a going concern is directly proportional.

H4. The profiles of structures in terms of value creation and financial security of going concern are similar.

Hypothesis results appear in the findings section, with implications discussed next. The conclusion summarizes key insights, limitations, and research directions. This article is part of a publication series on the Polish enterprise sector studies.

2. Cross-implications of value creation and risk management

2.1. Value creation

The essence of an enterprise is captured by three core principles that guide its operations: the ability to generate profit, the ability to operate under risk conditions, and entrepreneurial initiative (Penc-Pietrzak, 2003, p. 14). Enterprise activities are purposeful: goals direct planning, motivate employees, and form the basis for performance evaluation, though they do not always constitute a coherent hierarchy (Cyfert, 2004, pp. 25-32). The most general goals remain survival and development. Survival is a prerequisite for all other objectives, while development embodies their essence and serves as the ultimate measure of success.

Measuring and evaluating these two fundamental categories - their interdependencies and dynamics - forms the primary focus of this article. Enterprise development hinges on its durability, understood as sustainability in both operational and strategic terms. Sustainable development transcends narrow eco-development; it is supported by evolving tools and processes of sustainable management, reflecting the tight correlation between long-term enterprise growth and effective stakeholder relationship management (Svenson, Wood, Callaghan, 2010).

This perspective conflicts with the dominant Value-Based Management (VBM) philosophy, which prioritizes shareholder value creation. Pursuing broad stakeholder goals may dilute enterprise value creation, generating tensions. In response, "illuminated VBM" proposes complementarity between stakeholder approaches and VBM principles (Lenssen, Smith, 2019, pp. 224-225). Enterprise performance under this framework is still assessed primarily through financial metrics. Accommodating stakeholder expectations - including broader environmental and local community interests - occurs only insofar as it enhances financial outcomes (Hahn, Figge, Barkemeyer, 2007). Value creation metrics then provide financial justification for sustainable development strategies, bolstered by well-designed sustainable business models (Bocken, Short, Evans, 2014).

In summary, enterprise development yields diverse effects that create value and ultimately meet stakeholders' expectations. Among these, owners and their core financial goal of value creation hold a central position. By creating value for shareholders, enterprises also generate it for other stakeholders (Lubin, Esty, 2010). At the microeconomic level, created value naturally extends to the macroeconomic sphere as value added: the foundation of GDP and a key measure of economic growth.

2.2. Financial threat

Under widespread uncertainty, the critical consequence of entering a deep state of distress is an enterprise crisis. Crises are inherently complex, typically resulting from multiple interacting factors, a chain of cause-and-effect events, and an escalation path (Slatter, Lovett, 2001, p. 46). Crisis symptoms stem directly from their causes, vary widely, and form a unique web of interdependencies. Financially quantifiable failures are most commonly regarded as symptoms.

A key challenge is overcoming crises, but the primary one is predicting them early. This underpins the development of early warning systems (EWS), which diagnose crisis symptoms but do not forecast bankruptcy (Platt, Platt, 2002, pp. 184-199). Econometric prediction models underpin EWS functionality, with a critical emphasis on their diagnostic accuracy and appropriate reference points. Despite efforts to shift it, this remains bankruptcy in its narrow legal sense. Advanced multidimensional models, including logit models, are now used to estimate the probability of distress (Prusak, 2005, pp. 105-186).

Excessive operational risk (e.g., flawed liquidity management, suboptimal cost-to-income ratios) or poorly controlled strategic risk (e.g., excessive debt financing risk exposure without matching revenue growth) can erode payment capacity (Nawrocki, Jonek-Kowalska, 2016). The former undermines cash flow and operational profitability, while the latter amplifies financial leverage and vulnerability to exogenous shocks. In extreme cases, this culminates in bankruptcy.

Beyond purely financial risks, a corporate culture fixated on aggressive value creation breeds subtle yet equally destructive threats: managerial short-termism, risks of abuse and creative accounting, and reputational risk (e.g., consumer boycotts, regulatory penalties).

2.3. Risk-value relationship

The linkages between value creation and risk can be classified into three analytical categories.

Positive synergistic relationship: Effective operational risk management (OPRM) - reducing cash flow volatility, mitigating errors, and enhancing process resilience - lowers the cost of capital and increases the discounted value of future value-creating cash flows (Damodaran, 2019). OPRM strongly influences key value drivers, including process efficiency, financial results, and cash flow (Hahn, Kuhn, 2011).

Substitution relationship: Short-term value maximization by managers (e.g., deferring investments) creates an illusion of value creation that erodes over longer horizons. Agency theory explains this through information asymmetry between managers and stakeholders (Jensen, Meckling, 1976). This effect is amplified by the absence of risk-adjusted performance metrics in compensation systems (Syed, Khalid, 2007).

