Balancing Infrastructure Investments with Debt Sustainability

Background Note for the CAREC High-Level Forum
15 May 2019
Nur-Sultan, Kazakhstan

A. Executive Summary
B. Infrastructure Investment Needs in CAREC Countries
C. Infrastructure Financing and Debt Sustainability
D. Quality Infrastructure Investments through Capital Markets, Foreign Direct Investments and Public-Private Partnerships
E. Questions for Panel Discussions

A. Executive Summary

1. **This Background Note provides discussion points for the high-level CAREC Forum on 15 May 2019 in Nur-Sultan on balancing infrastructure investments with debt sustainability.** The background note was jointly prepared by International Monetary Fund (IMF), World Bank, and Asian Development Bank (ADB) staff. The note discusses infrastructure financing needs, fiscal constraints, debt sustainability, and the need for more private sector involvement in infrastructure financing. The note concludes with some key questions to guide the panel discussions during the forum.

2. **Infrastructure financing needs and gaps remain substantial in CAREC countries.** An ADB study estimates that the CAREC region, not including the People's Republic of China (PRC), will need to invest $76.8 billion per year between 2016 to 2030 in infrastructure for the region to maintain its growth momentum, eradicate poverty, and respond to climate change.[1] This level of investment is about 7.8% of GDP for CAREC member countries in Central Asia and the Caucasus subregion; 8.8% of GDP in the South Asia subregion; and 5.2% of GDP in East Asia. The study estimates the infrastructure investment gap—the difference between investment needs and current investment levels—at 3.1% of GDP for countries in Central Asia and 5.7% for countries in South Asia. Other estimates of infrastructure financing needs are broadly in the same range. Global indicators of infrastructure performance, such as the Logistics Performance Index, show that CAREC countries lag considerably behind top-performing countries on this index.[2]

3. **Large regional infrastructure investment projects in the CAREC region require recourse to additional financing sources.** With the opening up of the CAREC region and improving relationships among neighboring countries, major infrastructure projects of regional significance in the hydropower, rail and port connectivity sectors are being discussed. The

[1] ADB. 2017. *Meeting Asia's Infrastructure Needs.* Manila
[2] The World Bank. 2019. *Logistics Performance Index Database.* Washington, D.C.

financing needs of such mega projects are very large and require well-structured financing solutions, involving private financiers, public-private partnerships (PPPs), long-term institutional investors, and appropriate risk allocations.

4. **Infrastructure investments can have implications for debt sustainability.** Infrastructure investments remain important to promote growth, create employment, and reduce poverty. Such investments—when well-planned, well-executed, and accompanied by sector and institutional reforms, and trade facilitation efforts—yield significant economic, financial and social returns, and generate positive externalities. But these investments must be undertaken in a way in which growth-enhancing impacts are ensured and macroeconomic stability is protected through responsible debt and fiscal management policies. Thus, while infrastructure investments can improve potential economic growth and improve national debt repayment capacities, investments with low or even negative rates of economic return can also lead to unsustainable debt levels and can trigger a spiral of lower sovereign credit ratings and higher debt service commitments as well as contingent liabilities.

5. **Debt levels in several CAREC countries have surged in recent years given the oil price shock and depreciation in exchange rates.** Public debt figures remain on the lower side in the CAREC region with gross public-sector debt averaged about 44% of GDP in the region in 2018. However, with higher public spending following the oil price shocks, the average increase in debt ratios of CAREC countries since 2013 has been about 11 percentage points, with large jumps recorded in Azerbaijan, PRC, Tajikistan, and Uzbekistan. Deficit levels in 2018, even with the fiscal consolidation efforts in some countries, were already higher than their debt stabilizing primary balance in Tajikistan, Kyrgyz Republic, Turkmenistan, Pakistan, Uzbekistan, and PRC.

6. **Fiscal consolidation needs to be balanced with retaining space for essential public investments on quality infrastructure development.** Several CAREC countries are pursuing fiscal consolidation measures as a result of which fiscal deficits have declined. There remains fiscal space for carefully prioritized public infrastructure and other important investments in most CAREC countries, which are necessary to promote growth and create additional debt carrying capacity. It is important to protect such important investments to the extent possible during periods of fiscal adjustments. Fiscal space to maintain these investments can be gained, in part, through expenditure rationalization on untargeted and wasteful subsidies, checking losses of state-owned enterprises (SOEs), pensions and other related reforms and actions on reforming revenue mobilization.

7. **Public sector investments are needed to leverage greater private sector investment in infrastructure.** To alleviate public infrastructure financing constraints, the private sector must be facilitated to play a larger role in financing or partnering to close remaining infrastructure gaps. Due to private sector advantages in the management of key risks, CAREC governments are increasingly turning to the private sector to explore PPPs as a means of developing and managing critical infrastructure. However, international experience suggests that PPPs are complex undertakings and must be structured well to realize the projected benefits. PPPs also require continued public sector support in the form of viability gap funding and other modalities to leverage private sector investments in the infrastructure sectors.

