

NEPAL DEVELOPMENT UPDATE

September 2016

Powering Recovery



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This Update was produced by the World Bank Macroeconomics and Fiscal Management team for Nepal consisting of Damir Cosic, Roshan Bajracharya, Sudyumna Dahal and Saurav Rana under the guidance of Shubham Chaudhuri and Takuya Kamata. Rabin Shrestha and Barsha Pandey contributed to the Special Focus.

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Executive Summary



During 2016, global economic prospects have weakened and developing economies are facing stronger headwinds, yet economic activity in South Asia has been resilient. Robust domestic demand, the key driver of growth, held up through the first half of 2016.

Nepal, however, experienced its slowest growth in 14 years during FY2016. Real GDP growth, which had already fallen to 2.7 percent in FY2015 after the April 2015 earthquake and its frequent and powerful aftershocks, was dragged down further to 0.6 percent in FY2016 as a result of the sluggish post-earthquake reconstruction activities and disruption in cross-border trade with India.

Nevertheless, economic activity in Nepal is recovering. Following two years of sub-par rainfall, the current monsoon is progressing well with precipitation averaging 102 percent of the long-term average. Expected rice production is forecasted to be 4.8 million tons, up from 4.2 million tons a year ago, giving a much-needed income boost to the 60 percent of the population that works in agriculture.

Post-earthquake reconstruction activities are picking up speed after a slow start. By September 15, 2016, over half a million households had been de-

termined to be eligible for the rural household reconstruction grant; of this group, 447,000 households had signed the grant agreement and 376,000 of those households had received the first of the three tranches.

Imports have rebounded fast following the end of trade disruptions and have recovered to the same level as last year. Exports, however, are yet to recover to their pre-disruption level. Consequently, the trade deficit for FY2016 has increased to around 30 percent of GDP. While the growth rate of remittances has slowed to the lowest in 5 years, they are still high at 29.6 percent of GDP, helping to offset the trade deficit.

Despite normalization in supplies and a favorable external environment (i.e. low food and oil prices and moderating inflation in India), inflation in Nepal continues to be elevated. A sharp uptick in housing rental prices following the earthquake is the largest contributor to headline inflation.

In contrast with other economic activities, government revenues performed well. Driven by surging imports in the last six months of the fiscal year, as well as one-off improvement in collection of outstanding taxes, revenues increased from the year ago. Expenditure, driven in part by higher spending

on reconstruction activities increased but not as much resulting in a surplus.

Outlook

Growth in FY2017 is expected to recover to five percent after two years of sub-par growth and remain in line with potential thereafter. The rebound in growth comes on the back of a normal monsoon that will boost agricultural output and is supported by increased investment (both public and private) as the political process stabilizes and earthquake recovery gathers speed.

The fiscal deficit is expected to widen during the forecast period, but to remain within manageable limits. The government's recurrent expenditure is expected to grow substantially in the forecast period owing to an increase in earthquake-related cash assistance as well as measures introduced to increase social protection, pensions, and civil servants' compensation, while growth in revenues is expected to moderate.

Risks and Challenges

Domestic risks predominate and are on the downside. The political environment remains fluid as coalition governments have changed once a year on average since 2007. The latest government was sworn in during July, for a term announced to last only nine months, as part of the power-sharing agreement among the coalition partners. The new constitution adopted last year stipulates a series of elections by the beginning of 2018, which will further add to policy uncertainty.

The external environment is likely to be less favorable as well. With remittances comprising nearly 30 percent of GDP, the Nepalese economy is extremely dependent on these flows. Oil-exporting Gulf Co-operation Countries and Malaysia, are a key destination for Nepalese migrants. As oil prices in particular, and commodity prices in general, are likely to remain at present levels during the forecast period, the possibility of a slowdown in remittances has increased.

Special Focus: Powering Recovery

Over the past decade, power outages have increased substantially. Availability of reliable and affordable electricity has become a major constraint for Nepal's development as it hampers the ability to improve living standards, raise agricultural productivity and income, and help youth transition from farming to non-farm employment through creation of new industries at home.

Given Nepal's natural endowments, it is not difficult to envision an electricity sector that can support green growth, poverty reduction, and shared prosperity. Such an electricity sector would not only meet domestic demand reliably, affordably, and cleanly, but would earn revenue from export of surplus hydropower through enhanced regional electricity markets to neighboring countries by integrating the wider South Asia power market.

Wholesale structural reforms of the electricity sector are needed to achieve this. In the Special Focus of this *Update*, we take a closer look at what it would take for the electricity sector to power Nepal's recovery.

A. Recent Economic Developments



1. Global economic outlook has weakened, but activity in South Asia remains resilient

Growth prospects have weakened throughout the world economy. Emerging market and developing economies are facing stronger headwinds, including weaker growth among advanced economies, persistently low commodity prices, and lackluster global trade and capital flows. In addition, for oil importers, the sizeable positive terms of trade shock represented by falling prices has not translated into the large boost to growth initially expected, as other challenges and uncertainties have held back activities. As a result, global growth for 2016 is projected at 2.4 percent, unchanged from the disappointing pace in 2015. In low income countries (LICs), lower commodity prices as well as persistent security and political challenges are expected to create headwinds for growth. However, while the difficult external environment confronting LICs will likely continue, the projected growth of 5.3 percent in 2016 is supported by the resilience of domestic investment and the expected implementation of reforms (*Global Economic Prospects*, World Bank, June 2016).

Economic activity in South Asia has remained strong despite headwinds from the global economy. GDP growth reached seven percent in

2015, making it the fastest-growing developing region. Robust domestic demand momentum, the main growth driver, continued through the first half of 2016. India is the region's largest and fastest-growing economy, but Pakistan, Bangladesh, and Bhutan also show strengthening activity. Most South Asian economies have benefitted from the decline in oil prices and the resulting benign inflationary environment as well as steady remittance flows. Monetary policies have been accommodative. Some economies have benefitted from a pick-up in the pace of reform or from improvements in the security situation. Nonetheless, to varying degrees, weak external demand, a challenging business environment (e.g. energy and infrastructure constraints), and fiscal pressures have encumbered activity in some of the region's economies (*Global Economic Prospects*, World Bank, June 2016).

2. Recovery is underway after a challenging year in Nepal

Following the earthquakes and trade disruptions, economic activity is recovering in Nepal. Real GDP growth, which had already fallen to 2.7 percent in FY2015 after the devastating earthquakes and its frequent and powerful aftershocks, was dragged down further to 0.6 percent (market prices) in FY2016 as a result of the slug-

gish post-earthquake reconstruction activities and disruption in cross-border trade with India. Following two years of sub-par rainfall, the current monsoon is progressing well with precipitation averaging 102 percent of the long-term average (Figure 1). Expected rice production is forecasted to be 4.8 million tons, up from 4.2 million tons a year ago, giving a much-needed income boost to the 60 percent of the population that works in agriculture.

Housing reconstruction, despite a slow start in FY2016, is also picking up. The delay in the establishment of the National Reconstruction Authority and the appointment of its CEO, followed by trade disruptions, were the major factors contributing to the slow start of the post-earthquake reconstruction. Of the severely affected 11 districts where the housing survey has been completed, over half a million households have been determined to be eligible for the rural household reconstruction grant. By September 15, 2016, 447,000 of the households determined to be eligible had signed the grant agreements and 376,000 of these households had received the first of three tranches (Figure 2). The damages survey in the three districts of Kathmandu Valley is still ongoing, while the survey is yet to begin in 17 districts that were moderately affected.

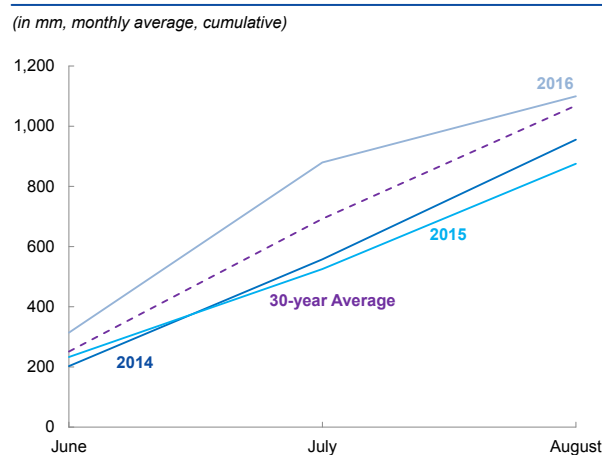
Imports managed to rebound quickly after the trade disruptions, but the growth rate in FY2016 contracted for the first time in dec-

ades. Trade disruptions lasted almost five months, from mid-September 2015 until end-January 2016. At the peak of the disruption in mid-November, imports were reduced by two thirds compared to the pre-disruption level. The trade disruptions ended in January 2016, and by mid-February, imports had recovered and reached the pre-disruption level and continued to grow strongly in the remaining five months of the fiscal year (Figure 3). By April, imports of fuel—the hardest hit commodity—had also fully recovered (Figure 4). Despite the quick recovery, the total imports, measured in NPR, contracted by 0.7 percent in FY2016, compared to the year before, a first in decades. Contraction of imports was primarily driven by oil imports, which contracted by 42 percent for the year as a whole, driven both by trade disruptions and lower oil prices.

