

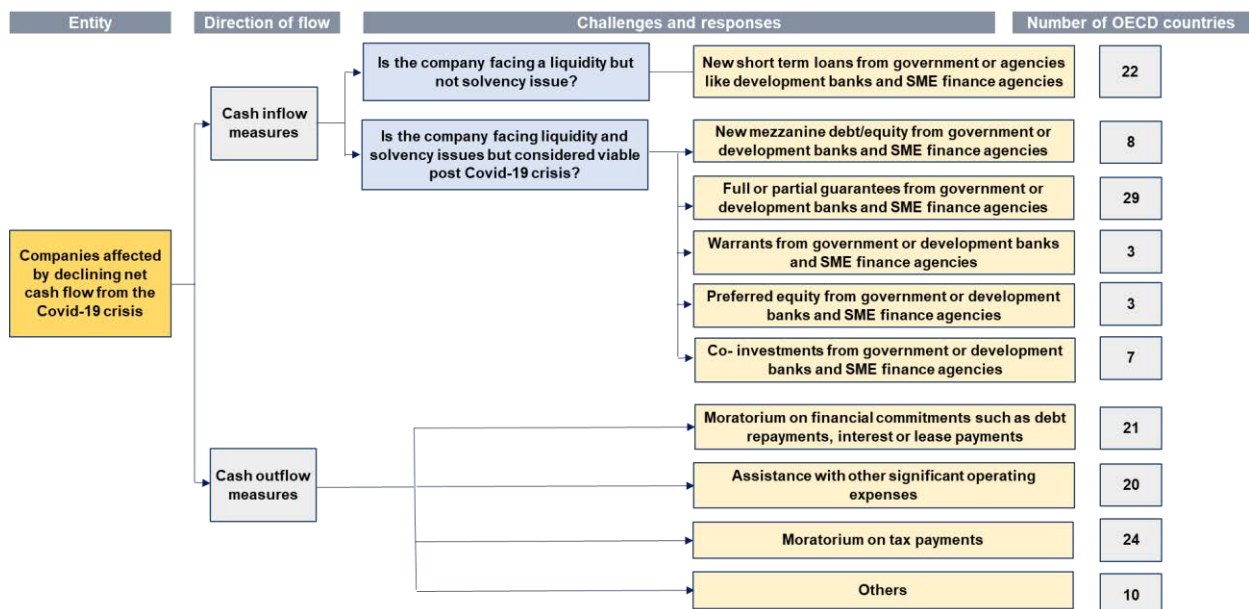
# Issue Note 3: Assessment of government crisis programmes to support businesses

## Introduction

Amid an extended period of accommodative monetary policy, the very low cost of borrowing has contributed to unprecedented sovereign and corporate debt issuance over the past decade, and also elevated securities market valuations. Prior to the COVID-19 crisis, some equity market valuations were near peak levels, while well over USD 10 trillion of bonds were trading at negative yields. In addition, corporate leverage is elevated, particularly in non-investment grade corporates in advanced and emerging-market economies. Moreover, while the global financial system is stronger due to G20 financial reforms, weak asset quality and anaemic performance of many banking sectors, as well as growing risks in market-based finance, have given rise to emerging vulnerabilities that amplified stress amid the impact of the pandemic. As a result, governments and businesses entered the COVID-19 crisis with very low buffers to guard against shocks.

The economic impact of the global spread of COVID-19 has heightened market risk aversion in ways not seen since the global financial crisis. While sharp declines in equity and credit valuations have partially recovered from the shock, in large part due to unprecedented government stimulus programmes, some parts of the market remain stressed. Consequently, corporate activities have been severely strained by the economic consequences of COVID-19, which have caused business output to decline sharply while cost of financing has spiked. The sudden reduction in economic activity has put severe stress on businesses and on employment, requiring swift and strong government actions.

**Figure 2.14. Unprecedented government programmes have been implemented to support business cash-flows**



Note: Based on 32 responses to a questionnaire out of 37 jurisdictions participating in the OECD Committee on Financial Markets (CMF). The framework is based on OECD (2020), Global Financial Markets Policy Responses to COVID-19. Source: OECD.

In response to the economic and market stress in the wake of the pandemic, OECD governments have developed a number of support programmes to provide emergency funding to businesses by addressing strains in cash inflows and outflows (Figure 2.14; Table 2.2). While central banks initially responded by offering short-term liquidity measures, growing awareness of the potential depth and duration of the global crisis prompted many OECD governments to further tailor targeted measures to prevent a wave of insolvencies of fundamentally viable companies, without putting public resources at risk. The aim of widespread and unprecedented support is to preserve employment and investment, which in turn supports a sustainable economic recovery. Yet, have governments of OECD countries done enough in this respect to ensure that businesses have access to reasonably priced capital? The following assessment reviews the design of government programmes to support business cash-flow needs, including an overview of the type of capital used, to evaluate whether the scope broadly addresses the crisis financing needs of business to support future economic growth.

