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MALI

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MALI

SELECTED ISSUES

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Approved By
The African Department

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Glossary

ALP	Arm's Length Principle
BCEAO	Banque centrale des États de l'Afrique de l'Ouest
CDIS	Coordinated Direct Investment Survey
CFAF	West African CFA franc
CGI	Code général des impôts (Tax Code)
CIT	Corporate Income Tax
CREDD	strategic framework for economic recovery and sustainable development of Mali
DGI	Direction Générale des Impôts du Mali
EBITDA	Earnings before interest, tax, depreciation and amortization
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
IMF	International Monetary Fund
LIBOR	London Interbank Offered Rate
MC	Mining Code
MNE	Multinational enterprise
OECD	Organization for Economic Co-operation and Development
PIE-X	Public Investment Efficiency indicator
PIM	Public investment management
PIMA	Public Investment Management Assessment
PPPs	Public-private partnerships
SIGIP	Public Investment Management Database
VAT	Value Added Tax
WAEMU	West African Economic and Monetary Union

THE COST OF INSECURITY[1]

A. A Fragile State

1. Mali is a fragile state with a highly undiversified economy. Mali's multi-faceted fragility is rooted in ethnic and political violence, poor governance, and unequal development. With agriculture accounting for over 30 percent of GDP, and cotton and gold for over 80 percent of exports, the country is vulnerable to adverse weather conditions and to commodity price fluctuations. Mali has a total population of over 18 million inhabitants, 10 percent of which live in the northern regions. With the current annual population growth of over 3 percent and fecundity rate of 6.2 children, the population is projected to increase to over 45 million by 2050. It is estimated that half of the population are below the age of 15 (World Bank 2016). Mali is one of the world's poorest countries, ranked as number 179 of 187 countries (UNDP 2017). High population growth rates and drought have fueled poverty, food insecurity, and instability. The country ranked 175th out of 188 countries, on the UN Human Development Index in 2016). Development indicators fall short of the Sustainable Development Goals. These challenging conditions, especially in the northern regions, are being exploited by terrorists and other militant groups. With growing insecurity, the delivery of services in this large, sparsely populated territory is challenging, and further affects geographic equity and social cohesion.

B. The Context of the 2012 crisis

2. In 2012, Mali was hit by a crisis unique in its nature, duration and impact. Heavily armed Tuareg separatists returning from Libya supported by jihadists groups drove the Malian army out of major northern cities and occupied vast sections of northern Mali for most of the year. Unlike prior rebellions[2] that were quickly circumscribed the 2012 uprising reached an unprecedented scale (Pezard et al., 2015).[3] The military defeat fed into existing frustrations with an ineffective political process and pervasive corruption and led to a military coup d'état in March 2012. Adding to a food crisis, these events created much political instability and damaged the economy. The occupation of the northern regions by armed groups with varied political and religious agendas, opened the space to criminal activities, including the taking of hostages, put the country at war and worsened the humanitarian situation with the displacement many people, both internally and in neighboring countries.

3. Conditions improved somewhat since 2013, but remain fragile. Control of the northern region was eventually restored with the help of French, African and United Nations Multidimensional Integrated Stabilization Mission in Mali (MINUSMA) troops in 2013, allowing elections to take place.

[1] Jemma Dridi. This paper draws on an earlier internal note prepared by Garth Nicholls in 2017.

[2] Since independence in 1960, there have been four rebellions (1963–1964, 1990–1996, and 2006–2009).

[3] The 2012 is seen as the worst crisis that post-colonial Mali has faced, because of the combination of different groups of insurgents, with not only Tuareg rebels claiming greater autonomy for the north, but also a range of jihadists with politico-religious agendas

In 2015, a peace agreement[4] was signed in Bamako between the government, the ex-rebel armed groups gathered within the Azawad Movement Coordination (AMC) and the armed groups close to the Malian government forming the Platform. This agreement brought hope and contains many provisions dealing with the development of northern regions, territorial organization and greater decentralization, security sector reforms and reintegration of combatants of various armed groups into the Malian security forces and civilian administration, human rights, and justice and reconciliation. However, since then, efforts to restore political, social and security order in the northern regions have been facing daunting challenges:

- security conditions have worsened, especially in the center of the country. Attacks by terrorist groups that are not signatories of the peace agreement have become more sophisticated. Despite losing their stronghold in the north in 2013, jihadist groups appear to be increasing the scale, scope and frequency of their attacks and therefore remain a key threat to stability in the Sahel and West Africa in general.[5]

- progress on the implementation of the 2015 peace agreement has been very slow, and this is giving rise to popular frustration and mounting tensions between the government, the population and ex-rebel groups that signed the peace agreement. After protracted negotiations, the interim authorities have officially returned in the North. However, the presence of government official and civil servants in northern and central Mali has decreased, primarily because of persistent insecurity. Contrary to notable progress achieved in fiscal decentralization, the process of disarmament and that of the demobilization and reintegration of combatants has yet to begin. In addition, persistent insecurity prevents or stalls the implementation of the planned development projects in the North. The proposed referendum in 2017 to reform the 1992 Malian Constitution in response to the 2015 Peace Agreement failed.

