AMRO Annual Consultation Report

Myanmar - 2017

The ASEAN+3 Macroeconomic Research Office (AMRO)

April 2017

<div style="border:1px solid">

Acknowledgements

1. This Annual Consultation Report on Myanmar has been prepared in accordance with the functions of AMRO to monitor, assess and report to its member macroeconomic status and financial soundness and to identify the relevant risks and vulnerabilities, and assist them in the timely formulation of policy recommendation to mitigate such risks (Article 3(a) and (b) of AMRO Agreement).

2. This Report is drafted on the basis of the Annual Consultation Visit of AMRO to Myanmar from 16 to 20 January 2017 (Article 5 (b) of AMRO Agreement). The AMRO Mission team was headed by Dr Chaipat Poonpatpibul, AMRO Group Head and Lead Economist. Members include Paolo Hernando, Senior Economist; Dr Xianguo Huang, Economist; Dr Huot Pum, Economist; Enrico Tanuwidjaja, Specialist; Xinke Tang, Researcher and Mr Kazuo Kobayashi, Technical Assistance Specialist. AMRO Director Dr Junhong Chang and Chief Economist Dr Hoe Ee Khor also participated in key policy meetings with the authorities. This AMRO Annual Consultation Report on Myanmar for 2017 was approved by Dr Hoe Ee Khor, AMRO Chief Economist.

3. The analysis in this Report is based on information available up to 31 March 2017.

4. By making any designation of or reference to a particular territory or geographical area, or by using the term "member" or "country" in this Report, AMRO does not intend to make any judgements as to the legal or other status of any territory or area.

5. No part of this material may be disclosed unless so approved under the AMRO Agreement.

6. On behalf of AMRO, the Mission team wishes to thank the Myanmar authorities for their comments on this Report, as well as their excellent meeting arrangements and hospitality during our visit.

</div>

Table of Contents

<div align="center">**Executive Summary**</div>

The March 2016 report noted the slowdown in growth and rise in inflation due to the massive floods in July-August 2015. A policy mix of tight monetary and fiscal policy was deemed necessary to contain rising inflationary and fiscal pressures, while the exchange rate needed to move more flexibly to absorb external shocks. Since March 2016, the expected recovery in economic growth after the severe flood did not materialize, as Myanmar was hit by another flood. Inflation has come down since August 2016, but risks to inflation remain significant. As anticipated, fiscal and current account positions deteriorated significantly in FY2015/16[1] as a result of declining gas prices. Given these challenges, maintaining tight monetary policy and consolidating the fiscal position continue to be warranted. The phasing out of direct deficit financing by the central bank will strengthen monetary discipline and ease pressure on the external accounts. With credit growth expanding rapidly in recent years, authorities need to be watchful of the potential effects in terms of growing bad debt and weak bank balance sheets. Amid elevated external uncertainty, maintaining exchange rate flexibility and building up of international reserves to serve as a buffer against external shocks are recommended.

Recent Developments and Outlook

After a slowdown in FY 2016/17 due to floods, growth will likely improve in FY 2017/18. Myanmar's economic growth in FY2016/17 (ending 31 March) is expected to moderate to 6.0 percent from the previous year's rate of 7.3 percent due to slowing agriculture and construction, and low gas prices which have dragged down investments in the oil and gas sector. Growth is expected to strengthen in FY2017/18 to around 7.0 percent, led by manufacturing and a recovery in agriculture. An improvement in medium-term growth could come largely from increased investments with the implementation of the new Investment Law; and the development of Special Economic Zones.

Inflation has declined due to base effects and monetary policy tightening. It is expected to be around 6.8 percent in FY2016/17, down from 10.0 percent a year ago, due to the diminished impact of the 2015 floods and tighter monetary policy. Authorities' efforts to enhance the monetary policy framework have increased the central bank's ability to manage inflation. Inflation is expected to decline and stabilize at around 6.2 percent in FY2017/18 in line with falling food prices due to base effects and tighter monetary policy.

The current account deficit remains high, driven by a widening trade deficit, while FDI inflows have moderated. Expectations of a modest recovery in exports and high import growth in FY2016/17 are responsible for the projected widening of the current account deficit to 7.9 percent of GDP from 5.4 percent in FY2015/16. Meanwhile, FDI is expected to moderate in FY2016/17 as some investors put new projects on hold pending firmer policy pronouncements. The current account deficit is expected to narrow to 7.2 percent of GDP in FY2017/18 as Myanmar reaps the benefits of a more diversified export base and rising tourism receipts.

Risks and Vulnerabilities

The outlook for the fiscal sector remains challenging as falling revenues require tighter expenditure management. After rising sharply to 4.5 percent of GDP in FY2015/16 due to falling revenues and rising expenditure, the fiscal deficit for FY2016/17 is expected to increase further to 4.8 percent of GDP. The ongoing enhancements in revenue administration are

---

[1] The fiscal year in Myanmar is from April to March.

commendable. The authorities have also spent prudently while maintaining the required level of social spending. However, lower revenues, mainly from the resource sector, could lead to higher deficits.

External stability risks remain significant as the current account deficit continues to widen. The current account deficit could rise more significantly should imports rebound much more strongly than exports. The external position will further deteriorate if FDI does not pick up in FY2017/18. Meanwhile, central bank foreign reserves are projected to remain below the conventional threshold of three-month import cover.

Continued high credit growth poses risks to the financial sector. Domestic credit has stabilized, but remains high at 30.0 percent. NPLs have been increasing, reaching 3.7 percent as of end-September 2016 from 1.7 percent as of end-June 2015. The number of banks has increased substantially with the establishment of new private banks and the entry of foreign banks. Risks arising from a rapidly growing financial sector could lead to increasing vulnerabilities in banks' balance sheets. In particular, loan portfolios of state-owned banks may have weakened, due to low capacity and continued dependence on government funding to fulfill its development mandates.

Policy Discussion and Recommendations

Enhancing tax revenue and public expenditure efficiency are needed to secure a stable fiscal position. Enhancing tax collection, broadening the tax base and reducing tax exemptions are necessary to compensate for the fall in natural resource revenue. Given limited fiscal space, making public expenditure management more efficient and focusing on priority areas such as health and education remains crucial. Infrastructure also needs to be adequately financed to support medium-term growth. The commitment to the plan to cap central bank financing of the deficit at progressively lower levels until a full phase-out is encouraged.

A further build-up of international reserves is recommended to provide a greater cushion against external shocks, particularly given the vulnerability of the country to natural disasters. Diversifying exports, boosting tourism, improving the business environment and facilitating inward remittances from workers overseas will help increase FX receipts. Obtaining more concessional finance for development and consolidating the foreign reserves in the Central Bank of Myanmar (CBM) by transfering the foreign assets at the state banks to CBM are likewise important for strengthening the external position. It is also essential to ensure that the gap between the formal and informal exchange rates does not widen significantly should exchange rate pressures heighten ahead.

Continued vigilance to identify and address financial stability risks are needed amidst the rapidly expanding financial sector. With credit growth expanding rapidly in recent years, authorities need to be watchful of the potential effects in terms of growing bad debt and weak bank balance sheets. Amid a changing financial landscape and rapid credit growth, prioritization of regulations based on the New Financial Institution Law is important, starting with the enhancement of bank capital. Increasing the manpower of the supervisory team and enhancing supervision capacity are particularly essential.

A. Recent Developments and Outlook

A.1 Real Sector

1. Myanmar's GDP growth for FY2016/17 is expected to moderate further due to effects of floods, a construction freeze in Yangon, and lower FDI inflows. Myanmar's economy is estimated to slow to 6.0 percent per annum in FY2016/17 from 7.3 percent in FY2015/16 (see Text Chart below, left panel). After being hit by massive floods from Cyclone Komen in July 2015, the agriculture sector was hit again by floods in 2016 and a slump in agricultural exports to China.[2] A temporary freeze on construction projects in Yangon to ensure that ongoing and new projects follow regulatory requirements also dragged down growth.[3] Private investments have fallen, as investors may have delayed new projects pending the formulation of economic policies by the new government. FDI is projected to grow at a slower rate of 3.0 percent this year after recording double-digit growth in past years.[4] In particular, persistently low commodity prices have discouraged investments in the oil and gas sector. A bright spot is garments and other enterprises in the light and medium manufacturing industries,[5] which are expected to drive the recovery of exports following a contraction in the previous year. Due to a pick-up in manufacturing, Myanmar's Purchasing Managers' Index (PMI) started to show expanding activity in January to March 2017 after a period of contraction in the second half of 2016 (see Text Chart below, right panel).

Real GDP Growth
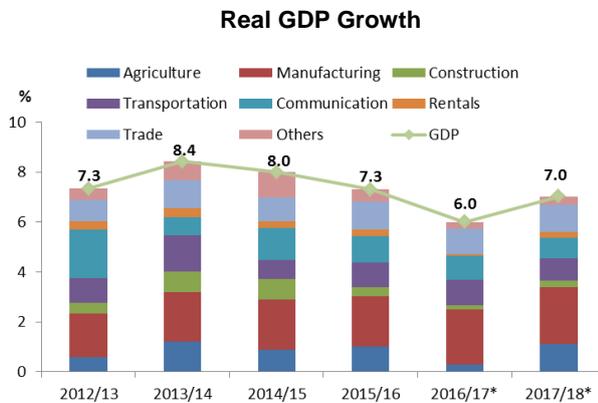
Note: Latest actual data is for FY2015/16
* AMRO estimates
Source: Planning Department, AMRO staff calculations

Purchasing Managers' Index

Note: Performance is assessed based on results relative to a threshold of 50, wherein values above 50 indicate expanding activity compared to the previous month, and vice-versa.
Source: IHS Markit and Nikkei

2. The economy is expected to recover in FY2017/18 as growth drivers remain strong. GDP is forecast to grow at around 7.0 percent in FY2017/18, led by manufacturing and agriculture, while FDI and aid inflows are also expected to increase. Manufacturing prospects have been boosted by

---

[2] In 2016, China cracked down on what it regards as illegal imports of rice and other crops from Myanmar, driving down prices in Myanmar.
[3] The share of the construction sector in Myanmar is 5.3 percent of GDP, with Yangon expected to take the bulk of construction activities since the boom in the sector from FY2013/14. Multiplier effects of the construction sector are also expected to be large.
[4] The interruption of investment approvals by the Myanmar Investment Commission (MIC) due to the dissolution of board members may have played a role in the slowdown in FDI inflows. No new investment commitments in the oil and gas sector have also been made amid low commodity prices.
[5] This include automotive parts, electrical products, food, household goods, footwear, gloves, construction materials, etc.

production from Special Economic Zones (SEZs), particularly Thilawa SEZ. Meanwhile, barring any natural disaster, agriculture is expected to recover and grow at its historical average rate. However, extensive efforts are needed to raise productivity in agriculture to enable it to compete, open new export markets, and reduce its dependence on informal border trade, especially in rice. In the construction and property sectors, new opportunities are seen in public works, retail spaces, apartments and affordable housing, while the outlook for office and high-end residential properties remains subdued as a result of increasing supply. Downside risks to the growth outlook mainly stem from weaker-than-expected FDI inflows, slowing public capital spending, and limited investment in the oil and gas sector.

A.2 External Sector

3. The current account deficit spiked in FY2015/16 owing to the widening trade deficit. The current account deficit increased significantly in FY2015/16 to 5.4 percent of GDP from 2.6 percent previously due to falling gas prices, which dragged down exports while import growth remained relatively stable.[6] Meanwhile, proceeds from FDI and official development assistance (ODA) were lower than expected, resulting in a negative balance of payments (BOP) position equivalent to 0.7 percent of GDP for FY2015/16 (see Table 1).

4. The current account deficit is expected to deteriorate in FY2016/17 and remains high in the next period, but increasing ODA and FDIs are projected to lead to an improvement in the BOP position by the end of FY2017/18. We expect the current account deficit to widen to 7.9 percent of GDP in FY2016/17, from 5.4 percent in the previous year. A modest recovery in exports, coupled with a strong rebound in imports in FY2016/17, underlie the projected widening of the trade deficit in FY2016/17. Import growth is expected to be strong, particularly in the second half of FY2016/17 as public infrastructure projects gather pace. The diversification of exports into garments and other sectors has driven the recovery in exports so far;[7] however, agriculture and gas exports are expected to remain weak throughout FY2016/17. For FY2017/18, low productivity, coupled with adverse weather conditions, will constrain an improvement in agriculture. Meanwhile, rising commodity prices bode well for oil and gas exports in FY2017/18, which together with strong performance of garments and other manufactured products, will support export growth of 15.2 percent. The improved export performance is expected to contribute to a lower current account deficit of 7.2 percent of GDP in FY2017/18 which is still higher than the average deficit of 2.7 percent of GDP in the past. Meanwhile rising ODA and a recovery in FDI are expected to contribute to a larger balance of payment surplus

---

[6] CBM data show that the trade deficit increased to US$4.0 billion in FY2015/16 from a deficit of US$ 1.85 billion in FY2014/15. Meanwhile, CSO data show that the trade deficit increased to US$5.4 billion in FY2015/16 from a deficit of US$ 4.1 billion in FY2014/15. The differences are due to adjustments in CBM data in line with BPM6, specifically, converting imports data from CIF as reported by CSO to FOB, adjusting CSO data for exports of goods procured in ports, re-exports and reclassifying to the services account exports and imports of goods for processing. To improve coverage, CBM supplements CSO data on exports of oil and gas data with information from Myanmar Oil and Gas Enterprise (MOGE).
[7] These include automotive parts, electrical products, food, household goods, footwear, gloves, construction materials, etc.

equivalent to 1.4 percent of GDP by the end of FY2017/18 compared with an estimated 0.4 percent in FY2016/17.

A.3 Monetary, Financial Sector and Exchange Rate

Monetary Sector

5. Inflation has declined due to base effects and monetary policy tightening. Inflation has been on a downward trend since April 2016, reaching 3.0-4.0 percent during September-November 2016, as the impact of the 2015 floods had dissipated and monetary policy had been tightened.[8] Since then, inflation has generally risen, reaching 7.0 percent in March 2017, led by rising food and transport prices, with average inflation in FY2016/17 declining to 6.8 percent, from 10.0 percent in the previous year (See Figure 1).

6. Inflation is expected to stabilize in FY2017/18 but underlying price pressures remain strong. Under the baseline scenario, inflation is expected to decline and stabilize at around 6.2 percent in FY2017/18 due to base effects associated with high food prices in FY2016/17 and tighter monetary policy. Notwithstanding, demand pressures in the economy remain strong on the back of still strong credit growth and some pick-up in oil prices.