**Table 2.2. Government support programmes to businesses**

Type	Purpose	Direct vs Indirect <sup>1</sup>	Terms	Examples
Collateral	Expansion of eligible collateral to allow banks to receive additional funding from the central bank.	Indirect	Inclusion of lower-rated collateral in central bank operations. This can be done within collateral frameworks, or through a separate facility with new counterparty and eligibility criteria.	The ECB expanded eligible collateral to include the possibility to accept loans with lower credit quality, loans to other types of debtors, not accepted in the ECB's general framework, and foreign-currency loans.
Credit guarantees	Most OECD jurisdictions provide some form of credit guarantees to businesses to facilitate the lending of banks and other financial intermediaries to businesses.	Direct	Guarantee fees can range from 0.5 to 4% of principal, depending on the percentage of the guarantee and size of the firm. The credit risk is usually assessed by the intermediary.	The guarantee can cover a part or the entire amount of the credit exposure. For example, in France, the guarantee covers a percentage of the loan, depending on the size of the borrower: - 90% for SMEs. - 80% medium companies (above the size of SMEs). <sup>2</sup> - 70% for large companies.
Short-term funding	To provide short-term funding, such as through commercial paper markets.	Direct	Interest rates are generally linked to an index swap plus a small spread (100 to 200 bps), which vary depending on the quality of the asset.	The US Commercial Paper Funding Facility (CPFF), purchases commercial paper of eligible corporates and banks. This helps solvent institutions maintain access to short-term funding at reasonable rates.
Bond purchases	Corporate bond purchases to help stabilise market prices and support liquidity.	Direct and indirect	Purchases are made at market prices and for investment grade securities. A small fee may be charged (100 bps). The maturity varies across jurisdictions, ranging from medium term (4 years) to longer terms. Limits on the share of new issued bonds purchased apply in some countries (from 25 to 70%).	The ECB's Pandemic Emergency Purchase Programme allows the Eurosystem to buy a range of assets, including corporate bonds, and the Corporate Sector Purchase Programme was expanded to non-financial commercial paper. Programmes such as the US Primary Market Corporate Credit Facility and the Bank of England's Corporate Bond Purchase Scheme buy investment-grade corporate bonds to reduce the cost of credit to eligible companies.
Fund purchases	The purchase of traded investment funds, such as equity and bond exchange-traded funds (ETFs), and real estate investment trusts (REITs), to support market prices and liquidity.	Indirect	Purchases are made selectively at market prices. Facilities avoid purchasing shares of ETFs when they trade at prices that exceed the net asset value.	The BOJ and FED purchase shares of ETFs of traded assets such as equity and REITs (BOJ) and bond funds (FED). The Federal Reserve's Secondary Market Corporate Credit Facility purchases shares of bond ETFs of investment grade bonds, and also to some extent high-yield bonds.

Type	Purpose	Direct vs Indirect <sup>1</sup>	Terms	Examples
Lending to corporates	Stimulus includes programmes to lend to corporates. These programmes are most often directed through banks, with provisions to pay for origination and credit assessment.	Mostly indirect	The amount provided is often tied to 2019 business debt levels and leverage. Rates vary from very low spreads, such as 50 basis points, to above 400 basis points where there is a material credit risk. Maturity is generally short, with some possibilities of extension.	Lending programmes are generally carried out through participating financial institutions that have access to central bank lending and government financing. In some cases, loans are provided by national development banks and national funds.
Lending to SMEs	Support programmes include lending and equity through SME agencies, indirect funding through banks that receive loans from government programmes, and facilities for SME securitisation.	Direct and indirect	Rates vary from almost no credit spread, such as 50 basis points, to above 400 basis points where there is a material credit risk. Maturity is generally short, with some possibilities of extension.	SME programmes tend to be provided through existing SME financing mechanisms such as small-business agencies. However, some programmes such as the US Main Street Lending Facilities, and the SME securitisation funding, provide additional reach to businesses with less than 15,000 employees and less than USD 5 bn in revenues.
Equity Investment	Several fiscal authorities have introduced tax credits on capital increases or begun to invest in corporate equity, to large and small businesses, through existing institutions or new vehicles. Many governments are co-investing jointly with private sector actors, while others are using public funds for temporary capital injections.	Direct and indirect	The programmes generally address medium-large sized companies or start-ups and include a 50% co-investment by private actors. Prices paid depend on due diligence of the fiscal authority and/or co-investors. Hybrid instruments can be used as well as preferred equity. Preferred stock often has a relatively high cumulative dividend and a medium-term maturity. The investments are carried out through the national development bank or national fund.	Finland, Germany, Hungary, Ireland; Italy, Latvia, Lithuania, and the Netherlands are among countries that have crisis-related equity programmes. In Lithuania, the equity investment fund will include up to: EUR 100 mln of the state budget, EUR 400 mln for government-guaranteed bonds, and EUR 500 mln from private investors to support medium and large firms. Several other countries are considering such forms of equity investments.

1. Direct programmes are those that either lend or purchase bonds directly from the corporates. Any use of banks or nonbank intermediaries are considered indirect.

2. While definitions vary for the term SME, often the number of staff, such as 250 employees, sets a size boundary. As such, medium sized firms are those that are larger than the SMEs by one or more metrics, but are below the size of national or international corporations.

