TACKLING CORONAVIRUS (COVID-19):
CONTRIBUTING TO A GLOBAL EFFORT
oecd.org/coronavirus

# Foreign direct investment flows in the time of COVID-19

4 May 2020

- FDI flows are expected to fall by more than 30% in 2020 even under the most optimistic scenario for the success of the public health and economic support policy measures taken by governments to address the COVID-19 pandemic and the resulting recession.
- FDI flows to developing countries are expected to drop even more because sectors that have been severely impacted by the pandemic, including the primary and manufacturing sectors, account for a larger share of their FDI than in developed economies.
- FDI could play an important role in supporting economies during and after the crisis through financial support to their affiliates, assisting governments in addressing the pandemic, and through linkages with local firms.
- FDI flows have steadily declined over the past five years, and they could remain below pre-crisis levels throughout 2021 if the public health measures and economic support policies are not effective.

Many governments have taken stringent public health measures to limit the spread of the COVID-19 pandemic. These public health measures have caused severe economic disruptions that impact the foreign direct investment (FDI) decisions of firms. Governments have also taken significant economic policy actions to forestall, or cushion, the economic consequences of the public health crisis. The eventual impact on FDI flows will depend on the success of both these public health and economic policy responses.

FDI could play an important role in supporting economies during the economic recovery following the pandemic. Evidence from past crises has shown that foreign-owned affiliates, including small and medium enterprises, can show greater resilience during crises thanks to their linkages with, and access to the financial resources of, their parent companies (e.g. Alfaro and Chen, 2012; Desai et al., 2008). FDI could be particularly important for emerging and developing economies given that other sources of international financing, including portfolio investment, have fled these economies (see OECD Investment policy responses to COVID-19). Unfortunately, it appears that the impacts of the pandemic on FDI flows to these economies may be particularly severe. For example, the primary and manufacturing sectors, which account for a larger share of FDI in many of these economies than in most developed economies, have been particularly hard hit by the pandemic (see forthcoming OECD note on implications of the COVID-19 public health and economic crisis on development finance).

Contributions to the recovery from FDI can go beyond financing. Multinational enterprises (MNEs) are generally larger, more research and development (R&D)-intensive, and more productive than purely domestic firms.1 As such, they are well-positioned to help governments deal with the effects of the pandemic.2 Investment Promotion Agencies (IPAs), charged with attracting and facilitating FDI, are also working with their clients and local networks of foreign affiliates to facilitate business collaborations and assist government efforts to combat the pandemic (see the forthcoming note investment promotion in times of uncertainty: OECD agencies during and post COVID-19 crisis). Going forward, cross-border partnerships and collaborations between companies can facilitate finding long-term business solutions, such as ways to resume production while protecting workers' health.

In the longer term, the pandemic may lead companies to shift the geographic allocation of their foreign operation. For example, MNEs may review and potentially shorten their GVCs to protect themselves from supply-chain disruptions; alternatively, they could seek geographic diversification to reduce exposure to location-specific shocks and reduce costs to be able to deal better with crises. Such shifts could have important implications for countries' economic prospects as MNEs are responsible for a large share of global value-added, trade, employment and R&D (OECD, 2018; Cadestin et al., 2018). Beyond direct impacts, FDI can also have potentially important indirect effects on the local economy. For example, it can have second-order effects on the economy when locally-established MNEs are entering buyer-supplier relations or competing with local firms, hiring and training local workers, and facilitating exports.3

However, there are reasons to have some scepticism regarding the role that FDI can play. The pandemic hit at a time when FDI flows were at the second lowest level recorded since 2010 in the aftermath of the global financial crisis (for more information on developments in FDI flows through the end of 2019, see the April 2020 edition of FDI in Figures). In addition, corporate debt was at record levels at the time the pandemic hit. OECD research shows that the stock of non-financial corporate bonds was at an all-time high at the end of 2019, and that this stock "has lower overall credit quality, higher payback requirements, longer maturities, and inferior covenant protections" compared to previous debt cycles (Celik at al (2020). High levels of debt could limit the ability of companies to survive the COVID-19 crisis, let alone support their foreign affiliates or pursue new investments. Rising debt levels and liquidity constraints could also be factors driving companies to divest some of their foreign operations (Borga et al, 2020).

OECD projections show that even under the most optimistic scenario, FDI flows will likely fall by at least 30 percent in 2020 compared to 2019 before returning to pre-crisis levels by the end of 2021. Figure 1 shows half-year trends from 2015 to 2019 and possible scenarios on a half year basis through the end of