Destructive relationship: Strategic risk paradoxically associates with performance (Bowman's paradox). Higher strategic risk leads to diminished future outcomes (Santacruz, 2020), particularly in enterprises below industry medians. Prospect theory accounts for this via a heightened propensity for extreme strategic risks ("gambling for resurrection") (Kahneman, Tversky, 1979).

Primary threats to value creation from inadequate risk management:

- Short-termism in performance metrics: Evaluation and compensation systems based on short-term results provoke cost cuts that erode adaptive capabilities, OPRM effectiveness, and tolerance for latent strategic risks (Graham, Harvey, Rajgopal, 2005). This increases earnings volatility and depresses market-based value measures (Rappaport, 2005).
- Fragmented risk management: Risk is handled in isolated silos (compliance, treasury, strategic, reputational) without assessing cumulative effects (Beasley, Clune, Hermanson, 2005). This escalates value destruction from the operational to the strategic level (Hoyt, Liebenberg, 2011).
- Underestimation of tail risk: Conventional risk measures focus on the distribution's core, overlooking tails (operational failures, strategic black swans) with outsized impacts (Taleb, 2008, p. 480). For instance, high cost-to-income ratios increase the risk of insolvency during turbulence by depleting slack resources (Yildirim, Philippatos, 2007).

The review of the economic literature on the linkages between enterprise value creation and operational risk reveals a fundamental inconsistency that poses theoretical, methodological, and practical challenges. On one hand, Value-Based Management (VBM) posits a linear, directly proportional relationship between shareholder value and accepted risk levels. On the other hand, empirical studies demonstrate that short-term value maximization erodes it over the long term, while higher strategic risk diminishes future performance, especially in weaker enterprises. Thus, is the value–risk relationship non-linear? Can opposing profiles coexist? What management mechanisms can reshape it toward synergy rather than destruction? The empirical section addresses these questions and offers recommendations for balancing value-risk dynamics.

3. Methodology of Research

The study is long-term, spanning Q2.2007-Q2.2025. The analytical dataset comprises 44,974 non-financial enterprises (with over 9 employees), which generate 95.6% of the sector's value added. Enterprises are classified by PKD sections B to N (13 sections), activity type (production, trade, services), and size class (small, medium, large) (Table 1). This selection ensures sector representativeness and enables structural differentiation analysis.

Table 1.
Characteristics by type of activity and size of studied enterprises in Poland (Q2.2025)

Type of activity	Number of enterprises	Number of employees	Sales revenue	Total assets	Equity
Studied enterprises	**44,974**	**5,307,635**	**5,836,671**	**5,070,356**	**2,327,424**
Share of total (>9 employees)	*93.3%*	*94.9%*	*96.4%*	*97.4%*	*96.7%*
Production (section B-E)	33.4%	44.3%	46.6%	47.0%	53.6%
Trade (section G)	25.7%	20.3%	32.8%	15.7%	13.3%
Services (section F, H-N)	40.9%	35.4%	20.6%	37.3%	33.1%
Small (10-50 employees)	62.9%	12.4%	13.4%	11.5%	12.0%
Medium (50-250 employees)	29.0%	27.1%	24.8%	26.1%	25.9%
Large (over 250 employees)	8.1%	60.5%	61.8%	62.4%	62.1%

Note. Sales revenue, total assets, equity - in PLN million.

Source: GUS in Warsaw (Statistics Poland) - limited-access databases. Available online: https://stat.gov.pl/en/databases/ (accessed 10 February 2026); Pont Info Warsaw, Gospodarka SŚDP - commercial databases. Available online: http://baza.pontinfo.com.pl/index.php (accessed 12 February 2026).

The constructed methodology enables a coherent assessment of the relationships between value creation, the financial security of going concern, and their determinants across the full population.

Value creation is measured via a multifaceted value measure (MVM), integrating two dimensions:

- value creation for owners: return on equity (ROE).
- value added for the economy: rate of value added (VAR).

ROE is determined by return on assets (ROA) and equity multiplier (EM). VAR is shaped by net financial result referred to sales revenues (ROR), and value added retention ratio (VAH). Retention denotes the portion of value added retained in the enterprise for development. ROR is a stimulant; VAH, from a macroeconomic (GDP) perspective, is a destimulant of the value-added rate.

These two value measures are combined using statistical procedures: standardization, a destimulant-to-stimulant transformation, and scalar subtraction to eliminate negative values. Distance (d_{i0}) from the anti-pattern (origin of the coordinate system) is:

$$d_{i0}(MVM) = \sqrt{\sum_{j=1}^{K}\left(x_{ij} - x_{0j}\right)^2} \;;\; x_{ij} = \begin{cases} stym\ (ROE) \\ stym\ (VAR) \end{cases} \quad (1)$$

where:

$x_o = (0, \ldots, 0)_K$,

K – number of multivariate measure components (j = *1, …, K*).

The resulting MVM serves as a synthetic micro-level measure of enterprise value creation and the transmission of value added to the economy.