Source: OECD staff assessment informed by public announcements of government's crisis programmes, and also by responses to a survey of central banks and finance ministries that are represented on the OECD Committee on Financial Markets.

## Overview of government programmes to finance businesses

### Programme types

Government programmes that seek to provide forms of capital to corporates and small and medium-sized enterprises (SMEs) have a number of design features tailored to meet urgent demand for financing while reducing moral hazard.<sup>1</sup> They include purchases of short-term commercial paper and corporate bonds in primary and secondary markets; purchases of shares of investment funds and exchange-traded funds (ETFs) of corporate bonds. They also include indirect lending through banks, either by providing expanded collateral eligibility that increases banks' ability to borrow from central banks, and indirect and direct lending to firms to ensure viable firms remain liquid until economic and market stability are restored. Many lending programmes – particularly to SMEs – rely on banks to facilitate lending, which require them to take on

<sup>1</sup> Assessment based in part on a survey of government support programmes to businesses, conducted in the OECD Committee on Financial Markets.

additional credit risk. However, some programmes permit banks to retain only a small portion of the loans to limit their credit risk exposure.

Business support programmes, particularly those that include lending, often involve restrictions with respect to firms' cash inflows and outflows. In particular, some programmes restrict firms from paying any dividends or down existing debt, such that borrowing to cover near-term expenses only adds to their overall debt. Also, some restrict firms from reducing employment levels. While these restrictions are important to prevent moral hazard and support employment, the result is that firms' leverage and cost of refinancing debt may increase, which could weaken businesses' financial flexibility to invest in a manner that would sustain an economic recovery.

Lastly, a few government programmes also support business through subordinated instruments, including credit guarantees or forms of equity. Credit guarantees serve to support losses on debt that can help absorb downside risks, and thereby incentivising banks to lend to businesses. Some governments also pursue a strengthening of the capital bases of businesses, in order to provide the latter with greater financial flexibility to reduce cash constraints associated with high interest payments on debt. This can be done through tax benefits on capital increases or through equity investment and co-investment.

### ***Programme eligibility***

The design features of these programmes serve to limit the scope to those businesses that need the funding, while striving to protect the government against material loss. The government lending programmes have sought to ensure broad-based availability of loans to corporate issuers and, to some extent, SMEs considered to be fundamentally sound and creditworthy prior to COVID-19 crisis.

Government support programmes to business in the United States and the euro area show that the programmes have been designed to allow the vast majority of investment-grade public corporates to have access to government support. In the United States, tailored facilities to buy bonds and lend to companies through banks provide ample lending. The total amount of lending or bond purchases is only a modest fraction of total outstanding investment-grade debt, in part because the programme terms seek to avoid concentration in any one issuer, and the amount of bond purchasing is meant to stabilise market liquidity and credit spreads through incremental purchases. By contrast, in Europe, corporate bond purchases within the revised programmes cover a large percentage of outstanding tradable corporate debt,<sup>2</sup> and loosening of collateral rules provides ample funding to European banks to pursue corporate lending. However, in both the United States and the euro area, capital constraints and credit risk concerns could limit the extent to which banks wish to lend amid heightened uncertainty over credit conditions. Nevertheless, lending and asset purchase programmes have a positive impact on market confidence, and their incremental contribution to lending or bond purchasing has positive spillover effects with respect to pricing and availability of credit in the markets.

By contrast, businesses that were considered non-investment grade prior to the crisis generally have not benefitted from the programmes in the United States or the euro area.<sup>3</sup> Of approximately USD 4 trillion of

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<sup>2</sup> The ECB's Pandemic Emergency Purchase Programme of EUR 1.35 trillion includes a range of public and private sector assets eligible for purchase, and the Corporate Securities Purchasing Programme does not have a pre-defined limit. Purchases have been roughly EUR 3-10 billion per month. For illustrative purposes, the CSPP is shown in the chart as a subset of the PEPP.

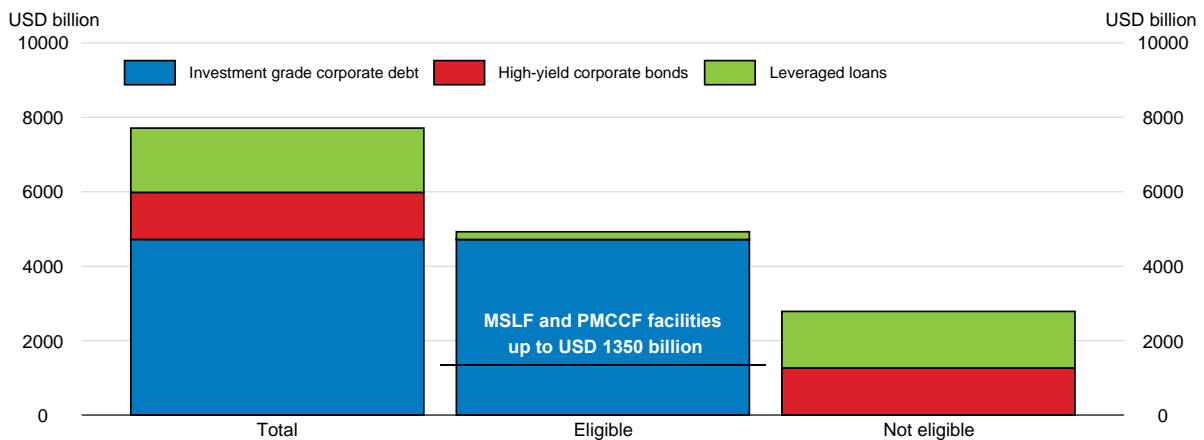
<sup>3</sup> Based on a comprehensive dataset that includes listed non-financial corporates with financial statement information available in Refinitiv at end-2019 (i.e. 1478 US firms and 1878 European firms). Firms are classified based on their eligibility to central bank facilities in keeping with the criteria previously detailed. For the Main Street Lending Facility, calculations have been performed using a leverage ratio of 4.

