GROUP OF TWENTY

GLOBAL PROSPECTS AND POLICY CHALLENGES

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Prepared by Staff of the

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*Does not necessarily reflect the views of the IMF Executive Board.

EXECUTIVE SUMMARY

An uneven and brittle global recovery continues, despite setbacks this year. With world growth in 2014H1 worse than expected in the spring, global growth forecasts have been lowered to 3.3 percent for 2014 and to 3.8 percent in 2015. Supportive financial conditions, moderating fiscal consolidation, and strengthening balance sheets should sustain the recovery in the remainder of 2014 and into 2015. Overall, slow growth highlights the importance of G20 commitments to raise global growth.

Key developments since the October WEO include a financial market correction, appreciably lower oil prices, and some further signs of weakness in activity. Sovereign bond yields in advanced economies, which had fallen since the spring, declined further in October. Equity prices, which trended up till late-September, have declined since, notably in emerging economies, where risk spreads have increased. The recent increase in financial market volatility is a reminder of potential risks and potential further corrections. While it is too early to identify the supply and demand factors at play, all else equal, the recent appreciable fall in oil prices, if sustained, will boost growth. Recent data releases also point to weak domestic demand in the euro area.

Downside risks identified in the October WEO remain significant. Heightened geopolitical tensions and potential corrections in financial markets, including due to monetary policy normalization, are the main short-term risks. Other risks are low inflation/deflation in the euro area and low potential growth.

Policy priorities are as follows:

- *Advanced economies* should keep accommodative monetary policies, given still large output gaps and very low inflation. Reflecting the uneven recovery, challenges are becoming increasingly different across major central banks. While monetary policy normalization will be coming to the forefront in the United States and the United Kingdom, accommodative monetary policy in the euro area and Japan should continue to fight low inflation. To prevent premature monetary tightening, macro-prudential tools to mitigate financial stability risks—for example, in the housing market—should be the first line of defense. Fiscal consolidation should continue to balance fiscal sustainability and growth within credible medium-term plans.

- In *emerging economies*, the focus of macroeconomic policies should remain on rebuilding buffers and addressing vulnerabilities, in preparation for an environment characterized by tighter external financing conditions and higher volatility.

- A higher priority should be placed on growth enhancing *structural reforms* across G20 economies. Some countries with protracted current account surpluses should focus on boosting domestic demand or modifying its composition. Further labor and product market reforms are needed in much of the euro area. In a number of euro area countries severely affected by the crisis and emerging economies with protracted current account deficits, there is a need for reforms which increase competitiveness, together with wage moderation.

- Finally, in economies with clearly identified needs and economic slack, current conditions are favorable for increasing *infrastructure investment*. However, while this would support economic development, efficiency of the investment process is important to maximize the growth dividend.

Prepared by a team from the IMF's Research Department, led by Emil Stavrev and Esteban Vesperoni, and including Eric Bang, Gabi Ionescu, and Ava Hong.

DEVELOPMENTS, OUTLOOK, AND RISKS

An uneven global recovery continues, despite setbacks this year. Growth in the first half of the year was weaker than expected, and it is now projected at 3.3 percent for 2014, 0.4 percentage point lower relative to the April 2014 WEO. The growth projection for 2015 is slightly lower at 3.8 percent. These projections are predicated on the assumption that key conditions supporting the recovery—highly accommodative monetary policy and moderating fiscal consolidation—remain in place. Data released after the October 2014 WEO suggest that growth performance is in line with projections in the United States and China, but there are downside risks to the outlook for the euro area. Also, there was a correction in financial markets amid higher volatility, with equity prices declining, notably for emerging economies where risk spreads increased, and oil prices fell appreciably. Downside risks continue to be associated with geopolitical tensions, further corrections in financial markets, low inflation in some advanced economies, low potential growth globally, and secular stagnation in advanced economies, and U.S. monetary policy normalization.

1. **Despite setbacks this year, the global recovery continues but remains weak and unbalanced**. With a brittle, uneven recovery, slower-than-expected growth, and increasing downside risks, there is a need to avoid settling into "new mediocre". Growth in the first half of the year was less than projected in the April 2014 WEO, in part reflecting temporary disruptions (e.g. unusually harsh weather and an inventory correction after an earlier buildup in the United States) as well as geopolitical tensions (e.g. Russia, Ukraine, and some Middle-Eastern countries). Other factors, though, have also played a role. In some advanced economies, notably the euro area, legacies of the boom and the subsequent crisis—including high private and public debt—still weigh on the recovery despite supportive financial conditions, bringing the economy to a halt in the second quarter. Lackluster domestic demand in emerging economies, as well as supply bottlenecks in some, has also been more persistent than forecast—particularly in Latin America, driven by Brazil where investment remains weak and GDP contracted in the first and second quarters. Emerging economies continue adjusting to slower economic growth than the pre-crisis boom and the post-crisis recovery. Overall, the pace of recovery is becoming more country specific.

