

# Corporate equity finance in Austria – impediments and possible improvements

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This study examines the state of play of equity financing in Austria and highlights challenges Austrian companies face in raising equity capital. The equity ratios of Austrian companies had been improving steadily before the onset of the COVID-19 pandemic, which has been weighing considerably on corporate equity levels. The decrease of equity levels would, however, be about twice as high in the absence of the support measures taken to alleviate the economic effects of the pandemic. The bulk of Austrian companies' equity is sourced from the rest of the world, while the domestic financial sector plays only a minor role in providing equity funding. Impediments to raising capital externally include business owners' reluctance to share control with external investors, information deficits and data gaps as well as differences in the tax treatment of debt and equity ("debt bias"). Equity supply is limited because investors lack information on the economic situation of capital-seeking companies and because investments in unlisted companies are less liquid. Together with representatives of national and international institutions and market participants, we identified ways to strengthen the equity base of Austrian companies. Cases in point are providing both tax incentives and intermediation support for equity finance and establishing public-private partnerships.

JEL classification: E61, G1, G2, G32

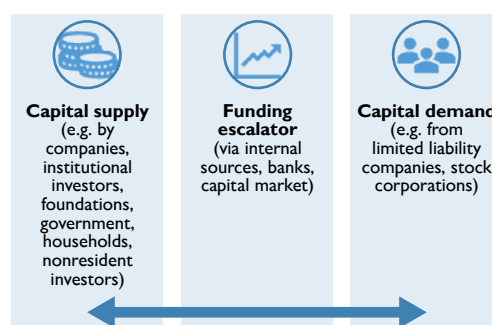
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The economic setback triggered by the COVID-19 pandemic has affected different economic sectors to different extents. In some sectors, the related containment measures have caused massive sales losses, which has had a direct impact on corporate liquidity and equity levels. As Austrian companies were facing frictions between capital supply and demand even before the current economic crisis, numerous economic policy actors have been calling for measures to strengthen the equity base of companies. This would improve the balance of supply and demand (figure 1) and generate a range of favorable macroeconomic effects.

In this study, we give an overview of the equity structure of Austrian companies, or nonfinancial corporations to be conceptually precise. We highlight challenges in raising equity capital and present ways to increase equity finance. Our goal is to provide more compre-

Figure 1

## Matching capital supply and demand



Source: OeNB.

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hensive data and a better understanding of the underlying mechanisms, explain the issues in more detail and share best practices from other countries.

The study is structured as follows: In section 1, we present data on the equity ratios of Austrian companies before and during the COVID-19 pandemic. In section 2, we look at equity ownership structures to answer the question: who is investing in Austrian companies? Section 3 discusses the concept of the funding escalator and frictions between capital supply and demand. In section 4, we outline possible avenues for strengthening corporate equity in Austria and present international best practices. Section 5 summarizes.

## 1 Understanding the facts: equity ratios of Austrian companies

### 1.1 Pre-crisis equity ratios were improving but bottom quartile ratios remained weak in an international peer comparison

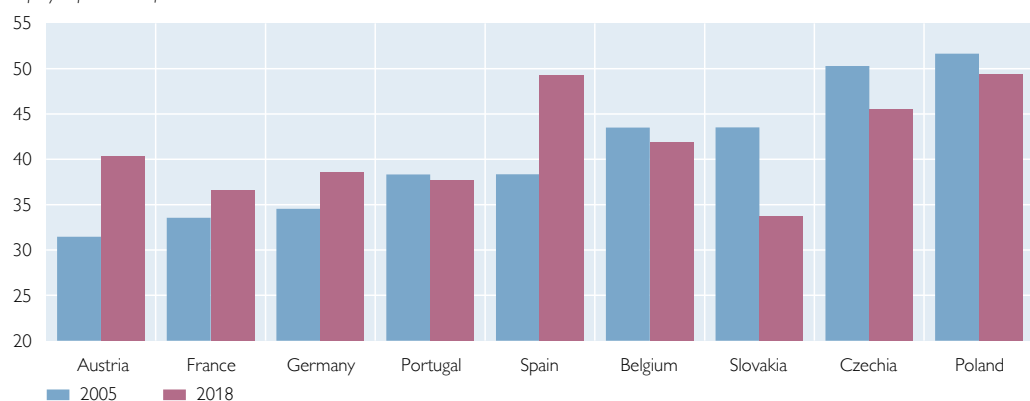
Before the onset of the COVID-19 crisis, the equity ratios of Austrian companies had been improving steadily, rising from an average ratio of 31.5% in 2005 to 40.4% in 2018, based on BACH data.<sup>2</sup> Among the nine countries for which BACH data are available from 2005, Austria moved up from rank 9 to rank 4 in this period (chart 1).<sup>3</sup>

Breaking down corporate equity structures by business sectors enables us to identify vulnerable areas in Austria (chart 2). Using weighted averages for 2018, we see that the corporate equity ratios measured for Austria were broadly aligned with the ratios measured for other countries in most business sectors (other than the hospitality sector). However, Austrian companies performing in the bottom

Chart 1

#### Corporate equity ratios (2005 and 2018)

Equity capital in % of total assets



Source: BACH database.

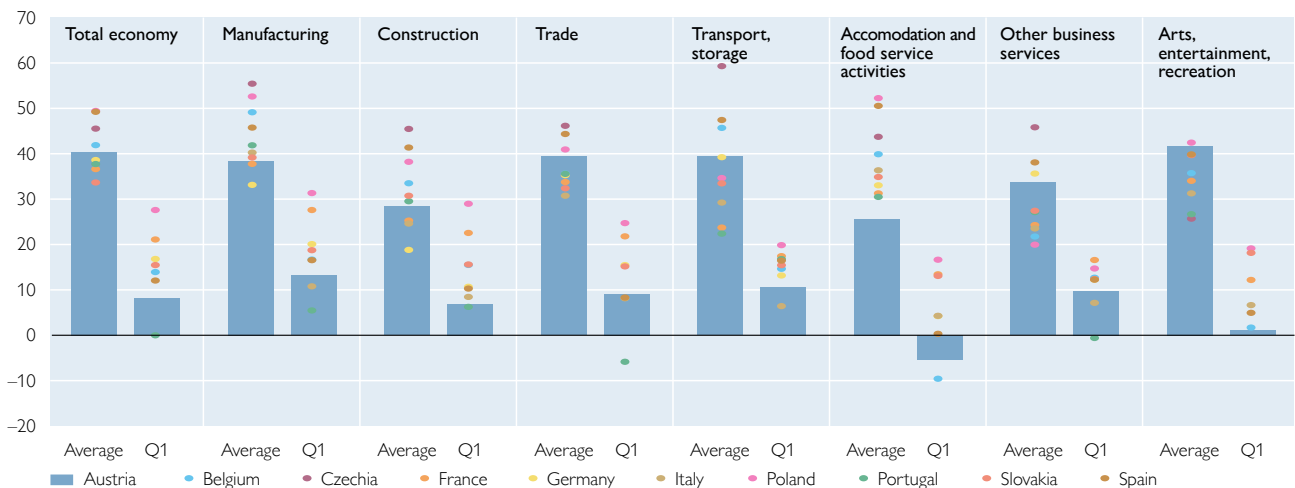
<sup>2</sup> BACH is a database of aggregated and harmonized accounting data of nonfinancial companies from 12 European countries. It covers a broad range of business sectors (more than 100 variables for over 80 NACE divisions) with breakdowns by four company size classes. All variables are available as weighted averages and quartiles (<https://www.bach.banque-france.fr/?lang=en>).

