

How fares the “commanding heights” of the Swiss economy? Evidence from the Crux of Capitalism project

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The track record of Swiss publicly listed companies in creating economic value is assessed, along with their propensity to experience corporate distress. This assessment is conducted both in absolute terms and relative to foreign peers for the years 2005 to 2022. Established measures of corporate distress are augmented by a specially constructed economic profits measure assembled from quarterly financial reports. While on average Swiss firms perform better in economic profit terms than rivals from neighboring countries, there are doubts as to whether Swiss firms can generate higher levels of economic profit in the future, especially as the cost of capital is rising.

Key words: economic profits, economic value creation, corporate distress, bankruptcy, Switzerland

JEL codes: G32, G33, E43, E44, E58

1 Introduction

When he introduced the phrase the “commanding heights” of an economy, Vladimir Lenin meant those economic activities that were strategically important – the locus of national economic power. These activities can be thought of not just in sectoral terms but in terms of individual companies with sufficiently large commercial footprints. While it would be going too far to argue that the success of a nation’s largest companies is the sole driver of national economic performance, it is difficult to envisage long-term aggregate improvements in living standards without an economy’s commercial behemoths flourishing.

Other considerations justify a focus on the largest firms in an economy. The scale of these firms’ commercial operations means they are often significant employers as well as major buyers of goods and services from other national firms. The capital expenditure decisions of such large firms may account for a significant proportion of observed levels of national investment. The same may apply for research and development outlays and these firms may be responsible for a disproportionate share of patent filings. In short, such firms tend to be

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central to national innovation ecosystems. Among the “commanding heights” of an economy are firms with the resources to enter foreign markets and with the capability to shift production abroad, potentially weakening the link between the firm and the economy where it is headquartered.

Salient large firms may be associated with their nation of origin and the success or otherwise of the former can reflect on the latter. As the President of General Motors, Charles Wilson, told the U.S. Congress in 1953: “I thought what was good for our country was good for General Motors, and vice versa. The difference did not exist. Our company is too big. It goes with the welfare of the country. Our contribution to the nation is quite considerable.” Clearly this argument can be taken too far. Still, the question posed in the title of this paper matters to the perception of Switzerland as a vibrant capitalist economy, to the Swiss public, and to its policymakers.

The capacity of firms in the “commanding heights” of an economy to adjust to changing circumstances is also a longstanding concern. While the focus these days is often on the implications of longer-term dynamics associated with the digital transformation and the energy transition, firms also face sharp changes in short-term business conditions.² The latter include rising interest rates, which are likely to increase the opportunity cost of the capital tied up in a business. Indeed, what some refer to as the ongoing interest rate normalization could put asset-heavy business models under considerable pressure. Value-creating corporate strategies may well turn into value-destroying ones.

Our goal in this paper is to quantify how much economic value has been created by publicly listed firms headquartered in Switzerland from their current operations. We exploit the fact that, in many nations, publicly listed firms must release financial statements on a quarterly basis.³ We correct traditional reported measures of accounting profit for the opportunity cost of capital and for other factors that better reveal the level of economic profit of each firm arising from its recent commercial operations. We also compute established measures of corporate distress, specifically, the interest coverage ratio and Altman’s “Z”-score. Applying this methodology consistently to nearly 40,000 publicly listed firms across 20 economies⁴ plus Switzerland over the years 2005 to 2022 facilitates

2 The sharp appreciation of the Swiss franc against the euro in the first quarter of 2015 marked another notable change in short-term business conditions that may well account for some of the intertemporal variation in total economic profits reported later in this paper.

3 Japanese publicly listed companies are an exception: they release half-yearly financial statements.

4 Those economies were: Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, South Korea, Malaysia, Netherlands, Russia, Singapore, South Africa, Spain, Sweden, United Kingdom, and United States.

both absolute and relative assessments of the performance of the “commanding heights” of the Swiss economy.

When we aggregate across Swiss publicly listed firms at a point in time, we are essentially creating a bottom-up measure of value creation by the behemoths of the Swiss economy. The statistics generated by this bottom-up approach complement what might be referred to as top-down national macroeconomic measures, such as gross domestic product. Indeed, given that the Swiss firms considered in this study have international operations, perhaps a more appropriate aggregate comparator is the gross national product of Switzerland.

A bottom-up, firm-based approach has the advantage of linking empirical measures of corporate performance (both value creation and measures of corporate distress) to pressures for business model transformation, corporate restructuring, and other departures from the status quo. Such connections are less evident in traditional macroeconomic statistics.

For example, the growth accounting approach to long-term economic growth makes reference to the volume and quality of factors of production and to total factor productivity as well as to factors influencing the latter. Remarkably, no reference is made in growth accounting to the performance of the very institution that brings factors, technology, and expertise together, namely, the capitalist firm. In relying on existing macroeconomic metrics, there is a risk that the connection to firms and the operational supply side of economies is obscured, if not lost outright, in policy deliberation and professional commentary.⁵

Many metrics pertaining to the supply side of national economies relate to either institutional factors⁶ (such as ease of setting up a business, access to credit, tax burden, corruption, and bankruptcy procedures) or to survey responses relating to the competitiveness of a national economy.⁷ The former are technically inputs or determinants of supply-side performance, while the latter are perception-based. What is missing is a reliable, comparable empirical measure of how well capitalist firms are actually doing in the national and international business environments that they find themselves in. To the extent that publicly listed firms have more resources to capitalise on the commercial opportunities available, focusing on their ability to create value could reveal important insights.

5 To the extent that corporate distress increases the likelihood of job losses or of job insecurity then, when salient, it may become a source of concern for elected officials where the distressed firms have their commercial operations.

6 The variables tracked by the World Bank’s Doing Business project come to mind.

7 The world competitiveness rankings of IMD Business School and the Global Competitiveness Reports of the World Economic Forum are leading examples.

By creating a bottom-up aggregate measure of performance of larger, established Swiss firms, we are augmenting the set of statistics available to assess the current performance of Swiss capitalism. But, like any aggregate measure, total economic profit must be carefully interpreted and, having laid out our results for Switzerland, we devote Section 8 of this paper to discussing what such statistics might mean and what they do not capture.

This paper draws upon the wealth of empirical evidence generated by the Crux of Capitalism project. This project, undertaken at the University of St. Gallen by us and former colleagues,⁸ seeks to contribute to a number of debates about contemporary capitalisms (notice the plural). For us, the ability of firms to create economic value⁹ is the crux of a capitalist system of economic governance. It is the promise of economic profits that spurs individuals and firms to improve their product and service offerings, to boost productivity, to find new ways to produce the same goods and services with fewer resources, and to expand into new markets and intensify competition that benefits buyers.¹⁰

We recognize that, in recent years, more emphasis has been put on other non-economic forms of value and do not contest those perspectives. We do note, however, that firms' and societies' capacity to address compelling social, environmental, and other imperatives will be greater if the "commanding heights" of an economy generate significant economic profits. At a minimum, the latter can finance the former.

The remainder of this paper is organized as follows. Section 2 discusses the relationship between the approach taken in this paper and the existing literature. In doing so, the contributions of this paper are further clarified. Section 3 briefly discusses the methodology employed in the Crux of Capitalism project, which is the principal source of data for this project. Summary statistics on Swiss publicly listed companies, which we take to be the "commanding heights" of the Swiss economy, are reported in Section 4.

The absolute and relative performance of Swiss companies is discussed in Sections 5 and 6, respectively. Section 7 summarises our findings from counterfactual assessments of the impact of higher levels of the weighted average cost of capital on the economic profitability in major sectors of the Swiss economy. We devote

8 Robin Baumgartner and Fabien Ruf deserve acknowledgement in this respect.

9 Here a firm is said to have created economic value when it produces goods and services that customers are willing to pay so much for that the corporate supplier in question can cover all its costs, including the opportunity cost of capital tied up in the business.

10 As will become evident, we recognize that factors other than innovation and ability to deliver for customers over time can generate high levels of economic profit. We will discuss the relevance of those other factors to the findings presented here on the performance of the firms in the "commanding heights" of the Swiss economy.

Section 8 of the paper to discussing how to interpret the aggregate findings, in particular as they relate to the total reported levels of economic profit. Concluding remarks are offered in Section 9.

2 Relationship to the existing literature

In seeking to assess corporate performance based on published financial statements, we join legions of analysts – both within and outside of academia – who have pursued this goal. Closest to the approach taken here are those analysts that have sought to calculate measures of economic profits. The Economic Value Added (EVA) measure developed by Stern Value Management is a high-profile example of this approach (CHEN and DODD, 1997).

