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Public-Private Partnerships in the Caribbean Region

Reaping the Benefits While Managing Fiscal Risks

Prepared by Maximilien Queyranne, Wendell Daal, and Katja Funke

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Glossary

CARTAC	The IMF's Caribbran Regional Technical Assistance Center
CDB	Caribbean Development Bank
EPEC	European PPP Expertise Center
GDP	gross domestic product
GFSM	*Government Finance Statistics Manual*
GNI	gross national income
GOJ	Government of Jamaica
IFAC	International Federation of Accounts
IPSAS	public sector accounting standard
MTBF	medium-term budget framework
NROCC	National Roads Operating and Construction Company
OECD	Organisation for Economic Co-operation and Development
ODA	official development assistance
PFRAM	PPP Fiscal Risk Assessment Model
PIM	public investment management
PPIAF	Public-Private Infrastructure Advisory Facility
PPP	public-private partnership
RSM	regional support mechanism

SIA	Sangster International Airport
SLR	sea-level rise
SSA	sub-Saharan Africa
UK	United Kingdom
USD	US dollar
USP	unsolicited proposal

Acknowledgments

This paper is the culmination of a three-year project in the Caribbean region to support countries in better managing the fiscal impact of public-private partnerships. It draws on findings from three workshops organized in the region during 2014 to 2017, which brought together representatives from 14 countries and staff from the International Monetary Fund (IMF), the IMF's Caribbean Regional Technical Assistance Center (CARTAC), the Caribbean Development Bank (CDB), the World Bank, and the Public-Private Infrastructure Advisory Facility.

This departmental paper was prepared by a team of the IMF's Fiscal Affairs Department (FAD), comprising Maximilien Queyranne (lead), Wendell Daal, and Katja Funke. Contributors also include S. Brian Samuel (CDB), Celeste Kubasta, and Bruce Stacey (both resident advisors in the CARTAC). Devin D'Angelo provided excellent research support. Geneviève Verdier and Rui Monteiro reviewed this paper.

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Executive Summary

Raising economic well-being in the Caribbean relies on strengthening economic growth and resilience, including by improving both access to and the quality of infrastructure. The member countries of CARTAC,[1] hereafter Caribbean countries, have made substantial progress in developing their infrastructure. The region's overall quality of and access to infrastructure are broadly better than in other comparable regions, except for critical infrastructure for the tourism industry, such as air transport and ports. Over the past decade though, the rate of both public and private fixed assets accumulation has slowed down in Caribbean countries on average.

Caribbean countries face significant challenges for developing infrastructure. Most Caribbean countries are small states with little potential for achieving economies of scale in infrastructure investment. At the same time, most Caribbean countries have graduated to upper-middle- and high-income status and, thus, have limited access to concessional financing. They also have shallow domestic financial markets, limited access to global capital markets, and, often, high public debt burdens. Finally, Caribbean countries are prone to costly and frequent natural disasters and are rather exposed to the effects of climate change, creating uncertainties for long-term investment in infrastructure while requiring additional investment and innovative technology solutions to make infrastructure more resilient.

Public-private partnerships (PPPs) can be an attractive option for developing infrastructure but come with important challenges. PPPs are long-term arrangements where the private sector finances and supplies infrastructure

[1]Anguilla, Antigua and Barbuda, Aruba, the Bahamas, Barbados, Belize, Bermuda, British Virgin Islands, Cayman Islands, Curaçao, Dominica, Grenada, Guyana, Haiti, Jamaica, Montserrat, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, and Turks and Caicos. Data is not available for Anguilla, Bermuda, British Virgin Islands, Cayman Islands, Curaçao, Montserrat, and Turks and Caicos.

assets and services that are traditionally provided by the government. In principle, PPPs can crowd in much-needed foreign private investment and generate efficiency gains for the government. But PPPs do not provide public infrastructure for free: they are a complex form of public procurement and all financing will need to be repaid over time. In theory, PPPs only generate value for the public sector if the efficiency gains realized outweigh the higher costs of private-sector financing and other costs associated with managing the complex PPP arrangements. In practice, developing infrastructure projects through PPPs has proven difficult in Caribbean countries, as the projects are often too small to attract global investors and governments lack capacity and funding to manage project development. As a result, the use of PPPs has declined in the region over the past decade.

This paper argues for integrating PPPs into public investment management processes and strengthening mitigation of fiscal risks to help Caribbean countries address their infrastructure needs. Based on a review of selected infrastructure projects undertaken and findings from a survey on PPP management practices, it provides a comprehensive legal, institutional, and public financial management framework for managing PPPs, with a focus on mitigating and properly reporting fiscal costs and risks. It builds on extensive technical support provided by the IMF on PPPs and various IMF publications on the fiscal management of PPPs.

PPPs entail potentially large fiscal costs and risks. In a PPP, the private partner usually finances the upfront investment costs, which reduces the short-term lumpiness of traditionally procured public investment. The government may also contribute to the financing of a PPP, for example through equity injections in the project company or different types of subsidies. Subsequently, paying for the provision of public infrastructure and related services is either the responsibility of the government or the users. Government-funded PPPs create firm commitments that may limit budget flexibility and endanger fiscal sustainability. Similarly, user-funded PPPs may generate (explicit or implicit) contingent liabilities for the government.

PPPs are best governed by legal provisions that are an integral part of the broader legal framework. A legal framework for private participation in public-sector projects reduces fiscal risks. Yet most Caribbean countries do not have such legal provisions. Hence, there is a need to clarify the rules governing the relationship between the public and private sectors; integrate PPPs into public investment management frameworks; empower ministries of finance to check budget affordability of infrastructure projects (including PPPs); and define accounting and reporting standards to ensure transparency. Those rules should be carefully embedded in the existing legal frameworks to avoid creating a separate track for PPPs.

PPP selection and management should be fully integrated into overall public investment processes, including budget processes. Currently, most Caribbean countries handle PPPs on a parallel track, separate from other public investments and outside the budget. In contrast, best practice suggests that all projects should be subject to the same screening and evaluation processes, leaving aside the method of procurement, so that priority projects can be selected on a level playing field. Competitive bidding and good project evaluation, including for unsolicited proposals, are key to ensure value for money. This means that all public investment projects, including PPPs, should be integrated into the budget cycle to ensure fiscal affordability.

International experience suggests that a structured "gateway" process with a strong role for the minister of finance is critical for safeguarding public finances. Ministries of finance should establish a gateway process for all public investment projects, including PPPs, to limit fiscal risks, and be able to stop or suspend a project at any stage if it proves unaffordable. To avoid conflicts of interest, this function should preferably be separated from PPP support functions, that is a PPP unit that supports project development.

Transparency on the fiscal implications of PPPs is key for strengthening government accountability and improving the management of fiscal costs and risks from PPPs. To this end, transparent accounting and reporting would be critical to eliminate any bias in favor of PPPs and to reveal their full fiscal impact. Under international accounting and reporting standards, most PPPs would be considered on the governments' balance sheet. Few Caribbean countries currently apply this approach. Until this approach is fully implemented, governments should report long-term fiscal implications of PPPs on the budget deficit and public debt.

Understanding the fiscal implications of PPPs also requires comprehensive fiscal risk assessments that include risks arising from potential natural disasters and climate change. Few Caribbean countries have a framework in place to manage the fiscal impact of PPPs. The decision to enter into a PPP project should include an assessment of its long-term fiscal costs and risks. Governments can use the joint IMF-World Bank PPP Fiscal Risk Assessment Model (PFRAM) to assess the long-term fiscal implications and fiscal risks of PPP projects. Governments in the Caribbean region should also develop national policy frameworks for managing risks from natural disasters and better integrate risks arising from climate change into PPP design.

Once the risks are clearly understood, governments should decide on how best to mitigate and manage them. In Caribbean countries, PPP contracts have often tilted risks toward governments; in the future, governments may wish to transfer to or share more risks with the private partners. In addition, governments need to monitor risks actively throughout the lifetime of

a PPP project. Governments could also limit their PPP exposure by adopting ceilings on the stock and flows of PPP commitments. PPP projects for which the fiscal risks are not well understood or cannot be managed should not be undertaken.

Introduction

Caribbean countries have a growing interest in using public-private partnerships (PPPs) to address their infrastructure needs. As most of these countries have limited fiscal space for public investment, they see PPPs as a way to crowd in private investment to improve public service provision, support their tourism sector, and boost economic growth.

This paper reviews the potential contribution of PPPs to addressing infrastructure needs in the region, as well as potential risks they create to governments. It is the result of an innovative three-year project—financed by Canada and in cooperation with the Caribbean Regional Technical Assistance Center and the Caribbean Development Bank—aimed at building capacities in Caribbean countries to management fiscal costs and risks stemming from PPPs. It consisted of three workshops organized over three consecutive years for these countries and hands-on training on using the PPP Fiscal Risk Assessment Model (PFRAM). All countries answered a survey on PPP management framework and practices that helped provide tailored recommendations for the region.

The paper is organized as follows. Chapter 1 takes stock of the infrastructure development in Caribbean countries relative to comparable countries in the Pacific region and sub-Saharan Africa, and discusses the challenges limiting infrastructure provision in the region. Chapter 2 analyzes how PPPs can help the countries in the region and the potential risks associated with them. Chapter 3 provides recommendations on how Caribbean countries can address the challenges related to PPPs and improve the management of fiscal risks stemming from PPPs. Chapter 4 concludes.

CHAPTER

1 Challenges to Infrastructure Development in the Caribbean Region

This section presents the common challenges faced by Caribbean countries in improving infrastructure access and quality. Economic developments and infrastructure indicators for the countries that are a member of the Caribbean Regional Technical Assistance Center, hereafter Caribbean countries, are analyzed and benchmarked against the group of small states in the Pacific and sub-Sahara African (SSA) region.[1]

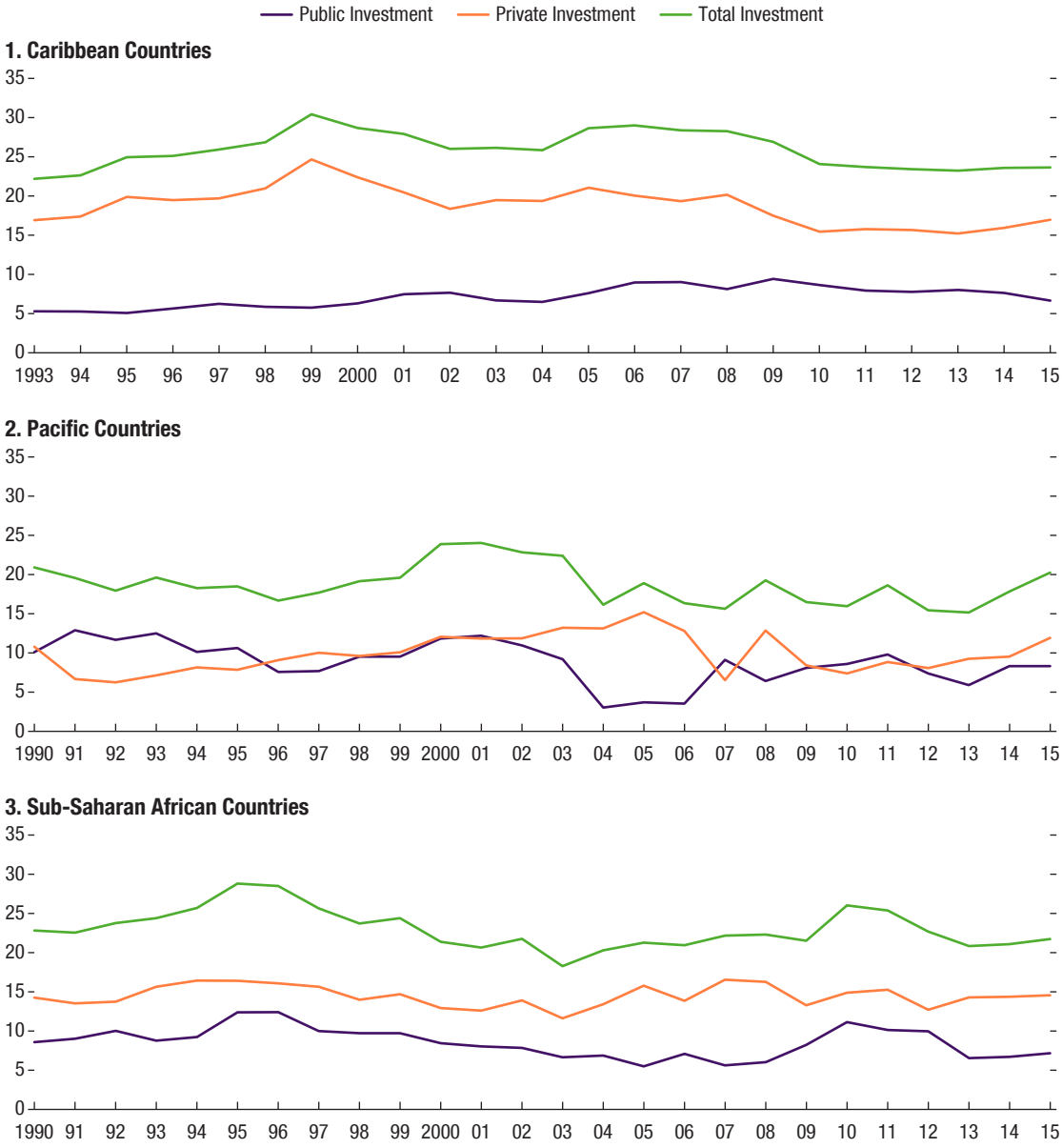
Infrastructure Developments in the Caribbean

Investment Trends

Over the past decade, total investment in the Caribbean region has been trending down. Following a period of strong growth, total investment (as a share of GDP) started to decline (Figure 1) with the global financial crisis and economic downturn, which negatively impacted the economies in the region. Most countries had a lower level of total investment during 2010 to 2015 relative to 2005 to 2009 (Figures 2 and 3), except for Haiti (in light of the reconstruction following the devastating 2010 earthquake), the Bahamas, Dominica, and Guyana. In the Pacific region, the total investment-to-GDP ratio has remained lower than in the Caribbean but on a broadly steadier path, whereas investment in peer countries in SSA has trended upwards from 2003, before leveling off over the recent period.

[1]This paper uses the IMF definition of small states (IMF Board paper, 2013a,b) to define comparator groups, as most the Caribbean Regional Technical Assistance Center member countries are included in this category, except Jamaica and Haiti. Comparator groups include, for Pacific countries, Fiji, Kiribati, Maldives, Marshall Islands, Micronesia, Palau, Samoa, Solomon Islands, Timor-Leste, Tonga, Tuvalu, and Vanuatu; and for SSA countries, Cabo Verde, Comoros, Mauritius, São Tomé and Príncipe, Seychelles, and Swaziland.

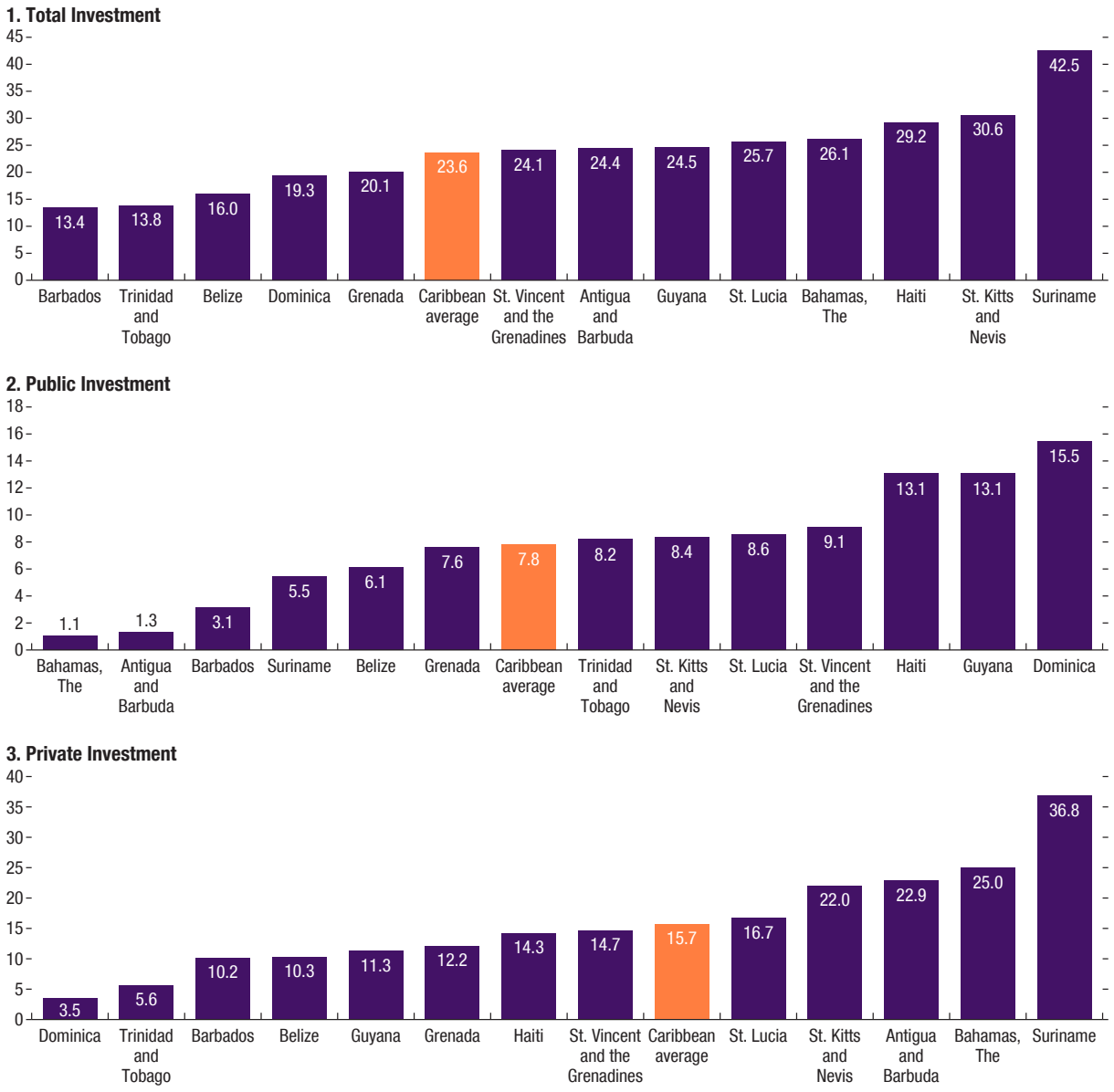
Figure 1. Public and Private Investment Trends
(Percent of GDP)



Source: IMF Fiscal Affairs Department Investment and Capital Stock Dataset.

Private investment, which plays a key role in the region, experienced a large decline. Over the last three decades, private investment has been twice as high as public sector investment and largely above levels reached among comparator groups. But private sector investment in almost all Caribbean countries has been trending down in the last decade, driving the decline in

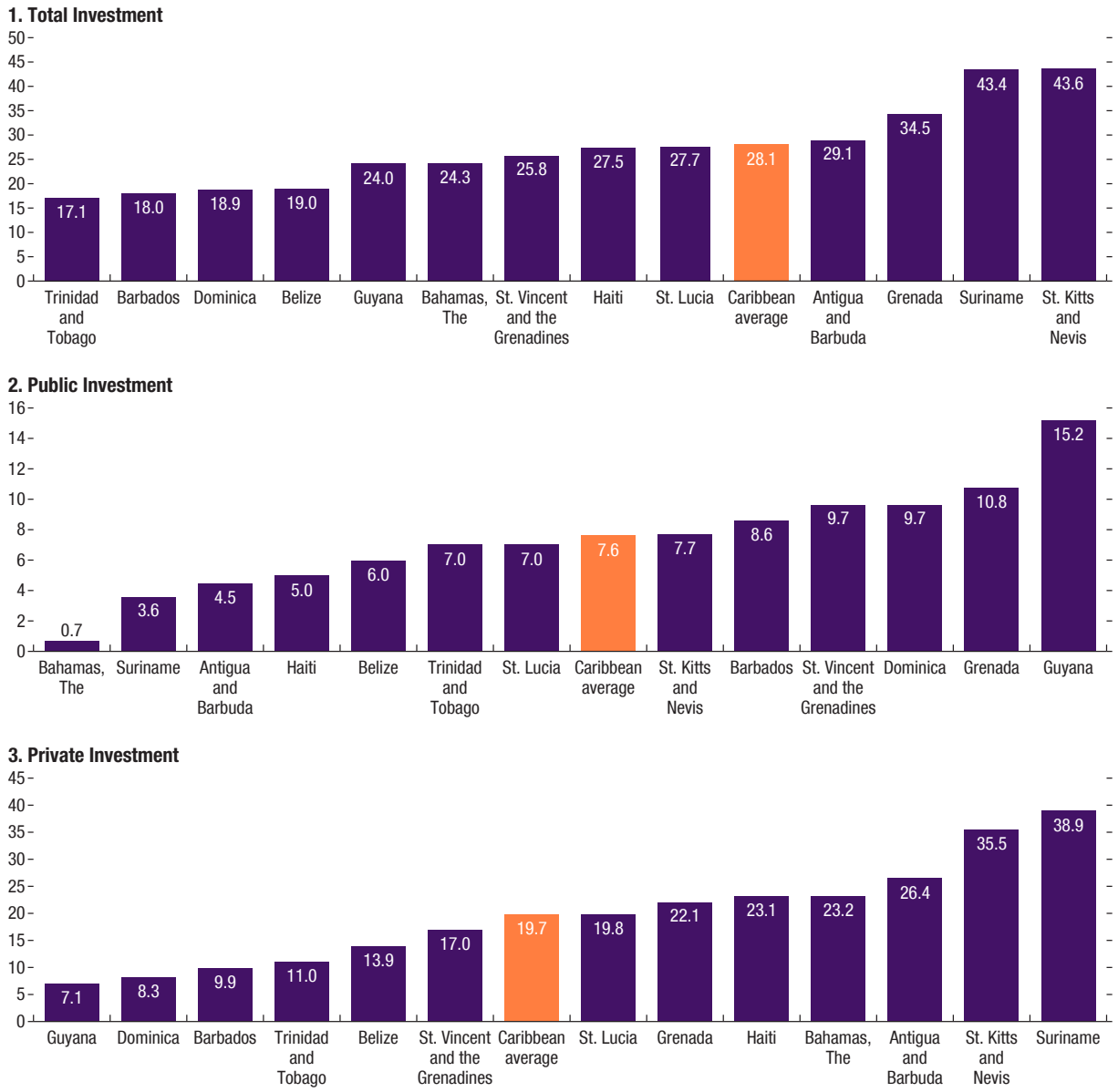
Figure 2. Caribbean Countries: Investment, 2010–15
(Median, percent of GDP)



Sources: Haver Analytics; Penn World Tables; and IMF staff calculations.
Note: Data not available for Jamaica.

total investment. Only Barbados, Bahamas, and Guyana have managed to scale up private investment during this period. More recently, private sector investment in the Caribbean region picked up again; however, it is still well below its 1999 peak.

Figure 3. Caribbean Countries: Investment, 2005–09
(Median, percent of GDP)



Sources: Haver Analytics; Penn World Tables; and IMF staff calculations.
Note: Data not available for Jamaica.

Governments in the region only temporarily and partially offset the decline in private investment. Initially, more than half of the Caribbean countries had a marginal increase in public investment, aiming to support growth during the global and domestic downturn. However, from 2008, countries in the region curtailed capital spending in response to deteriorating public

finances. Thus, public sector investment in the region decelerated from about 10 percent of GDP in 2005 to about 6½ percent of GDP in 2015, significantly below levels in peer countries in both the Pacific region and Africa. Almost two-thirds of the Caribbean countries scaled down public investment, except Barbados, Grenada, Belize, St. Kitts and Nevis, and St. Lucia.