<sup>3</sup> The comparatively high equity ratios of Czech, Polish and Slovak companies in 2005 may be a reflection of then still underdeveloped debt financing in these countries rather than companies' conscious efforts to maintain high equity ratios.

Chart 2

### Equity ratios in selected business sectors: Austria compared with peer countries (2018)

Equity capital in % of total assets



Source: BACH database.

Note: Q1 = bottom quartile.

quartile tended to be negative outliers. In other words, Austrian companies in the bottom quartile face heightened insolvency risk from debt overhang. Overall, only about 10% of all insolvencies in Austria result from debt overhang problems, whereas 90% of all insolvencies arise from liquidity issues. The propensity for liquidity problems is driven above all by small companies, which account for 89% of all companies covered by the BACH database. Of all size classes, the best equity capital ratios are in all countries attributable to medium-sized companies (with an annual sales volume of between EUR 10 million and EUR 50 million) and large companies (with an annual sales volume of more than EUR 50 million). This holds true in particular for companies in the bottom quartile. Among the companies in the bottom quartile, Austrian medium-sized companies are closer to the lower end while large Austrian companies tend to be aligned with the average of the other countries under review.

Apart from the BACH data, which are aggregated balance sheet data, we also draw on corporate data from the Sabina database, which provide for a more granular view of the corporate equity structure in Austria.<sup>4</sup> Based on the Sabina data, we see that 17.4% of all Austrian companies had a negative equity balance in 2018. The share of companies with a negative equity balance was particularly high among companies in the hospitality industry (32.1%) and companies providing arts, entertainment, recreation and other services (28.4%).

<sup>4</sup> The Sabina database, maintained by Bureau van Dijk, provides balance sheet data on more than 130,000 individual Austrian companies. The average equity ratio for the economy as a whole (39.9%) matches the results derived from the BACH database (40.4%); the figures diverge marginally when broken down by sector.

Table 1

### Equity ratio by sectors (Sabina data for 2018)

	Equity ratio by quartiles				Share of companies with an equity ratio of		Share of firms with	Number of companies	Average assets (EUR thousand)
	Average	Bottom quartile	Median	Third quartile	< -30%	< 0	Cash and bank < 0		
Total	39.9	8.7	37.7	71.1	9.9	17.4	2.5	129,239	5,506
Agriculture (A)	55.5	6.1	29.5	63.3	7.6	16.2	0.1	956	2,549
Mining (B)	50.3	16.4	42.1	70.0	10.1	14.4	35.0	303	20,774
Manufacturing (C)	45.9	15.1	39.2	66.5	8.8	14.0	0.1	10,981	14,402
Energy supply (D)	36.1	2.7	18.8	50.5	6.8	20.9	0.2	1,527	33,016
Water supply, waste management (E)	32.1	16.7	40.5	67.6	6.1	11.6	28.0	621	7,585
Construction (F)	31.4	10.8	36.1	64.9	6.8	14.2	0.1	15,648	2,426
Trade (G)	42.7	11.1	38.4	69.5	12.0	17.8	0.1	27,337	4,067
Transport and storage (H)	32.7	6.3	29.2	58.4	10.6	19.6	0.2	4,672	10,631
Accommodation and food service activities (I)	26.3	-14.9	19.2	51.5	20.4	32.1	0.2	8,782	1,984
Information and communication (J)	44.6	14.2	49.3	77.3	12.9	17.6	0.1	7,877	2,815
Real estate activities (L)	38.8	2.3	24.6	73.7	5.8	19.4	13.7	21,261	7,674
Scientific and technical activities (M, excl. head office activities)	49.5	25.9	58.3	83.9	6.9	10.4	0.1	18,427	1,537
Support service activities (N)	27.5	10.7	36.3	67.0	10.3	16.3	0.2	5,505	5,059
Education (P), health and social activities (Q)	30.9	9.4	37.4	70.6	12.1	18.2	0.1	2,287	1,805
Arts, entertainment, recreation (R), other services (S)	28.8	-8.2	29.1	65.3	19.4	28.4	0.2	3,055	2,410

Source: Sabina database, OeNB calculations.

## 1.2 OeNB insolvency model reveals substantial impact of pandemic support measures on corporate equity levels

In this section, we present the results of simulations run with the OeNB's insolvency model.<sup>5</sup> Specifically, we calculated two COVID-19 scenarios, one with and one without support measures,<sup>6</sup> and cross-checked the resulting estimates with a counterfactual scenario without COVID-19 in order to isolate the pandemic impact.

The results show that the pandemic-related crisis had a major impact on corporate equity in Austria. In the absence of support measures and when we factor out the effects of COVID-19, the equity level of Austrian companies would have been EUR 25 billion lower in 2020. The support measures diminish the decline in equity to EUR 17 billion, thus improving equity availability by EUR 8 billion in 2020 (chart 3). Equity losses until 2022 add up to EUR 47 billion (without support measures) or EUR 34 billion (with support measures).

However, note the caveat that these results must not be interpreted as equity finance forecasts, as the insolvency model simulations are conditional on the validity of numerous restrictive assumptions, and as they contain only the losses

<sup>5</sup> Puhr, C. and M. Schneider. 2021. Have mitigating measures helped prevent insolvencies in Austria amid the COVID-19 pandemic? In: *Monetary Policy and the Economy Q4/20–Q1/21*. OeNB. 77–110.

<sup>6</sup> The following support measures were taken into account: short-time work, fixed cost grants I and II, capital injections into NACE I companies, VAT cuts for NACE I and R companies, compensation for sales lost in November and December 2020, compensation for losses, forbearance measures, loan guarantees, deferral of social security contributions and taxes, suspension of bankruptcy petitions against companies by public health insurance funds and tax offices, suspension of mandatory insolvency filings by overindebted companies.

resulting from the projected decline in sales. Moreover, the simulations do not reflect the (substantial amount of) capital transfers from the household sector and from nonresidents observed in 2020, which means that the decline is overstated. The estimated pandemic-related decline in equity is also likely to constitute an upper bound as our insolvency model does not factor in any corporate investments.<sup>7</sup> Gross fixed capital formation by companies contracted by 3.9% in 2020 in view of lost sales. In other words, lower investment levels cushioned losses in sales to some extent, causing the impact of the COVID-19 pandemic on capital ratios to be smaller in actual fact than implied by the model.