7. The CBM continues to implement tighter monetary policy through deposit auctions. The average amount of deposit auctions has increased to 343 billion kyat on a bi-monthly basis in FY2016/17, which is equivalent to 2.0 percent of reserve money. The scaled-up deposit auctions mop up excess liquidity and help to contain credit and inflationary pressures. Regular deposit auctions have been maintained, with the volume adjusted (either upwards or downwards) based on the central bank's forecasts of excess liquidity in the market. The growth of monetary aggregates has generally trended downwards in FY2016/17 (see Text Chart below, left panel). However, broad money has not slowed down as much as reserve money, with the money multiplier increasing to 2.6 in December 2016 from 2.3 in April 2016.

8. Full compliance by all banks to the new cash reserve requirement has been achieved with the implementation of the penalty scheme since October 2016. The central bank's 5.0 percent cash reserve requirement is estimated to siphon off 1,261 billion kyat (7.1 percent of reserve money)

---

[8] A new CPI basket with base year 2012 was launched in August 2016, featuring new weights from the 2012 Household Income and Expenditure Survey (HIES). In the new basket, the weights for food have been reduced, while the weights for transport, communication and clothing increased to reflect emerging consumption patterns. The reduced food weight lowered inflation by around 1.0 percentage point compared to the old CPI basket with base year 2006, for which a parallel series was kept up until August 2016.

from the system up to March 2017. All banks are now in compliance with the new regime to avoid paying penalty.[9]

Growth in Money Aggregates	Growth in Domestic Credit
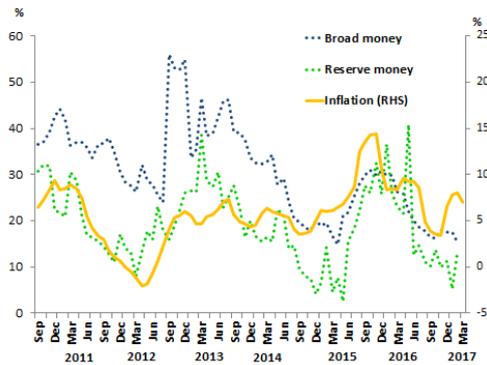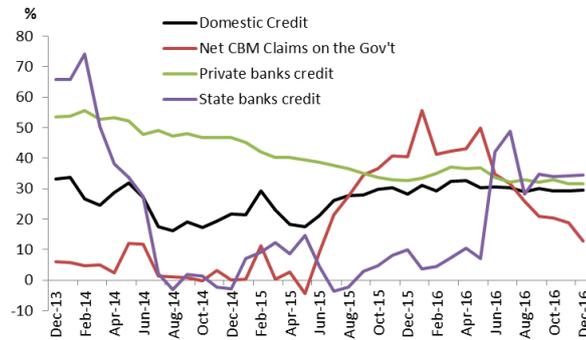
Source: CBM   Source: CBM

Financial Sector

9. Private domestic credit growth has stabilized since July 2015, but still remains high, while direct CBM financing of the deficit has declined in the second half of 2016 after spiking up in 2015. Meanwhile credit by state banks has increased sharply since the middle of 2016. Private domestic credit growth has stabilized at a little above 30.0 percent since July 2015 after reaching highs of over 50.0 percent in the past, as loans by private banks to most sectors slowed down, led by a contraction of loans to the agriculture sector. The driving force behind recent credit growth has been state banks, with loans expanding by 34.6 percent during the second half of 2016, from 9.9 percent in 2015. Rising state bank credit may be attributed to expanding finance to priority areas of government such as agriculture, housing and small business credit. Meanwhile, CBM net claims on the government increased in July 2015, signifying greater dependence on the central bank to finance the budget deficit in FY2015/16 (see Text Chart above, right panel).[10] Monetization of the deficit has declined since May 2016, with the renewed commitment of the authorities to cap central bank financing of the deficit at 40.0 percent of the total, with progressively falling shares thereafter. Despite the downward trend, credit growth, both to the private and public sectors remain high, exerting upward inflationary pressures.

10. Fixed interest rates, as well as strict collateral requirements, continue to constrain credit to agriculture and small enterprises. Banks are still held back by the fixed interest rate environment, preventing them from fully performing their task of intermediating funds across the economy.[11] As collateral is always needed to obtain loans, most of the lending are to large corporations. In particular,

---

[9] The penalty scheme is automatically imposed on a bank once its reserves falls below the regulatory requirement, with the penalty based on a percentage of the difference between actual reserves held by the bank and required regulatory reserves multiplied by the penalty rate, which is twice the prevailing CBM rate.

[10] CBM claims on the government are used as a proxy for CBM monetization of the deficit in the absence of high frequency data from fiscal authorities. In FY2015/16 the CBM financing is estimated to have increased to 60.0 percent of the total financing, up from around 30 percent in FY2014/15.

[11] The CBM policy rate has been fixed at 10.0 percent since January 2012, with all other rates administratively set, with reference to the CBM policy rate. For example, deposit rates are set between 8.0-10.0 percent and lending rates are set at 13.0 percent.

bank loans to low-risk trade finance account for more than a third of private bank lending. Amid the restrictive financial environment, there is a need for more credit in the agriculture sector as well as to micro and small enterprises, as only an estimated 30.0 percent of the population has access to financial services while a smaller percentage (16.0 percent) has bank accounts (see Annex 2 on Microfinance in Myanmar).

11. Full banking licenses have been issued to four additional foreign banks in 2016. In a second wave of bank license issuances for foreign banks, four banks were granted rights to operate in Myanmar. This brings the total number of foreign bank branches in Myanmar to 13.[12] The bulk of foreign bank lending are to companies from their home countries, with most of these loans in USD. Foreign bank lending to local companies is still at a nascent stage. In general foreign banks are unable to lend to local companies as they are prohibited from holding properties as collateral for the loans. Foreign banks are an important source of FX liquidity in the interbank market, but the lack of liquidity and hedging instruments hamper this ability.[13]

Exchange Rate

12. The exchange rate was subject to depreciation pressures towards the latter part of 2016, but has stabilized since then. After large depreciation episodes in 2015, the kyat appreciated against the USD during the first half of 2016 and depreciated in the second half of 2016, mirroring the movement of regional currencies during the same period (see Text Chart below, left panel). In December 2016, the gap between the reference rate set by the CBM and the informal rate widened by around 5.0 percent, due to depreciation pressures from the rising current account deficit and strong USD, coupled with some rigidity in the setting of the reference rate. The gap has since closed, owing to greater flexibility of the reference rate, which allowed for better reflection of demand and supply conditions in the exchange rate market.

Daily Exchange Rate Movements

NEER and REER

---
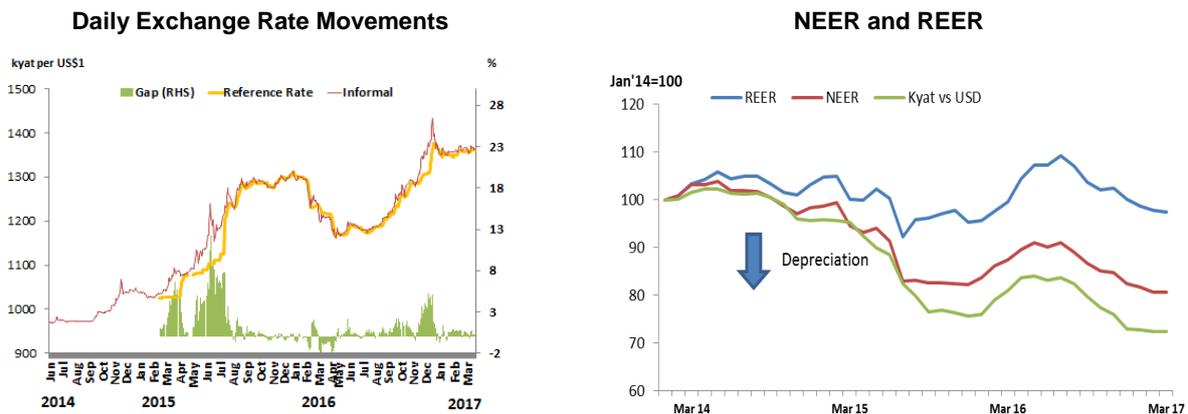
[12] The new foreign banks provided licenses in the 2nd phase in 2016 were Bank for Investment and Development of Vietnam, E. Sun Commercial Bank, State Bank of India and Shinhan Bank. The banks granted licenses in the 1st phase in 2015 were Australia and New Zealand Banking Group Limited (ANZ), Bangkok Bank, Bank of Tokyo-Mitsubishi UFJ (BTMU), Industrial and Commercial Bank of China (ICBC), Malayan Banking Berhad (Maybank), Mizuho Bank, Oversea-Chinese Banking Corporation (OCBC), Sumitomo Mitsui Banking Corporation (SMBC) and United Overseas Bank (UOB).

[13] Currently, foreign banks are only allowed to engage in wholesale banking and not retail banking. All foreign banks are only allowed to come in as branches, and are authorized to take deposits and lend in both foreign currency and Myanmar kyat to foreign companies and domestic private banks. However, foreign banks are not allowed to pay interest on kyat deposits and they are also prohibited to directly lend to domestic companies, unless through domestic private banks.

13. The real effective exchange rate (REER) appreciated in FY2016/17 due to high inflation, while the nominal effective exchange rate (NEER) settled at around the same level as in FY2015/16. The REER had appreciated by an average of 5.8 percent in FY2016/17, as inflation in Myanmar was generally higher than its major trading partners. The NEER averaged at around the same level in FY2016/17 compared to the average of the previous year, marginally appreciating by 0.1 percent, in contrast to an average of 3.5 percent depreciation of the kyat against the USD in 2016 (see Text Chart above, right panel).

A. 4 Fiscal Sector

14. Tax revenue growth is expected to fall given the slowdown of the economy. After increasing by around 20.0 percent per annum over the past three years, growth in tax revenue is estimated to decline to only 3.1 percent in FY2016/17, according to revised estimates by the tax authorities (see Text Table below). This is slower than the estimated nominal GDP growth, resulting in a lower expected tax-to-GDP ratio of 8.0 percent in FY2016/17 from the 8.7 percent in the previous fiscal year. A new specific tax was legislated in April 2016, applicable to a particular list of goods previously known as "special goods".[14] Meanwhile, income tax is expected to grow by around 2.6 percent, based on revised estimates by authorities. The relatively flat growth in income tax is owed largely to falling tax revenue from state economic enterprises (SEEs), equivalent to a decline of around 30.0 percent in FY2016/17, even as income tax collection from the private sector increased during the same period.[15] The budget revenue is viewed as being conservatively set, as revised estimates all indicate higher values compared to the budget. Authorities are confident of meeting the revised estimates, with around half of the taxes already collected up to November 2016, which is in line with tax collection performance in the past four years.

Union Government Tax Revenue

| In billion kyat	FY 2015/16 Actual	FY 2016/17 Budget	April – Nov 2016 Actual Performance	FY2016/17 Revised Estimate (RE)	FY16/17 RE vs FY15/16 Growth
Commercial and Specific Tax	2105.96 (2.9)	2229.93 (2.7)	1309.95 (1.6)	2443.76 (3.0)	16.0 %
Income Tax	2326.40 (3.2)	2370.43 (2.9)	1055.61 (1.3)	2387.60 (2.9)	2.6 %
Customs Duties	467.24 (0.6)	475.00 (0.6)	292.80 (0.4)	490.00 (0.6)	4.9 %
Other Tax Revenues	1415.13 (1.9)	1144.39 (1.4)	747.78 (0.9)	1191.35 (1.5)	-15.8 %
Total Taxes and Duties	**6314.73 (8.7)**	**6219.76 (7.6)**	**3406.15 (4.2)**	**6512.70 (8.0)**	**3.1 %**

Note: Figures in parenthesis are in percent of GDP.
Source: Internal Revenue Department

[14] Special goods include cigarettes, tobacco, cheroot, cigars, alcohol, beer, wine, teak, hardwood log, jade, gems, jewelry, vehicles above 1800cc vans, saloons, sedans, light wagons, coupes, kerosene, petrol, diesel, jet fuel and natural gas. There is no expected significant net positive effect on revenues, since these "special goods" were in other taxes in the past, with authorities estimating that other tax revenues will fall by 15.8 percent in FY2016/17, while commercial and specific taxes grow at 16.0 percent for the same period.
[15] If realized, this will push down the share of SEE tax revenue to 11.0 percent of total tax revenue, from an average of 24.0 percent over the past three years

15. The fiscal deficit is expected to increase further in FY2016/17, after a sharp rise in FY2015/16. From a fiscal deficit of 1.2 percent of GDP in FY2014/15, the fiscal deficit increased significantly to 4.5 percent of GDP in FY2015/16 as expenditures increased to meet the development needs of the country, while revenues from the resource sector fell in line with lower global commodity prices. The trend of falling total revenue as a percent of GDP is expected to continue in FY2016/17 due to weak tax collection and SEE receipts, dipping to 17.6 percent of GDP, down from 20.0 percent of GDP previously. Meanwhile, the trend of rising expenditure is expected to pause as defense and SEE expenditure decline, with total expenditure expected to fall to 22.5 percent of GDP in FY2016/17 from 24.5 percent of GDP previously. Public debt has been rising slowly since debt arrears were resolved in March 2014, and remains relatively low with external debt at 15.2 percent of GDP and domestic debt at 19.7 percent of GDP. (see Figure 3).