PPPs are another way for governments to procure public infrastructure. A PPP is a project governed by a long-term contract between a government and a company. The latter makes an investment in an asset and, using that asset and perhaps other assets made available by the government, provides services to the government or the public (Irwin, Mazraani, and Saxena, 2018). The company is usually private[2] and is typically established specifically for the project. The services are usually ones for which the government has traditionally been responsible, such as those provided by roads, railways, schools, hospitals, prisons, or airports. The government continues to have some responsibility for the quality of the services and to bear some of the attendant risks of providing them. At the end of the contract, control of the asset typically reverts to the government.

While PPPs have been extensively used in some Caribbean countries, they have not significantly contributed to public investment since the global financial crisis.[3] Some governments in the region resorted to PPPs for large-scale infrastructure in the first half of the 1990s, notably in the electricity, transport, and water and sanitation sectors (Caribbean Development Bank 2017b; World Bank 2014a). Thus, Caribbean countries have on average the highest PPP capital stock as a share of GDP relative to peers in the Pacific region and in Africa. However, PPP investment in the region has been declining since 2005 to levels below peer countries in SSA. As a result, PPP investment did not offset the declining trend in public investment over the past decade (Figure 4).[4]

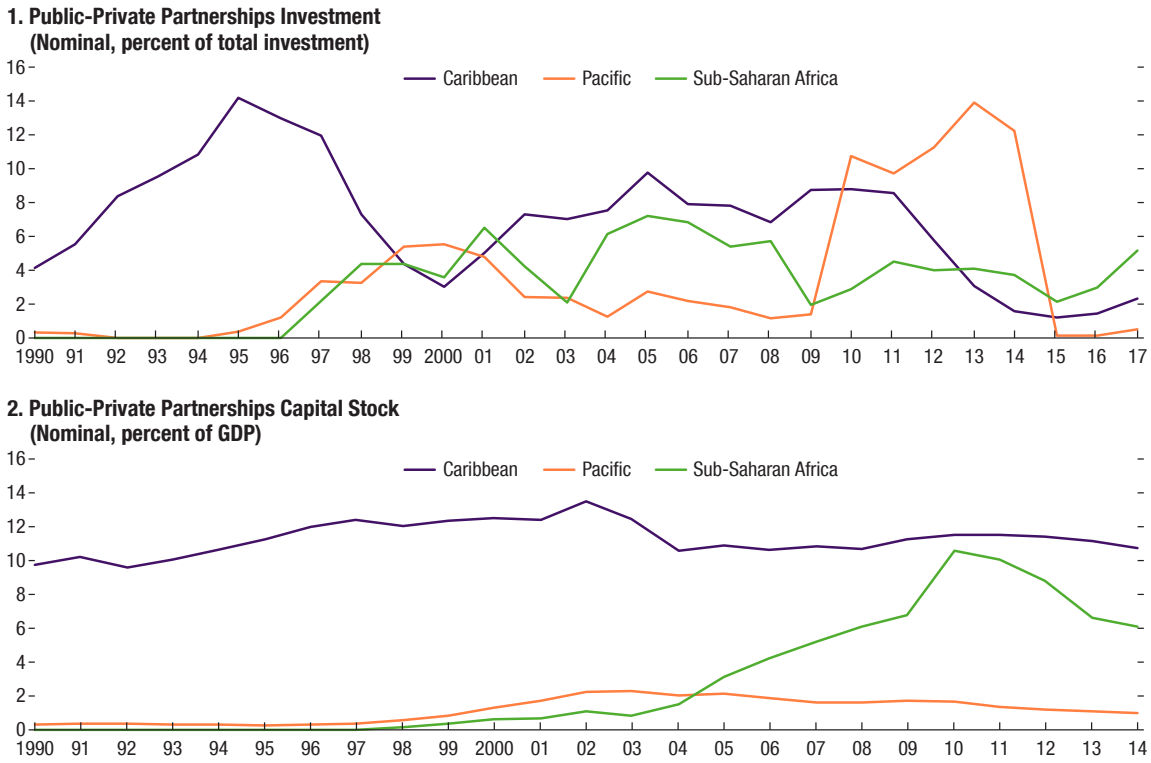
Few countries have implemented multiple PPPs. Jamaica has implemented large PPP projects (see the example of the Sangster International Airport in Box 1) and mobilized private investment in infrastructure through PPPs (The Economist Intelligence Unit 2017). Most countries in the region have less experience in negotiating and implementing PPPs. For example, in the airport sector, private participation is limited. Most airports in the Caribbean are owned and operated by the public sector, with only Jamaica

[2]PPPs can also consist of a joint venture company that is partly owned by a public authority and partly owned by a private company or private investors. In the Caribbean region, the Old Harbor Combined Cycle Power Station project signed in 2017 in Jamaica is an example of an institutional PPP.

[3]PPPs exclude simple joint ventures, the sale of public assets or of public company shares—which are part of a privatization process—and arrangements in which the private partner is not required to finance investment.

[4]Although we consider PPPs as public investment project, they are typically not properly reported in fiscal data, notably in countries with cash-based accounting as most Caribbean countries (see IMF 2017).

Figure 4. Private Partnerships Investment and Capital Stock[1, 2]

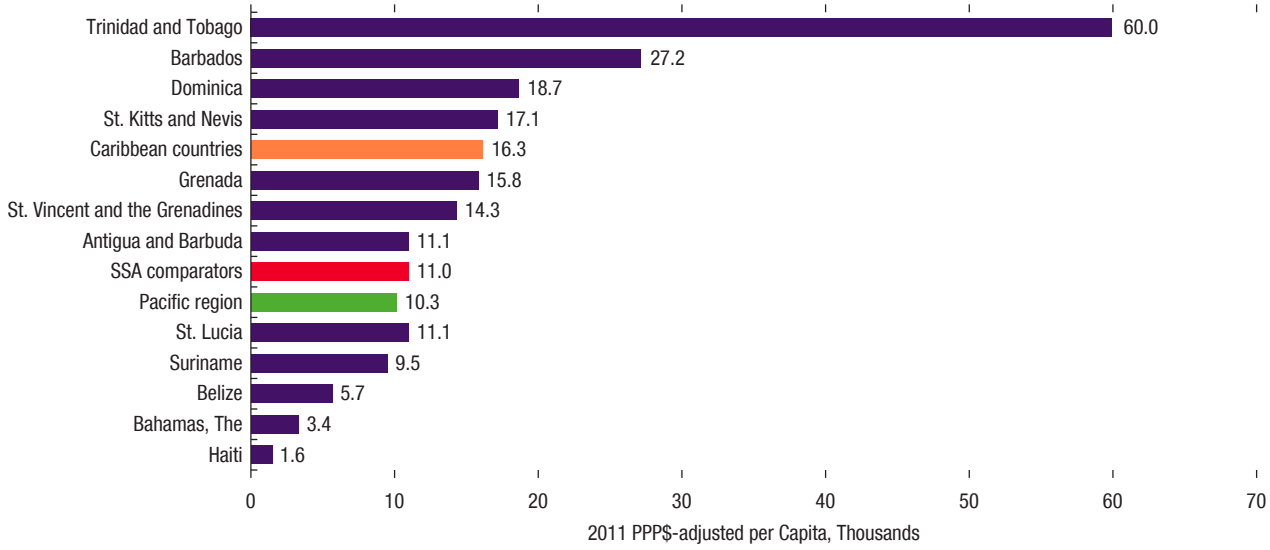


Source: IMF Fiscal Affairs Department Investment and Capital Stock Dataset.
[1]Caribbean average includes Belize, Dominica, Grenada, Haiti, Jamaica, and St. Lucia; Pacific average includes Fiji, Maldives, Samoa, Solomon Islands, Timor-Leste, and Tonga; sub-Saharan Africa average includes Cape Verde, Comoros, Mauritius, São Tomé and Príncipe, Seychelles, and Swaziland.
[2]Total investment = public investment + PPP investment; total capital stock = public capital stock + PPP capital stock.

and the Bahamas having functioning airport PPPs. Recently completed and ongoing airport expansion projects in Antigua and Barbuda, St. Vincent and the Grenadines, and Guyana are all publicly-funded and operated. Private sector participation in the Caribbean airport sector is challenging because few airports would pass the industry practice of at least one million passengers per year. Beyond PPPs, the Caribbean region has a long history of partnership between governments and the private sector in the ownership and operation of resort hotels. The typical model is a lease agreement for hotel assets owned by the government with an international hotel operator.[5]

[5]These arrangements are not further discussed in this paper as they are not considered PPPs.

Figure 5. Public Capital Stock per Capita, 2015
(2011 PPP$-adjusted, thousands)



Source: IMF Fiscal Affairs Department Investment and Capital Stock Dataset.
Note: PPP$-adjusted = purchasing power parity adjusted for US dollars.

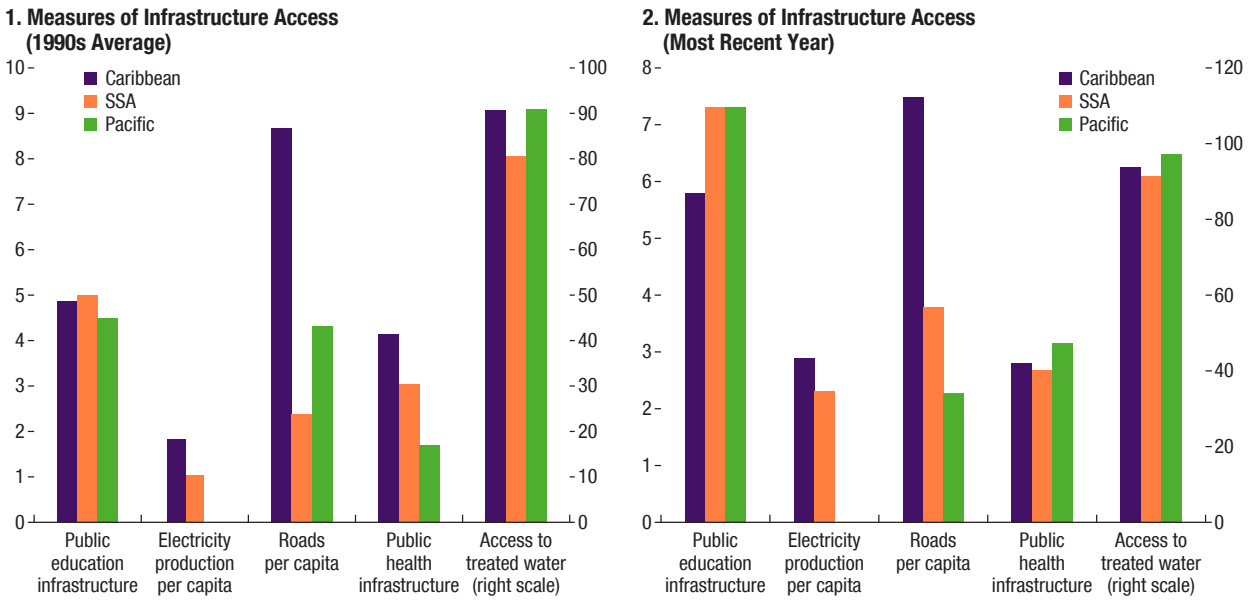
Infrastructure Provision

Despite the decline in public investment, the value of the public capital stock per capita in the Caribbean region remains relatively high on average (Figure 5).[6] Caribbean countries have on average a high public capital stock per capita (adjusted for purchasing power parities) relative to their peers in Sub-Saharan Africa and the Pacific. This masks however significant disparities across Caribbean countries. Trinidad and Tobago outperformed all Caribbean countries, while Haiti lags its peers in the region.

Access to economic infrastructure in the region has improved substantially in recent years, but Caribbean countries lag on social infrastructure (Figure 6). In this regard, the Caribbean countries have on average outperformed their peers in SSA and the Pacific, particularly in roads and in electricity production. However, with respect to social infrastructure (education and public), the region has fallen behind the Pacific region and appears on par with SSA comparators. Access to treated water is almost universal, as in the Pacific region, and to a lesser extent in Africa.

[6]The public capital stock is the accumulated value of public investment over time, adjusted for depreciation (which varies by income group and over time), and is the principal input into the production of public infrastructure (IMF 2015).

Figure 6. Access to Infrastructure



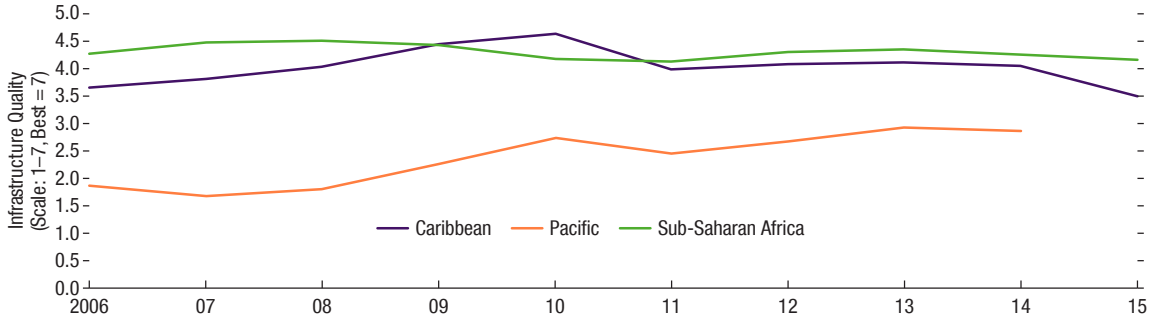
Source: World Bank, World Development Indicators.
Note: Units vary to fit scale. Left scale: Public education infrastructure is measured as secondary teachers per 1,000 persons; electricity production per capita as thousands of kWh per person; roads per capita as km per 1,000 persons; and public health infrastructure as hospital beds per 1,000 persons. Right scale: access to treated water is measured as percent of population.

The quality of existing infrastructure in the Caribbean region has suffered in recent years (Figure 7). Overall, infrastructure quality has somewhat declined in the Caribbean region and is perceived as lower than in SAA comparators on average. A breakdown of the overall index[7] shows that, in terms of the average quality of their air transportation and ports, Caribbean countries are on par with their African peers but performing better than their peers in the Pacific. Given the importance of tourism in the Caribbean region, the expectation was that the region would outperform its peers with respect to the average quality of both its air transport and ports. Only Barbados, and to a lesser extent Jamaica and Trinidad and Tobago, have a better score than the average in other regions. Haiti is significantly behind on almost all indicators for quality of infrastructure, illustrating its longstanding development challenges, which have been exacerbated by the devastating earthquake in 2010.

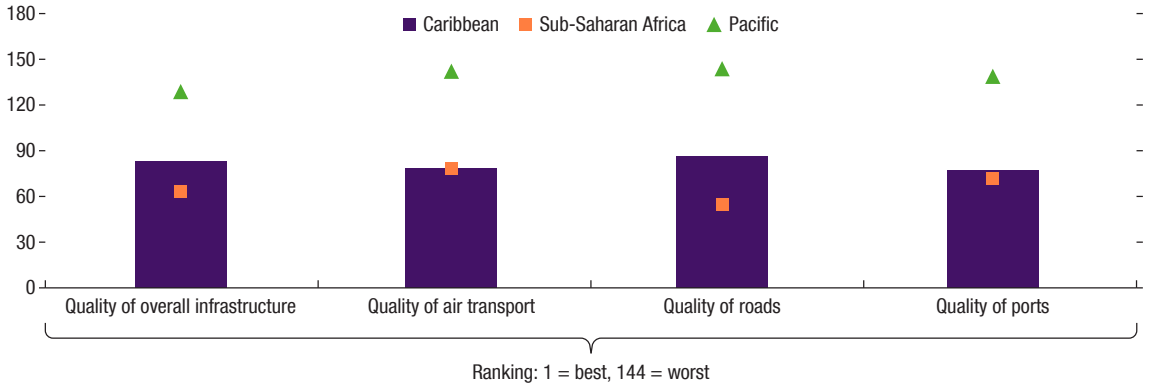
[7]Perception of infrastructure quality: measured by an index generated by the World Economic Forum, based on an executive opinion survey, conducted each year in more than 140 countries. Participants are asked to assess general infrastructure, such as transport, telecommunications, and energy, by ranking these on a quantitative scale (from 1 to 7).

Figure 7. Caribbean Region: Infrastructure Quality Indicators

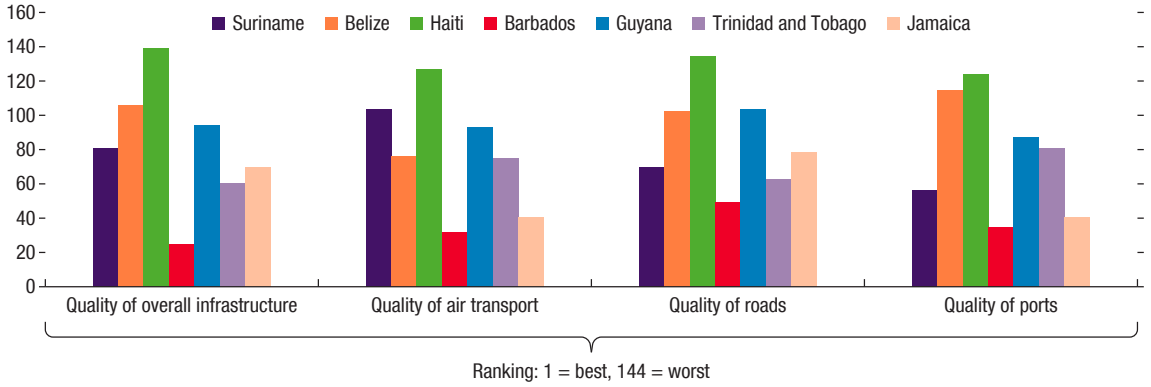
1. Perceptions of Infrastructure Quality



2. Infrastructure Quality, Latest Value Available



3. Infrastructure Quality, Latest Value Available



Source: World Economic Forum; and IMF staff estimates.
Note: Caribbean region average includes Barbados, Haiti, Jamaica, and Trinidad and Tobago.

Obstacles for Improving Infrastructure in the Caribbean Region

The region faces significant challenges to increase infrastructure provision. With comparatively high fiscal deficits, Caribbean countries have limited budget room to increase public investment spending. Access to long-term financing is curtailed by high public indebtedness, shallow domestic financial markets, and limited concessional support. Infrastructure development is also hampered by the small size of most countries which makes it difficult to achieve economies of scale in infrastructure investment. In addition, the region's vulnerability to natural disasters and climate change increases the risk profile of long-term investment in infrastructure.

Limited Fiscal Space

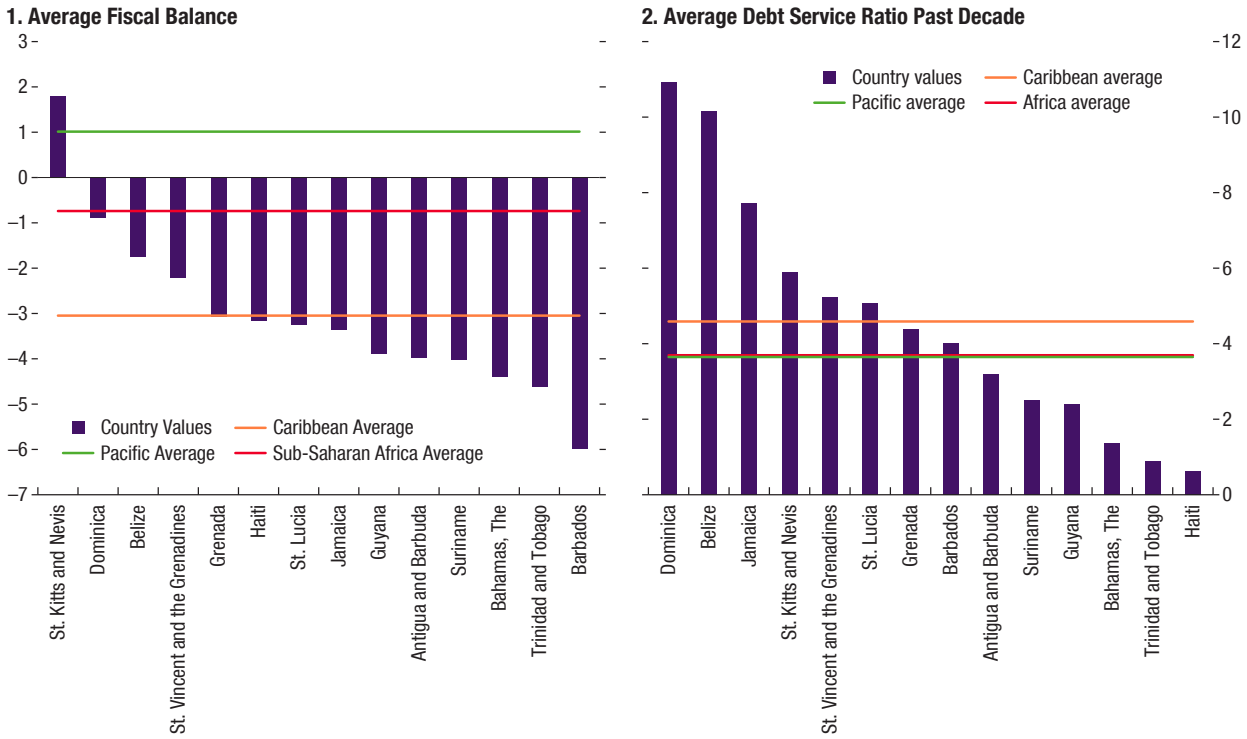
Most Caribbean countries are constrained by limited fiscal space to increase capital spending. With an average fiscal deficit of about 3 percent of GDP, the fiscal situation in the Caribbean region has been worse than for its peers in the Pacific and African regions (Figure 8). Starting in 2010 though, Caribbean countries have experienced a worsening in their aggregate fiscal balance. The countries in the Caribbean regions also have a higher debt service than their peers in the Pacific and African region, limiting their fiscal space and flexibility, in particular Dominica, Belize, Jamaica, and St. Kitts and Nevis.

High public debt is also affecting some Caribbean countries' access to international financial markets. Continued weak fiscal balances have contributed to a sizeable accumulation of public debt in the Caribbean region. The Caribbean economies are much more indebted than the average of their peers in other regions (see Figure 9). Despite decreasing in the mid-2000s, driven in part by restructuring operations and bilateral debt relief (Schipke, Cebotai, and Thacker, 2013), average debt levels remain high at about 75 percent of GDP. There is a considerable diversity in debt burdens across the Caribbean, with some countries with a debt-to-GDP ratio below 60 percent of GDP, whereas others have a debt ratio above 100 percent of GDP, which has led markets to assign high sovereign risk to most countries and thus reduces access to international financing (IMF 2013a).

Financing Constraints

Access to long-term financing for infrastructure is hampered by shallow domestic financial markets. Financial sectors in the region are large relative to the size of the regional economy, with total assets averaging 320 percent of GDP, but not geared toward infrastructure investment. The financial sectors in these countries are in general dominated by banks that have shorter

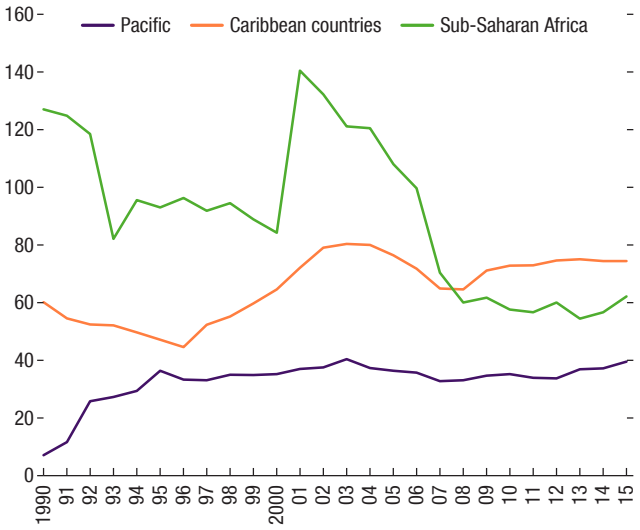
Figure 8. Caribbean Countries: Fiscal Situation, 2007–18
(Percent of GDP)



Source: IMF, World Economic Outlook database.