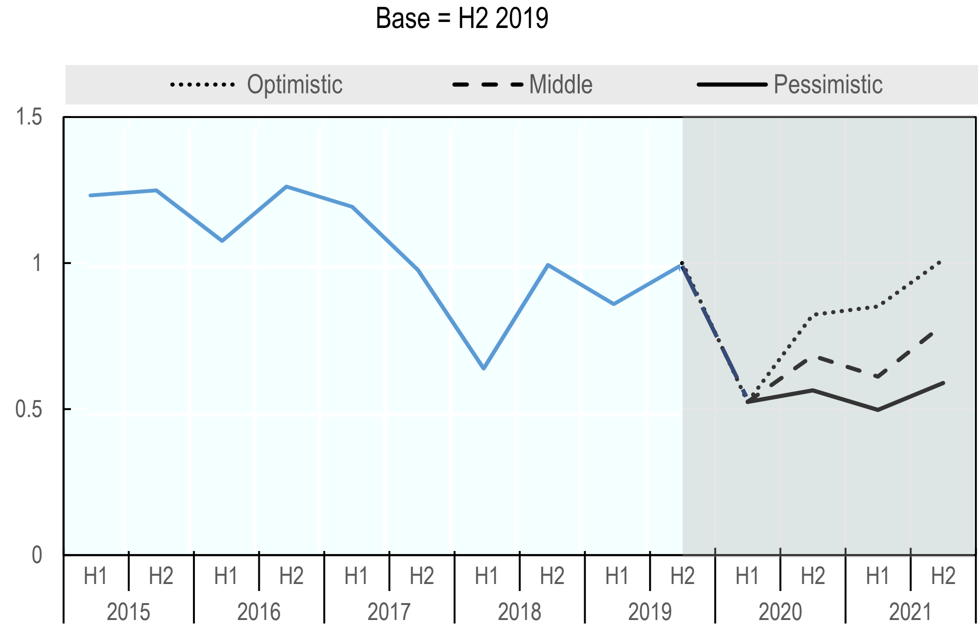
[1] This is because operating abroad involves additional risks and fixed costs, associated with building distribution and supplier networks or getting acquainted with local tastes and conditions, that only the most productive firms can bear (e.g. OECD, 2019, Helpman, Melitz and Yeaple, 2004; Antràs and Yeaple, 2014).

[2] For example, a Luxembourg-based ArcelorMittal developed a prototype of 3D-printed ventilator and protective gear tested and used in Spanish hospitals (ArcelorMittal, 2020). GM encouraged and provided necessary specifications to their network of suppliers to help increase production of protective equipment (CNBC, 2020). Coca-Cola has donated financial support, assisted in transporting necessary material for creating masks, and provided beverages to medical and hospital professionals in different countries (Coca-Cola, 2020).

[3] See OECD (2019), OECD-UNIDO (2019), Alfaro (2016) and Alfaro et al. (2009) for an overview of the different channels and empirical findings and Havránek and Iršová (2010, 2013) for a meta-analysis of this literature.

2021. The figure shows that there is expected to be a sharp drop in FDI flows in the first half of 2020. After that, the impact on FDI flows will depend on the success of the public health and economic policy measures taken by governments. Under the pessimistic scenario, the drop in FDI flows lasts longer.

### Figure 1. FDI Flows under Different Scenarios on the Effectiveness of Public Health and Economic Policy Measures




Source: OECD FDI statistics database and OECD projections

This note begins with an examination of the current situation for FDI flows. It uses information from companies and commercial databases to provide information on trends in companies' actual and expected earnings in the first half of 2020; in announced, completed, and pending mergers and acquisitions (M&A); and in announced greenfield investments. It then considers various scenarios for the impact of the pandemic on FDI flows in the medium term (2nd half of 2020 and full year 2021). The analysis examines the impacts on reinvested earnings and equity capital flows separately as the impacts will likely be different over time and under the different scenarios. Finally, it differentiates between the investment decisions and the divestment decisions of MNEs as the factors influencing them will differ. It concludes with a discussion of potential long term impacts.

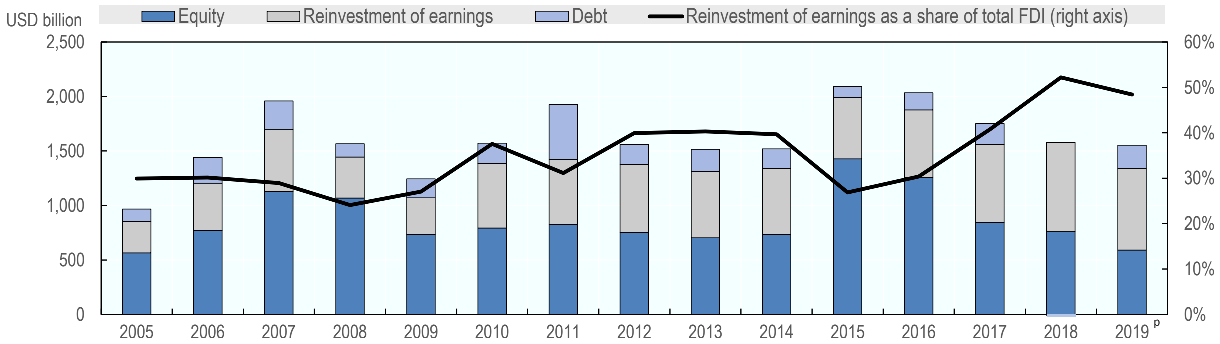
## Current situation: Fast drop of FDI in first half of 2020

FDI is expected to decline sharply as a consequence of the pandemic and the resulting supply disruptions, demand contractions, and pessimistic outlook of economic actors. This decline is accentuating and accelerating the steady decline of FDI flows observed in the past five years (figure 2). There immediate impact on FDI flows will come from a reduction in reinvested earnings.[4] However, equity capital flows will

[4] Reinvestment of earnings of direct investment enterprises reflects earnings accruing to direct investors (i.e. proportionate to the ownership of equity) during the reference period less earnings declared for distribution in that period (see OECD, 2008 for more information).

also be impacted as companies put some mergers and acquisitions (M&As) and greenfield investments on hold.