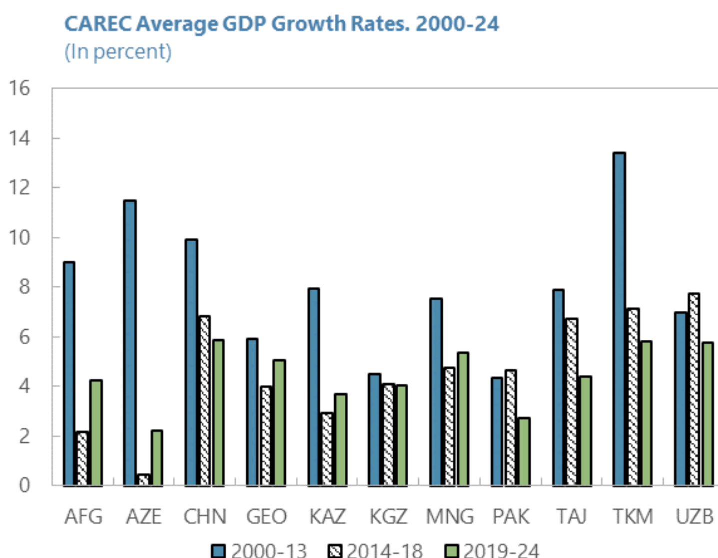
8. **Financial sector and capital markets development remain crucial to facilitate private participation in financing infrastructure.** Remaining vulnerabilities of the banking sectors and high levels of non-performing loans in some CAREC countries limit domestic financing options for infrastructure investments. Capital markets development reforms are key to allow investment banks, insurance companies, pension funds, mortgage and real estate lenders to develop, which,

in turn, are necessary elements for structuring private sector-led infrastructure investment financing models.

B. Infrastructure Investment Needs in CAREC Countries

9. **CAREC region is expected to grow at less than 5% per annum over the next four years.** Growth in the CAREC region, excluding PRC[3], averaged about 8.0% in the boom period of 2000–2013—notwithstanding the dip during the 2007–2008 global financial crisis—and declined to about 4.5% in 2014–2018 in the aftermath of the oil price shocks (figure 1). Growth experiences differed, however, across CAREC members, with the main commodity exporters—Azerbaijan, Kazakhstan, Mongolia, and Turkmenistan—comparatively more affected by the commodity price swings, which also depressed their growth performances. However, oil importing economies also felt the impact of the economic slump because of reduced demand for their exports and declined remittances. While some recovery can be expected going forward with the upward tick in oil prices, economic growth in the CAREC region over the next four years is projected to remain relatively constant at around 4.5% on average, given an expected slowdown in global growth and trade and with oil-prices projected to still remain lower than before 2014. This slowdown in growth has also been tied to sluggish productivity and productive capacity growth as a result of insufficient investments, investments in unproductive assets, or investments in low quality and low economic returns yielding assets. The need for quality investments in the CAREC region to drive growth, therefore, remains critical.

Figure 1: Past and Projected GDP Growth



Source: IMF

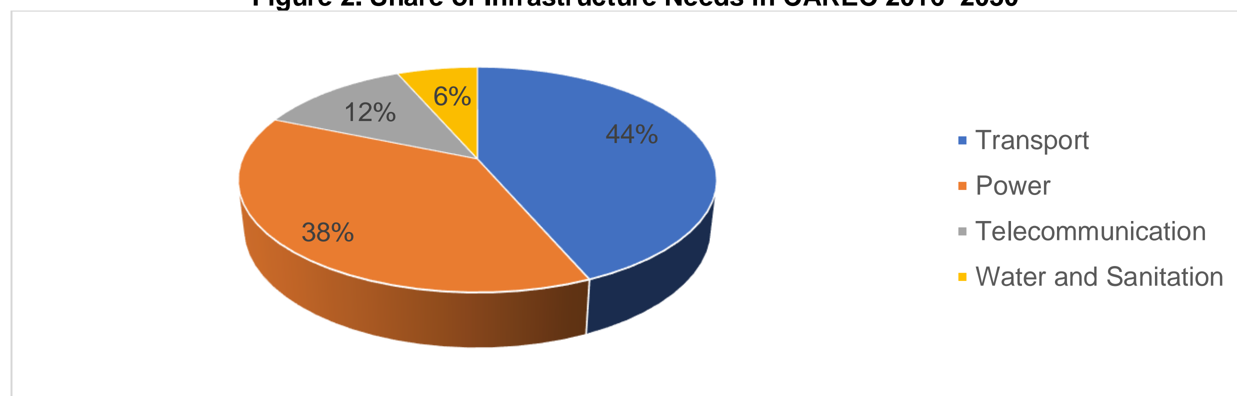
10. **Infrastructure investments—when accompanied with sector and institutional reforms, and trade facilitation efforts—are important drivers of growth, job generation and poverty reduction.** Public investment is an important driver for growth, needed for the delivery of public services and for connecting households and firms to economic opportunities. Infrastructure investment has both direct and indirect impacts on growth. Telecommunications, electricity, and water are used in the production process of nearly every sector, while transport is an input for trade and exchange of all commodities. Properly designed and implemented infrastructure investment can—when accompanied by trade policy and border management