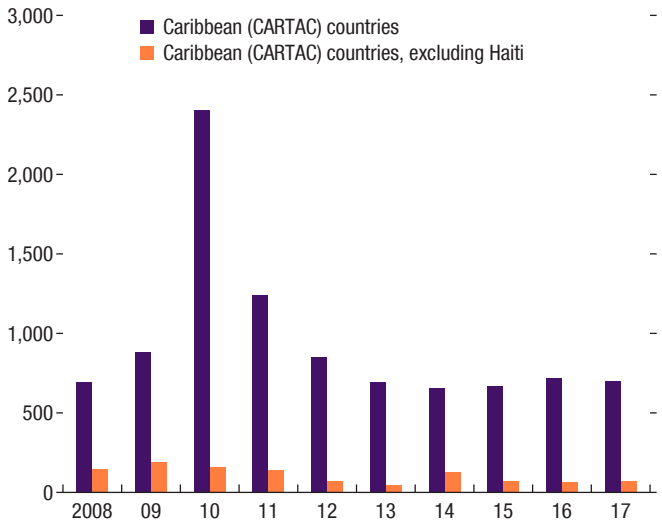
lending horizons relative to infrastructure investment (IMF 2013b). In some countries, the insurance sector is large relative to population, but it is not substantially financing local infrastructure investment due to the absence of well-developed local capital market. Some countries have an important credit union sector, which is mainly providing

Figure 9. Nominal Public Capital Stock and Gross Debt
(Percent of GDP)



Source: IMF World Economic Outlook database.

Figure 10. Caribbean Countries: Total Bilateral Development Aid
(Millions of US dollars, constant prices)



Source: Organisation for Economic Co-operation and Development, International Development Statistics database.

consumer and mortgage loans. And the very large offshore banking sectors is geared toward international clients and does not provide domestic financing.

The Caribbean region has limited access to global capital markets. Most Caribbean countries have limited access to global capital markets, as international investors are reluctant to take on small country exposure, given the risk posed by economic volatility, high indebtedness, and the cost of administering and monitoring relatively small financial transactions (Alleyne and others 2017; IMF 2013b, 2014A). This has resulted in illiquid markets for debt in most countries in the region and, therefore, access to financing for both public and private infrastructure investment has been heavily constrained. While external debt financing is growing in some countries—such as Trinidad and Tobago and Barbados—it remains practically nonexistent in the other countries of the region.

Most Caribbean countries cannot compensate the lack of private financing for infrastructure by tapping into concessional financing. While concessional flows have increased globally, including after the global economic crisis, most Caribbean countries—having reached upper-middle- and high-income status—have become less successful in accessing international development assistance as aid preferences shifted toward low-income countries and countries in post-conflict situations (Bourne 2015). Haiti is the largest recipient of official development aid (ODA) in the Caribbean region, receiving 80 to 90 percent of total aid disbursement to the region. Total bilateral flows to Caribbean countries (excluding Haiti) have declined substantially since 2009, reaching a very low level in recent years (see Figure 10). This decline took place as countries were dealing with the adverse effects of the global recession and were facing dwindling fiscal space for capital investment. With the exception of Barbados and Trinidad and Tobago, which received no ODA, Caribbean countries currently receive ODA ranging between 0.1 percent and 4.9 percent of their gross national income, with Haiti at the upper end, followed by Dominica and St. Kitts and Nevis with 4 percent, and Guyana and

Belize with 3.3 and 3.2 percent of gross national income, respectively. Other Caribbean countries are at the medium to low end of the aid spectrum. Overall, Pacific island small states have been more reliant on development assistance than Caribbean countries (IMF 2013b).

Small Size Constraints Infrastructure Investment

The small size of most Caribbean countries limits the potential for achieving economies of scale in infrastructure investment. Most Caribbean countries are characterized as small states based on their population size and, as such, these countries face substantial challenges in achieving economies of scale. Lack of economies of scale in providing public goods and services can limit institutional capacity because of fixed costs, raises the average cost of the public sector for small states, and results in the under-provision of some public goods and services (IMF 2013b). This is a challenge for the provision of infrastructure, as there is limited scope to generate sufficient return to cover fixed costs of investment given small market size.

Vulnerability to Natural Disasters and Climate Change

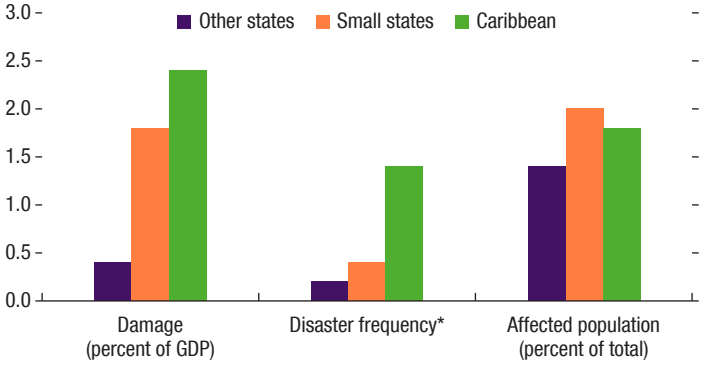
The Caribbean region is exposed to natural disasters. The region has experienced a series of natural disasters that have caused tremendous losses in terms of human lives, productive assets, physical infrastructure, and production, especially in agriculture and tourism (Appendix I). The average annual economic cost of disasters during 1990 to 2014 was equivalent to about 2.5 percent of GDP for the region, six times higher than in other countries and about ½ percentage point of GDP higher than in other small countries (Figure 11) (IMF 2016).

Natural disasters in the Caribbean region are not only costlier, but also more frequent than in other countries (Figure 11). The frequency of natural disasters reached an all-time high in the 2000s and the level reached in the first half of 2010s decade is already comparable to earlier decades (1960s and 1970s) and is on its way to reach the levels of the 1980s and 1990s. The frequency of disasters varies significantly within the Caribbean region, with Jamaica and the Bahamas having a more than 20 percent probability of being struck by a hurricane in any given year, and most of the other Caribbean countries having a probability higher than 10 percent.

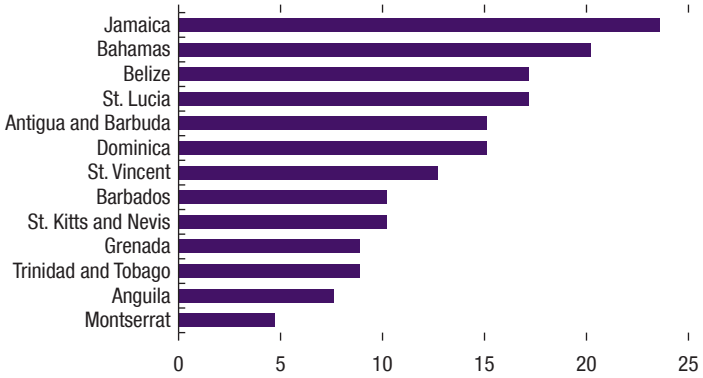
At the same time, many islands in the Caribbean region are exposed to climate change (Box 2). Climate change is expected to exacerbate the impact of natural disasters, increasing the frequency and force of hurricanes, causing sea level to rise—threatening coastal infrastructure, beaches (crucial for the

Figure 11. The Carribean Region Susceptibility to Natural Disaster

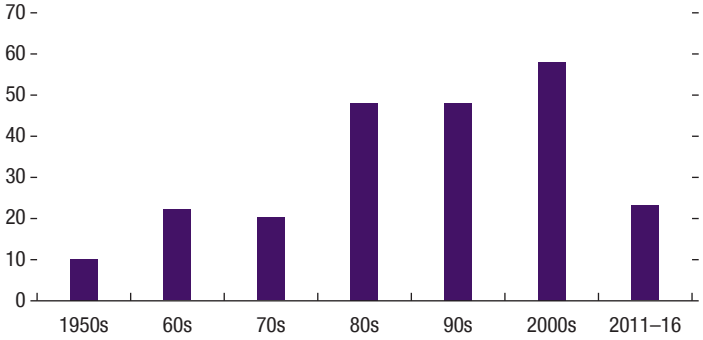
1. Average Annual Effects of Disasters



2. Probability of a Hurricane Striking in a Given Year (Percent)



3. Number of Disasters by Decade



Source: EM-DAT databases.

tourism sector), housing settlements, fresh water supplies, marine life, and coastal fisheries.

Climate change can cause extensive damages to the economy and infrastructure in the Caribbean region. The economic cost of climate change for Caribbean countries is projected at about 8 percent of GDP per year associated with one-meter sea-level rise (SLR) by 2080 (IMF 2016) and would largely impact infrastructure:

- **Coastal infrastructure and ecosystems.** SLRs and more intensive and frequent tropical storms could affect coastal infrastructure, destroying buildings, roads, airports, hotels, marinas, and other facilities in the tourism sector. Erosion of beaches is also a major source of risk for the tourism-depending Caribbean countries.
- **Transport systems.** Intense rainfalls can cause flash floods and landslides, which can destroy bridges and road infrastructure—leading to high repair costs.
- **Port activities.** More intensive tropical storms, combined with SLRs, could also affect port activities, raising shipping costs, reducing trade, and hampering cruise tourism.
- **Energy services.** SLR-related intensive tropical storms could threaten energy infrastructure in the region. Storms with high winds could damage pipelines, power transmissions, and distribution lines, resulting in power shortages.

Risks associated with natural disasters and climate change may discourage private investors or force governments to become the insurer of last resort (Public-Private Infrastructure Advisory Facility 2016). Natural disasters and climate can adversely impact the physical infrastructure, increase capital and operating expenditures, cause service disruptions and income losses, or increase insurance costs (World Bank 2016a). While typically a PPP contract allocates risks between the public and the private partners, climate risks are generally not considered or allocated to a specific party (Public-Private Infrastructure Advisory Facility 2016). In that context, private companies may be reluctant to invest in large infrastructure projects given significant uncertainties. And if PPPs are executed, the government may become the insurer of last resort to ensure availability and continuity of infrastructure services in case risks arising from natural hazards and climate change materialize.

Box 1. Jamaica Sangster International Airport Public-Private Partnership

The Government of Jamaica (GOJ) needed to upgrade the Sangster airport and decided to crowd in private financing and expertise, via a long-term concession. In the 1990s, Sangster International Airport was aging and holding back Jamaica's tourist industry, but the GOJ did not have the financial and technical capacity to expand and modernize it. In 2003, the GOJ handed over control of Sangster International Airport in Montego Bay to the Vancouver Airport Services Consortium, under a 30-year concession agreement. The concession agreement called for $180 million in new capital investment and development of the full commercial potential of the airport, thereby broadening its revenue base and reducing its dependence on passenger charges and landing fees.

In its first 15 years of operation, this PPP has led to major expansions and improvements in quality of service. The concession agreement has expanded the terminal building and added loading bridges and gates. Passenger traffic grew by about 25 percent, to reach 4.3 million passengers by 2017, and total revenues by more than four-fold, due primarily to increases in non-aeronautical (that is, commercial) revenues.

In 2018, halfway into its 30-year concession, the consortium is again expanding and modernizing the airport. The first phase will see rebuilding of the check-in area, customs, immigration, and car park and drop-off areas. Phase two, currently under development, involves runway extension to accommodate long-haul aircraft.

Overall, this project has had a positive fiscal impact. The GOJ incurred limited costs for the preparation of the project, and neither contributed to investment costs nor provided guarantees to its private partner. In addition, it received significant annual concession fees from its private partner.

Source: Caribbean Development Bank (2014).

Box 2. How will Climate Change Affect the Caribbean Region?

The Caribbean region is exposed to many climate risks, mostly related to its location and small size. Climate change is likely to exacerbate the region exposures to natural hazards, mainly through:

- **Extreme temperatures.** Global warming is projected to result in more frequent and more intense episodes of extreme heat. This will come on top of the already high average temperatures for the countries in the Caribbean region, with more frequent episodes of droughts.
- **Sea-level rise (SLR).** SLR is projected to be directly related to the degree of global warming and proximity to the equator. It will most probably contribute to higher risk of storm surges, such as tropical hurricanes and tsunamis, as well as persistent flooding and coastal erosion. Projections for SLR range from an average of 0.38 meters to 1.14 meters. Such SLRs and associated extreme coastal flooding could expose many Caribbean countries to the risk of storm surges.
- **More severe and frequent tropical storms.** Climate change is projected to increase the intensity and frequency of large natural disasters, such as tropical storms. Relatedly, the intensity and impact of coastal flooding is likely to increase substantially. Specifically, by 2100, tropical storms making landfall could inflict damages up to 77 percent higher than today—with an impact of up to 42 percent higher even when storms do not make landfall.

Source: IMF (2016).

CHAPTER

2 Public-Private Partnerships Can Help Improve Infrastructure in the Caribbean Region, but Come with Challenges

Public-Private Partnerships Can Contribute to Addressing Infrastructure Bottlenecks

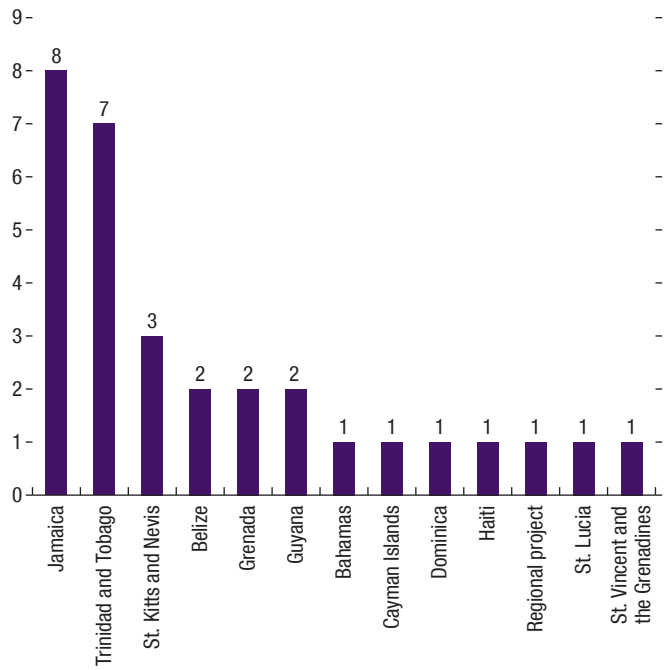
All countries in the region plan to use public-private partnerships (PPPs), but these projects are mostly at an early development stage. In early 2019, a total of 31 PPP projects were in various stages of development, in renewable energy, transport, and water and sanitation (see Figure 12). Total investment costs are estimated at about $2.5 billion, with the energy sector representing about $1 billion and the transport and water and sanitation sectors $500 million, respectively. Most of these projects were, however, at the concept stage, with only 4 of the 31 projects having progressed to the tender stage.

Indeed, PPPs can crowd in foreign private financing and bring potential benefits for the Caribbean region. Project financing is the process of raising the financial resources needed to pay for the construction of an infrastructure project (that is, for paying the architects, engineers, construction company, etc.). In a PPP, project financing is typically and predominantly organized by the private partner. This is done in the form of equity injection and debt raised by the private partner. As Caribbean countries face financing constraints to expand infrastructure, PPPs can help attract private financing, particularly through foreign direct investment.

Well-designed PPPs can also provide significant benefits to governments. PPPs are a form of contracting that requires a great deal of rigor on the part of the public authority in all phases of preparation and execution. Under these conditions, PPPs have the benefits described in the following:

- **More integrated technical design:** The public entity and the private partner should work jointly to optimize construction based on the service

Figure 12. Caribbean PPP Pipeline, 2019
(Number of projects)



Source: Caribbean Development Bank.

to be provided to users. The public entity should define its service objectives and describe them accurately, which often leads to closer analysis of its needs than in traditional public procurement. Instead of carrying out a technical project strictly defined by the public entity, the private partner should seek to optimize the work from a technical standpoint in light of the service to be provided. Compared to traditionally procured public investment projects, the experience of some advanced countries shows that technical gains can represent 15 to 20 percent of the cost of the work.

- **Internalizing coordination costs and technical difficulties:** The private partner's interest in reaching the operational phase—at the beginning of which it will start charging users or government—is an incentive to deliver the infrastructure asset on budget and on time. The private partner is responsible for resolving all coordination issues between the various players involved in the construction and benefit from the absence of interference by the public "client" in this phase, unlike what often happens in public project management, which often experiences program changes.
- **Maximizing revenue from users:** The private company will rely on its expertise to maximize revenues collected from the users of the infrastructure, under the constraints defined by the contracting authority, as it is better positioned to manage commercial revenues than the public sector.
- **Optimizing maintenance and operation:** In a PPP contract, equipment, maintenance, and upgrades are taken into account starting from the study stage, which helps contain overall investment, maintenance, and operation costs. In addition, the PPP structure itself ringfences resources for operation and maintenance spending. Many countries suffer from a chronic lack of maintenance funds when maintenance is carried out entirely with public budget resources.
- **Transferring risks to the private partner:** PPPs are a contractual mechanism that enables the government to transfer more risks to the private

partner than it can under traditional public procurement. That said, if the government wants an investment to be realized, it must be willing to take on some of the project risks or pay more if it transfers this risk to the private enterprise. The only method to reduce costs is to allocate the risk to the party that is better able to manage it at the lowest cost. Risks associated with the private partner's responsibilities typically include those related to feasibility studies, construction, maintenance, and operation. The public authority will ensure, when selecting the private partner, that the latter has all the qualifications and capacities needed to perform the work as described in the contract.

However, Public-Private Partnerships Have Proven Difficult to Implement in the Region

The region's potential for realizing PPPs is significantly constrained by several factors. As any public infrastructure project, PPPs face significant constraints in the Caribbean region. They include:

- **The limited size of most PPP projects in the region.** The average PPP project size in the Caribbean is under $100 million, a small size by international standards. Many Caribbean PPP projects are therefore below the radar screen of global players. Difficulties in attracting private investors are illustrated by the regional airline sector, where public enterprises continue to play a critical role (Box 3). Size by itself is not an absolute barrier to attracting investors as shown by the island of Nevis, which has two functioning PPPs (a wind farm and a bulk water project) with a population of about 12,000 people. However, it makes attracting the right kind of investor more challenging. Regional PPP projects, such as in the ferry sector, would probably attract more investors, but coordination across countries has been insufficient to prepare and implement infrastructure project at the regional level (World Bank 2014a).
- **Lack of technical capacity within the government.** Most governments in the Caribbean have limited capacities to deal with infrastructure project development. Governments often launch PPP transactions too early, when the project is not ready to be taken to market, with major unknowns and risks still outstanding. As a result, projects tend to languish for years, without making tangible progress to completion (Caribbean Development Bank 2017b).
- **Insufficient risk assessment and excessive risk allocation to the public sector.** In many instances, Caribbean governments end up taking on a significant amount of fiscal risks, both explicit and contingent. Most PPP projects in the region involve some form of payments or financial support from the government, for example to subsidize expected losses in the first

few years of operation. This period often turns out to be longer than anticipated, as experienced with Jamaica's Highway 2000 toll road, with net cash returns to the government not currently expected until well into the second half of the 30-year concession (Box 4).

- **Lack of sectoral reforms to attract private investors** (World Bank 2014a). The legal, institutional, and policy framework is not conducive to private investment in some sectors. In the electricity sector, for example, tariffs are well below cost recovery in many countries given limited tariff adjustments, hence creating uncertainties on future cash-flows for independent power producers.
- **Lack of funding for project advisors.** PPPs are complex operations that require quality advice to minimize fiscal costs and risks. To ensure a well-managed transaction and the realization of efficiency gains, governments must go to the market with a project that has been comprehensively studied from all angles and well prepared. The capacity for assessing and preparing projects is not available in most Caribbean countries, and the costs for adequate external support for the complete range of preparatory work can equal 5 to 10 percent of capital costs. For small economies seeking to implement large, transformative projects, this can present a major budgetary challenge. Thus, some PPP projects have been signed without the benefit of qualified advice, partly due to lack of funding.

Public-Private Partnerships Have Long-Term Implications on Public Finances

A survey on current practices for managing PPPs in the Caribbean countries was undertaken to assess their PPP framework. This survey is based on the PPP Country Readiness Diagnostic tool developed by the World Bank, which was presented during the first regional workshop organized in 2016 (World Bank 2016b). This tool assesses the PPP framework of a country to identify gaps relative to good practice and provide tailored recommendations. Survey results show significant gaps across a selection of seven areas: (1) institutional and legal framework, (2) framework for government support to PPPs, (3) framework for managing fiscal risks, (4) budgeting framework, (5) accounting framework, (6) statistical framework, and (7) transparency and disclosure.[1] Detailed results are presented in Appendix II and will be discussed in the remaining sections of this paper.

In contrast to a common misunderstanding, PPPs do not provide public infrastructure or public services for free, but only bring financing that will

[1]Anguilla, Antigua and Barbuda, Barbados, British Virgin Islands, Curacao, Dominica, Grenada, Guyana, Haiti, Jamaica, St. Lucia, St. Vincent and the Grenadines, St. Kitts and Nevis (which responded separately), Surinam, and Turks and Caicos participated in the survey.

need to be repaid. PPPs are a mechanism for financing infrastructure, but do not provide additional funding (Box 5). In a PPP, project financing is typically organized by the private partner, mainly through debt (often above 70 percent of total project financing) and to a lesser extent through equity. The government may contribute to the financing, for example through the provision of additional equity, guarantees, or investment subsidies. Government support is particularly needed in countries with limited PPP experience such as most Caribbean countries, where private investors are generally not willing to take all financial risks of a 25- to 30-year contract with a government or a public entity. According to the survey, half of Caribbean countries have provided project financing to PPPs, mostly in the form of capital grants (including free provision of assets—for example, land- or rights-to-use of public assets) and, to a lesser extent, through loans.

Paying for the provision of public infrastructure and services associated with a PPP asset is either the responsibility of the government or users. Therefore, PPP funding is either from public resources—which have been raised through taxes, etc.—or through fees or tolls collected from users. PPPs may be government-funded, user-funded, or a combination of both. In this regard, PPPs do not differ from traditionally procured infrastructure, as the government may collect fees or tolls from users, without involving a private partner in the project implementation. In the end, the taxpayer and/or user pay for public infrastructure and services, no matter whether they are implemented through traditional procurement or through a PPP.

In the Caribbean region, both government-funded PPPs and user-funded PPPs have been implemented. Government-funded PPPs include projects in the water sector (for example, Barbados Solid Waste Management Facility), in the real estate sector (such as Barbados Water Authority headquarter [Caribbean Development Bank 2017a]), and hospitals (such as in Turks and Caicos [Caribbean Development Bank 2017a]). In the electricity sector, most independent power producers operating under power purchase agreements are considered as government-funded PPPs, as the off-taker is a public utility and a concession agreement is required in the region (World Bank 2014a). User-funded PPPs have been used for example for airports (see Box 1 on the Jamaica Sangster airport) and roads (see Box 3 on Jamaica Highway 2000).