high-yield rated bonds and leveraged loans outstanding in both economic areas,<sup>4</sup> only a very small amount of issuers of these instruments have been able to benefit directly from government support measures.<sup>5</sup> The reason for this is that such instruments are either rated below investment grade – therefore they do not meet criteria related to creditworthiness such as a Debt/EBITDA ratio below 4; or, they are too large for certain programmes, such as those tailored for SMEs.

The programme constraints render most non-investment grade or non-rated issuance ineligible (Figures 2.15 and 2.16). This is a particularly challenging issue in the United States, where the size of the non-investment grade credit market is nearly USD 3 trillion. There are aspects of potential support. First, a small portion of non-investment grade bonds (estimated at below USD 100 billion) are eligible for purchase in the Federal Reserve’s Secondary Markets Corporate Credit Facility through investment funds holding speculative-grade bonds. Also, the Federal Reserve’s Main Street Loan Facility provides eligibility to a small amount of firms that meet leverage, size and revenue criteria.

### Figure 2.15. US business lending programmes do not extend to all firms in need of liquidity support

Simulation of US corporate credit eligibility for crisis business lending programmes



Note: US corporate debt outstanding includes bonds, loans and revolving credit facilities of non-financial corporates. Outstanding leveraged loan includes revolving credit facilities and are compiled from leveraged loan deals in the United States over 1990-2019 for non-financial companies only. Outstanding corporate bonds refer to non-financial companies only. Data presented are as of end-2019. MSLF is the Federal Reserve’s Main Street Lending Facility; PMCCF is the Federal Reserve’s Primary Markets Corporate Credit Facility. The Federal Reserve’s Secondary Markets Corporate Credit Facility, which is allowed to purchase assets including shares of bond funds is not represented, as it is the same overall budget envelop, yet it can also purchase a small but undetermined amount of Exchange Traded Funds holding high-yield debt. Source: S&P (2019), U.S. Corporate Debt Market: The State of Play In 2019; FSB (2019), Vulnerabilities associated with leveraged loans and collateralised loan obligations; OECD (2020), *Corporate Bond Market Trends, Emerging Risks and Monetary Policy*, OECD Publishing, Paris; OECD (2020), *Structural Developments in Global Financial Intermediation*, OECD Publishing, Paris; Refinitiv; and OECD calculations.

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<sup>4</sup> Estimates are based on S&P (2019), U.S. Corporate Debt Market: The State of Play In 2019; OECD (2020), *Corporate Bond Market Trends, Emerging Risks and Monetary Policy*; and OECD (2020), *Structural Developments in Global Financial Intermediation*.

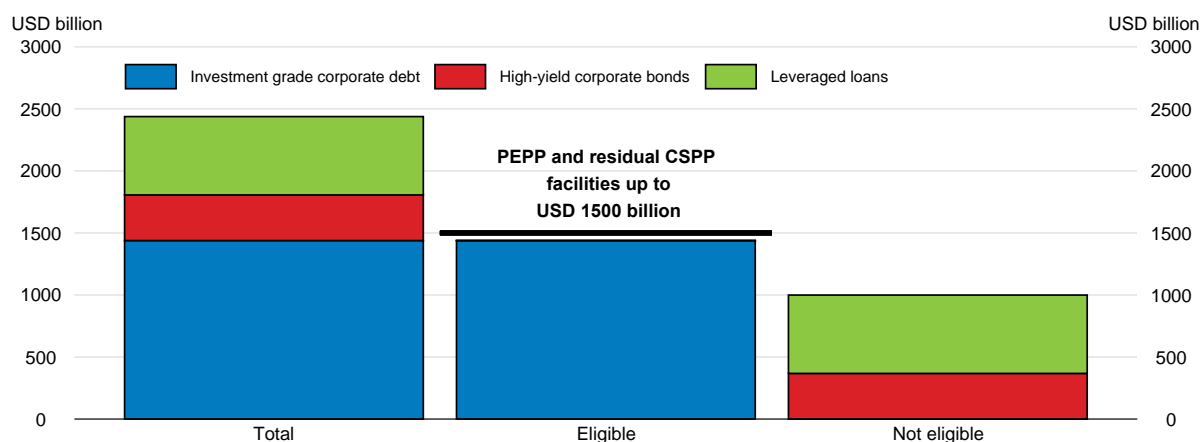
<sup>5</sup> One exception would be the Main Street Lending Facility, which states that lending could be provided to firms that have up to 6 times leverage, by Debt/EBITDA, and which could lend to firms that had revenues of below USD 5 billion or staff below 15,000. This would have captured a much larger subset of non-investment grade firms. However, the programme has not been operationalised so far.