## Figure 2. FDI flows by component, 2005 to 2019




Note: p: preliminary. Statistics on FDI flows through the full year of 2019 included in this chart will be made available in the OECD FDI statistics database. Debt refers to debt between related parties.
Source: OECD FDI Statistics Database and FDI in Figures, April 2020.

### *A fall in reinvested earnings is likely…*

Reinvested earnings have become an increasingly important component of FDI flows, accounting for more than half of FDI inflows in 2019. Two factors determine the amount of reinvested earnings: the earnings of direct investment enterprises and the share that the direct investor chooses to reinvest.

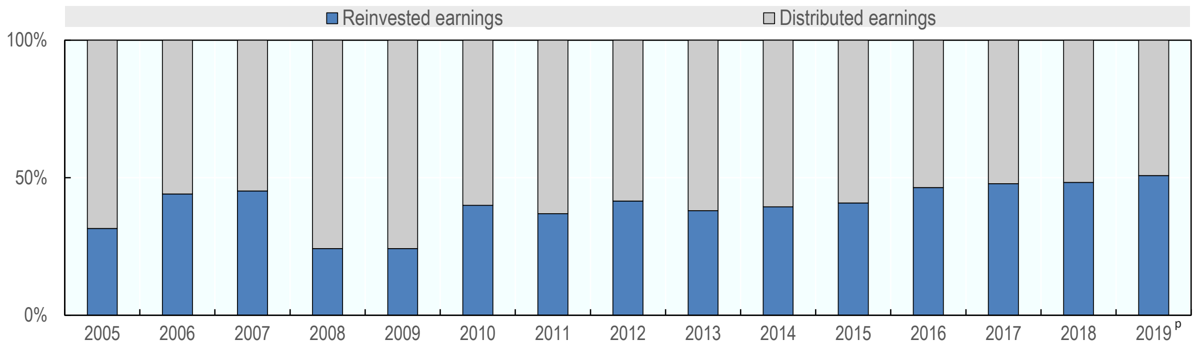
**In the first and second quarters of 2020, earnings of large MNEs are expected to fall, but the impact varies greatly across sectors.** For example, Refinitiv (2020) gathered the latest earnings information and market intelligence for companies in the S&P 500, which includes many of the largest MNEs in the world. Their analysis found that there will be large year-over-year drops in earnings in the energy, consumer discretionary sector, industrials, and materials sectors.[5] On the other hand, it is expected that there will be year-over-year increases in earnings in the health care, technology, and communications sectors. Given the important role that the primary sector and manufacturing play in FDI, these developments are expected to significantly reduce earnings of direct investment enterprises in the first half of 2020. FDI in emerging and developing economies will likely be more seriously impacted due to the higher share of the primary sector and manufacturing in their FDI than in developed economies, where services play a more important role.

**The share of earnings investors choose to reinvest is also likely to fall during the crisis.** Figure 3 shows the share of FDI earnings reinvested in OECD countries from 2005 to 2019. The share of earnings that are reinvested has shown an upward trend since 2013. In the period following the financial crisis, the share of earnings that were reinvested fell by about half, from 45% in 2007 to 24% in 2008. This is because some companies distribute a regular, constant amount of earnings, and some companies distributed a higher share of earnings to support other parts of the MNE. Therefore, it is expected that the share of earnings that are reinvested will fall in the first half of 2020.

5 The consumer discretionary sector includes food and accommodation, textiles and apparel, and much entertainment spending by households; industrials covers much of the manufacturing sector, and materials includes non-energy commodities and the manufacture of some intermediate inputs.

### Figure 3. Share of earnings that are reinvested

OECD countries from 2005 to 2019




Source: OECD FDI Statistics Database

### *… and adjustment in equity capital flows*

Equity capital flows are closely tied to new investments, regardless of the mode of entry – M&As (figure 4) and greenfield investments – and divestments by direct investors.[6]

### Figure 4. Global completed M&A deals and equity capital flows, 2005 to 2019

(USD billions)


Source: Author's calculations from Refinitiv M&A database and OECD FDI statistics database