16. The outlook for the fiscal sector remains challenging. Falling revenues require tighter expenditure management, not only for the Union Government, but for SEEs in particular, which are estimated to contribute up to one-third of the fiscal deficit in FY2016/17. With the passage of the supplementary budget in December 2016, the fiscal deficit for FY2016/17 is expected to increase further to 4.8 percent of GDP (see Text Chart below, left panel), with expenditure estimated to overshoot the budget while revenue over-performance is significantly lower (see Text Chart below, right panel).[16]
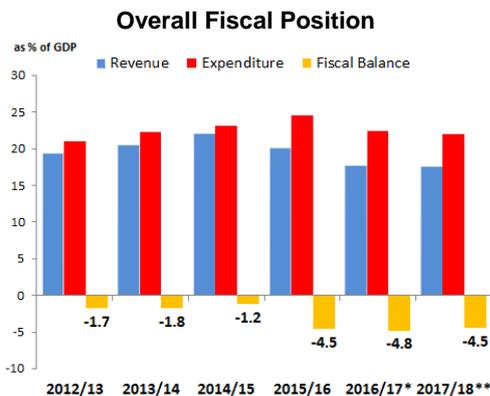
Overall Fiscal Position

Note: *2016/17 are revised estimates and **2017/18 are preliminary budget figures
Source: Budget Department

Revenue and Expenditure Performance vis-a-vis the Budget
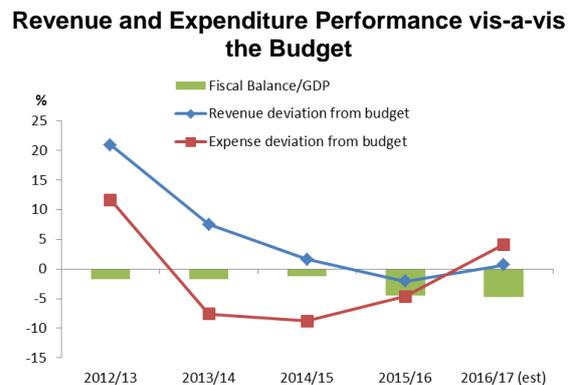
Note: The figure shows the percentage deviation of the actual from the budget, wherein positive values indicate revenue over-performance and over spending compared to the budget.
Source: Budget Department

---

[16] The original budget passed by the former government in January 2016 had a proposed fiscal deficit of Kyat 3,757 billion (4.6 percent of GDP), but was revised downward by the new government in June 2016 to Kyat 3,287 billion (4.0 percent of GDP), with expenditure cuts envisaged through restructuring of government ministries and departments, cuts in pay, allowance and honoraria, as well as capital expenditure cuts. However, with additional expenditure from the supplementary budget and planned revenue only slightly higher than planned, the fiscal deficit is now expected to increase to Kyat 4,010 billion (4.8 percent of GDP).

B. Risks and Vulnerabilities

B.1 Risks to the External Position

17. Risks to the external position remain significant from widening current account deficit and weak FDI inflows. The current account deficit is likely to widen further in FY2016/17, and remain high in FY2017/18. Reflecting the political uncertainties, FDI inflows could remain weak. If a strong recovery in imports is not matched by rising FDI, the external position will be weaker compared to the baseline.

18. International reserves remain below the conventional threshold of three-month import cover. International reserves have not increased adequately to match the rise in imports of goods and services, resulting in lower import cover so far in 2016/17 (See Figure 2). Central bank foreign reserves are projected to increase slowly, remaining below the conventional threshold of three-month import cover for FY2016/17. To mitigate rising external risks authorities should continue to build and further consolidate reserves in the CBM, including transferring foreign reserves from state banks to the CBM.[17]

Spillover Risks

19. Spillover risks derive mainly from neighboring countries, particularly China, Thailand and Singapore. China, Thailand and Singapore are the most important trading partners of Myanmar, accounting for around 70.0 percent of total trade. The largest export from Myanmar to China and Thailand is natural gas, while Singapore is a major source of imports, particularly since Myanmar opened up and liberalized its import policies. Border trade is also a significant feature of the economy, accounting for around 26 percent of total trade in FY2015/16 (excluding trade from oil and gas pipelines), with 14 checkpoints along borders shared with China, Thailand, India, Bangladesh and Lao PDR. China accounts for around 80 percent of the border trade, mainly through the northern checkpoint in Muse, from where Myanmar mainly exports raw materials, agricultural produce, jade and gems; while imports from China are consumer goods such as electronics and processed food. Tourism is still small but growing rapidly, with tourism receipts expected to reach 4.0 percent of GDP for FY2016/17. Tourists from Thailand and China are the top visitors, accounting for 21.2 and 8.5 percent of the total, respectively. Meanwhile, a long common border with Thailand has enabled over three million[18] workers from Myanmar to work in Thailand, which is a large source of remittances; however, this largely goes unrecorded as most transfers are done via informal channels. Meanwhile,

---

[17] There is an estimated USD2.5 billion foreign exchange still being held by state banks. This could prospectively raise the import coverage ratio to 3.8 months if added to the central bank reserves.
[18] Official figures on the Thai side show that only around one million are registered.

FDI inflows are mainly from Singapore[19] although China and Thailand also figure prominently, together with Hong Kong, China in the last five years (See Figure 2).

20. Spillovers from a slowdown in China, Thailand and Singapore are expected to be large due to close economic linkages. The main transmission of spillover from neighboring countries would be through the trade channel, as exports are expected to be severely affected in case of a significant slowdown in China or Thailand. Growth in Myanmar would also be negatively affected if investments from these countries fall significantly. The fall in exports and FDI would in turn lead to depreciation pressures on the exchange rate. However, the probability of negative growth spillovers emanating from China and Thailand are lower than before due to more stable outlook for these countries in 2017. Nonetheless, spillovers from policy changes would have a significant impact on Myanmar. An example is the recent clampdown by China on rice imports from Myanmar across the border, which severely affected demand and price levels, resulting in major losses in the agriculture sector. Going forward, capital flow management measures in China to restrict outward direct investment could affect FDI in Myanmar. Meanwhile, financial channels in Myanmar are not as developed, as foreign banks only started operations in 2015, with activities so far limited to servicing companies from home countries, thus, limiting their impact on the domestic economy.

B.2 Risks to Inflation

21. Risks to inflation from demand pressures, exchange rate depreciation and various supply shocks continue to be significant. From 2000-2015, Myanmar recorded an average inflation rate of 16.0 percent, the highest in the region, with the major drivers being shocks which can be attributed to floods and other natural disasters, money growth, exchange rate pass-through and imported inflation (see Annex 1 on Inflation Drivers in Myanmar). In the near- and medium-term, these drivers will likely continue to exert significant pressures on inflation in Myanmar. There is a risk that demand pressures from rising incomes and credit could translate into renewed inflationary pressures, as pent-up demand remains strong. Moreover, the impact of exchange rate depreciation on inflation also needs to be monitored, especially given the increasing openness of the Myanmar economy. Supply shocks from natural disasters may also recur and have a significant impact on inflation.

22. Risks from direct central bank financing deficit could also increase if the fiscal deficit increases further without a commensurate increase in financing from other sources. The sharp rise in the fiscal deficit in FY2015/16 translated into significantly higher financing by the central bank. The CBM financing of the deficit increased further in FY2015/16, accounting for 60.0 percent of total financing (see Text Chart). Other domestic financing likewise increased with the launch of the

---

[19] Anecdotally, Keppel Group, a major property and hotel investor is the largest Singapore-based investor, while other investors registered as being from Singapore comprised of holding companies based elsewhere, mainly Japan.

Treasury bill market in January 2015. Authorities have recognized the need to steadily reduce direct CBM financing to avoid spillovers to domestic inflation, committing to limit CBM financing to 40.0 percent of gross domestic financing needs in FY2016/17. CBM financing is planned to be steadily reduced until its full phase-out in around three years, depending on the development of the

Deficit Financing

% of GDP

Legend: External, CBM financing, Other domestic, Total Financing

Source: Budget Department

government bond market, which was launched in September 2016. External financing is also expected to rise to one-third of total budget financing in FY2016/17, as the necessary preparatory work has been completed, paving the way for the roll-out of several projects and programs by international donors. However, capacity constraints continue to pose challenges to the implementation of such projects, with the risk of lower than expected ODA if absorption is not enhanced.
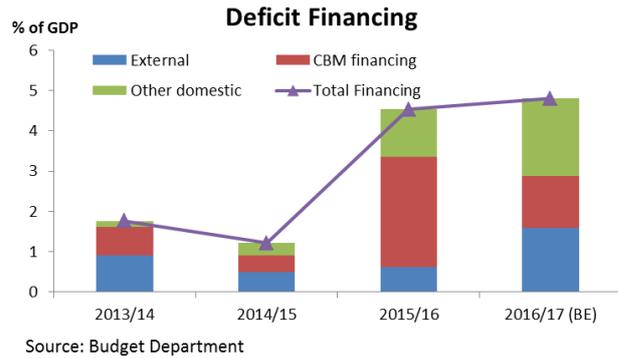
B.3 Risks to the Fiscal Position

23. Falling government revenues, mainly due to lower revenues from SEEs, pose a risk to the ability of the authorities to maintain a sound fiscal position. Total revenues have fallen from its peak, owing mainly to a decline in revenues from SEEs on the back of falling commodity prices in 2015 and 2016. The fall in revenues has caused a big shift in the fiscal accounts. In particular, the net contribution from the SEEs to the overall fiscal balance has shifted from a surplus prior to FY2015/16 into a large deficit, accounting for almost 50.0 percent of the total. This development has challenged the authority's efforts to maintain a sound fiscal position.

24. The outlook for the fiscal sector remains challenging as falling revenues require tighter expenditure management. After rising sharply to 4.5 percent of GDP in FY2015/16 due to decreasing revenues from the resource sector, particularly from SEEs, the fiscal deficit for FY2016/17 is projected to increase further to 4.8 percent of GDP, generally in line with authorities' own estimates. The increase in non-resource revenues, which are supposed to offset the loss in resource revenue, has been lower than expected, as the benefits of tax administration reform have come slowly. Looking forward to FY2017/18, it will remain challenging for authorities to keep the fiscal deficit at around 4.5 percent of GDP as growth in tax collection is expected to slow down to 17.3 percent in FY2017/18 from an average of 23.5 percent growth previously. Revenues are also vulnerable to shifts in global commodity prices as an estimated 23.6 percent of revenue come from the oil and gas sector.[20] Authorities have adjusted to the falling revenues by moving towards streamlining and re-prioritizing

---

[20] Despite the expected recovery of oil prices in 2017, Myanmar's long-term production contracts contain provisions that stipulate gas prices sold to the export market are revised every three months by taking the last 12 months' average of crude oil prices together with other variables and production costs. Thus, the recovery in prices will have a lagged impact on the fiscal and external accounts between 6 months to 1 year.

spending activities. In particular, the re-organization of ministries and departments is designed to cut current expenditure while capital expenditure has been re-prioritized towards funding for ongoing projects. Amid cuts by the government to its current and capital expenditures, SEE expenditure has remained high, which could point to existing inefficiencies. Loss-making SEEs are not able to contribute to government revenues and actually get support either from the budget or through loans from the Myanmar Economic Bank (MEB) to enable them to continue operations. This is another source of risk that could push the fiscal deficit higher, either through direct budgetary outlays or contingent liabilities.

B.4 Risks to Financial Stability

25. Continued high credit growth poses risks to the financial sector, particularly if this develops into rising NPLs. Domestic credit growth has stabilized, although it remained high at around 30.0 percent as of October 2016. This rapid credit growth has led to growing vulnerabilities in banks' balance sheets, as NPLs have been increasing, reaching 3.5 percent as of end-September 2016 from 1.7 percent as of end-June 2015. In addition, risks could be rising from problematic loan portfolios of state-owned banks against a backdrop of weak capital structure, due to weak capacity and continued dependence on government funding to fulfill its development mandates. However, a full assessment of their performance and financial status is rendered difficult by the lack of data.

Authorities' Views

26. Authorities recognize that risks remain elevated in several areas. They highlighted that heightened global uncertainty could affect external accounts and introduce volatility to the exchange rate, and they are cognizant of the need to build policy buffers to mitigate such external risks. Authorities recognize that external factors could also push up inflation, as oil prices are forecast to increase while depreciation pressures persist, requiring vigilance by the central bank to counter both external and domestic sources of inflation. Authorities acknowledge the growing challenges in the fiscal sector, while assuring their commitment to achieving a sound fiscal position. On rapid credit growth, authorities are of the view that this is due to base effects, and forms part of the move towards financial deepening. Nevertheless, authorities are enhancing their ability to monitor the financial system, and remains committed to tightening monetary policy to minimize excess liquidity. An audit of state-owned banks has started in March 2017 to assess capital and other financial indicators, targeted to be completed by the middle of the year.

C. Policy Discussion

C.1 Maintaining External Stability

27. A further build-up of international reserves is recommended to provide greater cushion against external shocks, especially given the country's vulnerability to natural disasters. Diversifying exports, boosting tourism, improving the business environment, and facilitating inward remittances from workers overseas will increase FX receipts. Supporting more concessional finance and further transferring foreign reserves from state economic banks to the CBM are likewise important to strengthen the external position.

28. Maintaining exchange rate flexibility remains an important cushion against external shocks. With a high current account deficit and thin reserves, it is important to maintain exchange rate flexibility to enable the economy to adjust to external shocks more nimbly, while still keeping an eye on the impact of exchange rate pass-through to inflation. It is essential to ensure that the gap between the formal and informal exchange rates does not widen significantly should FX liquidity squeeze and exchange rate pressures heighten ahead.

29. The role of the FX reference rate in guiding the market needs to be enhanced. The importance of guiding the exchange rate to reflect demand and supply conditions must be emphasized, particularly as Myanmar has a significant parallel market. Large deviations of the reference rate from the parallel rate discourage banks (both local and foreign banks) from engaging in the interbank FX market, thereby drying up the liquidity in the formal market. Efforts to further deepen and develop the interbank FX market to support better price discovery need to be intensified, to serve as a counterweight to the parallel informal market and to improve the CBM's ability to provide market guidance through the reference rate. Although the volume of interbank FX trading has increased over time, this has not been large enough to absorb the informal FX trading and thus, enable the CBM to step back as market maker in the formal FX market.

30. Enhanced and proactive communication of exchange rate policy will help avoid misaligned market expectations that influence exchange rate movement. In recent months, the kyat has been relatively stable in terms of the NEER while depreciating against the USD, in tandem with most regional currencies. Constructing and publishing the NEER can help market participants to understand the movement of the Kyat in a broader regional context. This, in turn, will allow for better-informed decisions regarding FX transactions, and help avoid unnecessary volatility. Enhanced communication will also reduce the need for the CBM to intervene in the FX market to smoothen volatilities, while nudging the exchange rate towards its perceived medium- to long-run equilibrium, taking into consideration the current account position and other macroeconomic fundamentals.

31. To mitigate the risk of slowing FDI, clear economic policies for investment and growth need to be articulated. The moderation in overall FDI disbursement is attributed to the cautious stance of investors who may have put on hold new projects until they feel more confident about the economic

policies of the new government. To address this concern, the government should articulate the details of its economic policies, particularly as there remains a large backlog of unrealized investment commitments (See Figure 1).