Exports of goods, however, are yet to recover to their pre-disruption levels. Exports were reduced by half during the peak of the trade disruption and were not as quick to recover following its end. What is more worrisome is that the exports are still far below average six months after the end of the disruptions (Figure 5). As a result, exports of goods, measured in NPR, contracted by 24 percent in FY2016, compared to the previous year, making this one of the highest contractions recorded in decades.

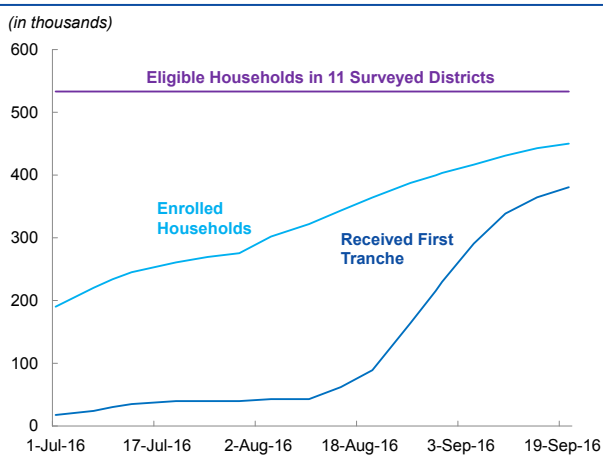
The slow recovery of exports is primarily on account of the sluggish growth of exports to

Figure 1: Monsoon during 2016 has improved compared to previous years



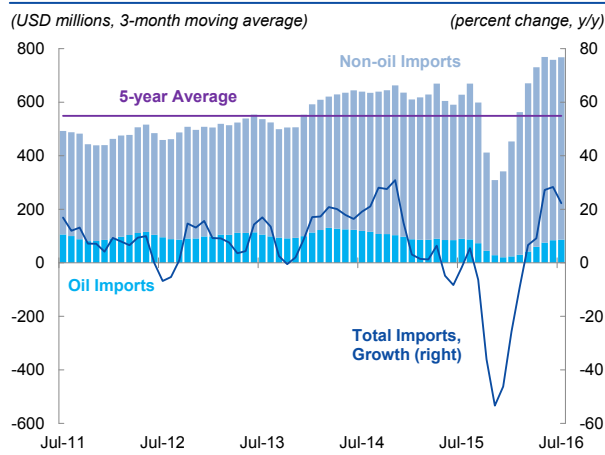
Source: Department of Hydrology and Meteorology

Figure 2: Housing reconstruction grants are finally picking up



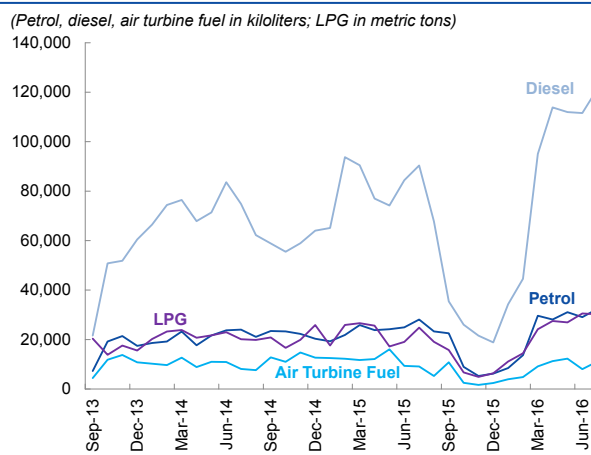
Source: National Reconstruction Authority

Figure 3: Imports have recovered quickly following the end of trade disruptions



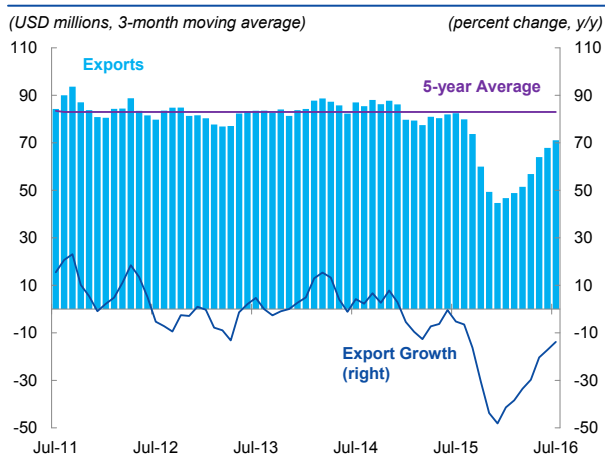
Source: Nepal Rastra Bank (NRB) and WB Staff Calculations

Figure 4: Fuel imports have also normalized



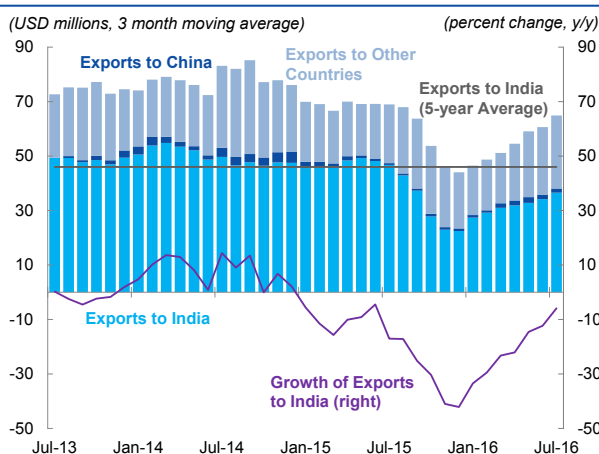
Source: Department of Customs

Figure 5: However, exports of goods have not ...



Source: NRB

Figure 6: Primarily due to sluggish recovery of exports to India ...



Source: NRB

India. India is Nepal’s largest export partner, accounting for 70 percent of total exports. Neither of the two major export categories—food/animals and manufactured goods—has recovered to pre-crisis level (Figure 6). Reportedly, the introduction of non-tariff barriers has been one reason why exports to India have been slow to recover.

Exports of services were also hard hit. After a robust growth averaging 25 percent per year be-

tween FY2011-2015, service exports suffered by contracting 7.2 percent during FY2016 (y/y, NPR terms). This is a result of poor tourist arrivals following the earthquake (Figure 7). Following a sharp contraction after the April 2015 earthquake, tourist arrivals were expected to pick up in the fall of 2015; however, trade disruptions hampered the rebound. Trade disruptions made travel to and from Nepal more difficult, given the acute shortage of fuel supplies, contributing to contraction of tourist arrivals by 15 percent in FY2016.

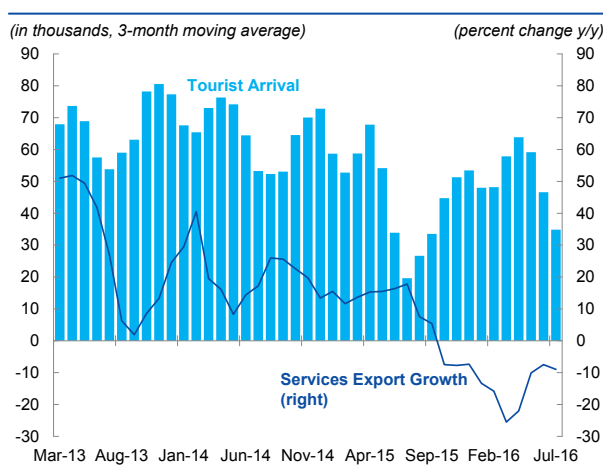
3. External sector is resilient thanks to high level of remittances, but risks remain

As the trade deficit increased, a rise in remittances helped reduce the current account deficit. The trade deficit, which had narrowed sharply during the disruption in FY2016, boomed quickly to above pre-crisis levels and has stabilized at this higher level in the last few months. This is not only because imports rebounded much faster than exports, but also because imports are seven times larger than exports. The trade deficit, which was down by 26 percent in January 2016 compared to

the same period of FY2015, surged by 28 percent (y/y) in July 2016 (Figure 8). At the same time, remittances also picked up in the last three months of the fiscal year, resulting in a cumulative surplus of USD 1.3 billion for the whole of FY2016 or 4.1 percent of GDP. This directly contributed to an increase in foreign reserves, with USD 9.7 billion being accumulated by the end of FY2016, up from USD 8.1 billion at the end of FY2015, and covering 14 months of merchandise and service imports (Figure 9).

