COVID-19 AND PUBLIC-PRIVATE PARTNERSHIPS PRACTICE

Assessing the Impact of COVID-19 on PPP Pipelines and Projects in Preparation
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COVID-19 has impacted infrastructure PPP projects and investments around the globe in all sectors. In its first 18 months, the pandemic caused disruptions to the operation of PPP projects, and their planning, preparation, and procurement. Projects were delayed, canceled, and restructured. Changes to customer demand and attitudes are forcing a shift in infrastructure needs, making governments and investors revisit priorities and look more closely at issues of resilience and sustainability in PPPs.

Some infrastructure sectors, notably transport, were impacted more than others due to lockdown, social distancing, and travel restrictions. There may be a slower recovery in some sectors, while changes could be permanent in others. Sectors such as digital and health saw increased demand and hold a promising future, at least for PPP investment.

COVID-19 offers opportunities for a review and reset of PPPs from these perspectives:

- **Governments** will need to consider how best to deal with immediate pandemic impacts, what infrastructure services are needed and how to structure PPPs to attract investment and stimulate activity.
- **Governments and potential bidders** should review assumptions in PPPs already structured or tendered, but not yet awarded, for example, to adjust for effects on demand growth and to assess if contract provisions need to be adjusted to reflect circumstances (such as force majeure).
- **Bidders and investors** are likely to reconsider which sectors and markets will be most favorable to deploy capital and the key provisions and protections they will require in upcoming contract tenders.

This note complements two other World Bank Practice Notes that dealt with the effect of COVID-19 on PPPs: "Assessing the Impact of COVID-19 on Operational PPP Portfolios" and “Stocktake of government responses to the impact of COVID-19 on PPP Projects.” This note building on previous analytical work on COVID-19 impacts to operational PPPs, this note discusses impacts on projects in the planning and procurement stages and examines the immediate effects on investment in PPPs in the first 18 months of the pandemic (from 2020 to the first half of 2021) and early government initiatives to stimulate recovery through infrastructure investment. The note reflects on how PPPs may change post-pandemic based on actions within this time period that are documented in this note, but does not discuss the yet-evolving “new normal” of PPPs and markets. While general good practice on PPPs is important, this note does not seek to repeat those principles here.
The pandemic resulted in delays, cancellations, and changes to PPP projects in planning and procurement stages, driving an overall decline in private participation in infrastructure (PPI) investments in 2020. Early signs of recovery are seen in 2021, and despite the turmoil, some PPPs managed to reach financial close. Lessons can be learned from those projects.

This section examines the scale of the impact of COVID-19 on PPP projects under preparation and touches on affected operational PPPs to identify lessons for future projects.¹

2.1 Market Activity

PPP investment in 2020 declined significantly in comparison to previous years and hit the lowest levels since 2004. Global PPI in 2020 was at $45 billion in 252 projects—a 52 percent drop from 2019. PPI investment in 2021 accounted for $76.2 billion across 240 projects, representing 0.26 percent of the GDP of all low- and middle-income countries. Private sector investment commitments increased by 49 percent from 2020, showing clear signs of recovery. However, the 2021 commitments were still 12 percent lower than the previous five-year average (2016–2020) – Figure 1.

*Figure 1 Investment commitments in infrastructure projects with private participation 2012–2021*²

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² PPI Database 2021 Annual Report
Compared to 2019, PPI projects closing in emerging market and developing economies (EMDEs) in 2020 (See Figure 2) suggest that the immediate impact of the pandemic were (i) overall investment size decreased, (ii) smaller projects were easier to close in the short term, (iii) transport projects, while still attractive to the market, would require closer review in the future, and (iv) a trend towards investment in green technologies continues.

**Figure 2 Trends in emerging markets 2020 PPI data compared to 2019**

- **Average project size decreased** (down $60 million)
- **Small projects on the rise** (accounted 59% up from 53%)
- **Transport sector was the hardest hit** (Only 41 projects)
- **Renewable energy investment continued** (117 out of 252 projects)

Similar news to that of EMDEs in 2020 came out of the European markets according to the European PPP Expertise Centre Market Update. This highlighted decreases in both the number and value of PPPs in comparison to 2019:

- The value of European PPPs decreased by 27 percent from 2019, and, in terms of numbers, the market decreased by 11 percent (the lowest number of transactions since 1997)
- Only six large transactions (over €500 million or $580 million) closed in 2020 and were all transport-sector related (roads and airports)
- Activity in the telecommunications sector increased, particularly with broadband transactions
- Fifty-nine percent of the transactions closed were demand/revenue-based—the first time since 1996 that more than half of the PPPs reaching financial close were demand-based

### 2.2 Canceled or Delayed PPPs

Major infrastructure projects around the world—including PPPs—were delayed or canceled in 2020, explaining the reduction in overall investment. Reasons for delay or cancellation are not always easy to pinpoint, and COVID-19 could have merely triggered canceling or postponing already-troubled projects. Projects in the planning, procurement, and construction stages, however, have been affected by office closures, unavailability of staff/laborers, travel restrictions, disrupted supply chains, changed government
priorities, and need for updated information, including financial and demand projections, and government budget reallocations.\(^3\)

The number of infrastructure projects that have reported cancellation or delay in EMDEs reached 307 by May 2021. Disruption hit a peak in April 2020 and has since decreased. Data was not collected beyond May 2021 as delays and cancellations can no longer be attributed to the immediate shock of the pandemic.

*Figure 3 Number of COVID-19-Affected Infrastructure Projects in EMDEs\(^4\)*

Figure 4 sets out a few examples of the immediate impact of PPP projects under preparation at the time of the pandemic and does not reflect later decisions regarding the future of these projects.

\(^3\) E.g., in Mexico, the government cancelled a series of open-tender processes citing their non-indebtedness policy amid the crisis caused by COVID-19.

\(^4\) COVID-19 Operational Disruptions in Infrastructure, PPI Database, May 2021.
### United Kingdom
Western Rail Link to Heathrow, one of the UK's largest rail projects, was put on hold by Network Rail. This was attributed to COVID-19 and continued discussions concerning the project's funding.

### Colombia
Public bidding of the first wave of fifth generation of transport infrastructure PPPs at a national level (5G Projects) was delayed for almost a year. 5G Projects with capital investment of $6 billion included PPPs for: 8 road, 4 airport, 2 river navigation, and 1 rail PPP.

### Barbados
Procurement delayed for a 30-year concession PPP to expand, operate, and maintain Grantley Adams International Airport due to the "new realities" of the aviation industry.

### California USA
A construction firm in Long Beach, California, requested an extension for the development of the Long Beach Civic Center PPP due to the economic uncertainty caused by COVID-19.

### Hawaii USA
Honolulu, Hawaii's troubled rail project (HART) is facing up to 18 months of delays as the Honolulu Authority of Rapid Transportation is considering scrapping the use of a PPP to build the remaining guideway and stations as well as operate the system for 30 years.

### India
While the Navi Mumbai Airport struggled from the start due to delays of environmental permissions and issues in acquiring land from local farmers, the project has been further delayed due to the pandemic.

### Poland
Procurement of an entrepreneurial PPP center in Staszow cancelled due to the pandemic's impact.

### Argentina
Cancelled an already-postponed project (from November 2019), to build a power transmission line between Rio Diamante and Charlone worth $560 million. Additionally, a new gas pipeline to Vaca Meurta was cancelled for a third time due to lack of bidders.
Brazilian infrastructure projects were heavily affected by COVID-19. Ninety-three (93) infrastructure PPPs and concession tenders at all government levels were reported in publicly available information to have been canceled in 2020. This is a 52 percent rise in cancelation compared to 2019. Another 270 tenders were postponed or suspended in 2020, representing an increase of 23 percent from 2019. The pace of project launches also worsened. In 2020, an average of 44 new projects were launched per month, while, in 2019, this number was 54. However, some PPP projects did manage to close during 2020 and early 2021, including PPPs for street lighting, sewage treatment, highways, housing, and solid waste management.

The passenger transportation sector was most negatively affected. According to the National Civil Aviation Agency (ANAC), COVID-19 significantly impacted the air transportation sector, as indicated by the demand and supply data study published in April 2021. It reported that in March 2021, there was a 32.5 percent retraction in demand for flights in the domestic market when compared to the same period in 2020. As for the international market, demand dropped by 81.5 percent compared to the same time in 2020.

The 6th Round of Airport Concessions is the most important example of project delays. The tender was expected at the end of 2020 but postponed to April 2021. Given the new economic situation, ANAC decided that it was necessary to review the demand projections for passengers, aircraft, and cargo. The economic-financial models were adjusted. These adjustments were made to improve the attractiveness of the auction, reduce costs, and maintain competitiveness, in addition to reducing the risks for investors.

2.3 Notable Projects Signed Despite the Global Crisis

There were a few bright spots in 2020 with some PPPs reaching financial close despite the circumstances with the help of adjustments to some projects to ensure they could receive committed investment. The examples below highlight that well-planned and well-structured projects, which are flexible in approach, can still attract investment and proceed despite difficult circumstances. Success increases in cases where parties are willing to adapt to changing deadlines, remote negotiations, and where there is a pragmatic approach to risk allocation and availability of government support.

Czech Republic: The €250 million D4 Expressway PPP in the Czech Republic reached financial close ‘in the teeth’ of the second wave of COVID-19. Despite a lengthy procurement period (pushed out by procurement challenges, use of competitive dialogue, and best and final offers–BAFOs), reasons for the project robustness may include:

- The project was awarded to a strong consortium of international sector specialist construction companies and infrastructure funds, which provided strong technical and financial capacity.

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5 Considered a concession rather than a PPP as in Brazil, there is a distinction between common concession contracts and PPP contracts (administrative or sponsored concessions).
6 Also see Section 4.1 below for further details on this Airport Concession project.
• Finance was provided by a large and mixed syndicate of IFI and commercial lenders.
• The PPP Agreement used an availability-based, rather than demand-based, payment mechanism.
• The project had material adverse change protection for lender commitments.
• The project duration, of 28 years, is lengthy enough to withstand better short-to-medium-term external shocks.
• The government is retaining forex risk throughout the project.

**Wales:** The £1.14 billion A465 'Heads of the Valleys' Road Project was the first PPP to be procured under the Welsh Governments Mutual Investment Model (MIM). The project was one of a few greenfield PPPs project financing in Europe and involved several debt tranches being provided by commercial banks and institutional lenders. Financial close was achieved in October 2020, four months after the announcement of the preferred bidder, which demonstrates the market's ability to finalize a large-scale project financing remotely, despite the lack of in-person meetings due to pandemic restrictions.