Our approach to calculating economic profits departs from EVA measures by adding back into the calculation of profitability voluntary firm expenditures that are not directly related to current operations, such as research and development expenses.¹¹ Still, our approach is firmly within the family of economic value-added measures. These measures have been employed in a number of settings, including predicting stock market values, internal firm capital allocation processes, as well as judging management performance.

Since we augment our calculations of economic profit with estimates of the interest coverage ratio (ICR) and Altman’s Z'' -score, our research is related to the sizeable, distinct literatures on so-called zombie¹² firms and on corporate bankruptcy and distress.

With respect to the zombie literature, our focus here is on zombie identification, scaling the corporate footprint of zombies, and tracking zombie status overtime. Relevant contributions here include FUKUDA and NAKAMURA (2011), BANERJEE and Hofmann (2018, 2020), FAVARA et al. (2021), and MINGARELLI et al. (2022). As a result, we do not have much to say about the other important matters raised in that literature, such as the causes and sectoral and macroeconomic consequences of zombie status (ADALET MCGOWAN et al., 2017; CABALLERO et al., 2008; STORZ et al., 2017).

As far as the corporate bankruptcy prediction literature is concerned, almost all empirical studies relate to single countries, often the United States. ALTMAN et

¹¹ We explain the reason for doing so in the next section.

¹² While definitions of zombie firms vary, especially when it comes to approaches to identifying them, by and large, most approaches consider a firm that continues its current operations a zombie if is unable to cover its interest payments from its current profits.

al. (2022) is a noticeable exception. In that paper, Altman's well-known Z-score is modified to allow for cross-country application, resulting in the Z"-score that we will apply. Clearly, this is not the only scoring method available in the bankruptcy prediction literature¹³ but it is, at this time, the one most amenable to cross-country empirical work.

Given the discussion in this paper about the possible consequences of rising interest rates on the commercial viability of Swiss publicly listed firms, our paper is related to the growing literature on interest rate or monetary policy "normalisation", as some prefer to term it (CACERES et al., 2016; CARLSSON-SZLEZAK et al., 2023; FELDSTEIN, 2018). In turn, that can be related to the question as to whether quantitative easing created a slew of zombie firms, that is, firms unable to cover their current interest payments. BERNANKE (2022) rejects that claim. Others, such as RZONCA and PAROSA (2022), read the evidence differently.

Ultimately, our paper seeks to contribute to the existing literature in three respects. First, we present a bottom-up assessment of the track record of Switzerland's publicly listed firms to generate economic profits and to succumb to corporate distress. We know of no systematic assessment of these matters that is currently available.

Second, we contribute to the understanding of how well contemporary capitalism is performing by comparing publicly listed companies across geographies in a structured and consistent manner that is grounded in long-established concepts, such as economic profits. Extant studies with a cross-country focus typically focus on a single metric of corporate performance, while our study employs three measures.

Third, we contribute to the growing literature on the potential consequences of interest rate normalisation, in particular as it relates to the likely pressure certain firms and sectors will face to change the business models they deployed during the era of quantitative easing.

3 Methodology employed

Readers are encouraged to augment the discussion in this section by consulting the extensive methodology paper that has been prepared for the Crux of Capitalism project (BAUMGARTNER et al., 2023). Here we confine ourselves to summarising the principal choices made in this research project.

¹³ Others being found in MERTON (1974), OHLSON (1980), SHUMWAY (2001), and CAMPBELL et al. (2008).

The focus of this project is on publicly listed companies that are headquartered in Switzerland. While we would like to have included privately owned firms in our analysis, the amount of financial data that are consistently available for private firms pales in comparison to publicly listed counterparts.

We employed the Compustat Global and Compustat North America databases to assemble information on the performance of close to 40,000 publicly listed companies headquartered in 21 economies that operate in nine sectors. Those economies were the 20 largest in terms of GDP plus Switzerland. In line with other studies (e.g., STORZ et al., 2017; ALTMAN et al., 2022; MINGARELLI et al., 2022),¹⁴ firms in the banking, insurance, and real estate sectors are excluded from the analysis given that the success of their business models is assessed by sector-specific financial metrics.¹⁵

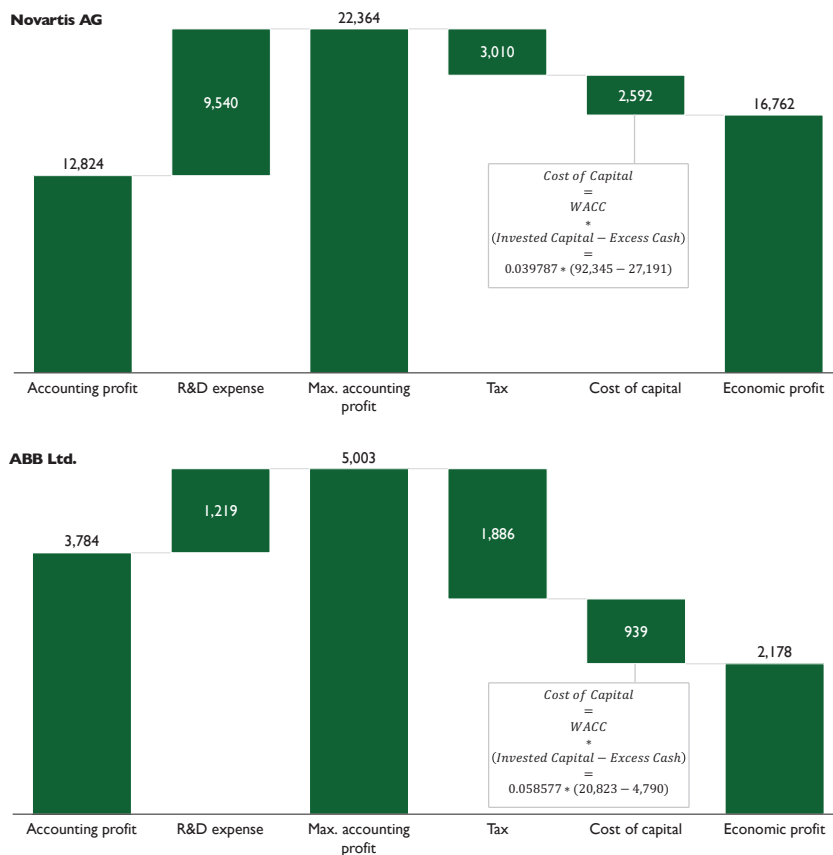
Data were obtained so that the measures of corporate performance referred to below were available from 2005 onwards. Quarterly and annual financial reports were used in a consistent manner to obtain the largest possible dataset of publicly listed companies in these economies. Inevitably, attrition occurs in the same as firms go bankrupt, delist, merge, or are acquired.

The first measure of corporate performance that we constructed is economic profits from current operations. This involved taking operating income after depreciation and adding back in non-operational voluntary expenses (such as research and development (R&D) outlays), and subtracting taxes paid and the opportunity cost of capital deployed in the firm (the latter being the product of the weighted average cost of capital and the difference between invested capital minus excess cash). As a result, standard reported measures of accounting profit can depart from our measure of economic profit.

Figure 1 shows the consequences of adjusting accounting profit to obtain measures of economic profits for two prominent Swiss-based companies. Novartis’ R&D expenses were so large in 2021 that its economic profit exceeded its accounting profit. That is not the case for ABB, where the ratio of economic to accounting profit was less than one in 2021. We will refer to this ratio as AP/EP, and the extent to which it departs from one indicates the degree to which adjustments to financial accounts obscure the current state of value creation by a publicly listed company.

14 Given the size of the banking and insurance sector in the Swiss economy, this feature of the literature may be regretted by some. Indeed, devising comparable operational metrics for firms operating in the finance sectors could be a profitable line of future research.

15 The commercial role of interest payments for a bank differs from that of a manufacturer. It makes little sense then to compare the interest coverage ratio of the former with that of the latter.

Figure 1 Accounting profit and economic profit, 2021 (US\$ million)

Note:

Due to data availability, there is a minor difference in the computation of economic profit between US-based and other firms. For US firms, three additional data items are available and need to be added back to accounting profit because they represent voluntary expenses. These are advertising expenses, restructuring expenses, and goodwill. Accounting profit is defined as Operating Income After Depreciation (Compustat item OIADP). Tax includes all payments of a given firm to jurisdictions worldwide.