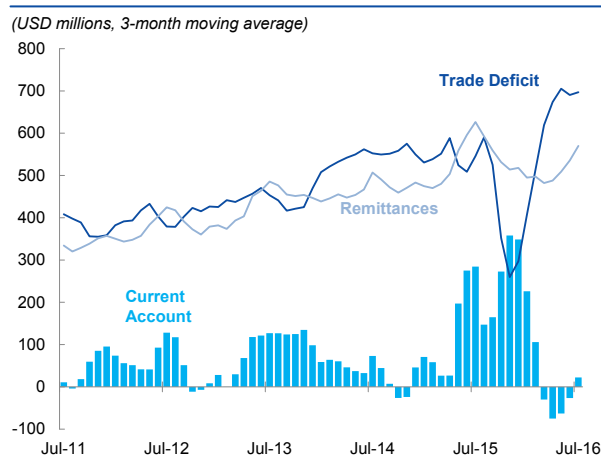
Remittances picked up in the three months to July, but the effect is largely seasonal. Remittances surged following the April 2015 earthquake, but since then their growth has slowed. By October 2015, they were recording negative growth rates (3m/3m). However, a clear seasonal effect is evident, as each October records the lowest receipts of remittances in the year while each July records the highest. This effect was even more pronounced in FY2016, with remittances contracting 15 percent in three months to October 2015 and then swinging to a growth of 17 percent in the three months to July 2016 (Figure 10). Using a common statistical technique, developed by the US Census Bureau, we adjusted the data to remove this seasonal effect. Analyzing seasonally adjusted data, we can observe that a contraction in remittances started in August 2015, and since then the growth rate has remained negative. In the three months ending in July, remittances contracted by 0.7 percent on a seasonally adjusted annualized rate (saar). This means that if the growth

Figure 7: As well as weak service exports



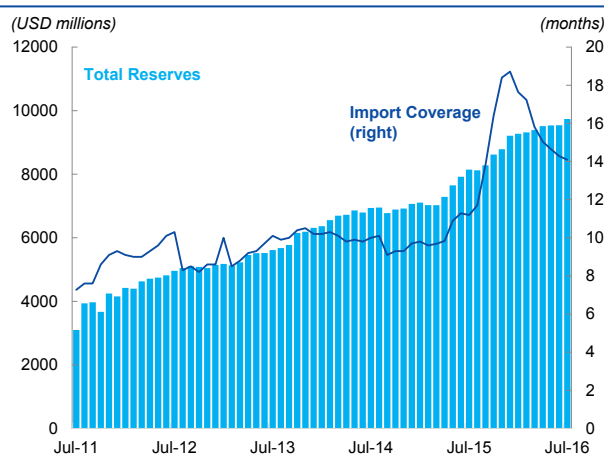
Source: NRB, Ministry of Tourism

Figure 8: The trade deficit normalized, but remittances grew at a faster rate in the last quarter



Source: NRB

Figure 9: Resulting in historic high foreign reserves



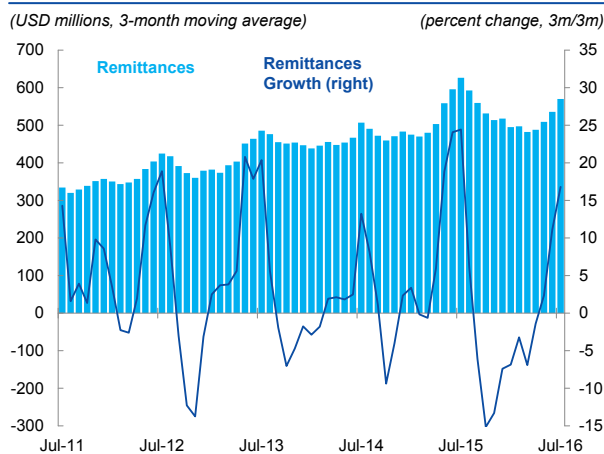
Source: NRB

rate in remittances observed in the last quarter of FY2016 is maintained for the entire following year, we would see a contraction in remittances for the year as a whole. (Figure 11).

Migrant workers' departures settled at a new lower level after the earthquakes. From an average departure of 45,000 per month prior to April 2015, migrant worker departures have slowed and are now averaging 33,000 per month (Figure 12). However, this slowdown in departures of migrant workers predates the earthquake and has only accelerated since then (Figure 13). Both push and

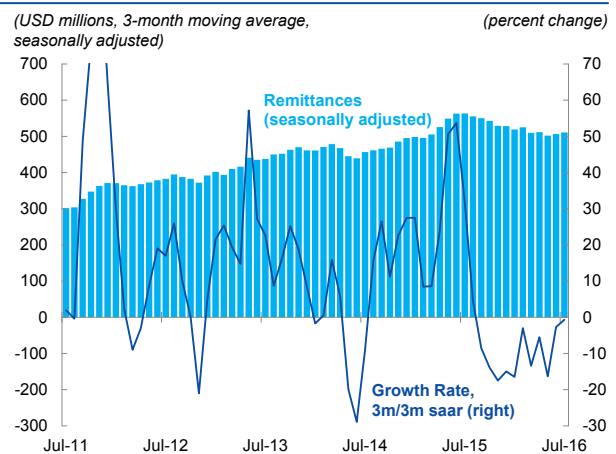
pull factors have contributed to this slowdown: (i) in the aftermath of the earthquake, potential migrants are increasingly choosing to stay at home to support their families with rebuilding homes and livelihoods; and (ii) there has been a weaker demand for workers from oil producing host countries (e.g. GCC countries) where decline in international oil prices have dented incomes and weighed on fiscal balances. In FY2016, the departure of migrant workers remained stagnant, and despite some pickup at the end of the fiscal year, the growth rate remains negative when controlling for seasonal effects (Figure 12, Figure 13).

Figure 10: Remittances picked up in the three months ending in July



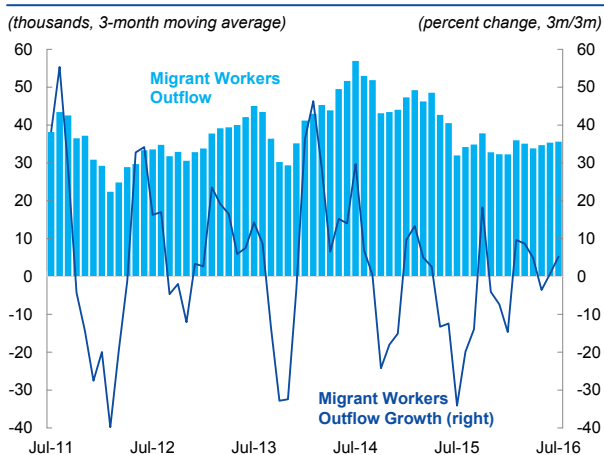
Source: NRB and WB Staff Calculations

Figure 11: But when controlling for seasonality, growth in remittances has been negative



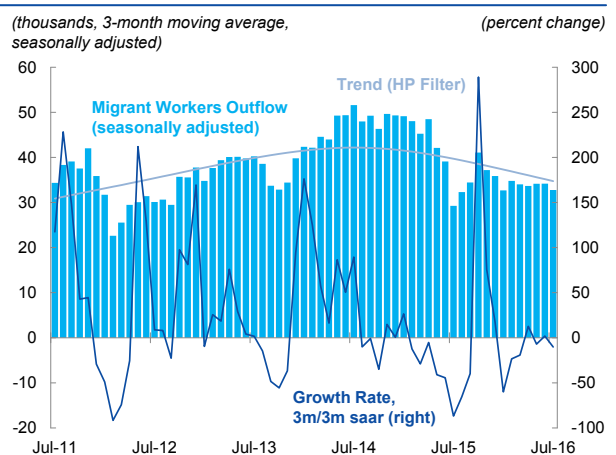
Source: NRB and WB Staff Calculations

Figure 12: Migrant worker departures have remained stagnant



Source: Department of Foreign Employment (DoFE) and WB Staff Calc.

Figure 13: Similarly, when controlling for seasonality, growth rate has been negative



Source: DoFE and WB Staff Calculations

4. Monetary policy stance remains accommodative

Monetary policy operations have increased, but interest rates have remained very low. In FY2016, Nepal Rastra Bank (NRB) conducted open market operations (outright sale auctions, reverse repos, and deposit auctions) to soak up liquidity totaling NPR 542.6 billion, which was 13.8 percent more than the previous fiscal year. However, interest rates for these operations remained extremely low for much of the fiscal year. In July 2016, the weighted average interest rate for NPR 25 billion reverse repo was 0.0001 percent (Figure 14). Persistently low interest rates, despite increasing efforts by the NRB, signal that excess liquidity has not been contained.

From FY2017, the central bank has introduced changes in the way monetary policy will be conducted. Starting in FY2017, monetary policy will be conducted through the introduction of an interest rate corridor. The corridor is comprised of three interest rates: ceiling rate, policy rate, and floor rate. This represents a shift to interest rate-based targeting in monetary operations from the targeting of the quantity of the money supply utilized previously. At present, the ceiling rate is set at the Standing Liquidity Rate (SLR), which is seven percent currently. SLR is the rate at which NRB lends to banks in case of a liquidity shortage. The floor rate is set at 10 basis points (one basis point is 100th of a percentage point) lower than the current interbank rate. As interbank was at 0.4 per-

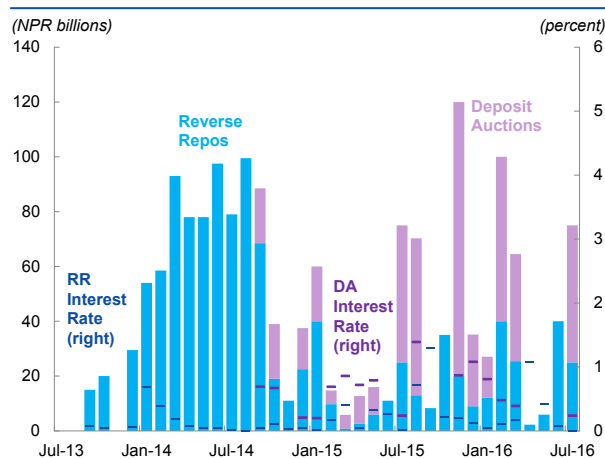
cent, the floor rate (called Term Deposit Rate) is set at 0.3 percent. This is the rate at which commercial banks can deposit money with the central bank. Consequently, the difference between the ceiling and the floor of the interest rate corridor is 6.7 percent, with the goal to gradually narrow the difference to 4.2 percent.