The potential for PPPs to generate long-term fiscal space is limited to the net efficiency gains generated by the private partner throughout the lifetime of a project. Procuring a project through a PPP only generates value if efficiency gains realized by the private execution of the project outweigh the higher private sector financing costs and the costs associated with managing a complex contract. The fiscal space generated by using a PPP instead of public procurement is therefore limited to the difference between the efficiency

gains and additional PPP-related costs[2]: Efficiency gains are mostly linked to the long-term engagement of the private partner, which leads to an internalization of the service and maintenance strategy in the project design and construction. Additionally, the drive, motivation, and creativity of the private sector may add to the efficiency of the project and thereby reduce project costs. At the same time, private sector involvement comes with additional costs: financing costs which are usually higher for the private sector than for the government, as investors expect to make a return on their equity,[3] and loans are carrying higher interest rates due to higher risks priced in for private sector debt (Box 6); due to their long-term nature, PPP contracts are complex and thus costly to arrange for and to manage for the public partner.

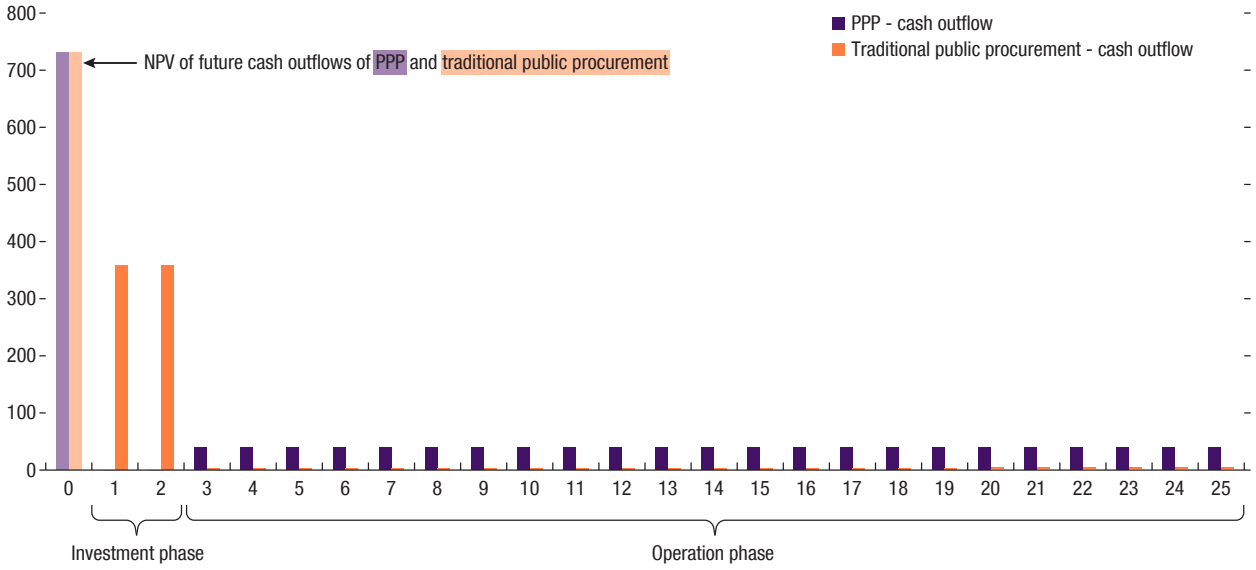
However, due to the structure of the contract, in a cash environment, PPPs can give the illusion of fiscal space in the short term. The cash-flow implications of a public infrastructure project are very different depending on whether it is implemented as a PPP or through traditional public procurement. In traditional public procurement, large, lumpy cash outflows from the budget are taking place during the construction phase. In the operation phase, outflows are limited to maintenance costs and any costs related to the service provided to users. In a typical PPP, no payments are being made until the projects starts operating, at the end of the construction period. However, during the operation phase, the investment cost, as well as the maintenance and operation cost must be recovered from the payments made by the government and/or the users (see Figure 13 for an illustrative example). Since nearly all countries, including all Caribbean countries, prepare their budgets on a cash basis, the delay in cash outflows makes PPPs attractive as they provide infrastructure services at limited costs in the short term.

Firm fiscal commitments from PPPs may limit budget flexibility and endanger fiscal sustainability if PPPs are used to bypass budgetary controls. Several countries have experienced the fiscal burden that a large PPP program may pose on future budgets if the long-term implications of PPPs are not fully considered in the decision process (Irwin, Mazraani, and Saxena 2018). In general, PPP-related decisions are often being driven by the lack of budgetary resources available for large-scale infrastructure projects, including in the energy and transport sectors. When a PPP program is built up, obligations to make payments from the budget increase over time. This is an experience reported on by the UK Treasury (Figure 14). Obligations peeked in the early

[2]A PPP is said to provide value if, compared to traditionally procured projects, it can provide higher-quality public infrastructure or services for the same cost, or to provide the same quality of public infrastructure or services at a lower cost.

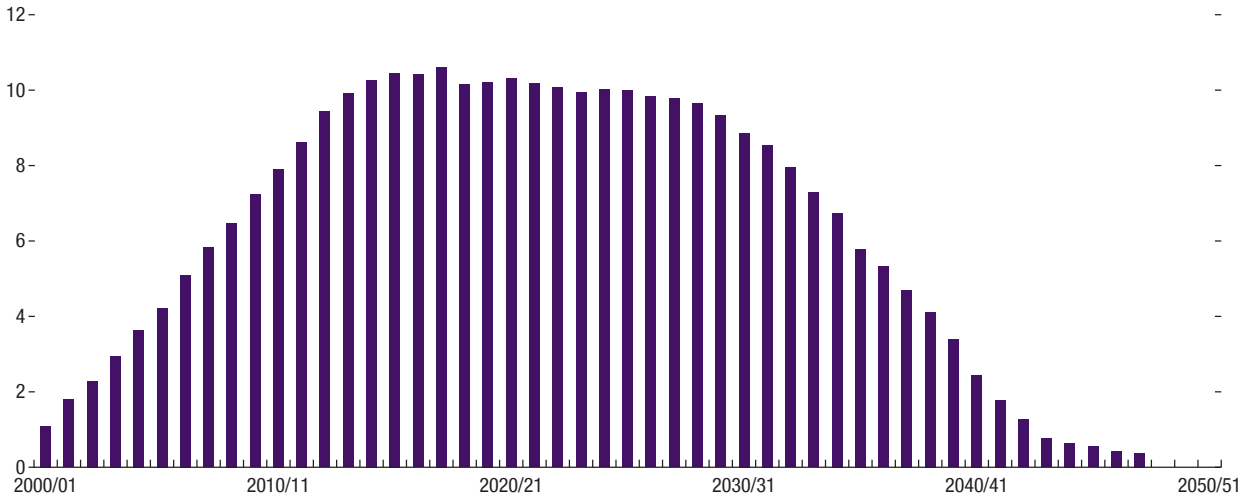
[3]In the United Kingdom, the cost of capital for PPPs was between 2 and 3.75 percentage points higher than for government-funded projects, and 3.5 to 7 percentage points higher for user-funded projects (National Audit Office 2015).

Figure 13. Cash-flow Implications of Executing a Government-funded Project through a PPP or through Traditional Procurement



Source: IMF staff.
Note: The effect of a user-funded project would be similar, but the government would generate revenues during operation phase in case of the traditional procurement and the users, instead of the government paying for the service during the operation phase in the case of a public-private partnership.

Figure 14. United Kingdom: Total Government Payments for all Public-Private Partnerships Projects as of March 2014
(Billions of British pounds)



Source: www.gov.uk/government/publications/private-finance-initiative-projects-2014-summary-data.

2010s and are not expected to decline until the mid-2020s. When PPPs require payments from the budget, these commitments may absorb a significant part of the expenditure envelope. Given already limited fiscal space in the region, a Caribbean country that would sign multiple PPPs could quickly face similar budget challenges as Portugal (Box 7).

PPPs implemented in parallel to the public investment program and outside the budget process may crowd out other high-priority spending and create governance risks. Countries mostly start with PPP programs that are formulated and decided outside the public investment and budget process. In the survey, 9 of 14 Caribbean countries confirmed that PPPs are handled outside the public investment program. These PPPs absorb considerable public resources, and once committed for a PPP, these resources are no longer available for allocation through the budget and thus for projects form the public investment program that would be implemented through traditional procurement or for new social programs. Thereby, potentially large but lower-priority PPPs may crowd out high-priority spending and, consequently, public resources are not allocated in line with policy priorities and the government's development plan. In addition, PPPs create governance risks as confidentiality clauses in contracts reduce transparency and frequent renegotiations generate significant discretion (IMF 2019).

Public-Private Partnerships Can Generate Large Fiscal Risks to the Government

PPPs create contingent liabilities, even if the long-term firm fiscal commitments are considered in the decision and budget process. Apart from firm commitments, PPPs often entail explicit and implicit contingent liabilities:

- **Explicit contingent liabilities relate, for example, to loan or minimum revenue guarantees, or the occurrence of natural or political force majeure events.** Explicit contingent liabilities occur if the government commits to bear the cost should a risk materialize (for example, in the case of a minimum revenue guarantee, the government commits to compensate the private partner if demand for the service and thus revenues collected from users fall below an agreed minimum level). The survey shows that four Caribbean countries have already provided government guarantees, including minimum revenue guarantees to PPP projects. These guarantees impose significant fiscal risks as governments often face unforeseen budget expenses to compensate their private partner (for example, in the case of the Barbados solid waste management facility that came with a minimum revenue guarantee equivalent to 5 percent of GDP [Box 11]). This can be

attributed to forecasting errors or deliberately overestimated projections driven by a desire to see the project realized.

- **Implicit contingent liabilities** may, for example, stem from a lower than expected residual value of the asset or a lower than expected quality or quantity of service delivered through the PPP. In the case of implicit contingent liabilities, the government does not contractually commit to bear the cost of the risk but might decide to bear the cost of ensuring service provision for other reasons. The government might, for example, decide to bear the additional cost arising from ensuring the proper functioning of an airport, in case of contracted private partner inability to complete the works or to manage the service (Irwin, Mazraani, and Saxena 2018). The government decision to bear the cost of the availability risk would not be due to contractual obligations but due to broader consideration (for example, to prevent adverse consequences for the country's economy, including though negative effects on tourism).

Fiscal risks from PPPs are often related to weaknesses in the business model. Important risks are the underestimation of costs or overly optimistic revenue forecasts. Cost overruns and shortfalls in revenues may make the project unprofitable, which would drive the private partner out of business. Cost overruns may be caused by changes in the specification of the asset or service, or by fluctuations in the exchange rate or the prices of raw material. In such cases, the additional costs are often absorbed by the government, while the private partner would usually be held responsible for an underestimation of construction or operation and maintenance costs. On the revenue side, tariff structures for public services and their adjustment over time are often agreed in a PPP contract. Demand estimates consider the price of the service, and together they provide revenue projections for the operational lifetime of the project. International experience shows that a large proportion of concessions have run into difficulties due to overoptimistic projections of revenues to be collected from end users (Box 7). Uncertainties in the revenue projections and systematic overestimation of demand and revenues (Flyvbjerg, Skamris Holm, and Buhl 2005; Standard & Poor's 2005) are a key risk to the economic viability of PPP-related business models. In many cases, this risk is absorbed by the government through the provision of minimum revenue guarantees.

Box 3. Public Sector Role in the Airline Sector in the Caribbean

Air transport is critical to the region's tourism industry. The region faces significant challenges for developing a cost-effective airline industry due to low passenger volumes, high seasonality, and taxation.

Domestic airlines are predominantly state-owned in the region. These airlines are generally loss-making enterprises and receive heavy government subsidies. Although there are larger number of privately-owned airlines, these are mainly smaller operators. The rationale for continued state ownership of airlines is that national carriers play a catalytic role in stimulating tourism markets. During the region's periodic tourism downturns, private airlines are more prone to abandon unprofitable routes than are national public carriers. But maintaining national carriers requires governments to impose heavy taxes on airline tickets that increase prices and reduce passengers' demand. This is particularly evident with intraregional travel, which has seen significant declines over the past 15 years, due to high ticket prices (Ram, Reeves, and James 2018).

Attempts to privatize Caribbean national carriers have proven to be largely unsuccessful. After years of increasing financial difficulties, the Government of Jamaica sold 70 percent share of its national carrier in 1994 to a local consortium. Although Air Jamaica expanded its network under private ownership, the privatization experience was not financially successful. After years of losses, the Government of Jamaica re-acquired full ownership of the airline in 2004. Jamaica and Trinidad signed a shareholding agreement in 2011, making Trinidad and Tobago's Carrier Caribbean Airlines the national airline of Jamaica and ceasing Air Jamaica's operation as of 2015, in return for 15 percent shares in the restructured Caribbean Airlines.

Source: Caribbean Development Bank.

Box 4. Jamaica Highway 2000 Public-Private Partnership Project

The Jamaica Highway 2000 project, with a total cost of $1.3 billion, remains the largest public-private partnership implemented in the English-speaking Caribbean. It was implemented in two phases: the first phase, the East-West Highway, is a PPP awarded to a French company through an international tender in 2001. The second phase, the North-South Link, originated from an unsolicited proposal from a Chinese company in 2011.

The East-West highway benefits about 65,000 drivers per day by reducing congestion around Kingston. It also spurred new economic activities outside of the Kingston Metropolitan Area, in satellite towns like May Pen which have seen the construction of several new housing developments since the opening of the highway. Anecdotal evidence suggests that city dwellers are increasingly opting to live in the rural areas because of the perceived better quality of life, which means they commute to Kingston on the highway. The shift in population growth from urban to rural relieves pressure on Kingston's overburdened social and physical infrastructure. In addition, the capital city is beginning to see some benefits from tourism, as it is now feasible to offer city tours to hotel and cruise ship guests on the north coast.

The North-South Link crosses Jamaica's central mountains, linking the north and south coasts. The French company that implemented the first phase of the highway declined to undertake this second phase of the project, as it was not commercially viable due to high capital costs and low traffic volumes. A 50-year concession was later awarded to a Chinese company, which financed the $600 million highway and obtained the right to develop 1,200 acres of government lands adjacent to the highway for commercial activities. The highway was completed in 2016 and has significantly reduced travel time by eliminating natural choke points.

The Government of Jamaica (GOJ) ended up providing more financial support than anticipated into the project, and for a longer payback. As shown in Table 1, the GOJ contributed $487 million into Highway 2000, or 37 percent of the total project cost, although it will be reimbursed over the long term by the Chinese company for the work on the Mount Rosser Bypass ($120 million). First, it committed $20 million to finance the detailed geotechnical investigations, engineering studies and designs, traffic forecasts, economic feasibility studies, and social and environmental impact assessments that led to the tender stage. Second, it provided an equity injection for the East-West Highway of $99 million, financed through Jamaica's first inflation-linked bonds issued by the National Roads Operating and Construction Company (NROCC) on local and international markets in 2002. Up to the end of 2015 the effective cost of these bonds was approximately 15.5 percent in Jamaica dollars and 7.8 percent in USD, which

Source: Caribbean Development Bank 2017a.

Box 4. Jamaica Highway 2000 Public-Private Partnership Project *(continued)*

compares favorably with the 9.375 percent US Bonds which were issued by NROCC in 2011. Third, the GOJ's additional expenditures include construction works, project development, interest payments and toll subsidies, and advances to NROCC to cover debt servicing.

To date NROCC has not received cash returns from its toll road investments. On the East-West Highway, it should receive 50 percent of Free Cash Flows (that is, after deducting all operating and capital costs and debt service). The current forecasts are for free cash flows to commence only in 2023. With revenues from the highway operations not expected for the foreseeable future, the GOJ must subsidize charges on NROCC's debt service. Interest charges in 2015 amounted to $37 million and should remain at this level over the foreseeable future.

Table 1. Total Cost of Highway 2000
(Millions of US dollars)

	East-West Highway (Phase 1)	North-South Link (Phase 2)	Indirect Costs (Both phases)	Total Cost (Both phases)
Government of Jamaica				
Equity injection	99			99
Capital expenditure		120		120
Admin., Interest and Subsidy			184	184
Grantor changes			41	41
Land purchases			44	44
Government Contribution	**99**	**120**	**268**	**487**
Private investors				
Equity injection	27	144		171
Project debt	198	456		654
Private Company Contribution	**225**	**600**		**825**
Total Project Cost	**324**	**720**	**268**	**1312**

Sources: National Roads Operating and Construction Company; and Ministry of Finance, Debt Management Branch.

Box 5. Public-Private Partnership Financing versus Funding

There is a fundamental difference between financing and funding. In a PPP, it is expected that the private partner brings in the financing of the project (that is, raises the equity and debt that is needed to finance the investment). However, the private partner never funds the project (that is, they never pay for the infrastructure or the service), and they require either the government (that is, the taxpayers) or the users to pay them for the investment (including interest), maintenance and operation, and profits.

Financing: The private sector may finance the project through (1) debt, (2) equity, or (3) government support. The latter may be provided, for example, in the form of guarantees, subsidies, equity injections, or tax exemptions.

Funding: The funding of a PPP may come (1) from the government, through (a) government fixed or variable payments during operation (that is, fees for service or availability payments) or (b) by contributing financing or fixed assets; or (2) from users, though a user fee for service (for example, a toll for using a road). Funding arrangements could be a mix of government and user funding and often involve fee-adjustment mechanisms and minimum revenue guarantees.

Sources: World Bank 2017; and IMF staff.

Box 6. Comparison of Public and Private Financing Costs in Infrastructure Projects

The project company is usually the borrower in a PPP project. It raises a loan without possible recourse against its shareholders, which therefore carry a risk only in relation to the amount of capital and shareholder loans. The project company borrows at a rate that reflects maximum risk during the course of the project. The borrowing rate depends on the quality of the contract and the spread of risks between the government and the project company. The spread measures the difference in risk for a lender between lending to the government, deemed to be the most reliable borrower, and lending to an enterprise or a project company. It represents an estimate of the borrower's default risk during the term of the loan. Interest rates charged by lenders are generally conditioned by three types of risks: construction risks, financial risks, and operating risks. Projects deemed to be low risk, particularly extensions of existing projects, benefit from lower rates, with reduced spread compared to government borrowing (150 to 250 basis points). In the United Kingdom, the cost of private debt for PPPs (7 to 8 percent) is approximately double that of government debt (3 to 4 percent) (National Audit Office 2015).

Costs in the development phase are financed using the enterprise's own funds. In a typical case, the project company then borrows at a high rate during the construction period. The spread may reach 600 basis points because the lender's risk is maximized; in addition to construction risk, there are risks associated with revenue during the buildup period and with operations during the remainder of the life of the project. Lenders will propose a rate corresponding to maximum risk. If the enterprise is technically efficient and has a good track record, it may carry out the construction by borrowing against its balance sheet for the duration of the construction.

At the end of the construction period, this construction risk disappears. Enterprises generally refinance the project at a lower rate. This refinancing may occur at the end of construction or after the buildup period (2 to 10 years after construction). The rate will be lower if refinancing is done after the buildup period. Compared to the initial rate, this rate may be 200 to 300 basis points lower, which represents a considerable decrease in financial costs compared to the initial financial model. The distribution, between the government and the project company, of the financial benefits associated with these successive refinancing operations should be arranged for at contract signing.

Source: IMF staff.

Box 7. The Fiscal Impact of Public-Private Partnerships—The Example of Portugal

Portugal developed one of the largest PPP programs in the world. The cumulative investment through PPPs was estimated at about 9 percent of GDP in 2012 and the present value of central government's recorded financial commitments at about 14 percent of GDP. PPPs have been used extensively to finance transport infrastructure and hospitals. Motorways PPPs resulted in an oversized and expensive network in Portugal, with one of the highest kilometer per million inhabitants in Europe. In addition, these PPPs were carried through *Estradas de Portugal*, a fully state-owned enterprise that was kept outside the general government perimeter. In addition, special purpose vehicles created for implementing PPPs were not consolidated in the *Estradas de Portugal* balance sheet, as they were considered fully private. Hence, on-budget spending was more than four times lower than off-budget commitments in the transport sector in 2008.

Following the financial crisis, PPPs entered into serious financial difficulties and as a consequence *Estradas de Portugal* was reclassified within the general government, as well as most of its PPPs, hence contributing to a large increase in public debt. In 2011, the financial crisis led to a sharp reduction of traffic levels (which are highly correlated with economic activity) and toll revenues, making PPP development model unsustainable. Large contingent liabilities materialized, and government guarantees were called. Public debt increased by around 15 percent of GDP due to the reclassification of state-owned enterprises (including *Estradas de Portugal*) and PPPs between 2009 and 2014. Also, PPP availability payments will remain a drag on the central government budget over a long period of time, as they have peaked at 0.9 percent of GDP in 2016 and are expected to plateau until 2022, before slowly declining as a share of GDP.

Source: IMF staff.

CHAPTER

3 Addressing Public-Private Partnership Challenges and Better Managing Fiscal Risks in the Region

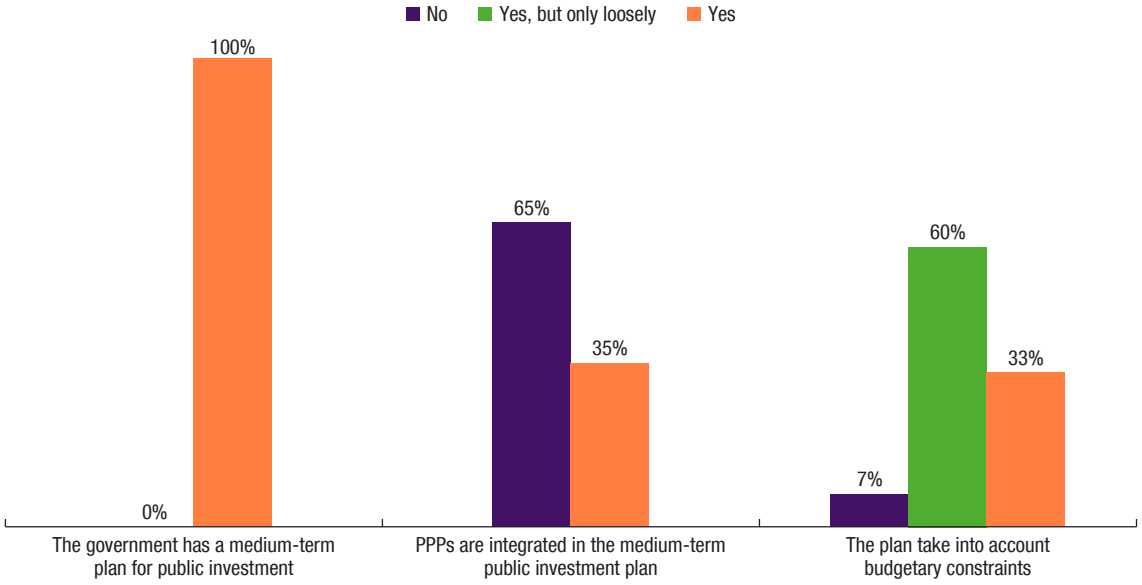
The current practices for managing PPPs in the Caribbean countries can be improved to better address fiscal risks. This chapter provides an overview of how (1) public investment management (PIM) and the budget process, (2) public procurement, (3) the legal framework, (4) institutional framework, (5) accounting and reporting, and (6) fiscal risk management can be strengthened to ensure that Caribbean countries profit from the efficiency gains that PPPs may bring without undermining the sustainability of public finances. Countries would have to define the roles and responsibilities of the different stakeholders and design an institutional framework (see generic design proposed in Figure 13 and Table 2) that allows every stakeholder to fulfill its part. On that basis, the legal framework has to be created to reflect these decisions.

Integrating Public Investment Management and Budgeting of Capital Spending

Countries around the world start with PPPs programs outside the PIM and budget processes. Initially, PPPs are often erroneously seen as a way to mobilize resources outside the budget. However, most countries soon experience the fiscal implications of PPPs and seek options for controlling them. To this end, the integration of PPPs in the PIM and budget process allows countries to take the fiscal impact of PPPs into account when allocating resources and selecting projects for implementation. These PIM reforms put all public investment projects, including PPPs, on a level playing field when it comes to project selection.