The second measure of corporate performance we deploy is the ratio of operating income before depreciation to total interest and related expenses. We refer to this as the interest coverage ratio (ICR). Unlike others, however, we are not particularly interested in the binary classification of firms as “zombies” or not (on the basis of whether the ICR is above or below one). Rather, we treat this ratio

as a continuous variable that we take as indicating the likelihood that a firm is in such distress that it cannot cover its interest payments.¹⁶

The final measure of corporate performance we calculate is the Altman Z^{''}-score, an indicator of the likelihood of bankruptcy (ALTMAN et al., 2022). This score is constructed from the following financial and market variables: current assets, current liabilities, total assets, total liabilities, retained earnings, operating income after depreciation,¹⁷ and the book value of equity.

All three measures are calculated on both a quarterly and an annual basis. A series of quality control checks were performed before we proceeded to publish these metrics and to analyze the data relevant to this study. Those checks are described in BAUMGARTNER et al. (2023).

A preliminary analysis of the covariance among these three measures in 2021 suggests they are largely uncorrelated.¹⁸ This implies that, when looking across firms, each measure contains different information about corporate performance. As will become evident in the charts that follow relating to national level statistics, when comparing across years these measures are more highly correlated. Even so, noteworthy divergences occur from time to time, suggesting that each metric contains different information about firm performance.

4 Summary statistics on Swiss publicly listed companies

Our first task was to extract the information on Swiss publicly listed companies. Table 1 was constructed to give readers a sense of the quantum and commercial footprint of the Swiss firms under consideration in this paper. We were able to obtain year-in year-out information on approximately 200 publicly listed companies, for which a full dataset of financial information was available for around 130 of them.¹⁹ In 2022, half of the 130 firms for which full data were available were classified by Compustat as being in the industrials sector (43 firms) or the healthcare sector (another 23 firms).

16 Given that this measure focuses on the interest actually paid rather than the total amount of interest due, the ratio we compute is likely to understate the degree of corporate distress.

17 In his studies, Altman uses EBIT rather than this measure.

18 Plots and regression results to support this conclusion are available upon request.

19 On this metric, the Swiss sample was the fifth smallest among the 21 economies studied.

Table 1: The population of Swiss publicly listed firms

Sample description	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Firms	216	216	213	211	204	206	205	209	206	203	205	206	205	206	210	207	206	188
Firms with full data	142	150	158	157	143	134	136	144	131	123	125	130	125	126	128	123	125	130
Econ. Profit, \$ billion	32.6	41.1	54.1	63.2	43.3	62.0	64.7	60.4	63.0	64.9	49.8	50.2	50.6	57.4	59.3	73.2	86.2	97.1
Acc. Profit, \$ billion	48.2	67.1	84.2	88.0	72.3	92.5	94.0	90.6	91.8	87.8	74.7	78.1	86.2	94.8	93.0	83.9	113.1	136.3
Revenue, \$ billion	491.3	619.5	749.3	806.8	689.3	824.6	856.9	910.6	913.6	849.5	777.9	757.6	861.8	899.2	902.4	806.3	933.4	1043
Total Assets, \$ billion	507.1	651.8	772.1	777.9	829.3	918.6	948.6	1028	1005	986.4	1006	981	1083	1112	1111	1161	1268	1269
Total tax paid, \$ billion	7.7	13.3	19.6	18.8	13.2	17.7	18.3	19.2	18.5	17.2	18.8	17.5	18.4	19.1	19.5	17.6	21.2	26.5
Employees, million	1.16	1.28	1.41	1.71	1.68	1.83	1.96	2.05	1.98	2.06	2.17	2.19	2.14	2.22	2.13	2.00	1.99	1.96
GDP Deflator, 2022	92.4	94.3	96.6	98.0	98.4	98.7	98.7	98.8	98.7	98.1	96.8	96.2	95.9	96.6	96.5	95.8	96.8	100.0

Note:

The number of firms with full data include firms with economic profit, ICR and Altman's Z"-score data. The number of employees cannot be divided by the number of workers in Switzerland to gauge our coverage of the Swiss economy given that the data presented above included employees of Swiss firms abroad. The sectoral decomposition of the 130 firms with full data in 2022 is as follows: Materials (14), Industrials (43), Consumer Discretionary (14), Consumer Staples (9), Healthcare (23), Information Technology (15), Communication Services (8), and Utilities (4).

With assets totaling more than \$1,250 billion in 2022, correcting for the opportunity cost of capital can be expected to introduce a wedge between total reported accounting and economic profits. This was indeed the case, with total accounting profits of \$136 billion exceeding total economic profits by almost \$40 billion. In just six years the economic profits of the firms at the “commanding heights” of the Swiss economy have doubled from \$50.6 billion in 2017 to \$97.1 billion in 2022.²⁰

Swiss publicly listed companies employed 2 million people worldwide in 2022, a number that has fallen from its 2018 peak. These Swiss firms paid over \$26 billion in taxes to governments around the world in 2022, an amount equivalent to one-fifth of their accounting profits in that year.

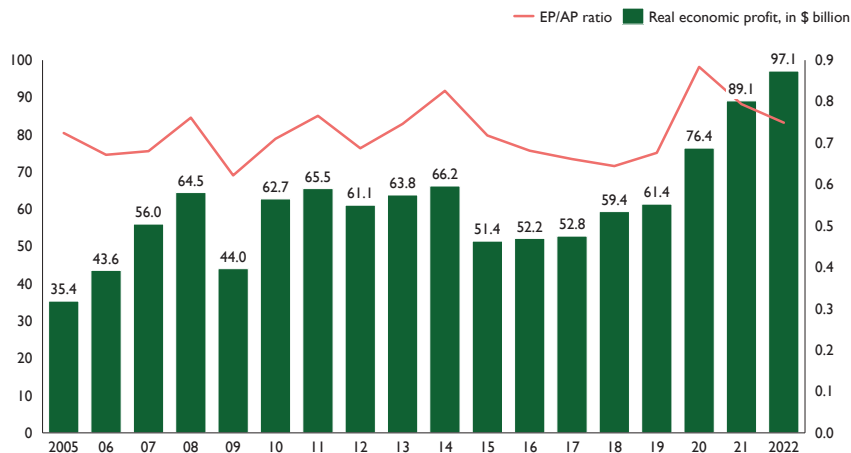
Total reported revenues, accounting profits, and economic profits need not move together, as shown in the year when the COVID-19 pandemic broke out (2020). In that year, total economic profits rose while traditional metrics (accounting profits and total revenues) fell. Even so, the simple correlation coefficient between aggregate accounting and economic profits from 2005 to 2022 was 0.88.

5 Absolute performance of Swiss publicly listed companies over time

The annual variation in inflation-adjusted economic profits and in the AP/EP ratio of Swiss publicly listed companies is shown in Figure 2. Three phases are discernible for the evolution of economic profits. In the boom years before the Global Financial Crisis, total economic profits rose. The first full year of the crisis (2009) witnessed total economic profits fall by 32%.

Then, in the second phase, during the decade that follows total economic profit varied in a range between \$50 billion to \$75 billion. In the final phase, which coincided with the onset of the COVID-19 pandemic, total inflation-adjusted economic profits rose sharply. Consistent with the notion that total value creation by Swiss firms is sensitive to macroeconomic conditions, it took 12 years for total economic profits to clearly surpass those levels witnessed before the Global Financial Crisis. This observation casts the surge in total economic profits during 2020 and 2022 in a less positive light.

²⁰ Clearly, all of the magnitudes mentioned in this paragraph could have been expressed in Swiss francs. Expressing them in US dollars provides, in the cases of economic and accounting profits, an indication of the buying power on global markets of the surpluses generated by Swiss publicly listed firms.

Figure 2: Inflation-adjusted economic profit of Swiss firms

Note: The nominal economic profit value was multiplied by the GDP deflator to adjust for inflation. Data on countries' GDP deflator was sourced from the World Bank Development Indicators. The base year is 2022. The EP/AP ratio represents the aggregate nominal value of economic profit as a share of the aggregate nominal value of accounting profit (restricted to the number of firms with economic profit data available).