5. Credit growth has recovered while deposit growth has moderated

Credit by the banks has recovered strongly after the earthquake and the trade disruptions. Credit growth had slowed sharply after the earthquake and general uncertainty caused by the trade disruptions further depressed new loan issuance (Figure 15). Following the end of trade disruptions, credit growth picked up strongly, growing by 22.6 percent for the entire FY2016, compared to 19.4 percent in FY2015. This growth was particularly driven by service and industry sectors. Credit growth was led by credit in categories including alcohol and food production; equipment and machineries (such as electrical and communication equipment and construction machinery); vehicles; automotive parts; and wholesale and retail businesses.

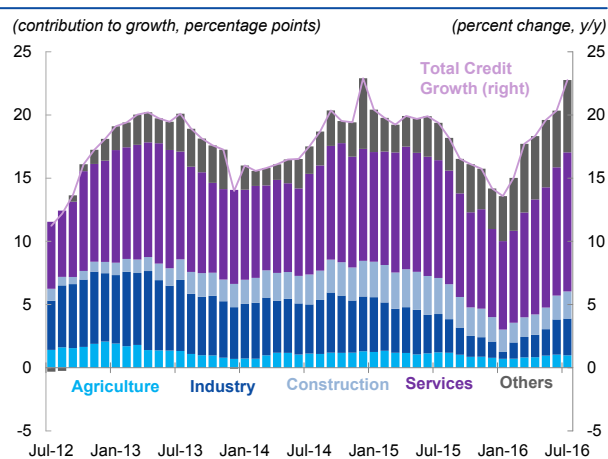
Deposit growth has moderated since the end of the trade disruptions. Between March and July 2016, the growth of deposits declined from 23.4 percent (y/y) to 19.1 percent (y/y) (Figure 16). Individuals and businesses may have curtailed consumption

Figure 14: High liquidity in the system has kept interest rates low



Source: NRB

Figure 15: Following the earthquake and trade disruptions, bank lending has picked up



Source: NRB and WB Staff Calculations

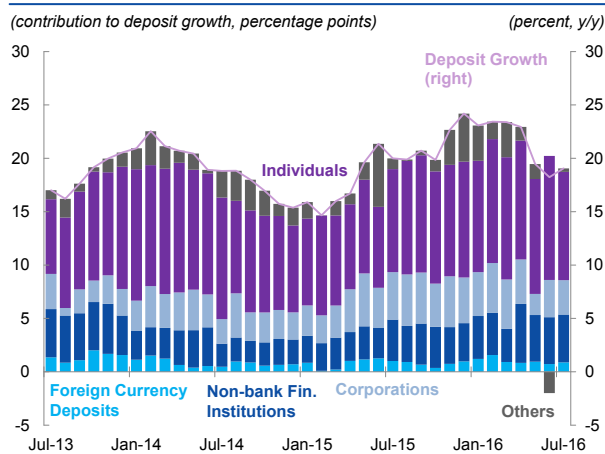
during the trade disruptions due to unavailability of goods and services, but once normal economic activities resumed, they may have increased consumption, thus depleting the stock of deposits in the banks. Taken together, the moderation in deposits and the pick-up in credit have steadily pushed the credit-deposit ratio to a level similar to the level before the twin shocks (Figure 17).

6. Inflation is on the rise, eroding competitiveness, albeit temporarily

After moderating following the end of the trade disruptions, inflation increased again

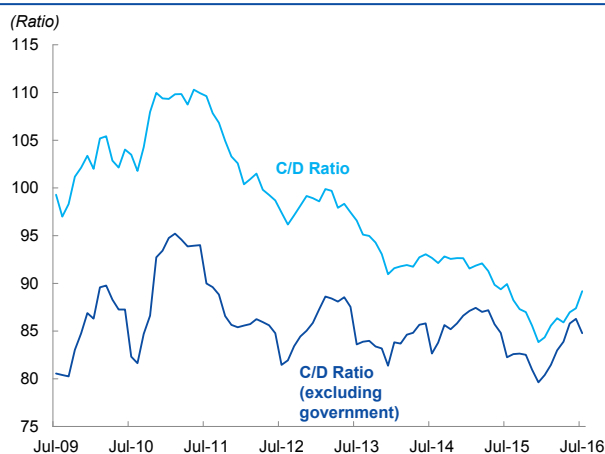
to double digits. Inflation, which had been moderating through FY2015, ended up reaching its highest level since FY2009, climbing to 12 percent (y/y) in January of FY2016 as a result of the trade disruptions. After the end of the trade disruptions, inflation moderated for three months before increasing again to double digits by the end of the fiscal year (Figure 18). Despite normalization in imports and a favorable external environment—low food and oil prices and moderating inflation in India—elevated inflation, which was at 10.5 percent (y/y) in July, continues to be a source of concern.

Figure 16: While the deposit growth has moderated



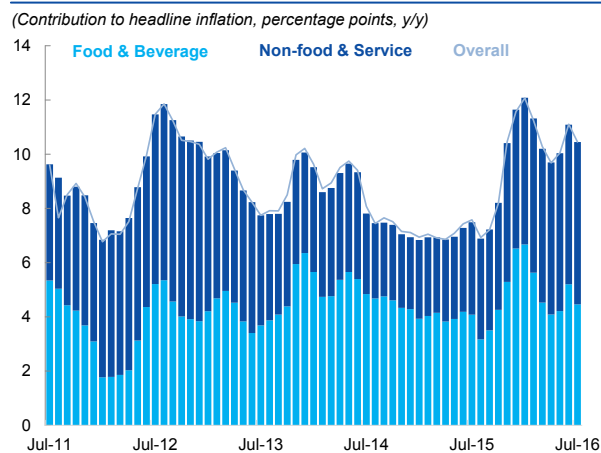
Source: NRB and WB Staff Calculations

Figure 17: Resulting in an increase in the credit-deposit ratio



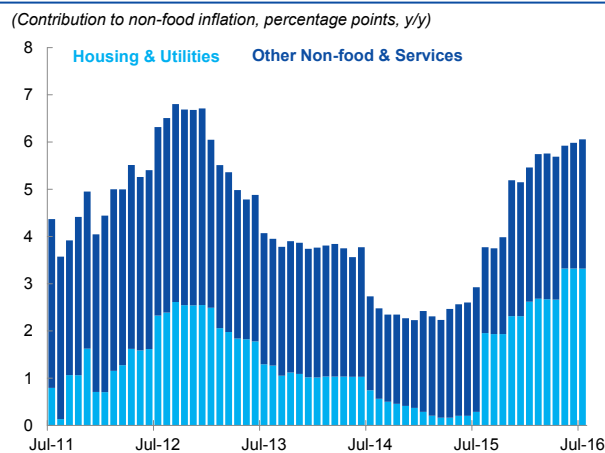
Source: NRB and WB Staff Calculations

Figure 18: After moderating, inflation climbs back to double digits ...



Source: NRB and WB Staff Calculations

Figure 19: Primarily driven by housing and utilities inflation within non-food prices



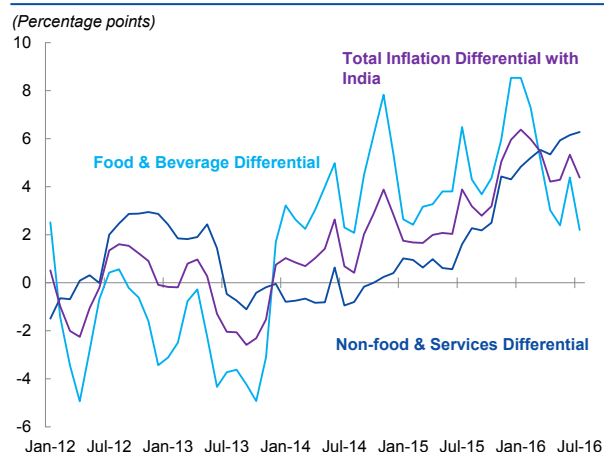
Source: NRB and WB Staff Calculations

The record high uptick in rental prices of housing and utilities following the April and May earthquakes is the largest contributor to headline inflation. While food inflation has somewhat moderated, non-food inflation is driving overall inflation. The contribution of food inflation, though elevated, has remained at four to five percentage points in FY2016. However, the contribution of non-food inflation to headline inflation has doubled from three percentage points to six percentage points. This is primarily driven by the cost of housing rent and utilities, which have increased

by more than 10 times in FY2016. It is possible that slow recovery and reconstruction of the houses destroyed by the 2015 earthquakes (more than half a million houses) could be fueling housing and utilities inflation (Figure 19).

