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Sustainable Finance and Small and Medium Enterprises

Germany's Bank-Based Financial System and EU Disclosure Requirements

To boost investments into sustainability, small and medium enterprises (SMEs) – a crucial part of the economy – must play a role. The current sustainable finance framework focuses on capital markets. But SMEs normally get external finance from banks, and bank-based financial systems work differently than market-based financial systems. Therefore, the regulation needs to take the characteristics and advantages of bank-financed SMEs into account. Decentralised und individual financing of credible transition plans, rather than extensive disclosure of data, could lead to the necessary rise of investments.

The need to respond to man-made climate change is undeniable. Estimates suggest that the transformation of all sectors of the economy towards climate neutrality in Germany will require an additional €5 trillion, or €190 billion per year, in investment until 2045 (KfW Research, 2021). Although there are large uncertainties in such estimates, substantial increases in investment will be needed to achieve climate neutrality.

There are several options to increase investment volumes in order to fight against climate change. Most economists propose pricing externalities, whether through taxes or certificates, because this method is the most efficient (see e.g. Kalkuhl et al., 2013). In the US, subsidies are used to influence the relative prices between carbon-intensive and low-carbon production processes. The European Union has decided to use another instrument in addition to pricing, namely channeling investments through the financial system (Wissenschaftsplattform Sustainable Finance, 2021a).

The term "sustainable finance" encompasses substantially more goals than just reducing carbon dioxide (CO_2) emissions.

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It includes environmental, social and governance (ESG) investment. However, since the target CO_2 emission reductions require massive investments, which apply to other targets only in a more limited form, the financial system plays a central role in achieving this goal.

Small and medium-sized enterprises (SMEs) in Germany rely primarily on banks for their external financing. At the same time, they play a key role in achieving climate neutrality because of their economic importance. Therefore, the question arises as to how a sustainable finance approach aligned with these financing structures would have to look like.

Allocation on the capital market

The central function of financial systems is to allocate capital, i.e. to decide on investment flows (Levine, 2005, 869). This elevates the financial sector to a prominent role within the economy. This is why the EU is trying to get the financial system to redirect investment flows to sustainable projects through regulation, e.g. ESG taxonomy, Sustainable Finance Disclosure Regulation (SFDR) and Corporate Sustainability Reporting Directive (CSRD). Disclosure of information on the sustainability of economic activities stigmatises unsustainable companies and their funding by financial intermediaries. Although no regulatory capital requirements for banks have been derived from this yet, transparency alone should redirect investment into sustainable projects.

At present, only a part of the planned regulations has been enacted. ESG data is clearly relevant for capital

markets, as it provides investors with necessary information for their decision-making and company valuation. Capital market efficiency increases, as comprehensive and consistent ESG data could further reduce information asymmetries (Wissenschaftsplattform Sustainable Finance, 2019, 3; 2021a, 8; 2021b, 4). Thus, ESG reporting helps capital markets in their allocation of capital in favour of sustainable investments. From this perspective, the goal of climate neutrality legitimises the economic costs connected to collecting the data.

Most economists take a critical view of the use of the financial system to achieve sustainability goals, attributing to it at most an accompanying role. In traditional neoclassical theory, finance and investment are separate (Miller and Modigliani, 1958). Thus, a "green" bond cannot be assigned to a specific asset that could have been acquired through other financing; the same goes for internal cash flow. Therefore, in efficient markets, the effect of sustainable finance is disputed (Krahnen et al., 2021, 4-5; Wissenschaftlicher Beirat beim Bundesministerium der Finanzen, 2021, 4; KfW Research, 2023). The parallelism of two instruments, i.e. CO_2 prices and sustainable finance measures, for the same sustainability target may even lead to welfare losses and reduce climate protection investments (Fuest and Meier, 2022).[1]

The EU sustainability strategy approach is focused on developing capital markets. The EU's promotion of capital market financing over bank financing via loans is a longer-term trend that is reflected in the design of banking supervision as well as in the current plans for the Capital Markets Union.[2]

Bank-based vs. market-based financial systems

What impact does this sustainable finance regulation have on an economy largely dominated by SMEs? Since the beginning of the 20th century, different manifestations of financial systems have been analysed and evaluated in terms of their efficiency and structural consequences (e.g. Weber, 1902; and Hilferding, 1910). In the more modern literature, it has become common to make a stylised classification into bank-based or market-based financial systems.