**Saudi Arabia:** It was announced that the Saudi Water Partnership Company and the Engie-led consortium closed on the Yanbu-5 independent water plant PPP on the Red Sea coast near Madinah, which is the first of its kind, including an $826 million water desalination plant with transmission pipeline.

**Bulgaria:** The Sofia Vrazgdebna Airport Concession ($1 billion) reached financial close in 2021 between the Ministry of Transport, Information Technology and Communications of Bulgaria and SOF Connect (a consortium of French investment firm Meridiam, Austria-based STRABAG and operator Munich airport) for a duration of thirty-five years. It is the first PPP in Bulgaria in 13 years recorded by European PPP Expertise Centre. A EUR 240 million financing from a club of lenders including IFC and EBRD was provided to fill a market funding gap and was required to structure the project, especially in the COVID-19 crisis conditions.
COVID-19 pandemic has negatively affected the global economy. As the world recovers, infrastructure is hoped to be a major lever for economic stimulus. Fiscal pressures mean governments have fewer resources to invest in traditional methods. PPPs can bridge this gap—but must be properly structured to attract private investment, promote building back better and avoid placing unsustainable debt burdens on governments through direct and contingent liabilities.

This section considers the impacts of COVID-19 on government finances and infrastructure investment and looks at steps recently taken by some countries to promote PPPs as a mechanism to bridge the investment gap.

3.1 The Increasing Debt Crisis

The COVID-19 pandemic hit the global economy. Global GDP fell by around 3.5 percent in 2020. Up to 85 percent of workers globally were affected by COVID-19 related restrictions, and nearly 9 percent of working hours were lost in 2020—four times higher than during the global financial crisis.

While the slowing of economic activity was less than predicted—mainly due to extraordinary policy support from governments—and global GDP rose from this point by 6.0 percent in 2021, uncertainty remains and depends on further vaccine rollout and on the structure of individual economies, particularly for EMDEs that are expected to suffer more medium-term losses.

Immediate government policies have generally focused on escaping the crisis by promoting health spending, providing fiscal support, and managing fiscal policy (tax relaxations, restructuring of loans, etc.) As the recovery progresses, however, policymakers will need to focus on how to boost longer-term productive capacity, for example, through public investment.

Sovereign debt levels were elevated before the crisis. With a fall in revenues due to low growth and trade, debt levels and cost of financing for some countries are being pushed to new heights. Countries with higher debt burdens will face difficult choices between scaling up public investment to meet ambitious development objectives and containing debt vulnerabilities.

3.2 What Does This Mean for Infrastructure Investment?

Demand for infrastructure is increasing—particularly in emerging economies—driven in the short-term by pent-up demand and by long-term global trends, such as an increasing and aging population, a rapid

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7 Latest IMF data (Jan 2022) states that the global economy is now projected to grow 6.0% in 2021 and 4.9% in 2022.
8 It is estimated that half of low-income countries (36 out of 70) were at high risk of distress or already in distress—that is true also of many emerging market economies.
9 Global population is expected to grow by 1.5 billion to 8.5 billion by 2030: 97% in emerging countries, 60% in Asia, 17% in Africa.
rise in urbanization, reliance on new technology, impacts of climate change, and a move away from carbon-based power.

Economies, especially in developing countries, were already facing significant infrastructure gaps pre-COVID, with a substantial difference between investment needs and levels. According to the Global Infrastructure Hub (GIH)\textsuperscript{10}, the gap is around $15 trillion globally (see Figure 5)\textsuperscript{11}. Traditional sources of finance for infrastructure—government budgetary allocations—have not been enough to meet demand and are now more depleted. Prior to the pandemic, the Asian Development Bank (ADB) estimated an annual infrastructure gap of $204 billion to be filled through private sector investment. That amount is now expected to increase. Support from the international community and private investment will be needed to aid reforms.

*Figure 5 Infrastructure investment at current trends and need*

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\includegraphics[width=\textwidth]{infrastructure_investment_current_trends_and_need}
\caption{Infrastructure investment at current trends and need}
\end{figure}

\textsuperscript{10} Based on the period from 2016 to 2040—World Bank data only covers economic infrastructure (energy, water and waste, transport, ICT) in low and middle-income economies.

\textsuperscript{11} The Asian Development Bank (ADB) estimates that Asia and the Pacific must spend $1.7 trillion a year on infrastructure until 2030 to maintain growth, meet social needs, and respond to the effects of climate change.
At a time when infrastructure spending should have been increasing, private investment decreased. Infrastructure Monitor 2020 notes that private investment in infrastructure in primary markets was already low and declining in 2019 at around $100–150 billion globally per year\(^\text{12}\) and further fell to around $80 billion in 2020, the lowest in over a decade (Figure 6). This is in contrast to an increase in secondary market transactions in 2020, indicating that a lack of private capital is not the issue, rather the issue is mobilizing that capital and a lack of new projects.\(^\text{13}\)

*Figure 6 Private infrastructure investment in primary and secondary markets*

![Graph showing private infrastructure investment in primary and secondary markets from 2010 to 2020.](image)

*Source: Global Infrastructure Hub based on IJ Global data.*

*Note: Figures may differ slightly from those published in Monitor 2020 due to data revisions and minor methodological improvements.*

The pandemic will increase calls for spending on public services including social safety nets, health care, digital connectivity, and infrastructure. GIH reports that public investment in infrastructure has an average fiscal multiplier of about 0.8 within 1 year, and around 1.5 within 2 to 5 years over those found for public spending as a whole, across both timeframes, with evidence that the effect tends to be higher in times of recession.\(^\text{14}\)

Infrastructure investment can and should be an important element of medium- and long-term stimulus packages to drive an economic rebound and enable sustainable transformation of the economy. Several countries have already announced major infrastructure investment policies, including the United

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\(^{12}\) Of that amount, 77% of private infrastructure investment was in higher income countries—showing that investment in lower- and middle-income economies was further depressed.

\(^{13}\) Global Infrastructure Hub, Infrastructure Monitor (2020).

\(^{14}\) Ibid.
Kingdom\textsuperscript{15}, United States\textsuperscript{16}, Australia\textsuperscript{17}, and Italy\textsuperscript{18}. While many of these plans may be delivered by traditional public investment, many stakeholders have called for scaling-up private sector participation to tap into financing from long-term investors that have an estimated $80 trillion of assets under management that could be used for infrastructure.

Although infrastructure investments are a vital stimulus, the desire to accelerate their development should not be at the expense of strategic prioritization, planning and preparation, nor should it be used to circumvent fiscal constraints. An International Monetary Fund (IMF) report\textsuperscript{19} warns that because public obligations under PPPs do not always appear in government balance sheets they may be underestimated. Contingent liabilities in PPPs can represent significant burdens that need to be taken into consideration and managed. The report indicates that public contingent liabilities in general (i.e., not only those linked to PPPs but state-owned enterprises, for instance), have been increasing over the last few years, particularly in Sub-Saharan Africa and Asia and the Pacific. This raises concerns about hidden liabilities, which could have severe long-term fiscal impacts for governments\textsuperscript{20} if not properly managed.

### 3.3 What Does This Mean for PPPs?

PPPs may have come under scrutiny in certain countries recently,\textsuperscript{21} but they are often viewed as a key model to enable delivery of infrastructure policies, particularly in emerging economies. Key benefits include:

- Key risks can be allocated to, and managed by, the private sector on an integrated construction and operation basis
- There is a high degree of visibility on future spending through financial models and set economic projections
- Greater flexibility is possible to address unplanned events/shocks given less restrictions and simpler decision-making process to redirect investments or stop/start activities where immediate actions may be needed
- Better risk management throughout the project life cycle
- Mobilization of additional financing
- Tend to be delivered, on the whole, on time and within budget compared to alternative procurement

\textsuperscript{15} National Infrastructure Strategy published by UK HM Treasury (2020) sets out plans for £600 billion investment over five years. This includes £27 billion in 2021/22 on economic infrastructure in addition to £8.6 billion in 2020 on capital investment in infrastructure, decarbonization and maintenance projects.

\textsuperscript{16} The American Jobs Plan—a proposed $2 trillion plan to improve the nation's infrastructure and shift to greener energy over the next eight years.

\textsuperscript{17} As part of the 2021/22 budget, the Morrison-McCormack government announced an additional $15 billion commitment to infrastructure to support 30,000 jobs as part of the $110 billion 10-year infrastructure investment pipeline.

\textsuperscript{18} The Italian Recovery Plan includes a €30.6 billion Italian state fund for infrastructure projects.

\textsuperscript{19} IMF, Evaluation of Public Debt Vulnerabilities in Lower Income Economies (January 2020).

\textsuperscript{20} World Bank is conducting global research on fiscal risk management of PPPs post-COVID-19.

\textsuperscript{21} For example, the UK has stated that it will no longer use the PFI/PF2 model for infrastructure investment.
In addition to countries embarking on infrastructure programs, many have announced intentions to use PPPs.\textsuperscript{22} The ADB expects PPPs to play a bigger role in closing the infrastructure gap. As noted above, infrastructure is often viewed as a cornerstone of recovery and, when public finances are stretched, PPPs can, if structured correctly, offer an efficient way to stimulate the economy.\textsuperscript{23}

There are several areas that governments can consider to attract private investment and develop PPPs post-pandemic, such as, reviewing PPP sector priorities, reinforcing government capacity, reconsidering risk allocation and contract provisions, as well as reflecting on lessons learned and consulting with stakeholders. More generally, two areas where some governments are taking action are in adapting their PPP frameworks and developing PPP pipelines to reflect the new realities of the infrastructure sectors.

### 3.4 PPP Legal Frameworks

Most countries with successful PPP programs rely on a legal framework and strong institutional base. Legal frameworks for PPPs are part and parcel of the enabling environment for such projects, comprising a set of policies, rules, and regulations that together define how PPP projects are identified, assessed, selected, prioritized, budgeted, procured, monitored, and accounted. Throughout COVID-19, several countries have announced new PPP laws or amendments to PPP laws. While many of these reforms were underway before the pandemic, revisions were able to incorporate responses to the crisis. A few examples are set out in Box 2, which evidence the desire to meet best practices and enhance attractiveness for private sector investment.

#### Box 2 Examples of countries introducing or strengthening PPP laws

**Kenya**: The Kenya National Treasury passed a new PPP bill in November 2021\textsuperscript{24} that aims to address some of the deficiencies of the 2013 Act from an investor perspective. Changes include a more certain and streamlined project process with clear timelines, expanded procurement options, and a more investor-friendly process for unsolicited proposals (USPs). The bill also envisages more robust project management and institutional framework through the establishment of a PPP Directorate and project implementation teams. The bill is to streamline the regulatory framework for PPPs, enhance efficiency in the PPP process through reducing the number of oversight approvals, and propose timelines on key project processes and stages. While this was already in progress prior to the pandemic, it was able to reflect conditions arising from the pandemic.