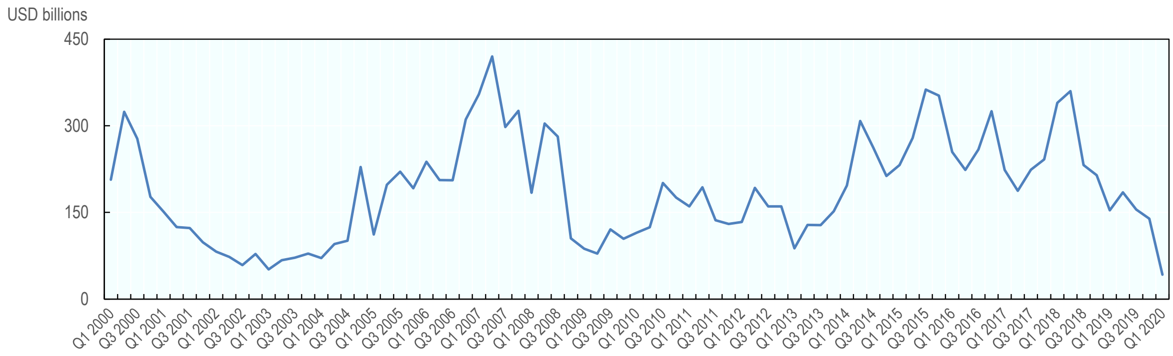
The latest data on cross-border M&As from the Refinitiv database show **a significant drop in completed deals in the first quarter of 2020** (figure 5), but there is no evidence of an increase in withdrawn deals. Instead, there has been an increase in pending deals. This means that direct investors have, thus far, not been trying to back out of deals that they have negotiated but appear to be holding off on closing them, primarily due to the difficulty in establishing valuations in the current situation. Since it is difficult and potentially costly for companies to call

6 Divestments are reflected in the equity capital component of FDI flows, but they are hard to discern because FDI is presented on a net basis. For example, for inward FDI, equity capital is measured as equity capital increases net of equity capital decreases by direct investors, the latter of which would include divestments or sell-offs of affiliates and withdrawals of equity capital. Hence, FDI flows can fall due to a decline in new investments or an increase in divestments or a combination of both.

off deals, they will likely wait to see economic developments in the near future before taking such a step (New York Times, 2020). In the short term, equity capital flows will fall due to so many deals being put on hold, but it could mean that there will be an increase in the future as these deals are completed as the economy recovers. On the other hand, if the economy does not recover, companies will begin to abandon deals, perhaps citing clauses that call for target companies to continue their ordinary course of business prior to closure of the deal.

## Figure 5. Completed cross-border M&A deals in advanced economies, 2000-2020

Value of deals in USD billions on a quarterly basis



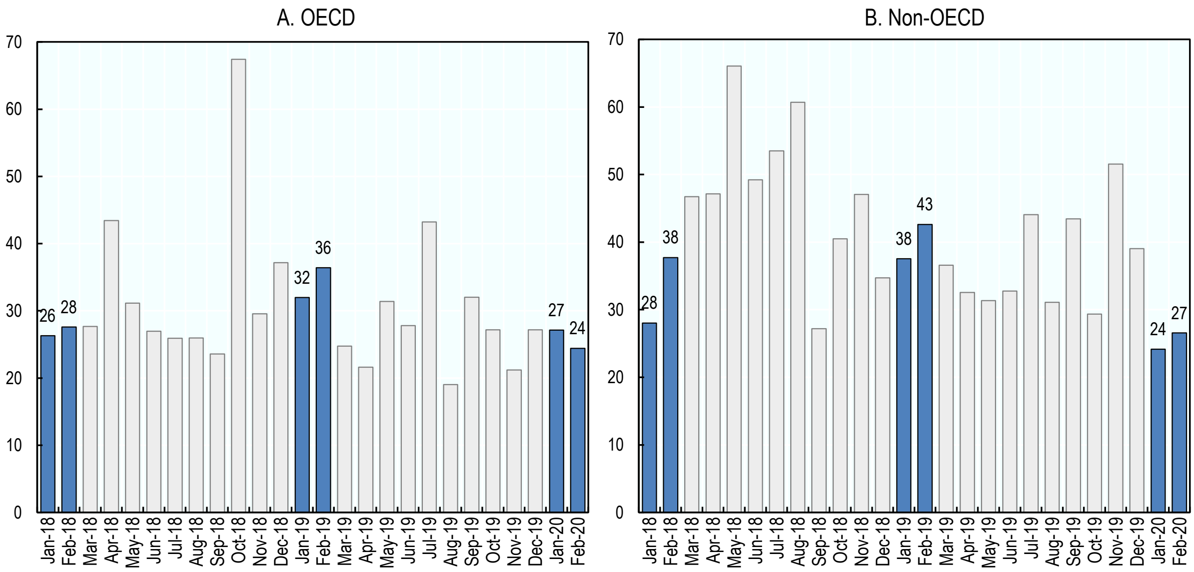

Source: Author's calculation from Refinitiv M&A database

Cross-border M&As play a particularly important role in advanced economies that consistently account for more than three-quarters of completed cross-border M&As. Greenfield investments, on the other hand, tend to play a more important role in FDI in emerging and developing economies.

The latest data on greenfield FDI from the Financial Times' fDi Markets database provides further evidence that investors are becoming more reluctant to explore new investment opportunities in the face of the pandemic. This is shown by the **decline in new project announcements** in the first two months of 2020, compared to previous years (Figure 6). This decline is sharper in non-OECD economies, where the value of greenfield FDI pledges dropped by over 36% relative to 2019 and 15-30% relative to 2018. Announced investments in non-OECD economies were lowest in January 2020 before recovering slightly in February.