Another interpretation may cast the intertemporal performance over the past 10 years in a different light. Recall there was a sharp increase in the value of the Swiss franc against the euro in 2015 that was not fully reversed subsequently. Such an appreciation would have affected the export competitiveness of Swiss publicly listed companies selling into the euro area. This headwind could have halted the growth in aggregate economic profit witnessed in the years before 2015. Put differently, in the absence of this exchange rate shock, Swiss publicly listed firms might have reached the pre-Global Financial Crisis peak level of economic profitability sooner.²¹

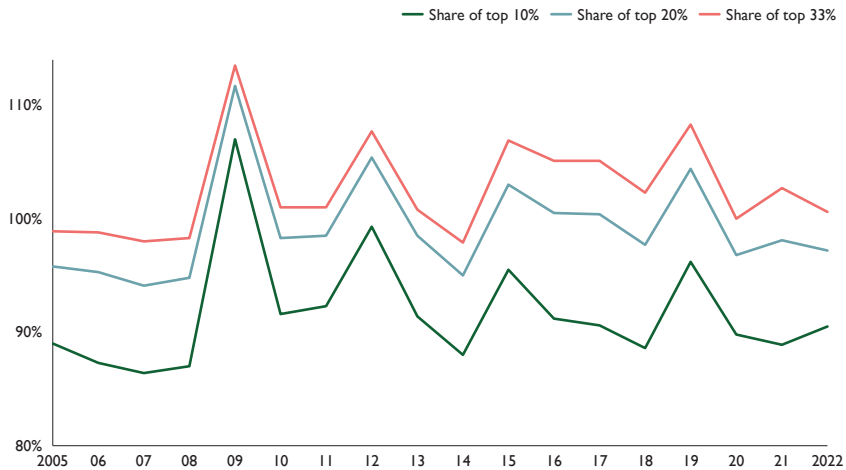
Throughout the years 2005 to 2022, economic profits stayed within 60% to 80% of total accounting profit. Put differently, the latter consistently over-estimated the total value creation of Swiss publicly listed companies by a significant margin.

Companies differ in their level of economic profitability. A “winner takes all” dynamic has been observed in other capitalist economies (PHILIPPON, 2019; DORN, 2021) and the question arises as to whether a small number of firms generate an outsized share of aggregate economic profits. As Figure 3 shows, the answer to

²¹ We thank Jan-Egbert Sturm for encouraging us to think through the implications of the 2015 currency appreciation. We note that the degree of sales exposure to the euro area varies across Swiss publicly listed firms and such variation might be usefully exploited in future research.

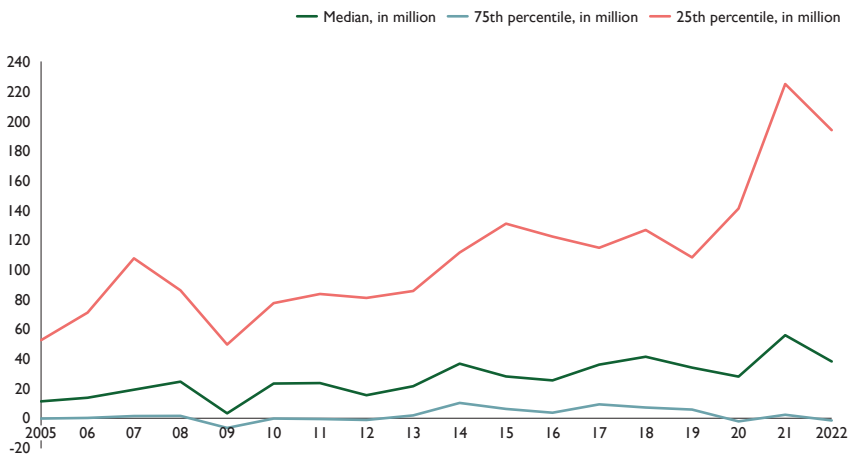
this question is a clear “yes”. Outside crisis years, the 10% of Swiss publicly listed companies that generate the most economic profits together account for between 85% to 100% of total calculated economic profits. In crisis years, these top 10% of firms generated all of the estimated aggregate economic profits, implying that the net contribution of the remaining 90% was close to zero.

Figure 3: Share of economic profit accounted for by large firms



Note: “Share of top 10%” refers to the largest 10 percent of firms by economic profit per year (sample is restricted to the number of firms with economic profit data available).

Figure 4: Distribution of inflation-adjusted economic profit in Switzerland



The impressive economic profit-making potential of the most successful Swiss firms extends from the 10th percentile (as shown in Figure 3) to the 25th percentile (as shown in Figure 4). In 2021 and 2022, the firms around the 25th percentile created economic profits in excess of \$200 million. Even the median Swiss publicly listed company created over \$50 million in economic profits.

The results for the firms around the 75th percentile are of interest, too. With the exception of the crisis years (2009 and 2020), even firms this far down the profit distribution were able to cover their costs, including the opportunity costs of the capital tied up in their business. Still, in 2022 around a quarter of Swiss publicly listed firms generated negative economic profits, which means they destroyed value during their ordinary operations.

We identified the Swiss publicly listed firms in the 10th percentile of each year. Restricting our analysis to firms that were in the top decile for three or more years, a total of 20 such firms were identified, and are listed in rows of Table A1 in the appendix. Garmin Ltd, Nestlé, Novartis, Roche and Swisscom can be found in the top decile every year from 2015 to 2022. The ability of Roche, Nestlé, and Novartis to sustain their relative position is particularly impressive. In fact, looking across the rows and columns of Table A1, nine firms remain in the top decile of economic profit generating firms for 10 or more years. This implies, however, that the other 11 firms listed in Table A1 move into and drop out of the top decile, indicating some degree of fluidity in the best profit-generating firms.

Turning now to indicators of corporate distress, we focus on the proportion of Swiss publicly listed firms that (a) generated negative economic profits, (b) had an ICR below one (taken by many to indicate zombie firm status), or (c) had negative Z'' -scores indicating a higher likelihood of bankruptcy.

To assess how sensitive these proportions were to any one year's data, we calculated those proportions in two ways: first, using only the data for the year in question; and second, using data for the past two consecutive years. Therefore, the latter measure shows, for example, the proportion of Swiss publicly listed companies that were zombies for two years running. The main findings are summarized in Figures 5 and 6 and in Table 2.

Figure 5: Share of Swiss firms under financial distress based on single year data

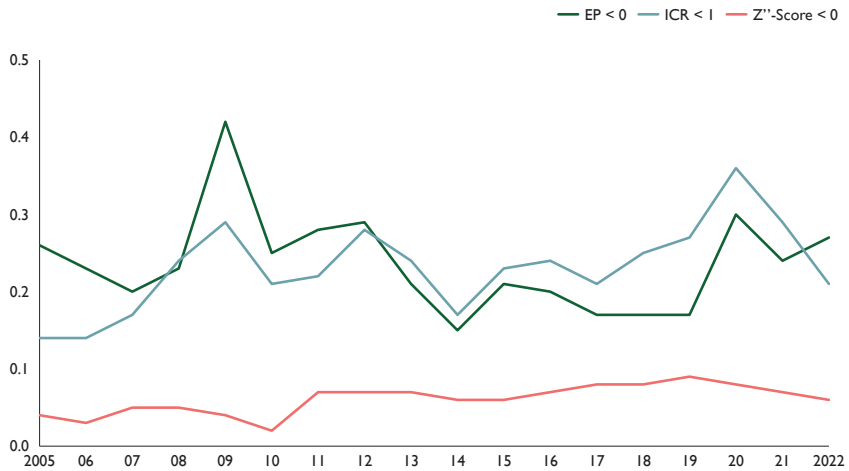
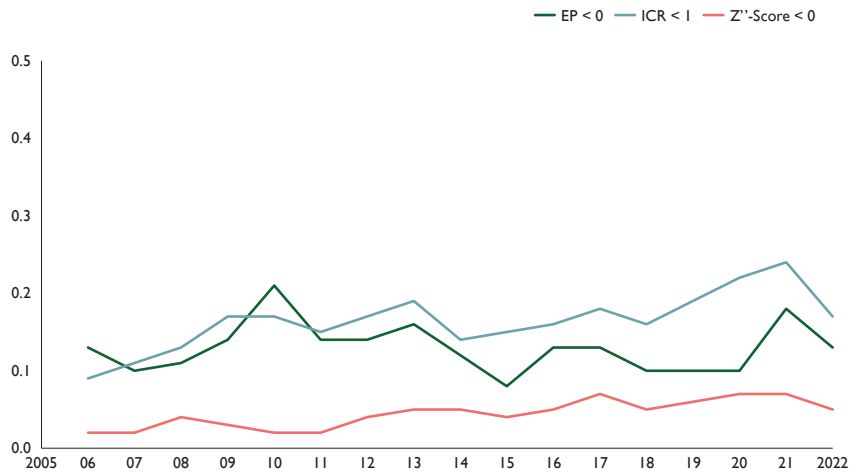


Figure 6: Share of Swiss firms under financial distress in two consecutive years



Note: Proportion of Swiss firms with EP < 0, ICR < 1, Z''-Score < 0 in two consecutive years. If no data is available for a given year, the condition of two consecutive years is not met (conservative approach). Year 2005 (latest available data) is omitted, as there is (almost) no data for the previous year 2004 available.