[3] PRC real economic growth was 10.0% on average for 2000–2013 and 6.9% for 2013–2018.

reforms—also improve the fiscal environment by creating growth and reducing debt-to-GDP ratios. Empirical support for a positive impact of public capital investment in infrastructure is clear in numerous studies. For example, Calderón and Servén (2003)[4] find that quantitative measures of electricity generating capacity, road and rail lines, and telephone lines have a positive and significant impact on output per worker. Easterly and Rebelo (1993)[5] find a strong positive impact arising from public investments in transportation and communications sectors. Milbourne, Otto, and Voss (2003)[6] find that public investment in transport and communications, appears to have a positive and significant effect on economic growth. Bose, Haque, and Osborn (2007)[7] suggests that for developing countries aggregate current expenditure has no effect on growth, whereas aggregate capital expenditure has a positive effect. Studies also show that there is also a converse relationship with growth affecting infrastructure investments, which makes it sometimes difficult to isolate the effect of one on the other. Most infrastructure surveys, however, signal that while important, infrastructure is not the only binding constraint to growth or to attracting foreign direct investments (FDI). Weak institutions, legal frameworks, governance, and access to finance are also often considered to be significant obstacles.

11. **Infrastructure needs in the CAREC region remain significant.** According to ADB's Meeting Asia's Infrastructure Needs study, the CAREC region, not including PRC[8], will need to invest $76.8 billion per year between 2016 to 2030 in infrastructure for the region to maintain its growth momentum, eradicate poverty, and respond to climate change. This level of investment is about 7.8% of GDP for CAREC member countries in Central Asia and the Caucasus subregion (Azerbaijan, Georgia, Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan and Uzbekistan); 8.8% of GDP in the South Asia subregion (including Afghanistan and Pakistan); and 5.2% of GDP in East Asia (including People's Republic of China and Mongolia). The estimated infrastructure investment gap—the difference between investment needs and current investment levels—is estimated at 3.1% of GDP for countries in Central Asia and 5.7% for countries in South Asia. Required investments are mostly in the transport sector, followed by power, telecommunication and water and sanitation sectors (figure 2).

Figure 2. Share of Infrastructure Needs in CAREC 2016–2030



[4] Calderón, C. and Luis Servén (2003), "The Output Cost of Latin America's Infrastructure Gap", in W. Easterly and L. Servén (eds.), The Limits of Stabilization – Infrastructure, Public Deficits, and Growth in Latin America, Washington (D.C.), The World Bank.

[5] Easterly, W. and S. Rebelo (1993), "Fiscal Policy and Economic Growth", Journal of Monetary Economics, Vol. 32, pp. 417-58, December.

[6] R. Milbourne, G. Otto & G. Voss (2003) Public investment and economic growth, Applied Economics, 35:5, 527-540,DOI: 10.1080/0003684022000015883

[7] Bose, N., Haque, M. E. and Osborn, D. R. (2007), Public Expenditure and Economic Growth: A Disaggregated Analysis for Developing Countries, The Manchester School, 75: 533-556. doi:10.1111/j.1467-9957.2007.01028.x

[8] Investment needs of PRC were estimated at $1,094.6 billion for 2016-2030 in 2015 prices.

Source: ADB

12. **Estimated needs for quality infrastructure and infrastructure gaps are substantial.** While not directly comparable, other estimates of infrastructure financing needs are broadly in the same range. A new World Bank study on quality infrastructure development determines that new infrastructure could cost low- and lower middle-income countries between 2%—8% of GDP per annum to 2030—and an investment of 4.5% of GDP should enable these countries to meet the infrastructure related Sustainable Development Goals.[9] The Global Infrastructure Outlook[10] estimating infrastructure investment gaps in energy, transport, water and telecommunication infrastructure for some of the CAREC member countries found the annual infrastructure investment gaps for Kazakhstan to be 1.2% of GDP, for Azerbaijan and PRC at 0.4% of GDP, and for Pakistan at 1.1% of GDP, for the 2018–2022 period.

13. **The reasons for high infrastructure investment needs are manifold**. The high needs for infrastructure investments can be explained by historically low investments in CAREC countries, especially in the post-Soviet space between 1990 and 2000, and large distances between cities through sparsely populated landscapes which makes such investments expensive. Other reasons are proneness to natural disasters and harsh climates which increases the needs for investments in, for example, heating infrastructure, but also makes maintenance of assets and construction more costly. The infrastructure investment needs are high partly also a result of inadequate maintenance and repairs of public assets. Given the constraint on public resources, it is essential to prioritize the realization of high-quality infrastructure through prudent project implementation, management, and maintenance, and carefully considering economic returns and value for money when selecting infrastructure investments.[11]

14. **Global infrastructure indicators show significant gaps for CAREC countries.** According to World Bank's Logistics Performance Index (LPI)[12], in 2018, the average score of infrastructure performance for the CAREC region (excl. PRC) was 2.41, which is considerably lower than the infrastructure score of 4.08 for the top 20 countries (figure 3). Among the CAREC countries, some of the comparatively larger economies such as PRC (20th with a score of 3.75), Uzbekistan (77th with a score of 2.57) and Kazakhstan (81st with a score of 2.55) stand out as among the better performers in the region. The composition of the better performing CAREC economies on the LPI has changed marginally, with PRC traditionally leading the group. From 2016 to 2018, the infrastructure performance score for Afghanistan, Kazakhstan, Pakistan and Turkmenistan actually declined, increasing their gap with the PRC.