2. **Looking forward, the October WEO envisaged that the recovery will regain some strength in the remainder of 2014 and 2015**. The key drivers supporting the recovery remain in place, including moderating fiscal consolidation, highly accommodative monetary policy in most advanced economies, and strengthening balance sheets. Global growth is projected to rebound to an annual rate of about 3.7 percent in the second half of 2014 and slightly higher in 2015. In advanced economies, this is mainly driven by a rebound in the United States. In emerging economies, the recovery is driven by the waning of temporary setbacks to domestic demand and production, the gradual lifting of impediments to growth, and policy support to demand.

- In ***advanced economies***, growth is generally expected to strengthen in 2014 and 2015—to 1.8 and 2.3 percent respectively—but prospects are uneven and growth has been revised downward in some economies, notably in the euro area and Japan (Table 1). The *United*

States is expected to experience the strongest rebound—with growth reaching more than 3 percent in 2015—and growth is also expected to remain solid in the *United Kingdom, Canada, and several Asian advanced economies*. In the *euro area*, on the other hand, while the moderating fiscal consolidation and the further monetary easing should support activity, growth is projected to strengthen more gradually and unevenly as the crisis-legacy brakes ease only slowly. Growth is resuming in Spain and projections have been revised slightly upwards compared to the April WEO, but forecasts have been revised downwards in Italy, Germany, and France. In *Japan,* given that the recovery in private consumption has been slower than expected and the underlying momentum for private investment is weak, projections have been lowered compared to the April WEO.

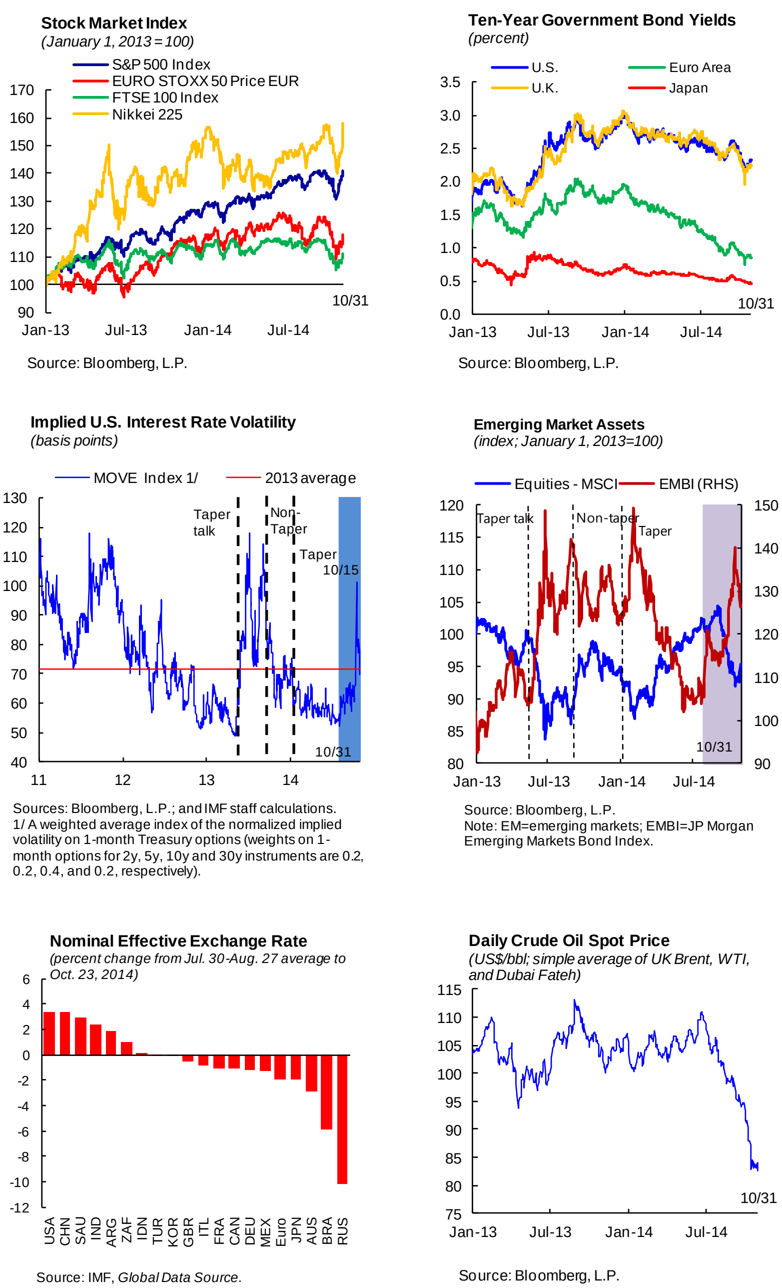
- In most ***emerging economies***, growth is expected to increase moderately in the second half of 2014 and into 2015 (averaging 4.4 and 5 percent for these years, respectively), reflecting stronger domestic demand and external demand associated with faster growth in advanced economies. *China*'s growth, however, is projected to moderate slightly in 2015 (to 7.1 percent, from 7.4 percent in 2014), as the economy transitions to a more sustainable path, and residential investment slows further. In *India*, growth is expected to increase as exports and investment pick up, helped by lower political uncertainty, several positive policy actions, improved business confidence, and reduced external vulnerabilities. Growth for *Latin America* is projected at 1.3 percent in 2014 and 2.2 percent in 2015, marked down for both 2014 and 2015 (by over 1 and 0.8 percentage points respectively relative to the spring), reflecting weaker-than-expected export performance amid deteriorating terms of trade, as well as various idiosyncratic domestic constraints. In *Russia*, activity will be impacted by structural bottlenecks and lower oil prices, further affected by geopolitical tensions; and activity is not projected to pick up before 2015 (with growth projected at 0.5 percent).