Table 2: Share of Swiss firms under financial distress in two consecutive years

in %	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
EP < 0	-	0.13	0.10	0.11	0.14	0.21	0.14	0.14	0.16	0.12	0.08
ICR < 1	-	0.09	0.11	0.13	0.17	0.17	0.15	0.17	0.19	0.14	0.15
Z'' < 0	-	0.02	0.02	0.04	0.03	0.02	0.02	0.04	0.05	0.05	0.04

	2016	2017	2018	2019	2020	2021	2022
EP < 0	0.13	0.13	0.10	0.10	0.10	0.18	0.13
ICR < 1	0.16	0.18	0.16	0.19	0.22	0.24	0.17
Z'' < 0	0.05	0.07	0.05	0.06	0.07	0.07	0.05

Assessed on yearly data, as shown in Figure 5, two indicators point to higher proportions of corporate distress during the Global Financial Crisis and the onset of the COVID-19 pandemic. Since 2005, on average 23% of Swiss publicly listed firms could be classified as zombies. Nearly the same percentage destroyed economic value.²² Yet, on average, only 6.2% of firms had negative Z''-scores during the years from 2005.

Insisting that underperformance lasts two years before classifying a firm as being in corporate distress necessarily reduces the percentages mentioned in the last paragraph (as can be seen by comparing the respective lines in Figures 5 and 6). The percentage of value-destroying firms (those generating negative economic profits) halves. The percentage of zombies falls a quarter to 15.5% for the average year. The percentage with negative Z''-scores falls to 4.2%, or by a third. Perhaps more interesting the percentage of zombie firms rises from an average of 13.4% during the years 2006–10 to an average of 19.4% during 2018–22. Likewise, the mean percentage of firms with negative Z'' scores rises from 2.5% to 6.1% over the same timeframe.

Overall, the track record of Swiss publicly listed companies over time is mixed. Only in the very recent past have the firms in the “commanding heights” of the Swiss economy been able to generate in aggregate economic profit levels that beat those witnessed before the Global Financial Crisis. Although very high levels of economic profits are concentrated in a small number of firms, there has been some fluctuation in the composition of top-performing firms. At the other end of the distribution, however, growing percentages of Swiss publicly listed firms are showing signs of corporate distress.

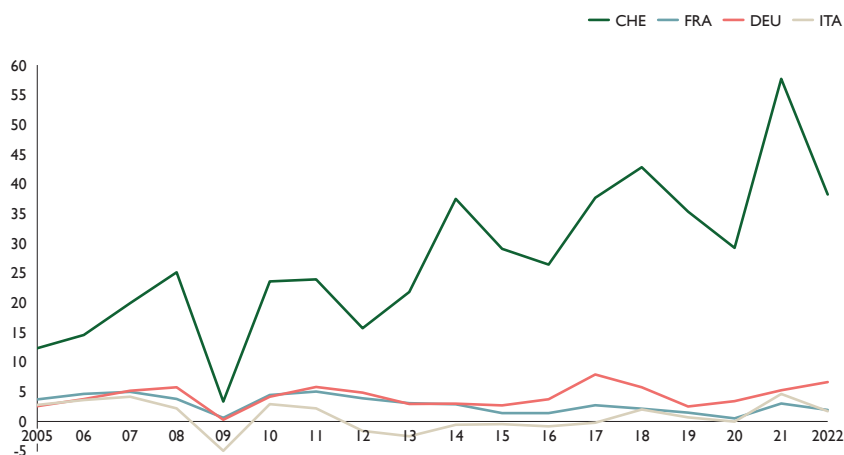
²² Weighting firms either by the total number of employees, total assets, or total debts tends to reduce the proportion of firms destroying economic value. The divergence between weighted and unweighted proportions has grown since the onset of the COVID-19 pandemic.

6 Performance relative to peers

We now compare the performance of Swiss publicly listed companies with their counterparts in other nations. We start by making a comparison with neighboring countries, specifically, with French, German, and Italian firms. Figures 7 and 8 and Table 3 contain the main empirical findings.

When median economic profit levels are compared, as they are in Figure 7, striking international differences emerge. The median levels of economic profits for French, German, and Italian firms do not exceed \$10 million in any year. By contrast, the median Swiss level of profitability only fell below that threshold in 2009.²³ Moreover, the median level of Swiss profitability increases on trend over time. Arguably, year-on-year volatility in median profitability is higher in Switzerland than in its neighbors. When sharp falls in median Swiss profitability are observed, they tend to be reversed within two calendar years.

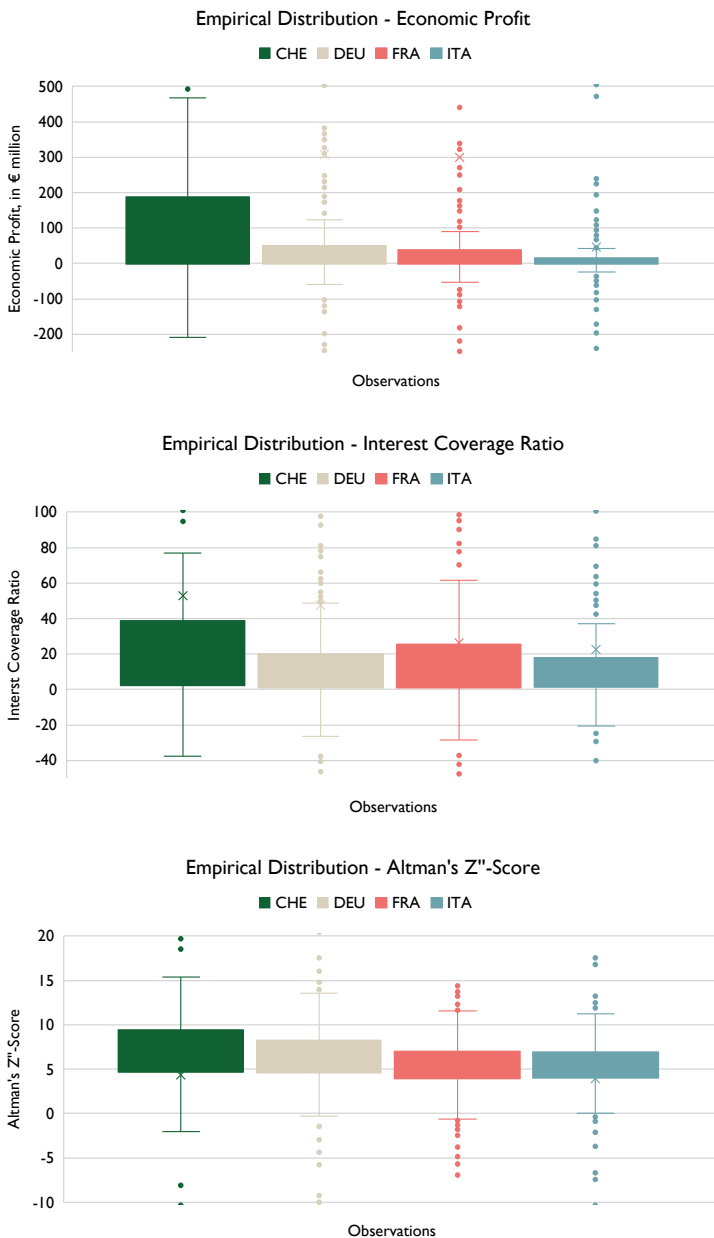
Figure 7: Cross-country comparison of median inflation-adjusted economic profit



Note: One of the reasons for the exceptionally high median EP in Switzerland could be that predominantly large firms decide to go public in Switzerland. Differences in the sectoral composition across countries may be another factor at work.

²³ To examine whether differences in the sectoral composition of publicly listed firms could be driving these results, we repeated this analysis for each of the nine sectors separately. In six of the nine sectors Swiss median economic profit performance equalled or exceeded that of firms from neighboring countries.

Figure 8: Empirical distributions compared across countries, 2022



Note: Crosses denote the mean while boxes delimit the interquartile range and show the median. Outliers are not shown on the box plots.