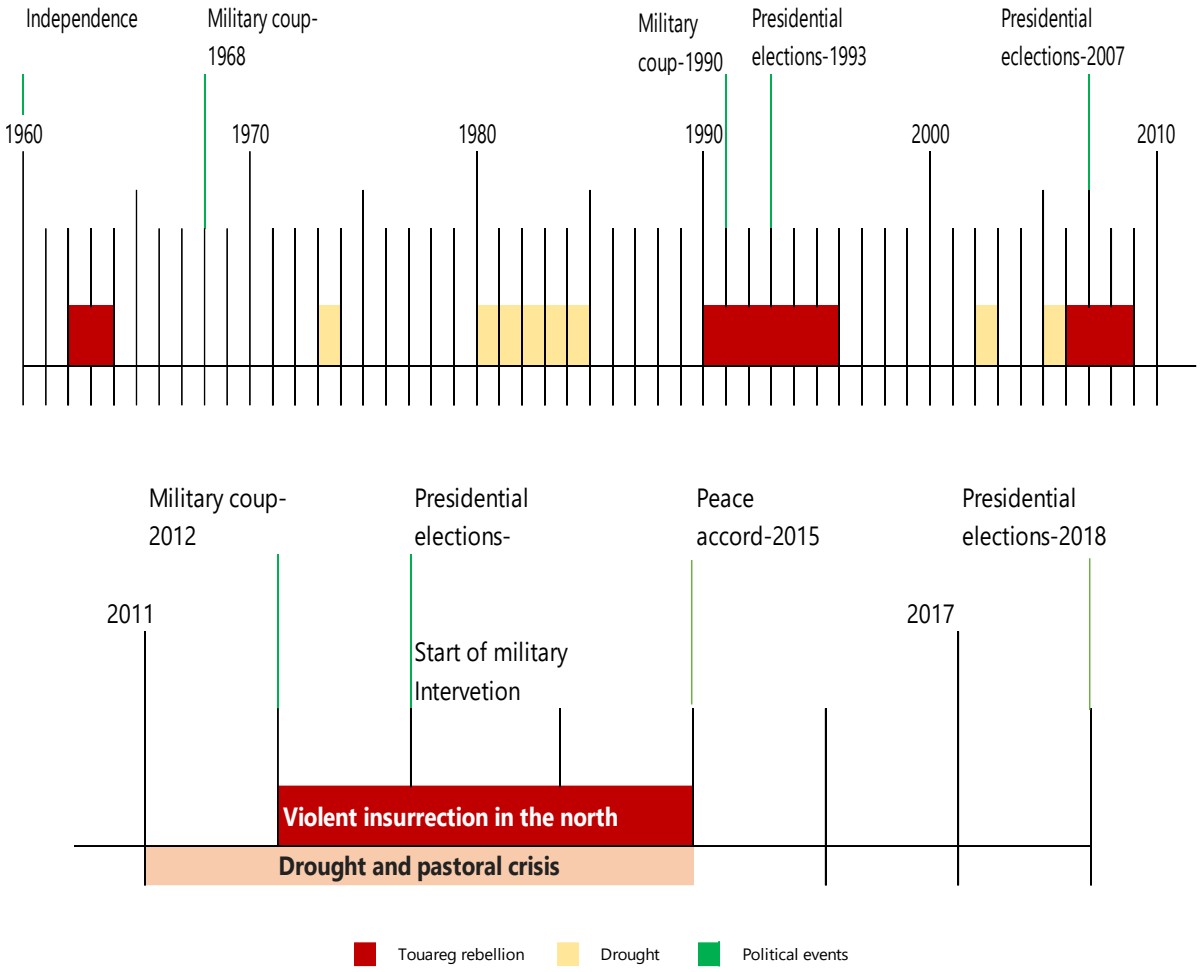
C. Impact of the Crisis

4. The 2012 crisis has significant economic effects, social and humanitarian impact, especially in the northern regions. The increase in security spending weighs on the budget and reduces space for priority spending. Persistent insecurity hinders investment and growth. The crisis resulted in the interruption and / or disruption of learning activities in the northern part of the country, dangerously compromising the efforts of the Government of Mali and its partners to achieve Education For All. The security crisis has slowed progress toward reducing poverty and achieving the Millennium development goals.

[4] The Agreement for Peace and reconciliation resulting from the Algiers process (the Peace Agreement) was signed on June 20, 2015.

[5] In late 2016, jihadi fighters based in Mali launched attacks in western Niger and northern Burkina Faso. Then in January 2017, a suicide bombing left 77 people dead in one of the deadliest attacks in recent years. In June 2017, Jihadists attacked a resort in a suburb of Bamako, killing four guests. Additionally, the Malian army reported on July 20 that it had repelled an attack against a military base located in Koro, near the border with Burkina Faso.

Figure 1. Mali: Sequence of Important Events



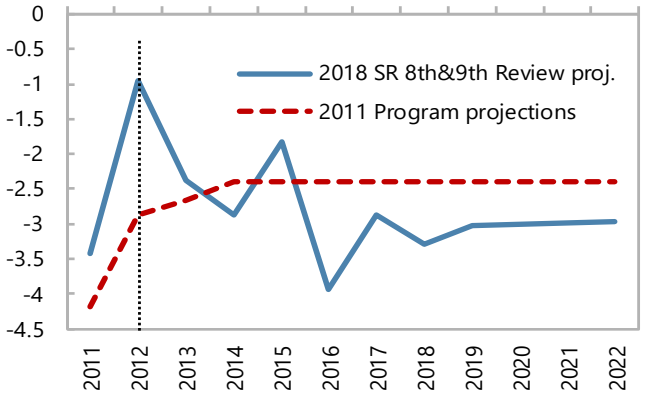
Source: Welthungerhilfe et al. (2015); and author's updates.

Economic Impact

5. Although initially narrowing sharply in 2012, the overall fiscal deficit has since widened. Actual realizations and projections over the medium terms show lower revenues and higher spending than envisaged in the 2011 program projections (Figure 2, IMF Country Report IMF Country Report No. 13/44, Malian Ministry of humanitarian actions, 2013). In 2012, reflecting the unsettled political environment, donors initially pulled back their support and total revenue dropped sharply. The authorities adjusted total public spending and the overall deficit narrowed sharply relative to the 2011 program projections. At the same time, spending on security rose while resources from other budget categories were reduced. Social spending was therefore adversely impacted, but the authorities still attached priority to spending on education, health and social development in line with their growth and poverty reduction strategy. In 2013, constitutional authority was restored and the donors reengaged, providing the authorities with more resources to implement their priorities. In 2016 total public spending, as a share of GDP, was about 0.8 percentage points higher than that envisaged in the 2011 program projections and is projected to remain about 1.3 percentage points higher than projected in the 2011 fiscal program in the near term. This higher spending is being driven by increased security needs, preparations for the presidential elections in 2018, spending on social programs, and the implementation of the 2015 peace agreement. At the same time, total revenues (even after an adjustment for the rebasing of GDP in 2016), as a share of GDP averaged 1 percentage point lower than its pre-crisis projection.[6] Lower revenues reflect a combination of lower average tax revenues; lower grant receipts and lower non-tax revenues. As a result of these factors, staff's medium-term overall deficit projection has widened to about 3 percent of GDP starting in 2019, compared with a projected deficit of about 2.3 percent of GDP for the 2011 projections.