According to the OeNB’s financial accounts data, corporate equity levels contracted by EUR 5.5 billion in 2020. While this figure provides a benchmark, it cannot be used to cross-check the simulation results because of underlying conceptual differences. The insolvency model results are based on simulated monthly balance sheet data. The financial/national accounts framework, by contrast, uses a point-in-time approach to calculate equity levels. Moreover, the two frameworks differ with regard to the coverage of companies. Last but not least, the insolvency model maps the simulated capital losses against a counterfactual scenario without the pandemic, whereas the financial accounts data reflect annual changes.

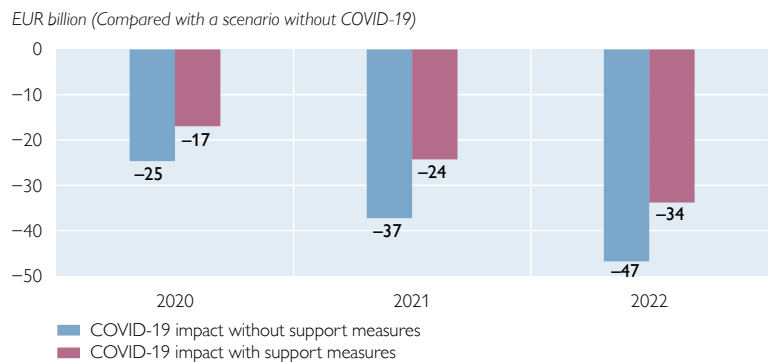
## 2 Corporate equity ownership in Austria

One starting point for identifying possible strategies to strengthen corporate equity in Austria is to establish the underlying investor structure. In other words, we need to know how much of the companies’ equity is currently being held by which economic sectors. To this effect, we provide a breakdown of the equity raised by Austrian companies from the individual financing sectors, using year-end 2020 data. The overview is based on the financial accounts data that the OeNB compiles. The financial accounts capture the flow of funds between the individual sectors of the economy, including the flow of funds between different units of the same sector, and the resulting stocks using unconsolidated data. For the purpose of this paper, we exclude the equity stakes of Austrian companies in other Austrian companies, presuming that a large share of such financing is intragroup financing. Both the financial accounts and the national accounts are based on the definition of

<sup>7</sup> The OeNB’s insolvency model was developed to quantify the impact of the COVID-19 pandemic on the insolvency risk of Austrian companies. The model is fed with corporate balance sheet as well as profit and loss data. For the sake of simplicity, the model uses static balance sheet structures, i.e. it does not reflect any investment made by the individual companies. The effect of this simplifying assumption on insolvency probabilities is limited, as vulnerable companies are unlikely to make big investments. Yet, this assumption has the side effect of overly driving up the profits, and hence the capital ratios, of thriving companies. That said, the impact of investment on capital ratios is limited: while investments affect cash flow performance, their impact on profit and capital is limited to the amount of depreciation and amortization.

Chart 3

### Impact of the COVID-19 pandemic on corporate equity levels in Austria



Source: authors’ calculations with the OeNB insolvency model.

nonfinancial corporations. Specifically, nonfinancial corporations include stock corporations, limited liability companies and cooperatives as well as partnerships, such as limited partnerships or sole proprietorships with more than 50 employees and/or sales or more than EUR 10 million (OeNB, 2018). While being published in a timely manner, financial accounts data are available only for the corporate sector as a whole, without any breakdowns by firm characteristics like size, business sector or the like.

According to financial accounts data, the amount of equity held by Austrian nonfinancial corporations totaled EUR 353 billion at the end of 2020 (table 2).<sup>8</sup> Stocks accounted for about 30% of this amount (quoted shares: 20%, unquoted shares: 10%). The by far bigger part, namely 70%, was attributable to other equity. Other equity refers to equity held in companies that have not been set up as stock corporations.<sup>9</sup>

## 2.1 Equity ownership structures in Austria at the end of 2020

The bulk of Austrian corporate equity tends to be sourced from the rest of the world. At the end of 2020, nonresident investors accounted for 44% of the (consolidated) equity of Austrian companies. The share of nonresident investors exceeded 40% for all three types of equity instruments discussed here. According to the OeNB's securities statistics, three-quarters of all quoted shares acquired by nonresident investors qualified as portfolio investment. 14% of corporate equity was held by the government sector, with the average masking large differences among individual financing instruments. The government share was as high as 43% for unquoted shares but below 6% for other equity. Households<sup>10</sup> held close to 24% of Austrian corporate equity (mostly in the form of other equity) at the end of 2020, but only close to 14% of all quoted shares issued by Austrian companies. Private foundations held close to 12% of corporate equity, typically in the form of other equity. Taken together, domestic households and private foundations accounted for somewhat more than 35% of the consolidated equity of Austrian nonfinancial corporations. This figure masks considerable differences when it comes to individual financing instruments: The combined share, for instance, ranged from about 44% for other equity to 19% for quoted shares. Private foundations apart, which are classified in the financial sector, the amount of equity sourced from the financial sector is limited. Banks (or monetary financial institutions (MFIs), to be conceptually precise) provided only 1.7% of all corporate equity (but 52% of consolidated corporate debt) at the end of 2020. The share of institutional investors (insurance companies, mutual funds and pension funds) in total corporate equity also added up to 1.7%. (Even quoted shares accounted for just 4.6% of their portfolio.) Last but not least, other financial corporations (including holding companies and special purpose entities) supplied 3.7% of total corporate equity in Austria, mostly by investing in unquoted shares and other unquoted equity.

<sup>8</sup> The figure at which we arrive for equity held by nonfinancial corporations (EUR 353 billion) differs from the amount shown on the OeNB's website (EUR 428 billion) for two reasons: we used consolidated figures and excluded the equity stakes of Austrian companies in other Austrian companies.

<sup>9</sup> Stocks are valued at current market prices in line with international national accounts conventions, whereas other equity is shown at book value.

<sup>10</sup> Including nonprofit institutions serving households.