However, the reach of the lending programmes would expand considerably should the Main Street Expanded Loan Facility become operational, as the majority of firms that meet the higher Debt/EBITDA target would also meet revenue and employee level requirements.<sup>6</sup> Distributing the loans through banks helps ensure that banks are conducting appropriate credit risk analysis, as they would need to retain 5-15% of the credit exposure. Yet, because of this obligation, they may be reluctant to lend during challenging credit conditions, in particular if they perceive that the appropriate yield to cover credit losses would exceed the programme cap on lending rates. At this time, the current strains in the high yield credit markets suggest that concerns over credit and market liquidity risk remain a genuine concern.

These findings suggest that despite unprecedented efforts by governments, high-yield corporates in industries such as airlines, energy, and consumer cyclicals, have yet to receive substantial support in many OECD countries. This poses a challenge because high-yield corporates have grown considerably over the past several decades and are essential to corporate growth and employment.

### Figure 2.16. Euro area business lending programmes do not extend to all firms in need of liquidity support

Simulation of euro area corporate credit eligibility for crisis business lending programmes



Note: Outstanding leveraged loans include revolving credit facilities and are compiled from leveraged loan deals in the euro area over 1990-2019 for non-financial companies only. Outstanding corporate bonds are calculated including non-financial companies only. Data presented are as of end-2019. PEPP is the ECB's Pandemic Emergency Purchase Programme, and the CSPP is the ECB's Corporate Securities Purchase Programme. While investment-grade corporate bonds are eligible to be purchased by the PEPP, to date most of the purchases have been public sector securities

Source: OECD (2020), *Corporate Bond Market Trends, Emerging Risks and Monetary Policy*; OECD Publishing, Paris; OECD (2020), *Structural Developments in Global Financial Intermediation*; OECD Publishing, Paris; Refinitiv; and OECD calculations.

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<sup>6</sup> As documented by FSB (2019) vulnerabilities associated with leveraged loans and collateralised loan obligations; a portion of leveraged loan issuers may be eligible to the Main Street Lending Facility as their ratio of debt-to-EBITDA is lower than the 4 or 6 requirements (i.e., 15% of leveraged loan issuers have a leverage ratio lower than 4 and 65% a leverage ratio lower than 6). Nevertheless, they also need to meet revenue and number of employees criteria to be eligible for this programme. Internal estimates, using a comprehensive dataset that includes listed US non-financial corporates, show that 80% of leveraged firms potentially eligible to the Main Street Lending Facility would also meet the revenue and number of employee criteria.



## Government lending programmes to high-yield corporate issuers

As government responses, while unprecedented in many OECD countries, have mostly excluded highly-leveraged issuers, such firms are likely to continue to struggle from the impact of refinancing in stressed market conditions. The majority of these firms, while viable during normal economic and market conditions, are at a higher risk of missing debt payments during recessions and prolonged credit market stress. The amount of corporates at risk of distress and default could be much higher, should stressed credit spreads and weaker cash-flows from operations persist over an extended period. If this were to occur, a spike in bankruptcies could cause non-performing credit exposures to weigh heavily on the balance sheets of banks, insurers and pension funds, consequently eroding their capacity to lend to higher-risk corporates.<sup>7</sup> Indeed, OECD analysis shows that under current circumstances, the percentage of “at risk” or distressed firms would rise considerably, to over 70% of high-yield corporates in the United States, and over 40% in Europe (Figure 2.17).<sup>8</sup> Corporate efforts to reduce cash outflows – or the need for restructuring – could have a devastating effect on employment, and would undermine authorities’ efforts to restore market and business confidence needed to spur economic recovery. Moreover, rising defaults on debt and bank loans would contribute to imposing losses on banks, insurers and pension funds, which are leveraged and capital constrained. Such losses could undermine their willingness and capacity to intermediate new credit to support the recovery.

In light of this assessment, the perceived reluctance of governments to lend to high-yield issuers merits further consideration. One key reason is that governments do not wish to accept credit risk of domestic businesses, as this could have legal or reputational consequences. While arguably reasonable under normal circumstances, it may result in market stress, higher unemployment, and a more fragile economic recovery at present. Rating agency studies of peak and average losses help illustrate the extent to which corporate credit risk is relatively predictable, even in periods of stress, and thus manageable by appropriate pricing of credit risk. The peak 1-year probability of default and loss experience of BB-rated issuers is relatively closer to that of the BBB than B categories, suggesting that the credit difference between investment grade and non-investment grade credit – delineated between a BBB- and BB+ rating – is not notably different than default probabilities between BB and B rated issuers (Table 2.3). In this context, if governments wish to ensure they lend only to viable firms, survival rates of both BBB and BB-rated firms are above 99% under normal conditions. To set a reasonable standard of viability, governments might set a 95% confidence rate which would allow the inclusion of better-quality B-rated firms. Also, modelled losses based on a 50% stressed loss-given-default suggest that annual losses would be below 7% even in the single-B-rated category, and facilities could easily set a borrowing price commensurate with such risks. In sum, fiscal authorities and central banks could calibrate programme pricing accordingly to include a sizeable portion of viable non-investment grade debt, based on decades of credit history of business survival probabilities.