\textsuperscript{22} For example, in Mexico, the 2021 federal budget includes a maximum amount of 42,735,600 pesos for PPP projects, which represents a 6.63 percent increase over 2020. The budget focuses mostly on transport and public health projects, mainly the construction of hospitals to cope with the COVID-19 crisis. Transport projects to be tendered in upcoming months are expected to include the development of new railways, highways, and ports.

\textsuperscript{23} ADB is working on a PPP Directional Paper to cover the period to 2030 to set strategic directions for PPPs. In the near-term, they expect investment in healthcare and services, and in the medium- to long-term, the need for economic infrastructure. (ADB Partnerships Bulletin).

\textsuperscript{24} The Public Private Partnerships Bill, No. 6 of 2021, published on March 12, 2021.
Senegal*: A new PPP contracts law was passed in 2021 to provide a legal framework that is more “flexible, reassuring for investors, and conducive to the rapid completion of quality and job-creating PPP projects.” Although initiated before the pandemic, the law reflects the country’s post-COVID-19 economic recovery plan. Key provisions are: (1) unification of the legal framework, (2) new governing bodies, (3) modernization of the procurement process, (4) increased local content, and (5) increased contract performance, including lenders’ rights and monitoring.

Guinea*: The government recently released a number of long-awaited decrees, implementing a PPP law and institutional framework. By adopting this new legal framework for PPPs, the government of Guinea has clearly expressed its commitment to encourage investment in infrastructure, its intention to strengthen the capacities of its institutions, and its determination to control and monitor public investments and the financial commitments of institutions. Except for mining and oil and gas projects, the PPP legal framework applies to all sectors, designation, or contractual nature, thereby providing clarity and simplicity for sponsors.

Qatar: A new PPP Law No. 12 published on May 31, 2020, to regulate the operation of PPPs in Qatar. The PPP law introduces a new process designed to streamline and accelerate the conception and design of PPP projects, while leaving considerable flexibility and discretion to governmental authorities to tailor individual PPPs to meet specific project needs. It signals Qatar’s strategic commitment to PPPs to local and international investors and lenders, which is seen as an attractive route to building key social infrastructure projects to deliver towards the Qatar 2030 Vision. The proposed PPP models and the enactment of the new PPP law align with best industry practices and aim to attract foreign direct investment from experienced international project sponsors and lenders.

Abu Dhabi: New PPP Procurement Regulations were enacted on August 31, 2020, to provide a robust legislative structure to support long-term private sector investment in the procurement and delivery of infrastructure assets. The regulations clarify that projects approved in accordance with the PPP law and regulations are not subject to the existing procurement law. The PPP law, regulation, and guidebook (with details on the processes and procedures for the development, procurement, and management of partnership projects in Abu Dhabi) provide consistency and clarity and align with international best practices. The PPP regulations and overall framework are a clear signal of the government’s political commitment to PPPs.

Philippines: On May 19, 2021, the proposed bill “Public-Private Partnership (PPP) Rationalization Act” was approved with the aim of ensuring better transparency in transactions, making the PPP Center more efficient, and intensifying the cooperation between the public and private sectors. It proposes major reforms to help boost the PPP program, among them providing clearer and simpler rules for faster project implementation to foster competition. It sets clearer procedures on project approval and procurement, fiscal rules on contingent liabilities, and other vital concerns. The measures aim to promote public infrastructure financing by including joint ventures such as PPP variants, opening capital

26 Decree D/2021/041/PRG/SGG implements the PPP Law and decree D/2021/042/PRG/SGG.
27 Bidding for Qatar PPP projects, Dentons, 2020
28 The regulations follow the Abu Dhabi government’s announcement in early 2020 to issue tenders worth 10 billion UAE dirham under the PPP model in infrastructure partnership projects including education, transport, and municipal works. The initiative was launched as part of the 50 billion UAE dirham Ghadan 21 accelerators program to boost Abu Dhabi’s economy.
markets for the financing of PPP projects, and defining the roles and participation of local government units in PPPs. To enhance fair competition and protect the public interest, the bill proposes to improve the framework on unsolicited PPP projects.

**Vietnam**: Vietnam’s new PPP law was ratified on June 18, 2020, and came into effect on January 1, 2021. It establishes an umbrella legal framework for all PPP projects and aims to attract more private investment in the development of Vietnam’s infrastructure. It clarifies that PPPs are permitted in five sectors (transport, power, water, health and education, and IT), sets minimum PPP project values, limits state capital participation (to 50 percent), provides for risk-sharing (for revenue reductions), clarifies government incentives/guarantees, and states that standard form contracts will be provided for various forms of PPPs.

**Pakistan**: On July 7, 2020, President Arif Alvi issued the “PPP Authority (Amendment)” Ordinance, 2020 (Ordinance), amending the federal PPP Act to create a more facilitative PPP regulatory framework and make it more amenable to private investment in development projects. The ordinance was passed by the National Assembly on February 1, 2021. Some key developments include: lowering regulatory approval requirements for certain projects, integration of unsolicited proposals by private parties, creation of a project development facility to support project proposals, creation of a new PPP Party to review and approve PPP proposals, and a risk management unit to ensure fiscal oversight of PPP projects.

*Assistance provided by the World Bank Group and PPIAF.*

Governments strengthened their PPP legal frameworks in part to boost investment post-pandemic providing greater clarity and, in some cases, streamlining their PPP processes. A clear and consistent government position can foster investment in infrastructure.  

The pandemic highlighted the following areas to address in PPP legislation and regulations to enable PPP programs to recover to pre-COVID levels:

- **Maintain the economic balance, provide opportunities for step-in, and make projects more resilient to external shocks**: Certain changes may be needed to force majeure, change in law, special circumstances and MAGA provisions in PPP laws, regulations, and guidelines to add clarity, flexibility, and ultimately, help make projects more resilient to shocks. In certain circumstances, provisions for legislative adjustments may also be necessary to allow the public partner to continue to make availability payments, even if the project operates below

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29 Law No. 64/2020/QH14. Also Decree 35/2021/ND-CP detailing and guiding implementation of the PPP Law and Decree 28/2021/ND-CP on the financial management mechanism of PPP projects passed on March 26, 2021.


31 Change in law provisions (also known in some jurisdictions as a “stabilization clause”) in the PPP legislation and contracts used to be most critical for emerging markets with unstable regulatory environments. Now they are becoming very important as various anti-pandemic measures affecting the performance of PPP projects have been introduced in primary and subordinate legislation. Change-in-law provisions may give the private partner the same options (for example, liability relief, right to change and, in some cases, terminate the PPP contract; and right to claim compensation of additional costs or lost profit) as under MAGA provisions, as described above.
full capacity in extreme events. Some PPP legal frameworks may need to be amended to recognize the rights of lenders (step-in) to keep the project and services going if the private partner defaults. In France, a new law was passed in March 2020 to adapt the rules for the award and performance of concessions and public contracts during the COVID-19 pandemic\textsuperscript{32}. The law ensures that when the concession grantor is led to significantly modify the terms of performance provided for in the contract, the concessionaire is entitled to compensation for the resulting additional cost of the service or work, if this requires supplementary resources that are excessive in relation to the concessionaire's financial situation. Later in December 2020, another law introduced the notion of "exceptional circumstances" into the Public Procurement Code to authorize grantors to implement temporary measures to deal with difficulties\textsuperscript{33}. This law contains a new provision that concession agreements and public procurement contracts whose term falls within the period of exceptional circumstances may be extended by amendment beyond the term provided for in the contract when the organization of a competitive bidding procedure cannot be implemented.

- Ensuring PPP models are flexible in terms of risk-sharing and project structures. The PPP framework in many EMDEs is often too rigid to successfully attract and implement PPPs—for example, being too prescriptive on the types of models allowed. Provisions should also be reviewed to ensure there is sufficient scope to encourage a collaborative approach to resolving issues as seen during the pandemic.

- **Providing flexibility for government financing and support mechanisms.** In practice, projects may be more bankable when public partners can offer direct support through demand guarantees (such as minimum traffic or volume guarantees), compensation of costs or lost profits, and other types of public support. Governments in many countries stepped in to provide short-term financing to projects at the height of the pandemic.\textsuperscript{34} Providing clarity on a menu of possible financing and government support instruments in the PPP legal framework and the ability to step in during extreme events, and on how and when governments can step in for future emergencies would give more certainty to investors and protect governments from excessive claims.

- **Reviewing and strengthening methodologies for risk assessment and management.** The pandemic has highlighted the importance of sound revenue projections and risk assessments and comprehensive risk allocation, including large-scale external shocks.

In certain sectors, demand has reduced drastically, with a corresponding reduction in contract revenues. This is likely to result in reduced appetite from investors for demand-based (e.g., user-paid) concessions. The lesson from the pandemic is that projects should be thoroughly reviewed in terms of bankability under a range of scenarios including stress-tested for a significant drop in demand. Stress testing specific scenarios could guide project risk allocation,

\textsuperscript{32} Ordinance N 2020-319 of March 25, 2020.
\textsuperscript{33} Ordinance N 2020-1525 of December 7, 2020.
\textsuperscript{34} Assessing the Impact of COVID-19 on Operational PPP Projects and Programs, World Bank, March 2021.
development of action plans, and anticipate costs to ensure resilience and avoid service disruption or failure. This analysis also informs whether government support may be necessary under certain circumstances when this represents value to the government. The current crisis clearly shows that refocusing and strengthening commitment to risk management methodologies and modern technologies in this area has become critically important.
Great expectation is being placed on the implementation of the Italian *Recovery Plan*, which provides for resources to be dedicated to energy transition and sustainable infrastructure. With regard to PPPs, the hope is that these resources will be used as a certain and *defined public contribution* within the framework of PPPs. This is provided for by article 180, paragraph 6, of the Italian Procurement Code (Legislative Decree 50/2016), which provides for a public contribution of up to 49 percent of the value of the total investment of the project in question, with objective advantages in terms of bankability of the operation.

A change designed to encourage interest in participating in PPP tenders is the certainty of *timing*. In some sectors (e.g., sports infrastructure), special regulations have been introduced aimed at *speeding up the approval process*. This appears in the Simplification Decree, which has just been approved by the Italian government (Law Decree 77/2021) giving general “substitutive” powers for the President of the Council of Ministers in the event of inertia on the part of the competent local or central granting bodies with reference to strategic infrastructure.