Table 3: Empirical distributions compared across countries, 2022

	CHE	DEU	FRA	ITA
Median EP, in \$ million	38.3	6.7	1.7	1.7
Median ICR	12.6	6.1	3.6	6.5
Median Z’’-Score	7.1	6.0	5.0	5.4

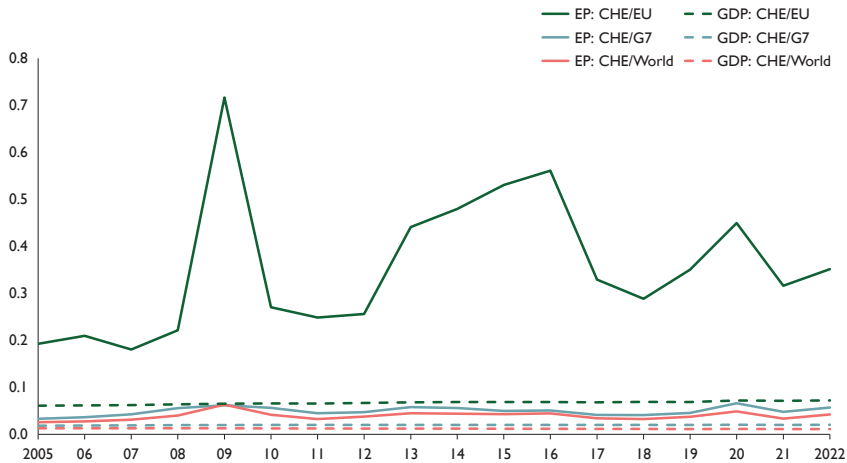
Figure 8 reveals the empirical distributions of the observed levels of economic profits, ICR ratio, and Z’’-score. The substantial differences in median economic profitability seen in Figure 7 do not carry over to the ICR and Z’’-scores.²⁴ Swiss exceptionalism does not extend to the latter indicators of corporate distress, in particular to the Z’’-score. Yet, as the evidence on outliers shows, on all three metrics reported in Figure 8, Switzerland has far fewer outliers at both ends of the distribution – meaning there are proportionally fewer stand-out superstar Swiss firms and fewer Swiss firms on life support.

Now we widen the comparison, benchmarking the total amounts of economic profit made by Swiss firms with the total generated by publicly listed firms in other groups of foreign nations. We created three comparator groups: the six EU member states for which we had collected data; the members of the G7 group; and the “world” (taken to be all 20 other nations in our sample.) As those groups have larger economies and tend to have more listed firms, unsurprisingly Swiss total economic profits as a share of the profits generated in these groups was always less than one.

To benchmark appropriately, we compared the Swiss shares of economic profits of each group with the Swiss share of the combined national income of the same group. In essence, we asked the question: do Swiss firms generate more economic profits than their national income share would suggest? The answer is a clear “yes”, especially when the comparison is made with the members of the European Union (see Figure 9).

²⁴ Notice also the substantial differences between the mean and median levels of economic profitability in France, Germany, and Switzerland.

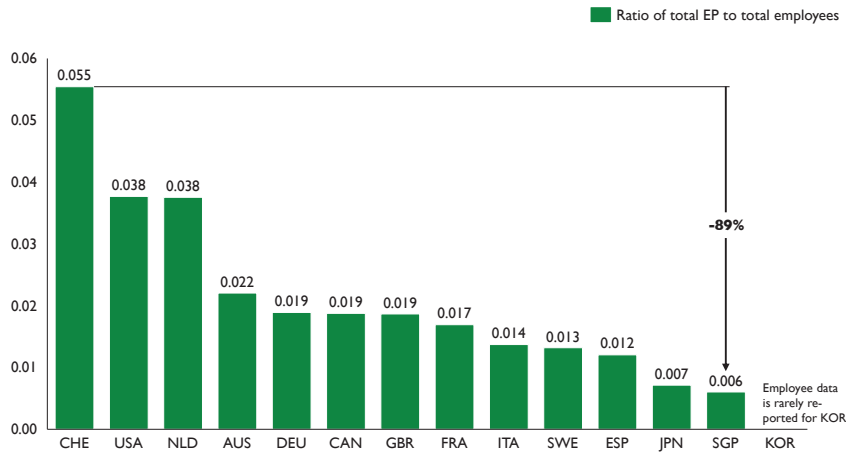
Figure 9: Switzerland's inflation-adjusted economic profit as a share of total economic profit in different groups of foreign nations



Note: “World” refers to Australian, Brazil, Canadian, Chinese, French, German, Indian, Indonesian, Italian, Japanese, South Korean, Malaysian, Dutch, Russian, Singaporean, South African, Spanish, Sweden, British, and American firms. The nominal economic profit value was multiplied by the GDP deflator to adjust for inflation. Data on countries’ GDP deflator was sourced from the World Bank Development Indicators. The base year is 2022.

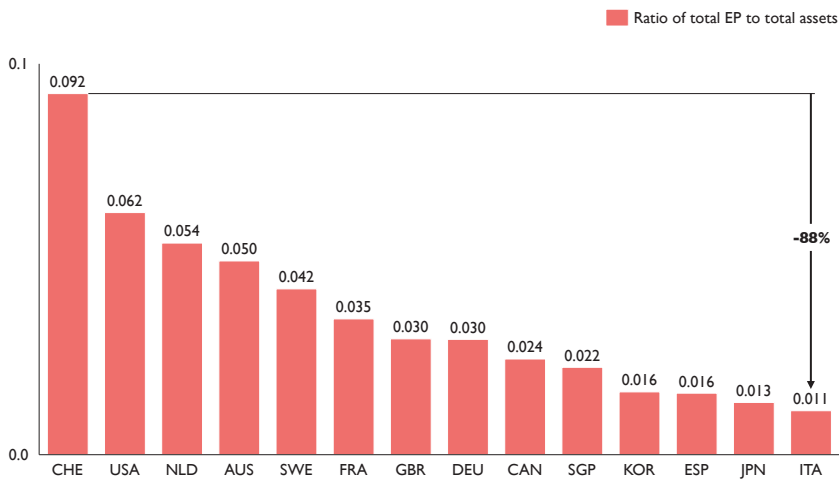
Figures 10 to 12 benchmark each nation’s economic profit generation in 2021 with the number of employees on the payroll of publicly listed companies, with the total amount of capital tied up in these company’s businesses, and with their total revenues. The variation across the countries for which we have data is significant. When countries are ranked in terms of economic profit per employee, per US dollar of capital employed, and per US dollar of revenues, Switzerland is consistently the top-performing nation, followed by Australia, Netherlands, and the United States. Italy, Japan, Spain, and Singapore are found consistently at the wrong end of the ranking. Caution is needed here in drawing too many conclusions from a single year’s data.

Figure 10: Economic profit per employee across countries, 2022

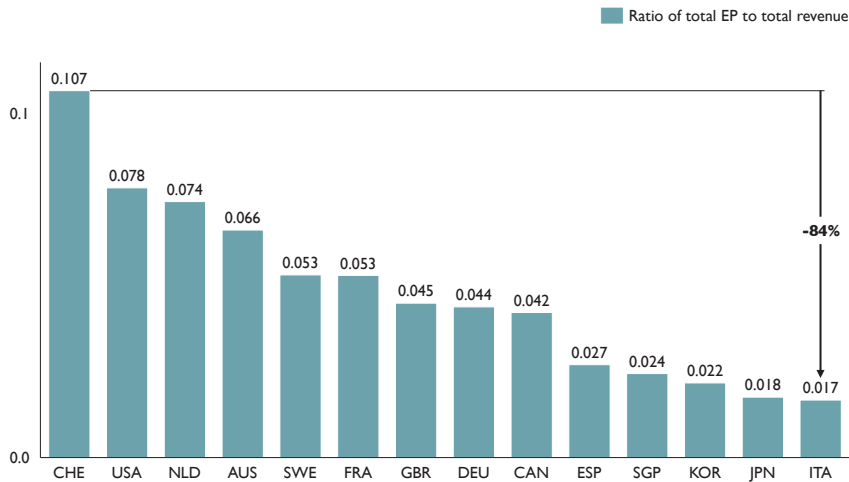


Note: Economic profit is shown in million \$ per employee. The ratio is calculated by dividing the sum of total economic profit per country (only for firms for which economic profit and employee data is available in 2022) by the sum of total employees (only for firms for which economic profit and employee data is available in 2022)

Figure 11: Ratio of economic profit to total assets across countries, 2022



Note: The ratio is calculating by dividing the sum of total economic profit per country (only for firms for which economic profit and asset data is available in 2022) by the sum of total assets per country (only for firms for which economic profit and asset data is available in 2022).

Figure 12: Ratio of economic profit to total revenue across countries, 2022

Note: The ratio is calculated by dividing the sum of total economic profit per country (only for firms for which economic profit and revenue data is available in 2022) by the sum of total revenue per country (only for firms for which economic profit and revenue data is available in 2022).