PPPs are just an alternative method for procuring public investments and should be fully integrated in PIM. The long-term impact of public invest-

Figure 15. Public-Private Partnerships in Public Investment Management—Practice in the Caribbean Counties



Source: IMF regional survey.

ment projects on public finances is largely the same whether a project is implemented through traditional public procurement or through a PPP. Therefore, all public investment projects should be assessed and prioritized in a unified process, irrespective of the method of procurement that might be applied for their implementation.

Most of the Caribbean countries are handling PPPs on a parallel track, separate from other public investment and outside the budget. The survey shows that all Caribbean countries have a medium-term plan for public investment and sectoral strategies, and several countries have public investment plans that serve as a bridge between strategic planning and the budget. With respect to PPPs, only five countries include PPPs in the medium-term framework and in budget documents (Figure 15). Investment planning and project selection is, however, done outside the budget process, undermining the transparent allocation of public resources. According to the survey, fiscal constraints are generally taken into account in a loose manner, leading to unrealistic expenditure plans. And countries in the region that receive donor funding for projects have difficulties integrating public investment projects in the budget process as projects are financed and thus selected through parallel tracks.

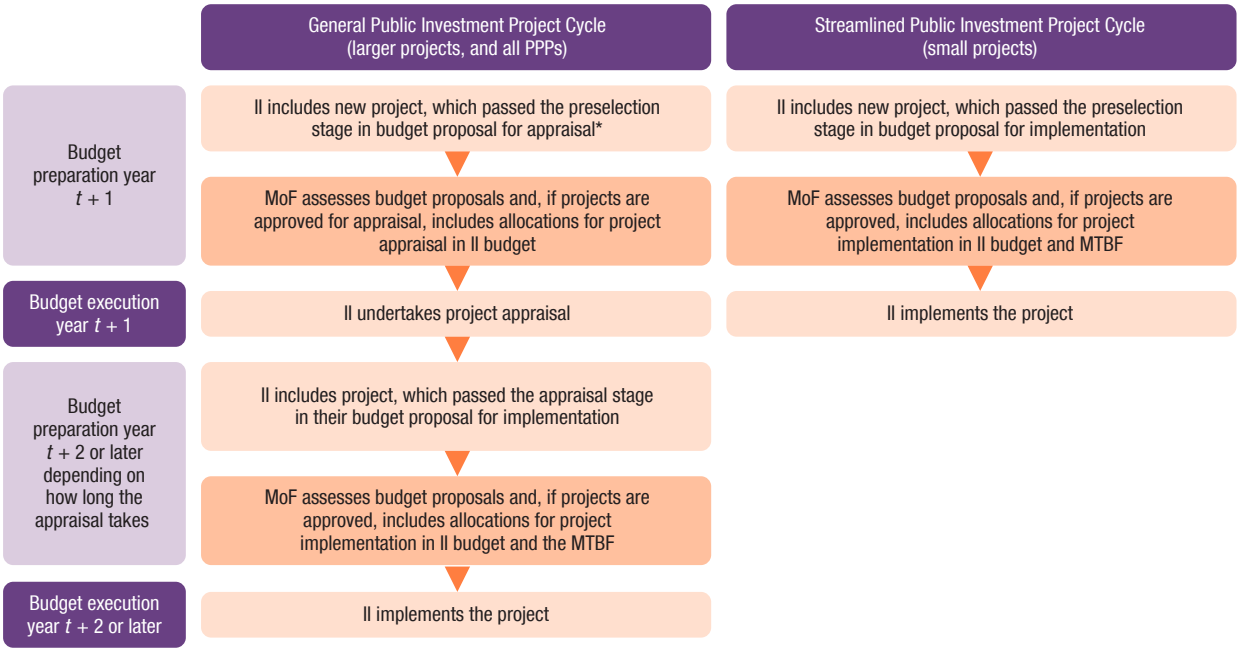
Caribbean countries should identify public investment projects that achieve their development priorities. The survey indicates that most countries in the region have a cabinet or high-level steering committee responsible for selecting investment projects. A strong PIM process ensures that scarce public resources are allocated to high-quality projects, which are selected in line with government priorities. Public entities should undertake a preliminary screening of potential projects. Only projects that pass the initial screening are taken to the evaluation stage, during which considerable public resources are often required for an in-depth project assessment.

To ensure that good projects are selected, project evaluation is best undertaken through rigorous arrangements of individual investment projects. Good public investment projects may have a substantial economic and social impact, whereas bad projects may take a lot of public resources without providing benefits. Selecting good projects requires that (1) all project proposals are subject to appraisal using standard methods, (2) risks are considered, and (3) projects are systematically vetted and selected based on transparent criteria before being included in a pipeline of approved projects. The project evaluation is driven by the implementing public entity and includes the following stages: (1) prescreening, (2) prefeasibility study, and (3) feasibility study (Caribbean Development Bank 2017b). The assessment at each stage should be based on transparent and consistent procedures. Based on the assessment, projects may be approved to move to the next stage. In the Caribbean region, most countries declare having clear criteria for evaluating public investment and public investment project. The survey shows that the evaluation criteria mostly relate to budget affordability and debt sustainability, whereas criteria for assessing value for money or fiscal risks are less common in the region.

The decision to allocate public resources, including for public investment, should be made in the budget process. Through the budget process, all projects proposed for implementation compete for available fiscal resources and are thereby prioritized within the given fiscal space. The public investment process should be linked to the budget process, including parliamentary approval, to ensure that resource allocation is in line with fiscal constraints. According to the survey, most countries already require annual legislative approval for recurrent government payments, such as availability payments related to PPPs.

This is best handled by integrating public investment in the budget cycle. It is good practice that implementing entities include project proposals in their budget submissions. For those projects that are approved in the budget process, the implementing institution's budget includes allocations for project appraisal or project implementation, depending on where the project stands in the preparation process. Those projects that have been appraised according

Figure 16. Integration of Public Investment Projects in the Budget Process



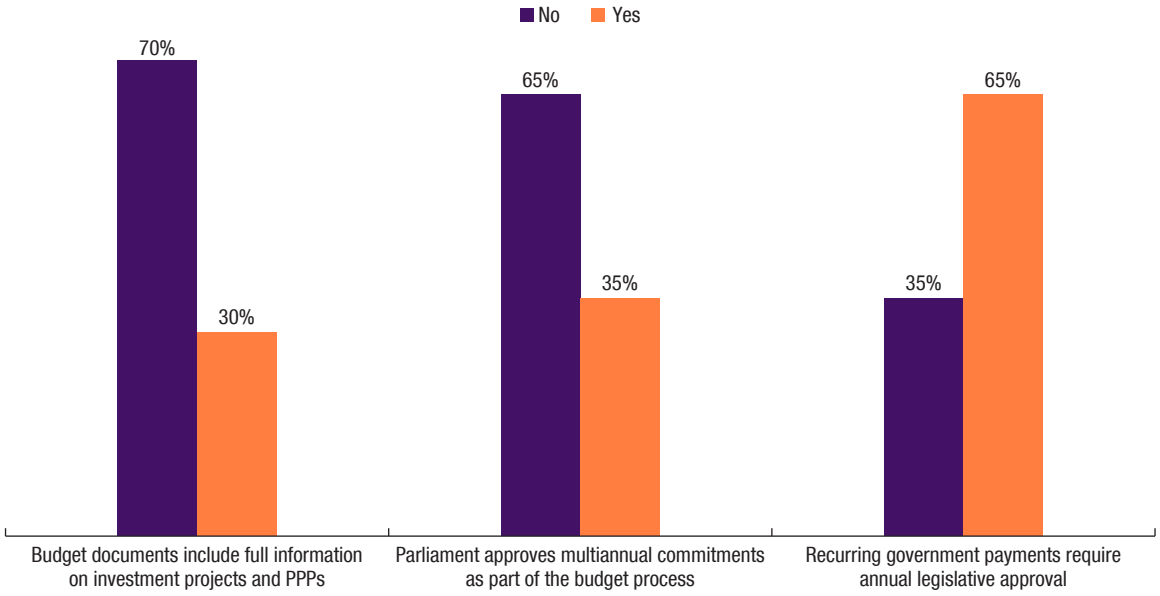
Source: IMF staff.

to objective criteria and included in the project pipeline may be proposed though transparent and competitive procedures. Figure 16 shows how public investment projects should be integrated in the budget process. For smaller projects, a simplified appraisal process may be followed.

Decisions on budget allocations for new projects should be made considering their lifetime fiscal implications. The traditional annual budget exercise is not well suited for public investment projects that have a multiannual horizon. Budget needs to take a medium- to long-term view, and projects can only be approved if the full project costs can be accommodated in the fiscal framework. Public investment projects should be transparently reflected in the medium-term budget framework (MTBF).

Countries in the Caribbean region have limited experience in managing the long-term fiscal impact of investment projects. Only one-third of Caribbean countries include in their budget information on projects costs expected to materialize outside the MTBF or on the total cost of long-term investment projects. But generally, capital expenditures are recorded only in the first year and most medium-term plans are not published. In addition, the survey indicates that only five countries in the region approve multiannual commitments in the budget process and only a few countries have automatic

Figure 17. Public-Private Partnerships in Budget Documents—Practice in the Caribbean Countries



Source: IMF regional survey.

carry-forward procedures that prove useful when project implementation is delayed (Figure 17).

Availability of comprehensive and up-to-date information on long-term investment projects, including PPPs, is a prerequisite for informed decision making. To this end, governments in the Caribbean should create and maintain a database on the actual and forecast fiscal implications of all public investment projects. The database and the reporting should include actual data and estimates of annual expenditures and revenues over the entire period of project implementation.

Governments in the Caribbean should provide full disclosure of fiscal obligations related to all public investment projects in budget documents. Because the implementation of large-scale investment projects, in particular when procured as a PPP, takes longer than the period covered by the MTBF, information on the annual and lifetime fiscal costs and fiscal risks of each ongoing and newly proposed investment projects should be presented in a dedicated part of the budget documents. This provides parliament and the public at least the necessary information to understand the long-term implications of the current project portfolio and new investment decisions. As a further step, commitment appropriations covering the lifetime cost of investment projects that would be approved in the budget would give parliament the power to approve the allocation of resources from future budgets related to

long-term investment projects. This restores the parliament role in approving the use of public resources before they are contractually committed, which in the case of PPPs is typically undermined unless these projects are specifically approved by parliament.

Dealing with Unsolicited Proposals to Ensure Competition in the Caribbean Region

The timely and cost-effective implementation of public investment projects requires that projects are transparently procured and effectively monitored and managed. It should be required that project procurement follows transparent and competitive tender procedures to generate efficiency and reduce costs to the government (Caribbean Development Bank 2017b). Once contracted, the progress and quality of project implementation should be closely monitor and manage. To this end, a project manager must be identified and held accountable for working in accordance with approved implementation plans.

However, unsolicited proposals (USPs) create a specific challenge for countries in the Caribbean. Traditionally, governments involve the private sector in infrastructure development through a public planning process. In the case of a USP, a private entity reaches out to a public agency with a proposal for an infrastructure or service project, without having received an explicit request or invitation from the government to do so. In the Caribbean region, unsolicited proposals are common and private companies frequently approach government agencies with project proposals, which governments often negotiate directly with the proposing companies (Caribbean Development Bank 2017b).

USPs can offer several potential benefits but create also risks to Caribbean governments. USPs can generate innovative solutions to infrastructure challenges and help overcome challenges related to early stage project assessment. However, they also introduce potential risks for the government. USPs often exacerbate a lack of technical capacity to evaluate, prepare, procure, and implement PPPs, which as mentioned before is a weakness in most Caribbean countries. They may also create difficulties with fiscal planning if they were not part of normal planning and budgeting processes. USPs may be used to avoid competition and potentially engage in corrupt practices. In practice, unsolicited proposals have been associated with high cost and poor outcomes (World Bank 2018), particularly in cases where the government chooses to negotiate a PPP directly with the private sector proponent.

USPs should be subject to competitive bidding and thorough due diligence from the government. To address this issue, many countries subject unsolicited proposals to some kind of competitive process, but generally with limited results, as almost all tenders for unsolicited proposals result in a single bidder. The large cost of preparing a proposal for a PPP, coupled with a situation where one firm already has all the information on that project and all studies done, discourages potential competitors. Competitive bidding for unsolicited proposals should be mandatory, but given its limitations, it also requires good project evaluation. If a government decides to accept an unsolicited proposal for a PPP, it needs to ensure thorough due diligence, requiring proponents to present detailed studies and then subjecting them to independent evaluation. Guidelines for managing unsolicited proposals are provided in Box 8.

Strengthening Legal Provisions for Public-Private Partnerships

International experience suggests that PPPs are best governed by laws rather than depending on contract-level legal provisions (Guasch 2004). Having a legal framework for private participation in public sector projects has shown to reduce fiscal risks associated with PPPs. Such a framework lowers fixed costs of entering into a new PPP contract and provides valuable information to prospective partners. That said, the ways in which the law is applied, interpreted, and, above all, the practices of the public entities involved in PPP projects will determine the success of the PPP framework.

However, Caribbean countries favor contractual arrangements. According to the survey, in over 60 percent of the countries, PPPs are not covered by the existing legal framework. Most Caribbean countries follow common law systems that generally promote sector regulations with contracts governing the relationship between partners. The survey indicates that only St. Lucia and Turks and Caicos have specific PPP laws. Caribbean countries contemplating scaling up PPP investment should consider introducing the necessary legal backing for PPPs. To ensure that PPPs are fully integrated in the PIM and budget process and that they are treated at a level playing field with traditional public investment, legal provisions pertaining to PPPs should be carefully incorporated into the existing legal framework.

Legal provisions can help manage fiscal risks from PPPs if they encompass the following eight key features. International experience shows that countries benefit from a solid legal framework that:

- Provides a clear definition of PPPs and the scope of its application to ensure clarity of rules governing the relationship between the public and the private sector. The legal framework should clearly state whether PPPs are applicable to all economic sectors and clarify if PPPs can be granted

in traditional economic sectors (for example, energy, transport, water) as well as in noncommercial activities (such as in the provision of government services in schools, hospitals, prisons, housing, and so on).

- Requires that all public investment projects, including PPPs, be evaluated and prioritized as part of the government's overall investment strategy, medium-term fiscal framework, and budget cycle.
- Defines the roles and responsibilities of all public and private entities involved in the identification, evaluation, selection, approval, and monitoring of public investment, including PPPs. It is crucial that the role and responsibilities of the minister of finance related to public investment, including PPPs, is clearly stated by law.
- Prescribes transparent mechanism for a competitive procurement process and clarifies the treatment of unsolicited proposals. Tendering procedures are meant to maximize efficiency gains. These procedures should ensure that every aspect of the contract (price, quality, time, risk allocation) is subject to competition and equal and fair consideration of each of the bidders for the projects.
- Defines the content of PPP contracts and provides some model provisions for certain contractual provisions that are found in every PPP contract (for example, force majeure).
- Provides guidelines for renegotiation and termination of PPPs contracts, including dispute resolution mechanisms (for example, arbitration, court resolution, adjudication, expert determination). To minimize potential costs and risks for the public sector, the legal framework should protect the interests of the public sector and the private partner in this process.
- States the way the government can support PPPs and the extent to its support.
- Includes clear procedures for accounting and reporting long-term investment projects and PPP-related operations in the government's accounts. It is an important factor contributing to fiscal transparency and, ultimately, to the ability of the government to manage fiscal risks.
- Finally, in case reporting practices do not ensure full recognition of the fiscal impact of PPPs, in line with international practices, embeds limits on the aggregate public sector exposure to PPP operations to properly manage fiscal costs and fiscal risks from PPPs, in the legal framework.

Building Institutions for Managing Public-Private Partnerships in the Caribbean Region

Gateway Process

A structured "gateway" process with a strong role for the minister of finance is critical for safeguarding public finances against fiscal costs and risks from

PPPs.[1] The gateway process should give the minister of finance the authority to stop or suspend a project at any stage of the project cycle, including project appraisal, assessment of PPP appropriateness, tendering, contract closure, and renegotiation (Table 2). This requires that the role of the minister of finance goes beyond endorsing the final decision of a cabinet or a procuring agency. International experience shows that the capacity for a minister of finance to stop a PPP project by checking budget affordability just before contract awarding is very limited, given the political and social pressures that has built up at this stage to deliver the project. Therefore, the minister of finance should be able to check budget affordability at early phases of the project cycle to prevent the implementation of projects that do not provide value if implemented as a PPP or are not affordable in light of current and future budgetary constraints. Also, the minister of finance should have a veto power over contract renegotiation and termination and be part of the monitoring process of PPPs during both the construction and operational phase, to limit fiscal risks generated by challenges in implementing PPP contracts.

This process can integrate the role of a planning or infrastructure ministry, as a decision-making entity with respect to investment planning and project approval. The ministry of planning would ensure that projects are in line with government investment priorities and are well prepared. It is essential that the minister of finance retains a veto power to stop projects that are not affordable or that would not be delivered efficiently through a PPP.

The Caribbean countries generally do not provide their minister of finance with a gateway role. In most Caribbean countries surveyed, the decision on PPPs is taken by the cabinet or a high-level steering committee and the minister of finance does not have the power to stop PPPs that are not affordable (Figure 18).

The gateway process should apply to all public investment projects, whether procured traditionally or through a PPP. Projects from all levels of government should be subject to this process. All types of investment projects, regardless of how they are funded and procured, or under which sector they fall, should be covered. This would ensure a level playing field for all investment projects, regardless of the mode of implementation. Such a unified approach for all investment projects that is linked to the budget process ensures that all projects are subject to the same assessment and that all projects are competing over the available resources in a transparent allocation process.

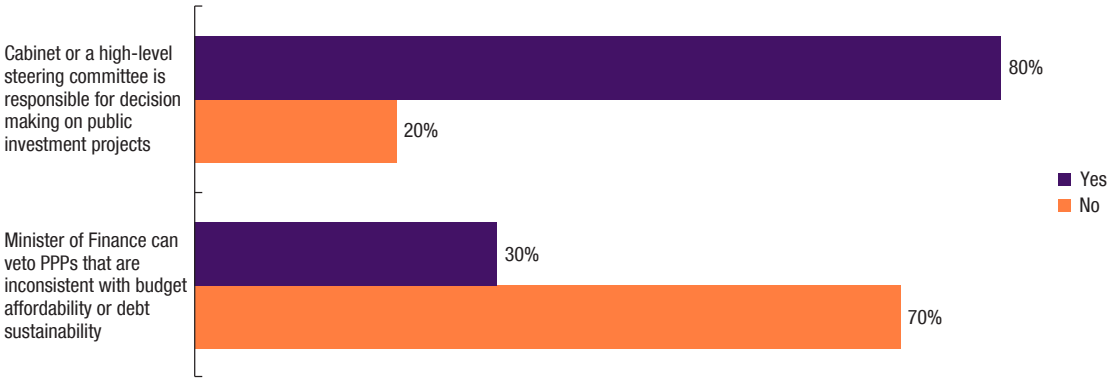
[1]South Africa and Cyprus are prominent examples of a strong gateway process.

Table 2. Standard Gateway Process for Public Investment Projects, including Public-Private Partnerships

Phases	Role of the Line Ministry	Role of the Infrastructure Team	Role of the Ministry of Finance
Phase 1: Prefeasibility	Prepares prefeasibility study of projects that are considered a priority for the implementation of the line ministries' policies	Advises line ministry on how to prepare prefeasibility study	Reviews prefeasibility study and verifies economic viability and assesses fiscal affordability
	GATEWAY 1: Minister of finance provides an opinion on the viable and affordable of the project based on the prefeasibility study		
Phase 2: Feasibility	Prepares feasibility study of projects that have been assessed positively in the prefeasibility study	Advises line ministry in preparing feasibility study	Reviews feasibility study and verifies economic viability and assesses fiscal affordability
	GATEWAY 2: Minister of finance approves the project for inclusion in the pipeline of projects if the project is viable and affordable based on the feasibility study		
Phase 2': Assessment of procurement method	Prepares study on efficiency gains, that is, value generated by project if procured and implemented as PPP compared to traditional procurement	Advises line ministry in preparing assessment of procurement method	Reviews assessment and confirms value of procuring and implementing project though a PPP
	GATEWAY 2': Minister of finance approves the project for procurement and implementation as PPP		
Phase 3: Resource allocation/budgeting	Prioritizes projects from pipeline and includes highest priority projects, indicating the preferred procurement method, in budget proposal		Reviews budget proposals for affordability
	GATEWAY 3: Minister of finance includes projects in draft budget and Council of Ministers and Parliament approve budget including multiannual investment projects, including PPPs		
Phase 4: Tendering	Prepares tender documents for projects that have been approved in the budget	Support line ministry in the preparation of project for tender and on tender process	Assesses tender documents for fiscal implications and, in case of PPP, for value generated by procurement through PPP
	GATEWAY 4: Minister of finance approves the project for tendering as traditional public procurement or PPP		
Phase 5: Bidding, negotiation, and contract signing	Assesses the tender submissions, and negotiates and signs the contract	Support line ministry in preparing the contract	Assesses proposed contract for fiscal implications and, in case of PPP, for value generated by procurement through PPP
	GATEWAY 5: Minister of finance approves contract if affordable and, in case of a PPP, if it provides value if as a PPP		
Phase 6: Construction and Operation	Monitors and reports on project implementation Renegotiates contract if necessary	Monitors project implementation; and advises the minister of finance on budget implications Support line ministry in renegotiation of contract	Monitors implementation and resulting budget implications. Assesses fiscal implications and, in case of PPP, for value generated by procurement through PPP
	GATEWAY 6: Minister of finance approves contract renegotiation if affordable and if project still provides value to the public		

Source: IMF staff.
Note: PPP = public-private partnership.

Figure 18. Decision-making Powers in Public Investment and Public-Private Partnership Process—Practice in the Caribbean Counties



Source: IMF regional survey.

Institutional Framework

Governments have created units that promote the use of PPPs and serve as a center of excellence. International experience points to the usefulness of entrusting a central unit with the overall responsibility for formulating policy and providing guidance on PPPs (European PPP Expertise Centre 2014; World Bank 2017). Many countries involved in PPP contracts have established a PPP unit, staffed by economists, financial analysts, accountants, and lawyers undertaking a wide range of functions. They include (1) advising the government on PPP policy, (2) developing and disseminating knowledge and expertise on PPPs, (3) assessing specific proposals for PPP projects and programs, (4) advising on the preparation of tender documents and on bid evaluation, (5) undertaking legal and economic reviews of specific contracts, (6) evaluating the results and operational risks of running PPP contracts, and (7) oversight and control of PPP projects. Typically, units report to the respective ministry of finance, as they are either located within the ministry of finance or as separate executive agency of that ministry (European PPP Expertise Centre 2014). In some countries with large PPP programs, line ministries have also developed their own centers of expertise, working in collaboration with the central PPP unit (Organisation for Economic Co-operation and Development 2010).

The responsibilities of PPP units should be distinguished from the control function performed by the ministry of finance (Organisation for Economic Co-operation and Development 2010). Conflicts of interest may arise when the same public entity promotes PPPs and is tasked with the responsibility and empowered to stop or suspend project that undermine the sustainability of public finances. The same entity that advises a contracting agency in iden-

tifying and/or selecting a project should not approve or monitor it. In many countries the PPP unit advises the contracting agencies in various technical aspects related to PPP projects, and given lack of experience and expertise with in the rest of the administration, the PPP unit is often also involved in the approval and monitoring process. However, a clear separation between the advisory function of a PPP unit and the control function of the budget department or the Treasury department or the risk management unit should be ensured, so that these departments never participate in the contract negotiation and award, as the ministry of finance should primarily validate them through its role in the gateway process.