Authorities' Views

32. The authorities have increased efforts to strengthen the external position. Regarding the external accounts and the exchange rate, the authorities shared that regular meetings are being conducted among the Ministry of Commerce, the Ministry of Planning and Finance, and the Central Bank of Myanmar to promote stability of the external accounts by encouraging more exports, limiting imports (especially of luxury consumer goods), and managing the exchange rate. They also noted that foreign assets held in state-owned banks could be mobilized to help cushion the economy against shocks, and if these were counted, import cover would be higher. To support future investment and growth, the passage of the new Investment Law is expected to provide a boost as an enabler for foreign investment.[21]

33. Authorities acknowledge the need for more flexibility in the reference rate. They have revised internal guidelines accordingly to allow more flexibility of the exchange rate. However, authorities also emphasized the need to be mindful of the impact of exchange rate on inflation, which would require a careful balancing act between allowing flexibility to enable external adjustment and maintaining stability to minimize the exchange rates' impact on inflation.

C.2 Continued Vigilance to Mitigate Inflationary Pressures

34. Monetary policy needs to remain tight to contain still high inflationary pressures. To contain strong demand-side drivers of inflation, a continuation of tight monetary policy is needed through stepped-up deposit auctions and strict implementation of the new reserve requirement regime. Given that the monetary policy framework for Myanmar is still at an early stage of development, continued improvements in monetary policy tools, forecasting ability and capacity development are necessary.

35. Refraining from fiscal deficit financing is critical to maintain price stability. In the past fiscal year, CBM claims on the government has increased starting in July 2015, signifying greater dependence on the central bank to finance the budget deficit. The increasing issuance of domestic government debt through Treasury bills and bonds to replace CBM financing of the deficit will improve

---

[21] The new investment law enacted in October 2016 combined the domestic and foreign investment law into one legislation, therefore clarifying and simplifying investment procedures. The new law provides corporate tax reductions for foreign businesses investing in Myanmar for up to seven years, from a maximum of five years in the old law. The new law also eases conditions for long-term real estate leases.

the autonomy of the central bank in setting monetary policy and enhance the effectiveness of using reserve money as a policy tool going forward.

36. Addressing inflationary pressures in Myanmar also requires effective natural disaster management and enhanced infrastructure. Myanmar is prone to weather-related natural disasters which, together with infrastructure bottlenecks, significantly affect inflation (see Selected Issues on Drivers of Inflation in Myanmar). Improvements in the capacity to deal with natural disaster will help contain the inflationary impact of supply shocks from large natural disasters. Incorporating natural disaster management as a major element of economic policy is therefore necessary.

37. Coordination between monetary, exchange rate and fiscal policy should continue to be enhanced to properly identify and mitigate various risks to inflation. The establishment of the High-Level Committee on Inflation is commendable, and there should be continued active engagement among major government economic agencies to ensure open lines of communication. Enhanced communication will enable more coordinated efforts to tackle inflation during challenging times, particularly when inflation pressures are coming from multiple sources. Medium-term plans may also be discussed in this forum, as lack of infrastructure and logistical challenges have also played a role in driving up inflation in Myanmar.

Authorities' Views

38. The authorities remain committed to achieving a low and stable inflation environment, and will use available policy tools to maintain tight monetary policy to manage liquidity. The authorities have committed to cap central bank financing of the deficit at progressively lower levels until a full phase-out is accomplished. Towards this end, authorities have highlighted efforts that led to the accelerated development of the Treasury bill market in 2016 via market-determined interest rates, foreign bank participation, and the introduction of 6- and 12-month bills. The launch of the Treasury bond market in September 2016 should also provide another avenue that can help finance the deficit in FY2016/17. These developments, together with greater access to concessional loans and grants, are expected to reduce central bank financing of the deficit progressively over the next 2-3 years.

C.3 Enhancing Efficiency and Prioritizing Resources in Fiscal Sector

39. Efforts to enhance tax revenue and reprioritize fiscal resources should continue, as the budget becomes tighter in a challenging fiscal environment. Efforts to reprioritize the budget to

achieve desired social outcomes more efficiently should continue. Enhancing tax collection, broadening the tax base and reducing tax exemptions are necessary to compensate for the fall in revenue. In this regard, the continuing enhancements in revenue administration are commendable. Moving forward, the government could consider a shift towards broader base, indirect taxes such as VAT, which has proven to increase tax revenue in other countries. On the expenditure side, from FY2012/13 to FY2015/16, the budget to GDP ratio was increased to enable increased spending on development priorities (See Figure 3). For FY 2016/17, this ratio is reduced but the budget share of education, health and other social services has been preserved at around 17.0 percent. Over time, subsidies and transfers have also grown bigger as a share of the budget, mainly driven by transfers to states and regions to meet their development objectives, in line with the fiscal decentralization plan. While other expenditures have fallen as a share of total expenditure (for example, the defense budget is to be cut further by 7.0 percent in FY2016/17), a large part of the budget continues to be the operational and investment costs of SEEs. This has been a growing strain on the budget, particularly as SEE revenues have been falling in the past two years. Given limited fiscal space, making public expenditure management more efficient and focusing on priority areas such as health and education remain crucial.[22] Meanwhile, rising subsidies and transfers need to be monitored for its long-term implications, particularly ensuring that transfers to states and regions in line with the decentralization process are accompanied by efforts to increase capacity of local administrators, to enable efficient spending.

40. More resources need to be allocated for public investments to boost Myanmar's medium-term growth trajectory. Current expenditure has been rising, driven by public sector wage hikes and transfers to states and regions, accounting for 21.0 percent and 18.0 percent of Union Government Expenditure in FY2015/16, up from 16.0 percent and 8.0 percent in FY2012/13 respectively (see Text Chart).[23] Meanwhile, capital expenditure has steadily

Union Government Expenditure

Source: Budget Department
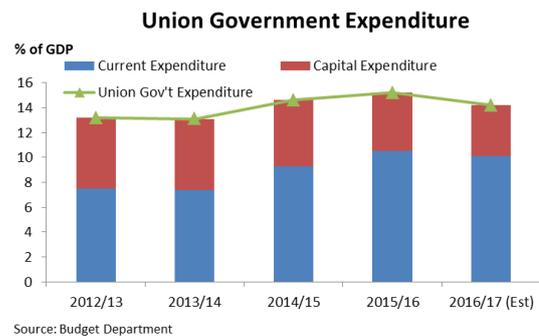
declined, settling at around 29.0 percent of Union Government Expenditure in FY2015/16, from 43.0 percent in FY2012/13. This development is due to the government's decision to prioritize funding for existing projects, while new projects are more challenging to fund amid tightening fiscal conditions, particularly in the past two years. Moving forward, the budget for infrastructure needs to be prioritized

---

[22] Although spending on education has increased significantly from a low base, massive education gaps due to decades of underspending are assessed as a major limitation to Myanmar's ability to achieve its potential. Myanmar has one of the lowest enrollment rates in the region at 93.1 percent for all levels of education, behind Lao PDR (95.9 percent), Vietnam (98.1 percent) and Cambodia (98.4 percent). Coupled with the low enrollment rates are the high drop-out rate, with only 38 percent of students making it to the 11th grade. Focused efforts are also required to improve health expenditure, as it is one of the lowest health outcomes in the ASEAN region. Life expectancy in Myanmar is at 65 years for both sexes, compared to 71 years in Cambodia and 76 years in Vietnam. Infant mortality rate per 1,000 live births is 42.4 in Myanmar, compared to 33.9 and 18.4 in Cambodia and Vietnam, respectively.

[23] Union Government Expenditure excludes expenditure by SEEs, since a comparable breakdown for SEEs is not available, however, discussion with authorities reveal that SEE investments are for their own operations, and are not available to the Union Government for non-market, non-production related public service delivery.

and adequately financed to support medium-term growth, with concessional loans and grants from development partners a good option due to lower costs and longer maturity periods.

41. SEE reforms need to be considered to boost revenue and reduce inefficient spending. Maximizing revenues from SEEs and enhancing their efficiency to reduce costs will alleviate some of the fiscal pressures they exert on the government budget. Authorities may consider privatization of non-strategic SEEs, while strategic SEEs that the government wants to retain should undergo reforms to improve governance and enhance efficiency.

Authorities' Views

42. The authorities agree that the fiscal outlook remains challenging and will exert further efforts, if needed, to ensure a stable fiscal position. Due to the fall in revenue from the commodity sector, significant efforts need to be exerted to maintain a stable budget deficit as government will still need to maintain spending on basic items during the ongoing transition period. To cover the fall in commodity revenue, tax revenue is being ramped up through the large and medium-size taxpayers' office. To enhance budgeting and expenditure procedures, authorities are working on a Public Financial Management Law. Authorities are strongly committed to increasing infrastructure and social services; however, absorptive capacity remains a constraint. SEE reforms need to be tackled in a progressive manner, with careful consideration of the impact of privatization on medium-term fiscal accounts.

C.4 Strengthening Financial Sector Buffers and Regulations

43. Continued vigilance to identify and address financial stability risks are needed amidst the rapidly expanding financial sector. With credit growth expanding rapidly in recent years, authorities need to be watchful of the potential effects in terms of growing bad debt and weak bank balance sheets. Careful monitoring of where the credit is growing is needed, amid some rise in NPLs. There is significant scope to curb credit growth while not undermining the overall strength of the economy, by effectively facilitating credit to underserved sectors such as agriculture and small and medium-sized enterprises (SMEs). To help improve credit allocation to productive sectors of the economy, gradual liberalization of interest rates could be considered. But such reform need to be undertaken in a measured pace, along with continued improvements in monetary policy tools, strengthened bank supervision and greater use of risk management tools by banks. Reform of state-owned banks also need to be addressed. In this regard, establishing a clear policy framework, assessing financial health and improving disclosure and transparency of state-owned banks should be priorities moving forward.

44. The implementation of the Financial Institutions Law is crucial to safeguard financial stability together with continued capacity building. The Financial Institutions Law is a welcome achievement. Given rapid credit growth and a changing financial landscape, the prioritization of regulations under the new law is important, starting with the enhancement of bank capital. The implementation of the upgraded regulations are expected to posed some challenges for the banks in the short term, thus the authorities should develop a well-designed roadmap for its implementation. Increasing the manpower of the supervisory team and enhancing supervision capacity are prerequisites to financial stability, especially as the banking sector has been growing rapidly.

Authorities' views

45. The authorities recognize the need to implement regulations based on the New Financial Institutions Law in a timely manner to address emerging risks in the fast-changing financial landscape. The authorities expressed their concern about the rising NPLs, and assured AMRO that the CBM is working hard to address this issue. In particular, regular onsite and offsite supervision for commercial banks and the development of Financial Soundness Indicators (FSI) are measures that are designed to support financial stability. Furthermore, authorities provided assurance that new regulations in relation to capital adequacy, loan classification and provisioning, lending to related parties, large exposures and liquidity, in line with the Financial Institutions Law, will be released soon. The implementation of these regulations should provide clarity and consistency, resulting in a sounder and more stable financial system.

C.5 Enhancing Data Adequacy

46. There has been continued improvement in the availability of macroeconomic statistics, which enhances the timely monitoring of economic developments and trends. Significant improvements have been made in improving the availability of data and in reducing time lags, resulting in enhanced surveillance of the economy. In particular, the release of the new CPI, which is based on the 2012 Household Income and Expenditure Survey, with an updated consumer basket and weights, has ensured that price statistics in Myanmar conform with best practices, enabling better cross-country comparison and making inflation data in Myanmar more relevant for policy analysis. With regards to the ERPD Matrix, the development of Financial Soundness Indicators by the authorities in 2016 has enabled a more comprehensive assessment of financial sector stability. Efforts to upgrade external sector statistics to BPM6 are likewise commendable; however, the time-series needs to be sufficiently extended backwards to enhance data availability. The timeliness of external debt and current account balance data also needs to be improved to enable better surveillance of external stability. In terms of general statistical issues, data on national statistics and external accounts need to be made consistent, particularly for the expenditure method of GDP and the BOP. The reliability of

the BOP data is affected by gaps in coverage, particularly for some services, direct investment assets and other investment assets. Data on FDI need to be consolidated across relevant agencies. In addition, data on the execution of the budget are internally available in the local language, but are not published. In this regard, the authorities' further efforts in improving statistical data are welcome. Delivering a clear message on the importance of quality statistics to line agencies, and providing more resources in terms of manpower and training to those tasked with generating statistics, will go a long way in improving data quality and accuracy. Further enhancing inter-agency coordination and providing clearer delineation of responsibilities will also enhance data collection.

Authorities' views

47. Notwithstanding limited resources and capacity, the authorities have continued to strengthen efforts to enhance economic and social statistics. They are working on the passage of the modernized National Statistics Law, which is seen as a crucial step for the development of national statistics in Myanmar. Among others, the law will clearly state the powers and responsibilities of the Central Statistics Office, thereby making it the focal point for national statistics in the country.

D. Policy Recommendations

48. Although economic growth is expected to improve in FY2017/18, macroeconomic risks are still significant. Inflationary pressures as well as fiscal and current account deficits are expected to remain high. Risks to the fiscal consolidation efforts still emanate from lower than expected recovery in gas prices and prospect of natural disaster. Rapid credit growth amid limited supervisory capacity likewise poses risks to the financial sector. In this regard, AMRO staff recommend that policy space and resiliency of the economy be further enhanced as follows:

49. Supporting external stability by building up international reserves and maintaining exchange rate flexibility. It is recommended to build international reserves above the conventional threshold of three-month import cover. Transferring the foreign assets at the state banks to CBM are important in this regard. Exchange rate flexibility should also remain as a key shock absorber, especially as terms-of-trade shocks may be significant in Myanmar. Efforts to further deepen and develop the interbank FX market to support better price discovery need to be intensified to attract more flows into the formal exchange rate market.

50. Maintaining tight monetary policy and further phasing out CBM's direct financing of the fiscal deficit to help contain inflationary pressures. Efforts to mop up excess liquidity through deposit auctions along with ensuring full compliance by banks under the cash reserve requirement regime should continue to ensure that base money growth is consistent with target, and does not fuel

credit growth and feed into rising prices. Authorities' continued commitment to cap direct central bank financing of the deficit at progressively lower shares of total financing is encouraged. Efforts to develop the Treasury bill market via market-determined interest rates and foreign bank participation, along with the launch of the Treasury bond market will help in this regard. A clear strategy with specific timelines on the full phase-out of direct deficit financing by CBM is recommended.