> The financial system can generally be characterised as an interaction system of supply and demand for the provision of capital and other finance-related services. In addition to the supply side, the financial sector, it also includes the demand side. … Between the surplus units, the intermediaries, and the deficit units, there are not only financial flows. Information and influence relationships also exist in parallel with these. (Schmidt and Hackethal, 2000, 3-4, own translation)

The terms "surplus units" and "deficit units" make clear that financial systems allocate necessary external funding. Financial flows do not simply settle transactions, but relationships between information and influence constitute the systemic character of finance. The controlling influence can be very different in nature. The starting point is a different way of accounting, not only for companies but also for financial institutions. Accounting under the German Commercial Code (HGB) follows debtor-oriented principles, e.g. the lower-of-cost-or-market principle secures repayments of loans and makes it more difficult to distribute unrealised profits to equity investors. In contrast, international accounting standards are equity provider-oriented. In accordance with the fair value principle, the aim is to enable a company to be valued in line with the market, which can represent the value of the investment to the equity provider.

Consistency of financial systems

There are different types of financing and information flows, but the differences go beyond these and are summarised ideally as bank-based or market-based financial systems:

- In market-based financial systems, corporate financing takes place through (organised) markets that bring together supply and demand of capital. Equity financing is at the centre of this process. Investment decisions are made based on disclosed information, beyond balance sheets through commitments to shorter reporting cycles such as quarterly reports, ad hoc announcements or publicly known ratings.

- In bank-based financial systems, corporate financing is provided by banks, which bring together supply and demand and handle the financing flows on their balance sheets. It follows that primarily, debt capital is intermediated to companies in this way. The investment decision is made based on the banks' credit assessments. To this end, banks have privileged access to information that is not made public.

Accounting according to the lower-of-cost-or-market principle, debt financing and universal banks are, therefore, (selected) characteristics of a bank-based financial

1 One can imagine the example of a profitable investment where all externalities are fully internalised and thus have a positive net welfare effect, but could not be implemented because of a static ESG taxonomy.

2 For example, Commissioner McGuinness calls the goal of the Capital Markets Union, "making sure we don't have to rely too much on bank finance which we do today, that we move towards capital markets." (European Commission, 2022).

system that are complementary to each other. Complementary means that these aspects of corporate financing are aligned with one another. A system is consistent "if the advantages of complementarity are used and a small change in the expression … [of the] characteristics does not allow an improvement in the sense of the target or evaluation function" (Schmidt and Hackethal, 2000, 3-5, own translation). Thus, in terms of efficient corporate financing, the complementary characteristics should be used to express a consistent financial system.

Certain characteristics of the financial system and real economy in different economies have emerged in interdependence over time. SME structures are consistent with a bank-based financial system while an economy with many large companies is consistent with a market-based financial system (Greitens, 2022, 118-123).

Different structures of financing, via banks or via financial markets, have effects that go well beyond corporate finance and reach deep into the economy and society. These interrelationships have been discussed under different headings for many decades, most recently under the Varieties of Capitalism approach (see Hall and Soskice, 2001; Schefold, 1994). These differences are reflected in the specific mode of dual vocational training and the strong role of chambers of commerce and industry as parastatals in Germany, and are also shaped by the bank-based structure of the financial system.

Though a trend towards disintermediation – because of the changed regulations of banking supervision and digitalisation – can be observed in the last 20 years, when these descriptive approaches were developed, the situation is still essentially the same. At the very least, the high importance of banks for SMEs remains unchanged.