The Simplification Decree also introduced changes, making it easier for firms that win public tenders to *issue sub-contracts*. Previously, subcontracting could not exceed 50 percent of the total contract amount, and the complete transfer of the contract and execution of labor-intensive works was prohibited. From November 1, 2021, any limit on subcontracting was removed, but contracting authorities will indicate in the tender documents the services or works that must be carried out by the contractor and will indicate the works for which it is necessary to reinforce the control of working conditions and health and safety of workers and prevent the risk of criminal infiltration. Under the new law, the main contractor and subcontractor are made jointly and severally liable to the contracting authority.

Another important point is the *role of SACE* (a public company wholly owned by Cassa Depositi e Prestiti) whose role is to support Italian companies in their internationalization and promotion of sustainable projects in Italy. SACE encourages investment in sustainable projects, including infrastructure, through financial guarantees, counter-guaranteed by the State. This support makes it easier to obtain financial resources from potential lenders.

Finally, a further recent important development is the issuance by the National Anti-Corruption Authority (ANAC) of a *PPP contract template* setting out a clear allocation of risks based on the bankability of the projects and Eurostat principles for the off-balance allocation of the costs. This initiative could have a favorable impact on the development of a PP, also considering that the template is based on a concession to design, build, and operate a project supported by public grants.

### 3.5 PPP Programs and Project Pipelines

Predictability and certainty are important to contractors and investors. Announcing new or updated PPP pipelines is a proven way to generate investor confidence and interest in the market. It signals government commitment and enables investors to plan and allocate resources. However, credible, well-prepared projects will need to be advanced to attract investors. While project pipelines were already under development before the pandemic, several countries have updated or amended these over 2020 and early 2021 (Box 3) indicating a commitment to continue with their PPP programs despite the pandemic.
Thailand: In April 2020, the SEPO announced its PPP Project Preparation Plan to be developed between 2020 and 2027, worth an estimated 1.09 trillion baht ($32 billion), including 92 possible projects. The PPP Project Preparation Plan outlines the urgent need for partnership projects, brief project information, objectives, total investment, and time frames for preparation and operation. Basic infrastructure, including roads and trains (sky train, metro), feature prominently. The plan notes that digital technology infrastructure may be significantly developed to further digitize the main platform for communications. It is also expected that the healthcare sector will be a focus, since COVID-19 has exposed the shortcomings of Thailand’s current healthcare system.

Philippines: The government’s PPP program added 14 new projects in 2020 comprised of both solicited and unsolicited projects, the program now reaching 8.448 trillion pesos or $167 billion. Solicited projects include the Mariveles Mental Wellness Center, Philippine Travel Center Complex, Metro Cebu Expressway, Bicol Medical Center, Medical Arts Building, and Upgrading of Health Services. Unsolicited proposals include the operation and maintenance of Francisco B. Reyes Airport and the New Busuanga Airport, Dumangas Port, the Davao Sasa Port Modernization, and the development, operations, and maintenance of General Santos Port.

Uzbekistan: In 2021, more than 40 large and medium projects using PPPs are expected to commence, sending an unequivocal signal to government agencies and the international market that Uzbekistan is committed to PPPs. The program achieved several milestones in 2020. In January 2021, a long-awaited amendment to the PPP law, assisted by PPIAF and IFC, was approved and signed. The first transactions prompted by the program are coming to a close, paving the way for more in sectors including renewable energy, health, and transport. The Agency for the Development of PPPs, jointly with international financial institutions, is working on 32 projects worth $3.85 billion.

South Africa: South Africa plans to spend 8 billion rand ($1.2 billion) to support infrastructure PPPs over the next three years, including water and sanitation projects. Financing for an Infrastructure Fund to support this initiative was confirmed as part of the country’s 2021 budget. The fund aims to blend its own financing with private capital. It has a planned budget of 100 billion rand ($6.8 billion) over the next 10 years and aims at boosting PPPs. The government is also finalizing a review of its legal and regulatory framework for PPPs at the national, provincial, and municipal level, supported by the World Bank and PPIAF. This initiative is being implemented as sectors such as water and sanitation alone face an estimated annual funding gap of 33 billion rand ($2.3 billion), and the budget review indicates no capacity to increase direct funding. To boost infrastructure spending, the government plans to partner with the private sector, multilateral development banks, and development finance institutions to augment its skills, expertise, and funding. The finance minister said much of the country’s infrastructure is in need of repair or replacement and the government has committed to a 791.2 billion rand ($53 billion) infrastructure investment drive to this end.

35Thailand PPP Delivery Plan.
36ADB Blog: In Uzbekistan, PPPs are the Engine Driving Infrastructure Development.
**Middle East**: Governments across the region are turning their focus to alternative project finance solutions to develop infrastructure and PPP contracts are taking shape across the region, perhaps most notably schools projects in Saudi Arabia, healthcare in Kuwait, and water and power projects in Qatar. The Abu Dhabi Investment Office plans to procure infrastructure projects worth $2.72 billion under the PPP model as part of the Ghadan accelerator program. In early 2020, Abu Dhabi announced its intention to tender $2.7 billion in PPP projects to finance and operate new social, municipal, and transportation assets. New PPPs are being planned for Oman, including schools, healthcare, roads, and ports.

**Chile**: The Chilean government and the Ministry of Public Works (MOP) have decided to continue with a strong pipeline of concessions through its PPP program to attract investment into the sector and the country. The MOP presented a strong PPP pipeline for 2020–24 and plans to tender $3 billion in contracts on average per year. Among these are 23 freeway projects, 14 hospitals, five trams and cable cars, two reservoirs, and six airports. After delays due to the COVID-19 crisis, the MOP announced a group of hospital projects in the Maule region, the first of 10 hospital group projects to be tendered and developed under Chile’s new hospital infrastructure concession program that includes a total of 18 hospitals of approximately $2 billion.

**Colombia**: In November 2021, the Ministry of Finance approved a $20 trillion Colombian Peso (approximately $5.5 billion) budget to support the financing of 5G road concessions.

**The Caribbean**: A number of countries in the Caribbean have announced plans for PPP projects, with around 30 being identified, mostly in Jamaica and relating to transport, renewable energy, and water. The Development Bank of Jamaica updated its plans for several privatizations and the tender of five projects through public-private partnerships. The Dominican Republic’s PPP office (DGAPP) revealed investments of $1 billion for the economic development of the Pedernales region.

The above examples all support key messages and lessons for the successful delivery of PPP projects:

- Mobilizing private investment into infrastructure is crucial as public budgets become increasingly constrained
- Well-structured, well-balanced PPPs that are attractive to private capital and fiscally responsible are more important than ever
- Infrastructure investments post-COVID should not sacrifice quality over quick wins and should explore potential for investing in low-carbon/resilient infrastructure investments
- Following shocks like the pandemic, updating information on demand and other assumptions, and adjusting structures accordingly will be critical to making PPPs attractive to the market
- Countries should review PPP frameworks and pipelines to ensure they meet emerging conditions
The substantial infrastructure gap and need for resilient and sustainable infrastructure will require private finance and new technology. However, COVID-19 has affected PPP revenues and risk appetites. Liquidity is not the key constraint, but rather the bankability of projects. To attract strong sponsors and finance, governments will do well to adapt their PPP models through improvements in the general PPP Legal Framework, as well as through specific approaches to risk allocation and project revenue-generation and government support.

This section examines lessons across three areas of PPPs that could be addressed in light of COVID-19 experiences: at the project level, on risk allocation and public-private collaboration; at the PPP program level, on PPP policies and procurement rules; and at the economic/sector level, related to government short-term financial support as they relate to PPPs.

4.1 Risk Allocation and Collaboration

In PPPs, the risk allocation process is extremely detailed and based on the principle of “allocating risk to the most appropriate party.” The risk appetite of public authorities, sponsors, and lenders are always evolving, but with a shock like the pandemic as with extreme climate events, basic assumptions of risks need to be revisited. Many governments are reviewing the risk allocation and revenue structures of their PPPs in light of the impact of COVID-19 (Box 4).

There are some important areas to consider:

- **Payment structure:** PPPs are generally either demand- or availability-based. The pandemic affected demand-based PPPs (such as toll roads and airport concessions): revenues significantly reduced, sponsors relied on cash buffers, or effected contract claims. This event will affect appetite for similar projects in the future, and concessions with demand and minimum revenue guarantees or availability/performance-based PPPs are likely to be more attractive. This is particularly for those sectors more exposed to demand risks, such as public transport, airports, roads and railways, tourism, and energy. Other sectors, such as telecommunications and information technology, were not badly impacted and have seen increased demand. They could attract private investment using demand-based concessions without public-sector revenue guarantees. Governments will need to review proposed payment structures for new PPPs and consider the best way to attract investment in a fiscally sustainable manner. Robust methodologies will be required to monitor, control, and report on contingency and other liabilities created by such projects.

- **Contract provisions:** Many PPP contract provisions may require review in light of COVID and the increased push for resilience and sustainability. Contract provisions will be discussed in more detail in Section 5.

37 See also Section 6 of this note.
• **Construction risk:** Construction is viewed as the riskiest phase of a PPP project (and attracts higher costs) and is usually best managed by the private party. However, the pandemic has shown that governments may need to step in with relief during such an extreme event which will need to be factored into future risk allocation and contract design.

• **Collaboration:** In any PPP, the public sector should take a proactive approach involving all parties (project stakeholders) rather than waiting for the private partner to make claims and put the project and services at risk. This has been a key lesson from the pandemic. This may entail a revisited cooperative approach with the public partner making every effort to assist and cooperate with the private partner in performing the contract with more regular meetings and sharing of information. Contracts could be strengthened to formally enhance this ethos of collaboration. Governments need to have sufficient skills and resources to appraise key performance indicators (KPIs) and market conditions, anticipate issues, and negotiate during such situations.

• **Disputes:** The pandemic has shown that PPP contracts should focus on collaborative recovery and sustainability. Avoiding disputes and making use of modern techniques (such as “dispute boards”) to promote a less adversarial approach to dispute resolution in PPP projects should be considered. The PPP contract could also provide for “standing boards” of the parties meeting jointly on a regular basis and providing advice even when there is no dispute. Although this may add cost, the benefits have been shown in the context of large infrastructure projects.
**Box 4 Modification to PPP contract structure and remuneration in the light of COVID-19**

**Vietnam** has recognized the issue of managing demand risk effectively in advance of the pandemic. Their newly adopted PPP law introduces a specific revenue risk-sharing mechanism: The government can give tax relief and will share with the investor and the PPP 50 percent of the difference between the actual revenue and 75 percent of the committed revenue in the financial plan.