51. Enhancing tax revenue and improving public expenditure efficiency amid a tight fiscal environment. Enhancing tax collection, broadening the tax base and reducing tax exemptions are necessary to compensate for the fall in natural resource revenue. Given limited fiscal space, making public expenditure management more efficient and focusing on priority areas such as health and education remains crucial. As infrastructure also needs to be adequately financed to support medium-term growth, the authorities are encouraged to supplement domestic financing with concessional loans and grants from development partners.

52. Closely monitoring the financial sector and addressing emerging risks. Amid rapid credit growth, authorities need to be vigilant of growing bad debt and weak bank balance sheets. In this regard, prioritization of regulations under the new Financial Institutions Law is crucial. The one of initial tasks should be the enhancement of bank capital. With regards to state-owned banks, establishing a clear policy framework, assessing financial health and improving disclosure and transparency will also help mitigate risks from these institutions. Increasing the manpower of the supervisory team and enhancing supervision capacity continue to be essential.

53. Further improving macroeconomic statistics to support economic surveillance and guide policy making. There have been continuing improvements in the availability and quality of macroeconomic statistics. However, significant data gaps and limitations still exist and could impede timely and effective policy making. These data are also important for proper and accurate assessment of policy reforms. Enhanced inter-agency coordination is important for further improving macroeconomic statistics.

Box A. Measures of Underlying Inflationary Pressures for Myanmar

Constructing and monitoring various measures of underlying inflation could help improve inflation forecasts. Headline inflation in Myanmar is quite volatile, which makes inflation forecasting challenging. To address this, the central bank could look at other measures of inflation that are less volatile but are closely related to headline inflation. In removing the volatile components, the CBM must also consider that it cannot exclude too much (either too many items, or items with large weights) since this will make the underlying

---

Box A. Measures of Underlying Inflationary Pressures for Myanmar

measure of inflation too detached from headline inflation, rendering it difficult to explain to the public when the central bank needs to communicate its views about the inflation trend.

Most measures of underlying inflation show high and persistent price pressures. A new CPI basket with base year 2012 was launched in August 2016, featuring new weights from the 2012 Household Income and Expenditure Survey (HIES). Using this new basket, AMRO staff constructed various measures of underlying inflation, including (1) median inflation, (2) trimmed mean inflation and (3) inflation excluding fresh food and energy (Figures A1, A2).[24] Obtaining the median inflation is a mechanical exercise, since the method picks up the median value of the items in the CPI basket at each point in time. The trimmed mean requires more judgment, particularly on how much to trim. On the one hand, trimming too little may still result in a volatile measure which is hard to forecast, but, on the other hand, trimming too much will make the underlying measure of inflation less representative of headline inflation. Excluding particular items from the CPI basket (for example, fresh food and energy) needs careful consideration, taking into account not only the volatility of the item itself, but also the source of the volatility, and whether it can be reasonably affected by the central bank.[25] At this initial stage, several measures can be monitored, until such time that a sufficiently long time series is generated that will allow a more accurate gauge of their stability and power in tracking headline inflation.

**Figure A1. Inflation Measures (2012 Base Year)**

Source: CSO, AMRO staff calculations
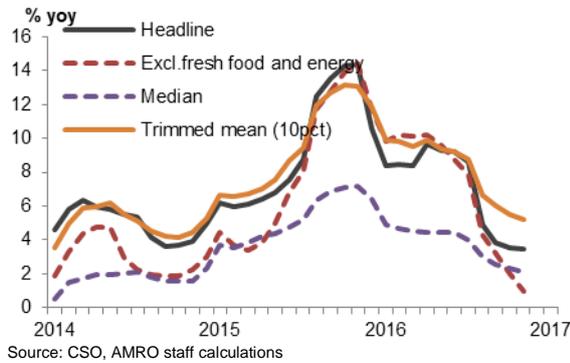
Figure A2. Inflation Measures (2012 Base Year)

Source: CSO, AMRO staff calculations

---
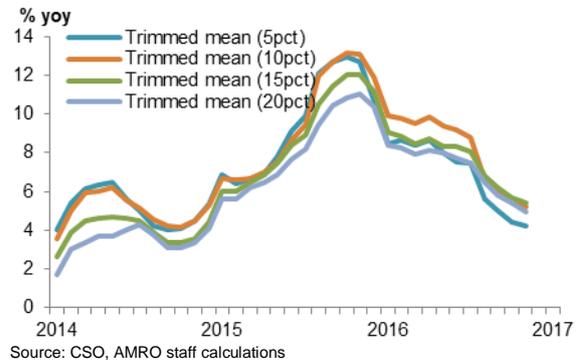
[24] The construction of various underlying inflation measures: (1) the median inflation, (2) trimmed mean and (3) inflation excluding fresh food and energy, are based on the disaggregated CPI data provided by CSO on a monthly basis, from January 2013 to November 2016, consisting of 137 items in the CPI basket. The median inflation picks up the median value at each point in time. Meanwhile, the trimmed mean inflation trims various percentiles off the tails. The third measure excludes raw food (meat, fish, seafood, fruits and vegetables), and two items related to energy (electricity, fuel and others, the operation of personal transport), with a total of 38.0 percent out of the total CPI weight being excluded.

[25] The median inflation series has the least volatility, however, it's average differs markedly from headline inflation. In terms of being able to track headline inflation, trimmed mean (10 pct) and inflation excluding fresh food and energy are on average closer to headline inflation, with the trimmed mean (10 pct) having a lower standard deviation compared to inflation excluding fresh food and energy. The standard deviation from January 2014 to November 2016 for median, trimmed mean (10 pct), and inflation excluding fresh food and energy are 1.8, 2.6 and 2.8, respectively. The standard deviation of headline inflation is 3.0 for the same period.

Table 1. Major Economic Indicators and Projections for Myanmar

	FY13/14	FY14/15	FY15/16	2016 Q1	Q2	Q3	Oct	Nov	Dec	2017 Jan	Feb	Mar	FY16/17 Est.	FY17/18 Proj.
Output and prices				(Percent change)										
Real GDP 1/	8.4	8.0	7.3	…	…		…	…	…	…	…	…	6.0	7.0
CPI (2012=100, end-period)	6.3	6.1	8.4	8.4	9.2	3.9	3.5	3.5	6.6	7.8	8.0	7.0	7.0	7.0
CPI (2012=100, period average)	8.1	5.1	10.0	8.4	9.4	5.8	3.5	3.5	6.6	7.8	8.0	7.0	6.8	6.2
CPI (2012=100,12-month rolling ave)	8.1	5.1	10.0	10.0	10.6	9.2	8.3	7.4	7.0	7.0	6.9	6.8	6.8	6.2
Consolidated Public Sector 2/				(Percent of GDP)										
Total Revenue	20.5	21.9	20.0	…	…	…	…	…	…	…	…	…	17.6	17.5
of which: Tax revenue	7.7	7.8	8.7	…	…	…	…	…	…	…	…	…	7.9	8.2
Non-tax revenue	1.5	3.6	2.4										1.8	0.9
SEE receipts	9.7	9.5	7.2	…	…	…	…	…	…	…	…	…	6.7	6.2
Total Expenditure	22.2	23.2	24.5	…	…	…	…	…	…	…	…	…	22.4	22.0
Fiscal Balance	-1.8	-1.2	-4.5	…	…	…	…	…	…	…	…	…	-4.8	-4.5
Public debt	34.2	29.7	32.3	…	…	…	…	…	33.20	…	…	…		
Money and Credit				(Percent change)										
Reserve money	16.3	4.6	19.6	19.6	12.0	15.6	13.6	9.97	11.31	5.34	13.24	…	15.0	13.2
Broad money	31.7	17.6	26.3	26.3	19.9	17.6	16.2	17.91	17.45	17.58	15.30	…	20.7	18.8
Domestic credit	24.6	22.9	32.3	32.3	30.0	29.8	29.3	29.13	29.51	…	…	…	29.9	25.6
Private sector	52.5	36.3	34.2	34.2	35.5	34.0	32.8	31.73	31.61	…	…	…	32.9	31.3
Balance of Payments				(Percent of GDP)										
Current account balance	-1.8	-2.6	-5.4	…	…	…	…	…	…	…	…	…	-7.9	-7.4
Trade balance	-2.3	-2.8	-6.4	…	…	…	…	…	…	…	…	…	-7.9	-8.9
Exports	17.1	15.8	15.1	…	…	…	…	…	…	…	…	…	14.6	15.9
Gas Exports	5.0	6.5	5.9	…	…	…	…	…	…	…	…	…	4.1	4.2
Imports	-19.4	-18.7	-21.5	…	…	…	…	…	…	…	…	…	-22.4	-24.9
Services, net	-1.5	-3.0	-2.4	…	…	…	…	…	…	…	…	…	-3.5	-2.3
Transfers, net	2.8	3.7	4.0	…	…	…	…	…	…	…	…	…	4.1	4.5
Financial account	5.3	5.3	6.4	…	…	…	…	…	…	…	…	…	7.8	8.3
Foreign direct investment, net	4.4	4.4	5.5	…	…	…	…	…	…	…	…	…	5.3	5.8
ODA, net	0.9	0.5	0.7	…	…	…	…	…	…	…	…	…	2.2	2.3
Overall balance	4.7	1.8	-0.7	…	…	…	…	…	…	…	…	…	0.4	1.5
CBM reserves (US$ millions)	4757.9	5124.6	4764.0	4764.0	4926.1	4917.4	4970.8	4978.6	4889.6	…	…	…	5019.8	6046.1
in months of imports goods & services	2.8	3.4	3.0	2.7	2.7	2.7	2.7	2.7	2.7	…	…	…	2.7	2.9
External debt (US$ billion)	10.2	7.9	8.5	…	…	…	…	…	8.99	…	…	…		
in percent of GDP	18.0	12.1	12.6	…	…	…	…	…	13.1	…	…	…		
Exchange rate (kyat/$, end period)	964.0	1027.0	1216.0	1216.0	1181.0	1255.0	1285.0	1308.0	1365.0	1350.0	1360.0	1362.0	1362.0	
Exchange rate (kyat/$, period average)	966.2	995.6	1219.0	1256.0	1180.0	1198.0	1267.0	1292.4	1345.1	1351.4	1357.3	1360.8	1261.1	
Banking sector														
Capital Adequacy Ratio	24.8	21.4	19.6	19.3	19.4	19.4	…	…	…	…	…	…		
Non-performing Loans Ratio	1.2	1.9	2.6	2.6	3.7	3.5	…	…	…	…	…	…		
Loan-to-Deposit Ratio	67.0	67.9	70.6	70.6	67.5	65.6	…	…	…	…	…	…		
		-3.0	-18.3											
Memorandum items:														
Nominal GDP (Kyat billions)	58,012	65,262	72,780										81,878	92,522
Nominal GDP (US$ billions)	60.0	65.6	59.7										64.5	68.8

Notes: 1/ Real GDP series base year is 2010/11 prices
           2/ Union and state/ regional governments and state economic enterprises

Sources: National authorities, AMRO staff estimates

**Table 2. Data Adequacy for Surveillance Purposes: a Preliminary Assessment**

Surveillance Areas	Data Availability[i]	Reporting Frequency/Timeliness[ii]	Data Quality[iii]	Consistency[iv]	Others, if Any[v]
National Account	GDP on the production side is the main approach, while the expenditure approach is still work-in-progress. Hard-copy of data is available.	Disseminated on an annual (fiscal year—April to March) basis. Timeliness is one-year. However, estimates and forecasts are provided by the authorities upon request.	Coverage of the growing private sector is incomplete due to a lack of annual enterprise/economic surveys.	Myanmar's NA broadly follows the concepts and definitions of the *System of National Accounts 1968*.	In the medium term, they plan to adopt the *2008 SNA* with the help of the SNA team established in the Planning Department with donor support and comprising 21 staff members.
Balance of Payments (BOP) and External Position	Hard-copy of data is available.	Periodicity is annual—on a fiscal year basis (April to March). Timeliness is 5 months.	Gaps in some services, direct investment assets and other investment assets impact the reliability of the data.	The statement of the balance of payments is compiled broadly according to the classification of the *BPM6.*	-
State Budget and Government/External Debt	As the MOF does not disseminate government financial statistics, the CSO publishes them in a tabular form in its Statistical Yearbook.	Periodicity of data is annual, on a fiscal year basis (April to March). Timeliness is 20 months after the end of the reference year.	Data do not explain how the difference between revenue and expenditure is financed.	The MOF currently does not compile Government Finance Statistics according to the *GFSM 2001* methodology.	The plan for future improvement is to publish within-the-year fiscal reports.
Money Supply and Credit Growth	Selected Monthly Economic Indicators are available online.	Data on monetary aggregates are available on a monthly basis with 4-5 months lag.	Source data comprises five sets of accounts, each one in a different format: a separate set of accounts for each of the four state-owned banks and one set for the private banks.	Money Supply and Credit statistics are broadly compiled in accordance with the Monetary and Financial Statistics Manual (*MFSM)* methodology.	Revisions on past time-series are made without adequate explanation on the underlying reasons for the revisions.
Financial Sector Soundness Indicators	Data are not publicly disseminated, but are available upon request.	Data with a one-year lag are available upon request.	Banking sector indicators have yet to be brought in line with international standards.	Revisions on past time-series are made without adequate explanation on the underlying reasons for the revisions.	-
State-Owned-Enterprises Statistics	Data are not publicly disseminated, but are available upon request.	State-owned enterprises' production (volume, value, and unit price) is reported monthly and yearly by line ministries.	Limited data on the financial health of SEEs are collected.	Accounts of SEEs are compiled according to internal methods.	-

Source: AMRO Staff Compilations. This preliminary assessment will form the "Supplementary Data Adequacy Assessment" in the EPRD Matrix.
Notes: (i)   Data availability refers to whether the official data are available for public access by any means.
    (ii)   Reporting frequency refers to the periodicity that the available data are published. Timeliness refers to how up-to-date the published data are relative to the publication date.
    (iii)   Data quality refers to the accuracy and reliability of the available data given the data methodologies.
    (iv)   Consistency refers to both internal consistency within the data series itself and its horizontal consistency with other data series of either same or different categories.
    (v)   Other criteria might also apply, if relevant. Examples include, but are not limited to, potential areas of improvement for data adequacy.