In the Caribbean region, the institutional framework for managing PPPs is limited. Only six countries (Haiti, Jamaica, Saint Lucia, Trinidad, Turks and Caicos) have put in place a PPP unit or a PPP team that regroups staff from different departments (Grenada) that generally sits in their ministry of finance. In most of these countries, the PPP unit has clearly defined roles and responsibilities and intervenes at all key stages of the PPP process. This, however, includes signing-off fiscal risks before project approval in two of these countries (Grenada and Saint Lucia), hence creating a risk of conflict of interest, whereas the PPP promotion and fiscal oversight functions are well segregated in Jamaica.

Caribbean countries should develop an integrated gateway process for all public investment projects, including PPPs. The entity in charge of the control function of PPPs and other infrastructure projects should be clearly identified within the ministry of finance, as almost half of the Caribbean countries do not have an entity designated to enforce the gateway process. This entity should be different from the PPP unit, as for example in Barbados where the budget office is in charge of the control function, and the PPP unit plays a role of center of excellence. Jamaica provides another example of segregation between the promotion function and the control function to prevent conflicts of interest. The PPP unit is housed within the Development Bank of Jamaica, and a separate PPP unit in charge of fiscal oversight is established within the ministry of finance (Caribbean Development Bank 2017a).

In addition, Caribbean countries should better integrate PPP management into PIM. There have been important institutional and regulatory changes in the PPP framework in many countries. Advanced countries tend to better integrate traditionally procured public investment and PPPs to pursue PPPs for improving efficiency and not to circumvent fiscal constraints (World Bank 2017). For example, France, South Africa, and the United Kingdom have recently integrated public investment and PPP management functions into their Treasury department. To support all large public investment projects, irrespective of how they are implemented, the mandate of existing

PPP units in Caribbean countries should be expanded to turn them into infrastructure units rather than PPP units. In other Caribbean countries, creating such an infrastructure unit might not be advisable, given the small size of the ministry of finance and the limited number of large investment projects and PPPs implemented or planned. Functions related to supporting the development and implementation of large public investment projects, including PPPs, could be provided by the regional infrastructure unit recently created, by expanding the existing initiative of the Caribbean Development Bank (Box 9).

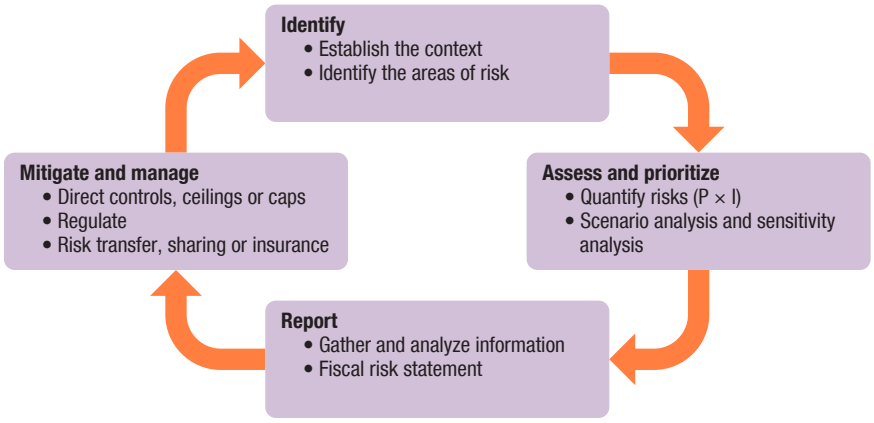
Managing Fiscal Risks

Fiscal risks, including those from PPPs, are best managed through a comprehensive fiscal risk management framework. The management of fiscal risks can be divided into four steps: (1) identifying the sources of fiscal risks, (2) assessing their magnitude and likelihood of realization, (3) reporting fiscal risks, and (4) taking actions to mitigate and manage the fiscal exposure (Figure 19). Such a framework would ensure that all sources of fiscal risk, including PPPs, are monitored, assessed, and managed appropriately. This is important as the different fiscal risks are often correlated and thus need to be analyzed and managed together.

In the Caribbean region, at this time, few countries have a framework in place to manage fiscal risks from PPPs. According to the regional survey, while most countries have clear criteria for assessing budget affordability and debt sustainability of public investment projects, they lack criteria for assessing fiscal risks and the benefits of implementing a project through a PPP. Three-quarters of these countries do not manage fiscal risks from PPPs through an integrated fiscal risk management framework or a PPP specific framework, and only about 30 percent of the countries consider PPP-related debt in their debt sustainability assessment. In more than half of the countries, there is no entity responsible for signing off on the risks that are being taken before a new PPP contract is signed. This indicates that fiscal risks from PPPs are not appropriately monitored and managed within the public sector. It would be urgent for all countries considering using PPPs more extensively as a procurement method, to introduce a fiscal risks management framework ahead of time.

The introduction of a full-risk management framework should be well sequenced as its different elements are interrelated. The best order for introducing a fiscal risk management is to start with simple reporting on PPPs. This creates transparency and incentives to develop capacity for assessing fiscal risks and for managing fiscal risks based on the assessment. Once more

Figure 19. Framework for Managing Fiscal Risks from Public-Private Partnerships



Source: IMF staff.

detailed and accurate information on fiscal risks is available and the risks are properly managed, the reporting on fiscal risks from PPPs can be expanded and more detail can be added. The following sections discuss good practice for the various elements of a fiscal risk management framework for PPPs.

Identifying Fiscal Risks from Public-Private Partnerships

It is important to understand the fiscal risk from its entire portfolio of PPPs. The decision of a new PPP project or the management of fiscal risks of individual projects is based on a project-by-project approach to assess fiscal implications. However, for a government to manage public finances, the risk of the overall PPP portfolio is more relevant. Due to the accumulation of fiscal commitments and the interlinkages of different projects, and the resulting correlations in the projects' risks, the firm and contingent liabilities of all PPPs must be looked at together.

The IMF and the World Bank have developed the PPP Fiscal Risk Assessment Model (PFRAM) to assess fiscal risks and costs from PPPs. This tool can be used to assess the long-term fiscal implications and fiscal risks (that is, contingent liabilities) of PPP projects. The PFRAM allows to quantify the impact a new project would have on the headline fiscal indicators (that is, government deficit and debt) over the lifetime of the project. It shows how a baseline projection of fiscal outcomes would change if the project was undertaken on top of the ongoing government activities (Box 10). A new version of PFRAM is being developed to analyze a portfolio of PPP projects and consolidate their fiscal implications. It can be used to assess the existing portfolio

of PPPs and/or to the impact of a new project or several new projects on the existing portfolio.

Assessing Fiscal Risks from Public-Private Partnerships

The decision on whether to enter into a new PPP should include an ex ante assessment of the long-term fiscal risks of the PPP project under consideration. In traditionally procured projects, the decision on whether the fiscal implications of a project are manageable for the government is made through the budget process, where the allocation of the limited available resources for the current budget year and, through the MTBF, the medium-term is decided. Because the fiscal implications of PPPs typically go far beyond the time horizon covered by the budget and the MTBF, there is no expenditure limit that could guide whether the fiscal implications of a new PPP would be manageable for government finances over the long term. This is also the case for most traditionally procured large-scale infrastructure projects as the time required for their implementation may exceed the horizon of the MTBF.

In the PPP lifecycle, the risk profile of a project may change and therefore, must be updated. The PFRAM can be used to assess the implications of a project at an early stage of the project development, using assumptions regarding the project and contract structure, funding, and financing, and can be refined as the project details are firmed up. It can also be used to assess the fiscal implications of ongoing projects, as for the Barbados Solid Waste Management Facility (Box 11).

In the region, most countries do not have a framework to assess fiscal risks at the key project stages. According to the survey, only five countries (Barbados, Jamaica, St. Lucia, St. Vincent and the Grenadines, Turks and Caicos) require fiscal risk assessment at project selection, tender preparation, contract negotiation and renegotiations, and contract extension. Other countries have either no fiscal risk assessment required (such as Guyana) or only at selected project stages (for example, Haiti).

Once risks for a specific PPP are identified, their fiscal impact can be estimated using alternative evaluation techniques. The quantification of the fiscal impact depends on the type of fiscal cost or risk, and to what extent the analysis incorporated the probability of occurrence or likelihood. Maximum exposure (face value) and expected fiscal exposure (weighted by likelihood) are important measures to fully understand the overall fiscal implications of a PPP project. When likelihood is not considered, or the future event is regarded as certain, fiscal costs and risks are estimated at maximum exposure (face value). This is what is reflected in the results generated by PFRAM. If likelihood of the risks materializing is considered in the analysis, fiscal expo-

Table 3. Assessing Fiscal Costs and Risks from Public-Private Partnerships

Type	Example	Fiscal Impact	Likelihood
Fiscal Costs	Gap viability payments Availability payments Output-based payments	Present value of annual payments over the project life	Certain, probability = 1
Fiscal Risks	Guarantees	Scenario analysis: Present value of estimated annual payments (baseline)	Under alternative scenarios for main risk trigger variables (for example, GDP, inflation)
		Probabilistic analysis: Expected value of estimated annual payments	Stochastic simulations modeling changes in risk trigger variables (for example, GDP, inflation)
		Option-valuation techniques: Estimate probability of default	Structure model
	Termination payments	Maximum value of termination payment under baseline assumptions	Contract dependent

Sources: World Bank 2016c; and IMF staff.

sure is estimated as fiscal impact times likelihood. In order to do this, the PFRAM results would have to be adjusted. Table 3 summarizes examples of different methods to quantify fiscal implications of PPPs based on international experience.

Simple and intutitive methodologies for estimating fiscal costs and risks from PPPs are the best option for Caribbean countries. To this end, scenario analysis tends to be a good starting point. Probabilistic and other complex techniques require a significant amount of data on the underlying variables triggering risks (long-term series, assumptions of steady state levels, and so on). As a result, they can be difficult to implement and interpret, reducing the credibility of the analysis for decision making. In practice only a few countries use sophisticated analysis to assess risk exposure to the PPP portfolio. In the Caribbean region, the results provided by PFRAM could be used as a starting point to assess the fiscal impact of PPP projects in a very simple way.

Reporting for Public-Private Partnerships in Small Island Context

International accounting and reporting standards suggest that most PPPs should be considered on governments' balance sheet. In 2011, the International Public Sector Accounting Standard (IPSAS) 32 set out the accounting requirements for public sector entities as the grantor in service concession agreements. Similarly, the *Government Financial Statistics Manual* 2014 (GFSM 2014) defines international standards for how to treat PPPs in determining the government deficit and debt (IMF 2014b). For both accounting and statistical treatments, whether a PPP is considered on- or off-balance sheet and therefore how it impacts fiscal headline indicators, depends on whether the PPP-related asset is regarded as public or private. The decision on whether to regard an asset as public or private under IPSAS 32 and GFSM 2014 is based on who controls the asset and on the economic own-

ership of the asset, respectively (Box 12). While these two concepts differ in the specific criteria that they apply, the decision on whether to account for an asset on the government accounts or not is mostly the same.

Accounting for and recording on PPPs' on-balance sheet eliminates the bias in favor of PPPs. As discussed, PPPs have often been used when fiscal constraints did not allow to finance infrastructure projects from the budget. A cash budgeting and accounting environment encourages this as the short-term implications of a PPP differ materially from those of traditionally procured infrastructure as the net-cash outflows are postponed and spread over a longer time, often decades. However, the long-term impact on public finances is much the same if a project is implemented through a PPP or through traditional public procurement. When applying IPSAS 32 and GFSM 2014 for accounting and reporting, the impact of PPPs on headline fiscal indicators (that is the deficit and public debt) is very similar to that of traditionally procured projects. Therefore, the "wrong" incentive for undertaking PPPs—just because they allow to push investment off-budget and off-balance sheet—is eliminated.

Reporting and accounting for PPPs is country specific and so is the capacity to avoid the bias in favor of them. IPSAS 32 has been designed for application by entities following accrual accounting. However, many governments do not currently follow accrual accounting standards. Some present fiscal data only on a cash basis and do not have a balance sheet prepared according to any specific standard. Consequently, most governments do not recognize PPPs on their balance sheets or treat investment in PPPs as public investment in fiscal data.

In the Caribbean region, few countries apply international accounting standards. According to the survey, less than 15 percent of the Caribbean countries applied accrual accounting standards. A recent study covered a different sample of 15 countries from the region and came to a similar result (International Federation of Accountants 2017). Countries in the Caribbean who have adopted accruals continue to experience reporting challenges. The first country to adopt accrual accounting, the Cayman Islands in 2004, has difficulties with state-owned enterprises and compliance by line ministries, departments, and agencies. Bermuda adopted accruals in 2010 with a three-year plan for compliance and continues working to improve recording. Barbados started planning for accruals in 2002 and adopted them in 2007, but financial reporting issues continue for pensions, assets, and accounting consolidation. In addition, Aruba and Curaçao are in the process of applying accrual accounting.

Several countries are in the process of or are planning to move toward accrual accounting standards. According to the International Federation of Accoun-

tants 2017 study, one-third of the 15 Caribbean countries covered by the survey will remain on cash basis. The remaining countries are planning to adopt or to transition to accrual standards. However, the introduction of accrual accounting comes with significant challenges and takes time. Box 13 gives an overview of the challenges these reforms might pose for some Caribbean countries.

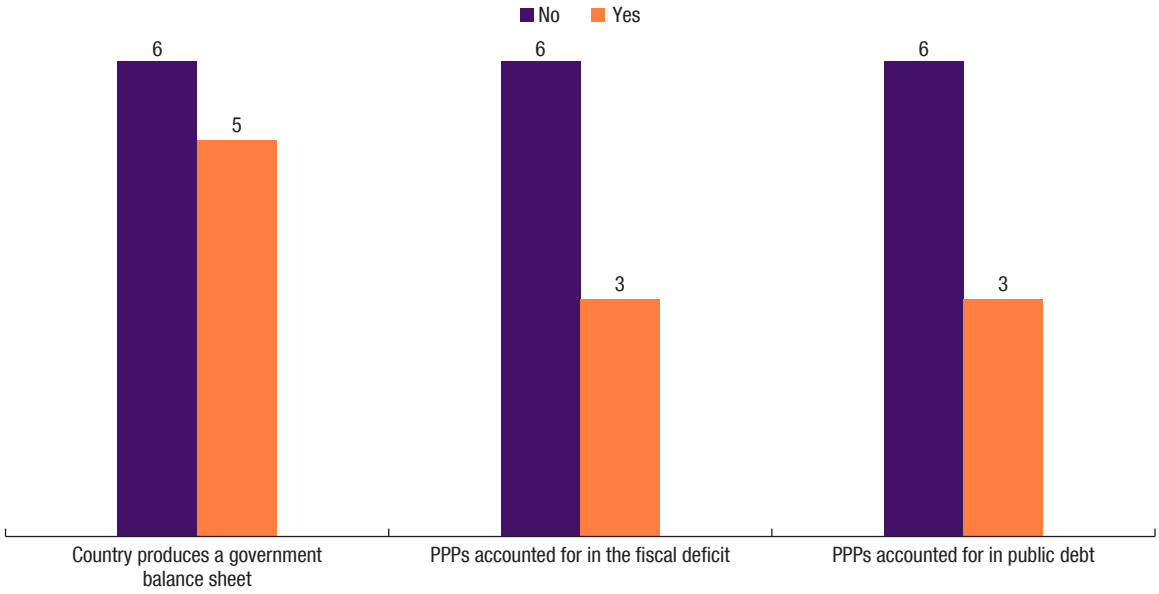
More Caribbean countries apply international accounting standards, but with significant limitations for PPPs. According to the survey, while seven countries have implemented GFSM 2014 in the region, only three of them are producing a government balance sheet. In addition, only three countries report accounting for PPPs in both fiscal deficit and public debt (Barbados, Jamaica, Turks and Caicos) (Figure 20).

Intermediate solutions are required to report PPP liabilities in the Caribbean region. It is important that governments take short-term actions to compensate the adverse implications of cash-based accounting and reporting in the context of PPPs. These actions should aim at informing transparently about the implications of PPPs on the fiscal deficit and public debt. The latter can be done in a clear and transparent manner by including PPP-related liabilities in the government debt reporting. Governments can also improve transparency over fiscal implications by including detailed information on all firm and contingent costs of PPPs on future budgets in budget documents and financial reports.

According to the survey, the information on fiscal risks is only available in three countries in the region. Caribbean countries could align with international good practices in other emerging market economies, such as Georgia (Sayegh and others 2017) and the Philippines, which already publish fiscal risk statements that include PPP-related liabilities. While this does not impact the budget deficit and thus does not put the PPP on a level playing field with implementing the project through traditional procurement, it informs about the long-term implications a project is expected to have on public finances.

The information provided through the accounting and reporting systems must be considered when decisions on new projects are made. Good accounting and reporting practices can help reveal the long-term fiscal implications of PPPs. However, the accumulation of fiscal risks from PPPs can only be managed if the expected fiscal implications of new projects are known at the time when the decision on the project is made. This can only be achieved if information on the long-term implications a project would have, irrespective if it is implemented through traditional public procurement or through a PPP, is provided when new projects are identified, prioritized, and selected in

Figure 20. Reporting Practice for Public-Private Partnerships in the Caribbean Counties



Source: IMF regional survey.

the budget process. Once a project has been selected and implementation has started, the government can only manage but no longer avoid fiscal risks.

Finally, auditing of PPPs is generally limited in the Caribbean region. Ex post assessment of PPPs by an independent institution creates incentives for government to check affordability and value for money when preparing a project and help improve transparency. According to the survey, PPPs are generally not required to be audited by the supreme audit institution, and only three countries have had audits of PPP projects.

Mitigating and Managing Fiscal Risks

Governments in Caribbean countries should decide how to mitigate or manage existing fiscal risks. Once the risks are understood and reported, the government needs to decide how to deal with them. Well-structured contracts and an active supervision and enforcement of contract implementation are often the best way to limit and mitigate fiscal implications and risks. However, this requires an experienced team with the capacity to manage such contracts. Most Caribbean countries—due to the size of their economy—would not have a sufficient number of PPPs to gain the necessary experience or the manpower to focus on following PPPs closely throughout their lifetime. Governments generally need external advisors to support them in the preparation

and negotiation of the project. However, this comes at a high price, which must be factored into the overall project cost estimates.

To mitigate fiscal risks, governments can limit their PPP exposure. This can take the form of ceilings on the total debt or total investment value that can be accumulated or contracted under PPPs, on the annual expenditure for PPPs, or limits on government support for PPPs, such as guarantees (Box 14). Ceilings or caps, while not a substitute for medium-term planning, can help contain fiscal costs and limit overall government long-term commitments to levels that are fiscally affordable. Only two Caribbean countries (Jamaica, Turks and Caicos) have binding ceilings for the total volume of PPPs.[2]

To manage fiscal risks from PPPs, governments in the region can transfer risks or share them with the private partner. To realize efficiency gains through a PPP, project risks must be assigned to the party that is best equipped to manage them. For example, the government will typically be in a better position to manage political risks (for example, changes in tax or labor laws, civil unrest or war), whereas the private sector can generally handle construction risks more efficiently. By clearly assigning all identified risks, the public and the private partners can develop strategies for managing the risks under their responsibility (Box 15). This will come at a cost but in case of limited risk management capacity, the cost of keeping and not managing the risk might be even higher. Risks that cannot be mitigated or transferred to another party need to be accommodated by the government (that is, the budget needs to provide room for taking up the cost should a risk materialize) or through insurance whenever possible and affordable. In addition, while the responsibility for and thus the actual management of some risks may be allocated to the private partner, the government should have monitoring mechanisms in place to ensure that the private partner takes on their responsibility and manages the risks actively. Otherwise, in case the private partner neglects their responsibilities, the risks that have been explicitly assigned to the private partner might become implicit risks to the government.

Governments can use the PFRAM risks matrix to identify and manage fiscal risks that are difficult to quantify. In addition to a quantification of the firm and contingent liabilities related to the project and their implication on the government finances, the PFRAM provides a risk matrix. Users can assess

[2]In 2014, Jamaica adopted a revised fiscal rule that sets a floor on the overall balance of the public sector, to bring debt down to 60 percent of GDP or below by 2025/2026 which includes a limit of 3 percent of GDP on the total loan value of all new user-funded PPPs on a cumulative basis. For government-funded PPPs, the full construction cost of the project is recorded as a government liability within public debt (following the IPSAS 32 accounting standards) and is thus covered directly by the fiscal rule. Fully user-funded PPPs with only minimal fiscal risks, as assessed independently by the Office of the Account General, could be exempted from the PPP ceiling.

risks that might not be easily quantified and obtain guidance for managing fiscal risks from the individual PPP. Some of those risks are explicitly allocated to the government, but many others are implicit fiscal risks, resulting from the absence of explicit allocation in the contract or from opportunities for transferring risk back to government. PFRAM users can review a battery of 11 classes of risk, and information provided by the users is summarized in a project risk matrix. Following a structured questionnaire, PFRAM assists the users in identifying the main risks arising from a PPP project, their allocation, likelihood, impact, as well as potential mitigation measures. Box 16 presents an illustrative fiscal risks matrix for the Jamaica Highway 2000 project.

In addition, resiliency planning is needed to ensure that uncertainties about future climate impacts are incorporated in today's investment decision in the Caribbean region (Public-Private Infrastructure Advisory Facility 2016). Given the long lifespan of most infrastructure, governments in the region and private sector must work together to incorporate elements of comprehensive resiliency to natural disasters and climate change into the design, construction, financing, and operation and maintenance of all future infrastructure projects—whether procured through traditional procurement or PPPs. A wide range of options are available to increase the resiliency of infrastructure to natural disasters and climate change, including engineering options, technological and ecosystem-based options, and institutional arrangements.

Risks associated with natural disasters and climate change could be shared and innovative insurance mechanisms used to reduce government exposure. At the project identification stage, in addition to assessing the sources of revenue linked with the affordability of the project, the government must undertake a broad assessment of the risk that arises from potential natural disasters and climate change. Failure to do so may have financial implication for the private sector as well as the public sector, which is usually left to manage unaccounted risks. Parametric insurance can also be used, as it allows to take into account country-specific exposure to natural disaster by paying out in the event of a natural disaster that exceeds a prespecified severity (Alleyne and others 2017).

Encouraging the private partner to insure itself against natural disasters and ensuring public assets could also help. Disaster risk insurance and related hedging tools also help protect governments from the economic burden of disasters and increase the capacity to respond (Alleyne and others 2017). Governments can insure public assets and encourage insurance of private assets to reduce uncertainties associated with direct exposure to disaster risks, although small Caribbean countries can be exposed to high costs as their insurance market is underdeveloped (Alleyne and others 2017).

Governments in the Caribbean region should develop national adaptation policy frameworks for managing risks from natural disasters, including for PPPs (Public-Private Infrastructure Advisory Facility 2016). Given the exposure of Caribbean countries to natural disasters, managing risks related to these events is especially important. Some countries in the region already have policy frameworks for PPPs that include clauses related to force majeure, which typically includes "Act of God"–encompassing extreme climate events (such as natural disasters). But these frameworks do not capture the frequency and magnitude of damage associated with impact of climate change—a more permanent feature. In this context, PPP frameworks in the region should include explicit clauses on climate change to take into account exposure to climate change and include explicit references to making projects resilient to changing climatic conditions.