The financial security degree (FSD) measurement relies on an estimated logit model. FSD is the opposite of financial distress, going concern, and bankruptcy, and is perceived as a stimulant. The model takes the form (Kaczmarek, 2012, pp. 130-137):

$$\text{FSD} = \left(1 - \frac{1}{1 + exp\left[-\left(-0{,}70 - 0{,}42\frac{AP - 1{,}89}{1{,}09} - 0{,}93\,\frac{SF - 0{,}39}{0{,}31} + 0{,}65\frac{STL - 0{,}47}{0{,}27} - 0{,}73\frac{RoOA - 2{,}94}{13{,}46}\right)\right]}\right) \cdot 100\% \quad (2)$$

where:

AP - asset productivity ratio,

SF - self–financing ratio,

STL - short-term liability ratio,

RoOA - operating return on assets.

The measure ranges from (0,100%), with higher values indicating a greater probability of maintaining the financial security of a going concern over one year. Model diagnostics (sensitivity 82.4%, specificity 82.1%) confirm high predictive utility.

Object classification uses mean and standard deviation, identifying four normative patterns in MVM-FSD space: (1) high and stable; (2) high and highly variable; (3) low and stable; (4) low and highly variable. These patterns, along with MVM/FSD levels and determinants, underpin profile analysis.

Profile similarity is assessed via taxonomic measure of similarity (TMS), ranging from <0-1>; values nearer to 1 indicate greater structural similarity (Kaczmarek, Kolegowicz, Szymla, 2022). Distribution density employs the DM measure, proportional to the area of the ellipse enclosing the dataset (Kaczmarek, 2022), capturing concentration and dispersion in the MVM-FSD space.

Causal analysis converts the product chain of independent variables dynamics (DX) into a sum chain, assuming the dependent variable logarithm (DY) equals unity. This derives structural shares from the influence of independent variables (RX) on the dependent variable (RY), identifying value drivers and sources of changes in financial security.

Correlation analysis uses a significance level of $\alpha = 0.05$. A p-value $< \alpha$ indicates rejection of the null hypothesis of no correlation. The Pearson r coefficient scales dependence strength as: <0.1 slight; 0.1-0.3 weak; 0.3-0.5 average; 0.5-0.7 strong; 0.7-0.9 very strong; >0.9 almost perfect.

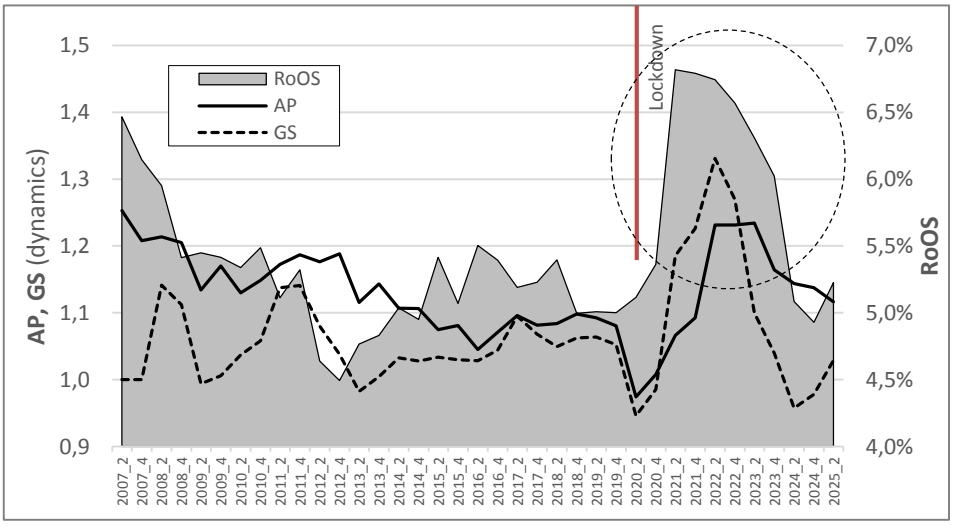
4. Findings

4.1. Economic conditions and enterprise performance

From the current vantage, the Warsaw Stock Exchange WIG index curve makes pinpointing the pandemic onset challenging. The 2008-2009 financial crisis inflicted a deeper plunge, with recovery lasting until 2017. GDP dynamics clearly mark the start of the pandemic and lockdown. The anticipated swift rebound materialized but quickly shifted from a "V" to a "W" shape. Pandemic effects included severed global supply chains and surging inflation.

The enterprise sector exhibited distinct financial condition patterns. Pandemic onset depressed sales revenues (GS), yet operating return on sales (RoOS) not only held but exploded in Q2.2021, remaining elevated through Q4.2022. The following year saw a decline, with 2024 reverting to pre-pandemic levels. High revenue dynamics from inflation partly explain RoOS growth: revenues outpaced inflation-driven costs, enabling enterprises to capture pandemic profiteering and price gouging amid uncertainty. Averaging RoOS over three pre- and two post-pandemic years, excess profits exceeded 327 billion PLN in 2021-2023.