Figure 1. Economic Growth and Inflation Developments

Growth is expected to dip further in FY16/17 before recovering in FY17/18, driven by manufacturing and agriculture.
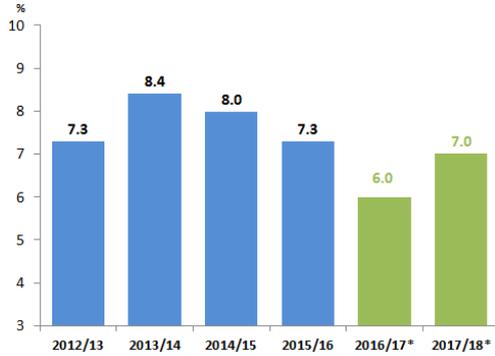
Electricity supply has been growing steadily and supporting economic activity.

Note: Data for 2016/17-2017/18 represent AMRO staff estimates.
Source: Planning Department, AMRO staff calculations
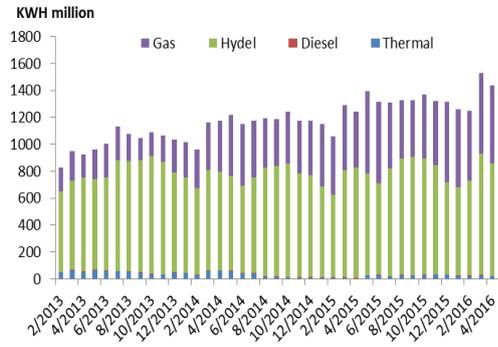
Source: CSO

The tourism industry has received a boost in recent years but remains small.
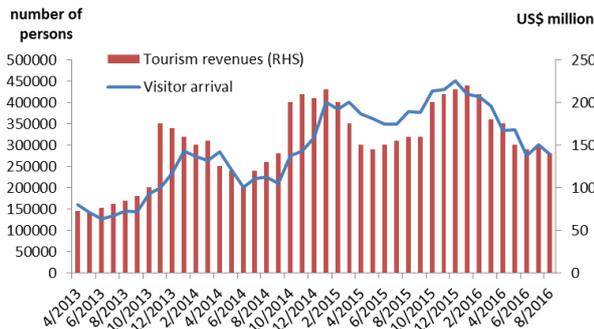
Approved investments have fallen so far, with no new investment commitments in the oil & gas sector due to low commodity prices.
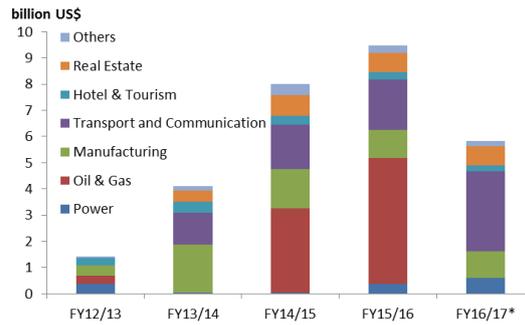
Source: CSO

Source: Central Statistics Office

Investment commitments have received a boost since the economy opened up in 2012, however, actual disbursements have lagged behind.
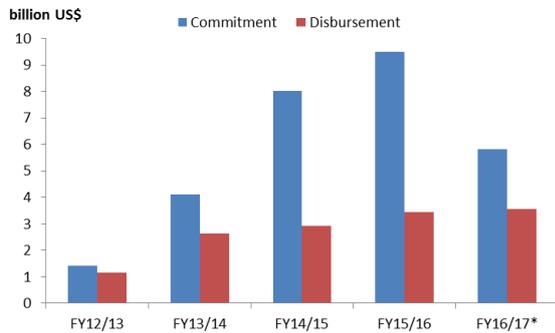
Inflation has come down in FY2016/17 due to tight monetary policy and base effects, but risks to inflation remain high.

Source: Central Statistics Office
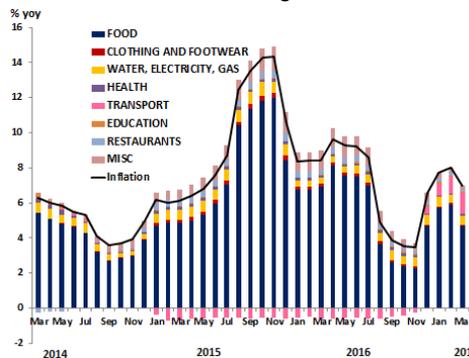
Source: Central Statistics Office

Figure 2. External Sector

Export growth has recently gone back to positive territory driven by garment and other exports, while gas exports continue to be a drag.

% yoy, 3-mon moving ave
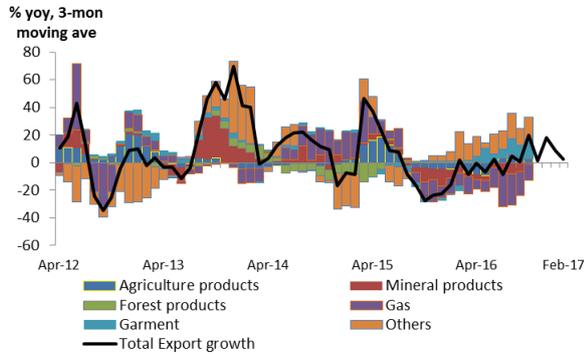
Source: Central Statistics Office

Import growth has recently been driven by intermediate goods as the imports of capital goods have contracted and consumer goods imports remain weak.

% yoy, 3-mon moving ave
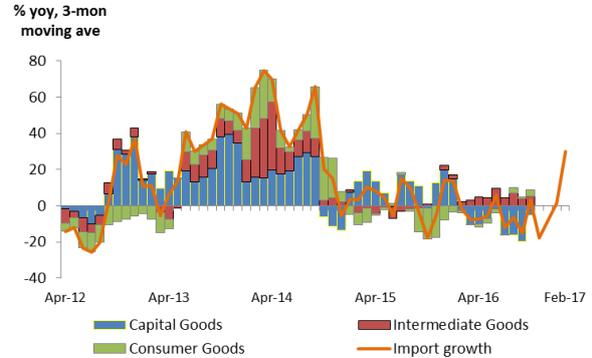
Source: Central Statistics Office

International reserves remain below the conventional threshold of three-month import cover.
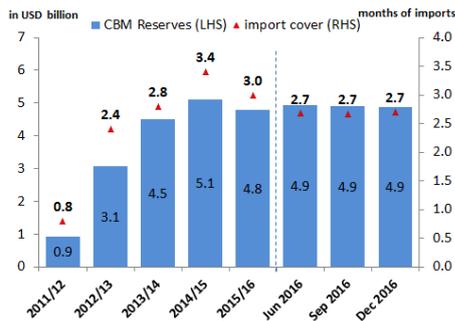
Note: Import cover is in months of imports of goods & services
Source: Central Bank of Myanmar, AMRO staff calculations

The current account deficit is estimated to widen in FY2016/17 with some improvement in FY2017/18 but still remain high.
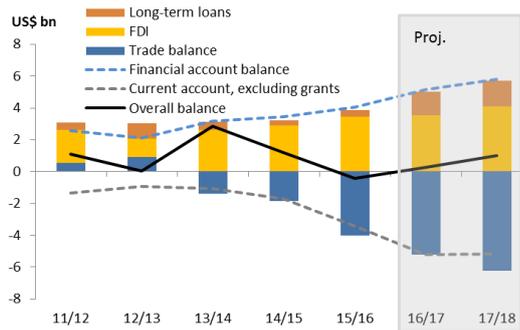
Note: Data for 2016/17-2017/18 represent AMRO staff estimates.
Source: Central Bank of Myanmar, AMRO staff calculations

Spillover risk through the trade channel are significant with China, Thailand and Singapore as they account for 70 percent of Myanmar's total trade.
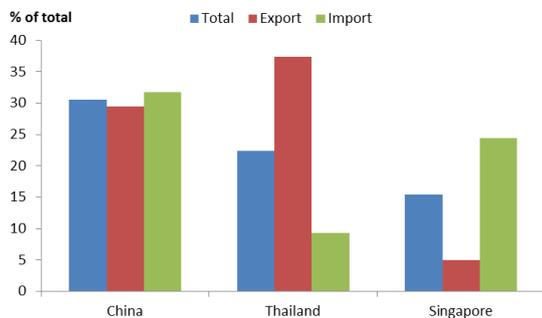

Source: CSO

Spillover risk from slowing growth in regional economies may be transmitted to Myanmar through the investment channel given significant investments from the region.
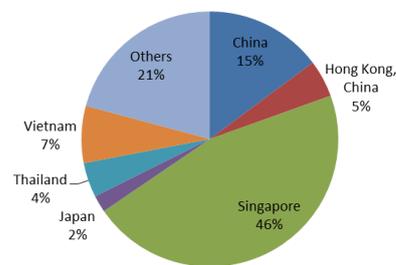
Note: FDI from Singapore not only represent Singapore-based investors but also Singapore-registered holding companies owned by groups based elsewhere..
Source: DICA

Figure 3. Fiscal Sector

The budget has undergone fundamental shifts since 2012 to allocate more resources to social services.

Legend: Economic Services, Education, Health, Other Social Services, Defense, Interest payment, Subsidies, transfers, Other Expenditure, SEE Expenditure

2012/13

2015/16
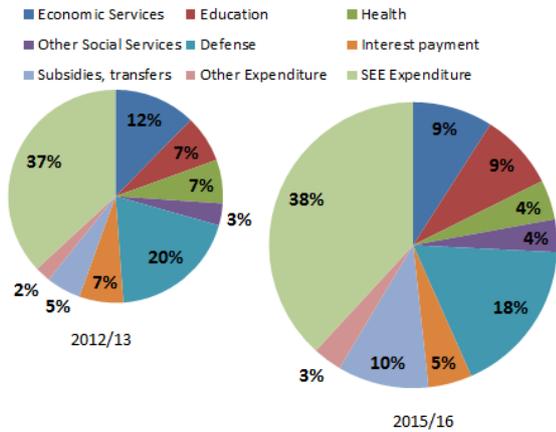
Source: Budget Department

Spending on education and health continues to rise with efforts to contain the deficit resulting in capital expenditure cuts.

Legend: Economic Services, Education, Health, Other Social Services, Defense, Interest payment, Subsidies, transfers, Other Expenditure, SEE Expenditure, Total Expenditure

% of GDP
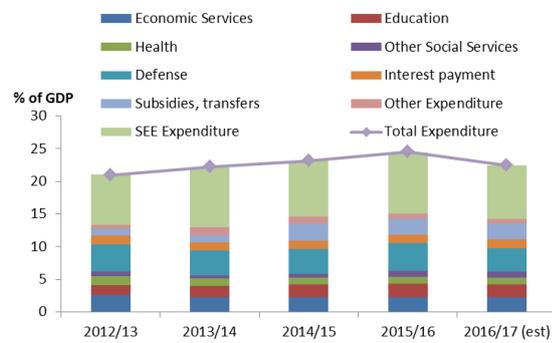
Source: Budget Department

Rising tax revenue has not been enough to compensate for falling SEE receipts due to low commodity prices.
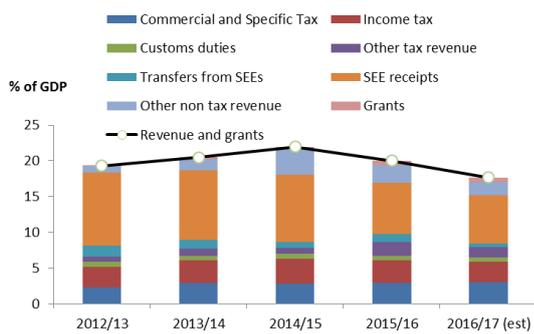
Legend: Commercial and Specific Tax, Income tax, Customs duties, Other tax revenue, Transfers from SEEs, SEE receipts, Other non tax revenue, Grants, Revenue and grants

% of GDP

Note: *2016/17 are revised estimates and **2017/18 are preliminary budget figures
Source: Budget Department

Falling revenues require tighter expenditure management to maintain a stable fiscal deficit.
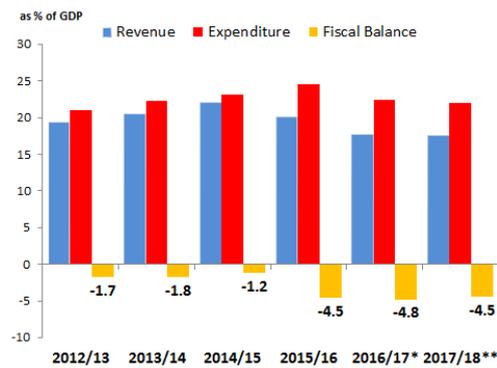
as % of GDP — Revenue, Expenditure, Fiscal Balance

-1.7 -1.8 -1.2 -4.5 -4.8 -4.5

Note: *2016/17 are revised estimates and **2017/18 are preliminary budget figures
Source: Budget Department

Estimated spending above the budget in FY2016/17 may result in a higher fiscal deficit, while revenue performance is close to the budget.

Legend: Fiscal Balance/GDP, Revenue deviation from budget, Expense deviation from budget
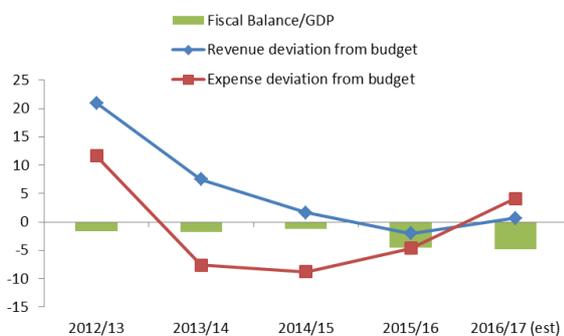
Source: Budget Department

Despite relatively low public debt due to sovereign debt forgiveness, debt dynamics and gross financing needs should be carefully managed.