---

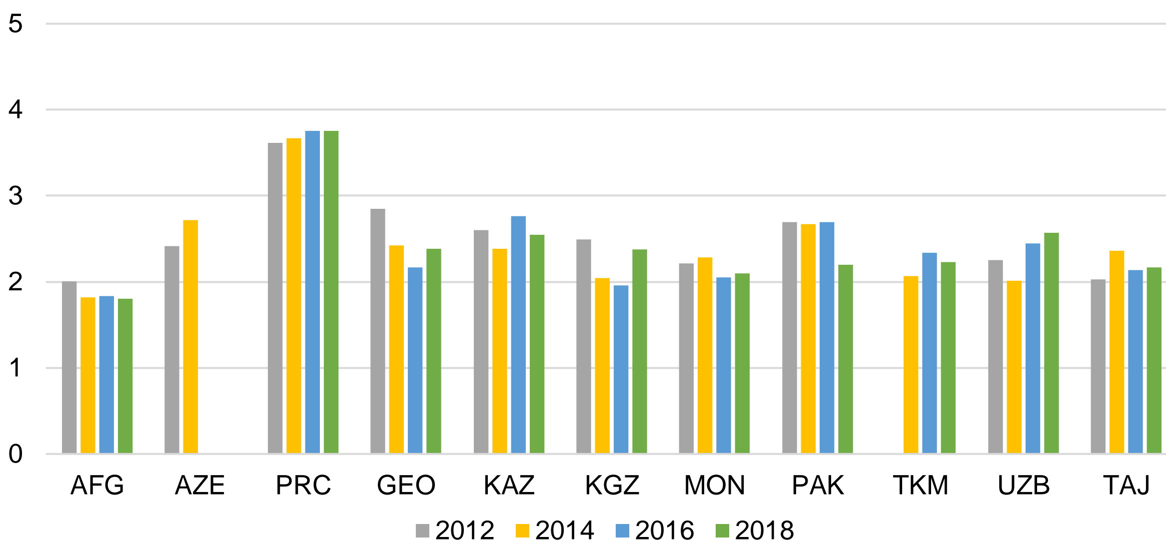
9 World Bank. 2019. *Beyond the Gap: How countries can afford the infrastructure they need while protecting the planet.* Washington, D.C.

10 Oxford Economics. 2017. *Global Infrastructure Outlook*. Oxford.

11 A 2011 IMF paper *Investing in Public Investment: An Index of Public Investment Efficiency* assess 71 countries regarding project implementation through creating a Public Investment Management (PIM) Index. Six of the assessed countries are CAREC members. Kazakhstan and Afghanistan were ranked in the best quartile, Mongolia in the second-best quartile, and Pakistan, Azerbaijan and Kyrgyz Republic were categorized within the third-best quartile. In most CAREC countries PIM is still relatively weak and even in those countries with higher access to infrastructure funding, the appraisal, selection, costing and monitoring of investment projects could be improved.

12 The LPI 2018 allows for comparisons across 160 countries. The LPI is based on a worldwide survey of operators on the ground (global freight forwarders and express carriers), providing feedback on the logistics "friendliness" of the countries in which they operate and those with which they trade.

Figure 3. Logistics Performance Index: 1=Low To 5=High: Quality of Trade and Transport-Related Infrastructure



Source: World Bank, LPI database

15. **Regional infrastructure to promote integration within CAREC along with trade facilitation reforms can further enhance connectivity to markets and among producers.** In addition to national infrastructure, investments in regional infrastructure projects, such as cross-border transport connectivity and power trade projects offer benefits beyond a single nation's territory. Such infrastructure creates spillover effects, brings down the cost of doing business and increase competition to support growth and specialization in the region when leveraged by trade and business reforms. The CAREC region, however, falls behind other regions in terms of progress on cooperation and integration. ADB's Asia-Pacific Regional Cooperation and Integration Index ranks CAREC as region with the lowest score.[13] Among other implications, this low score indicates the need for greater trade and connectivity investments and policy improvements in the region.

16. **Large infrastructure investment projects of regional significance have been identified by CAREC countries, which require recourse to additional financing sources.** With the opening up of the region and improving relationships among neighboring countries, large infrastructure projects of regional significance in the hydropower, rail and port connectivity sectors are being now discussed. In addition to ongoing initiatives like the Turkmenistan-Uzbekistan-Tajikistan-Afghanistan-Pakistan (TUTAP) power connection framework, and the Turkmenistan-Afghanistan-Pakistan-India (TAPI) gas pipeline project, work on the Rogun hydropower project in Tajikistan has started which will generate surplus power for exports, while large railway projects connecting Central Asia to PRC and to Afghanistan and Pakistan to access warm water ports on the Arabian sea are being planned. The China-Pakistan Economic Corridor (CPEC), a flagship initiative under the Belt and Road Initiative, is also being implemented with proposed $62 billion worth of investments. The financing needs of such mega projects are enormous and require well-structured financing solutions, involving private financiers, PPPs, long-term institutional investors, and appropriate risk allocations.