Asset productivity (AP) trended downward until 2016, stabilized, dipped briefly during the pandemic, then rose sharply. The post-pandemic revenue slowdown did not drag AP proportionally (Figure 1).



Note. RoOS – operating return on sales; AP – asset productivity; GS – gross sales revenues.

Figure 1. Performance of enterprises in Poland, Q2.2007-Q2.2025.

Source: author's own work based on sources in Table 1.

Solvency (cash flow to short- and long-term liabilities) declined sharply until 2020, surged in three subsequent years, then stabilized after a dip. Liquidity (current and quick ratios) fell for three pre-pandemic years before rising annually. Cash stocks grew steadily from 2007 uninterruptedly. This stemmed from 250-300 billion PLN in public aid (shields, subsidies, ZUS exemptions, loans, guarantees), sustaining liquidity, liability servicing, production, and employment - despite egregious channeling into supernormal profits. Short-term liabilities rose from 2016, peaking in 2022-2023; long-term liabilities declined from 2021. Investments grew in volume but shrank as a share of revenues. Inventory and receivables cycles remained stable, while a weakened payables cycle briefly extended the cash conversion cycle.

In conclusion, the Polish enterprise sector demonstrated strong resilience during the pandemic, with operating profitability (RoOS) rising despite declining sales. Inflationary dynamics and public support measures sustained liquidity and allowed enterprises to generate excess profits in 2021–2023. Profitability and solvency later normalized to pre-pandemic levels, while investment volumes increased but declined relative to revenues. Overall, enterprise financial stability remained sound throughout the period.

4.2. Determinants of multifaceted value measure

An assessment of changes in return on equity (ROE) and the rate of value added (VAR) as determinants of the multifaceted value measure (MVM) over Q2.2007-Q2.2025 yields several key insights.

First, object displacements relative to the analysis period's start and end suggest dispersion (24.5%). However, two phases emerge: gradual concentration from Q2.2007-Q4.2018, followed by dispersion peaking at Q2.2022 amid the pandemic. Concentration generally aligns internal (ROE) and external value created (VAR) profiles across objects.

Second, ROE-VAR factor directions aligned closely until Q2.2017: rising in one corresponded to rising in the other ($r = 0.77$; p-value < 0.000). Thereafter, three patterns appear: (1) continued VAR growth amid ROE decline to Q4.2020; (2) ROE-VAR direction reversal from Q2.2021-Q4.2023; (3) VAR rise against ROE fall from Q2.2024 (Figure 2).

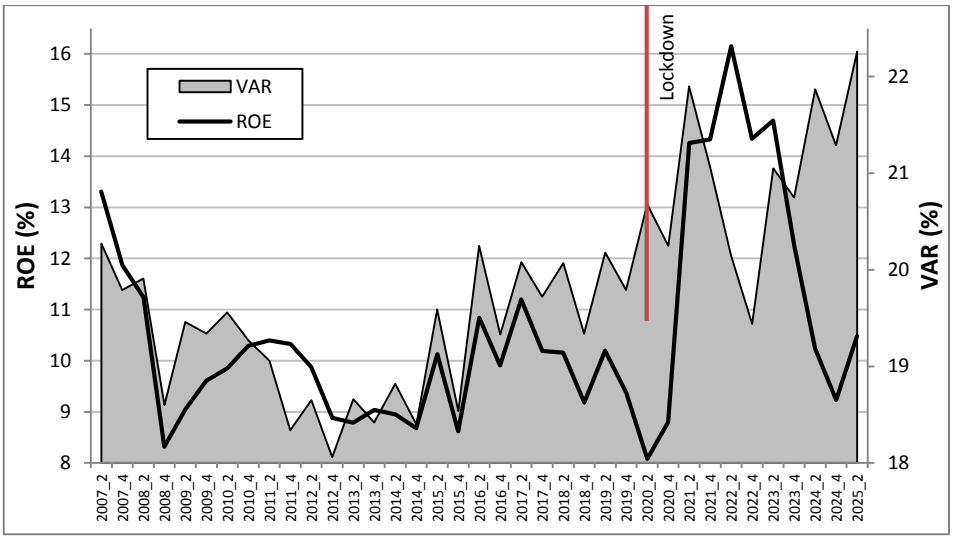


Figure 2. Return on equity (ROE) and rate of value added (VAR) of enterprises in Poland, Q2.2007-Q2.2025.

Source: author's own work based on sources in Table 1.

Mean values settled at ROE = 10.57% and VAR = 19.79%. ROE-VAR correlation stood at r = 0.46 for all enterprises; r = 0.85 production; r = 0.63 trade; r = 0.45 services (all p-value < 0.000). By activity, mean ROE neared general levels in production (10.96%), exceeded them in trade (14.57%), and lagged in services (8.04%). VAR patterns inverted: trade (10.85%) below general, services (30.62%) above.