### Figure 6. Value of announced greenfield projects, 2018-2020

Announced capital expenditure, USD billions on a monthly basis

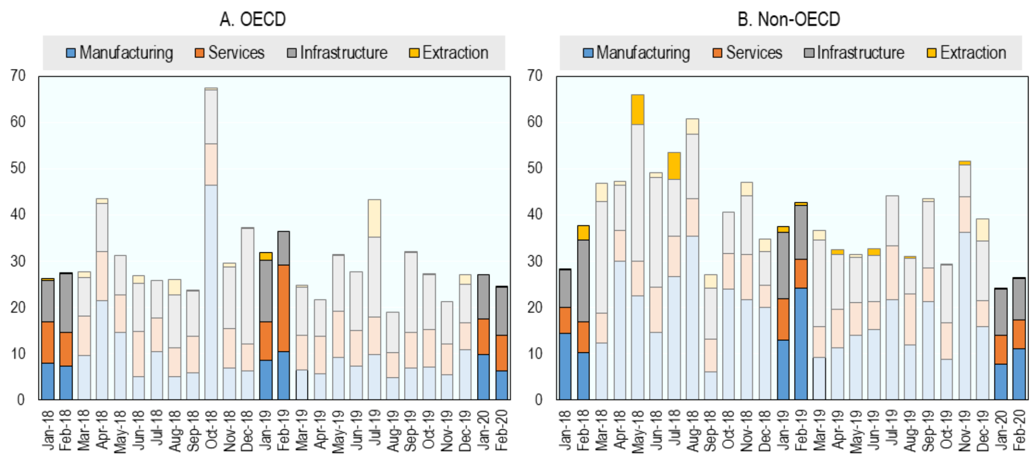



Source: Author's calculation from Financial Times fDi Markets (2020).

A sectoral breakdown of greenfield investments shows that manufacturing, which tends to be more important outside of the OECD area, suffered the largest decline in non-OECD countries (Figure 7). The extensive lockdown measures, implemented widely across OECD countries, and in many non-OECD economies from March onwards, are likely to have severe repercussions on greenfield FDI pledges for both groups in the coming months.

### Figure 7. Value of announced greenfield investments by sector, 2018-2020

Announced capital expenditure, USD billions on a monthly basis




*Source*: Author's calculations from Financial Times fDi Markets (2020).

The current disruptions could also have **knock-on effects on equity capital flows** in the future as new investments, either through M&As or greenfield investments, are probably not being explored at this time. Participants in the OECD webinar with IPAs on 9 April 2020 noted that they still see some projects going ahead as they are a product of long-term preparations and planning.[7] However, participants also signalled a drop in new expressions of interest from firms, despite an increase in sectors such as digital and healthcare. IPAs have also had to scale back their proactive marketing activities that may have an impact on the generation of leads in the future. Any decline in reinvested earnings and equity capital flows could be partly **offset by intracompany loans and injections of equity capital** that parents make to their struggling foreign affiliates that would result in increased FDI. Analyses of past crises show that foreign investors provided such support to their affiliates (Alfaro and Chen, 2012, and Desai et al, 2008). Indeed, this is one advantage of foreign ownership: the financial linkages between investors and their foreign affiliates play an important role in the affiliates' resilience to economic crises.

**Divestments could also have an impact on FDI flows.** In general, divestments are a frequent and natural feature of global supply chains, allowing firms to adapt their operations to rapidly changing business realities. A study by the OECD found that one in every five foreign-owned firms is divested every five years (Borga et al, 2020). Before the outbreak, a global survey found that 84% of surveyed firms planned to divest some operations in 2020-21 (Ernst & Young, 2019). Understanding the dynamics of divestments is relevant not least because divestments can affect performance of affected firms and well-being of impacted workers and their communities. For example, formerly foreign-owned firms that were sold off to a domestic owner by their global parent, experienced, on average, about 25% drop in sales and value-added as well as 15% in employment.[8] Liquidations would obviously have even more serious impacts on employment and production in effected communities.

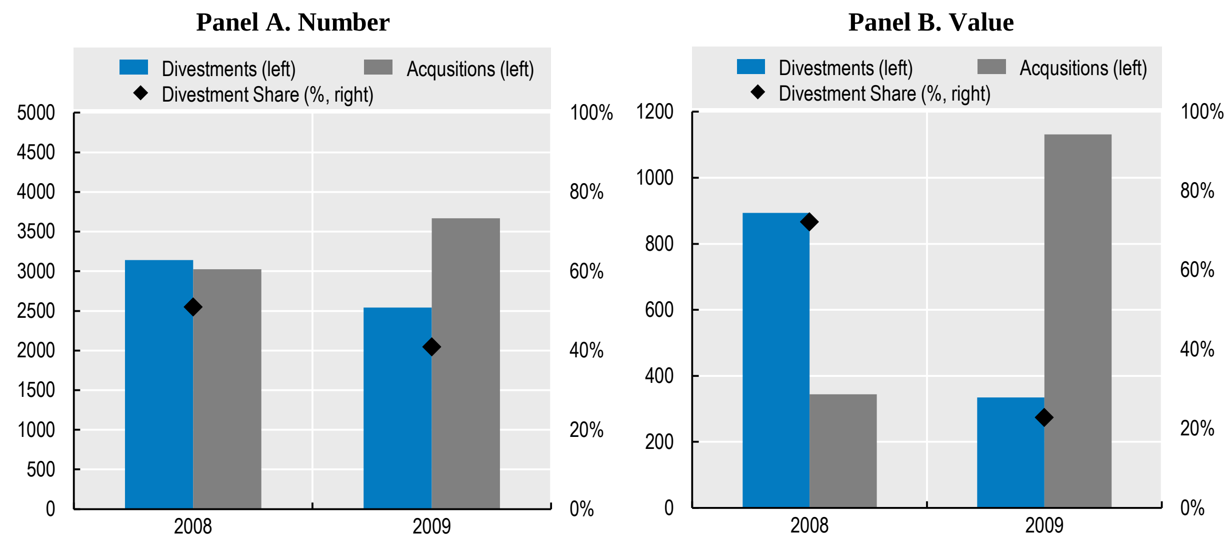
**Financial health and debt levels of MNEs** are important drivers of international divestment. If firms are in sufficiently good financial health, they may be able to hold off divestments – especially those of strategic nature – until the economy improves to obtain a better bid for the affiliates they are selling. Other firms may face severe liquidity constraints and rising debt levels that could force them to divest operations, especially as the pandemic hit when corporate debt had reached record levels (Celik et al, 2020). Therefore, the developments in MNE earnings discussed earlier are likely to impact divestment prospects.