3. **Key developments since the October WEO include a financial market correction, sharply lower oil prices, and further signs of weakness in some advanced economies** (Figure 1). Specifically:

- *Financial conditions remain supportive of the recovery, but the recent increase in volatility is a reminder of potential risks*. Long-term bond yields in advanced economies, which had fallen since the spring, declined further in October. The Euro and the Yen depreciated against the U.S. dollar. Equity valuations edged higher until mid-September, but have declined since, notably in emerging economies, where risk spreads have increased and exchange rates have depreciated. The recent comprehensive assessment of European banks found a manageable capital shortfall of €9.5 billion after taking into account capital raised this year, but also registered a large increase in the stock of non-performing loans. Swift action is now needed to deal with the few banks identified by the assessment as being in need of further capital, and to resolve non-performing assets. Overall, while tail risks have decreased and balance sheet repair has progressed, the recent increase in volatility is a reminder about the challenges ahead.

- *Oil prices have fallen sharply (by almost 20 percent) since early September*. Several factors have been at play. Weaker than expected activity since the spring has weighed on oil demand, but its impact on prices has initially been muted by increased precautionary demand and the restocking cycle. Higher-than-expected production in non-OPEC countries, led by shale oil in the United States and recovering output in Libya, has also played a role. In light of higher supply and the fact that some of the weakness in demand is already reflected in the WEO baseline, the decline in prices will—ceteris paribus—boost global growth. Weak oil prices will have a different impact across regions, easing the pressure on external position of net oil importers with current account deficits, while posing an additional downside risk for producers in emerging economies where which growth is already decelerating.

Figure 1. Recent Developments



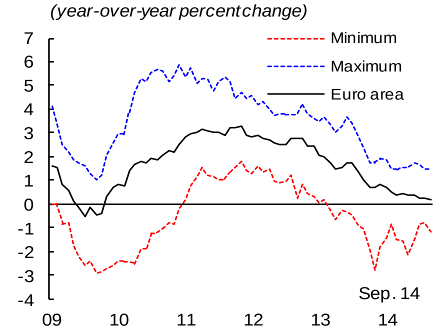
- *Recent data releases point to weak growth in the euro area*. External demand was weak, reflecting in part the growth moderation in China, but domestic demand was also surprisingly weak (notably, in Germany). Recent data also shows disappointing industrial production (e.g., Germany, France), raising concerns over stalling growth in the euro area. In Japan, recent indicators show that the recovery is weak but still ongoing. Finally, weakness in industrial production in India and consumer and investor confidence in Korea point to the sluggishness of the recovery.

4. **Increased downside risks identified in the October WEO persist**. In the short term, geopolitical risks and an abrupt correction in financial markets—including due to monetary policy normalization in the United States and the United Kingdom—are the main risks. Over the medium term, the key risks are low potential growth in both advanced and emerging economies and a prolonged period of weak demand in major advanced economies that could turn into stagnation.

- *Geopolitical tensions* heightened and may increase further. Developments in Ukraine and Russia could trigger an escalation of sanctions and large spillovers in other parts of the world, including via confidence effects. Similarly, heightened geopolitical risks in the Middle East could lead to disruption in oil markets.