Third, decomposing MVM dynamics into ROE and VAR contributions (deterministic approach, logarithm method) shows ROE share falling from 53.0% in Q2.2007 to 45.2% in Q2.2025 (+7.8 pp rise for VAR). Pandemic proportions briefly flipped toward ROE dominance (57.0% at Q2.2022), then declined to 45.2% by Q2.2025.

In conclusion, the analysis of the multifaceted value measure (MVM) indicates shifting dynamics between internal performance (ROE) and external value creation (VAR) among Polish enterprises over 2007-2025. While the early years showed growing alignment between the two factors, the pandemic period introduced greater dispersion and temporary dominance of ROE. Sectoral variation was notable, with trade achieving the highest ROE and services the highest VAR. Over time, the contribution of ROE to MVM declined in favor of VAR, reflecting an increasing emphasis on value creation beyond equity returns.

4.3. Financial security degree

For general enterprises, financial security degree (FSD) exhibits a long-term downward trend (average rate of change per year, ARC = -1.9%), briefly halted during the pandemic. Pandemic volatility surged markedly (Q4.2020 peak 0.181, standard deviation), remaining over 60% above pre-pandemic stabilization levels (Q2.2013-Q4.2017) despite post-pandemic moderation. Such FSD volatility preceded the GDP drop in Q4.2012-Q4.2013 and emerged two years before the lockdown.

Production enterprises saw FSD decline from Q2.2011 to Q4.2020, pausing briefly during the pandemic before plunging to a Q4.2023 minimum. Services followed a downward path to a Q2.2020 trough, then rose and stabilized after the lockdown. Trade experienced the strongest positive pandemic effect, though gains faded, driving FSD below pre-pandemic levels (Figure 3).

The decile distribution shows improvement in the first (highest threat), second, and third deciles, thereby lifting the mean. Interdecile spreads peaked at D2/D1 (10.2 pp), D3/D2 (4.5 pp), D4/D3 (3.3 pp), narrowing to 1.7-2.1 pp thereafter. The differentiation measure (D9-D1) and the standard deviation (SD = 1.8 pp) indicate low variability.

Decomposing the FSD model reveals average shares: AP (asset productivity) 24.1%, SF (self-financing) 23.8%, STL (short-term liabilities) 37.4%, RoOA (operating return on assets) 14.6%. From Q2.2007 to Q2.2025, AP influence rose +56.1% and STL +19.3%, while SF fell –33.8% and RoOA –31.1%. Variability coefficients were highest for RoOA (30.3%), SF (19.6%), AP (11.3%), and lowest for STL (6.0%). Pandemic-driven RoOA volatility peaked its share during that period.

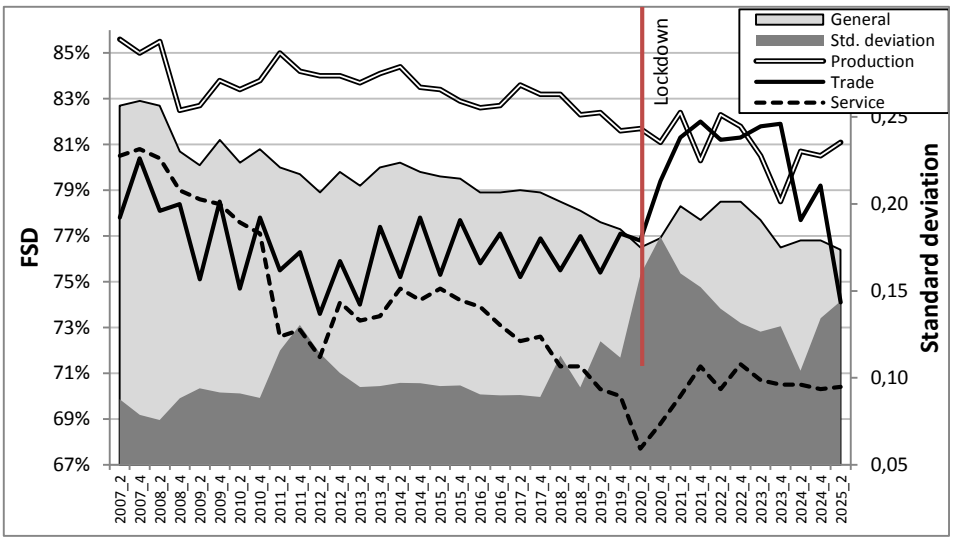


Figure 3. Financial security degree (FSD) by enterprise activity type in Poland, Q2.2007-Q2.2025.
Source: author's own work based on sources in Table 1.