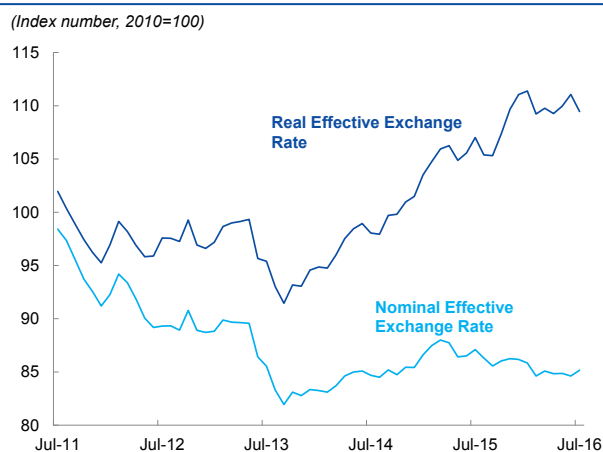
While Nepal's food-inflation divergence with India is narrowing, the non-food inflation wedge has increased sharply. Inflation in Nepal has diverged significantly from India's inflation since mid-2014, driven primarily by food prices in Nepal. By February 2016, the gap in headline inflation had reached a record high

Figure 20: Non-food price differential has been driving Nepal's recent inflation gap with India



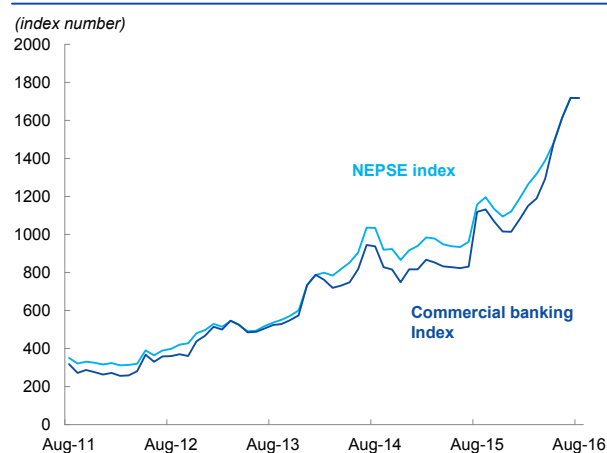
Source: NRB, Central Statistical Office India

Figure 21: Rising inflation is causing appreciation of the real exchange rate



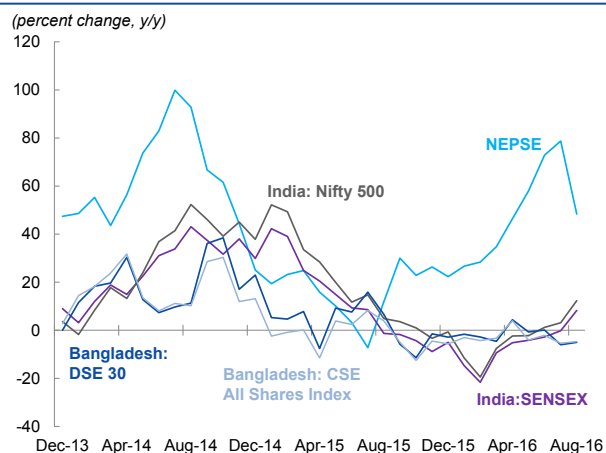
Source: WB Staff Calculations

Figure 22: Surging credit may be fueling a bull market ...



Source: NRB and WB Staff Calculations

Figure 23: While other regional stock markets have remained subdued



Source: Regional Stock Markets and WB Staff calculations

of 6 percentage points. While the food-inflation divergence started to moderate from a peak of 8.5 percentage points in February, non-food prices in Nepal have started to diverge from non-food prices in India. It is up from almost no gap in July 2015 to a gap of 6.3 percentage points in July 2016 (Figure 20). Given stable nominal effective exchange rate and rising inflation, the real effective exchange rate has appreciated by 15 percent from the average level in FY2014 (Figure 21).

7. Stock market remains disconnected from the real economy

The NEPSE index has reached historic highs, in sharp contrast to weak economic performance in Nepal and to other stock exchanges in the region. From July 2015 to September 2016, the NEPSE index nearly doubled, reaching historic highs of over 1,800 points (Figure 22) and growing 78.7 percent in FY2016. This occurred on the back of twin shocks that severely dented economic activities in Nepal. With a rapid rise in credit issuance occurring simultaneously, there is concern that those loans are being directed from their original intent towards the stock market, fueling the stock market bubble. In contrast, other stock exchanges in the region have remained subdued from July 2015, when the rapid rise in Nepal’s equity prices started, until the present (Figure 23). In August 2016, the growth rates of these four major stock exchanges—SENSEX (8.3 percent, y/y) and

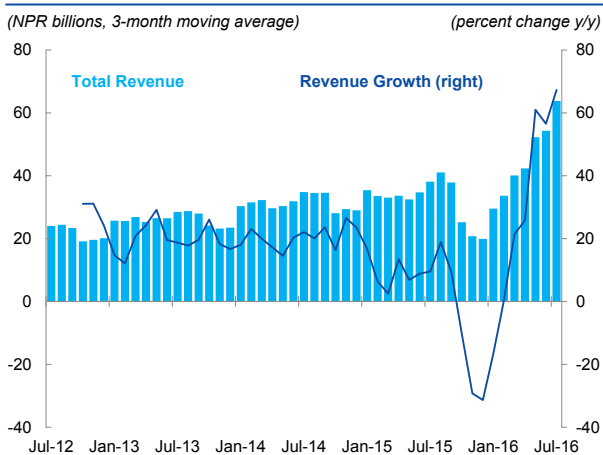
Nifty 500 (12.3 percent, y/y) in India, and DSE 30 (-5.0 percent, y/y) and CSE Index (-4.7 percent, y/y) in Bangladesh—remained well below the ten percent mark while the NEPSE grew by 48 percent.

8. Realism of government budget, particularly of expenditures, has deteriorated

The Government of Nepal exceeded its revenue target despite a difficult year for the economy. Government revenues which fell precipitously during trade disruptions, picked up sharply after April 2016 as imports normalized following the disruptions. As a result, the total domestic revenue collection in FY2016 grew 18.9 percent compared to the previous year (Figure 24) and exceeded the target set by the government. Despite the worst economic performance in more than a decade, domestic revenue performed extremely well and reached 21.5 percent of GDP in FY2016.

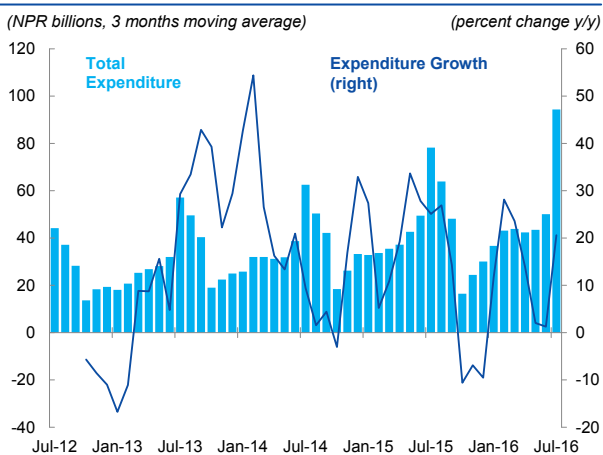
Growth of domestic revenue was driven by income and excise taxes as well as non-tax revenue. Growth in revenue was driven by income tax (56.5 percent, y/y), excise (29.7 percent, y/y) and non-tax revenue (22.9 percent y/y). One-off payments—capital gains tax payment by Ncell Private Limited and a transfer from Nepal Telecom—drove the income tax and non-tax revenue growth respectively. All these revenue sources collected a large share of their total collections

Figure 24: Revenue targets were exceeded on account of large one-off collections



Source: NRB and WB Staff Calculations

Figure 25: But expenditures did not materialize as planned



Source: NRB and WB Staff Calculations

Table 1: Selected Fiscal Indicators
(annual percent change unless noted otherwise)

	FY2013	FY2014	FY2015	FY2016 b	FY2016 e	FY2017 b	FY2017 f
Total Revenue and Grants	19.5	20.6	20.9	26.1	23.2	24.7	23.1
Total Domestic Revenue	17.5	18.5	19.1	21.1	21.5	20.8	20.8
Tax Revenue	15.3	15.9	16.8	19.0	18.7	18.7	18.7
Non-Tax Revenue	2.2	2.6	2.4	2.1	2.7	2.0	2.0
Grants	2.1	2.1	1.8	4.9	1.8	3.9	2.4
Total Expenditure	19.0	20.0	21.9	33.5	23.0	36.5	24.3
Recurrent	14.6	15.5	16.0	21.5	16.3	22.6	17.1
Capital	3.2	3.4	4.2	9.3	5.2	11.4	6.0
Net Lending	1.2	1.1	1.7	2.7	1.5	2.4	1.2
Fiscal Balance	0.5	0.6	-1.0	-7.5	0.3	-11.8	-1.1

Sources: MoF, NRB for History and WB Staff for Estimates and Forecasts
Notes: b=budget, e=estimate, f=forecast

during the last month of the fiscal year: 21 percent, 19 percent, and 35 percent for income tax, excise and non-tax revenue respectively.