- *Risks to activity from low inflation* remain relevant, especially for the euro area. Inflation continues to remain below the ECB target, and longer-term inflation expectations have begun drifting downward. With policy rates at the zero bound, negative shocks can lower inflation or expectations further, raising real rates, hampering the recovery and increasing debt burdens.

HICP Inflation 1/
(year-over-year percent change)



Source: IMF, *Global Data Source*.
1/ Figure reports euro area aggregate, and maximum and minimum of euro area economies.

- *An increase in risk premia and volatility in global financial markets, triggered by higher global risk aversion, liquidity shocks associated with the increased role of the shadow banking system, or faster-than-expected normalization of U.S. monetary policy*. An increase in global risk aversion can be associated with further declines in U.S. long-term yields but still lead to a capital flow reversals and exchange rate pressures in emerging markets, as well as negative effects on equity prices. Uncertainty about the cyclical position in the U.S. can amplify risks associated with faster than expected tightening in monetary policy. Against the backdrop of the still low risk spreads and volatility indicators, such surprises could trigger financial market corrections.

- In the medium term, there is a risk of *low potential growth* in both advanced and emerging economies. In addition to the implications of weaker potential growth, the major advanced economies, especially the euro area and Japan, could face an extended period of low growth reflecting persistently weak private demand—especially investment—that could turn into stagnation, with a further adverse impact on potential growth. As for emerging economies, several years of slowing growth prospects brings to the forefront the risk that potential growth could disappoint further.

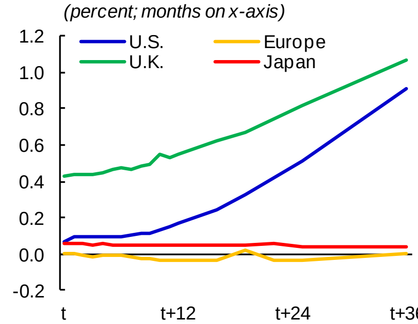
POLICIES: MANAGING RISKS AND BOOSTING GROWTH[1]

Policy priorities center on supporting demand, strengthening supply over time through structural reforms as well as infrastructure investment in some economies, and managing key risks. Macroeconomic policies need to continue supporting the recovery in advanced economies, given still large output gaps and very low inflation. Macro-prudential policies are an important first line of defense to address potential financial stability threats associated with a protracted period of low interest rates. In emerging economies, macroeconomic policies should continue preparing for a new environment characterized by tighter external financial conditions. A higher priority needs to be put on policies aimed at raising today's actual and tomorrow's potential growth—by restoring confidence, boosting investment, reforming labor and product markets, and raising productivity and competitiveness.

ADVANCED ECONOMIES NEED TO FIGHT LOW INFLATION AND SUSTAIN THE RECOVERY

5. **Prospects for an uneven recovery points to an asynchronous unwinding of monetary stimulus in advanced economies**. With output gaps still large, and inflation running below target, accommodative monetary conditions remain essential to support demand. However, the unbalanced recovery across economies suggests that challenges faced by central banks differ, with well-crafted communication continuing to play a critical role, given that protracted monetary support has raised financial stability concerns:

Policy Rate Expectations 1/
(percent; months on x-axis)



Source: Bloomberg, L.P.
1/ As of October 31, 2014. Policy rate expectations derived from Overnight Indexed Swaps (OIS), for Euro area (EONIA rate), U.K. (SONIA rate), U.S. (FED Funds rate), and Japan (TONAR rate).

- In the *United States*, with growth expected to increase above trend in the remainder of 2014 and 2015, the main policy issue is the appropriate speed of monetary policy normalization. The timing of the policy rate increase should be attuned to inflation and labor market developments. In the *United Kingdom*, still accommodative monetary policy has been combined with macro-prudential tools to contain financial stability risks.
- In the *euro area*, the ECB's recent actions—lower policy rates, cheap term funding for banks and the asset purchase program—are welcome, and underline the bank's commitment to raising inflation towards target. But if the inflation outlook does not improve and inflation expectations continue to drift down, the ECB should be willing to do more, including purchases of sovereign assets.
- In *Japan*, monetary policy has helped lift inflation and inflation expectations. On October 31st, the Bank of Japan (BoJ) expanded its Quantitative and Qualitative Monetary Easing (QQE) framework by accelerating purchases of JGBs (and extending their maturity) and

[1] For a further discussion of policies see "Global Prospects and Policy Challenges", G20 Surveillance Note prepared for the September 20–21 Ministerial Meeting, in Cairns, Australia.

tripling the purchases of private assets, which should support domestic demand. For these measures to succeed, they need to be supported by growth and fiscal reforms.