In conclusion, the financial security degree (FSD) of Polish enterprises trended downward in the long term, with pandemic-era volatility peaking sharply and persisting above pre-pandemic levels. Sectoral differences emerged: production deteriorated post-pandemic, services rebounded after a 2020 low, and trade saw temporary gains that later reversed. Decile analysis shows easing threats in lower groups with low differentiation, while FSD decomposition highlights rising asset productivity and short-term liabilities amid declining self-financing and volatile RoOA.

4.4. Value creation and financial security

Analysis of the relationship between value creation and the financial security of a going concern yields several partial conclusions.

Until Q4.2015, the correlation between multifaceted value measure (MVM) and financial security degree (FSD) was very strong, positive, and statistically significant (r = 0.78). It then waned, turning negative by Q2.2021. Over the full Q2.2007-Q2.2025 period, the correlation was weak and negative (r = –0.28). FSD's long-term decline broke sharply a year before the lockdown, rebounded, then fell again. MVM changes were phased until lockdown onset, followed by a sharp rise and gradual decline. FSD–MVM correlation peaked positively for Q2.2020-Q2.2025 (r = 0.70, p-value < 0.000) (Figure 4).

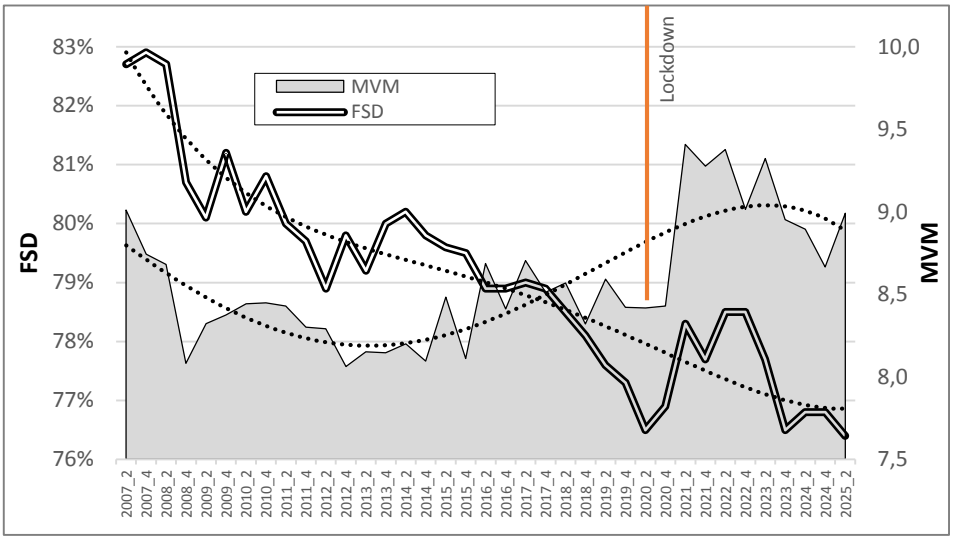


Figure 4. Multifaceted value measure (MVM) and financial security degree (FSD) for enterprises in Poland, Q2.2007-Q2.2025.

Source: author's own work based on sources in Table 1.

Overall dispersion rose 57.7% after a period of relative stability. The pandemic start triggered a 1.92-fold dispersion surge, followed by contraction (–18.0%). Rising dispersion signals widening gaps between contemporaneous FSD and MVM values. By activity and size, displacements favored FSD declines over MVM gains. Production enterprises showed the largest relative deterioration (Euclidean distance difference), and among size classes, large enterprises fared worst.

Period averages were MVM = 8.58 and FSD = 79.1%. Using these as classification benchmarks, service enterprises fell below both (Euclidean distance ED = 7.96) (Figure 5). Production performed better (ED = 8.72), while trade led in value creation at the average security (ED = 9.64). Small enterprises ranked highest in size classes (ED = 8.88).

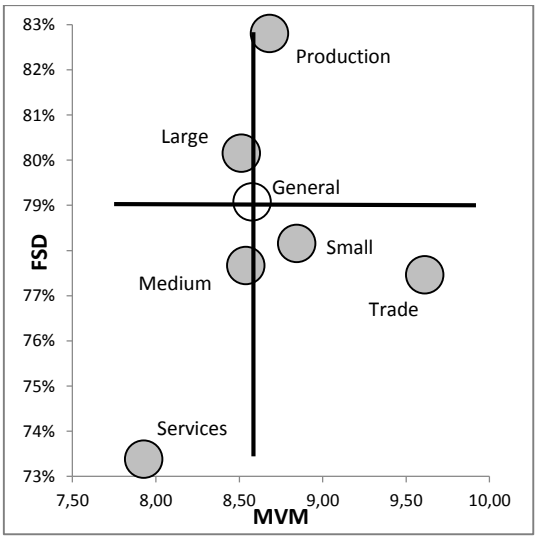


Figure 5. Average position by multifaceted value measure (MVM) and financial security degree (FSD) for enterprises in Poland, Q2.2007-Q2.2025.

Source: author's own work based on sources in Table 1.