Box 8. Managing Unsolicited Proposals

Six principles should guide governments in managing unsolicited proposals (USPs) that should in the PPP process. Based on the following guiding principles, governments should establish a USP policy that ensure clarity, predictability, transparency, and accountability for both public agencies and private entities:

- **Public interest:** A USP project must align with national infrastructure priorities and meet a real societal and economic need.
- **Value for money:** Governments should only structure USP projects as PPPs if they are expected to generate greater value for money under PPP delivery than under traditional public procurement.
- **Affordability:** Governments must understand the impact on public finances, including whether firm fiscal commitments are affordable and whether fiscal risks are contained and manageable.
- **Fair market pricing:** Governments must ensure that PPP contracts resulting from USPs reflect market prices, avoid excessive private returns, and include a risk allocation appropriate for the government.
- **Transparency and accountability:** Governments should disclose all relevant project information to allay stakeholder concerns regarding transparency and accountability.
- **Alignment of PPP and USP procedures:** Governments should align PPP and USP policies to increase stakeholder support, enhance market interest, and ensure consistency in public decision-making.

Source: World Bank 2018.

Box 9. A Regional Public-Private Partnership Unit in the Caribbean

A PPP regional support mechanism (RSM) was established in 2015 in the Caribbean Development Bank (CDB), with the support of the World Bank, the Public-Private Infrastructure Advisory Facility, the Inter-American Development Bank, and the Multilateral Investment Fund. It provided support to Caribbean governments in four key areas:

- **Capacity building:** The RSM hosted a series of "PPP Boot Camps": three week-long workshops that trained 46 regional government officials in all phases of PPP principles, policies, and practices. In addition, the RSM participated in the IMF's regional workshops on Fiscal Risks in PPPs.
- **Policy development:** The RSM, with additional support from CDB, has assisted five countries in adopting PPP policies: the Bahamas, Belize, Guyana, St. Lucia, and Trinidad and Tobago.
- **Project development:** The Caribbean PPP helpdesk provide early stage support to eight PPP projects in the Caribbean.
- **Caribbean PPP Toolkit:** An open online knowledge source, containing detailed guidance notes, case studies, and sample documents, tailored to the Caribbean environment for PPPs.

Moving forward, support initiatives must emphasize project development: to create a pipeline of bankable infrastructure projects, the RSM could help move good projects through the preparation process. The CDB is planning to host such a regional PPP unit to provide technical assistance and support the delivery of services by qualified technical consultants. The provision of quality advisory services will increase the flow of new infrastructure projects, providing investment opportunities for both local and international operators.

Source: Caribbean Development Bank.

Box 10. The PPP Fiscal Risk Assessment Model (PFRAM)

PFRAM has been developed as an analytical tool to quantify the macrofiscal implications of PPP projects. The tool uses a simple, user-friendly, Excel-based platform and follows a four-step decision tree:

- Who initiates the project? The impact of main fiscal indicators (that is, deficit and debt) varies depending on the public entity ultimately responsible for the project (for example, central or local governments, state-owned enterprises).
- Who controls the asset? Simple standardized questions assist the user in making an informed decision about the government's ability to control a PPP-related asset—through ownership, beneficial entitlement, or other means. If the government is regarded as controlling the asset, this typically impacts the main fiscal indicators.
- Who ultimately pays for the asset? PFRAM allows for three funding alternatives: (1) the government pays for the asset using public funds (for example, periodic payments), (2) the government allows the private sector to collect fees directly from the asset's users (for example, tolls), or (3) a combination of methods (1) and (2).
- Does the government provide additional support to the private partner? Governments may not only fund PPP projects directly but can also support private partners by providing guarantees (for example, debt and minimum revenues), equity injections, and tax amnesties, among other methods.

Once project-specific and macroeconomic data are introduced, PFRAM automatically generates standardized outputs: (1) project cash flows over the whole life cycle; (2) fiscal tables and charts, both on a cash and accrual basis—that is, government's cash statement, income statement, and balance sheet; (3) debt sustainability analyses with and without the PPP project; and (4) sensitivity analyses of the main fiscal aggregates to changes in the macroeconomic and project-specific parameters. These outputs can be compared to the country-specific reporting standards of PPP transactions to evaluate how closely they conform to best practices.

Source: IMF staff.

Box 11. PPP Fiscal Risk Assessment Model Assessment: Barbados Solid Waste Management Facility

In 2009, the Government of Barbados (GoB) signed a 20-year build, own, operate, and transfer agreement for a solid waste management facility. The GoB provided the land, and its private partner invested in site improvements and equipment and runs the site. The GoB agreed to pay a tipping fee for each ton of acceptable waste delivered to the site, which is adjusted in line with the price index, and guaranteed a minimum monthly and annual tonnage of acceptable waste to be delivered.

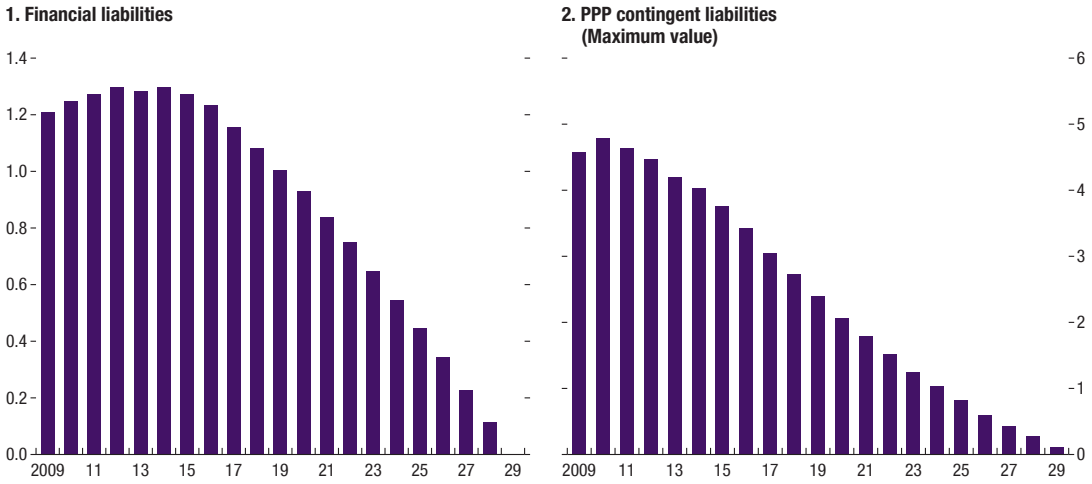
The PFRAM tool was used to assess the potential fiscal impact from the main operation of the PPP, the management of acceptable waste. The assessment looked into the minimum cost to the government and the risk in case of higher demand. The PFRAM tool requires a set of financial and other project-related information to perform the assessment. The Barbados waste management PPP contract provided only part of the information required for the PFRAM. Additional inputs needed for the assessment are derived from sources other than the contract to make assumptions that allow to fill the data gaps.[1] Therefore, this assessment is illustrative.

The PFRAM assessment showed that the expected impact of the project on overall government finances was relatively small with an increase in the overall debt level of less than 1.5 percent of GDP at any given time of the project lifecycle. However, the contingent liability from the revenue guarantee amounted to about 5 percent of GDP at the beginning of the project (Figure 21).

[1]These include (1) Inter-American Development Bank study (Riquelme, Méndez, and Smith 2016) on waste management in the region, which has been taken as starting point for estimating the volume of acceptable waste delivered to site, with GDP growth used as driver for demand; (2) the investment by private partner (that is, construction cost and investment in equipment) has been derived from transfer value stated in contract, taking into account depreciation; (3) operation and maintenance cost were set at a level that made the project viable under minimum volume; (4) the financing structure used by the private partner is assumed to be split between debt and equity similarly to the financing mix of the mother company; and (5) financing cost are based on industry and risk assumptions.

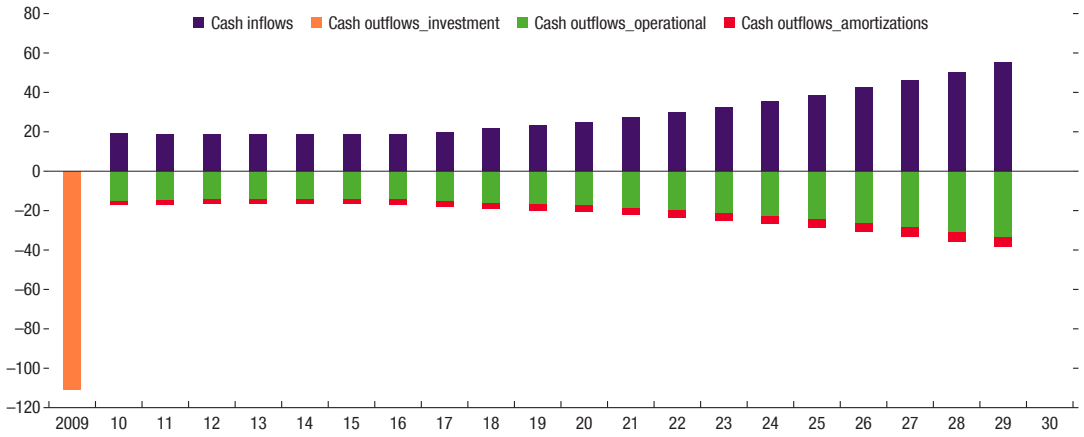
Box 11. PPP Fiscal Risk Assessment Model Assessment: Barbados Solid Waste Management Facility *(continued)*

Figure 21. Impact of Public-Private Partnership Project on Government Finances
(Percent of GDP)



Source: Barbados authorities; Jamaican authorities; and IMF staff.
Note: The PPP Fiscal Risk Assessment Model allows to check the sustainability of the business model. The tool gives an indication of the level of maintenance and operation costs that can be supported by the expected revenues, given the financing costs. By comparing the calculated maintenance and operation costs with the cost expected by the private partner, the validity of the business model can be assessed (Figure 22).

Figure 22. Cash Flows of the PPP Private Project Company
(Millions, national currency)



Sources: Barbados authorities; and IMF staff.
Note: As not all risks can be modeled in the PPP Fiscal Risk Assessment Model; certain upside and downside risks entailed in the project have to be assessed outside the model. Upside risks include the production of compost of predefined quality, the sales revenues of which are shared between private company and the government, and revenues from the sale of any carbon credits, which would go to the government. Downside risks, on the other hand, include an unforeseen surge in demand for waste disposal, which would raise the fees that the government must pay to the private partner, and higher than expected amounts of nonacceptable waste, which the government would have to take care of.

Box 12. International Accounting and Statistical Standards for Public-Private Partnerships

International Public Sector Accounting Standard (IPSAS) 32

It prescribes that the PPP asset and liability, and its costs and revenues, are recorded on the government's accounts if the PPP asset is regarded as a public asset. A PPP asset is a public asset if the public entity controls the asset (that is, the government controls or regulates what services the private partner must provide with the asset, to whom it must provide them, and at what price) and controls—through ownership, beneficial entitlement, or otherwise—any significant residual interest in the asset at the end of the term of the arrangement.

Under IPSAS 32 most PPPs would be treated on-balance sheet. This is because PPPs are used to deliver a public service and the government usually determines the kind of service, the access to the service, and the price of the service. Once it has been decided that the PPP asset is to be treated on-balance sheet, all expenditures and revenues related to the asset as well as the corresponding liabilities are accounted for in the government accounts. Thus the fiscal implications of procuring the asset or service through a PPP are similar to those of traditional procurement, regardless of whether the project is government- or user-funded.

Government Financial Statistics Manual 2014

According to this statistical standard, if the government bears most of the project's risks and rewards related to the asset, PPPs are included in fiscal deficit and gross debt. The allocation of risks included in the assessment considers a complete risk matrix, including risks associated with acquiring the asset (for example, design and construction risks) and risks associated with using the asset (for example, supply, demand, availability, residual value, and obsolescence risk).

Government-funded PPPs are mostly treated the same way as under IPSAS 32. The risks and benefits related to the asset are typically allocated to the government in a government-funded project, the treatment of user-funded PPPs is less clear and requires a detailed assessment of the allocation of associated risks.

The treatment of user-funded PPPs under international accounting and reporting standards could deviate. To safeguard consistency and transparency, national practices should ensure that a PPP is consistently treated on- or off-balance-sheet, even if this means that either for accounting or reporting purposes the national treatment is not fully in line with international standards.

Source: IMF staff.

Box 13. Challenges Associated with Implementation of Accrual Accounting

The move to accrual accounting is one of the key reforms that drive modernization of the Treasury or accountant general department. Under accruals, the accountant general becomes a "chief accountant" for the government, by developing, applying, and enforcing accounting standards and practices in line with international standards. Weaknesses in accounting will likely delay full implementation of accrual accounting in the region, such as:

Staff capacity. Within the region, the professionally educated and trained staff at ministry of finance, Treasury/accountant general's office, and line ministries is limited. Large capacity-building efforts are needed to transition to accrual accounting.

Timely financial statements. While preparation of financial statements has improved within the region at year-end, several countries remain without audited financial statements from the previous year. This may be due to both lack of capacity and staffing in the auditor general's office to perform the audits, but the cause of the delays is more often related to Treasury functions. Preparation of the financial statements is delayed due to unreconciled below-the-line accounts, unreconciled amounts between revenues and the cash deposits, and expenditure arrears.

Consolidated reporting. In many countries, the financial statements represent the financial transactions of the consolidated bank account only and have been prepared primarily to provide accountability for the financial resources appropriated from that account. These financial statements are not summary financial statements of the government, and significant financial activities occur outside of the account, such as debt payments and contingency funds. The scope of the public sector financial reporting needs to expand to encompass the central government, including other central government bodies and funds, before covering the whole public sector.

Balance sheet. The move to accruals requires incorporating additional classes of assets and liabilities. An initial target is often to cover these assets and liabilities in disclosure notes to the account, starting with financial assets and liabilities and later including nonfinancial assets and liabilities. This gives country officials time to develop systems and procedures before bringing the full data into the principal financial statements. A detailed transition plan for each class of asset or liability will be needed and should be coordinated with other parts of government as some data sources will be outside the main financial systems, particularly for nonfinancial assets.

Chart of accounts. While several countries now have prepared *Government Financial Statistics Manual* compliant charts of accounts, progress on implementation has stalled in other countries due to the need to reconfigure their financial management information system. To move to accruals, the cash basis charts of accounts will need to be updated.

Source: Caribbean Regional Technical Assistance Center staff.

Box 14. International Experience of Limits for Government Exposure to Public-Private Partnerships

Ceilings should cover both the stock and the annual flow of PPPs. Ceilings on the overall size of the PPP program (stock) and the annual PPP-related payments (flow) can increase the predictability of the government's exposure to PPPs. A flow ceiling on annual PPP-related payments helps to ensure budget affordability on an annual basis. A stock ceiling on the overall size of the PPP program helps limit the government's overall exposure to fiscal risks and prevent that PPP contracts are designed to circumvent the flow ceiling (for example, by pushing payments further into the future at a higher fiscal cost).

The size of the PPP program should be measured using an unambiguous measure that captures fiscal risks to the extent feasible. It is important the measure is unambiguous so that it is credible and can be verified. For example, the measure of the PPP program could be based on the capital investment under the contracts or the sum of known government obligations of the government (for example, availability payments) and a simple measure of contingent liabilities (for example, due to demand guarantees).

The assessment of the maximum size of a PPP program should be guided by the medium-term budget framework and a debt sustainability analysis. They should incorporate government payments under PPP contracts and scenarios of what may happen with contingent claims from PPPs. The PPP ceiling should be consistent with affordability in the short to medium and long term.

Many countries have included ceilings for PPPs in their PPP laws:

- **United Kingdom.** Payments in PPPs are limited to £70 billion over the five-year term of the current parliament, or £14 billion a year on average. This amounts to 0.8 percent of the GDP of the first year of the Parliament. In addition, some PPPs in the United Kingdom are treated as on balance sheet in the measure of the debt that is subject to fiscal targets.
- **Hungary.** The Public Finance Act limits the nominal value of new long-term commitments to 3 percent of total state budget revenues in any given budget year.
- **India.** The State of Karnataka limits the stock of guarantees at the beginning of the financial year to 80 percent of the government's revenue two years before.
- **Brazil.** The PPP law sets a ceiling on current spending from PPP contracts of 1 percent of net current revenue applicable to all levels of government. New subnational PPP commitments cannot be guaranteed by the federal government if (1) existing commitments already amount to 5 percent of net current revenue or (2) the new

Source: IMF staff.

Box 14. International Experience of Limits for Government Exposure to Public-Private Partnerships *(continued)*

contract would entail commitments more than 5 percent of net revenues at any time during the forthcoming 10 years.

- **Peru, El Salvador, and Honduras.** In Peru, the net present value of the government's explicit spending and guarantees in PPPs is limited to 12 percent of GDP. The limit also takes account of the revenue that the government may derive from revenue-sharing arrangements in concessions. Similar limits are set at 3 percent and 5 percent of GDP in El Salvador and Honduras, respectively.
- **Other countries.** Some governments do not have PPP ceilings per se but set limits on total government debt and government-guaranteed debt, which includes government explicit guarantees on PPPs. Examples include Indonesia, Jordan, and Poland. Turkey sets similar limits on guarantees and on-lending in the coming year in each year's budget.

Box 15. Sharing Contractual Risks in Public-Private Partnerships to Minimize Fiscal Costs and Risks

Investors and lenders analyze the risk distribution matrix between the parties. The amount of spread they propose will be based on this matrix. If the government wants an investment to be realized, it must be willing to take on some of the project risks or pay more if it transfers more risks to the private enterprise. In addition, good project preparation can reduce risks significantly. Conducting detailed studies reduces uncertainties considerably, whether it is for geological studies in the case of underground work or revenue estimates from tolls.

The only method to reduce the cost of this premium is to have the risk borne by the party that is better able to manage it at the lowest cost. Risks can be divided into four main categories, as described in the following.

- **External risks to both partners.** Inflation risk can be placed in this category as inflation may result from global events that are difficult to foresee. In strong correlation with inflation risk is interest rate risk. Swaps are a way of protecting against it. Added to these are risks associated with a major technological change during the contract term, making the service described in the contract obsolete. To limit the effects of such risks, the private partner can contract insurance, where available.
- **Risks associated with tasks under the public authority's responsibility.** These are risks related to the land acquisition, the rights-of-way, and environmental and social consequences of the project. To minimize those risks, the government must prepare and act early on so that construction work being performed by the enterprise never stops. If these risks materialize, the public authority will typically have to compensate its private partner. This category also includes risks related to unilateral decisions of the public authority (such as early termination of the contract), changes in law affecting the project specifically, and governance risks of the country and the project.
- **Risks associated with the private partner's tasks.** These include risks related to studies, construction work, service performance to be delivered, maintenance, and operation. The private partner will assume these risks, and the public authority will ensure when selecting its private partner that the latter has all the qualifications and capacities needed to perform the work as described in the contract.
- **Risks that are often shared.** These include revenue risk for user-funded public-private partnerships, licenses required to start construction, the cost of supplying the raw materials needed for construction, and even financing cost.

Source: IMF staff.

Box 16. Fiscal Risk Matrix of Jamaica Highway 2000—Phase I

An assessment of fiscal risks from the Jamaican Highway 2000 project was guided by the PFRAM risk matrix (Table 4). The evaluation was done after the project was already in operation and the assessment has been impacted by the nonmaterialization of most risks. The PPP contract allocated key risks partly to the public and partly to the private partner. Several risks were also shared between the partners. The review of the allocation of subrisk reveals that the risk allocation was also largely in line with common practice.

All but two risks were assessed as having a low likelihood. Considering the likelihood of the risk materializing and the potential fiscal impact, most risks received a "low" risk rating or were identified as irrelevant. Only the financial risk and the renegotiation risk were rated as "medium," and as there were no mitigating measures in place for these two risks, it was suggested that these were areas of high priority for action.

The financial risk, which had been identified as critical through the assessment, materialized during the contract implementation and required government intervention. After the commercial closure with the preferred bidder, the private party faced difficulties in obtaining the financing in time for meeting the deadline for financial closure. Consequently, the government assisted with the raising of the initial financing.

Table 4. Risk Matrix for Highway 2000
Project Risk-Sharing Arrangements

Identification of Risks	Allocation	Likelihood	Fiscal Impact	Risk Rating Likelihood*Impact	Mitigation Strategy	Priority Action Rating*Mitigation
1 Governance risks	Public	Low	Medium	Low	NO	Medium priority
2 Constructon risks	Shared	Low	Medium	Low	YES	Low priority
3 Demand risks	Private	Low	Low	Irrelevant	YES	NO action required
4 Operatonal and performance risks	Private	Low	Low	Irrelevant	YES	NO action required
5 Financial risks	Shared	Medium	Medium	Medium	NO	High priority
6 Force majeure	Shared	Low	Low	Irrelevant	YES	NO action required
7 Material adverse government actons	Public	Low	Medium	Low	NO	Medium priority
8 Change in law	Public	Low	Medium	Low	NO	NO action required
9 Rebalancing of fnancial equilibrium	Private	Low	Medium	Low	NO	Medium priority
10 Renegotiation	Public	Medium	Medium	Medium	NO	High priority
11 Contract terminaton	Shared	Low	Medium	Low	NO	Medium priority

Sources: Jamaican authorities; and IMF staff.

Concluding Remarks

This paper reviewed the current economic situation and infrastructure investment needs of Caribbean countries. Access to infrastructure in the Caribbean countries is high relative to comparator countries in Asia and Africa, and has improved substantially in almost all sectors. However, the quality of existing infrastructure in the region has suffered in recent years. High-quality infrastructure is a critical condition for promoting the tourism industry, a key sector to catalyze economic growth in the region.

The potential contribution of public-private partnerships (PPPs) to addressing the infrastructure needs were discussed. Large-scale public investment in infrastructure in most Caribbean countries is hindered by limited access to financing. In addition, public investment in most of these countries is constrained by limited fiscal space. By crowding in foreign financing and increasing efficiency by cooperating with the private sector, PPPs can bring potential benefits to the Caribbean region.

Fiscal costs and risks coming with PPPs have been highlighted. In contrast to a common misunderstanding of the nature and benefits of PPPs, PPPs do not provide public infrastructure or public services for free. Paying for the provision of public infrastructure and services associated with a PPP asset is either the responsibility of the government or users. Firm fiscal commitments from PPPs may limit budget flexibility and endanger fiscal sustainability if PPPs are used to bypass budgetary controls and fiscal constraints. In addition, PPPs implemented in parallel to the public investment program and outside the budget process may crowd out other high-priority spending. Furthermore, PPPs create contingent liabilities, even if the long-term firm fiscal commitments are considered in the decision and budget process. The paper has also showed that benefits from PPPs can only be realized if these risks are properly managed.

Features of a public financial management framework have been outlined to reap the benefits of PPPs in the region without jeopardizing fiscal sustainability. PPPs are just an alternative method for procuring public infrastructure, and they should only be used if they are more efficient than traditional public procurement. A few prerequisites for achieving efficiency gains and protecting public finances when using PPPs were discussed and include (1) a high-quality public investment process that ensures that all public investment projects are properly assessed and selected according to the government's policy priorities; (2) handling all public investment projects, including PPPs through the same project process to ensure a level playing field for all infrastructure projects; (3) full integration of the public investment process with the budget process to ensure that public investment decisions are taken in the context of the country's fiscal framework; (4) a competitive procurement process for all public investment projects, including for unsolicited proposals; (5) a legal framework that assigns clear roles and responsibilities; (6) an institutional framework that empowers the minister responsible for public finances to stop all projects that are not affordable; (7) a comprehensive risk management framework; and (8) transparent accounting and reporting arrangements providing information on the long-term implications of all investment projects, including PPPs.