6. **Macro-prudential tools should be the first line of defense against financial stability risks**. Excessive risk-taking may have built in some sectors—credit booms in a number of smaller advanced economies and the underpricing of risks in certain segments of U.S. financial markets—after more than five years of exceptionally low rates. Deploying macro-prudential tools—which in some cases may require changes to regulatory and legal structures—is essential to limit financial risks and reduce the risk of monetary policy tightening not warranted by the cyclical position. It will also make systemic institutions more resilient, help contain pro-cyclical asset price and credit dynamics, and cushion the consequences of liquidity squeezes if volatility spikes.

7. **Fiscal policy should be growth friendly, with the pace and composition of fiscal adjustment—where needed—attuned to supporting the recovery**. Fiscal consolidation should proceed gradually, anchored in credible medium-term plans, which are lacking in some countries (notably Japan and the United States). At the same time, the design of fiscal policy should support growth, including by enhancing infrastructure investment (see Annex) where needs have been identified, there is slack in the economy, and investment processes are relatively efficient (e.g., Germany and the United States). When there is economic slack and monetary accommodation, short-run demand effects are stronger, and the boost in output can lead to a decline in the public-debt-to-GDP ratio. Provided that there is space, a supportive fiscal stance can help offset short-term adverse effects of structural reforms on aggregate demand, bringing forward the growth benefits. In response to negative growth surprises in the *euro area* flexibility within the fiscal governance framework could and should be used where possible to avoid triggering additional consolidation efforts. Finally, the pace of fiscal withdrawal in 2014–15 is broadly appropriate in *Japan*, but a post-2015 consolidation plan remains needed.

EMERGING ECONOMIES HAVE TO ADAPT TO A CHANGING ENVIRONMENT

8. **Macroeconomic policies should aim at addressing vulnerabilities, considering the potential impact on activity**. A protracted deceleration in activity during the last years has increased vulnerabilities and reduced policy space in some economies with inflation above target and weaker fiscal positions. The prospects for financial tightening may bring about changes in risk sentiment such that investors are less forgiving and macroeconomic weakness is more costly. In this context, addressing vulnerabilities—which has been instrumental before the global crisis—will be critical going forward:

- In some economies (Brazil, India, Turkey), maintaining the course of fiscal consolidation is critical, given large fiscal deficits and high inflation in some cases, and high external borrowing that has increased exposure to external funding risks in others. Monetary policy tightening may also be necessary should inflation expectations worsen.
- Rapid credit expansion has become a potential source of vulnerabilities in some economies, calling for greater attention to monitoring the financial sector and exposures of non-financial firms, and to enforcing prudential regulation and supervision, as well as macro-prudential measures. This is critical in *China*, where rebalancing towards domestic demand has

proceeded through booming investment and credit, with intermediation taking place not only through banks, but also the shadow banking sector and local government lending.

- As in advanced economies, and with the same caveats, infrastructure investment is needed to ease supply bottlenecks (e.g., Brazil, India, South Africa) and support economic development.
- Exchange rate flexibility, alongside credible macroeconomic policies and frameworks and FX intervention to manage volatility, has also proven essential in coping with volatile capital flows. Some economies (e.g., South Africa, Turkey) rely heavily on private external financing and should proactively further adjust policies.

ACTION BY ALL MEMBERS FOR STRONGER AND MORE BALANCED GROWTH SHOULD BE A PRIORITY

9. **To strengthen growth potential, structural reforms should become a higher priority**. The G20 has set the objective of raising collective output by at least 2 percent above the October 2013 WEO baseline over the coming five years. In addition, growth–enhancing structural reform is particularly relevant in emerging economies that have experienced a gradual, protracted and broad based slowdown over the past several years. On top of infrastructure investment, actions are needed in other areas:

- Structural reforms to improve the functioning *of product markets*—Japan, some European countries severely affected by the crisis and emerging economies. To enhance productivity, removing infrastructure bottlenecks in the energy sector (India, South Africa), reforms to education, labor and product markets (Brazil, China, India, South Africa), and easing limits on trade and investment and improving business conditions (Brazil, Indonesia, Russia) would be instrumental.
- *Labor market reforms* are needed in several countries. Reforms to raise labor force participation, including of women and/or older workers, are critical in advanced economies undergoing population aging (Japan, Korea, and the United States). Actions to increase labor demand and remove impediments to employment, including reducing duality in labor markets where relevant, are key where an important fraction of the population remains unemployed (stressed euro area economies, South *Africa).*