C. Infrastructure Financing and Debt Sustainability

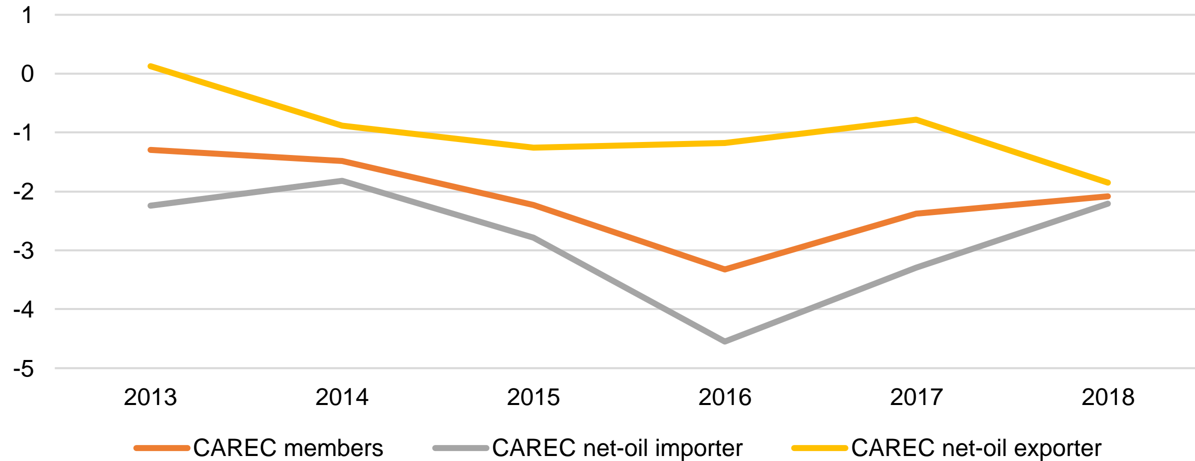
[13] ADB. 2018. *Asian Economic Integration Report.* Manila.

17. **Infrastructure investments must be undertaken in a way in which macroeconomic stability is protected through responsible public debt policies.** Most infrastructure projects are financed by CAREC governments either directly through the budget, or indirectly through issuing bonds, domestic debt, through SOEs, or through sovereign loans from international financial institutions. Private sector infrastructure investments are being increasingly sought to relieve pressure from public sector balance sheets, with some successful outcomes particularly in the power generation and associated sectors. After the 2007–2008 global financial crisis, CAREC countries increased public investments to boost economic growth. This effort was renewed after the oil price shock in 2014, which heavily impacted the region and led to recessions in some countries. Many investment projects started at that time have been already completed or are nearing completion. Some CAREC governments consequently are now scaling back public investments and moving into a phase of fiscal consolidation.

18. **CAREC oil-exporters are shifting from fiscal stimulus to fiscal consolidation**. Expansionary fiscal policies continued through 2017 in oil-exporting CAREC members, but fiscal consolidation is now under way. The average non-oil fiscal balance in these countries is anticipated to narrow from -17.4 percent of GDP in 2017 to -12.1 percent in 2018, and further to -11.9 percent in 2019. For example, Kazakhstan's $9 billion infrastructure investment and reform program started in 2014, which was funded by an expansionary fiscal policy using resources from the sovereign wealth fund and support from international financial institutions, has been concluded. Other examples are Turkmenistan, where capital spending is being reduced and Uzbekistan, where subsidized loan operations will be partially cut. In Azerbaijan, after a cut-back of its fiscal stimulus in 2016 and 2017, the government remains cautious about incurring external debt for financing infrastructure investments, but nonetheless is planning to increase some capital expenditures mostly linked to oil sector investments.

19. **Closing infrastructure gaps in a period of fiscal consolidation is challenging.** Fiscal consolidation is not limited to oil exporters only. The fiscal restraint in CAREC oil importers, too, has helped reduced average fiscal imbalances from -4.5% of GDP in 2016 to -3.3% 2017 and -2.2% in 2018 (figure 4). Further consolidation efforts are expected over the medium term through fiscal policies that remains slightly contractionary; in some countries like Georgia, a more neutral stance is expected over the medium term. A notable exception is Pakistan, with increasing fiscal deficits since 2016 (-4.6% of GDP), with -5.8% of GDP in 2017, and -6.6% in 2018. However, in Pakistan too, fiscal consolidation efforts are underway, with a part of the immediate adjustment expected to come via reduced public investment spending through reduction in the public sector development budget. In this fiscal tightening environment, closing infrastructure gaps can appear to be challenging, particularly given the relatively low tax performance in several CAREC countries. In 2016, based on IMF data, the simple average tax revenue to GDP ratio in CAREC countries stood at 13.8% of GDP.