**The Kenya National Highways Authority** signed an agreement in September 2020 with Rift Valley Highway (a company owned by VINCI Highways, VINCI Concessions, and Meridiam SAS) for the development of the Nairobi-Nakuru-Mau Summit Highway Project. The project is based on an availability payment model PPP. The private party will finance, design, widen, upgrade, operate, and maintain this road corridor for a duration of 30 years. This is a good example of a shift towards an availability-based structure in Kenya.

**Brazil 6th Round of Airport Concessions**: Given the new economic situation of air transportation companies and the aviation sector, the National Civil Aviation Agency (ANAC) decided that it was necessary to review the demand projections for passengers, aircraft, and cargo. The updated projections indicated that the gross revenues of future concessionaires will be $3.3 billion reals ($618.5 million) lower than the initially estimated value. As a result, new guidelines from the Ministry of Infrastructure, new values for the economic feasibility studies—under the responsibility of the Civil Aviation Secretariat, and regulatory improvements by ANAC, were developed. Further, for the Central and South blocks of the concessions—the latest version of the bidding notice—reduced the minimum grant value, i.e., the initial concession fee to be paid by the winning bidders before the signing of the concession agreement.

### 4.2 Government and International Financial Institution (IFI) Support for Projects

National governments and international financial institutions (IFIs) have stepped up during the current crisis to support restructuring or postponing debts in the short-term (six months to a year), tax relief, bridge loans, guarantees, viability gap funding, co-funding of loans, or other subsidies.

Going forward, the establishment of risk retention programs could be considered such as setting aside specific budget reserves, contingency, and reconstruction funds. These measures should be time-limited but ready to be deployed quickly, guiding the principles of economic neutrality and no unjust enrichment. Such arrangements can show that a government is committed to sustainable development and the infrastructure market is resilient while providing the private sector with confidence to invest.

For certain projects, PPP contracts could include provisions such as demand, currency rate, and similar types of guarantees, which allow part of the demand or cost escalation risk to remain with the public authority. However, given the fiscal implications for governments such support should be carefully structured and judiciously used. These risks can be flexibly allocated between the private and public partners, with the private partner still being able to collect user fees. For example, minimum traffic volumes could be guaranteed for toll roads giving the project company certainty of revenue. Off-take and

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Supply guarantees are also not unusual. Any PPP legal framework underpinning the contracts would need to provide flexibility in structuring the guarantee and a basis for calculating the appropriate compensation due. However, whether these approaches represent the best value for money for the delivery of the project should be carefully assessed together with corresponding liabilities.

Flexibility is also important for availability payments. It is advisable for contract provisions to contain options for full payment (or non-enforcement of performance provisions) in unexpected and emergency situations and the right to reduce them. This would reflect the practice in some countries during COVID-19 of continuing with full payments despite reduced services. For example, in the UK, guidance was issued to allow payment of the normal unitary charge to private finance initiative (PFI) contractors and a temporary moratorium on related payment and performance mechanism deductions so that PFI contractors could continue to operate and pay their workforce and suppliers—so maintaining vital services. Box 6 illustrates how Turkey has adapted its transportation build-operate-transfer (BOT) bid parameters to incorporate a guaranteed minimum level of traffic.

National and multilateral development banks can take an important role in implementing these initiatives. They have a developed institutional structure and can take responsibility for preparing and implementing loan, guarantee, and funding mechanisms. In pursuing ambitious infrastructure development goals, national development banks can facilitate budgetary financing and provide an additional source of external financing.

Box 6 Turkish road PPPs case study post-COVID

Turkish build-operate-transfer (BOT) models are regulated in Law No. 3996 on Investments and Services Under the Build-Operate-Transfer Model, and secondary legislation Decision No. 2011/1807 on the Implementation Procedures and Principles of the BOT Model Law No. 3996 (Decision). In Turkish BOT models, the aim is to provide optimal benefit to all parties (public, private sector investors, and banks). The achievement of this is related to the financial structure used. There have been two distinct alterations in the BOT models post-COVID, namely (1) the shift in Administrative Specifications and (2) the frequency of toll rate updates in implementation contracts (i.e., the main PPP Agreements).

**Shift in Administrative Specifications**: In each project, participating bidders compete against one of the basic parameters (operation duration, toll rate per vehicle, guaranteed number of vehicles, etc.), and the remaining parameters are kept constant. Those parameters are demonstrated under Administrative Specifications. The tendering state authority has the discretion to determine the parameters tailored for each project’s needs. In BOT projects pre-COVID, the common practice for the selection criterion of the awarded bidder was to determine the **shortest contract period**. The Gocek Tunnel, Gebze-Orhangazi-Izmir Motorway, and İzmit Bay Bridge, Eurasia Tunnel, and Third Bosporus Bridge are examples of the duration bidding methodology used in road PPPs in Turkey.

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Now, however, the preferred selection criterion seems to be shifting towards bidding the toll rates against a fixed duration of the contract and a fixed amount of guaranteed vehicles. This switch shows the discretion of the state authorities to make projects more robust against external events such as the COVID-19 pandemic and their ability to keep pace with the market demand. The reason behind this change is to ensure a more foreseeable and predictable market environment for the bidders and lenders.

Another notable change is in relation to the frequency of toll rate updates in implementation contracts. Toll rates are set in the BOT Implementation Contract and are allowed to be escalated with inflation. The toll rates used to be updated once a year by the state authorities. However, with the market pressure, it has been revised to twice a year: in January and July.

4.3 Pandemic Response and Mitigation Plans

The pandemic has shown the importance of understanding the roles and responsibilities of each party in case of emergencies and planning activities to react in a coordinated and efficient way. Plans prepared in advance will help provide clarity for future similar events.

Project companies, as the entity responsible for construction and/or operation of the facility, are in the best position to prepare and provide such a plan to the contracting authority for further consultation and elaboration. PPP contracts (current and future) should contain an obligation on the project companies to submit plans that set out the activities and reporting that it will implement to prepare for and respond to any potential or actual pandemic or epidemic (including a subsequent outbreak).

Such response and mitigation plans should include the detailed steps to be taken by the project companies and subcontractors. It should be regularly reviewed by the parties and updated if any pandemic or epidemic becomes reasonably foreseeable or likely to occur and affect the project. The contract should confirm responsibility for costs of the plan and implementation and set out conditions upon which the project company is entitled to any reasonable compensation or additional costs.
The COVID-19 pandemic exposed shortcomings in key PPP contract provisions although the lack of significant project cancellations suggests that contracts were, in general, robust enough to respond to such an extreme event. While all eventualities cannot be anticipated in long-term contracts, some lessons can be reflected in new contracts to ensure they are resilient, sustainable, and can deal with future shocks—and continue to attract much-needed private investment.

This section reviews standard PPP contract provisions and considers possible adjustments in future procurements in light of the pandemic experience. These include force majeure, exceptional events, Material Adverse Government Action (MAGA), extensions of term, economic rebalancing, and dispute resolution.

5.1 Force Majeure, MAGA, Change in Law and Other Exceptional Events

Many jurisdictions have reviewed PPP contracts or legislative provisions on force majeure to determine their relevance to COVID-19. The pandemic was of such an extraordinary nature that existing contract drafting may not have specifically referred to such an event. The response on this issue has not been uniform across countries. In the first months of the pandemic, the Brazilian government declared COVID-19 a force majeure event, permitting claims related to the financial rebalancing of federal concessions in the transport infrastructure sector, such as railways, highways, and airports. However, in the UK, it was specifically stated that, as a matter of PPP contract standard forms, COVID-19 was not regarded as an event of force majeure.

Colombia, Turkey, and others regulated the extension of PPP contracts in response to the pandemic. Some provided for possible compensation equivalent to the additional costs incurred or the loss of revenue (for example, Morocco), and others gave rise to potential termination option. Colombia also introduced into its 5G toll roads program provisions for dealing with restricted mobility (Box 7).

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40 Force majeure refers to events beyond the control of a party and that make it impossible to fulfil all or a material part of its obligations. Many jurisdictions have a concept of force majeure under general law. For example, in both cases the private partner may be able to claim relief from its obligations under the PPP contract and may have the right to claim a change to the PPP contract or even terminate it in the event of force majeure/MAGA lasting longer than a certain period of time (generally between 6 and 12 months). However, unlike standard force majeure provisions the risk of occurrence of a MAGA is allocated entirely to the contracting authority, which means the private partner will be entitled to claim for losses incurred as a result of the occurrence of the MAGA. Secondly, the amounts payable to the private partner in case of termination further to a MAGA are likely to be similar to those payable upon default by the contracting authority. This is quite a typical approach to MAGA provisions, however they can be structured differently depending on jurisdiction and its perception of political risks (See: Guidance on PPP Contractual Provisions. World Bank, 2019, 49-56). See more: Guidance on PPP Contractual Provisions. World Bank, 2019.

41 The concept of Material Adverse Government Action (or MAGA), which is also sometimes referred to as “political force majeure”, is a name for provisions typically included in the contracts with the government or public entities to allocate certain types of “political” risk to the contracting authority. MAGA provisions are in many aspects similar to force majeure clauses.


COVID-19 demonstrated that the usual force majeure provisions in PPP may have been worded too vaguely, can cause disputes, or do not achieve their purpose. For example, a dispute could arise over whether the pandemic and consequent actions/restrictions by the government fall under the force majeure definition (normally a no-fault shared risk between the PPP parties) or political risk (normally treated as a risk to be borne by the government, e.g., by way of MAGA provisions or change in law).

Some PPP contracts limit force majeure to a specific exhaustive list of cases, which may not include any reference to an epidemic or pandemic—sometimes they have even specifically excluded them from such closed lists.

- In most cases, and particularly for emerging markets, force majeure provisions should be worded to reflect lessons recently learned. At the very least, investors and lenders will require specific reference to epidemics, pandemics, or similar events in force majeure provisions, most likely as part of a non-exhaustive list, allowing relief and potentially compensation under PPP contracts.

- Governments could consider specific pandemic-type clauses dealing with the effects, rather than rely on force majeure. For example, delays in construction works, relief in performing operational services, protection from any consequential change in law, and any cost impacts, subject to mitigation. The protection offered may vary between emerging and developed markets.

- A PPP contract could provide that the parties will mutually agree on economic rebalancing-style solutions when events beyond the parties’ control occur—including force majeure circumstances with material impact.

- The contract could require the public partner to ensure that the competent government authority dealing with the impact of the event will adopt specific ad-hoc measures addressing the effects on PPP projects. Clarity would be required as to what the private party would ultimately be entitled to and who, once the ad hoc agreement has been exhausted, ends up bearing the risks of extreme—but increasingly less extraordinary—circumstances.