Figure 2. Mali: Consolidated Public Sector Deficit, 2011-22

(in percent of GDP)



Sources: Malian authorities; and IMF staff estimates and projections.

6. The authorities cleared external arrears in 2015. In 2012, although the government responded with fiscal austerity, including the cutting of almost all capital spending, it could not prevent the accumulation of arrears to external creditors of about 0.5 percent of GDP. These arrears

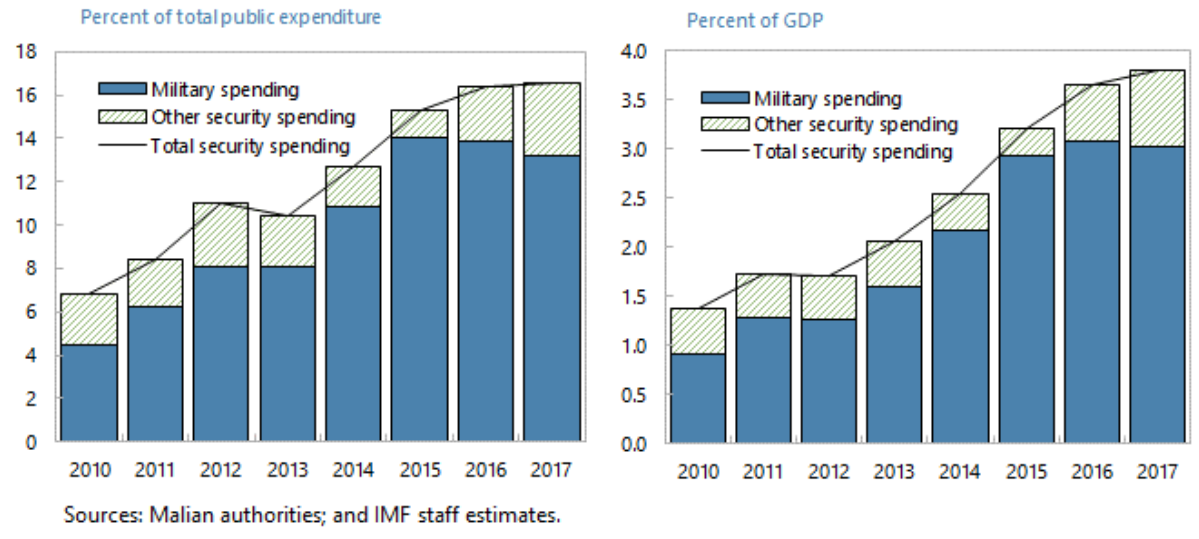
[6] Nominal GDP was rebased in 2016. The new nominal GDP series (used for the 8th & 9th reviews) from 2011 to 2016 is about 10 percent higher than the GDP series used in the 2011 program projections. For the purposes of this comparative analysis, the fiscal ratios were restated using the new nominal GDP.

have since mid-2015 been fully cleared.

7. The authorities have also adjusted the priorities of the budget to address both the immediate security needs and the implementation of the 2015 peace agreement. Two specific measures have budgetary implications. First, the Peace agreement includes a process of fiscal decentralization. Under this measure the central government is committed to transferring 30 percent of budget revenue to subnational governments by 2018. Transfers to local government reached 24.4 percent of revenues in 2017, and are expected to rise to 25.3 percent in 2018. The authorities have prepared a three-year strategy to finance regional development projects by increasing transfers to the national support fund for technical communities (FNACT) to support investment in the regions. Second, a sustainable development (FDD) has been established as a component of the peace process. The FDD is expected to help finance regional development projects, especially in the northern regions and accompany the decentralization process. The FDD is being financed mainly through export taxes and other levies targeting specific sectors. An amount of CFAF 18 billion and CFAF 24.6 billion was executed in 2016 and 2017, respectively, and CFAF 40 billion is budgeted for 2018.

8. Military and security spending is consuming an increasing share of public spending (Figure 3). The share of security spending in Mali's budgets has been increasing, making the preservation of much needed spending on social services and development investment challenging. A year before the crisis, military spending, as a share of public expenditure was 8.4 percent (2.1 percent of GDP), however by 2013 this had risen to 11.4 percent (about 2.9 percent of GDP), and in 2017 it was 16.5 percent of spending (3.8 percent of GDP). The security needs are part of the security planning and civil protection act, which provides for enhancing human resources management (recruitment, training and career path) for police and security staff.

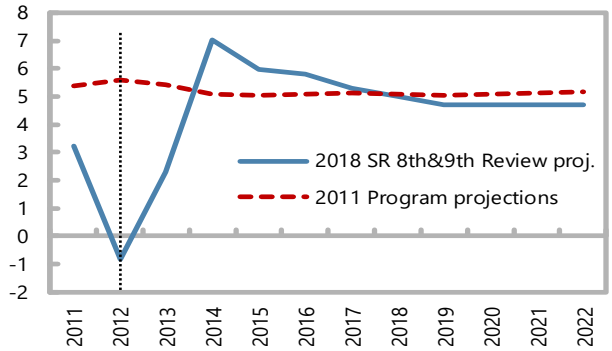
Figure 3. Mali: Security Spending, 2010–17



Sources: Malian authorities; and IMF staff estimates.

9. Economic activity was adversely impacted, especially in the immediate aftermath of the 2012 terrorist attack (Figure 4). In 2011, the year before the terrorist attack and coup d'état, staff projected output growth for 2012 at about 5.5 percent, and 5.2 percent for the medium term. After the terrorist attack, growth in 2012 plunged to minus 0.8 percent and average growth over the medium-term was marked down to less than 5 percent. Economic activity has been mostly impacted in the northern region and some businesses and aid agencies have substantially scaled back their operations given their increased costs associated with insecurity. The fragile security environment has also prevented the government from delivering basic social services, thereby increasing the cost of doing business in these regions.