In conclusion, the correlation between the multifaceted value measure (MVM) and the financial security degree (FSD) shifted from a strong positive to a weak negative overall, peaking positively during the pandemic. Dispersion between MVM and FSD widened substantially, surging at lockdown onset and signaling growing gaps favoring FSD declines. Sectorally, services lagged both metrics, production showed the largest deterioration, and trade excelled in value creation; small enterprises performed best.

4.5. Profiles of enterprise structures in value creation and financial security

Evaluating enterprise structure profiles requires a tailored research methodology (four-factor for MVM, five-factor for FSD), which guides further studies and the dissemination of results. For this article's preliminary, general assessment, several overarching conclusions emerge.

First, the macrostructure profile of value creation (by activity type and size class) mismatches the financial security profile over Q2.2007-Q2.2025. Divergences also appear relative to the start and end of the period. Initially, MVM and FSD balanced for general and production enterprises; by period end, equilibrium held only for production, but with weakened value creation and security. These findings and visualization (Figure 6) provide a qualitative profile comparison.

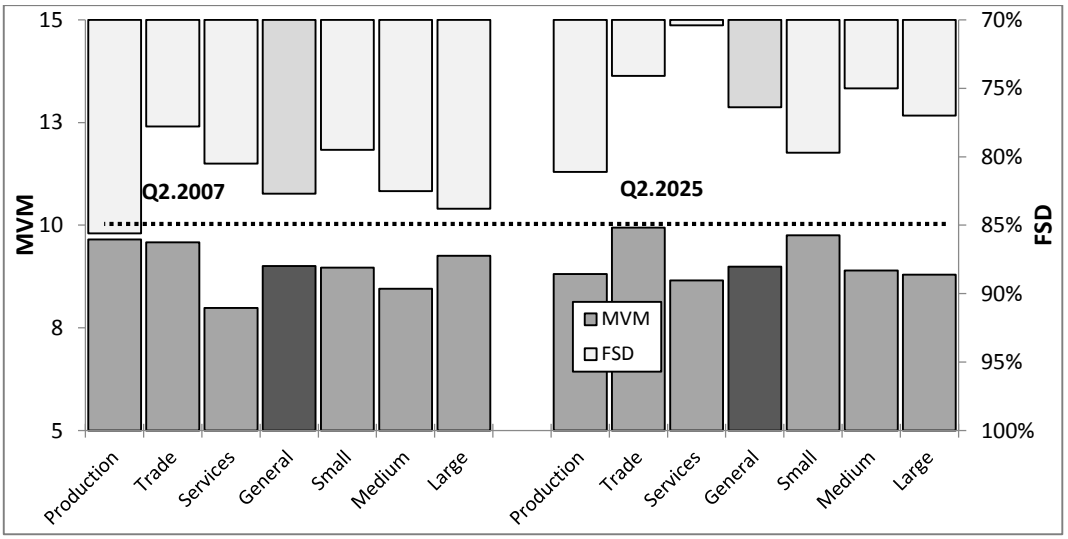


Figure 6. Profiles by multifaceted value measure (MVM) and financial security degree (FSD) for enterprises in Poland: a) Q2.2007 and b) Q2.2025.

Source: author's own work based on sources in Table 1.

For quantitative assessment, the taxonomic measure of similarity (TMS) was applied. For macrostructure (13 PKD sections), MVM-FSD similarity was TMS = 0.62 in Q2.2007-Q2.2025, rising +17.2%. For microstructure (70 PKD divisions), TMS = 0.73, up +7.5%.

A second profile dimension jointly evaluates value creation and financial security by combining average values and variability (standard deviation) using normative patterns (Table 2).

Table 2.
Multifaceted value measure (MVM), financial security degree (FSD), and normative patterns for enterprises in Poland, Q2.2007-Q2.2025

Enterprises	av MVM	sd MVN	av FSD	sd FSD	Pattern MVN	Pattern FSD
Production	8,68	0,377	82,8%	1,55 pp	**4**	**3**
Trade	9,61	0,772	77,5%	2,36 pp	**4**	**2**
Services	7,92	0,537	73,4%	3,43 pp	**2**	**2**
General	8,58	0,375	79,1%	1,69 pp	x	x
Small	8,84	0,832	78,2%	2,60 pp	**4**	**2**
Medium	8,54	0,485	77,7%	2,33 pp	**2**	**2**
Large	8,51	0,370	80,2%	2,06 pp	**1**	**4**

Note. av – average value, sd – standard deviation.

Source: author's own work based on sources in Table 1.

The optimal pattern 3 combines above-average value creation and financial security with below-average variability in both. This occurred solely for FSD in production enterprises.

Its antithesis - least desirable pattern 2 - prevailed, recurring sixfold. Normative pattern congruence was limited, observed only twice: services enterprises and medium enterprises, both in unfavorable pattern 2.