10. **While global current account imbalances have narrowed in 2013, they are still larger than desirable and further reduction is essential for more balanced growth**. Policy actions required to further narrow excessive imbalances vary but include medium-term fiscal consolidation, limiting financial excesses, and structural reforms to facilitate adjustment in deficit economies and countries with high net external liabilities. Trade integration should be an essential component in the global policy agenda as well, to ensure that the trading system remains open and foster a new momentum in global growth. In economies with protracted current account surpluses, policies that support stronger domestic demand would help, including boosting domestic demand, moving toward more market-based exchange rates, avoiding sustained, one-sided foreign exchange market policies, and reducing capital account restrictions. Taken as a whole, policy actions are needed on both sides of excess imbalances, and policy adjustments by all would be mutually supporting, with benefits in terms of growth and reduction of financial risks.

Table 1. Real GDP Growth

(Percent change)

	Year over Year					
			Projections (from Oct. 2014)		Deviations (from Jul. 2014)	
	2012	2013	2014	2015	2014	2015
World 1/	**3.4**	**3.3**	**3.3**	**3.8**	**-0.1**	**-0.2**
Advanced economies	1.2	1.4	1.8	2.3	0.0	-0.1
Euro area	-0.7	-0.4	0.8	1.3	-0.3	-0.2
Emerging market and developing countries 2/	5.1	4.7	4.4	5.0	-0.1	-0.2
Advanced G-20	1.5	1.6	1.8	2.4	0.1	-0.1
Emerging G-20	5.4	5.3	4.9	5.2	-0.1	-0.1
G-20 3/	3.5	3.5	3.5	3.9	0.0	-0.1
Argentina 4/	0.9	2.9	-1.7	-1.5	-1.2	-1.5
Australia	3.6	2.3	2.8	2.9	0.1	0.1
Brazil	1.0	2.5	0.3	1.4	-1.0	-0.6
Canada	1.7	2.0	2.3	2.4	0.1	0.1
China	7.7	7.7	7.4	7.1	0.0	0.0
France	0.3	0.3	0.4	1.0	-0.4	-0.5
Germany	0.9	0.5	1.4	1.5	-0.5	-0.2
India 5/	4.7	5.0	5.6	6.4	0.2	0.0
Indonesia	6.3	5.8	5.2	5.5	-0.1	-0.2
Italy	-2.4	-1.9	-0.2	0.8	-0.5	-0.3
Japan	1.5	1.5	0.9	0.8	-0.7	-0.2
Korea	2.3	3.0	3.7	4.0	0.1	0.0
Mexico	4.0	1.1	2.4	3.5	0.0	0.1
Russia	3.4	1.3	0.2	0.5	0.0	-0.5
Saudi Arabia	5.8	4.0	4.6	4.5	0.0	0.0
South Africa	2.5	1.9	1.4	2.3	-0.3	-0.4
Turkey	2.1	4.0	3.0	3.0	0.0	0.0
United Kingdom	0.3	1.7	3.2	2.7	0.0	0.0
United States	2.3	2.2	2.2	3.1	0.5	0.0
European Union	-0.3	0.2	1.4	1.8	-0.2	-0.1

Source: IMF, *World Economic Outlook* October 2014.
1/ The quarterly estimates and projections account for 90 percent of the world purchasing-power-parity weights.
2/ The quarterly estimates and projections account for approximately 80 percent of the emerging market and developing countries.
3/ G-20 aggregations exclude European Union.
4/ The data for Argentina are officially reported data as revised in May 2014. On February 1, 2013, the IMF issued a declaration of censure, and in December 2013 called on Argentina to implement specified actions to address the quality of its official GDP data according to a specified timetable. On June 6, 2014, the Executive Board recognized the implementation of the specified actions it had called for by end-March 2014 and the initial steps taken by the Argentine authorities to remedy the inaccurate provision of data. The Executive Board will review this issue again as per the calendar specified in December 2013 and in line with the procedures set forth in the Fund's legal framework.
5/ For India, data and forecasts are presented on a fiscal year basis and output growth is based on GDP at market prices. Corresponding growth rates for GDP at factor cost are 4.5, 4.7, 5.4, and 6.4 percent for 2012/13, 2013/14, 2014/15, and 2015/16, respectively.