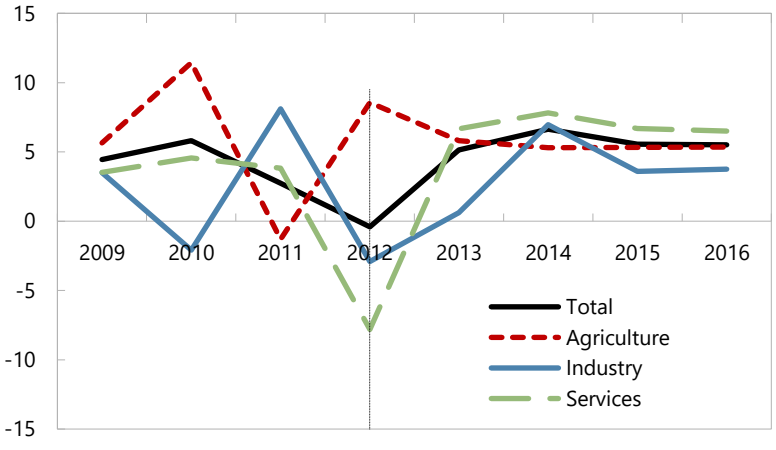
Figure 4. Mali: Real GDP Growth, 2011–22 (percent)



Sources: Malian authorities; and IMF staff estimates and projections.

10. The services sectors, especially tourism and commerce, were among the most adversely impacted sectors (Figure 5). Travel to Mali and associated services fell sharply. Moreover, the ongoing terrorist attacks, are likely to restrict further development of the tourism sector. However, key sectors such as agriculture and mining, were not directly impacted by the terrorist attacks given their geographical location in southern Mali. They expanded in 2012 and helped to offset, somewhat, the negative impact of the other sectors (services and industry) on overall output growth.

Figure 5. Mali: Real Sectoral GDP Growth, 2011–22
(in percent)



Sources: Malian authorities; and IMF staff estimates.

11. The impact on FDI is likely to have been small. Most of the FDI is focused on gold mining operations that are located in the south of the country and do not appear to have been adversely impacted.

12. Financial soundness in the banking sector has deteriorated. Following the take- over in the north, banks suffered losses estimated at 0.3 percent of GDP through the theft of bank notes,

the looting of buildings and an increase in NPLs. By end-2012, NPLs had risen to 21.5 percent of total gross loans, out of which only 64 percent had been provisioned. In 2017, NPLs are still high at 16 percent of total gross loans, but the authorities have begun to implement a plan to resolve the banking sector problems. This plan involves the merger of two banks, an aggressive strategy to reduce NPLs and then the eventual partial privatization of the new bank.

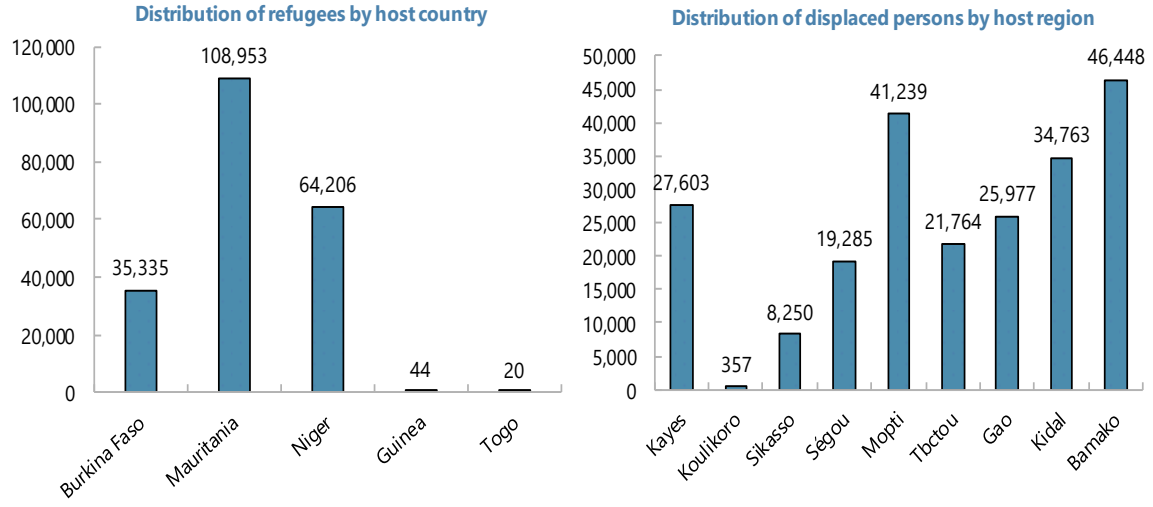
Humanitarian and Social Impact

13. The crisis displaced entire populations, caused loss of lives, and deprived generations in the north from education. According to the UN OCHA (2012), the total population displacement is 412,401, including 208,558 refugees in neighboring countries (including 108,953 in Mauritania, 64,206 in Niger, and 35,335 in Burkina Faso) and 203,843 internally displaced persons (Figure 6). Internally displaced people have been hosted by 150,000 households, putting increasing pressure on the resources of the host families and on the basic social services of the host communities. According to the Ministry of Humanitarian Action, Solidarity and the Elderly, Women and children are the most affected by the crisis, with about 52 percent of the displaced are women and 31 percent of children. The outbreak of conflict has severely disrupted improvement in education in previous years. An estimated 800,000 school-aged children were affected by ensuing complex emergency, in addition to 1.2 million children who were out of school prior to the crisis (Sarrough, 2013). Indeed, they have translated by the destruction of the management structures of the school, the schools, the displacement within (to the southern part of the country) and outside (in neighboring countries, Burkina Faso, Niger, Mauritania) and the demoralization of teaching staff. Some education personnel closed schools for fear of being attacked by armed groups; others were found to be occupied and used by them as locations to base their operations and to train new recruits. Despite the government's efforts to reopen schools, the UN OCHA reported that as of end-2017, about 500 schools are still closed in the north and center due to insecurity. more than half of these schools are in the region of Mopti alone. In addition, nearly 150,000 children are out of school or out of school due to school closures.