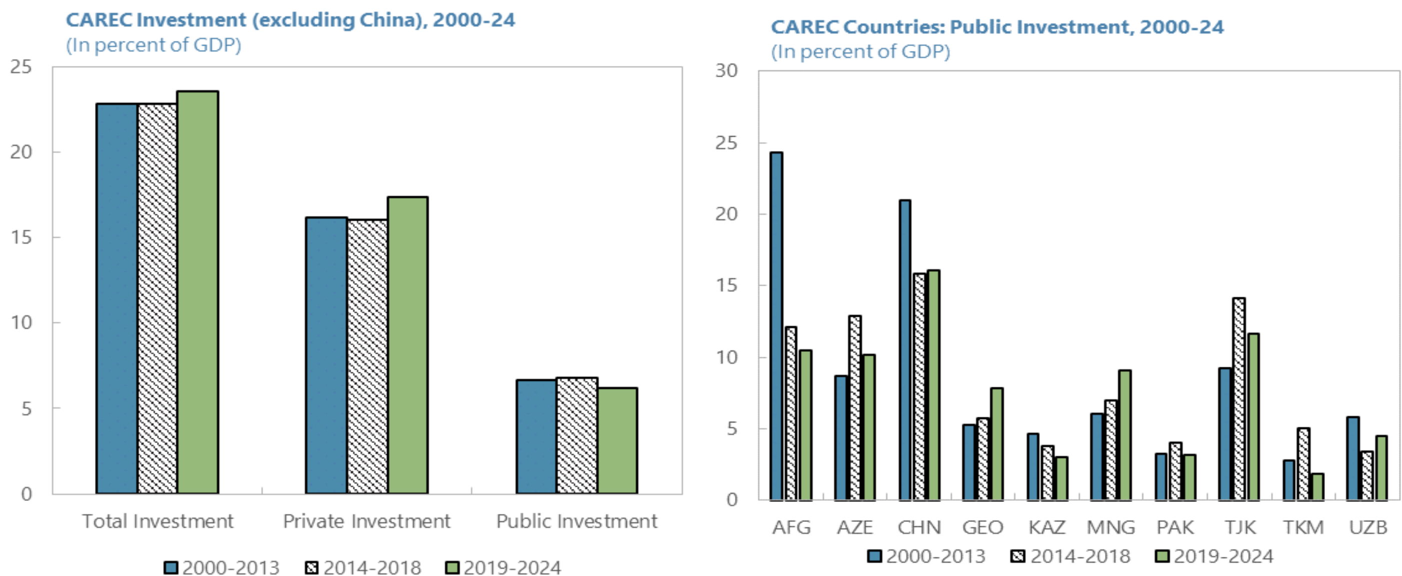
Figure 4. Fiscal Balance of Central Government, % of GDP, simple average



Source: ADB. 2018. *Asian Development Outlook.* Manila

20. **Public investments as share of GDP in CAREC countries are projected to somewhat decline during 2020--2024.** After a slight increase in public investment as share of GDP after the post oil price shocks period in CAREC countries (excluding PRC), this ratio is expected to decline marginally during 2020-2024 as countries maintain prudent fiscal management (figures 5 and 6). This trend of declining public investment to GDP ratios is noticeable in Afghanistan, Azerbaijan, Kazakhstan, Pakistan, Tajikistan and Turkmenistan. Private investment as share of GDP is, however, expected to increase to compensate for lower public investments.