ANNEX. THE MACROECONOMIC EFFECTS OF PUBLIC INVESTMENT

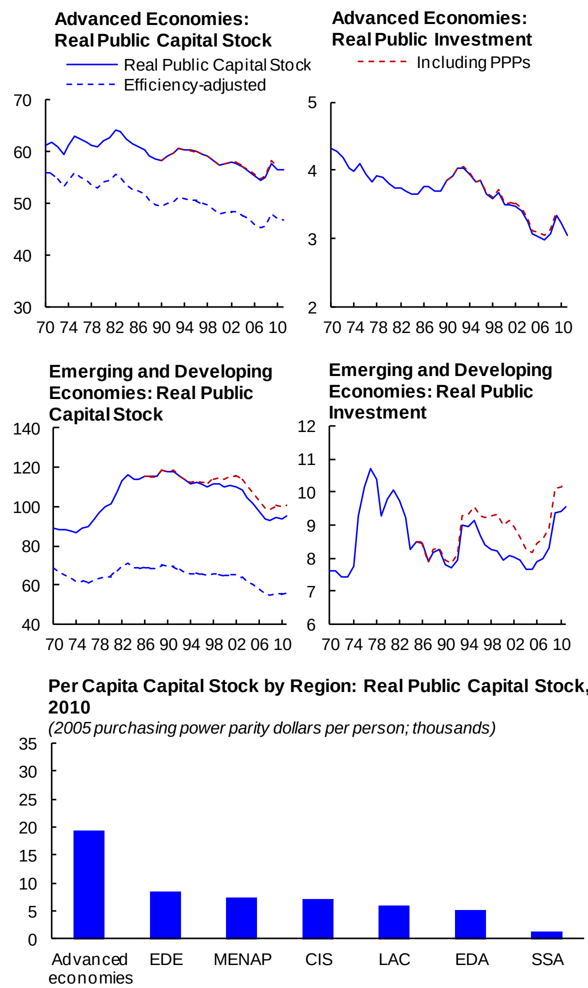
Infrastructure investment has been a signature issue under the Australian G20 Presidency, with the objective of establishing a multi-year Global Infrastructure Initiative as a part of the Brisbane Action Plan. Accordingly, this annex provides supporting material for that objective by elaborating on the macroeconomic rationale for pursuing this policy goal as well as expanding the discussion of efficiency of public investment management, including by previewing additional work on the subject.

Macroeconomic Rationale for Public Investment

Figure 1. Evolution of Public Capital Stock and Public Investment

(percent of GDP; unless noted otherwise)

The stock of public capital has declined substantially as a share of output over the past three decades across advanced, emerging market, and developing economies. In per capita terms, non–advanced economies still have only a fraction of the public capital available in advanced economies.



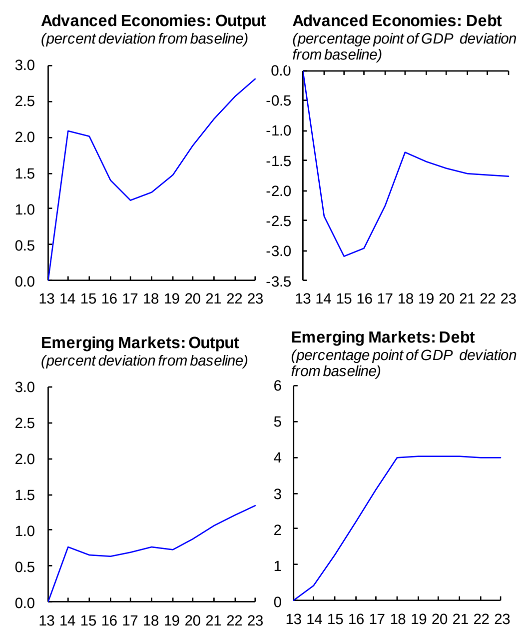
Sources: IMF staff calculations.
Note: CIS = Commonwealth of Independent States; EDA = Emerging and Developing Asia; EDE = Emerging and Developing Europe; LAC = Latin America and the Caribbean; MENAP = Middle East; North Africa, Afghanistan, and Pakistan; SSA = Sub-Saharan Africa. Aggragates are weighted by GDP at purchasing power parity for panels 1 through 4. PPP=public private partnerships.

The stock of public capital—the most widely available proxy for infrastructure provision—has declined significantly as a share of output over the past three decades in both advanced and developing countries. In advanced economies, this reflects primarily a trend decline in public investment from about 4 percent of GDP in the 1980s to 3 percent of GDP at present. In developing countries, sharply higher public investment in the late 1970s and early 1980s significantly raised public capital stocks, but public capital relative to GDP has declined since then (Figure 1). Moreover, adjusting for the efficiency of public investment—project selection and execution can be sub-optimal, and only a fraction of the amount invested gets converted into productive public capital stock—the estimated stock of public capital is even lower. In per capita terms, developing economies still have only a fraction of the public capital in advanced economies (Figure 1, panel 5). The large cross-country variation in public capital stocks per person is mirrored by the availability of physical infrastructure. Power generation capacity per person in emerging market economies is one-fifth the level in advanced economies, and in low-income countries it is only one-tenth the level in emerging markets. The discrepancy in road kilometers per person is similarly large.