Table 2

### Corporate equity and debt ownership in Austria

	MFI	Institutional investors	Other financial corporations incl. holdings and SPEs	Private foundations	Government sector	Households and nonprofit institutions serving households	Rest of the world	All sectors
<i>Assets in EUR million (end-2020)</i>								
Quoted shares	466	3,271	735	4,105	20,160	9,691	32,809	71,237
Unquoted shares	1,016	453	1,850	1,166	14,937	1,476	14,209	35,108
Other equity	4,475	2,145	10,648	35,409	14,262	72,864	106,893	246,695
Total equity	5,957	5,869	13,232	40,680	49,359	84,031	153,911	353,039
Total debt	179,597	6,249	5,887	294	25,281	15,383	112,410	345,100
Debt and equity	185,553	12,118	19,119	40,974	74,640	99,414	266,321	698,139
<i>Share of individual sectors in corporate equity in %</i>								
Quoted shares	0.7	4.6	1.0	5.8	28.3	13.6	46.1	100.0
Unquoted shares	2.9	1.3	5.3	3.3	42.5	4.2	40.5	100.0
Other equity	1.8	0.9	4.3	14.4	5.8	29.5	43.3	100.0
Total equity	1.7	1.7	3.7	11.5	14.0	23.8	43.6	100.0
Total financial assets of individual sectors (EUR million)	1,178,334	347,777	134,193	55,465	301,092	779,071	847,298	3,643,228
of which: corporate equity (%)	0.5	1.7	9.9	73.3	16.4	10.8	18.2	9.7

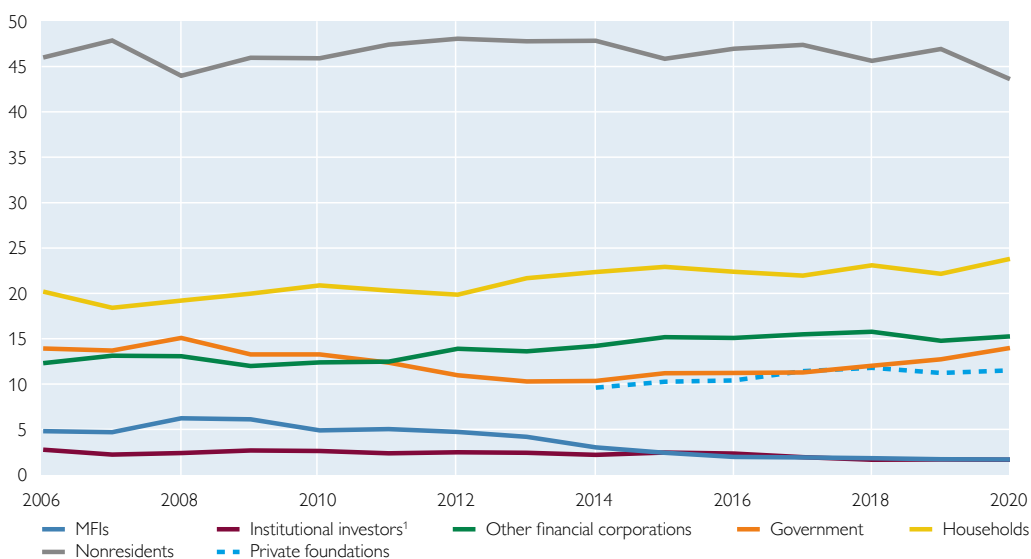
Source: OeNB (financial accounts).

Note: Based on consolidated figures = capital of nonfinancial corporations minus (asset-side) debt instruments held by the nonfinancial corporations sector. MFIs (monetary financial institutions) = the OeNB, credit institutions and money market funds; SPEs = special purpose entities.

Chart 4

### Equity ownership of Austrian nonfinancial corporations

Share in %



Source: OeNB (financial accounts).

<sup>1</sup> Insurance companies, mutual funds, pension funds.



The (consolidated) capital structure of Austrian companies has remained broadly unchanged since 2006 (the first year for which the respective data are available; chart 4). The share of capital sourced from the rest of the world hovered around 45% in the period under review. At the end of 2020, this share was about 2 percentage points below the share measured for 2006. The MFI share of corporate equity dropped from 4.8% to 1.7%. The arising gap was filled by households (whose share of corporate equity went up by 3.6 percentage points between 2006 and 2020) and other financial corporations (plus 3 percentage points, including private foundations). Between 2014 and 2020, which is the subperiod for which data on private foundations are available separately, the share of private foundations remained broadly stable.

In order to assess potential options to increase equity finance in Austria, we also need to understand the role corporate equity plays as a source of financial investment for individual economic sectors. For most sectors, its relevance is comparatively low (table 2). The only two exceptions are private foundations, which had invested close to three-quarters of their financial assets into Austrian corporate equity at the analysis date, and to some extent also households, with a corresponding share of close to 11%. In contrast, institutional investors had put only 1.7% of their financial assets into corporate equity at the end of 2020, and banks only 0.5%. This compares with a share of slightly more than 18% of Austrian corporate equity sourced from nonresident financial investors.

## 2.2 On the role of institutional investors

Institutional investors serve to channel other people's money saved through, e.g., insurance policies and private pension plans into financial instruments traded in capital markets. In Austria, institutional investors have been playing a minor role in corporate equity ownership (table 2), above all when it comes to investment in corporate stocks of these institutional investors. This can be explained with the generally small volume of assets invested in stocks. According to financial accounts data, Austrian institutional investors (mutual funds, insurance companies, pension funds) had invested only 10.2% of their assets in quoted shares at the end of 2020 (table 3<sup>11</sup>). Moreover, among the stocks held by institutional investors, shares issued by Austrian companies are of minor relevance. Most of the stock portfolio (87.7%) is attributable to foreign shares, compared with just 8.7% issued by domestic nonfinancial corporations (which accounted for 0.9% of institutional investors' total assets). Pension funds tend to invest in mutual fund shares rather than in corporate stocks directly. According to the financial accounts, Austrian pension funds had put 91% of their total assets into mutual funds at the end of 2020, while holding almost no stocks directly. When we include indirect share investment through domestic mutual funds, the share of stocks increases to about 14% (EUR 3.9 billion at the end of 2020). Here too, almost all of the shares held had been issued by nonresidents, with shares issued by residents accounting for a mere 0.6% of all pension fund assets.<sup>12</sup> The mutual fund shares held by insurance

<sup>11</sup> The table contains data that are not part of the regular release of financial accounts data that the OeNB provides on its website.

<sup>12</sup> We are unable to provide a corresponding breakdown for foreign mutual funds.



Table 3

### Quoted shares held by institutional investors

	Held by			Total
	Mutual funds	Insurance companies	Pension funds <sup>1</sup>	
<i>EUR million (end-2020)</i>				
Total	34,325	1,156	0	35,481
Domestic issuers	3,336	1,012	0	4,348
Nonfinancial corporations	2,554	717	0	3,271
Other domestic sectors	782	295	0	1,077
Foreign issuers	30,989	144	0	31,133
<i>% of institutional investors' total assets</i>				
Total	17.5	0.9	0.0	10.2
Thereof: nonfinancial corporations	1.3	0.6	0.0	0.9
Total assets	196,089	124,236	27,451	347,776

Source: OeNB (financial accounts).