Dealing with information asymmetries

The task of the financial systems is to overcome the information asymmetries between capital providers and capital seekers. Only then can risks of an investment or a business model be assessed and capital allocated on this basis. This leads to costs, as the financier requires relevant information from and governance over the financed party.

Financial systems differ in the methods used to overcome information asymmetries. In the case of *financing via markets*, these costs are borne directly and at the time of transaction by the companies. They commission rating agencies and investment banks and engage legal advisors for the documents to be published in compliance with the law. Data required on regulated capital markets is massive because the information needs of many different capital providers have to be met.

With *bank financing*, parts of these costs are borne by the banks, which then charge companies over the course of the entire relationship between a bank and a customer and over the life cycle of the company. It is the relationship banking[3] that makes it possible to take a long-term perspective. The level of knowledge required on the part of financial intermediaries to understand the business models of SMEs is high and often includes regional knowledge.

The larger the financing volumes and the better known and more supraregional the business models are, the more cost effective market-based financing is. However, this also means that the specific and small-scale financing in the SME sector can be handled more efficiently by banks. The relationship banking also gives bank financing a longer-term focus that is less oriented towards short-term profit increases. This should suit the financing of investments in sustainability, as these projects require a long-term perspective (Wissenschaftsplattform Sustainable Finance, 2021b, 2-3; 2021, 4).

With the aim of financing the largest possible investments for CO_2 reduction as quickly as possible, therefore, the previous sustainable finance regulation is geared towards the capital market (Polzin and Sanders, 2020, 5). However, to facilitate sustainable SME investments, the orientation of politics needs to change.

Sustainable finance in the SME sector

Fully consistent with the EU strategy and the logic of market-based financial systems, the Sustainable Finance Re-search Platform[4] calls for the most comprehensive pos-sible disclosure obligations for CO_2 emissions that also include SMEs. Disclosure achieved as early as possible would also lead to long-term financing advantages on the international capital market (Wissenschaftsplattform Sustainable Finance, 2019, 1-2; 2021a, 11; 2021c).[5] Conversely, this also means that financing via banks will become more difficult.

CO_2 emissions show strong concentrations that can be attributed to only a few sectors as well as companies and banks; in particular, a large proportion of these emissions can be attributed to a small number of financing banks

3 It is referred to as *Hausbankprinzip* in German.
4 Wissenschaftsplattform Sustainable Finance, https://wpsf.de/en/.
5 But even this is controversial in the literature, see e.g. Christensen et al. (2022).

in Germany, as measured in terms of CO_2 emissions via the European Union Emissions Trading System (EU ETS; Steffen and Hoffner, 2022). Large and capital market-oriented companies dominate the most relevant sectors (e.g. energy, transport), and only a few industries, such as construction and agriculture, are dominated by SMEs from a CO_2 emissions perspective (Wissenschaftsplattform Sustainable Finance, 2021c, 4).

Around 3.35 million SMEs or 99.3% of all companies in the private sector comprised the SME sector in Germany (Institut für Mittelstandsforschung, 2022). The overwhelming majority of these companies are too small to bear the costs of the necessary disclosure for capital market financing and do not have the reporting and controlling structures or adequate expertise in capital markets. Additional costs incurred must be borne without additional expected earnings.

From another perspective, the focus on market-based finance is also harmful to the goal of climate neutrality. According to the KfW Research (2022, 16), 71% of climate protection investments in Germany are financed from own funds, 12% each from loans and subsidies, and 5% from other sources, under which capital market financing is subsumed. This miscellaneous position does not rise above 7%, even when considering large companies. On the other hand, SMEs' credit financing accounts for more than 20%. Therefore, capital market financing is of secondary importance to climate protection investments. Even if the shares were to increase in the next few years, bank-based financing for climate protection investments would have to be the focus. However, the figures also show the mentioned difficulties to allocate financing instruments to investments.