Countries expanding their PPP portfolios can strengthen public financial management. Benchmarking current practices in the region against the suggested prerequisites shows that public investment management is relatively well developed in many countries in the region. However, PPPs are handled in a parallel process and thus not covered under this public investment management framework. In most countries, multiyear commitments for long-term projects do not exist and information on the fiscal implications of such projects are not properly reflected in the budget documents. In several countries, the minister of finance does not have the power to stop a PPP project if it is not affordable. Furthermore, many countries do not have a framework for assessing and managing fiscal risks, and only some countries that have such a framework include PPPs. Also, most countries use cash or modified cash accounting and do not publish sufficient additional information to provide a clear picture on the fiscal implications of ongoing PPP projects.

Public finance management reforms are already under way in several countries in the region, with IMF and Caribbean Regional Technical Assistance Center support. Several countries plan or are in the process of introducing accrual accounting standards, under which a project has largely the same fiscal implications whether it is implemented through a PPP or through traditional procurement. Several countries, including the Bahamas, which have recently approved a fiscal responsibility law, and Barbados, which is

preparing a new public finance management law, are working on improving public financial management, including public investment management, and the management of and reporting on fiscal risks. Interest in the management of fiscal risks gained momentum after recent natural disasters, and the IMF and Caribbean Regional Technical Assistance Center have intensified their capacity-building efforts in this area.

Appendix I. Natural Hazards Impacting Caribbean Region, 1988–2012

Appendix Table 1. Natural Hazards Impacting Caribbean Region, 1988–2012

Hazard	Year	Magnitude	Estimated Cost	Countries Affected
Hurricane Gilbert	1988	Category 5	US$ 1.1 billion, 65% of GDP	Jamaica
Hurricane Hugo	1989	Category 5	US$ 3.6 billion, 200% of GDP for Montserrat	Antigua and Barbuda, St. Kitts and Nevis, Montserrat, British Virgin Islands
Tropical storm Debby	1994	n.a.	US$ 79 million, 18% of GDP	St. Lucia
Hurricanes Iris/Marilyn/Luis	1995	Iris (cat. 3–4) Marylin (cat 1) Luis (cat. 3)	US$ 700 million	Anguilla, Antigua and Barbuda, Dominica, Montserrat, St. Kitts and Nevis
Hurricane Georges	1998	Category 3	US$ 450 million (not including Dominica)	Antigua and Barbuda, Dominica, St. Kitts and Nevis
Hurricane Floyd	1999	Category 4	n.a.	The Bahamas
Hurricane Lenny	1999	Category 4–5	US$ 274 million	Anguilla, Antigua and Barbuda, Dominica, Grenada, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines
Tropical Storm Lili	2002	n.a.	US$ 7.8 million US$ 9.6 million	Grenada St. Vincent and the Grenadines
Tropical storm Earl	2004	n.a.	n.a.	St. Vincent and the Grenadines, Grenada
Hurricanes Charley/ Frances/Ivan/Jeanne	2004	Charley/Frances (cat. 4) Ivan (cat. 5) Jeanne (cat. 4)	US$ 150 million	The Bahamas, Cayman Islands, Grenada, Jamaica, St. Lucia, St. Vincent and the Grenadines, Trinidad and Tobago
Hurricane Emily	2005	Category 5	US$ 75.5 million	Grenada
Hurricane Dean	2007	Category 5	US$ 90 million (infrastructure for Dominica and Belize)	Belize, Dominica, Grenada, Jamaica, St. Lucia, St. Vincent and the Grenadines
Tropical storms Alma/Arthur	2008	n.a.	US$ 26.1 million	Belize
Tropical storm Fay, Tropical storms/hurricanes Gustave/Hanna	2008	Gustav (cat. 1) Hanna (cat. 1) Ike (cat. 4)	US$ 211 million (estimated for Jamaica only)	The Bahamas, Cayman Islands, Haiti, Jamaica, Turks and Caicos Islands
Hurricane Otto	2010	Category 1	US$ 25.5 million (52% for road transport sector)	British Virgin Islands
Hurricane Tomas	2010	Category 2	US$ 336 million, 43% of GDP US$ 49.2 million, 10.5% of GDP	St. Lucia St. Vincent and the Grenadines
Hurricane Irene	2011	Category 3	US$ 40 million	The Bahamas
Hurricane Ophelia	2011	Category 1	US$ 14.4 million (public infrastructure damage)	Dominica
Tropical storm Helene	2012	n.a.	US$ 17 million	Trinidad and Tobago
Tropical storm/hurricane Isaac	2012	Category 1	n.a. (Jamaica, Dominica) US$ 250 million (Haiti)	Trinidad and Tobago, Dominica, Haiti
Hurricane Sandy	2012	Category 1–2	US$ 55 million (Jamaica) >US$ 100 million (Haiti) US$ 300 million (Bahamas)	Jamaica, Haiti, The Bahamas
Other events				
Volcano	From 1995	—	Negative growth: −7.6% to −20.2%	Montserrat
Landslides	2002	—	US$ 116 million	Jamaica
Floods	2005	—	US$ 2.6 billion	Guyana
Drought	1997	—	US$ 29 million	Guyana
Drought	2010	—	US$ 14.7 million	Guyana
Earthquake	2010	7.3 Richter scale	US$ 8 billion	Haiti

Source: Caribbean Development Bank

Appendix II. Survey Results

Appendix II. Survey Results

	Anguilla	Antigua and Barbuda	Barbados	British Virgin Islands	Curacao	Grenada	Guyana	Haiti	Jamaica	St Lucia	St Vincent and the Grenadines	St Kitts	Nevis	Turks and Caicos	Surinam	Dominica	Total # of replies on survey				
I. Institutional and Legal Framework																					
																	Yes	No			
1 Does your country have a specific law for PPPs?	No	No	No	No	No	No	No	No	No	Yes	No	No	No	Yes	No	No	2	14			
2 At what stage(s) does the Ministry of Finance intervene in the PPP process?																	Yes	No			
2.1 Project selection	No	No	Yes	Yes	No	Yes		Yes	Yes	Yes	Yes	No	No	Yes	No		8	6			
2.2 Tender preparation	No		Yes	Yes	No	Yes		Yes	No	Yes	Yes		No	Yes	No		7	5			
2.3 Contract negotiation	No		Yes	Yes	No	Yes		Yes	Yes	Yes	Yes		No	Yes	No		8	4			
2.4 Contract renegotiations	No		Yes	Yes	No	Yes		Yes	Yes	Yes	Yes		No	Yes	No		8	4			
2.5 Change in scope (contract extension)	Yes		Yes	Yes	No	Yes		Yes	No	Yes	Yes		No	Yes	No		8	4			
																	Yes	No			
3 Do the PPP legislation/rules/ regulations give the Minister of Finance (or the Minister responsible for budgetary policies) the power to veto a PPP on the grounds of budget affordability or debt sustainability considerations?	**Yes**	**No**	**No**	**No**	**No**	**No**		**No**	**Yes**		**Yes**	**No**	**Yes**	**No**	**No**		**4**	**9**			
If yes: At what stage(s) does the Minister of Finance have a veto powers?																	Yes	No			
3.1 Project selection			No						Yes		Yes		Yes	No			3	2			
3.2 Tender preparation			No						Yes		Yes		Yes	No			3	2			
3.3 Contract negotiation			No						Yes		Yes		Yes	No			3	2			
3.4 Contract renegotiations			No						Yes		Yes		Yes	No			3	2			
																	Yes	No			
4 Is there a PPP unit or something equivalent, which provides expert support on the preparation, procurement, and implementation of PPPs?	**No**	**No**	**No**	**No**	**No**	**Yes**	**No**	**Yes**	**Yes**	**Yes**	**No**	**No**	**No**	**Yes**	**No**	**No**	**5**	**11**			
If yes:																	MoF	MoE/MoD/ MoP	MoPW	IPA	Other
4.1 Where is it located within the government?			Other			MoF		MoF	MoE/MoD/ MoP	MoF				MoF			4	1	0	0	1
																	Yes	No			
4.2 Does it have clearly defined roles and responsibilities?			No			No		Yes	Yes	Yes				Yes			4	2			
4.3 What stages of the PPP process does the PPP unit support?																	Yes	No			
4.3.1 Project selection			No			Yes		Yes	Yes	Yes				No			4	2			
4.3.2 Decision of procurement method (i.e., traditional public procurement vs. PPP)			No			Yes		Yes	Yes	Yes				Yes			5	1			
4.3.3 Project design and planning			No			Yes		Yes	Yes	Yes				Yes			5	1			
4.3.4 Tender preparation			No			Yes		Yes	Yes	Yes				Yes			5	1			
4.3.5 Tender award			No			Yes		Yes	Yes	Yes				Yes			5	1			
4.3.6 Contract negotiation and approval			No			Yes		Yes	Yes	Yes				Yes			5	1			
4.3.7 Project implementation			No			Yes		Yes	Yes	Yes				Yes			5	1			
4.3.8 Project renegotiation or termination			No			Yes		Yes	Yes	Yes				Yes			5	1			

5 Is there a cabinet or a high-level steering committee responsible for decision making at key milestones of public investment projects?	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**	**No**	**Yes**	**13**	**3**
If yes, at what stages?																	Yes	No
5.1 Project selection	Yes	Yes	Yes		Yes	Yes	Yes	No	Yes	Yes	Yes		Yes	Yes		Yes	12	1
5.2 Decision of procurement method (i.e., traditional public procurement vs. PPP)	Yes		Yes		Yes	Yes	Yes	Yes	Yes	Yes			Yes	No		Yes	10	1
5.3 Project design and planning	Yes		Yes		Yes	Yes	Yes	Yes	No	Yes			Yes	Yes		Yes	10	1
5.4 Tender preparation	Yes	Yes	Yes		Yes	Yes	Yes	Yes	No	Yes			Yes	No		Yes	10	2
5.5 Tender award	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes			Yes	No		Yes	11	1
5.6 Contract negotiation and approval	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	No		Yes	12	1
5.7 Project implementation	Yes		Yes		Yes	Yes	Yes	Yes	No	Yes	Yes		Yes	No		Yes	10	2
5.8 Project renegotiation or termination	Yes		Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	No		Yes	11	1
II. Framework for Government Support to PPPs																		
6 Are there clear criteria for evaluating public investment and public infrastructure projects?																	Yes	No
6.1 For assessing budget affordability	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	No	Yes	Yes	No	11	5
6.2 For assessing debt sustainability	Yes	Yes	No	Yes	No	Yes	Yes	No	Yes	No	Yes	Yes	No	Yes	Yes	No	10	6
6.3 For assessing value-for-money	No		No	Yes		No	No	No	Yes	No	Yes	Yes	No	Yes	No	No	5	9
6.4 For assessing fiscal risks	No		No	No	No	Yes	No	No	Yes	No	Yes	Yes	No	Yes	No	No	5	10
7 Are there clear criteria on what instruments the government can use to support a project and on the conditions under which the instruments may be used?																	Yes	No
7.1 For providing grants	Yes		Yes	Yes		Yes	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes	Yes	11	3
7.2 For providing loans	Yes	Yes	Yes	Yes		Yes	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes	Yes	12	3
7.3 For providing equity	Yes		No	No			No	Yes	No	No	Yes		No	Yes		Yes	5	6
7.4 For providing government guarantees	Yes		Yes	No		Yes	No	Yes	No	No	Yes		No	Yes	Yes	Yes	8	5
7.5 For making availability payments	No		No	No			No	Yes	No	No			No	Yes	Yes	Yes	4	7

(continued)

Appendix II. *(continued)*

	Anguilla	Antigua and Barbuda	Barbados	British Virgin Islands	Curacao	Grenada	Guyana	Haiti	Jamaica	St Lucia	St Vincent and the Grenadines	St Kitts	Nevis	Turks and Caicos	Surinam	Dominica	Total # of replies on survey	
																	Yes	No
8 Are there caps on the amount or level of direct funding/ financing support?			**No**	**No**	**No**	**No**	**Yes**	**Yes**	**No**	**No**		**No**	**No**	**No**	**Yes**	**Yes**	**4**	**9**
If yes, at what level are the caps set?																	Yes	No
8.1 at the project level	Yes		No				Yes	Yes		No	No			No	Yes	Yes	5	4
8.2 at the sector level	Yes		No				No	Yes		No	No			No		No	2	6
8.3 at the program level	Yes		No				No	Yes		No				No	Yes	No	3	5
																	Yes	No
9 Is there a separate fund/ budget account supporting PPP commitments?	No		No	No	No	No	No	No	No	No	No	No	No	Yes	No	No	1	14
																	Yes	No
10 Has the government financially supported any PPPs?	**Yes**		**Yes**	**Yes**	**No**	**Yes**	**Yes**	**No**	**No**	**No**	**Yes**	**No**	**No**	**Yes**	**Yes**	**No**	**8**	**7**
If yes, which instruments have been used:																	Yes	No
10.1 Grants (including free provision of assets (including land) or rights (use of public assets or rights))			Yes	Yes		Yes	Yes				Yes			No	Yes		6	1
10.2 Loans			Yes	No		Yes	Yes				Yes			No			4	2
10.3 Equity			No	No			Yes							No			1	3
10.4 Government guarantees (including minimum revenue guarantees)	Yes		Yes	No			No				Yes			Yes			4	2
10.5 Availability payments			Yes	Yes			No										2	1
10.6 Other																		
III. Framework for Managing Fiscal Risks																	Yes	No
11 Is there a PPP/public financial management/ fiscal responsibility/budget management law, regulation or policy that mandates the assessment, measurement, monitoring, and management of fiscal risks?	**Yes**	**No**	**No**	**Yes**	**No**	**Yes**	**No**	**No**	**Yes**	**No**	**No**	**No**	**No**	**Yes**	**Yes**	**No**	**6**	**10**
If yes, in what format?																	Yes	No
11.1 Law	Yes		No	Yes		Yes			Yes					Yes	Yes		6	1
11.2 Regulation			No	No		Yes								Yes	Yes		3	2
11.3 Policy	Yes		No	No		Yes								Yes			3	2

																	Yes	No	
12	**Are PPPs integrated in the overall fiscal risks management framework?**	Yes	No	Yes	No	No	No	No	No	Yes	No	No	No	No	Yes	No	No	4	12	
13	**If no, is there a separate framework for managing fiscal risks related to PPPs?**		No	No	No	No	No	No	No			No	No	No		No	No	0	12	
14	**Do you quantify the impact of PPPs on debt sustainability?**	Yes	No	Yes	Yes	No	No	No	No	Yes	No	No	No	No	Yes	No	No	5	11	
15	**Does any entity have the responsibility of signing-off fiscal risks before project approval?**	**No**	**No**	**Yes**	**Yes**	**No**	**Yes**	**Yes**	**No**	**Yes**	**Yes**		**No**	**No**		**No**	**Yes**	**7**	**7**	
	If yes, which entity																	Yes	No	
	15.1 Budget office			Yes						Yes	Yes				Yes			4	0	
	15.2 PPP unit			No			Yes			Yes	Yes							3	1	
	15.3 Debt management office			Yes				Yes		Yes	No	Yes			Yes			5	1	
	15.4 Economic planning office (or similar)			Yes	Yes					No	No						Yes	3	2	
	15.5 Contracting agencies			No						No	Yes							1	2	
16	**Does the framework include an assessment of fiscal risks at the key project stages:**																	Yes	No	
	16.1 Project selection	Yes		Yes		No	Yes	No	No	Yes	Yes	Yes	No	No	Yes			7	5	
	16.2 Tender preparation	No		Yes			No	No	No	Yes	Yes	Yes			Yes			5	4	
	16.3 Contract negotiation	No		Yes			Yes	No	Yes	Yes	Yes	Yes			Yes			7	2	
	16.4 Contract renegotiations	No		Yes			Yes	No	Yes	Yes	Yes	Yes			Yes			7	2	
	16.5 Change in scope (contract extension)	Yes		Yes			Yes	No	Yes	Yes	Yes	Yes			Yes			8	1	
	IV. Budgeting Framework for PPPs																	Yes	No	
17	**Is there a medium-term plan for government wide public investment and infrastructure priorities?**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**		**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**15**	**0**	
	17.1 Are PPPs integrated in this medium-term plan?	Yes		No	No	No	Yes	Yes	No	Yes	No		No	No	Yes	No	No	5	9	
																		No	Yes, but only loosely	Yes, priorities or financially viable
	17.2 Does the plan take into account budgetary constraints?[1]	Yes, priorities or financially viable	Yes, but only loosely	Yes, but only loosely	Yes, priorities or financially viable	Yes, but only loosely	Yes, but only loosely	Yes, but only loosely	Yes, but only loosely	Yes, priorities or financially viable	Yes, but only loosely		Yes, but only loosely	Yes, but only loosely	Yes, priorities or financially viable	No	Yes, priorities or financially viable	1	9	5

(continued)

Appendix II. *(continued)*

	Anguilla	Antigua and Barbuda	Barbados	British Virgin Islands	Curacao	Grenada	Guyana	Haiti	Jamaica	St Lucia	St Vincent and the Grenadines	St Kitts	Nevis	Turks and Caicos	Surinam	Dominica	Total # of replies on survey	
																	Yes	No
18 Is there a medium-term budget framework that projects resources and expenditures over a period of three to five years or more?	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	15	1
19 Do budget documents include full information on public investment projects and PPPs, including over 3 to 5 years?	Yes	No	No	No	Yes	No	No	No	No	No	Yes	No	No	Yes	No	Yes	5	11
20 Does the parliament approve multiannual commitments as part of the budget process?	Yes	No	No	No	No	Yes	No	No	No	Yes		No	No	Yes	No	Yes	5	10
21 Do recurring government payments, such as payments relating to PPPs, require annual legislative approval?		Yes	Yes	No	Yes	Yes		No	No				No	Yes	Yes	Yes	7	4
22 Is there any type of binding ceilings for the total volume of PPPs, either on the total stock of PPPs or on the annual expenditure on PPPs specified in law or regulations?	No	No	No	No	No	No	No	No	Yes			No	No	Yes		No	2	11
If yes,																	Yes	No
22.1 Is there a ceiling on total volume of PPP contracts (i.e., on the stock of PPPs)	No		No						No	No			No	Yes		No	1	6
22.2 Is there a ceiling on total annual expenditure under PPPs (i.e., on the flow for PPPs)	No		No						No	No			No	No		No	0	7
V. Accounting Framework for PPPs																		
																	Cash	Modified cash	Accruals
23 What kind of accounting standards are used for central government accounting?	Modified cash	Modified cash	Accruals	Cash	Accruals	Modified cash	Cash	Cash	Cash	Cash		Cash	Modified cash	Modified cash	Modified cash	Cash	7	6	2
																	IPSAS standards	Other accruals standards	
23.1 If in accruals, which standard are you applying?			IPSAS standards		Other accruals standards											IPSAS standards	2	1	
																	Yes	No	

24	**Are you producing a government balance sheet?**	Yes	Yes	Yes	No	Yes	No	No	Yes	No	Yes	Yes	No	Yes	No	Yes	9	6			
	24.1 If yes, are PPP assets and liabilities accounted for on the government balance sheet?	No	No	Yes		Yes			No		No			Yes		No	3	5			
																	Economic control	Majority of risks born by the government	Other		
25	**For accounting for PPPs, which criterion are you applying to PPPs?**			Other		Majority of risks born by the government				Majority of risks born by the government					Other		0	2	2		
26	**Are the following PPPs on balance sheet?**																Yes	No			
	26.1 Government funded PPPs	No	No	Yes	No	Yes	No		No	Yes				Yes	No	No	4	7			
	26.2 User funded PPPs	No	No	No	No	No	No		No					Yes	No	No	1	9			
																	Yes	No			
27	**Does the framework clearly enunciate the treatment of fiscal risks arising from state-owned enterprise PPPs?**	**Yes**	**No**	**No**	**No**	**Yes**			**No**	**Yes**			**No**	**Yes**		**No**	**4**	**6**			
	If yes,																				
	27.1 For subnational level			No		No								Yes			1	2			
	27.2 For state-owned enterprise	Yes		No		Yes				Yes				Yes			4	1			
28	**Is the information on fiscal risks available in the public domain?**	**Yes**	**No**	**No**	**No**	**Yes**		**No**	**No**	**Yes**	**No**		**No**	**Yes**		**No**	**4**	**8**			
																	In the form of a Fiscal Risk Statement	As part of the annual debt statement	As part of BD/note to BS	As part of DMS	Other
	28.1 If yes, how is it published?[2]	DBS				DBS	As part of BD/ note to BS			In the form of a Fiscal Risk Statement				As part of BD/ note to BS			1	0	2	2	0
																	Yes	No			
29	**Is there provisioning for unexpected losses arising from contingent liabilities in the form of a readily accessible account in the budget or a fund such as a contingency fund or a specially created fund?**	No	No	No	No	No	Yes		No	No	No		No	Yes	Yes	Yes	4	9			

(continued)

Appendix II. *(continued)*

	Anguilla	Antigua and Barbuda	Barbados	British Virgin Islands	Curacao	Grenada	Guyana	Haiti	Jamaica	St Lucia	St Vincent and the Grenadines	St Kitts	Nevis	Turks and Caicos	Surinam	Dominica	Total # of replies on survey	
VI. Statistical Framework for PPPs																	GFSM 1986	GFSM 2010–2014
30 Which statistical standards are you using for the public sector?			GFSM 2010–2014	GFSM 2010–2014	GFSM 2010–2014	GFSM 2010–2014			GFSM 1986	GFSM 2010–2014			GFSM 1986	GFSM 2010–2014	GFSM 2010–2014	GFSM 1986	3	7
																	Yes	No
31 Are you producing the government balance sheet?	**No**	**Yes**	**Yes**	**Yes**	**No**				**No**	**No**			**No**	**Yes**	**No**	**Yes**	**5**	**6**
31.1 If yes, are PPPs included?		No	Yes	No										Yes	No		2	3
																	Yes	No
32 Are PPPs accounted for in the following headline fiscal indicators?																		
32.1 Fiscal deficit		No	Yes	No	No	No		No	Yes				No	Yes			3	6
32.2 Public debt		No	Yes	No	No	No		No	Yes				No	Yes			3	6
VII. Transparency and Disclosure																	Yes	No
33 Are PPPs required to be audited by the supreme audit institution?	No	No	No	Yes				No	Yes	No		No	No	Yes	Yes	No	4	8
34 Does the supreme audit institution publish the findings?		No	Yes	Yes			Yes	No	Yes	No		No	No	Yes	Yes		6	5
35 Does the supreme audit institution have adequate capacity and skills to undertake PPP audits?			No	Yes			No	Yes	Yes	No		No		No			3	5
36 Have there been prior audits of PPP projects?		No	Yes	No				Yes	Yes	No		No	No	No			3	6
37 What are the audits focusing on? [multiple answers possible]:																	Yes	No
37.1 Financial audits			No	Yes			Yes	Yes	Yes					Yes	Yes		6	1
37.2 Performance audits			Yes	Yes			Yes	No	Yes					Yes			5	1
37.3 Forensic audits			No	Yes			Yes	No						No			2	3
																	Yes	No
38 Is there a proactive disclosure/transparency law and/or policy?		**Yes**	**No**					**Yes**	**No**	**No**		**No**		**Yes**		**No**	**3**	**5**
If yes,																		
38.1 Does it cover PPPs?		No	No					Yes						Yes			2	2
38.2 Is it fully implemented?		No	No					No						Yes			1	3

Source: IMF regional survey on PPP practices

Note: DBS = debt management strategy; IPA = investment promotion agency; MoD = Ministry of Development; MoE = Ministry of Economy; MoP = Ministry of Planning.

[1]Yes, the plan includes only priorities and/or projects that can realistically be accommodated within the existing budget constraints

[2]As part of BD/note to BS: as part of the budget statement/note to the budget statement; As part of DBS: as part of the debt management strategy.

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