The analysis of the benefits and costs of additional infrastructure investment requires a clear picture of its macroeconomic effects. Chapter 3 of the October 2014 WEO finds that increased public infrastructure investment raises output, in the short term through demand effects and the crowding in of private investment, and in the long term by raising productive capacity. In advanced economies, a 1 percentage point of GDP increase in investment spending increases the level of output by about 0.4 percent in the same year and by 1.5 percent four years after the increase. These effects vary with a number of mediating factors, including (1) the degree of economic slack and monetary accommodation, (2) the efficiency of public investment, and (3) how public investment is financed. When there is economic slack and monetary accommodation, short-run demand effects are stronger, and the boost in output can actually lead to a decline in the public-debt-to-GDP ratio. If the efficiency of the public investment process is relatively low, higher investment leads to more limited long-term output gains. Finally, an increase in public investment that is financed by issuing debt has larger output effects than a "budget-neutral" increase that is financed by raising taxes or cutting other spending, although both options deliver similar declines in the debt-to-GDP ratio under some conditions. For economies with clearly identified infrastructure needs and efficient public investment processes, and where there is economic slack and monetary accommodation, now is an opportune time for increasing public infrastructure investment.

Figure 2. Model Simulations: Effect of Public Investment in Advanced Economies and Emerging Markets

The response of output to public investment shocks is smaller in emerging market economies, because the lack of stack implies an immediate monetary policy response, and because public investment efficiency is relatively lower.



Source: IMF staff estimates.
Note: Shock represents an exogenous 1 percentage point of GDP increase in public investment spending.

Many countries have a pressing need for additional infrastructure to support economic development. Increasing public investment will boost output, but long-run gains depend on investment efficiency. In developing economies, the experience with public investment has varied widely, and the empirical estimates of the macroeconomic effects are much less precise. Model-based simulations suggest that public investment does raise output in both the short and long term, but at the cost of raising the public-debt-to-GDP ratio, given absence of economic slack and inefficiencies in public investment (Figure 2). Thus, negative fiscal consequences should be carefully weighed against the broader social gains from increased public investment. For those emerging market and developing economies where infrastructure bottlenecks are currently constraining growth, the gains from alleviating these bottlenecks are likely to be large.

Making the Most of Public Investment

Increasing investment efficiency is critical to mitigating the possible trade-off between higher output and higher public debt. Thus, a key priority in many economies, particularly in those with relatively low efficiency of public investment, should be to raise the quality of infrastructure investment by improving the public investment process. Improvement could involve, among other reforms, better project appraisal and selection that identifies and targets infrastructure bottlenecks, including through centralized independent reviews, rigorous cost-benefit analysis, and zero-based budgeting principles.

Given the large expected infrastructure investment needs in many economies over the coming years, facilitating increased private financing and provision of infrastructure will be very important. Financing and provision of infrastructure can help ease fiscal constraints, generate efficiency gains, and increase investment returns. The macroeconomic effects of private infrastructure investment are likely to be similar to those of public infrastructure investment; to the extent that the private sector is more efficient in reducing waste and only investing in projects with sufficiently high return, then the long-term effects could be higher.

Private participation in infrastructure via public-private partnerships (PPPs) has been on the rise over the past two decades (Figure 1, dashed red lines), but it is still low. It represents less than 10 percent of public investment in emerging markets and advanced economies, and less than a quarter in low-income countries. There is strong potential for boosting private participation substantially as long-term investors such as pension funds, insurance companies, and sovereign wealth funds want to provide the necessary financing.

Well-structured and well-implemented PPPs offer the prospect of efficiency gains. They can lower government's costs and raise returns. However, PPPs can also be used to bypass spending controls, and move public investment off-budget and debt off the government balance sheet. Governments can end up bearing most of the risk and facing large fiscal costs over the medium-to-long term. It is therefore essential that countries maintain maximum standards of fiscal transparency when using PPPs.

Going forward, there is a need to evaluate the efficiency of public investment for a range of advanced, emerging, and developing countries, including the G20, and the strength of public investment management procedures, by analyzing: (i) the recent trends in public and private investment in economic and social infrastructure; (ii) factors that help to explain the variation in efficiency of that investment in improving economic and social outcomes; (iii) the role of public investment management institutions; and (iv) the priorities for strengthening public investment management practices across different groups of countries.