<sup>1</sup> Typically investing in mutual fund shares, pension funds hold shares indirectly.

companies comprised quoted shares worth EUR 3.6 billion, of which EUR 1.6 billion related to shares issued by domestic companies.<sup>13</sup>

The limited role of institutional investors in providing corporate equity in Austria is in no small part due to the structure of Austria's pension insurance system. The pool of assets that is available for investment in capital markets is much larger in countries with funded pension systems than in countries with pay-as-you-go pension systems (like Austria). Furthermore, the asset allocation of institutional investors may be affected by the low degree of market capitalization and liquidity that characterizes the Austrian stock market. Austria's stock market is comparatively small and dominated by small-cap stocks and little free-float ownership. In the MSCI World Index, for instance, Austrian stocks carry a weight of less than 0.1%. In this vein, the small share of investment in Austrian stocks is also a reflection of the prudence principle guiding insurance companies and pension funds in investing the assets entrusted to them. Last but not least, the comparatively small volumes traded on the Austrian stock market also result in low levels of liquidity. In the absence of adequate liquidity, especially larger institutional investors will not be able to acquire the volumes required for their portfolios in a timely manner.

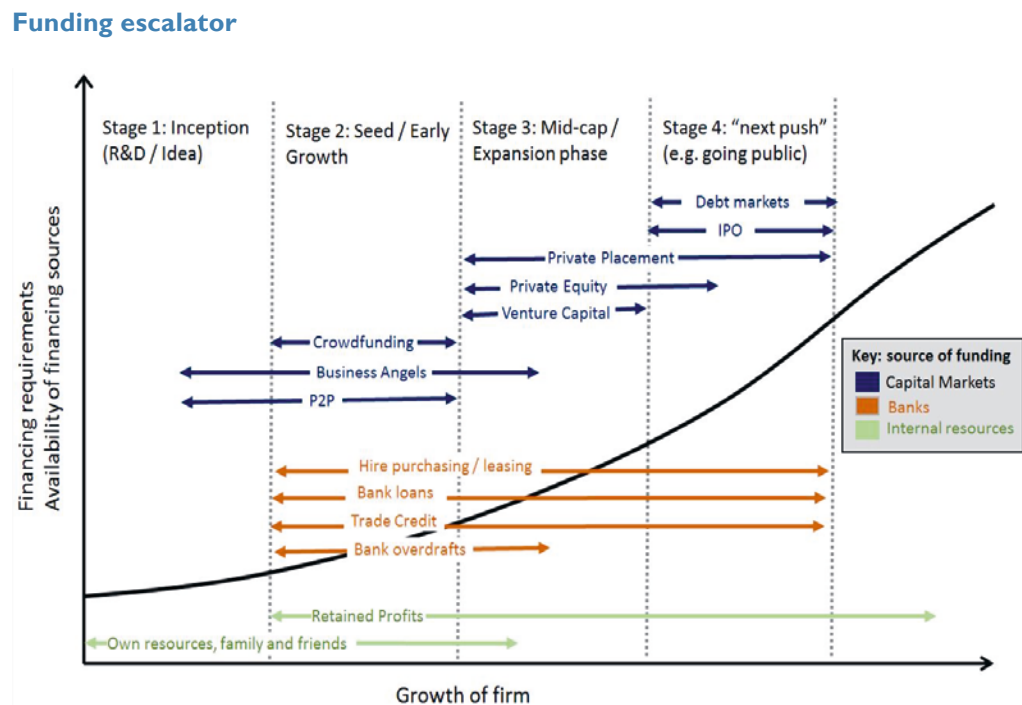
## 3 Corporate funding escalator and frictions between equity supply and demand

### 3.1 Equity sourcing in an international comparison

Securing adequate funding for initial expansion plans is often a big challenge for business start-ups, and risk capital financing is underdeveloped in Europe compared with other markets, such as the United States or Israel. Start-ups typically progress through a number of funding rounds, repeatedly realigning the interests

<sup>13</sup> Money invested by households in mutual funds is classified neither under contributions to insurance policies nor under money invested in dedicated pension plans.

Figure 2



Source: European Commission.

of founders and owners as they grow in a process that has been represented as a funding escalator (figure 2). At the bottom of the funding escalator, funding comes from the founder, family and friends; after that, in the early growth stage, banks, business angels or crowdfunding platforms start to provide external funding.

Compared with other countries, Austrian businesses make only limited recourse to the range of equity financing instruments available for the various stages of the business life cycle; they tend to rely on bank loans instead. This holds true for both venture capital financing, which is geared to start-ups and new businesses in the early stages of expansion, and the option to tap the stock market by issuing shares, which is an instrument of choice for mature businesses (chart 5).

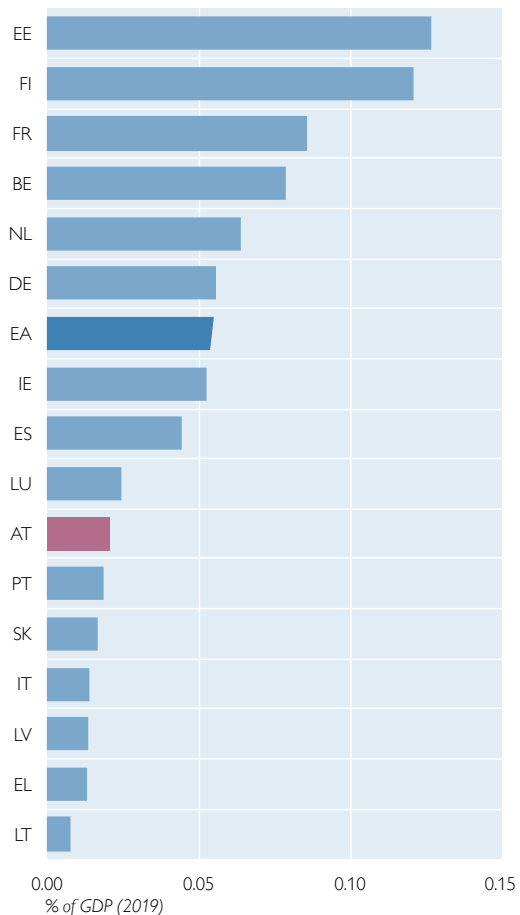
Venture capital investment in Austria was equivalent to 0.02% of GDP in 2019 according to OECD data. This is only slightly more than one-third of the euro area average and the measure for Germany. Given the relatively low share of equity in the financial assets held by the nonfinancial sectors – and the even smaller share in the financial assets of the financial sectors – the scarcity of risk capital financing in Austria is unlikely to be due to a lack of funds. Likewise, it is unlikely to result from a lack of subsidy options, since many support mechanisms are in place and many more have been made available in the past decade.

Austria's relative position in the euro area is not that much different when it comes to quoted shares. According to data derived from the ECB's Statistical Data Warehouse, the market value of shares issued by Austrian nonfinancial corporations at domestic and foreign stock exchanges was equivalent to 21.1% of GDP at the end of 2020. This was less than half of the euro area average and of the German equivalent.