On the other hand, the ambitious target for post-earthquake government expenditure did not materialize. The government managed to increase total spending by 1.3 percent of GDP compared to FY2015 spending. Initially, the government planned to increase spending by 11 percent of GDP, largely on account of larger spending on earthquake recovery efforts. However, total spending remained depressed for much of FY2016 due to the impact of the trade disruptions, and there was no robust recovery similar to the pick-up in revenue collection except for a considerable hike of spending in the last month of the fiscal year (Figure 25).

Bunching of expenditure worsened, especially for capital expenditure. Capital spending registered a robust growth of 30 percent in nominal terms, which can be considered impressive given the political disturbances and trade disruption during the year. However, the quality of spending

is likely to have severely worsened, because 71 percent of the total capital expenditure was spent in the last quarter and a massive 50 percent just in the last month of the fiscal year. This is a significant deterioration compared to the last four years.

The realism of the budget has worsened in the past two years. During the past two fiscal years, the adopted budgets have called for a substantial increase in expenditures, driven to a large extent by increased needs in post-earthquake reconstruction. The planned outlay for the FY2016 budget was 33.5 percent of GDP while the actual expenditure remained at 23 percent of GDP, i.e. the deviation was more than 11 percent of GDP. The FY2017 budget has been even more ambitious, with a target of 36.5 percent of GDP—i.e. an increase of 14 percent of GDP compared to FY2016 actual spending—which is also unlikely to materialize. Just increasing planned spending, without measures to improve the public investment management process in particular, will not lead to an improvement in the quantity nor, more importantly, the quality of spending on infrastructure, which is critically needed (Table 1).

B. Outlook, Risks and Challenges



After disappointing growth for two years in a row, economic activity is expected to rebound. The rebound in growth comes on the back of a normal monsoon that will boost agricultural output and is supported by increased investment (both public and private) as earthquake recovery gathers speed. GDP growth in FY2017 is forecasted to accelerate to five percent and is expected to moderate in line with the country's potential during FY2018 (Table 2).

While all supply-side components of GDP are expected to improve, a rebound in the service sector is expected to contribute the most to overall growth. Agriculture output is expected to improve significantly as the monsoon in 2016 has been above its long term average. Industry is expected to rebound in FY2017 as the manufacturing, construction and electricity generation sub-sectors recover. Manufacturing in particular is expected to get a modest boost starting from FY2017 as the apparels and garment industry will be receiving duty-free access to the US market. As reconstruction activities are expected to speed up in FY2017, the construction sector is expected to benefit. Hydropower projects, which were delayed by the earthquakes and trade disruptions, are expected to be completed in FY2017, which will add a positive contribution from the electricity genera-

tion sub-sector as well. Services are expected to rebound in FY2017 with the revival of transport and full normalization of wholesale and retail trade sub-sectors. Tourism in particular is expected to give a boost to services in FY2017, as 80 percent of the flights for the fall tourist season have already been booked (Figure 27).

Similarly, demand side components of GDP are expected to rebound. Private consumption is expected to recover in FY2017 in light of full normalization of the supply of goods and services and persistently strong incomes from remittances. Government consumption is expected to grow substantially, owing to increases in civil servants' compensation. Gross fixed capital formation is expected to rebound, too, on the back of improved earthquake recovery efforts. Exports of services are expected to rebound to the pre-crisis level as tourism normalizes. However, exports of goods are expected to grow only modestly in light of below-average recovery of exports after the trade disruptions and increasing non-tariff barriers with the major exporting partner, India (Figure 26).

The fiscal deficit is expected to widen during the forecast period, but to remain within manageable limits. The FY2017 budget calls for an

Table 2: Nepal Macroeconomic Outlook
(annual percent change unless noted otherwise)

	FY2013	FY2014	FY2015	FY2016 e	FY2017 f	FY2018 f
Real GDP Growth, at Constant Market Prices	4.1	6.0	2.7	0.6	5.0	4.8
Private Consumption	2.9	4.1	2.9	-0.6	5.0	4.5
Government Consumption	-6.6	10.1	7.3	-5.4	11.0	11.0
Gross Fixed Capital Investment	16.8	11.4	19.6	-12.2	12.6	6.0
Exports, Goods and Services	10.3	18.4	7.5	-3.2	13.6	8.9
Imports, Goods and Services	14.2	21.0	9.5	3.5	10.1	5.9
Real GDP Growth, at Constant Basic Prices	3.8	5.7	2.4	0.6	5.0	4.8
Agriculture	1.1	4.5	0.8	1.3	3.5	3.0
Industry	2.7	7.1	1.5	-6.3	4.0	4.0
Services	6.2	6.0	3.8	2.3	6.3	6.2
Inflation (Consumer Price Index)	9.9	9.1	7.2	9.9	9.0	8.0
Current Account Balance (% of GDP)	3.1	4.8	3.8	4.1	0.3	-1.6
Fiscal Balance (% of GDP) ^{a/}	0.5	0.6	-1.0	0.3	-1.1	-1.4
Debt (% of GDP)	32.2	28.5	25.6	25.1	25.9	26.3

Sources: CBS, NRB, MoF for History and World Bank Staff for Estimates and Forecasts

Notes: a/ fiscal balance includes net lending, e = estimate, f = forecast

expenditure increase of nearly 14 percent of GDP over the estimated expenditures in FY2016. However, as in previous years, significant underspending of the budget is likely. The government's recurrent expenditure is expected to grow substantially in the forecast period, owing to an increase in earthquake-related cash assistance, the hike in civil servants' salaries, increase in pensions, and other social security expenditures. The slow pickup in capital expenditures, particularly those related to earthquake reconstruction, resulted in a fiscal surplus in FY2016. The healthy growth in revenues is expected to continue, particularly in light of increased imports for reconstruction activity. However, with the pace of expenditures picking up as reconstruction efforts take full shape, the fiscal balance is expected to turn negative in FY2017. Similarly, the current account, which had remained in surplus over the past several years, is expected to narrow and turn into a deficit as imports pick up, driven by reconstruction efforts and slower growth in remittances.

The high inflation induced by the trade disruptions is expected to moderate somewhat in FY2017, but will remain elevated owing to persistent supply-side bottlenecks. Although both global oil prices and prices in India are expected to remain around their present levels, inflation is likely to remain elevated in Nepal. Persistent supply-side bottlenecks as well as the demand pres-

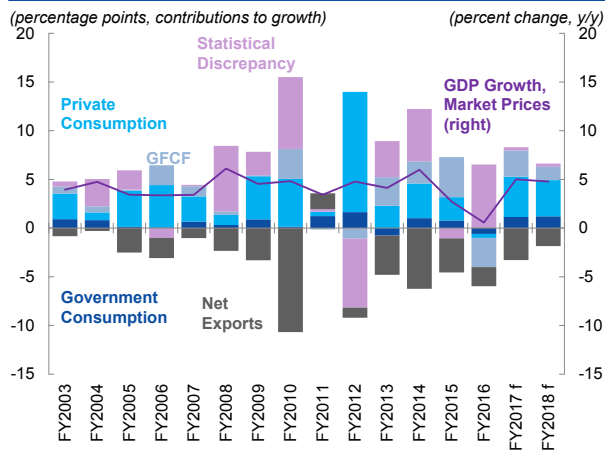
ures that arise from the pickup in reconstruction activities and government spending during the forecast period will continue to contribute to inflation. In particular, the sharp uptick in rental prices of housing and utilities following the earthquake is expected to continue in FY2017 due to slow reconstruction activity in FY2016.

Risks and Challenges

Domestic risks predominate and are on the downside. Despite a pickup in the first tranche of housing reconstruction grants, uncertainties remain in regards to the actual construction of the destroyed houses and the disbursement of the second and third tranches. Furthermore, significant political risks still exist. The boundaries of the provinces that were the subject of protests have not been resolved, while the tussle surrounding the demarcation and restructuring of local-level governmental bodies has become controversial.

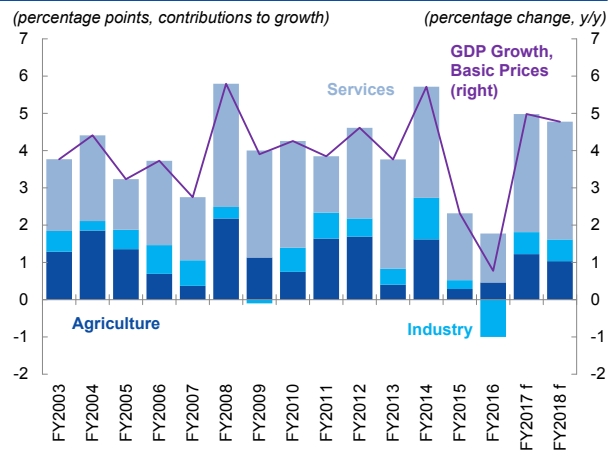
The overall political environment continues to be fluid, with the coalition government having changed yet again in July 2016. On average, the government has changed once a year since 2007. The latest government was sworn in during July for a term announced to last only nine months as part of the power-sharing agreement among the coalition partners. The new constitution adopted

Figure 26: GDP growth is forecasted to accelerate in the forecast period



Source: CBS for History and WB Staff for Calculations and Forecasts

Figure 27: With rebound services contributing the most



Source: CBS for History and WB Staff for Calculations and Forecasts

last year stipulates a series of elections (local, provincial, federal) by the beginning of 2018, which will further add to policy uncertainty.