14. Another aspect of the humanitarian crisis is food insecurity and the massive displacement of populations. Mali, before the political and security crisis, was already facing a serious food crisis in the entire Sahelian belt of its territory because of the bad campaign 2011–2012.[7] The political and security crisis and the resulting massive displacements of the populations of the North worsened the food insecurity and deteriorated the living conditions of the populations. According to the UN OCHA, the humanitarian situation in the north remains worrying due to the absence of public administrations (forced departure of civil servants); withdrawal of international NGOs (high risk of hostage taking); looting of banks, grain stores and state and WFP food security stocks; closing of health centers, pharmaceutical depots and schools; a break in the supply of electricity and drinking water and disruptions in the approval of the markets.

[7] The Ministry of Agriculture indicated a sharp (41 percent) drop in cereal production or 5,286,351 tons (all cereals combined) in 2011-2012. As for the northern regions, this deficit was estimated at 138,690 tons and the population affected to more than 900,000 people.

Figure 6. Mali: Distribution of Refugees and Internally Displaced Persons



Source: UN OCHA, Cluster Protection and Commission Movement of Populations, October 2012.

15. The security crisis has slowed progress toward achieving the Millennium development goals. This especially due to the massive displacement of people fleeing insecurity in regions in northern Mali. The crisis has adversely impacted the delivery of basic social services. The coup of March 2012 led to the suspension of almost all public development assistance, except emergency and direct population aid. According to the poverty reduction strategy paper – progress report (2014),[8] it also caused the poverty incidence to increase by a percentage point to 42.7 percent in 2012 from 41.7 percent in 2011 as agricultural output and trade was disrupted and a fall in public investment.

[8] IMF country report 14/166.

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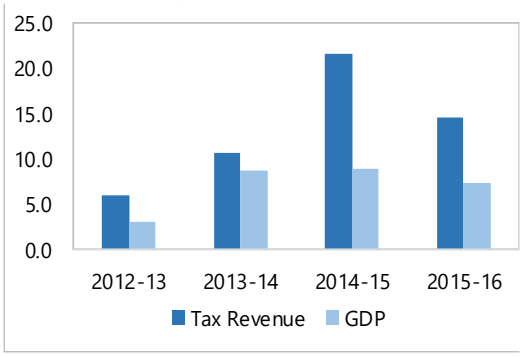
TAX REVENUE MOBILIZATION IN MALI[1]

Mobilizing more revenue to keep up with raising spending will be critical to implement the new government's priorities while preserving fiscal sustainability in the context of declining external support. This paper shows that the tax-to-GDP ratio, at about 12.6 percent is low relative to West African Economic and Monetary Union (WAEMU) and SSA averages. Using the peer (SSA) analysis and stochastic frontier approach, the tax revenue gap in Mali is estimated at about 0.7 percent of GDP in 2010–15, implying a significant potential to raise revenue. The estimated gap is even larger for trade taxes at about 2 ½-3 percentage points of GDP below their tax capacity during the same period. The analysis suggests that closing the tax policy and tax gap will require sustained reforms, both in tax policy and tax administration. On tax policy, progress achieved with the law to forbid granting new discretionary exemption in 2017 can be consolidated by reviewing provisions of the tax and customs codes related to the tax base, duties and taxes to limit the cases of exemptions to considerations of economic policy and social nature. Consideration should also be to developing property taxation and address the under-taxation of agriculture and trade. With regard to tax administration, actions include cleaning up the taxpayer registration and accounting, upgrading the IT system and strengthening compliance risk management, and building the capacity of tax agents, including through on the-job training, the use of modern management tools and procedures, the reinforcement of the analysis and control capacities of the tax administrations, particularly in areas experiencing a marked economic growth.

A. Background and Recent Developments

1. Revenue mobilization in Mali has been in the last decade a pillar of the successive governments' economic and financial programs supported by the IMF. In the context of growing population and large development needs, domestic revenue mobilization has helped support investment in education, health, social protection, and critical infrastructure while preserving fiscal sustainability. Reliance on domestic revenue mobilization has also emerged as a top priority because of the significant decline in donor support. Over the last 12 years, external grants dropped from 3.5 percent of GDP in 2005 to 1.6 percent of GDP in 2017.

Figure 1. Mali: Tax Revenue and GDP Growth
(percent)



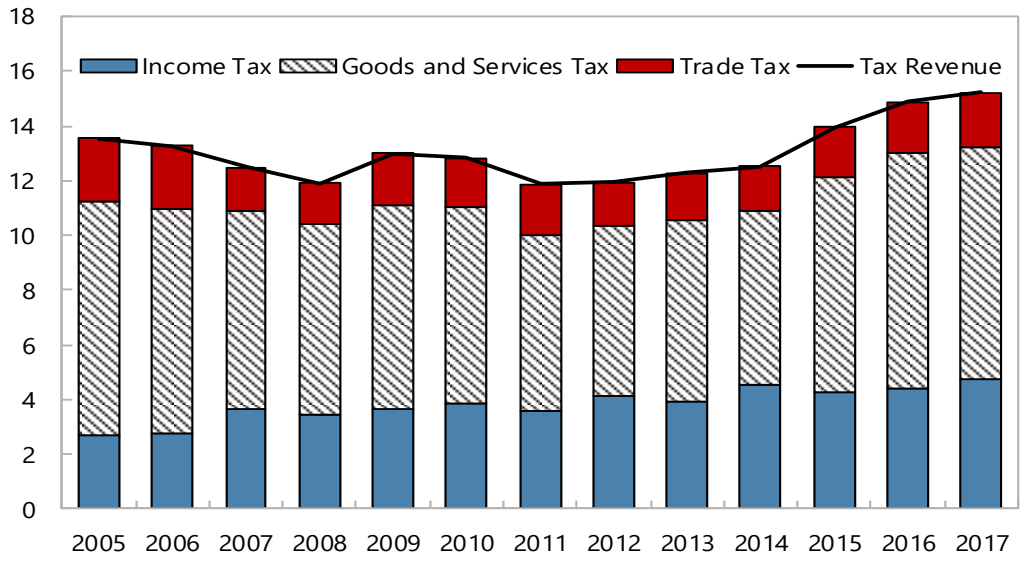
Sources: Malian authorities; and IMF staff calculations.

2. Mali's tax revenues have increased significantly in recent years, reflecting stronger economic growth and the impact of tax policy and administration reforms. Tax revenue increased by 13 percent per year during 2012–16, well above the nominal annual GDP growth of

[1] Prepared by Jemma Dridi and Edna Mensah.