In sum, when it comes to the capacity to generate economic profit, there is a clear performance premium of Swiss firms over counterparts in other capitalist economies.²⁵ This is not to imply that every Swiss firm does better than its rivals abroad, but there is a clear tendency to do so and that tendency has persisted. When it comes to indicators of zombie firm status and bankruptcy prediction scores, the Swiss performance premium is less discernible.

7 Robustness of Swiss publicly listed firms to rising costs of capital

We recognize that there have been changes in monetary policy regimes during the years that we evaluate corporate performance. Arguably, there have been three regimes: the “standard” Taylor rule-driven regime that prevailed before the Global Financial Crisis; the Crisis response regime followed by various bouts

²⁵ One conference participant suggested that Switzerland’s superior economic profit performance reflected the fact that a higher proportion of its publicly listed companies were multinationals with significant international footprints. That participant suggested comparing Swiss performance to that of Dutch firms. We note that Sweden and the United Kingdom are often said to have higher proportions of multinational firms. So we compared the median economic profit performance of Swiss firms with British, Dutch, and Swedish counterparts. Only the Dutch multinationals came anywhere close to meeting the Swiss median economic performance. Not since 2007 has Dutch median profit performance exceeded comparable Swiss performance. We take from these findings that a profit premium for being a multinational firm is possible but not assured.

of quantitative easing; and now the so-called interest rate normalisation that is motivated, in part, by the desire to tackle the unusually high levels of inflation of recent years. Indeed, it is the prospect of a return to permanently higher interest rates and with its corporate bond yields that is the focus of this section.

Clearly, we have no special insight into how high interest rates will rise over the months and years to come. Nor can we know how the management of Swiss publicly listed firms will react to higher costs of capital. But what we can do is use recent reported financial performance to identify which firms and sectors would cease creating economic profits if their weighted costs of capital rose by different amounts and if their managers declined to adjust.²⁶

Indeed, such “as is” counterfactuals can identify how many more Swiss firms would move from value-creating status to value-destruction if their managements failed to react. Such counterfactuals can indicate which firms and which sectors of the Swiss economy will face pressures to transform their business models. Put differently, if the quantitative easing era induced managers to adopt asset-heavy business models, then will rising interest rates encourage a shift to new business models that can better cover the opportunity cost of capital deployed?

We took the financials reported by each publicly listed Swiss firm in 2022 as well as information on their computed weighted average cost of capital (WACC).²⁷ As shown in Table 4, with the WACC prevailing in 2022, a quarter of Swiss publicly listed companies generated negative economic profits during that calendar year. These value-destroying firms employed approximately 122,000 people and had about \$80 billion of assets tied up in their businesses.

Next we recalculated the counterfactual levels of economic profits generated if the WACC was raised progressively for each firm by 1 percentage point, 3 percentage points, and 5 percentage points (Figure 13 and Table 4). Unsurprisingly, as the WACC level rises, so does the proportion of firms failing to earn positive economic profits.²⁸ A 1 percentage point increase in WACC does not raise that proportion much, but a 3 percentage point increase results in a third of Swiss publicly listed firms moving into value-destruction territory. An across-the-board increase in WACC by 3 percentage points would double the number of

26 Our focus on interest rate normalisation is just one of the counterfactual analyses that could be conducted with Crux of Capitalism data. Others include changing corporate tax rates and levels of employee compensation.

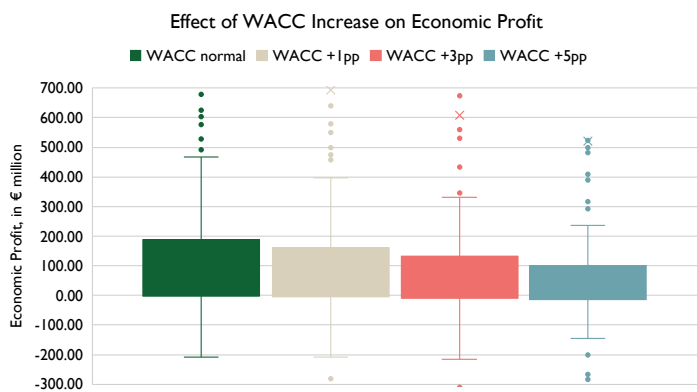
27 Since 2022 is the baseline against which the counterfactual is calculated, the changes in the proportion of value destroying Swiss firms is taken from the baseline proportion of firms that made negative economic profits in 2022 (as opposed to in 2021 and 2022). Therefore, the proportion of value destroying firms in Table 4 correspond to the relevant annual estimate reported in Figure 5.

28 More generally, however, as the WACC increases, *ceterius paribus*, the estimated levels of economic profit for each firm will fall. This is true for those firms whose economic profit level remains positive after the WACC increase.

people and the amount of capital working in value-destroying businesses, when compared to 2022 outcomes.

If WACC were to rise 5 percentage points, then only 60% of Swiss publicly listed firms could be confident that their current business models would continue to generate positive economic profits.

Figure 13: Effect of WACC increase on economic profit in Switzerland, 2022



Note: Crosses denote the mean while boxes delimit the interquartile range and show the median. Outliers not shown on the box plot

Table 4: Effect of WACC increase on employees and assets of Swiss firms, 2022

Variable	WACC	WACC +1pp	WACC +3pp	WACC +5pp
Share of firms with EP < 0, %	26.5	28.2	33.3	39.3
Employees in firms with EP < 0	122,829	143,639	270,061	300,543
Assets of firms with EP < 0, \$ million	80,026	101,077	191,580	207,052

To the extent that interest rate normalization results in firms facing higher WACC – not least because many debt-financed companies have yet to roll over their loans at higher interest rates – then pressures will mount to change business models and corporate strategy. Such pressures are likely to be concentrated in certain sectors of the Swiss economy, as the calculations in Table 5 reveal. An across-the-board 3 percentage point increase in WACC would significantly increase the proportion of firms making negative economic profits in the consumer discretionary, consumer staples, and materials sectors.

Table 5: Effect of WACC increase on the number of Swiss firms with EP < 0, 2022

Firms with EP < 0, %	WACC	WACC +1pp	WACC +3pp	WACC +5pp
Communication Services	37.5	37.5	37.5	37.5
Consumer Discretionary	26.7	33.3	40.0	46.7
Consumer Staples	22.2	22.2	33.3	33.3
Energy				
Health Care	34.8	34.8	34.8	47.8
Industrials	20.9	20.9	27.9	30.2
Information Technology	25.0	25.0	25.0	25.0
Materials	21.4	35.7	42.9	57.1
Utilities	50.0	50.0	50.0	75.0

Note: In 2022, there are no publicly-listed energy firms headquartered in Switzerland.

In contrast, firms in communication services and information technology sectors are unlikely to cease earning positive economic profits – perhaps due to the fact that, in general, firms in these sectors have been able to generate more economic profits in the years since the onset of the COVID-19 pandemic.

Unless firms take steps to reduce capital tied up in their businesses, it is difficult to see how higher interest rates – a consequence of interest rate normalization after the era of quantitative easing – can support recent levels of aggregate economic profits generated by the firms in the “commanding heights” of the Swiss economy. This implies that the unusually high aggregate levels of economic profits generated in 2021 and 2022 by Swiss publicly listed companies is unlikely to be sustained. In turn, this increases the likelihood that the total amounts of economic profit created by leading Swiss firms will return to the range witnessed in the previous decade, that is, in inflation-adjusted terms between \$50 billion and \$75 billion.

8 Do high levels of aggregate economic profits imply that the “commanding heights” of the Swiss economy are protected from competition?

It may be tempting to make inferences about the degree of competitive pressure on firms based on the findings for economic profits reported here. Some may be tempted to reason as follows: as we all learned in our first economics class, in a perfectly competitive market with free entry and exit in the long run, economic profits should settle down to zero. If positive levels of economic profit can be sustained over time, then this is due to barriers to entry (including those created

by patents), direct or indirect state support for firms, or regulatory capture conferring some benefit on incumbent firms. Following this view, the findings on high levels of economic profits for Swiss publicly listed firms, especially for the most profitable firms, could lead to the conclusion that competitive forces have been blunted in the “commanding heights” of Swiss capitalism.

We challenge this interpretation on four grounds. First, positive economic profits can be earned by firms that have a distinctive and hard-to-copy corporate strategy. That corporate strategy may be built around a difficult to understand and replicate core competence which was developed organically and was neither nurtured nor sustained by the state or by lobbying the state.