In conclusion, enterprise structure profiles show a persistent mismatch between value creation (MVM) and financial security (FSD) across activity types and size classes. Initial balance in production and general enterprises weakened over time, with production alone

retaining relative equilibrium. Taxonomic measures indicate a moderate improvement in profile alignment. Normative patterns reveal limited congruence, with most groups converging toward suboptimal performance and variability.

5. Discussion

The empirical findings on inconsistencies between value creation and business risk in Polish enterprises over Q2.2007-Q2.2025 substantially contribute to debates on the Value-Based Management paradigm and its limitations under systemic turbulence.

Hypothesis H1: positing equivalent and stable impacts of shareholder value (ROE) and rate of value added (VAR) on multifaceted value measure (MVM) - is rejected. ROE's share in MVM declined in favor of VAR, only to reverse during the pandemic. This aligns with Hoyt and Liebenberg (2011) on exogenous influences on value creation. In stability, shareholder value dominates; crises redefine priorities, prioritizing ROE protection over VAR distribution to stakeholders. This echoes Hahn, Figge, and Barkemeyer (2007) on sustainable value creation, though turbulence elevates financial aspects. Sectoral ROE–VAR variation supports Beasley, Clune, and Hermanson (2005) on industry-specific value-risk management, augmented by Miller and Waller (2003) on scenarios and uncertainty.

Hypothesis H2: phased FSD changes with constant determinant distribution - is partially rejected. Phasing occurred (long-term decline, pandemic stabilization), but determinant shares proved unstable. Alarming drops in self-financing and operating return on assets (RoOA) shares, with high RoOA volatility, signal operational fragility. Graham, Harvey, and Rajgopal (2005) illustrate hidden risk acceptance, and Taleb (2008) tail risk underestimation. The mechanism reflects security source substitution: from endogenous efficiency to exogenous resource mobilization (Bromiley, McShane, 2015).

Hypothesis H3: directly proportional value creation–financial security correlation - is rejected overall, starkly opposing prior strong positives. Pandemic positives surged amid extensive state intervention. Damodaran (2019) concurs: the performance-value linkage holds in stable conditions; systemic shocks decompose it, with interventions sustaining it. Pandemic stratification matches Bowman's paradox (Santacruz, 2020). In Poland, Niemiec (2014) partially confirms this paradox via risk-performance cyclicity and nonlinearity.

Hypothesis H4: profile similarities in value creation and financial security - is rejected. Taxonomic measure of similarity reveals low structural convergence. Normative pattern alignment is low (~1/3). The rarity of the desirable high-value/high-security/low-variability pattern contrasts with the overrepresentation of the worst. Short-term focus depresses value measures (Segal, 2011, p. 432) and heightens volatility (Rappaport, 2005), underscoring the need to emphasize core value drivers (Copeland, Koller, Murrin, 2000, pp. 20-27).

6. Conclusions

The study's objective was to measure inconsistencies between value creation and business risk, encompassing shareholder value (ROE), value transmitted to the economic system (rate of value added, VAR), and financial security of going concern (FSD). The research is extensive and rare due to its duration, vast data scope, and sourcing from restricted-access databases.

Empirically, ROE-VAR as multifaceted value measure (MVM) determinants proved fundamentally variable: ROE share declined in favor of VAR, fully reversing during the pandemic, signaling a redefinition of priority under systemic shock. FSD changes were phased with a long-term downward trend, pandemic interruption, and elevated volatility. Determinant instability - falling self-financing and operating return on assets (RoOA) shares - indicates security source substitution from endogenous operational efficiency to exogenous resource mobilization.

A pivotal finding is the transformation of the value–security relationship from a very strong positive to a weak negative correlation. The pandemic sharply stratified enterprises by concurrent goal attainment; massive state intervention (250-300 billion PLN) merely temporarily paused the decline. Taxonomic measure of similarity confirms low-profile congruence, as well as the rarity of the desirable pattern (high value and security, low variability) and the overrepresentation of the unfavorable one.

Practical implications urge abandoning simplistic shareholder value maximization in favor of sustainable value creation, balancing stakeholders and long-term value drivers. Risk management must integrate operational, financial, and strategic dimensions, incorporating risk-adjusted performance, shock-absorption reserves, and tail risk, while addressing extreme events that exert disproportionate impacts on enterprise value.

Limitations include a financial perspective, a focus on enterprises with over 9 employees, and the capture of turbulence periods, potentially limiting generalizations about stability. Annual FSD modeling overlooks shorter threat cycles; profile analysis needs multifactor deepening.

Future research directions encompass detailed PKD sections, divisions, and size classes; FSD source substitution mechanisms; and critical thresholds that shift value–risk from synergy to destruction. Findings will inform practice in balancing value creation with financial security.

Acknowledgements

The article presents the result of research conducted within the framework of the ‘Potencjał’ project, financed from the subsidy granted to the Krakow University of Economics.

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