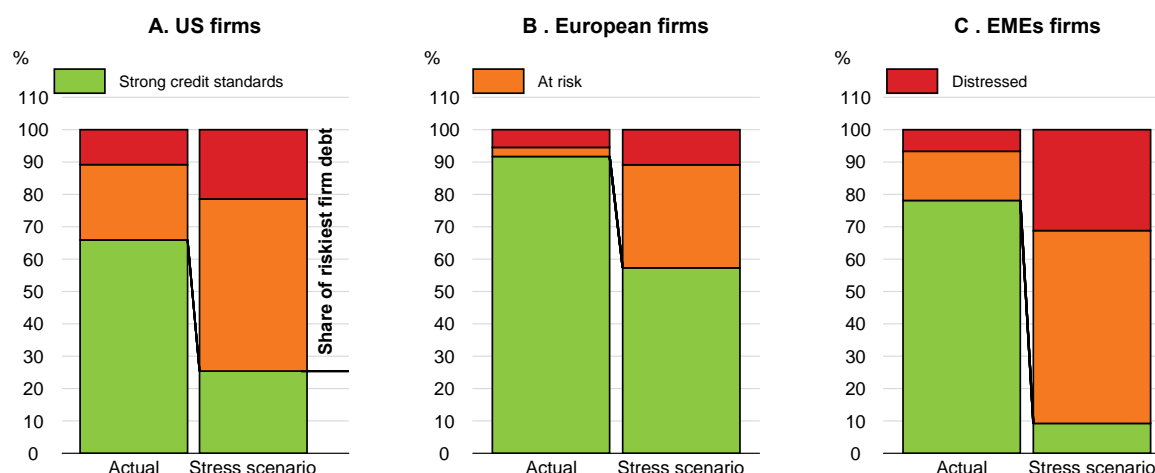
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<sup>7</sup> This potential constraint is particular to supervised institutions, particularly those that have to adhere to standards of regulatory capital or other measures of solvency. By contrast, other investors such as hedge funds or private equity might find value opportunities during markets in which credit risk is mispriced.

<sup>8</sup> A firm is considered “at risk” if its interest coverage ratio (ICR) is between 1 and 2; which means the firm has operating cash-flow to cover debt interest payments, but the excess cash is limited. A company is qualified as “distressed” if its ICR is lower than 1, which means the firm does not have enough operating cash-flow to cover its interest expenses.

**Figure 2.17. The share of distressed firms could rise considerably**

Distribution of leveraged firms



Note: These figures show the share of debt of firms with strong credit standards, “at risk” and “distressed” in total debt of leveraged equivalent corporates under normal and stress scenarios by region. The sample includes 8361 “leveraged equivalent corporates”, i.e. companies with a leverage ratio higher than 5 or with a negative leverage ratio. A firm is considered “at risk” if its interest coverage ratio (ICR) is between 1 and 2. A company is qualified as “distressed” if its ICR is lower than 1. A stress testing analysis is performed on corporate debt assuming a 650-basis point increase in the cost of debt in borrowing costs for the portion of debt (equivalent to 50% of total debt) maturing within the next three years and a 20% fall in EBITDA. The ICR under the stress scenario is calculated for each company so that firms are re-classified according to their financial soundness possibly falling to “at risk” or “distressed” groups.

Source: OECD calculations.

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**Table 2.3. Stylised mapping of corporate credit ratings, defaults and pricing of risk**

Rating	Default 1-year Average	Default 1-year Peak	Stressed Loss –Given-Default <sup>1</sup>	1-year Peak Loss	Breakeven Credit Spread <sup>2</sup>
BBB	0.2%	1.0%	50.0%	0.5%	0.6%
BB	0.6%	4.2%	50.0%	2.1%	2.2%
B	3.3%	13.8%	50.0%	6.9%	8.0%
CCC	27.1%	49.5%	50.0%	24.7%	48.8%

Note: One-year trends from S&P (2020), “Default, Transition, and Recovery: 2019 Annual Global Corporate Default and Rating Transition Study.” Breakeven columns are calculations based entirely on these figures.

1. The stressed loss-given-default (LGD) rate of 50% reflects a 1-percentage point add-on to a modelled 40% LGD associated with a 8% default rate. Financial studies suggest that LGDs vary widely by industry, are positively correlated with default rates, and are positively correlated with the firm leverage and debt structure. Therefore, the 50% rate here provides a blended stress rate for illustration purposes. See Frye et al. (2013), “Loss given default as a function of the default rate”, Federal Reserve Bank of Chicago.

2. The breakeven credit spread is the rate that provides the return of par, with no gains or loss to the initial investment. It assumes no interest is paid out on the defaulting debt. The simplified formula is: Breakeven Credit Spread = Default Probability \* Loss Given Default/(1-Default Probability). Should a government wish to ensure at least a return of the risk free rate on surviving firms, this spread should be added to the risk free rate.