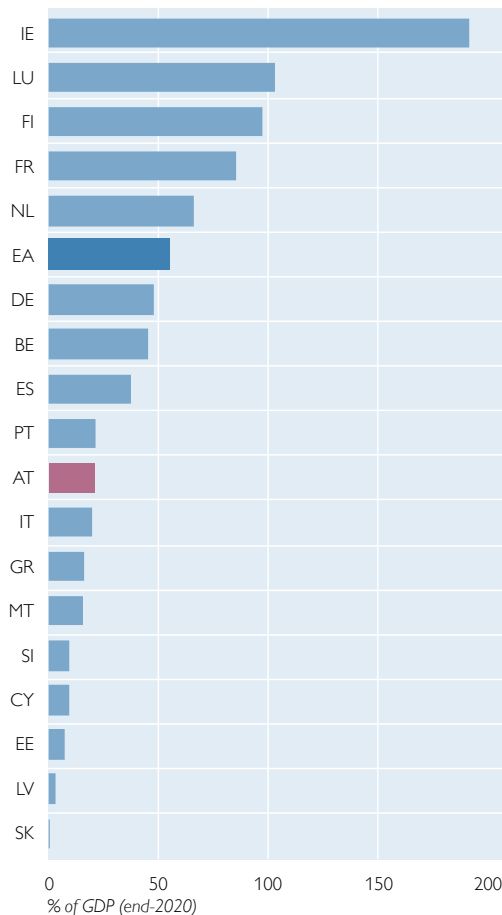
Chart 5

## Use of equity instruments

### Venture capital investment



### Quoted shares of nonfinancial corporations



Source: OECD, ECB.

## 3.2 Potential frictions between equity supply and demand in Austria

### 3.2.1 Background

At the European level, the issue of raising corporate finance, and of funding small and medium-sized enterprises (SMEs) in particular, has for instance been addressed as part of the EU's efforts to deepen the capital markets union.<sup>14</sup> Policy-makers have acknowledged the complexity of the issue and communicated their understanding that individual measures will not suffice to make a difference. Making substantial progress will require an integrated mix of measures.

<sup>14</sup> "A Capital Markets Union for people and businesses – new action plan" (COM(2020) 590 final), providing details on 16 actions on which the European Commission commits itself to achieve three key objectives: making financing more accessible to European companies, making the EU an even safer place for individuals to save and invest long-term, and integrating national capital markets into a genuine single market.

From an investor's supply-side viewpoint,<sup>15</sup> several issues are important when providing capital apart from yield targets, namely factors like taxation, the investment horizon and exit options but also factors that go beyond the traditional investment focus, such as environmental, social and governance (ESG) criteria. Yield targets may relate to both the current yield and the yield investors can realize when selling their equity stake in a company.

From the equity demand viewpoint, it is above all the following considerations that matter: asset value at issuance (balance sheet view vs. economic view of capital), purpose of equity financing (raise additional capital, fill liquidity gaps, etc.), repurchase privileges, governance, disclosure requirements and possible drag-along rights and obligations of existing and new shareholders.

In a stocktaking exercise for identifying challenges for Austrian businesses in raising equity finance and inviting a debate on possible solutions, we conducted a structured OeNB survey among the following relevant stakeholders: the Austrian Economic Chambers (WKO), Wiener Börse, Austria Wirtschaftsservice Gesellschaft mbH (aws<sup>16</sup>), Austrian Private Equity and Venture Capital Organisation (AVCO) and AustrianStartups. In addition, OeNB officials met up with representatives of international institutional investors (BlackRock, Allianz Capital Partners and International Finance Corporation) as well as major Austrian banks. Summing up, we found broad agreement among these stakeholders with a view to the existing impediments to raising capital. The evaluation highlighted above all the following aspects: (1) difficulties of business start-ups in raising adequate financing in growth stages, (2) tax discrimination between debt and equity, and (3) a lack of financial knowledge.

In the following, we outline the frictions between capital supply and demand in greater detail.

### 3.2.2 Impediments to demand for equity

The kind of impediments that exist for demand for capital and the severity of the challenges depend on a number of factors. These factors include the size of the business, ownership and management structures and the level of internal development as well as the sector in which a company is doing business. Other factors of relevance are the (un)availability of collateral (such as real estate vs. intellectual property), how well the business has been performing and the purpose for which it seeks to raise capital (establishment, growth, recovery, etc.), ownership preferences and the legal form of the company and whether it is growth- or subsistence-oriented.

Impediments to raising capital externally that were brought up again and again include:

- reluctance among business owners to step aside and allow for significant external control;

<sup>15</sup> For insights into the decision-making process of institutional investors, see e.g. the "Study on the drivers of investments in equity by insurers and pension funds" (2019) produced by Deloitte Belgium and CEPS for the European Commission.

<sup>16</sup> The main focus of aws, a public sector entity, is on providing services to innovative enterprises and academic researchers to facilitate the establishment and development of technology start-up firms and to foster the use of high tech in Austria.

- information deficits among business owners with regard to their options for raising external capital and how these solutions might work;
- data gaps arising from accounting and internal reporting deficiencies at SMEs, as a result of which the information expectations of external investors cannot be met in a timely manner;
- different tax treatment of debt and equity;
- availability of alternatives such as trade credits, subordinated loans and favorable bank lending.

### 3.2.3 Impediments to equity supply

Getting investors on board may be more difficult for business owners in the absence of adequate incentives for investment. A lack of incentives for investment may be due to information deficits on the part of investors (which is especially relevant at the SME level), deal size (investment volumes may be too small for investors) and the comparatively lower degree of liquidity associated with investments in unlisted companies. Investors may also be less savvy about particular economic sectors, and the absence of peer groups for capital-seeking companies may cause price expectations and risk tolerance to diverge. Furthermore, in the interest of safeguarding financial stability and adequate consumer protection, institutional investors like nonbanks and banks must also comply with regulatory requirements and possibly supervisory restrictions.

### 3.2.4 What are the regulatory requirements for nonbank financial intermediaries investing in risk capital/equity instruments?

Under current legal framework conditions, nonbank financial intermediaries<sup>17</sup> may invest in a broad range of venture capital or equity instruments. Actual investment activities must be compatible with internal investment rules and regulatory upper exposure limits where applicable. In the prevailing low-yield environment, equity instruments have become more popular among investors, but in absolute figures the amount of funds invested by nonbank financial intermediaries remains limited. Diversifying assets to include equity instruments may make sense for nonbank financial intermediaries, subject to the ownership rights conferred and potential liquidity issues. Other considerations relate to the preservation of portfolio asset quality, given that insurance companies, pension funds and provident/severance funds manage money saved for retirement and care or as a means of protection from financial loss.

With regard to the role pension funds may play in increasing equity financing, it should be noted that the second pillar of Austria's pension system is comparatively small. Moreover, the Austrian pension funds invest only limited amounts in shares and tend to invest in foreign rather than domestic shares. This, in turn, is in no small part due to the comparatively limited market capitalization and liquidity of the Austrian stock market. As long as this is the case, any effort to strengthen the role of pension funds is likely to benefit corporate equity financing in Austria only to a relatively small extent. Moreover, the asset allocation rules for pension funds ought to be changed only with a view to enhancing retirement provision.