Approaches to bank financing for the transformation

The forms of financing must not be played off against each other in view of the necessary and massive investments. Disclosure obligations introduced by the EU can improve the financing of sustainability investments via capital markets in the medium term. However, it is not a realistic option to bring a larger number of SMEs to capital markets; therefore, there should be solutions other than comprehensive disclosure for non-capital market-oriented companies. ESG regulations demand a large amount of data from these companies, even though relevant information for the individual company's specific business models and markets is smaller and more targeted in the relationship banking.

External financing of the less standardised business models and corporate structures of SMEs is easier for banks with a regional understanding of these companies. Banks must define concretely and specifically the information they need to assess ESG risks. Data documentation can also remain simplified because of non-disclosure. The financing of the transition, i.e. not only the grouping into "brown" and "green" investments but also the definition of company-specific transition paths, can be better designed by a more individual approach than by extensive disclosure. For this to happen, regulation must be changed in the direction of principles rather than detailed rules. Banks should be allowed to give "green loans", approved by the supervision, based on credible transition plans of the SMEs without the need to fulfill all requirements of the capital market-oriented framework. This would help to finance the transformation in a more decentralised und individual manner.

A proportional implementation of the disclosure rules, instead of adjusting the disclosure requirements for bank financing, is often presented as a solution for this problem. The disclosure requirements should be proportion-al to the size of the companies and the negative effects that the businesses can have (Platform on Sustainable Finance, 2022, 99; Wissenschaftsplattform Sustainable Finance, 2021c, 8-9). Unfortunately, it is unclear what this proportionality might consist of (or look like?) and whether such proportionality is even possible in view of the high fixed costs of generating data and the increasing disclosure needs with the number of suppliers and customers of a SME.[6] In principle, a capital market-oriented approach to dis-closure requirements does not allow for gaps along the value chain. Even when SMEs are not directly within the scope of the disclosure requirements, they end up having to prepare the ESG information in any case to satisfy the needs of the larger companies within their value chain. This is called the trickle-down or value chain effect. Only a change in the top-level regulations for the larger companies can lead to a proportionate implementation for SMEs. This could, for example, be a restriction of the disclosure requirements to CO_2-intensive industries, limiting the disclosure of CO_2 emissions, or a larger acceptance of estimations (Platform on Sustainable Finance, 2022, 99-100).

A loan for sustainability investments in SMEs presently leads to a deterioration of the Green Asset Ratio introduced with the EU taxonomy of a bank. Therefore, both in terms of sustainable investments and in terms of exposures, this indicator should be limited to the capital market business of banks. If risks are assessed through banks' regulatory-audited ESG models (as addressing ESG-risks by the enterprises also has a positive effect on

6 EFRAG (2022, 5) also includes a reporting requirement for the entire value chain in the standards for SMEs.

credit risk; see Höck et al., 2020), a reduction in required capital adequacy would have no impact on financial stability. In return, sustainability investments in SMEs could be promoted.

Conclusion

The most efficient way to reduce climate-damaging emissions is to introduce CO_2 prices. The prices should be adjusted based on rules, thus avoiding time inconsistencies, consider distributional effects and tackle questions of international competitiveness. The expansion of the EU Emissions Trading System has brought us closer to this goal, and this path should be pursued further.

The impact of the sustainable finance regulation on the capital market has been the subject of controversial debate. Consistent pricing of the externalities would reduce the pressure to introduce comprehensive sustainable finance regulations, as the capital market would define its disclosure needs in its own interest. Policies should be geared towards achieving the sustainability goals, and disclosure must not become an end in itself.

On the other hand, the promotion of bank financing for sustainable investments, especially for SMEs, has been neglected so far. The focus here should not be on the disclosure of ESG data but on boosting company-specific financing of the transformation. This can decisively advance the transformation.

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