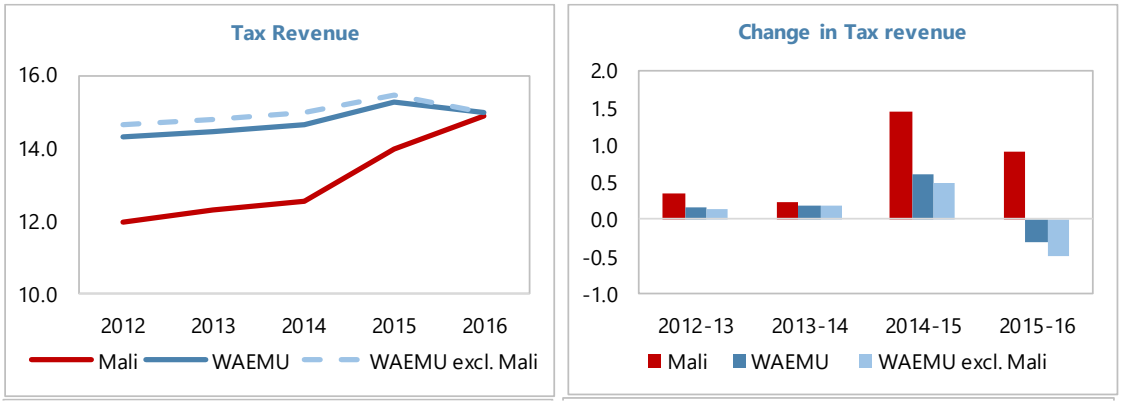
7 percent (Figure 1 and 2). As a result, the tax-to-GDP ratio increased from 11.9 percent in 2012 to 14.9 percent in 2016 (Figure 1), following an average decline by 0.2 percentage points of GDP per year over 2005–2012 (from 13.5 percent of GDP in 2005). The recent performance helped Mali score an average increase of 0.6 percent of GDP above the WAEMU average for the same period (Figure 3). In 2017, there was a further increase in tax revenue by 0.3 percent of GDP largely due to a 0.3 percentage point increase in income tax revenue and a modest increase of 0.1 percentage point in trade tax revenue offset by a 0.1 percentage point decrease in goods and services tax revenue (Figures 2). The tax-to-GDP ratio grows faster in Mali than in other WAEMU countries, albeit starting from a weak base.

Figure 2. Mali: Tax Revenue in Mali (percent of GDP)



Sources: Malian authorities; and IMF staff estimates.

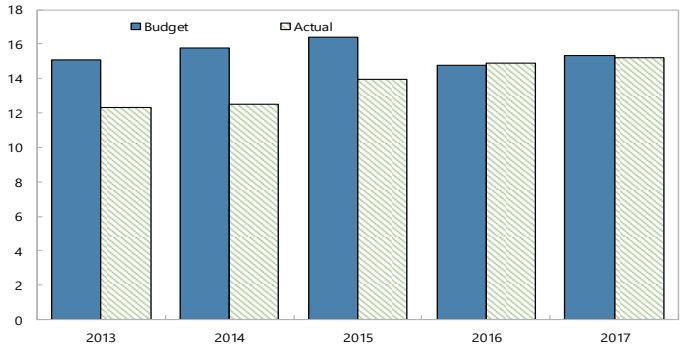
Figure 3. WAEMU: Evolution of Total Tax Revenue
(percent of GDP)



Sources: Malian authorities; FAD Revenue database; and IMF staff calculations.

3. Revenue collection has often fallen short of budget targets, complicating budget management. The shortfall has been predominantly driven by optimistic projections. Figure 4 shows that except in 2016 and 2017, the execution of the budget had resulted in a gap in revenue, which led to a scaling back in planned investment programs to keep the budget deficit within target. Difficulties to reduce expenditure in the second half of the year led to significant float, especially when committed external support could not be fully mobilized.

Figure 4. Mali: Tax Revenue Collection and Budget Forecast, 2013-17



Sources: Malian authorities; and IMF staff estimations.

4. The increase in tax-to-GDP ratio is due to tax policy and administrative measures. The authorities implemented series of tax reforms and administrative measures including, increase in taxes on financial transactions and telecommunication, the expansion of the tax base, increase in tax rates and improvement in tax payers' compliance. However, given this notable improvement in tax revenue, the WAEMU target of 20 percent tax-to-GDP ratio is far from being reached.

Mali: Tax policy and administrative measures, 2014-16

Tax policy
Elimination of oil price subsidies
Adoption of a 3% synthetic tax [1]
Increase in other tax rates
Telecommunications (TARTOP) [2]
Financial transactions (TAF) [3]
Excises on specific products (ISCP) [4]
Administrative measures
Change in the VAR threshold
Increasing audits of tax payers
Modernization of the mining and petroleum codes
Reorganization of medium and large tax payers units
Simplification of tax laws

Sources: Malian authorities and Staff estimates.
[1] This rate applies to every entreprise, business not paying VAT.
[2] The TARTOP increased from 2 % to 5%.
[3] The TAF was increased from 15% to 17%.
[4] Excise taxes on tobacco, alcohol and passenger vehicles