**Looking back at acquisitions and divestments following the 2008 global financial crisis can give an indication of what might happen at this time**. Foreign divestments increased in OECD and G20 countries (Figure 8) in 2008, exceeding foreign acquisitions in terms of number and value. These divestments were followed by a wave of foreign acquisitions a year later as some firms that remained in the market were able to buy assets at attractive prices. In the first half of 2020, divestments are unlikely to increase as a significant number of firms are not yet likely to be forced to sell due to financial difficulties. There may even be a decrease in divestments as companies hold off from selling to avoid accepting lower prices.

7 For more information on OECD work with IPAs, see www.oecd.org/investment/investment-promotion-and-facilitation.htm.

8 Other studies, using official national statistics, find similar results, e.g. in the case of Indonesia, Javorcik and Poelhekke (2017) find that sold-off plants experienced a drop in output and productivity (as well as in mark-ups and export- and import intensities, among others).

### Figure 8. Number and value of foreign divestments during the global financial crisis




Note: For more information and the methodology, see Borga, Ibarlucea-Flores and Sztajerowska, 2020
Source: OECD calculations using ORBIS © data.

## Medium term outlook: Three possible scenarios

**This note considers FDI flows under three possible scenarios for the effectiveness of the public health and economic policy measures being taken by countries**: optimistic, middle, and pessimistic, based on OECD (2020) and McKinsey (2020).

### Possible scenarios

Under the **optimistic scenario**, the public health measures that have been taken control the spread of the virus within the next 2 to 3 months; treatments are identified that reduce deaths and serious illnesses from the virus; and testing is expanded to help prevent future outbreaks. The economic policy interventions are very effective and avoid serious structural damage to the economy, including those sectors of the economy that are most impacted by the public health measures taken (e.g., small and medium enterprises, and the travel, tourism, and energy sectors). Under this scenario, economic growth resumes in the second half of the year and is back to pre-crisis levels by the end of 2021.

Under the **middle scenario**, the public health measures are initially successful in containing the current outbreak in the next 2 to 3 months, but there are future outbreaks so stringent public health measures will be imposed in specific countries/regions until a vaccine is developed and widely administered in the middle of 2021. Economic policy interventions are partially effective but not completely, and, so, the economic recovery is uneven and weak.

Under the **pessimistic scenario**, the current public health measures are not able to completely contain the virus necessitating that stringent measures remain in place in many countries for an extended period. The economic policy interventions are not able to offset economic damage and economies settle into a lingering recession; bankruptcies and defaults are more common than under the other scenarios.

**Investment policies can also influence the impacts on FDI flows.** The actions taken by governments across the globe can impact investment flows either directly or by increasing or decreasing uncertainty for investors.

While there is no evidence that countries are taking measures to limit capital outflows, if countries make it more difficult for investors to repatriate their earnings, it would increase reinvested earnings in the near term but could hurt the reputation of the country as a destination for investment. In addition, as outlined in the dedicated OECD note on investment policy responses to COVID-19, some countries have taken measures to prevent potential acquisitions of sensitive assets. The design and implementation of these FDI review mechanisms **can increase uncertainty and costs and delay transactions**.

Some governments are supporting companies through equity capital injections and through taking temporary ownership of these companies. Because FDI statistics capture transactions between foreign residents and domestic residents, such transactions would only be captured in the statistics if a government provided such support to a foreign business enterprise, which would be unlikely. However, state support of this nature to domestic direct investors could enable these direct investors to support their foreign affiliates, thereby indirectly impacting FDI flows. In addition, as part of the recovery process, these state-owned assets could be sold back to private investors following the crisis, creating opportunities for foreign direct investors. Such transactions raise a number issues for governments that become temporary owners of enterprises (see the OECD note on equity injections and unforeseen state ownership of enterprises during the COVID-19 crisis).