Figure 5 and 6. Total fixed investments in CAREC Countries



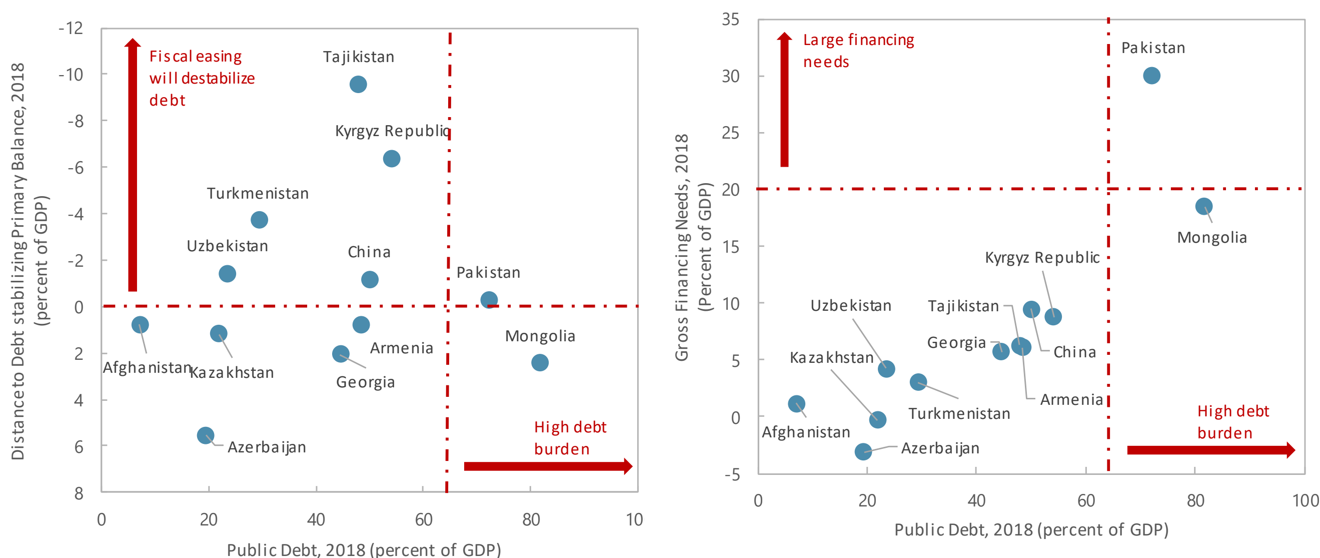
Source: IMF calculations

21. **Public debt figures overall remain on the lower side in the CAREC region with gross public-sector debt averaged about 44% of GDP in the region in 2018.** Only two countries (Pakistan and Mongolia) reporting debt to GDP ratios above 70%. Georgia, Tajikistan, PRC, and

Kyrgyz Republic had debt to GDP ratios in the 40%–60% range, while Uzbekistan, Kazakhstan, Turkmenistan, and Azerbaijan report public debt between 20% and 40%, while Afghanistan reports only 7.2% in public debt, albeit considered in high debt distress, if grants by development partners are excluded.

22. **However, debt levels have surged in recent years given the oil price shock and depreciation in exchange rates.** With higher public spending following the oil price shocks, the average increase in debt ratios of CAREC countries since 2013 has been about 11 percentage points, with large jumps recorded in Azerbaijan, PRC, Tajikistan, and Uzbekistan. Perhaps most importantly, deficit levels in 2018, even with the fiscal consolidation efforts in some countries, were already higher than their debt stabilizing primary balance in Tajikistan, Kyrgyz Republic, Turkmenistan, Pakistan, Uzbekistan, and PRC (figures 7 and 8). Gross financing needs reflect the amount of financing a country must raise to pay for its deficit and amortization of its public debt coming due. If gross financing needs are high, a country could be squeezed for liquidity. The IMF uses a 20% of GDP threshold as an indicator of vulnerability. In CAREC, only Pakistan had a ratio above this threshold, with Mongolia slightly below the 20% benchmark. Other countries, like PRC, Kyrgyz Republic, Tajikistan, and Georgia all had gross financing needs that hovered around 5% of GDP.

Figures 7 and 8. Debt Sustainability and gross financing needs of CAREC countries



Source: IMF calculations

23. **State-owned enterprises have a large expenditure footprint in many CAREC economies, but their debts and liabilities are sometimes underreported in public debt figures.** While reliable data on contingent and implicit public liabilities emanating from SOE debt is difficult to obtain, it is likely that SOEs, especially in the energy and financial sectors, are potential risks to debt sustainability in come CAREC countries. SOEs in the CAREC region often operate in sectors that are not structured around natural monopolies. Privatization, corporatization, and regulation of SOEs could be strengthened in most CAREC countries. Properly managed SOEs can play an important role in financing infrastructure development and attracting private sector investments.

19. **Fiscal consolidation needs to be balanced with retaining space for essential public investments on quality infrastructure development**. As mentioned in paras 18 and 19, several

CAREC countries have pursued fiscal consolidation measures since vulnerabilities remain due to the build-up of debt and fiscal deficits. However, even under such a consolidation scenario, fiscal space has to be created for carefully prioritized public infrastructure investments that remain necessary to promote growth, and create additional debt carrying capacity in the medium and long term. It is also important to ensure that fiscal adjustments deemed necessary for consolidation do not all come only at the cost of sacrificing critically needed public infrastructure investments. Other measures such as cutting expenditures on untargeted and wasteful subsidies, checking losses of SOEs, pension reforms and actions on reforming revenue mobilization are all important undertakings to protect the space for necessary infrastructure investments at the national and regional levels.

D. Quality Infrastructure Investments through Public-Private Partnerships, FDIs, and Capital Markets

24. **International financial institutions are playing an important role in infrastructure development in the region.** Most CAREC countries receive considerable support from international financial institutions through infrastructure loans and grants, mostly for transport, energy and urban and water related investments. Through CAREC alone, close to $34 billion of infrastructure investments have been mobilized since 2001. In addition to the governments' contribution of $7.8 billion, ADB has financed $12.5 billion, the World Bank $7.4 billion, Islamic Development Bank $1.7 billion, European Bank for Reconstruction and Development $1.6 billion, and other cofinanciers have financed $2.7 billion. Most of the investments were in the transport sector with (75%), followed by energy (23%), and trade (2%).

25. **Private sector financing and PPPs are required to play a stronger role in financing high quality infrastructure.** To alleviate public infrastructure financing constraints, it is clear that the private sector has to be facilitated to play a larger role in financing or partnering to close remaining infrastructure gaps.