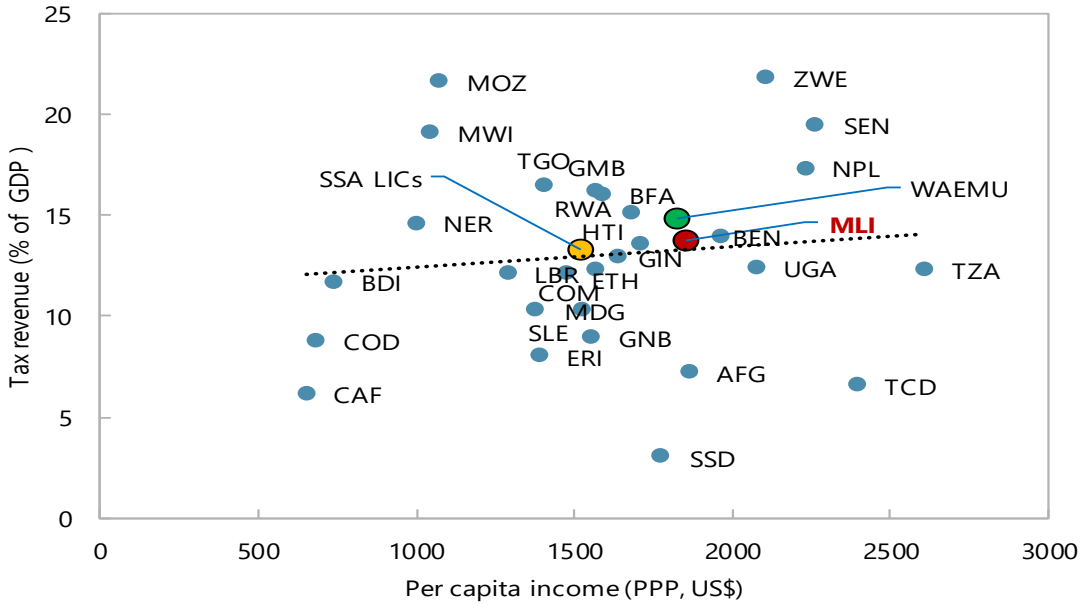
5. Most policy makers and stakeholders see scope for Mali to further increase its tax revenue. The strengths of the current tax system lie in the continued increase in the tax-to-GDP ratio, in part due to good coverage of the Industrial sector (Manufacturing, Energy, Mines) and certain Services (Telecommunications, Banks and Insurance, etc.). At the same time, the system has weaknesses inherent to the sectoral approach, with the under-taxation of agriculture and trade. There is also room to improve the tax administration, especially with regard to the identification system of companies and other economic agents; and the administration of tax exemptions. This paper reviews the level and structure of tax revenues in Mali and compares them to peers; provides a quantification of Mali's tax capacity and discusses policy options for reforms.

B. Benchmarking of Mali's Revenue Performance

6. Mali's tax-to-GDP ratio is low in comparison with most WAEMU peers, but stood at the level implied by its level of development. Over the 2013-17 period, Mali reached a tax-to-GDP ratio of 13.8 percent of GDP, below the average of WAEMU countries and SSA, respectively at

14.8 percent of GDP and 15.6 percent of GDP (Figure 5). At the same time, Mali's revenue collection stood broadly at the level implied by its GDP per capita (Figure5).

Figure 5. Mali: Tax Revenue and Income Level in Low-Income Countries
(average 2013-17)



Source: IMF, World economic Outlook; and staff estimates.

7. Mali's income tax revenue is broadly in line with WAEMU peers, but out-of-line with SSA. Over 2013-17, Mali's income tax averaged 4.4 percent of GDP, while it stood at 4 percent of GDP and 5.5 percent of GDP in WAEMU and SSA peers, respectively (Text Table). As in most WAEMU countries, direct taxes, consisting of taxes on companies and individuals, remain the weak point in the mobilization of tax revenues. These taxes are much lower than the indirect taxes, the direct taxes represent hardly half of the indirect taxes; unlike OECD countries where tax revenues from both types of taxes are of the same magnitude. Thus, the effort to mobilize tax revenues tends to focus more on VAT than on taxes on companies and individuals. This situation reflects the large share of the informal sector in the economy (close to 55 percent of GDP in 2015).

Text Table Mali: Total Tax Revenue and Sub-categories, Cross Country Comparison
(Average 2013–17)

	Total	Income	Trade	Goods and Services
Mali	13.8	4.4	1.8	7.6
WAEMU	14.8	4.0	4.3	5.8
SSA	15.6	5.5	2.8	5.8
SSA LIC	13.3	4.3	2.9	5.6

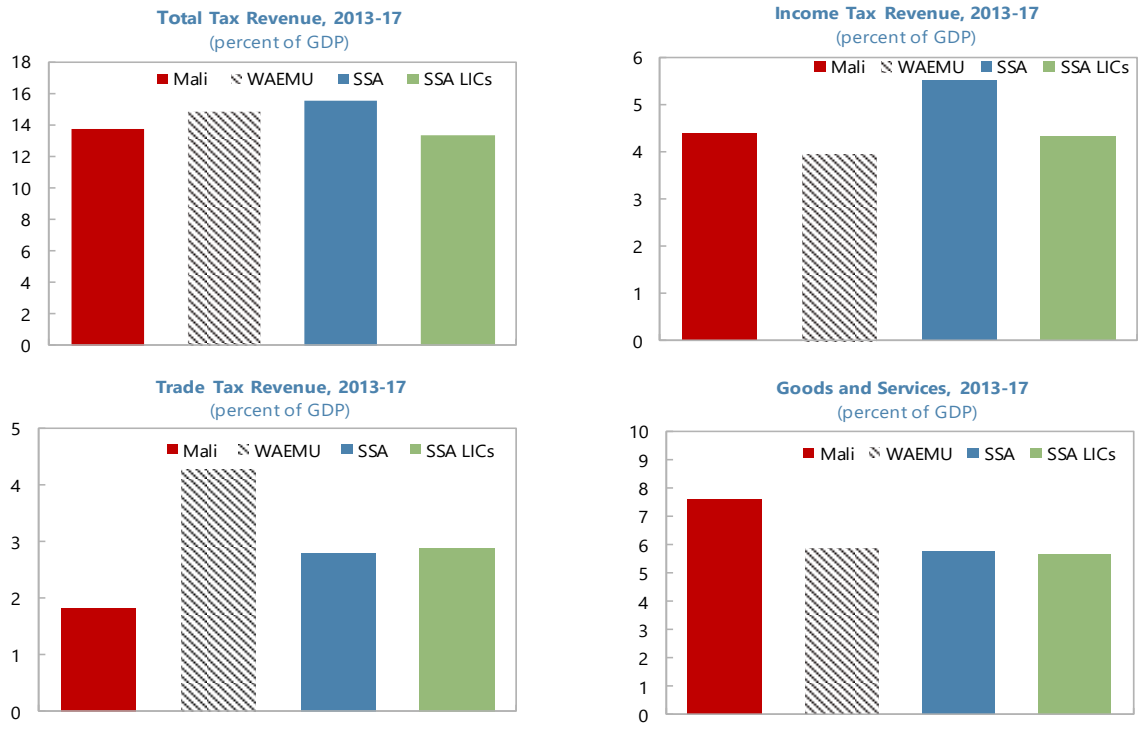
Source: Country authorities; and IMF staff estimates.