% of GDP — External, Domestic, Public Debt
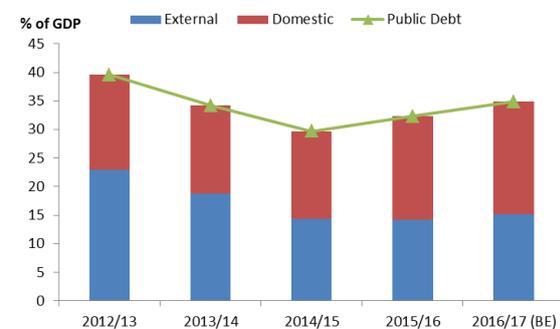
Figure 4. Monetary and Banking Sectors

Growth of monetary aggregates has been falling with tighter monetary policy.
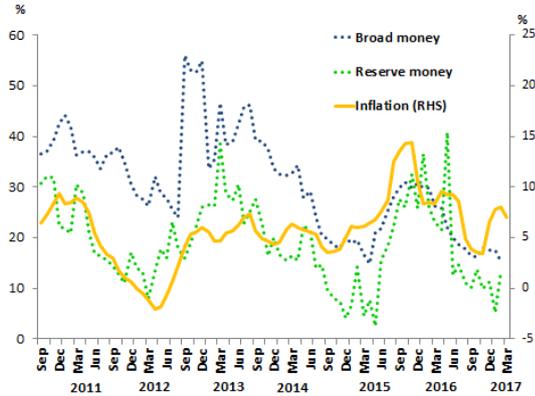

Source: Central Bank of Myanmar

Domestic credit growth is levelling off, while net CBM claims on the government has come off its peak but remains high.
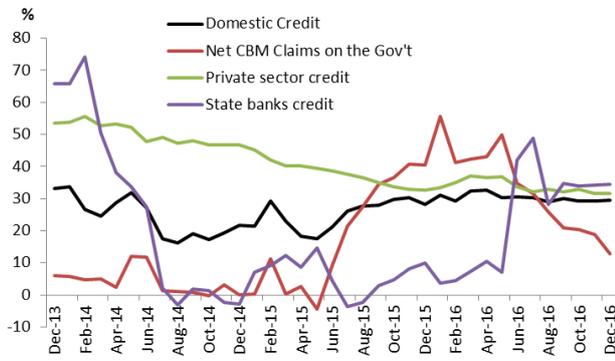

Source: Central Bank of Myanmar

Loan growth by private banks has gone down to single-digits due to a contraction of loans to the agriculture sector.
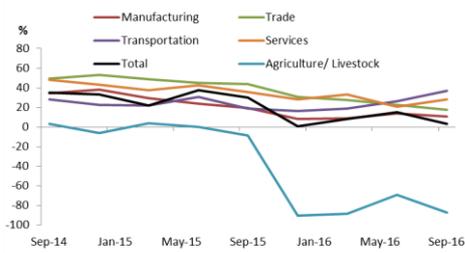

Source: Central Bank of Myanmar

Loans to construction and trade form the bulk of bank lending, with the share of lending to agriculture falling.
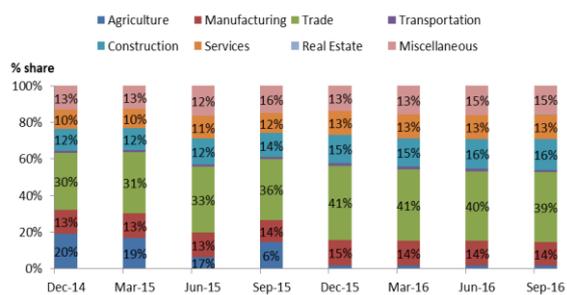

Source: Central Bank of Myanmar

NPLs have been rising along with the growing loan portfolio.
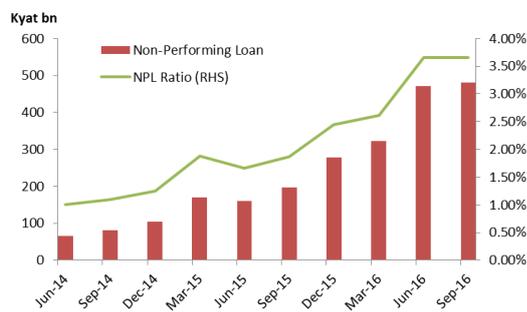
Source: Central Bank of Myanmar

Although the downward trend in Capital Adequacy Ratio (CAR) has stabilized, further efforts are needed to enhance bank capital.
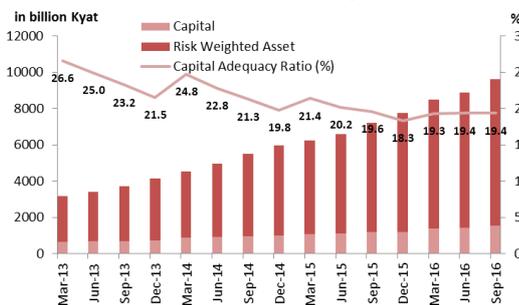

Source: Central Bank of Myanmar

ANNEX

Annex 1. Drivers of Inflation in Myanmar

Inflation has historically been high and volatile in Myanmar. A comparison between Myanmar and other emerging and developing countries shows that the average inflation and volatility of inflation in Myanmar are very high (see Text Charts below). To better understand why inflation has been very high and more volatile in Myanmar, this analysis examines the drivers of inflation over the past 10 years.

Inflation in Selected Countries in Asia (2000-2015)
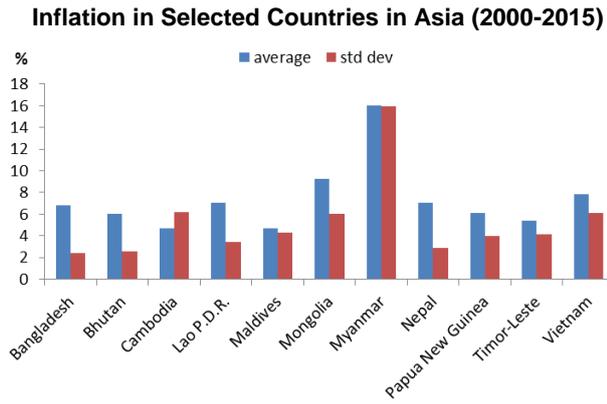
Source: CEIC

**Inflation in Emerging and Developing Countries (2000-2015)**
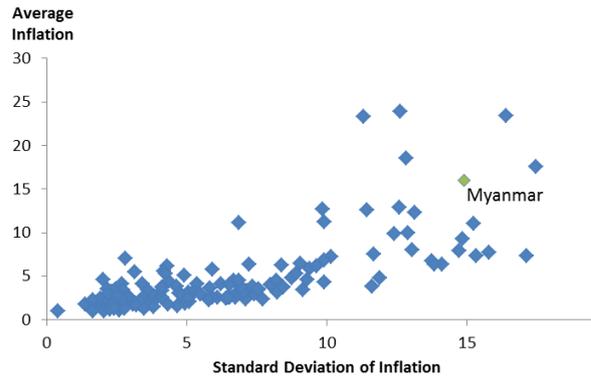
Source: IMF

To examine the dynamics of inflation and pinpoint inflation drivers, estimation using Instrumental Variables (IV) are used. The drivers in the study include trading partners' inflation, nominal effective exchange rate (NEER), money growth and non-systematic shocks.[26] Trading partners' inflation is included to account for external sources of inflation, and this variable enters the regression via a trade-weighted inflation index using the top three trading partners of Myanmar. Exchange rate pass-through is accounted for by the NEER with the same three largest trading partners.[27] Since Myanmar is a heavily cash-based economy within a reserve money targeting framework, the growth in reserve money is used as an explanatory variable as well. Non-systematic shocks[28] are constructed to capture other factors that could significantly affect inflation, notably supply shocks due to frequent natural disasters, weak disaster management and poor infrastructure.

The sample is divided into three periods to illustrate the change in the contribution of the selected drivers of inflation across different policy regimes. The first period prior to 2010 is called the pre-reform period, when the Central Bank of Myanmar (CBM) operated as a department within the Ministry of Finance. The CBM had conducted operations without a monetary policy anchor, with the main driver of monetary policy was the financing needs of the government, as the CBM had to

---

[26] Monthly data from January 2006 to May 2016 are used in the analysis, sourced from authorities' data except for Myanmar's inflation series, which is sourced from the IMF to allow for a longer time-series; and Myanmar's exchange rate prior to April 2012, wherein rates in the informal market are used since the official rate was pegged to the USD prior to April 2012. The new CPI basket with base year 2012 is not used due to limited data points.
[27] The top three trading partners of Myanmar are China, Thailand and Singapore, which together account for 70.0 percent of Myanmar's total trade.
[28] This variable is constructed from an unobserved stochastic volatility model. See Annex 2.

finance the fiscal deficit. The second period extends from 2010 to March 2012, which can be considered a transition period, when military rule gave way to a more reform-minded leadership, marked by the election of President Thein Sein in February 2011. The third period starting in April 2012 reflects the acceleration of Myanmar's economic reform program with the assistance of multilateral institutions and bilateral doors. The peg to the USD was removed at the beginning of this period in April 2012, which resulted in the unification of the official rate with the informal rate to reflect market demand and supply conditions.

Drivers of Inflation
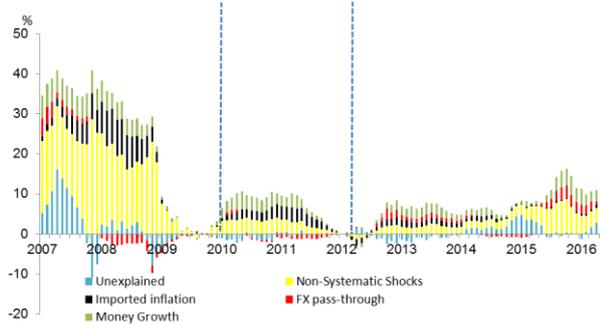
Note: The vertical lines denote the separation of the series into three periods to correspond with Text Table in the right panel.
Source: AMRO staff calculations

Average Contribution of Drivers of Inflation across Different Periods (% of Total Inflation)

	2007-2010	Mar 2012	Apr 2012-2016	Total
Imported inflation	3.2	1.9	0.7	1.9
FX pass through	-0.2	-0.7	0.8	0.0
Money Growth	3.3	1.3	1.9	2.2
Non-Systematic Shocks	10.7	1.4	2.8	5.0
Residual	0.9	0.1	0.6	0.6
Average Inflation	17.9	4.0	6.9	9.6
Exchange Rate Movement Across Different Periods				
	2007-2010	2010-Mar	Apr 2012-2016	Total
kyat (% change)	33	20.7	-32	4.7

Source: AMRO staff calculations

Non-systematic random supply shocks contributed the most to high inflation likely due to frequent occurrence of natural disasters[29], while money growth and imported inflation have been consistent drivers of inflation across the different policy regimes, and exchange rate pass-through started to contribute positively to inflation in the recent period. The regression results indicate significant coefficients for selected variables (please see Appendix , Section A1 for the regression output table). Using the coefficients derived from the regression, the contribution of each variable to inflation is computed (see Text Chart above). From an average inflation of 9.6 percent for the entire sample period, the largest contributors to inflation are random supply shocks, accounting for more than half of inflation dynamics during the past 10 years. During 2007-2009 and 2015-2016[30], such random supply shocks accounted for spikes in inflation because of the impact of natural disasters and their persistence given limited disaster management capacity. A second major factor is money growth, which explained around 23.0 percent of inflation, while imported inflation contributed almost a fifth of average inflation for the whole sample period. A breakdown of the sample into different periods (see Text Table above) indicates that the respective contributions of money growth and imported inflation to overall inflation were almost equal during the pre-reform period. Since the reform period began, however, the contribution of imported inflation has waned, while that of money growth

---

[29] Myanmar is ranked one of the highest in the world in terms of disaster risk and capacity to address such risks according to various global measures, particularly the UN Risk Model of the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) and Climate Risk Index by Eckstein, D., Dorsch,L., and Fischer, L., Kreft, S., 2016, "Global Climate Risk Index 2016","Germanwatch Briefing Paper.

[30] The removal of government subsidies on fuel on August 2007 caused massive price hikes and civil unrest. This was followed by Cyclone Nargis in early May 2008, the worst natural disaster in Myanmar, with 138,000 fatalities recorded. During the monsoon season in 2015, Cyclone Komen brought heavy rainfall in Myanmar in July and August, affecting 12 out of 14 states and regions in Myanmar, with an estimated 5.2 million people being affected by the floods. Heavy rains and floods once again negatively affected Myanmar in July and August 2016, affecting almost half a million people.

has remained large at around 27 percent. Meanwhile, the general depreciation trend in the recent period (April 2012-2016) has contributed 11.5 percent to inflation, broadly similar to imported inflation.

Going forward, broader economic management beyond monetary policy is essential to contain inflation. As highlighted by the results, inflation has been largely driven by random supply shocks. The broad policy response therefore requires improving disaster management to mitigate the impact of heavy flooding, and developing infrastructure, especially rural roads and transport systems. Continuing developments on these fronts can reduce the impact of natural shocks and shorten the persistence of high inflation, particularly by facilitating the flow of goods and services.[31]

Controlling money growth by phasing out direct financing of the fiscal deficit could help mitigate inflationary pressures due to their significant impact on inflation. Although the effects of money growth and exchange rate are not as large as the effect of supply shocks on inflation, they are still significant. A separate vector autoregression (VAR) analysis was conducted (see Appendix, Section A2 for details), which showed that both exchange rate depreciation and money growth significantly affect inflation, however, the effect of depreciation on inflation lasts longer.[32] This result points to the need for the CBM to maintain tight control of money supply to manage inflation effectively. CBM response could include limiting and eventually fully phasing out the direct financing of the fiscal deficit by the central bank. Under the managed float exchange rate regime instituted in April 2012, the flexibility in the exchange rate has helped the economy adjust to external shocks, particularly during the downturn in commodity prices in recent years. This VAR study nevertheless shows that exchange rate pass-through is significant; hence, it is important to prevent second round effects by tightening monetary policy.

Appendix

A1. Inflation Determination

The steps of our inflation drivers' investigation in this selected issue are as follows:
Step 1: We construct the following Instrumental Variables (IV) to use as regressors: inflation in Myanmar's top three trading partners (China, Thailand and Singapore); nominal effective exchange rate (NEER) calculated using bilateral exchange rates of the top three trading partners; reserve money growth; and non-systematic shocks constructed by employing an unobserved stochastic volatility model. After controlling money growth, exchange rate, global food prices and global energy prices, the time-varying standard deviations of stochastic volatility are extracted to represent the shock variable.[33]

---

[31] According to ADB (2016), an estimated 70.0 percent of all villages in Myanmar do not have all-season road access and this affects a population of around 20 million people. Providing all-season access to all villages would involve constructing about 100,000km of roads and upgrading 75,000km of existing roads.
[32] The foreign exchange depreciation has a strong effect on inflation and has a long lasting effect of around 20 months. The effect of money growth on inflation is also significant, but lasts only around 3 months.
[33] We choose 36 periods for the Bayesian sample training to form priors and the results are based on 30,000 draws with 20,000 burn-in draws through Gibbs Samplings (a variant of the MCMC process).