<sup>17</sup> The nonbank sector includes undertakings for collective investment in transferable securities (UCITS), alternative investment funds, corporate provident/severance funds, pension funds and insurance companies.

### 3.2.5 Regulatory requirements for the financial sector: banks must back investments in nonfinancial companies with own funds

Banks holding shares and other equity issued by nonfinancial corporations must set aside minimum amounts of capital to cover that risk. The risk weights banks need to apply to calculate the minimum capital requirements depend on their approach to measuring credit risk (standardized approach vs. internal ratings-based (IRB) approach) and on the actual risks incurred.

At present, the IRB approach is being applied by just five Austrian banks, using average risk weights ranging from 190% to 370% for equity holdings. All other Austrian banks have adopted the standardized approach, typically using a risk weight of 100% (Article 133 of the Capital Requirements Regulation – CRR). Under this approach, a higher risk weight, namely 150%, must be assigned to investments in venture capital firms and investments in private equity (Article 128 CRR, exposures associated with particularly high risks). Other risk weights apply for exposures to financial companies, exposures in the form of units or shares in collective investment undertakings or if public sector guarantees apply. Moreover, under the supervisory review and evaluation process, banking supervisors may require banks to hold additional capital (“Pillar 2”) for risks arising from equity holdings deemed not covered or insufficiently covered by the aforementioned minimum capital requirements (“Pillar 1”).

The final Basel III framework, which is scheduled to apply from January 1, 2023, onward, will change the risk weighting of equity holdings. Specifically, Basel III provides for the migration of equity holdings to the standardized approach; the IRB approach will no longer be permitted. Due to concerns about a feedback loop between financial institutions and the real economy and to account for the higher risk of loss of equity, the risk weight applicable under the standardized approach for credit risk will be increased from currently 100% to 250%. Speculative unlisted equity exposures will receive a higher risk weight of 400% under the final Basel III framework. However, the applicable risk weights will depend on the specific implementation of the Basel III reforms in the EU.

## 4 Possible measures to increase corporate equity ownership in Austria

In talks with representatives of national and international institutions,<sup>18</sup> we discussed a range of economic policy and regulatory measures to strengthen the equity base of companies, with a focus on tax incentives and different types of equity holdings, which will be presented below. Moreover, we highlight two international approaches to supporting the availability of equity finance for small and medium-sized companies.

A number of proposals put forth included providing better tax incentives for investing in risk and equity capital. A suggestion brought up repeatedly was to put an end to the tax bias toward debt by allowing fictitious interest on equity to be deductible (for a discussion of this proposal, see box 1). Another idea that was proposed repeatedly was an equity investment allowance for early-stage investments (in the amount of about 50% of the capital invested). Another proposal was to widen the time span for which losses arising from equity holdings may be carried

<sup>18</sup> *The World Bank, the Austrian Economic Chambers, Wiener Börse, aws, AVCO, AustrianStartups, etc.*

forward or anticipated (e.g. three years in either direction). Last but not least, it was also suggested to re-introduce a one-year holding or speculation period during which securities investment gains should not be subject to the withholding tax on investment income.

Box 1

### **Notional interest deduction – a tax incentive for equity financing?**

*For Austrian businesses, equity proves more expensive than debt as the return on these types of finance is taxed differently (“debt bias”). The current system allows tax deductions of interest payments from the tax base but not of equity costs. Among the larger euro area countries, Italy, Belgium and Portugal have already introduced notional interest deduction by means of an allowance for corporate equity (ACE) in corporate taxation. These countries currently have a so-called soft ACE regime in place, where equity increases are multiplied by an appropriate nominal rate of interest (“allowance rate”). The resulting amount may then be deducted from the tax base.<sup>19</sup> Naturally, the scope of such favorable treatment varies according to the allowance rate. Due to the low level of interest rates in general, larger businesses in Belgium even had a marginally negative notional return on equity in 2020 (European Commission, 2021).*

*In the early 2000s, Austria had likewise enacted preferential tax treatment for corporate equity, which was subsequently replaced by a general corporate income tax reduction in 2005 for incorporated firms and a profit allowance for unincorporated firms in 2010.<sup>20</sup> To mitigate the debt bias and stimulate equity financing, it would also be possible to restrict tax deductions of interest payments on debt. Yet in practice, measures taken in this respect mostly target tax avoidance strategies of corporations.<sup>21</sup> In Austria, the following interest payments are nondeductible: interest paid on intragroup equity acquisitions or to parent companies abroad, provided the foreign applicable tax rate is below 10%.<sup>22</sup>*

<sup>19</sup> Belgium had previously implemented a hard ACE regime, taking into account the full stock of equity.

<sup>20</sup> A study recently commissioned by the Ministry of Finance discusses the possibility of introducing an ACE (Köppl-Turyna et al., 2021).

<sup>21</sup> It would be very difficult to implement a general nondeductibility of interest payments. If interest income were still taxable in this case, there would be a very heavy tax burden on the financial sector. On the other hand, if income on interests was also tax-free, financial companies would be undertaxed.

<sup>22</sup> Furthermore, the EU Anti-Tax Avoidance Directive (ATAD) contains an interest limitation rule ensuring that net interest payments over 30% of EBITDA (i.e. earnings before interest, taxes, depreciation and amortization) are not deductible for larger businesses.



Table 4

**Selected studies investigating the impact of tax measures on equity finance**

Authors	Country	Measures	Impact on equity
Petutschnig and Runger (2017)	Austria	Corporate/personal income tax rules (2000–2003)	Yes
Petutschnig and Runger (2016)	Austria	Half tax rate on personal income (2004–2009)	~
Petutschnig (2018)	Austria	Interest limitation rules	Yes
Panier et al. (2013)	Belgium	Hard ACE	Yes
Princen (2012)	Belgium	Hard ACE	Yes
Campenhout and Caneghem (2013)	Belgium	Hard ACE (SMEs only)	No
Branzoli and Caiumi (2018)	Italy	Soft ACE	Yes

Source: authors' compilation.

Note: ACE = allowance for corporate equity.