## FDI flows through the end of 2021

In the medium term (second half of 2020 and 2021), the impacts on flows will vary greatly among countries and sectors depending on the success of the public health and economic policy measures. Figure 1 shows the projections of FDI flows under the different scenarios.

**Under the optimistic scenario, earnings are expected to start to rise in the second half of 2020 and return to pre-crisis levels by the end of 2021** as the economy recovers; the share that direct investors choose to reinvest will also return to historical levels. Almost all of the previously announced M&A deals that are pending and of the announced greenfield projects will be completed. While there might be a drop in the medium term due to the dearth of new investments being negotiated at the current time, new investments will return to normal in late 2021. Divestments would remain at historical levels. As a result, FDI flows are expected to fall between 30% to 40% in 2020 before rising by a similar amount in 2021 to return to pre-crisis levels. As noted earlier, it is important to remember that FDI flows have been on a downward trend since 2015, and FDI flows in 2018 and 2019 were lower than for any years since 2010.

**Under the middle scenario, the economic recovery will be uneven**. While earnings in some sectors will recover, others will remain below pre-crisis levels; the share of earnings reinvested will recover somewhat but not to historic levels in all sectors. The pending M&A deals and announced greenfield projects that still make strategic sense will be completed, but there will be more deals that are abandoned. Equity capital flows will be subdued not only from the dearth of new projects being negotiated during this time but from a continuing slump in new deals. Yet, there will be some foreign acquisitions as financially stronger firms buy assets at attractive prices. Divestments by firms that are struggling financially would also put downward pressure on equity capital flows. These divestments would include not only sales of existing affiliates but also some liquidations. Overall, FDI flows would fall 35% to 45% in 2020 before recovering somewhat in 2021 but would remain about one-third below pre-crisis levels.

**Under the pessimistic scenario, earnings remain depressed in most sectors and so does the share of earnings reinvested**. Equity capital flows would be significantly reduced as many of the pending M&A deals and announced greenfield projects would be called off as they no longer make strategic sense or the investor faces financial pressure, and fewer greenfield investments would be completed. New M&As and greenfield investments would be depressed. Divestments by struggling firms would be more common, including more liquidations. Overall, FDI flows would drop by more than 40% in 2020 and would be flat until the end of 2021 when the introduction of a vaccine could allow the recovery to begin.

## Long term impact on investment in global value chains

**COVID-19 may affect investors and economies differently depending on country/regional context and FDI motivations.** For example, with the projected growth in the healthcare and ICT sectors, knowledge-seeking FDI may prove buoyant in the longer run. Meanwhile, the difficulties faced by firms operating in the energy sector following the collapse in demand, may result in negative impacts for economies relying on resource-seeking FDI. Future trends in efficiency-seeking FDI are still uncertain. Disruptions due to the coronavirus pandemic may lead some MNEs to rethink the geographic and sectoral spread of their activities and shorten their supply chains and the distance between suppliers and clients. Other MNEs may wish to diversify their supplier networks to increase resilience to location-specific shocks. This diversification may involve divestments from some locations but expansions in others.

**These concerns will add to other factors that were already leading companies to reconsider their supply chains.** For example, some companies were already concerned about possible vulnerabilities of GVCs in light of global trade tensions and Brexit (e.g. Cohen and Lee, 2020). The pandemic could also increase other pressures. For example, companies were already rethinking their supply chains in response to demands by consumers and companies for more sustainable and inclusive production methods; the pandemic may increase these demands (see COVID-19 and Responsible Business Conduct for more information). Another factor present before the crisis is the deployment of digital technologies, which could expand following the experiences during the pandemic. To insulate themselves from future shocks, companies may make more intense use of e-solutions to dematerialise and automate processes, and to reduce reliance on unmovable assets and long-term contracts.[9] This may mean less FDI in the long-run but could also offer the possibility of market consolidation in the e-commerce and digital space that creates FDI opportunities.

Advances in automation and other advanced technologies may also potentially facilitate re-shoring. Although available evidence suggests that this type of activity has been relatively limited to date (de Backer et al., 2016). Long-term OECD projections also show that the rise of “new” emerging markets and a growing consumer demand could lead to further lengthening of GVCs by 2030.[10] Even as wages rise in some developing countries, operations are more likely to be moved to other developing, rather than developed, economies (de Backer and Flaig, 2017). This means that, while some re-shoring opportunities may arise post-COVID-19, offshoring is likely to remain attractive to MNEs.

9 For example, 3D printing, better use of big data to optimise local presence, a wider use of on-demand contracting workers, including for service delivery online, may reduce the need for physical presence.

10 Projections are made using the OECD METRO model, which is a static computable general equilibrium model (CGE). The model is derived from the Social Accounting Matrix (SAM) based CGE model. For more information on the METRO model and the scenarios mentioned here, see de Backer and Flaig (2017).

## References

Alfaro, L. and M. Chen (2012), "Surviving the Global Financial Crisis: Foreign Ownership and Establishment Performance," *American Economic Journal: Economic Policy,* 4(3): 30-55.

Alfaro, L. (2016). "Gains from Foreign Direct Investment: Macro and Micro Approaches." *The World Bank Economic Review*, 30 (Supplement 1): S2–S15.