Step 2: We estimate the regression of domestic inflation using the above regressors. As such a determinant regression upon contemporaneous relations is subject to the problem of endogeneity for the variables of exchange rate and money growth, the lag variables and additional global food and oil prices are used as instruments for the two-stage least squares. The results are shown in the following Table:

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Imported Inflation	1.57	0.40	3.93	0.0002
NEER	0.20	0.07	2.88	0.0048
Money Growth	0.26	0.14	1.90	0.0599
Non-systematic shocks	8.39	0.72	11.65	0.0000
Constant	-10.36	2.37	-4.37	0.0000
R-squared	0.65	Adjusted R-squared		0.64

Step 3: We calculate each variable's contribution to inflation by using the coefficients of independent variables estimated in Step 2 for each of the three periods and for the entire period.

A2. VAR System

We employ the VAR method below to examine the impact of money growth and exchange rate on inflation.

$$\pi_t = \alpha + \beta_{2,j} \sum_{j=1}^{l} \pi_{t-j} + \beta_{2,j} \sum_{j=1}^{l} m_{t-j} + \beta_{3,j} \sum_{j=1}^{l} e_{t-j} + \gamma X_t + \epsilon_t$$

where π_t stands for domestic inflation, and m_t and , e_t represent money growth and exchange rate respectively. p, p^* and E stand for domestic price, foreign price and exchange rate, all in levels similar to the construction of variables in A1. X_t is the controlling variable such as global food and oil. Two lags are chosen based on information criteria.

The impulse response in Figure C1 shows that NEER depreciation has a strong effect on inflation and has a prolonged effect of around 22 months. The effect from money growth on inflation is also significant as demonstrated in Figure C2. However, it is relatively less persistent with the effect lasting for around five months.

**Figure C1: Response of Inflation to FX Depreciation**
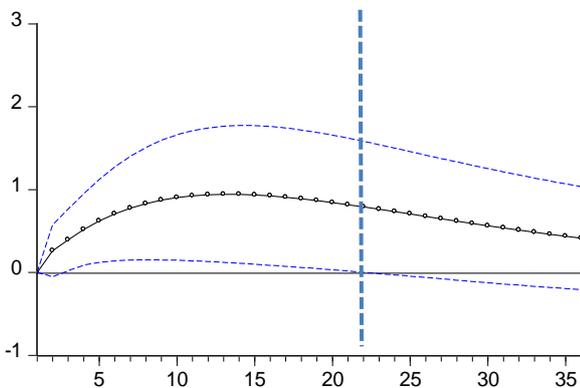
Figure C2: Response of Inflation to Reserve Money Growth
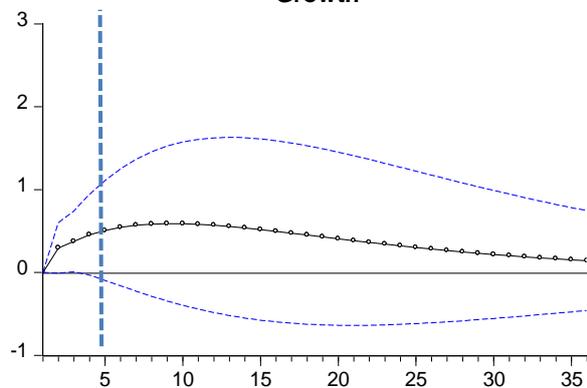
Annex 2. Microfinance in Myanmar: Development, Challenges and Regulatory Enhancements

Background

At the beginning of the reform process in 2010, access to finance for agriculture and micro- and small enterprises was identified by the government as one of the priority areas, given that a large portion of these sectors still do not have access to financial services. Data from the World Bank show that Myanmar has the lowest number of commercial bank branches per 100,000 adults, at 3.3 as of 2015. Although this ratio has improved from 1.8 in 2004, the country still lags behind peers such as Vietnam (3.8), Timor-Leste (5.0) and Cambodia at (6.1), and only does slightly better than Lao PDR (2.9).[34] Estimates also show that more than half of the population rely on agriculture and micro- and small enterprises as their means of living, which implies a significant unmet demand for credit in these sectors. For example, while the agricultural sector represents 43.0 percent of GDP and employs 54.0 percent of the population, but only 2.5 percent of all outstanding loans are provided to this sector (Seward 2012).[35] In 2012, the United Nations Capital Development Fund (UNCDF) estimated that there is approximately 1,000 billion kyat (1.5 percent of GDP) worth of unmet microcredit demand in Myanmar.

To serve the unmet credit needs of the agriculture sector and micro- and small enterprises, the government bolstered microfinance institutions (MFIs) through the Microfinance Law. With private banks still held down by restrictive rules (particularly high collateral requirements) and unable to lend to a wider population, the government launched a campaign in 2011 to promote microfinance to fill the credit gap, with the enactment of Microfinance Law as its cornerstone. The Law allowed local and foreign investors who are keen to participate in Myanmar's microfinance sector to be formally regulated by granting wholly privately-owned licenses that pave the way for the establishment of MFIs. At the same time, the Law also seeks to eliminate borrowing and lending activities via informal channels (Please see below for other key elements of the law).

Key Excerpts of the Myanmar Microfinance Law of 2011

- MFIs will acquire legal status as cooperatives, NGOs, or private local or international companies or organizations.
- Two categories of MFIs are permitted, namely non deposit-taking MFIs and deposit-taking MFIs. Non deposit-taking MFIs can extend microcredit with funds obtained from sources other than public deposits, but may utilize compulsory savings from members who take microcredit. Deposit-taking MFIs can utilize other sources as well as voluntary savings deposits collected only from their clients.
- MFIs have to comply with the requirement of a minimum capital of 15.0 million kyat for non deposit-taking institutions and 30 million kyat for deposit-taking ones.
- The types of services that can be rendered by MFIs are the provision of microcredit and taking deposits. Microcredit is defined as loans without collateral.
- MFIs are subject to a maximum lending rate of 30.0 percent per annum or 2.5 percent per month.
- MFIs are required to apply a minimum rate on deposits of 15.0 percent per annum or 1.25 percent per month.

Source: International Financial Corporation

**Developments in the MFI Sector since the Reform**

---

[34] World Bank Online Databank accessed on 28 February 2017.

[35] According to estimates, the agriculture sector makes up the bulk of the SME sector in Myanmar.

MFIs are seen as the ideal model to boost financial access in Myanmar. With banks unable to provide the required credit to agriculture and micro enterprises, MFIs are seen as the primary vehicle to fill the gap. The model of having a network of closely-knit communities wherein a recognized group of elders, or the community as a whole, incentivizes individual borrowers to maintain good credit standing, is expected to provide the needed assurance even without collateral or credit history. Such a model allows easier access for those who need credit and, at the same time, has proven to mitigate the risk of loan defaults, due to its self-regulating nature. This means that the community encourages individual borrowers to pay off their loans on time, which in turn translates into more supply of ready credit, thus increasing both credit access and availability. The funding model of relying on equity rather than deposits likewise minimizes systemic risk to the financial sector and the economy as a whole, making it ideal for a country like Myanmar, particularly given past bank failures that resulted in huge losses to the public.

The MFI sector has expanded rapidly over the past five years. Having more flexibility in providing loans, allowing foreign capital to come in, and developing a conducive regulatory environment for MFIs have resulted in the exponential growth of the industry, which has outstanding loans worth 1.9 trillion kyat as of October 2016, up from 86 billion kyat in FY2012 (see Text Chart below, left panel). This accelerated growth was fueled largely by the influx of local and foreign companies into the sector. It can also be attributed to the shift from informal to formal sources of finance.[36] This development has enabled an expanded number of borrowers to access MFI finance, with borrowers numbering at 2.3 million as of October 2016 from around 700,000 in FY2012 (see Text Chart below, right panel). The growth in the industry was further boosted in FY2015 when the maximum loan size was raised to 5 million kyat from 500,000 kyat, with the average loan size rising to 675,000 kyat in FY2015 from 280,000 kyat previously.

MFIs Loans and Paid-up Capital
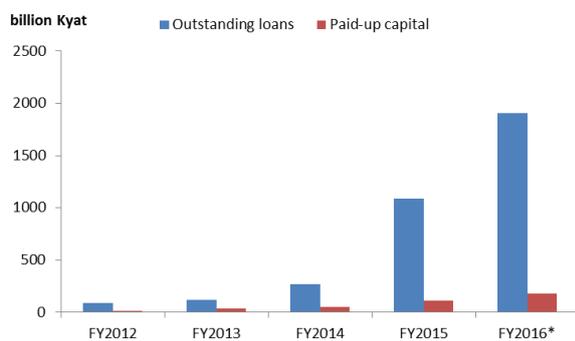
Note:*FY2016 until October only
Source: Financial Regulatory Department (FRD)

Number of MFI Institutions and Borrowers
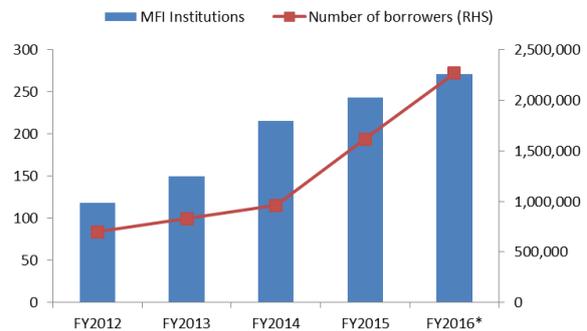
Note: *FY2016 until October only
Source: FRD

---

[36] According to a study by UNCDF on Making Access Possible (MAP) in Myanmar (2014), a financial services survey conducted in 2013 revealed that 64.0 percent of the respondents make use of both formal and informal sources of credit, while 41.0 percent make use of informal services only.

The rapid growth of MFIs has allowed the sector to overtake the Myanmar Agricultural Development Bank (MADB) in terms of outstanding loans. The MADB is the biggest state-owned bank that lends to rural farmers and small business owners, mostly in the agriculture sector. It accepts deposit and provides credit to more than 1.4 million people in rural areas on a subsidized basis. Amid MADB's entrenched position in agriculture lending, the MFIs were able to come to par with MADB in terms of outstanding loans in FY2015 and overtook it in FY2016, according to latest available data. Nonetheless, despite the rapid increase in MFI loans, overall credit provided by private banks is still much larger, although it should be noted that private banks lend to a different segment, particularly large corporations and high-income individuals (see Text Chart below).

Outstanding Loans of MADB, MFIs and Private Banks

Note: *FY2016 until October only
Source: MADB, FRD, Central Bank of Myanmar (CBM)
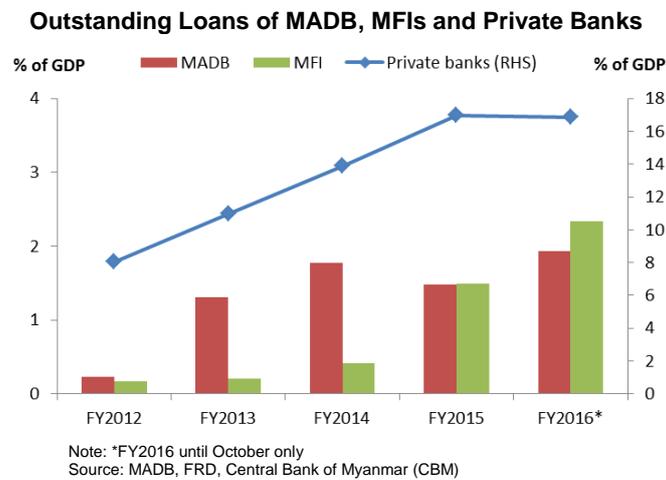
Challenges and Policy Discussion[37]

Various strategies for greater financial inclusion can be explored. Efforts to increase financial inclusion need to be continually and consistently exerted given that Myanmar remains a low-income country dependent on agriculture and micro enterprises from which people derive their livelihood. To ensure enhanced financial inclusion, authorities may consider promoting access to smaller loan amounts and streamlining documentation requirements. Allowing MFIs to process remittance transactions and issue payment cards may also increase the number of account holders, and thus encourage more people to transact in formally-regulated financial institutions. Promoting financial activities through alternative channels, particularly mobile phones, could also boost financial access.

At the same time, the accelerated growth of the MFI industry requires continued vigilance to ensure that financial stability is maintained. Increased financial inclusion with financial stability can be achieved with an appropriate mix of policies. With increasing outstanding loan amounts and a growing customer base, authorities need to be watchful through the implementation of continued

---

[37] The Basel Committee on Banking Supervision's paper on "Range of practice in the regulation and supervision of institutions relevant to financial inclusion" (January 2015) provides a comprehensive discussion about policy choices and best practices in this area.

supervision and improvements in prudential regulations for MFIs. The following policies may be considered to enhance financial stability in the MFI sector:

- **Enhancing MFI regulatory and supervisory resources.** In September 2014, the Financial Regulatory Department (FRD) was formed, comprising mainly of staff from the former Myanmar Microfinance Supervisory Enterprise. This new department under the Ministry of Planning and Finance was given an expanded mandate to supervise not only microfinance institutions, but also state-owned banks, private insurance companies and the state lottery. It is essential that regulatory and supervisory resources in the MFI area are further strengthened and the required focus on supervision of MFIs is not diluted by this expanded supervisory coverage expected of the FRD by ensuring adequate allocation of supervisory resources.

- **Authorities need to be vigilant, and constantly develop supervisory techniques to keep abreast of the rapid expansion of the sector.** Economic progress combined with the move towards greater financial inclusion could give rise to financial innovations that will necessitate enhanced monitoring to maintain the stability of the financial sector. Regulators and supervisors require specialized understanding of risks inherent from special features of MFI lending such as risks that large volumes of small transactions are hit by the same large shocks such as a natural disaster, operational risks from digital and mobile platforms, and credit risks of small uncollateralized loans. In this regard, a program of continuous training and capacity building needs to be developed, to build and enhance understanding of microfinance business and products.

- **Enhancing licensing criteria.** Licensing criteria can be further enhanced to screen out risky or non-viable institutions by including the assessment of ownership structure, governance strategies, internal controls, and risk management.

- **Improving cooperation and collaboration among relevant domestic authorities and foreign supervisors.** Enhanced coordination between various agencies is required. This is particularly true of the Central Bank of Myanmar, given its supervisory role over the financial sector; and the FRD, which is the main supervisor for MFIs. Coordination with telecommunication regulators may also be necessary once financial activities start making use of alternative channels such as mobile phones. The involvement of foreign MFIs also requires proper coordination with the home supervisor.