The external environment is likely to be less favorable as well. The Nepalese economy is extremely dependent on remittances, which comprise around 30 percent of GDP. The oil-exporting Gulf Co-operation Countries and Malaysia are the destinations of almost 97 percent of Nepali migrants (excluding those going to India) and a key source of remittances. As oil prices in particular, and commodity prices in general, are expected to remain at their current levels during the forecast period, the possibility of a slowdown in remittances remains. Given that remittances enable the consumption-centric structure of the Nepalese economy and that the government relies on taxation of imports as a major source of revenue, even a modest contraction in remittances would have an adverse effects on growth and fiscal and external accounts, in addition

to curtailing economic opportunities for Nepalese abroad.

There are several near and medium-term challenges ahead for Nepal. Effective mobilization of post-earthquake reconstruction, full recovery of exports, and the successful holding of various upcoming elections are key near-term challenges. Additionally, the trade disruptions have highlighted the urgent need to diversify the Nepalese economy, particularly in terms of fuel trade and transport options. In the medium term, Nepal faces several simultaneous and daunting challenges. These include the challenges of completing the political transition and setting up a new federal structure while attempting to leverage its endowments (such as hydropower potential and human capital) to achieve faster growth, reduce poverty, and create economic opportunities for its citizens at home.

C. Special Focus: Powering Recovery



1. Current state of Nepal's electricity sector

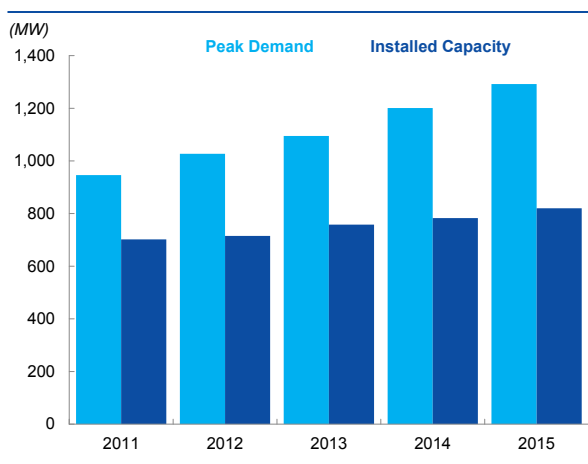
At present, electricity covers only three percent of Nepal's energy consumption, with traditional biomass (i.e. wood) and imported petroleum products covering the rest. Three out of four Nepalese have some access to electricity, with two out of four connected to the grid and one out of four serviced by off-grid solutions. However, access to electricity does not guarantee its availability. Addition of new generation capacity did not keep up with increasing demand, and as a result, Nepalese suffer from serious power outages that, on average, last 50 percent of the time during the year.

These power cuts have plagued the country for the last decade, especially during the winter months when electricity demand is highest and production is lowest. For example, in 2015, the peak demand reached 1,385 MW while the present installed capacity is just 827 MW, all hydropower. To make matters worse, the peak demand occurs during the dry season (between November and March) when glacial water flows decrease sharply, making only about 350-400 MW of capacity actually available. This results in shortfall of about 900 MW during peak demand period, leading to an average daily power cuts of 16 hours. Even during

the monsoon season (from May to September) the installed capacity is not sufficient to meet the demand, resulting in average daily power cuts of about six hours (Figure 28).

To bridge this gap, Nepalese have resorted to diesel generation or rooftop solar photovoltaic solar panels, with businesses and industry relying heavily on diesel generators, which are

Figure 28: Domestic electricity demand and supply



Source: Nepal Electricity Authority (NEA)

some of the most expensive sources of electricity at a cost of \$0.5 to \$1.0 per KWh. This captive-type generation capacity is estimated at around 500 MW. In addition, Nepal imports about 300 MW of electricity from India.

Nepal’s national power utility (Nepal Electricity Authority, NEA) is a government-owned monopoly that is facing various problems. It has high costs of service, as it loses about one quarter of the electricity that it supplies through its transmission and distribution systems. In addition, tariffs charged for the electricity can cover only about 80 percent of the costs. The result is a utility that is financially weak, is unable to generate needed cash flow for investments, and relies on the subsidies from the government’s budget to stay afloat.

In short, electricity in Nepal is unreliable, insufficient, and expensive. As such, it has become a major constraint for Nepal’s development and hampers its ability to improve living standards, raise agriculture productivity and incomes, and help its youth transition from farming to non-farm employment through creation of new industries at home.

2. What could Nepal’s electricity energy sector look like?

It does not have to be this way. Nepal is abundantly endowed with hydropower resources that can both meet the domestic electricity needs and enable it to become an important player in regional power markets. Nepal’s hydropower potential is estimated at 84,000 MW, of which 43,000 MW is deemed economically viable. At present, less than two percent of this potential is being exploited.

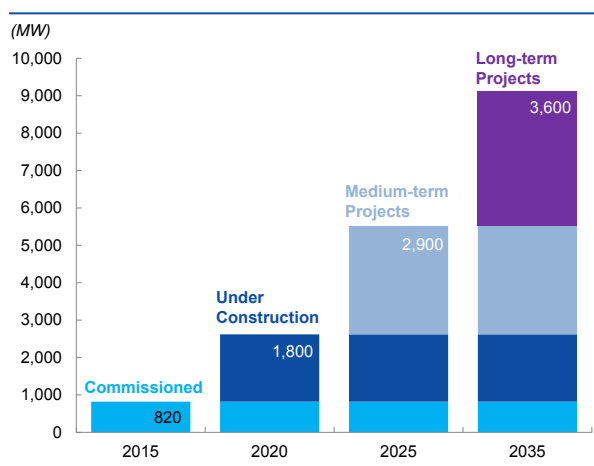
In addition, with an average of 300 days of sunshine per year, the commercial potential of solar power for grid connection is estimated at around 2,100 MW. Nepal also has potential for wind power generation, although exploration of this potential and mapping of sites is in the early stages. There are no fossil fuel resources in the country and it relies fully on imported petroleum products for transportation and other needs. This leaves hydropower as the least-cost option not only for meeting domestic demand, but also to transform Nepal into a significant power source for the South Asia region. In addition

to these natural endowments, there are a significant number of projects that are under various stages of development. Since 1993, when the Government of Nepal opened hydropower generation to the private sector, some 13,000 MW hydropower projects have been licensed to potential developers.

More recently, Project Development Agreements (PDAs) for two large export-oriented hydropower projects were signed in late 2014. PDAs were signed for the Upper Karnali and Arun 3 projects, each with a capacity of 900 MW and an estimated investment cost of around \$2 billion. There are five additional large projects with a capacity of 2,500 MW and investment costs of about \$4 billion that are in the preparation stage by international companies. Furthermore, there are some 2,600 MW (around \$4 billion in investments) of smaller hydro projects which are at different stages of development by private independent power producers (IPPs) in Nepal. Put differently, at present there are about 7,000 MW of projects under development, with investment costs of about \$10 billion or almost 50 percent of GDP. Of this, however, only about 1,800 MW of projects have actually mobilized sufficient financing and are under construction at present (Figure 29).

Historically, the development track record of new generation capacity is dismal. Since 2002, NEA has commissioned only 70 MW of new hydropower capacity, while IPPs have added about

Figure 29: Projected generation capacity addition



Source: NEA and WB Staff Estimates

325 MW. In other words, NEA was able to add only 5 MW of new capacity per year on average, while IPPs added about 25 MW per year for a combined 30 MW per year. Transmission and distribution suffer from similar problems. In this same period, only a few new transmission line projects were completed.

Nepal can and should do much better. Its electricity sector is unreliable, insufficient, and expensive not because of lack of natural endowments or lack of planned projects, but because it is organized and regulated in a way that is not generating sufficient new investments.

3. How to mobilize investments in hydroelectricity

Given its natural endowments, it is not a big stretch to envision an electricity sector in Nepal that can support green growth, poverty reduction, and shared prosperity for the country. Such an electricity sector would not only meet the domestic demand reliably, affordably, and cleanly, but would also earn revenue from export of surplus hydropower through enhanced regional electricity markets to neighboring countries by integrating with the wider South Asia power market.

However, strategic planning for the sector has been erratic. Since 2001, there have been five strategic documents, one every three years on average. In 2001, the Government of Nepal adopted a Water Resource Strategy which was revised in 2005 into a National Water Plan. In 2007, a plan calling for construction of 10,000 MW in 10 years was adopted, which was then altered in 2009 to become a plan for 25,000 MW in 10 years. Finally, in the wake of the trade disruptions that affected the import of petroleum products acutely, the government came out with another revamped plan, this time calling again for 10,000 MW in 10 years.