*Empirical studies generally suggest that notional interest deduction is effective (table 4), but the effect on SMEs is somewhat disputed.<sup>23</sup> The latter might also be attributable to the fact that the respective rules tend to be very complicated in order to prevent tax avoidance (see for example Zangari, 2014).*

*Lowering corporate taxation in general, like Austria did in the 2000s, would be a possible alternative to reducing the fiscal debt bias. Given its general nature, this measure could, however, only achieve the same effect on the capital position as a soft ACE (favorable treatment of incremental equity) at the expense of a much bigger loss in tax revenues. Notional interest deduction, in turn, would also benefit unincorporated firms (provided they use double entry bookkeeping), thus ensuring legal form neutrality.*

*A drawback that applies to general tax cuts and notional interest deductions alike is that both measures would above all entail higher retained earnings, which is why the equity situation of individual businesses would only improve at a slow pace. A much faster effect could be achieved by introducing tax incentives for investors to encourage investments in certain equity instruments. But such a measure would also have significant drawbacks. Measures related to corporate taxation are specifically geared toward Austrian businesses, while tax measures aimed at investors would also have to favor international companies (at the same time, investments of international taxpayers in Austrian businesses would not receive favorable treatment). Moreover, such measures are likely to have a highly uneven distributional effect<sup>24</sup> and would thus hamper progressive income taxation.*

The suggestions relating to the role of intermediation support for equity finance included a number of suggestions to promote venture capital funds. A proposal made repeatedly, along the lines suggested by Keuschnigg and Sardadvar (2019), was to create an Austrian fund of funds which would invest in target funds set up to provide equity to start-ups and SMEs during the growth stage. Austrian institutional investors might be nudged to start investing in this asset class with accompanying public sector guarantees that would be remunerated at market rates. Public sector

<sup>23</sup> In this respect, the studies by Petutschnig and Runger (2016, 2017), among others, deliver interesting results. Using a mostly corporation-based dataset, they found that a small tax advantage significantly affected the increase in equity in the early 2000s (in incorporated and unincorporated firms). However, an analysis of a follow-up regulation favoring to a much greater extent unincorporated firms only, concludes that even though this regulation did indeed bring a rise in equity, the increase was not more pronounced than that seen for corporations.

<sup>24</sup> In the 1980s, high-income earners benefited disproportionately from extremely generous tax benefits for investments in certain equity instruments.

guarantees would lower the refinancing costs of the fund and make it more attractive for institutional fund investors. Role models for state-backed funds supporting equity finance exist; in France, such a fund was launched in 2021 (see box 2).

Another possible way to go would be one or more banks stepping forward, issuing private equity fund shares or supporting or sponsoring SME funds. The UK Business Growth Fund, launched already in 2011, is a case in point (see box 2). Another option to step up the provision of equity might be to introduce new types of collective investment vehicles: SICAVs (Société d'investissement à capital variable) or SICAFs (Société d'investissement à capital fixe). They would invest in SMEs or start-ups of all shapes and forms. Finally, as also mentioned repeatedly, institution-izing and expanding the COVID-19 start-up relief fund launched by aws (see footnote 16) should also make a difference.

Box 2

### Selected initiatives promoting equity financing

#### **Equity capital initiative in France**

*The goal of the French equity capital initiative is to support SMEs through a “Fonds de prêts participatifs,” i.e. a fund offering quasi-equity in the form of participative loans. In other words, this fund is meant to support businesses that, while having been hit by the economic crisis, still operate on healthy business models. The fund is financed via insurance companies and institutional investors, which bear the costs of fund management and receive 4.5% to 5.5% interest on participation capital. The French government guarantees losses of up to 30% of the fund's assets. The state guarantee is remunerated by investors at between 0.9% and 1.8% of the nominal participation capital. Five large banks offer issuance support to businesses, assess the credit quality and bring 90% of the newly issued participation capital into the fund while keeping 10% on their balance sheets. For these services, they receive a fund management fee and fee-based income. The maturity period of participation capital is limited to eight years. The whole program amounts to EUR 20 billion.*

#### **UK Business Growth Fund**

*The UK Business Growth Fund (BGF) was established in 2011 by five large banks (Barclays, HSBC, Lloyds, RBS and Standard Chartered) on the basis of a political initiative with the aim to strengthen the funding of SMEs in the UK and Ireland. Since then, the fund has invested more than GBP 2.7 billion in over 420 businesses and supported 110 exits. From its very outset, BGF has built a regional model with a wide network suitable for distributing large amounts of investments among SMEs. Its business model is based on a pre-selection of growth companies (average compound annual growth rate of 5.1%) whose annual sales range from GBP 2.5 million to 100 million and that require substantial funding but whose founders do not wish to give up control yet. An investment committee makes decisions on investments independently of the owners. The investment volume typically ranges from GBP 5 million to 10 million and BGF owns a 10% to 40% minority share of each company. A BGF representative sits on the board to ensure close monitoring of the companies. BGF also has a network of 6,000 non-executive managing directors and industry experts ready to provide support and advice to SMEs. Earnings from exits are reinvested. Considering itself a long-term investor, BGF does not lay down any rules for exits, however. In view of the long investment horizon, the expected return on investment is lower than in the case of traditional private equity investors (some 10%, on average). BGF has already joined the ranks of the world's largest financing vehicles for young businesses. Meanwhile, the model has also been exported to Ireland, Canada and Australia, partly with governments getting involved too.*

In the interest of addressing market imperfections, equity finance-promoting funds as discussed above might also be launched as private-public partnerships, geared at supporting Austrian SMEs in predefined sectors, for instance tech companies. This role could either be taken on by new entities or by vehicles that exist already at the general and regional government levels, such as Österreichische Beteiligungs AG (ÖBAG, managing companies partially or fully owned by the Republic of Austria) or regional government holding companies. Another option would be to expand existing support schemes, like tech catalyst funding provided by awfs. Last but not least, one option might also be the creation of silent partnerships by converting publicly guaranteed loans into equity.

## 5 Summary

Before the crisis triggered by the COVID-19 pandemic, corporate equity capital ratios had been improving steadily in Austria. In 2018, domestic corporate capital ratios were well aligned with international averages, except for the lowest quartile, where Austrian companies had significantly lower capital ratios than peer companies in other countries under review. Equity ownership is broadly diversified across all economic sectors: the rest of the world (44%), households (24%), the government sector (14%) and private foundations (12%). International comparisons show that the role of both quoted shares and venture capital is limited in Austria.

According to the OeNB's insolvency model, the crisis triggered by the COVID-19 pandemic has had a marked impact on corporate equity levels in Austria. Reflecting all support measures known at the time of writing, the insolvency model implies that capital ratios are likely to drop by an average of 6.2 percentage points until 2022. In the absence of the support measures, the decline would be even twice as high, i.e. 12.4 percentage points.

Raising corporate equity is subject to numerous impediments in Austria, on both the supply and demand side. Supply-side impediments include, among other factors, information deficits, deal size issues, low market liquidity, legal and regulatory framework conditions. Demand-side impediments include concerns among owners about losing control, information deficits and data deficiencies or tax discrimination.

Discussions with relevant experts and market participants highlighted a number of options to strengthen equity finance. Suggestions that were made repeatedly include creating tax incentives, strengthening intermediation support for equity finance and building public-private partnerships. Beyond Austria, we find a number of examples for how to ensure better access to equity finance for small and medium-sized enterprises with public sector initiatives. In this paper, we highlight above all the UK Business Growth Fund and the equity finance support program adopted more recently in France.

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