26. **The role of PPPs is still very limited in most CAREC countries, but it has a significant potential, as PPP legislation has been developing recently.** Due to private sector advantages in the management of key risks, CAREC governments are increasingly turning to the private sector to explore PPPs as a means of developing and managing critical infrastructure. PPPs can be a financially advantageous alternative to traditional public procurement if the price of transferring risks to the private sector according to risk preferences and management capabilities is lower than the higher cost of finance that the private sector partners face in the market.[14] However, it is also important to bear in mind that international experience has identified many reasons why PPPs might not lead to the projected benefits, such as inadequate legal and institutional frameworks, wrong assumptions about future income streams or inaccurate estimates of risk transfers from the public to the private sector.[15][16] Support from the public sector continues to be needed to ensure bankability of PPPs through viability gap funding and other modalities.

---

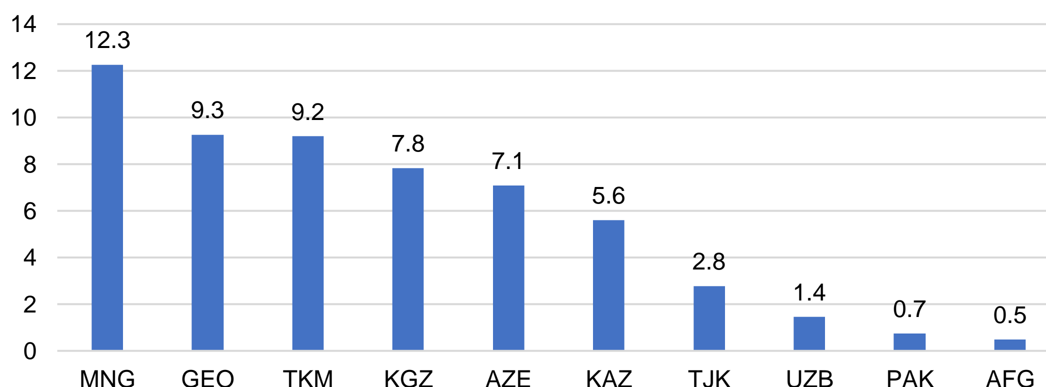
[14] Sawyer, M. 2008. *Private Finance Initiative and Public Private Partnerships: The Key issues,* in P. Arestis and M. Sawyer (ed.), *Critical Essays on the Privatization Experience,* Basingstoke: Palgrave Macmillan, ISBN 978-0-230-22252-6 2008

[15] Hodge, G.A. and Greve, C. 2007. *Public-Private Partnerships: An International Performance Review*. Public Money and Management 37(2): pp. 133-140.

[16] Even in emerging markets where PPP experience is extensive and has spanned several decades to date, like India, "public-private partnerships are [still] floundering, mainly due to the opportunistic behavior of private sector partners, regulatory uncertainty and poor value-for-money to the government". See: Pratap, K.V. 2014. *Floundering Public Private Partnerships*. Economic and Political Weekly No XIIX No 15

27. **Foreign direct investments are a major source of infrastructure financing in CAREC, but highly concentrated in extractive industries** (Figure 9). Excluding PRC, and with the exception of Georgia, with an average of FDI as share of GDP for 2010–2017 of 9.2%, larger shares of FDI in GDP in the rest of the CAREC economies are explained by foreign investment in extractive sectors (oil, gas, gold, and copper). The share of FDI in other infrastructure, however, plays a relatively small role, and is noticeable only in a few countries such as Kazakhstan, Azerbaijan and Mongolia. However, FDIs in infrastructure projects has recently increased in the lower income CAREC countries, including Tajikistan, Kyrgyz Republic, and Pakistan, including through projects within the Belt and Road Initiative. Tajikistan is an outlier because of the HPP Rogun financing, where funding has come from domestic bond issuance, a dollar denominated Eurobond (US$500 million), and sales of government-owned gold.

Figure 9. FDI as a share of GDP in CAREC Countries (average 2010–2017)



Source: World Development Indicators, World Bank

28. **Financial systems and capital market reforms are required to support more private infrastructure investments.** Among the main impediments to private sector investments in long-gestation infrastructure projects is the lack of availability for long-term finance. In the banking sector in CAREC countries, vulnerabilities, as exposed after the global financial crisis, persist. Financial sector stresses in the region have deep-rooted structural causes, including lack of competition, weak governance, segmentation of the credit market, and weak regulation and supervision. Measures to strengthen the banking system should be complemented by efforts to further develop capital markets (which remain weak and nascent in many CAREC countries), including securities market infrastructure and stronger regulation and supervision. Capital markets can provide alternative channels for firms to access long-term capital for infrastructure investments.

E. Questions for Panel Discussions

- Does infrastructure remain an important bottleneck for growth and job creation?
- What are key priorities for infrastructure development in CAREC countries?
- How is national and regional infrastructure being financed in CAREC countries?
- Are public investment levels sufficient to address infrastructure requirements?
- How can domestic revenue sources be increased to finance a larger share of infrastructure investments?
- How are governments closing the infrastructure financing gaps?

- How are governments managing public debt sustainability while undertaking infrastructure investments?
- What are key constraints to private sector participation in regional infrastructure development?
- Private financing of public infrastructure and fiscal risks: What can go wrong?
- How can public-private partnerships be made to work better in the infrastructure financing space?
- How can capital markets play a more effective role in catalyzing private investments in large infrastructure projects, including through local currency financing?
- How can foreign direct investments contribute more to infrastructure finance?