Source: S&P (2020), “Default, Transition, and Recovery: 2019 Annual Global Corporate Default and Rating Transition Study”; and OECD calculations of breakeven rates.

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Should governments consider developing business support programmes to assist high-yield issuers, they might consider several factors to effectively manage aspects of the programme related to credit. First, governments should determine and set criteria for what is considered a fundamentally viable firm based in large part on pre-crisis solvency metrics. Criteria could include ratings, and pre-set rating minimums, such as a minimum rating of B or B+, or minimum leverage or interest coverage ratios. Programmes that lend to high-yield issuers would need to be able to conduct sufficient credit assessment and independently verify the ratings of major ratings providers. Second, where the credit risk is considerable, programmes should have tiered pricing per rating to ensure that losses can be covered by programme rates and associated fees. Rates should be linked to the central bank or interbank borrowing rate (e.g. a standard rate plus a credit spread) so that firms are not able to benefit from a fixed rate when central bank interest rates are raised. Third, governments should consider ways to help the high-yield corporate sector transition to a solid footing when the government exits the programme. In the event that a portion of borrowers must exit government with higher debt and leverage, and with the prospect of refinancing debt at higher costs than that offered by the government programmes, firms would be more likely to experience cash-flow constraints. The extent to which highly leveraged businesses might experience financial distress would depend on the economic strength of the recovery to support cash inflows, and buoyant credit market conditions to facilitate continued borrowing at pre-crisis credit spreads.

### Equity investment could help spur the recovery

Governments could consider whether there are other ways to support corporates without incentivising higher indebtedness, which could complicate the exit of extraordinary monetary and fiscal stimulus and jeopardise a sustainable recovery. In this context, fiscal authorities could consider equity investments in viable corporates to provide them with needed cash without creating immediate interest payment obligations. As the majority of B-rated firms have private equity ownership, the government could consider incentives for co-investing with private equity and venture capital, which would give some assurance that motivated parties are conducting due diligence. For existing equity holders, the trade-off would be to acquiesce to lower equity returns as the cost of reducing the probability that the corporate would enter into bankruptcy, which would eliminate equity value.

However, to date, only a few jurisdictions have initiated government support programmes for business that include equity capital, which is critical to help ensure financial flexibility to support robust economic recoveries. OECD analysis suggests that the use of retractable preferred equity could provide the much needed financial flexibility to absorb sharply falling operating cash-flows and avoid distress, thereby allowing firms to grow and invest into the recovery. Governments could consider using a form of retractable preferred equity that has several key design features. The dividends would be flexible to allow repayment toward the end of the programme duration. However, participating businesses would only be allowed to pay common equity dividends once preferred dividends are paid in full. Moreover, the retractable feature of the equity would stipulate that the firms would need to repay the government holder at a fixed price (such as par) at the end of a designated maturity date, much like debt. At that time, the firm could choose to issue equity (preferred or common) or debt to repay the government, depending on its leverage and cash situation. This retractable form removes the significant market risk associated with price fluctuations of publicly traded equity, and also the liquidity risk associated with the sale of preferred stock. In essence, the government would trade the upside price returns for greatly reducing the downside risk of a loss.

Importantly, preferred equity support can reduce government exposure to a loss in certain scenarios,<sup>9</sup> by reducing leverage and improving interest coverage in participating firms. If the share of firms in distress (likely to result in default and bankruptcy)<sup>10</sup> remains below a certain threshold of total firms in the government programme (known as the breakeven threshold), the government could expect a higher return on investment from the preferred equity contribution compared to a debt contribution (Figure 2.18, Panel A). For example, should a significantly lower share of firms be in distress at the end of the government support programme, the expected return on investment for the equity contribution would be significantly higher than that of a debt contribution.<sup>11</sup> In addition, given excessive corporate leverage in the financial sector in many OECD countries, incentivising equity investment can also help reduce the leverage position of firms. In contrast, debt financed support increases leverage and interest payments, and erodes financial flexibility and the resilience needed to emerge from the crisis. For example, in the event of an anaemic economic recovery, with greater than expected firms being in distress at the end of the government support programme,<sup>12</sup> the government could expect to almost break even on its investment, such that material fiscal losses would not occur. Also, the average debt-to-EBITDA multiple of firms improve more significantly when a preferred equity contribution is used (Figure 2.18, Panel B), in contrast to firms' higher leverage upon exit for the debt lending programmes.

This approach has several benefits. While equity is lower than debt in the capital structure and prone to higher losses after default, the use of equity rather than debt would reduce leverage and thus the probability of default. Should equity be used to replace maturing debt, it could prompt an increase in the credit rating, which would result in a lower future cost of borrowing and more cash available for reinvestment. If the government could partner with other equity investors – including private equity – to reduce leverage, it would both bring needed expertise to the investment process, and would help reduce leverage further for the same amount of government participation. Moreover, as private equity holders would not be able to receive any dividends or sell their stake before the government is repaid, there is an incentive to run companies prudently to preserve cash-flow.