Alfaro, L., S. Kalemli -Ozcan and S. Sayek (2009). "Foreign Direct Investment, Pro - ductivity and Financial Development: An Empirical Analysis of Complementarities and Channels". *The World Economy* 32, 111–135

Antràs P. and S. R. Yeaple (2014), "Multinational Firms and the Structure of International Trade", *Handbook of International Economics*, Vol 4, 55-130.

Arcelor Mittal (2020), "Innovating to support society's fight against COVID-19", *www.corporate.arcelormittal.com/media/case-studies/innovating-to-support-society-s-fight-against-covid-19.*

Borga, M., P. Ibarlucea Flores and M. Sztajerowska (2020), "Drivers of divestment decisions of multinational enterprises - A cross-country firm-level perspective", *OECD Working Papers on International Investment*, No. 2019/03, OECD Publishing, Paris, *https://doi.org/10.1787/5a376df4-en.*

Cadestin, C., et al. (2018), "Multinational enterprises and global value chains: New Insights on the trade-investment nexus", OECD Science, Technology and Industry Working Papers, No. 2018/05, OECD Publishing, Paris, *https://doi.org/10.1787/194ddb63-en.*

Celik, S., G. Dimertas, and M. Isaksson (2020), *Corporate Bond Market Trends, Emerging Risks, and Monetary Policy,* OECD Capital Market Series, Paris, https://www.oecd.org/corporate/corporate-bond-market-trends-emerging-risks-and-monetary-policy.htm.

Cohen, M. A. and H. L. Lee (2020), "Designing the Right Global Supply Chain Network", *Manufacturing & Service Operations Management*, Vol. 22, No. 1, *https://doi.org/10.1287/msom.2019.0839*

CNBC (2020), "GM offers manufacturing blueprints for face masks to 600 auto parts suppliers amid virus pandemic", www.cnbc.com/2020/04/05/gm-encouraging-suppliers-to-produce-face-masks-amid-covid-19-pandemic.html

Coca-Cola (2020), COVID-19 Response, www.coca-colacompany.com/news/covid-19-response-how-the-coca-cola-north-america-system-is-supporting-communities-and-frontline-responders

De Backer, K., et al. (2016), "Reshoring: Myth or Reality?", OECD Science, Technology and Industry Policy Papers, No. 27, OECD Publishing, Paris, https://doi.org/10.1787/5jm56frbm38s-en.

Desai, Mihir, C. Fritz Foley, and Kristin J. Forbes (2008), "Financial Constraints and Growth: Multinational and Local Firm Responses to Currency Depreciation," *Review of Financial Studies,* 21 (6):2857-88.

De Backer, K. and D. Flaig (2017), "The future of global value chains: Business as usual or "a new normal"?", OECD Science, *Technology and Industry Policy Papers*, No. 41, OECD Publishing, Paris, *https://doi.org/10.1787/d8da8760-en*.

Ernst & Young (2019), Global Corporate Divestment Survey, *www.ey.com/en_gl/divestment-study*

Forbes (2020), "General Motors Embraces Supply Chain Resiliency", www.forbes.com/sites/stevebanker/2016/05/31/general-motors-embraces-supply-chain-resiliency/#38d054b13684

Fortune (2020), "Europe's auto factories are closing. Experts fear a lost decade is coming", www.fortune.com/2020/03/17/coronavirus-impact-shutdown-european-auto-sector-volkswagen

Helpman, E., Melitz, M., Yeaple, S. (2004), “Export Versus FDI with Heterogeneous Firms”, *American Economic Review* 94, 300-16.

Javorcik, B. S. and S. Poelhekke (2017), "Former Foreign Affiliates: Cast Out and Outperformed?", Journal of the European Economic Association, Vol 15, Issue 3, 501–539.

Kose, A., N. Sugawara and M. E. Terrones (2020), "Global Recessions," *Policy Research Working Paper Series 9172,* World Bank.

McKinsey (2020), Scenarios for the Economic Impact of the COVID 19 Crisis.

New York Times (2020), DealBook of April 7, 2020, Interview with Professor *Steven Davidoff Solomon of the Berkeley Center for Law, Business and the Economy.*

OECD (2020), Valuating the Initial Impact of COVID-19 Containment Measures on Economic Activity, https://www.oecd.org/coronavirus/policy-responses/evaluating-the-initial-impact-of-covid-19-containment-measures-on-economic-activity/

OECD (2019), *FDI Qualities Indicators: Measuring the sustainable development impacts of investment*, http://www.oecd.org/investment/fdi-qualities-indicators.htm

OECD (2018), Multinational enterprises in the global economy: Heavily debated but hardly measured. Policy Note, www.oecd.org/industry/ind/MNEs-in-the-global-economy-policy-note.pdf

OECD (2008), *Benchmark Definition of Foreign Direct Investment, 4th edition*, www.oecd.org/investment/fdibenchmarkdefinition.htm

OECD-UNIDO (2019), Integrating Southeast Asian SMEs in global value chains: Enabling linkages with foreign investors, www.oecd.org/investment/integrating-southeast-asian-smes-in-global-value-chains.htm

Refinitiv (2020), S&P 500 Earnings Scorecard, March 30, 2020.