The events and effects of COVID-19 may lead investors to expect government to provide the types of relief which are similar to MAGA provisions, such as exempting the private partner from liability and compensate extra costs (and potentially lost profit) incurred by it as a result of legislative or policy enactments. This may be reasonable for many emerging economies wishing to attract investors and stimulate the market—but should not be needed in more mature markets. The authority may object that the government should not be financially responsible for taking reasonable and well-grounded measures to address such extreme events, (which usually do not fall within MAGA but can constitute exceptional events), but the private partner should not bear such risks either, as it has no control over them and could not price for such actions. For some countries, this may mean a need to change the approach in the legislation and contracts to the list of actions, decisions, and conditions to trigger MAGA, change in law, or exceptional event mechanisms.

Force majeure, MAGA, change in law, and exceptional event provisions are all related and must be considered together in a risk allocation. A combination of clear government action along with more broadly drafted force majeure provisions and suitable protection for private partners and lenders in respect of change in law and MAGA would make it possible in COVID-19 and post-COVID times to clearly respond to risks, fix the consequences, regulate how public and private partners will interact, and deal with cost implications. This would avoid having to prove grounds for claiming damages or change of
contract (citing a material change in circumstances, hardship, or change in law) at precisely the time when proactive action to mitigate the impact is required.

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**Box 7 Dealing with mobility restrictions in future PPPs, Colombia**

In Colombia, the National Agency of Infrastructure (Agencia Nacional de Infraestructura) introduced to the 5G road PPPs a new mechanism called **Mobility Restriction** (Restricción de Movilidad) where the concessionaire is entitled to compensation if the State issues lockdown or mobility restriction orders, among others, which significantly and atypically impact the traffic projections of the project:

“1.165 Mobility Restriction: Refers to the occurrence of an event or series of events directly related to the declaration of a constitutional state of exception and/or state of emergency declared by a National State Authority, restricting the mobility or free circulation, such as lockdowns or vehicle restrictions, which produce atypical, significant, and direct impact on the traffic of the Project’s roads, causing a lower Toll Collection during the period in which such event has occurred.”

Consequently, compensation is granted in favor of the concessionaire:

“3.3 (g) (v) A Mobility Restriction event occurs in accordance with Section 1.165 of this General Part and under the terms and conditions set forth in Section 13.3(y) of this General Part.

3.3 (h) For the event referred to in Section 3.3(g)(v) of this General Part, the Concessionaire shall be compensated for the lower Toll Collection in the terms described in Section 3.3(h) of this General Part, as applicable, as of the Day after the Mobility Restriction event is decreed by means of a decision of the competent State Authority.

The compensation for lower Toll Collection for the event described in Section 3.3(g)(v) of this General Part shall be calculated for each quarter of performance of the Contract after the Mobility Restriction event is declared and shall be equal to ninety percent (90%) of the difference between the Toll Collection that would have occurred if the Toll Station had been operated under the terms of Technical Appendix 1 - determined in accordance with the provisions of Section 3.3(h)(vii), and the Toll Collection of the affected Toll Station in such quarter.”

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**5.2 Government Step-in Rights**

PPPs procure the provision of public services—sometimes vital ones. COVID-19 has shown how vital services, such as healthcare PPPs can be disrupted, and should therefore provide, in limited circumstances, for governments to “step in” to the project and take temporary control of the service and operation of the facility. This is not to be confused with the lender’s step-in (to cure a breach of loan obligations or prevent termination of the PPP contract) but may be required for reasons of emergency, national security, major health and safety issues, or to ensure vital service provision. The purpose of step-in is to relieve serious, specific, and urgent issues threatening performance of the PPP and ensure delivery of the essential public service or operation of the critical public facility (such as a hospital, water, or electricity supply).
The authority may, of course, have a statutory duty to ensure effective delivery, and a right to step in may be contained in existing legislation (for example, in France, the authority’s step-in right is a general principle of public law), but this could also be reflected in the contract for greater clarity and detail.

5.3 **PPP Contract Changes**

Notwithstanding the pandemic disruptions, it is widely recognized that, considering the duration of a typical PPP contract (usually 10 to 30 years), unexpected events will undoubtedly occur, and this means that PPP contracts cannot fully specify all future possible situations.

Most PPP contracts contain provisions permitting changes with the agreement of both parties. These can be used to deal with circumstances not contemplated by either party. The situations that lead to changes are usually those required to reflect (i) changes in the overall political, economic, or commercial environment in order to retain the “financial equilibrium” of the project (also known as economic rebalancing in civil law jurisdictions), (ii) changes to construction and/or service requirements, and (iii) legislative and regulatory changes.

It is important to insert in the PPP contract from the beginning specific review or option clauses providing, for instance, clear mechanisms for price and payments adjustment, change of performance regime and KPIs, and modernization of infrastructure to comply with the changing needs and requirements (without changing the initial risk matrix). For example, the issued guidance that PFI/PF2 projects supporting vital service provision during the COVID-19 emergency should reflect increased costs of operations in the payment mechanism if such increases are caused by contract requirements and performance standards that were changed due to COVID-19 (e.g., additional cleaning requirements). 44

Provisions should also be included for other adaptations of the contract that become necessary because of technical or economic difficulties that appear during operation of the facilities, such as any extraordinary maintenance interventions that might be needed to ensure continuation of public service.

The PPP contract should also contemplate short-term changes and temporary emergency regimes, which would be implemented—informally at first—but quickly agreed or formalized through the amendment procedure when the impact has been brought under control.

5.4 **Extension of Contract Terms**

Some jurisdictions permit extensions of term in PPP contracts, and some have legislation contemplating this. This reflects the fact that the contract duration, in theory, and generally in practice, has been set to permit the private partner to recover its costs and earn its expected return. Often the first and most significant provision of a PPP legal framework requires the parties to set the contract duration (as well as construction and operational terms). However, considering the recent crisis, considerable flexibility should be given to the parties by the legal framework, both in setting the initial term, and in providing for any permitted extensions. A flexible approach to setting out the duration of PPP contracts is more adaptable to the individual needs of a particular project.

Extensions of terms can be used to permit the private partner to reach its expected return in circumstances (such as force majeure, government action, and other compensation events) where any failure to do so did not result from its own acts or omissions. However, such extensions should not be

44 UK Guidance Note by the Infrastructure and Projects Authority, April 2020.
unlimited, and the law should identify the factors that influence the duration of the PPP, such as the nature and size of investment required from the private partner or the amortization period for the facilities concerned. Financial analysis of these options should be assessed based on the principles of economic neutrality.

Costa Rica recently published an amendment to their Regulation of Investment Management Contracts for Airport Services. The regulation had a maximum term of 25 years for the PPP contracts related to the major international airport in the country, but due to several factors, including the impact of COVID, the government decided to extend the term to 50 years.

5.5 Economic Rebalancing

Changes to the political, economic, or commercial environment need to be material to require an economic rebalancing of a PPP contract. PPP contracts generally contain a wide range of relief provisions to deal with changes of a less extreme nature, including relief events, force majeure, compensation events, and the like. However, in cases of extreme changes, these measures may be insufficient to protect a project from failure. In these cases, public authorities have permitted the renegotiation of PPP contracts. Examples include the renegotiation of some PPP contracts during the 2008–09 financial crisis and the COVID-19 pandemic.

Such amendments have typically been negotiated on an ad hoc basis rather than under any specific contractual provision. Public authorities remain conscious of the risks (and the potential social cost) of total project failure and rightly endeavor to avoid this whenever possible. However, the administrative law and civil codes of many civil law jurisdictions, in particular, may permit, or even require, such renegotiation in cases of extreme economic disruption (for example, Italy and Turkey).

An approach of clearly defining economic rebalancing grounds and conditions could be considered for certain PPP projects to make them more resilient and provide better value. However, best practice would suggest that any such provision be restricted to avoiding the worst effects of a market failure and assisting the private partner to get back to the position contemplated in the agreed financial model for the project, subject to performance requirements. These provisions should not be used to overcome the private partner’s own inability to perform to the required standard.

5.6 Dispute Resolution

Given the long-term nature of PPP contracts, disputes will inevitably arise. There are various alternatives commonly found in PPP contracts before referring a dispute to a final forum, such as courts or arbitral tribunals. These typically call for a tiered system prior to arbitration or court resolution, with each step becoming more formal:

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45 Financial equilibrium provisions, if included into PPP contracts, entitle an operator to changes in the key financial terms of the contract to compensate for certain types of events beyond their control. Adjustments are based on a mutually agreed financial model that is maintained over the lifetime of the contract. Three causes of unexpected changes that merit financial equilibrium revisions are typically defined as force majeure (major natural disasters, epidemic, pandemic, and civil disturbances), factum principis (government action) and ius variandi (unforeseen changes in economic conditions) (World Bank PPP Reference Guide, 2017, 153).
• There are preventive mechanisms that PPP contracts may include to avoid disputes, such as an “early warning” measure.\textsuperscript{46}

• The PPP contract may provide that, initially, the parties should attempt to resolve the dispute through good faith negotiations between senior representatives of each party who have the ability to agree on a settlement.

• If this fails, the parties can establish a “mediation or conciliation” proceeding in which a person or panel assists the parties in an independent and impartial manner.

• For disputes of a technical nature, the PPP contract may provide for the “review of technical disputes by independent experts”.\textsuperscript{47}

The difficulty with this common tiered approach leading to formal trial and resolution is the adversarial nature, and it may be costly and lengthy. Another form of dispute review is known as “\textit{dispute review boards,}” mostly used in contracts for large infrastructure projects. Boards are comprised of experts (with relevant experience) appointed by both parties to help settle disputes that may arise during the construction and operational phases. These boards may be permanent or ad hoc, depending on the anticipated volume of disputes and the parties’ assessment of the cost and efficiency of either alternative. Proceedings before a dispute review board can be informal and expeditious, and tailored to suit the characteristics of the dispute that it is called upon to settle.\textsuperscript{48} The main purpose is to avoid a formal dispute arising.

This method has, among others, the advantage that the experts may be replaced if the project comprises different stages that may require different expertise. Given the experiences encountered from the COVID pandemic and the risk of multiple claims being made, such boards could be considered for future PPP contracts.

\textsuperscript{46} I.e., where if one party considers events have occurred, or have the potential to occur, so as to cause disputes, these should be brought to the attention of the other party as soon as possible.

\textsuperscript{47} This method may be particularly useful in connection with disagreements relating to technical aspects of the construction of the infrastructure facility (for example, whether the works comply with contractual specifications or technical standards).