While these plan focus on the investment goals, they lack measures needed to develop a clear and well-regulated environment. Attracting and retaining investment in the tens of billions of dollars requires mechanisms for sharing risks, the provision of common infrastructure such as transmission corridors and roads, and streamlined procedures within the context of a clear and strong legal and regulatory framework. Put simply, wholesale structural reforms of the electricity sec-

tor are needed. Something radically different needs to be done if the country wants to construct more new capacity in the next 10 years than the 300 MW commissioned in the past 10 years. In the absence of such reforms, the most likely result is a repeat of the past performance.

Issues that need to be resolved can be grouped into four broad categories:

(i) Improvement in Strategic Planning:

Power System Master Planning is needed to guide investments. In all aspects of the electricity sector (i.e. generation, transmission, distribution, and electrification), a set of compatible master plans is needed to determine the least-cost investment plan.

The creation by the government of a master plan for electrification would be critical to enabling effective estimates of future demand for electricity. Once the demand projection is established, a generation master plan can be developed to meet this demand. Generation projects need to be planned on a least-cost basis in the context of river basins. Once the source and end destination of electricity is identified, a master plan for transmission can be developed that connects the two. Planning the generation in terms of river basins enables construction of transmission corridors that minimize the cost of transmission lines. As a result, these master plans would give a reliable indication of investment needs in the generation, transmission, and distribution segments of the electricity sector. These master plans should be done for a 10-20 year planning horizon and updated in a timely manner as required.

(ii) Improvement of the Regulatory Framework:

Traditionally, the electricity market is considered to be a natural monopoly requiring either nationalization or strong regulation. With technological development and innovations in information technology, electricity is no longer a monopoly business. Different market models are in operation in the electricity sector, including wholesale competition, retail competition, and operation of a power pool system. Nonetheless, all these market mechanisms still require proper regulation.

Establishment of an independent sector regulator that will oversee planning so that future demand can be met with an adequate supply at the lowest cost possible and to determine the prices that will generate the appropriate level of investment is, simply, critical. The key role that the new electricity regulator would have is to set tariffs for electricity. Tariffs need to be set at a level that covers reasonable operational costs (i.e. limiting the level of system losses) and also offers a reasonable return on assets. Such tariffs achieve two things. First, they would allow the utility to phase out government subsidies, and second, they would generate cash flows that would enable investments. A crucial complement to such tariffs is a social safety net that protects the poor and their basic needs for electricity services through a targeted subsidy.

(iii) Improvement of Investment Environment:

One of the chronic problems in Nepal in general, and in the power sector in particular, is the inability of the public sector to execute capital projects in a timely manner, which results in incomplete physical assets. Some hydropower projects under implementation by NEA (e.g. Chamelia and Kulekhani 3) are taking more than 10 years. Similarly, many transmission lines could not be completed for more than five years due to the delay in acquiring the land and forest clearance permits, as well as other obstacles.

As indicated above, power system master planning is crucial to the strategic selection of least-cost investment projects. Similarly, a transparent and competitive selection of hydropower developers for identified projects is central to developing projects that will result in electricity produced at the lowest tariff possible. In order to do that, feasibility studies and preferably conceptual design should be completed for each project before it is offered for bidding. Developers should be requested to bid a capacity and energy profile rather than a single value to take into account finance availability and terms for hydropower development. Bids should be evaluated based on the present value of the tariff offered, taking into account the alternative cost of imported power and energy.

Clear guidance and requirements on environmental and social requirements should include a bene-

fit-sharing policy to allow developers to make informed decisions and ensure achievement of the sector vision in a sustainable way. There is a need to enhance the regulations in cumulative impact assessment, environmental flows, and benefit sharing and to provide clear guidelines for developers to follow.

Similarly, adoption of a transmission line right-of-way (RoW) policy is needed to speed up implementation of new transmission lines. This policy would define the appropriate consultation policies that need to take place with affected communities and set up parameters for compensation for land acquisition and livelihood restoration. Once these issues were streamlined through a country-wide policy, they would not need to be negotiated on a project-by-project basis.

(iv) Improvement in organization of the sector:

At present, the Nepal Electricity Authority (NEA) is a vertically-integrated, government-owned monopoly. As it is inefficient (large losses) and unable to deliver sufficient power to consumers (large power cuts), there is a need to restructure the NEA's generation, transmission, and distribution operations into separate businesses. Already competition exists in generation, with NEA and independent power producers developing power plants and foreign companies having signed power purchase agreements to develop new ones as well.

In order to ensure a level playing field among these different producers, the transmission network needs to be separated and independent from any generation company, so that it does not offer preferential treatment to any of them. For example, we would not want one bus company owning the roads and interfering with the work of other transport companies. Consequently, establishing and operationalizing a National Transmission and Grid Company (NTGC) is necessary in order to transfer the transmission assets and corresponding liabilities from the NEA.

Similarly, the remaining distribution assets and liabilities should be transferred to a distribution company that would be supplying the electricity to consumers. At the end of the reform process, NEA would be reorganized into three different companies (generation, transmission, and distribution).

So what could Nepal's power sector look like by 2030 to ensure a reliable, affordable, and sufficient supply of electricity to meet not only the domestic demand but also to export electricity to promote and sustain green growth?

- Nepal's power sector would be transformed into separate commercially sustainable generation, transmission, distribution, and power trading entities, along with strong and independent regulatory agencies with clearly defined roles and responsibilities;
- Sufficient generating capacity would be installed through both public and private investments to meet the domestic demand and export significant hydropower through a number of export-oriented projects;
- An expanded system of transmission lines would be developed to deliver electricity to all major urban and rural areas and link with neighboring countries to enhance the regional energy trade;
- A financially self-sustaining, reliable, and efficient local distribution network would be delivering power to all consumers;
- An independent regulator would be ensuring competition, fairness, and efficiency for expansion and smooth operation of the power sector, including setting wholesale and retail electricity tariffs.

4. Government's policy response

To be fair, the Government of Nepal has thought through many if not most of these issues. A concept paper released in February 2016 (National Energy Crisis Prevention and Electricity Development Decade, 2016) calls for the construction of a 10,000 MW capacity through hydropower, solar, and wind projects over the next 10 years. It urges immediate tariff and institutional reforms and proposes re-visiting the sector policies, passing enabling legislation, and establishing a regulatory framework. This concept paper grew out of two years of work by various government agencies.

In terms of strategic planning, government agencies have initiated preparatory work for the envisaged policy and reform actions, including the

drafting of a whole set of sector policies, namely a National Energy Security Policy (NESP), Integrated Water Resources Management Policy (IWRMP), and National Renewable Energy Policy (NREP).

In terms of strengthening the regulatory environment, an update of the Electricity Act, a new National Energy Regulatory Commission (NERC) Act, and an update of the Water Resource Act are either drafted or are in the final stages of preparation.

In terms of institutional restructuring, the National Transmission and Grid Company (NTGC) has been established and the company registration process completed. A study on power trading has been completed and the establishment of a Power Trading Company (PTC) recommended. A study on the road map for NEA restructuring and on a market structure for roles and functions of these new sector institutions has been initiated.

5. What would a comprehensive reform program look like?

Obviously, not everything could or should be tackled at the same time. A recommended strategy for the Government of Nepal to achieve the above-stated objective could be as follows:

- **Prepare sector restructuring (1-2 years)**
 - i) Complete or initiate (as appropriate) planning exercises in the areas of generation, transmission, distribution and rural electrification;
 - ii) Advance preparation of project documents for medium and large domestic and export-oriented hydropower projects and transmission lines which previous studies have indicated to have high priority;
 - iii) Carry out a tariff study dealing both with the structure and level of tariffs and commence the process of tariff adjustment;
 - iv) Develop a comprehensive time-bound power sector reform plan that is agreed to by all stakeholders to address key sector issues, starting with a workshop involving all stakeholders.
- **Reduce power cuts (1-2 years)**
 - i) Rehabilitate existing generation plants to increase supply;

- ii) Rehabilitate distribution network to reduce system losses;
- iii) Expand critical cross-border transmission lines that can bring additional power and expand the supply.
- **Achieve supply-demand balance (3-5 years)**
 - i) Commission hydropower under construction (about 1,800 MW);
 - ii) Expand imports (300-600 MW);
 - iii) Implement sector policy and reform actions in accordance with the agreed-upon plan.
- **Generate surplus electricity for export supply (10-20 years)**

- i) Meet domestic demand reliably and affordably;
- ii) Generate electricity exports by transforming Nepal from an 800 MW country to a 10,000 MW country with full integration into South Asia's regional power system.

Nepal does not have to do this alone. Development partners have welcomed the recent concept paper and the Action Plan on National Energy Crisis Prevention and Electricity Development Decade prepared by the government. Development partners have offered support to key activities under this plan and can help the Government of Nepal to formulate a vision, strategy, and achievable plan to transform the power sector.



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