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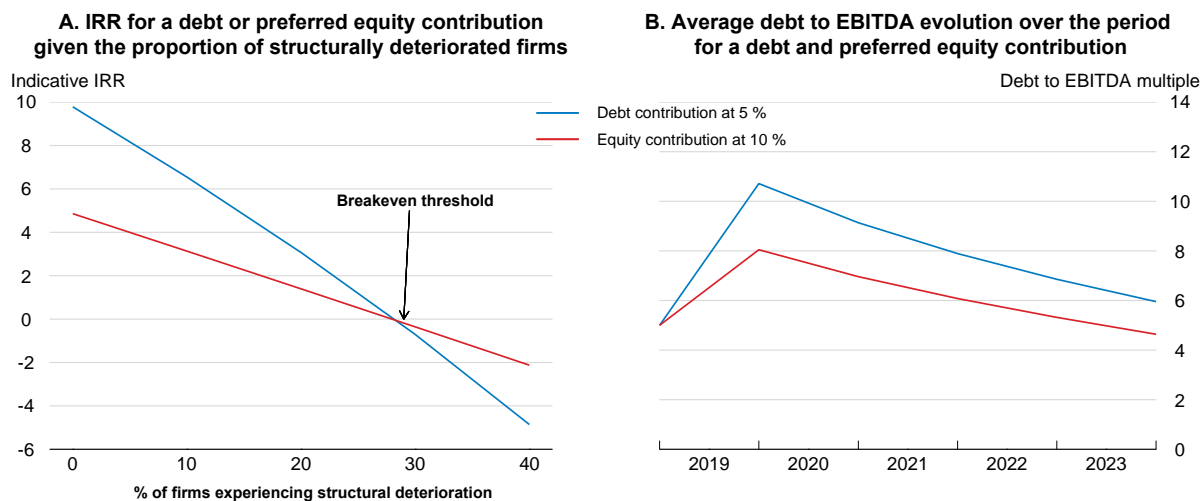
<sup>9</sup> A higher return on investment /Internal Rate of Return (IRR) more than compensates for losses on investments in distressed firms. Simulation analysis has been used to estimate expected government returns (positive, breakeven, negative) in various recovery and capital structure scenarios. Based on an assumed USD 1.25 million debt or equity contribution to participating firms. Other key assumptions are a 5% interest rate and a 4-year linear principal amortisation for the debt contribution, and a 10% dividend yield and exit after four years (2024) for the preferred equity contribution. Additional assumptions include a 20% corporate tax rate, existing outstanding debt estimated at varying rates of 6%, 8% and 10% depending on the prior capital structure of the firm, and 10% EBITDA capex with 10% annual growth in the event that the firm has sufficient free cash-flow.

<sup>10</sup> Firms experiencing high-distress and structural deterioration are expected to exhibit a 75% shock to 2019 EBITDA in the first year, with a haircut of 50% to long term EBITDA. Fewer than 30% of programme firms experience financial distress resulting in bankruptcy in the OECD simulation analysis.

<sup>11</sup> In the OECD simulation, should only 10% of firms experience high-distress/structural deterioration, the expected government Internal Rate of Return (IRR) would be 6.5% for the preferred equity contribution portfolio versus 3.1% for the debt contribution portfolio.

<sup>12</sup> In the OECD simulation, this is measured as above 30% of firms experiencing distress and structural deterioration leading to bankruptcy.

**Figure 2.18. Preferred equity support can reduce government exposure to loss and reduce business leverage**



Note: Indicative simulation, not based on current industry information. IRR is the internal rate of return. EBITDA is earnings before interest, taxes, depreciation, and amortisation.

Source: OECD calculations.

StatLink  <https://doi.org/10.1787/888934140753>

Should this path be chosen, fiscal authorities would need to be mindful of how their equity investments would impact industry competition, both during the investment period and upon exit. First, large-scale equity investment in businesses (e.g. explicit strategic investment or nationalisation) could distort governance practices and have consequences for a level playing field. At the same time, during this crisis period, corporates with high cash levels are increasingly engaging in mergers and acquisitions of businesses with temporary cash-flow shortages due to the impact of the responses to the pandemic. In concentrated markets, government equity programmes could reduce the pressures for companies to be taken over by industry giants, which could preserve competition.<sup>13</sup> Moreover, should government business financing programmes not integrate environmental, social and governance and responsible business conduct into their criteria, they might hinder the progress made in many countries through greater investor demand for environmental, social and governance considerations toward sustainable finance. As such, OECD principles for corporate governance, competition, and responsible business conduct could help shape constructive behaviours during this exceptional period of government involvement, to support competitive markets as businesses exit temporary programmes.

As well, despite well-constructed lending programmes, fiscal authorities could risk losses if corporate defaults were to rise well above prior historical peaks due to a severe and prolonged recession. In such an event, it is possible that equity investments could lose more than debt investments due to lower recovery rates in bankruptcy. However, in such a scenario, governments would need to consider not how to minimise losses on crisis programmes, but rather if it is better to invest in equity to keep businesses open rather than having to pay higher amounts of unemployment benefits, grants, and other outflows to address the consequences of high business failures on societies.

<sup>13</sup> See link to [OECD Competition's Covid-19 Policy Papers](https://www.oecd.org/competition/covid-19-policy-papers/).



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