\textsuperscript{48} UNCITRAL Legislative Guide on Public-Private Partnerships, 2020, 230.
COVID-19 has negatively impacted PPPs in many sectors, with projects under procurement being delayed or canceled, and a resulting significant decrease in levels of private investment and availability of government finance. But COVID-19 has also provided an opportunity to refocus and improve PPPs as a key delivery method to assist in economic recovery. The events of 2020 and early 2021, and the responses of governments, sponsors, and investors, as set out in this note, offer lessons that can assist in developing, promoting, and procuring future successful PPPs and attracting much-needed investment. While 2020 saw the lowest level of private investment in infrastructure in a decade, there are promising signs of recovery in early 2021 and evidence that governments are seeking to mobilize private finance and expertise as part of their COVID recovery plans. Key lessons are emerging that can strengthen the resilience and adaptability of PPPs for an increasingly uncertain future and bolster the need for good practices as outlined below.

For the PPP planning and preparation phase, governments should consider:

- Reviewing their investment and infrastructure priorities in light of COVID-19 and any changed demands or requirements. They should prepare for a resurgence of PPPs in the medium term. Consideration should be given to sectors such as healthcare and digital, where increased change may take place.

- Greater focus on their PPP financial commitments and contingent liabilities—and availability of finance for future projects or to grant guarantees. Methods and corresponding regulations should be introduced to evaluate risks of contingent liabilities, as well as to report, monitor and control such risks.

- Reviewing their PPP framework to ensure that it meets current best practices and can deliver projects in an efficient and resilient manner. Discussions with sponsors, investors, lenders, and other stakeholders should be held. Any new constraints likely to arise as a result of the pandemic (such as risk allocation, force majeure, or financing) should be considered and mechanisms put in place to address it. The aim should be to provide a clear and flexible legal framework for PPPs, clarity on government support, and an efficient process.

- Including a streamlined and clear project process in a PPP framework, with defined procurement options and timelines, a strong institutional framework with clearly defined roles, and fiscal rules on contingent liabilities.

- Regularly communicating with the market on plans and timetables to retain bidder interest and manage expectations. The temptation to rush to catch up on delays should be avoided.

- Ensuring sufficient capacity in the PPP agency—for PPP working teams, contract management teams, and technical staff.

- Devoting sufficient time and resources to project planning, ensure that adequate information and data is collected for projects, and prepare terms of references and technical specifications.
Ensuring that projects are well planned and prepared—and consider gateway reviews as an assurance process.

A review of payments structures, particularly for transport projects—fiscal pressures may mean that availability-based are more attractive, or user pays with government minimum guarantees.

In procurement, take into account that:

- Parties will need to be flexible with any deadlines and should be open to remote discussions—and consider practicalities of delivering documents and tender requirements. Requests to change project participants (due to financial difficulties) should be considered.

- Parties will need to review financial forecasts and any assumptions based on user demand to determine if the project remains viable and affordable.

- Governments could consider offering minimum demand or revenue guarantees, or an increase in contract terms or tariffs to ensure the project provides value for money and is bankable. More cooperation and flexibility is required in PPP contracts in terms of risk allocation as well as interaction between the parties in case of force majeure and other exceptional events to ensure continuity in provision of public services.

- Provisions of PPP contracts and, if needed, legislation on force majeure, MAGA, change in law, exceptional events should be adjusted to provide necessary protection to the private partner against restrictions imposed by governments due to external shocks and overall change in economic environment.

- Consideration should be given to the involvement of international development banks to help plug any funding gaps.
Annex A: Review of COVID-19 Impact on Key PPP Sectors

This section provides a snapshot of certain key sectors—transport, health, digital, and clean energy—with an overview of the COVID-19 impacts, relevant statistics on activity levels and potential, and the potential for development post-COVID during 2020 and early 2021.

Figure 7 Impact of COVID-19 on investors’ appetite

<table>
<thead>
<tr>
<th>Sector</th>
<th>COVID-19 impact</th>
<th>Investor appetite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport – general</td>
<td>Medium</td>
<td></td>
</tr>
<tr>
<td>Transport – airports</td>
<td>High</td>
<td>↓</td>
</tr>
<tr>
<td>Health</td>
<td>High</td>
<td>↑</td>
</tr>
<tr>
<td>Digital/Telecommunications</td>
<td>High</td>
<td>↑</td>
</tr>
<tr>
<td>Energy/Renewables</td>
<td>Low</td>
<td>↑</td>
</tr>
<tr>
<td>Energy from waste</td>
<td>Low/Medium</td>
<td>↑</td>
</tr>
<tr>
<td>Utilities and Networks</td>
<td>Low/Medium</td>
<td>→</td>
</tr>
<tr>
<td>EV/Battery Storage</td>
<td>Medium</td>
<td>↑</td>
</tr>
</tbody>
</table>

1. Transport

COVID-19 caused unprecedented disruption to the transport sector, especially demand-based sectors such as aviation, toll roads, and public transit. The pandemic resulted in a full-scale transportation crisis, as aviation was brought to a virtual halt in April 2020, restrictions left roads virtually empty (and tariffs not collected), and demand-based urban transport ridership plummeted. Ports and railways were also impacted, with decreased volume of containers and cargo.

PPP revenues were reduced—substantially in some cases. Most operators, particularly for airport PPPs or concessions, will require or seek financial support from governments. Claims are expected under force majeure, MAGA, or similar provisions.

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49 COVID-19 and a new resilient infrastructure landscape, OECD Policy Responses to Coronavirus (COVID-19), February 22, 2021, showed in some cities passenger numbers fell by 70% to 90% during the height of the pandemic.
**Key COVID-19 Related Statistics: Transport sector**

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
</table>
| **Investment**            | Historically low investment levels, lowest in a decade 78 percent decrease from 2019 levels.  
|                           | 50                                                                                                                                 |
| **Air traffic**           | Decline of 64.2 percent of global passenger traffic in 2020 with Europe and the Middle East being worst affected 65 percent reduction in airport revenues |
| **Road transport industry** | Global losses for the goods road transport sector estimated at $347 billion in 2021.  
|                           | Mobility services have been hit particularly hard during the pandemic, especially international coach and tourism services.  
|                           | Revenue losses in the passenger transport industry in 2021 are forecast to climb to $543 billion, $43 billion more than in 2020. |

**Box 8 Examples of impact of COVID-19: Transport**

**Colombia:** The National Agency of Infrastructure carried out negotiations in 2020 with toll road concessionaires in which the Colombian Infrastructure Business Association (CCI) and additional government and control entities participated. This resulted in a settlement agreement being reached in relation to COVID-19-related claims. Similar negotiations were held with six airport concessionaires responsible for 16 national airports.

**Brazil:** On April 15, 2020, the Office of the General Counsel within the Ministry of Infrastructure recognized COVID-19 as a force majeure event in order to allow claims related to the rebalancing of concession contracts in the transport area, such as railways, highways, and airport infrastructure.

**United Kingdom:** On the A74(M)/M74 PFI project (a 30-year PPP project to design, build, finance, and operate a section of motorway) measures implemented by the government significantly reduced traffic flows during 2020, which impacted project revenues. Compensation payments have been agreed between the parties using historic traffic figures to calculate revenue.

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50 Private Participation in Infrastructure (PPI), Annual Report 2020, the World Bank.  
1.1 Potential for Development Post-COVID-19

The GIH estimates a gap of $10 trillion between investment needs and current trends between now and 2040 across the airport, port, rail, and road sectors.\(^{53}\) But investment in transport infrastructure from January to October 2020 reached only 30 percent of investment levels seen in the same period in 2019.\(^{54}\)

The impact of COVID-19 has not been homogenous, neither will the recovery based on demand. While air and rail travel has dramatically reduced, road usage has fallen, but not to the same extent. This is reflected in the fact that road investments still dominated the transport sector in terms of volume (79 percent of all investments within the transportation sector).

Recovery in demand for transportation services will not be homogenous either. In relation to air travel, demand will grow in certain areas but languish in others due to factors such as vaccine inequalities. European air passenger traffic estimated at only to 30–50 percent of 2019 levels in 2021.\(^{55}\) Regardless of location, domestic travel will grow in demand faster than international travel.\(^{56}\)

Activity in PPP projects in transport for air and rail is intrinsically tied to demand for services: when demand returns, activity will return. There are signs, particularly in Asia where demand for airport infrastructure remains high, that PPPs could see an early return. However, project authorities and bidders may also review demand projections and financial estimates (see above example in Section 2.3 of Brazil airport concessions).

**Box 9 Signs of future activity: Transport**

**Nigeria—Lagos State Fourth Mainland Bridge:** During the pandemic the government launched a tender for the construction of a new bridge worth $2.5 billion. The Lagos State Fourth Mainland Bridge PPP is set to be one of the largest-ever PPPs in Nigeria's procurement history. It is set to cover a tolled road and bridge spanning 38 kilometers connecting Lagos Island to the mainland.

The announcement comes as part of the Nigerian drive for private investment to fill the infrastructure funding gap within the country. According to a report from Moody's in 2020, Nigeria needs over $3 trillion in infrastructure investment over the next 30 years. Infracorp, a Nigerian government-backed infrastructure company, was launched to invest in Nigerian greenfield opportunities. The fund is targeting $24.2 trillion of initial seed capital. The government has also recently issued a notice to begin procurement process for 12 roads.

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\(^{53}\) GIH, *Global Infrastructure Outlook*.

\(^{54}\) Q320 League Tables: *Investors priorities brownfield as COVID-19 catches up*, *Inframation* (subscriber only).

\(^{55}\) COVID-19 Impact: *Key Takeaways From Our Articles*, S&P Global Ratings (subscriber only).

\(^{56}\) *The impact of COVID-19 on the airport business*, Advisory Bulletin, ACI.
2. Health

COVID-19 put the healthcare sector under unprecedented strain, and governments had to address urgent implications such as hospital capacity and equipment, access to care, and equity in health outcomes. The pandemic has exacerbated a wide range of complex healthcare challenges such as aging populations, the growing burden of chronic diseases, and changing demographics. Managing these challenges will be expensive, and for countries globally, the key conclusion is that significant investment is needed.

Figure 9 Key COVID-19-related statistics: Health

<table>
<thead>
<tr>
<th>Key COVID-19-related Statistics: Health sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthcare challenges</td>
</tr>
<tr>
<td>Investment in healthcare</td>
</tr>
<tr>
<td>COVID-19 disruption to healthcare</td>
</tr>
</tbody>
</table>

2.1 Potential for Development Post-COVID-19

Not only has the demand for healthcare increased, but also methods of delivering healthcare have shifted dramatically during the pandemic. Delivery of healthcare has been forced to change, and some of these changes will remain, such as the need for greater agility in how hospitals are constructed to maximize infection control and capacity, the need for dedicated facilities for those with certain illnesses, and the increase of digitization, including the ‘virtual front door’. These changes may force governments to think differently about healthcare infrastructure, and PPPs may prove a suitable vehicle to implement the changes. In the UK during COVID, a number of health PPP projects made informal changes to contractual provisions to allow for changes in patient numbers, infection control requirements, and cleaning and associated service requirements. Relaxations to contractual provisions and remedies were granted, and lessons learned may result in formal contract changes or the introduction of provisions dealing with similar future emergencies.