Second, the economic profits earned by each firm refer to their global operations. A Swiss firm may earn much more economic profits abroad than at home, indicating that any lack of competitive pressure may, in fact, be in foreign markets.

Third, we checked whether there were unusually high levels of median firm profits in the more regulated sectors of the Swiss economy, where the potential for rent-seeking cannot be ruled out. In the communication services sector, the median economic profit level has been close to zero for several years now. In the health care sector, the median profit levels are lower during the past decade than before; likewise in the utilities sector (where, in fact, median firm economic profitability was close to zero in the three years preceding the pandemic). These sectoral findings are hard to square with a rent-seeking explanation.

Fourth, to the extent that competitive pressure erodes the market power of previously highly profitable firms and increases pressure on the management of laggard firms to improve or exit, then a competitive economy might be one where the coefficient of variation of economic profits across firms is lower than in a less competitive economy.

We calculated the relevant coefficient of variations for all 21 economies for each year from 2005 to 2022.²⁹ The rising median economic profit levels reported earlier for Swiss firms were not associated with increases in the Swiss coefficient of variation. In fact, those Swiss coefficients have fluctuated within a narrow range. Moreover, comparing across the European economies studied here, only the Netherlands has a lower coefficient of variation of economic profit than Switzerland in recent years. All of the other European economies, including all of Switzerland’s neighbors, have higher coefficients of variation. Such evidence is hard to square with Switzerland’s high levels of economic profit being associated

29 The results are available upon request.

with unusually high levels of market power, barriers to entry, or rent-seeking when compared to European peers.

Although Swiss firms are largely economic profit-making, it is worth asking whether there is anything to be learned from a firm or a sector making negative economic profits over time.³⁰ Arguably, yes. To survive, negative economic profit-making firms are either (a) selling off assets as they destroy value, (b) able to persuade a private sector lender to advance them funds while they are going through a “rough patch”, or (c) receiving explicit or implicit state support.

The first of these three reasons only has an upside if the firms in question are undergoing a transformation of their business models. Otherwise, here sustained negative economic profits indicate a declining or “sunset” industry. When presented with evidence of the latter, policymakers may wish to ease the eventual exit of employees and capital from the firms and sector in question. Structural adjustment policies can thus be informed by economic profit performance metrics.

The second reason implies that some other private sector actor sees a chance for redemption for the value-destroying firms or sectors in question. Whether that comes to pass, only time will tell. Presumably, those funding actors have strong incentives to allocate their resources wisely having conducted the appropriate market analysis, due diligence, and so on. In these cases, there may not be a public policy concern.³¹

In the absence of evidence of asset sales or private sector support, persistent negative economic profits could be an indication of sustained state subsidisation or other forms of support (including encouraging private lenders to roll over loans to the firms in question). In principle, the combination of sustained evidence of negative economic profits and the indicators of corporate distress described earlier in this paper could be used to ascertain whether certain firms or sectors are likely to have received state support. Red flags could be raised, etc. Since state support to firms need not be transparent, being able to infer circumstances where such support is more likely to have been furnished could be of value to competition agencies, finance and trade ministries, and international organizations concerned about resort to selective policy intervention.

In sum, the metrics developed and presented in this paper can generate evidence that can inform a range of domestic and international economic policymaking.

³⁰ We thank Reto Föllmi for encouraging us to explore this matter further.

³¹ There might be a competition law problem if the funding was part of a predatory strategy to drive non-supported firms out of the market. This is not the place to go into the preconditions for predation strategies to work, however, it is worth noting that this is a highly contested matter.

9 Concluding remarks

We set ourselves the task of assessing how well the firms in the vanguard of Swiss economy are doing in terms of generating value and avoiding corporate distress. When compared to foreign publicly listed firms, in particular in Europe, Swiss performance looks impressive, at least with respect to the ability to generate economic profits. If making positive economic profits is what successful capitalist firms are supposed to do, then the firms in the "commanding heights" of the Swiss economy appear to be getting something right.³²

Where there are concerns is with respect to performance over time. For sure, results for 2021 and 2022, especially as they relate to economic profits, were impressive. But will such performance last? Should interest rates return to peak levels seen earlier this century before the Global Financial Crisis (around 3.5%), then this would create a drag on economic profitability. Yet, the counterfactual evidence presented here suggests that the weighted average cost of capital would have to rise considerably further before putting pressure on firms in certain sectors of the Swiss economy to change their business models.

In addition, we found evidence that the current operating performance of a growing number of Swiss publicly listed firms is such that they are likely in corporate distress. Such distress may have been obscured by various adjustments in published financial accounts.

As the COVID-era stimulus wears off around the world, Swiss internationally oriented firms may find it difficult to maintain recent higher levels of economic profit generation. This may tip aggregate economic profit generation back into the range witnessed during the past decade. In turn, this begs the question as to why, as a class, Swiss firms are unable to profit more from the ongoing digital transformation of societies and from the energy transition.

More generally, in this paper we have made the case for augmenting the set of short-run macroeconomic metrics with one rooted in the actual economic value creation performance of a nation's publicly listed firms. Combined with up-to-date indicators of corporate distress, we believe that central bankers, other government officials, analysts, journalists, and researchers are now in a position to better track the supply-side performance of the "commanding heights" of capitalist economies.

³² The word "appear" was used deliberately because, in principle, differences in sectoral composition of publicly listed companies, differences in age, and other factors could account for some of reported cross-country differences in profit performance.

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Appendix

Table A1: Swiss Superstars: Ranking Swiss firms that have been three or more years under the top 10% in terms of economic profit, 2005-2022

Top 10% firms	Sector	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
ABB LTD	Industrials	4	4	4	4	4	4	4	5	5	4	4	4	4	10	9	28	7	8
ACTELION LTD	Health Care	15	13	11	12	8	8	13	10	10	9	9	7						
CIE FINANCIERE RICHEMONT AG	Consumer Discretionary	33	29	13	11	9	7	8	6	6	7	7	11	7	8	10	12	6	6
DSM FIRMENICH AG	Materials	13	11	14	15	144	12	12	19	17	23	129	37	15	9	20	11	18	90
GARMIN LTD	Consumer Discretionary	11	10	10	10	7	10	11	11	12	10	10	10	9	6	6	6	9	11
GEBERIT AG	Industrials	22	22	23	20	12	17	18	15	15	15	18	15	21	15	11	10	14	17
GIVAUDAN SA	Materials	9	12	32	22	17	14	17	12	11	12	11	9	10	11	8	7	11	12
HOLCIM LTD	Materials	10	9	8	9	145	138	140	146	136	127	132	135	131	132	131	125	13	15
KUEHNE & NAGEL INTERNATIONAL	Industrials	18	20	19	19	13	15	16	14	14	14	12	12	12	13	14	9	5	7
NESTLE SA/AG	Consumer Staples	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4
NOVARTIS AG	Health Care	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
ROCHE HOLDING AG	Health Care	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SGS SA	Industrials	14	17	18	16	10	13	14	13	13	13	13	16	14	14	17	15	19	19
SIKA AG	Materials	32	33	30	29	28	23	28	20	20	17	14	14	13	12	13	8	12	13
STMICROELECTRONICS NV	Information Technology	8	8	75				7					8	5	4	4	4	4	5

Top 10% firms	Sector	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
SWATCH GROUP AG	Consumer Discretionary	12	14	12	13	15	9	10	8	8	11	28	133	56	28	30	127	28	30
SWISSCOM AG	Com. Services	5	6	9	8	6	6	6	7	7	6	6	6	8	5	5	5	8	10
SYNGENTA AG	Materials	7	7	7	6	5	5	5	4	4	5	5	5	6					
TE CONNECTIVITY LTD	Information Technology				17		139		9	19	8	8	13	11	7	7	119	10	9
XSTRATA PLC	Materials	6	5	5	7	146	11	9	148										
EP share of TOP 10% Swiss firms		0.89	0.87	0.86	0.87	1.07	0.92	0.92	0.99	0.91	0.88	0.96	0.91	0.91	0.89	0.96	0.90	0.89	0.90
No. of top 10% Swiss firms		14	15	16	15	14	13	14	14	13	12	13	13	13	13	13	12	13	13
No. of total Swiss firms		144	155	160	159	146	139	140	148	136	127	132	135	131	132	132	127	131	132

Note: Swiss firms are included if they were three or more times under the top 10% of Swiss publicly listed firms in terms of economic profit (2005-2022). Numbers are showing the rank of the Swiss firm in a given year (in terms of economic profit). The number of total Swiss firms includes all publicly listed Swiss firms with data available for economic profit.