Governments may be attracted to PPPs to address a range of health infrastructure challenges such as the need for new or upgraded infrastructure, capital budget and/or cash flow constraints, and the need for expanded service capacity. All of these challenges have been exacerbated by COVID-19. Investors are increasingly turning to ‘infra-like’ assets, such as capital-heavy assets like healthcare infrastructure, as they look beyond traditional core infrastructure assets in the wake of COVID-19.

57 What will be the impact of the COVID-19 pandemic on healthcare systems? Deloitte.
59 Ibid.
Box 10 Signs of future activity: Health

Chile – Hospital PPPs

In 2020, the Chilean government announced a number of hospital PPP projects in the Maule region under a new hospital infrastructure program. The program includes the construction and supply of medical and non-medical equipment for 18 hospitals, worth an estimated $2 billion. The program has been divided into 10 groups to be tendered over the coming years. The most recent of these projects was the launch of the tendering process for the construction of a new hospital in the Coquimbo region.

The program is a continuation of Chile’s hospital PPP development following the 2009 pilots, La Florida and Maipu hospitals, and the subsequent tenders for other hospitals in 2012 and 2014. The legal framework for the tenders has been subject to little change.

Peru – Hospital PPPs

Peru’s investment promotion agency ProInversión plans to award or to label as being of public interest nearly $3.9 billion in social infrastructure and water PPP projects in the coming years. These include a number of health PPP projects. ProInversión’s executive director Rafael Ugaz has stated that “the current crisis has exposed the limitations of the traditional public works model. Many hospitals haven’t been finished or were finished but didn’t count with adequate personnel or equipment.”

Currently, there are two PPP health projects promoted by the Social Health Insurance Board. These are new high complexity hospitals in Chimbote and Piura. Both involve design, construction, and provision of hospital equipment and provision of non-clinical services (cleaning, security, waste management, maintenance of equipment and facilities, etc.) An availability-based payment with a contract term of 20 years, including investment stage, allows the operator to recover investments as well as to collect maintenance and operation fees.

3. Digital

As traditionally active sectors, such as airports, have struggled in 2020, the digital infrastructure sector was pushed front and center. The urgency for digital infrastructure has never been more pressing than in 2020. Momentum behind digital infrastructure has boomed as pre-existing demand for data storage, cloud services, connectivity, and internet quality abruptly accelerated.

COVID-19 has shown that digital connectivity is critical to society and business continuity in times of crisis and digital infrastructure will be of critical importance—not only in pulling the world out of the COVID-19-induced economic slump, but also in a post-COVID-19 world.

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60 The Proinversion project portfolio lists nine projects with a value around $1,057 million.
61 Peru Planning $39 bn in social and water PPPs, BNAmericas
Investment | In Europe, activity in the PPP telecommunications sector has increased over the past number of years, and four projects closed in 2020 with an aggregate value of €1.1 billion ($1.2 billion)—all broadband transitions in France.  

Increased reliance on data infrastructure | Vodafone has reported increased usage of digital infrastructure: 15 percent for mobile internet and 44 percent for fixed broadband. Operators are experiencing as much as a 60 percent increase in internet traffic compared to before the COVID-19 crisis.

Increasing transactional activity | Total mergers and acquisitions (M&A) volume of $31.1 billion in 2020 exceeded 2019’s final total. Digital assets reached another peak in disclosed deal volume, reaching $50.7 billion in deals closed in 2020.

Deal flow by region | Since 2015, Europe has had the highest deal flow; however, in terms of transaction value, the Asia and Pacific region is top, despite a significantly lower deal count (mainly as a result of the $64.45 billion East Lantau Metropolis in Hong Kong to create a business and data center hub).

3.1 Potential for Development Post-COVID-19

The increased recognition and focus on digital infrastructure have put pressure on government investment. COVID-19 has further increased the perceived value of connectivity, and demand for digital infrastructure to provide connectivity is likely to only increase.

Accessible and fast broadband have been necessities in COVID-19, and the pandemic has highlighted deficiencies in existing broadband structures, especially in rural areas. Despite the 2016 United Nations’ declaration that access to the internet is a basic human right, in 2019, only 37 percent of rural households had access to the internet. Expanding and improving broadband connections will remain essential as elements of teaching and work remain from home into the future.

Data centers had a slow start the first quarter of 2020, registering one deal. However, the number of deals increased throughout 2020, with four greenfield projects closing in the final quarter. Some anticipate that demand for data centers will grow at a rate matching the pace of broadband growth, as data centers forge themselves an essential role in traditional infrastructure to store critical data for all sectors.

The IFC commented that: “For digital infrastructure providers in emerging markets, higher demand for connectivity may be counterbalanced by a series of negative shocks. These could affect broadband operators and smaller companies, leading to less competition, limited availability of open-access

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65 Digital infrastructure: 2020 deal flow and outlook sneak peek, inspiratia.
66 Ibid.
broadband infrastructure, and reduced technological innovation. However, the perceived value of digital connectivity is likely to rise, creating opportunities to implement policy reforms to accelerate the rollout of 4G and 5G. Digital infrastructure companies, however, may accelerate their migration toward diversified business models. Against a background of funding withdrawal from emerging markets, financing for smaller or independent companies in the poorest economies may require substantial support from development finance institutions to preserve competition, improve resilience, and promote digital inclusion for the poorest.”

Box 11 Signs of future activity: Digital

Greece – Ultrafast Broadband: A project to provide broadband infrastructure capable of delivering download speeds of at least 100 MB per second, upgradable to 1 GB per second, was announced in 2019 by the Greek government and received funding from the European Commission. The PPP project involved the design, financing, development, and management of fiber-optic networks for at least 20 years. At the time of its announcement, the project was the largest PPP in Greece, worth around €700 million ($820 million), with €300 million ($351 million) of funding being provided publicly.

4. Energy

Energy transition spending in high-income countries rose in 2020, despite COVID-19, recording investments 50 percent above the annual average of the previous five years. While investment in traditional infrastructure sectors, such as transport, has fallen, investment in energy and renewables accounted for six out of the 10 largest deals in the third quarter (Q3) of 2020.

Investments in higher high-income countries have spread to new sectors such as electric vehicles, energy storage, and electrified transport. Whereas investment in emerging economies tends to be focused on renewable energy. Similarly, there has also been a divergence in the type of investments made in the clean energy sector. While greenfield renewable investments in Q3 of 2020 reached their lowest quarterly level in the preceding four years, brownfield investments increased more than 55 percent over the quarter when compared to the same quarter in 2019.

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69 Q320 League Tables: Investors prioritise brownfield as COVID-19 catches up, Infrawatch (subscriber only).
70 Unlocking Private Climate Finance in Emerging Markets, Climate Finance Leadership Initiative.
71 Q320 League Tables: Investors prioritise brownfield as COVID-19 catches up, Infrawatch (subscriber only).
Increasing investment into clean energy assets | Global energy transition investment almost doubled from $290 billion in 2010 to $501 billion in 2020\textsuperscript{72}. Private investments into clean energy assets in emerging markets dramatically rose between 2010 at $6 billion to $28 billion in 2019\textsuperscript{73}.

Impact of COVID-19 and income disparities | Investment into the energy transition in high-income countries rose by 24 percent in 2020, compared to 2019. However, emerging markets recorded a 21 percent contraction in investment\textsuperscript{74}.

Infrastructure gap | The GI Hub estimates a gap of $2.9 trillion between investments needs and current trends between now and 2040\textsuperscript{75}.

Globally, there is also a need to rehabilitate aging infrastructure, which currently produces 70 percent of global greenhouse gasses\textsuperscript{76}, and to build new energy-efficient, resilient infrastructure, which can not only withstand the effects of climate change but help in the fight against it.

4.1 Potential for Development Post-COVID-19

If global ambitions to transition to low carbon economies and to mitigate and adapt to the effects of climate change are to be realized, investment is needed. For example, estimates of the additional investment needed for adaptation alone vary between $30 billion to $100 billion per year by 2030. PPPs can help to close this funding gap\textsuperscript{77}.

Governments, with the assistance of private investors, now have the opportunity to deliver a green recovery that accelerates the transition to net zero. While investment in emerging markets has suffered due to COVID-19, history shows that where emerging markets have taken the lead on climate action, private capital has followed. These factors, alongside the ever-growing numbers of private investors committing to climate finance, point to strong opportunities ahead\textsuperscript{78}.

\textsuperscript{72} Unlocking Private Climate Finance in Emerging Markets, Climate Finance Leadership Initiative.
\textsuperscript{73} Climate finance: Creating the conditions we need to invest in emerging markets.
\textsuperscript{74} Unlocking Private Climate Finance in Emerging Markets, Climate Finance Leadership Initiative.
\textsuperscript{75} GIH, Global Infrastructure Outlook.
\textsuperscript{76} Leveraging PPPs to tackle climate change – A new resource, World Bank’s Getting Infrastructure Finance Right blog.
\textsuperscript{77} Action Plan on Climate Change Adaptation and Resilience, Managing risks for a more resilient future, World Bank Group.
\textsuperscript{78} Unlocking Private Climate Finance in Emerging Markets, Climate Finance Leadership Initiative.
**Uzbekistan – Solar Station PPP**

In February 2020, the government of Uzbekistan announced the launch of a tender 200 megawatts (MW) solar photovoltaic power station in the country, backed by the Asian Development Bank. The project is to be administered under a PPP model and will sell the generated electricity to the JSC National Electric Networks of Uzbekistan under a 25-year power purchase agreement. The tender is part of a wider project to create 1 gigawatt (GW) of solar PV capacity in the country. The government is working with IFC and the World Bank as part of their ambitions to increase the share of renewables from 0.3 percent in 2016 of power production to 25 percent and to develop up to 5 GW of solar power by 2030.

**North Macedonia – Solar Park PPP**

Recently, the government of North Macedonia announced it had selected Bulgarian and Turkish companies to build photovoltaic power plants of a combined 100 MW at an old mine in Olsomej, worth $82 million. Each of the companies is to build a solar plant with a capacity of 50 MW as part of a PPP with the state-owned energy company ESM. The partnership is to last 35 years, following which ownership shall be passed to ESM. The projects come as part of the government’s plan to invest over $3.6 billion in energy until 2027. Numerous projects are planned, such as the construction of one of the biggest photovoltaic facilities in Europe, set to amass 300 MW to 250 MW estimated to be worth $234 million.