8. Mali's goods and services (G&S) tax revenue was significantly higher than in peers, mostly reflecting VAT performance. Over 2013-17, Mali's G&S tax revenue averaged 7.6 percent of GDP, well above the average of 5.8 percent of GDP in both the WAEMU and SSA. VAT contributed about 40 percent total tax revenue in Mali, compared to about 26 percent of GDP in WAEMU and

SSA peers.

9. Mali's trade tax revenue is significantly out-of-lines with peers, notwithstanding customs duty harmonization and liberalization process within the WAEMU. Trade tax revenue amounted to about 1.8 percent of GDP, well below the average of 4.3 percent of GDP for WAEMU countries, but quite far from the 2.8 percent of GDP for SSA (Figure 4). Low trade taxes are likely due to full trade liberalization within the WAEMU region, with a growing share of Mali's imports originating from WAEMU countries. However, inefficiencies in customs administration also weigh on low collection of trade taxes, suggesting that there is a potential to raise more revenue while proceeding with the trade liberalization agenda.

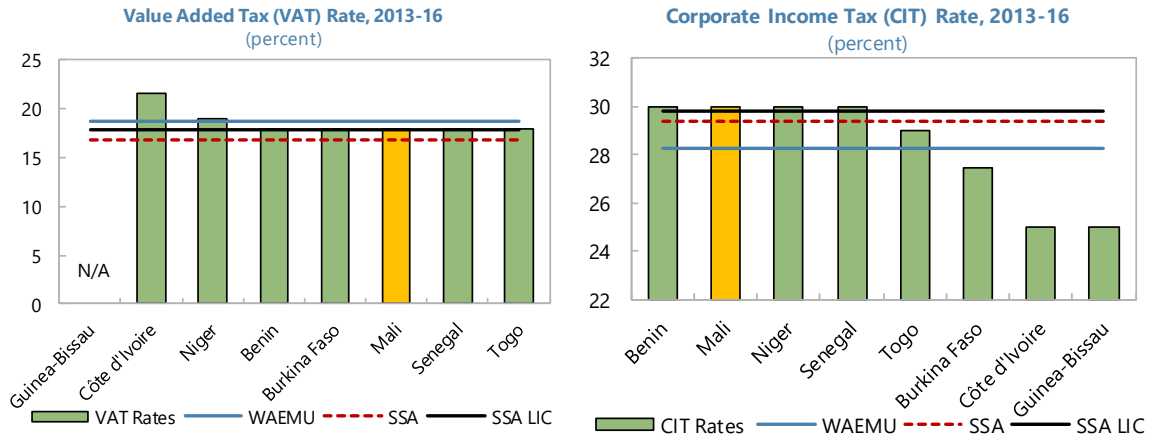
Figure 6. Mali's Total Tax Revenue and Sub-categories with Comparators



Source: World Economic Outlook; and staff estimates.
Note: SSA= sub-Saharan Africa; SSA LICs= sub-Saharan Africa Low Income Countries ; WAEMU= West African Economic and Monetary Union.

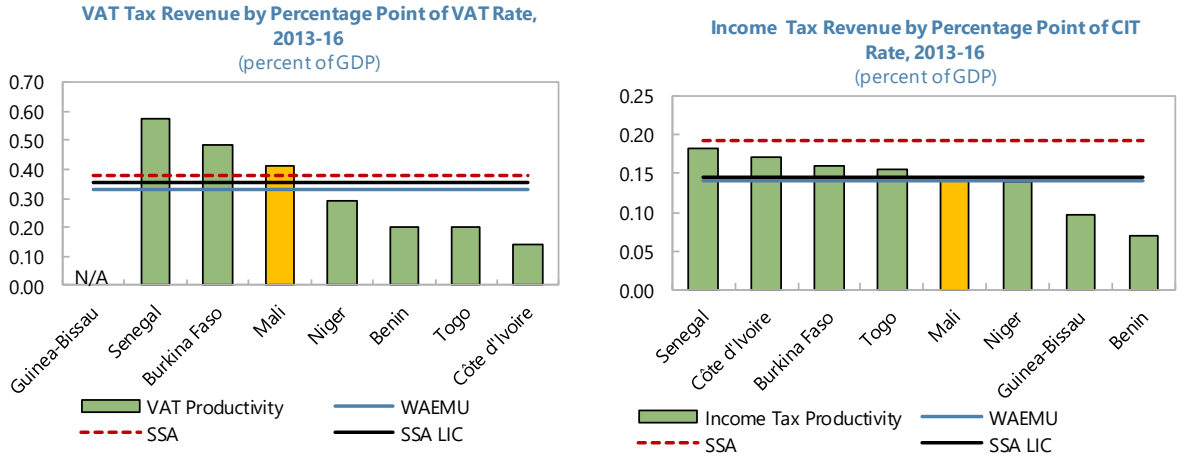
10. With Mali's CIT and VAT rates comparable to those applied in peers, the lower tax revenue performance instead results from a lower tax productivity. Mali's CIT and VAT rates stood at 30 and 18 percent, respectively. These rates were close to those in peer countries (Figure 7). However, the tax productivity, measured by the revenue collected (in percent of GDP) for each percentage point of tax rate, is lower than in peers (Figure 8). This lower productivity may be linked to administrative inefficiency, compliance issues and policy gaps other than the rate (e.g., exemptions).

Figure 7. Mali: CIT and VAT Rates in Mali and Other WAEMU Countries, 2013-16



Sources: FAD Tax Rate Database and IMF staff estimates.

Figure 8. Mali: Income and VAT Productivity in Mali and Other WAEMU Countries, 2013-16



Sources: IMF, World Economic Outlook; FAD Tax Rate Database; and staff estimates.

11. The benchmark analysis offers a useful perspective to assess Mali's tax revenue performance relative to peers, but does not look at Mali's tax capacity. For the comparison to be meaningful, there is a need to supplement it by an investigation of the factors determining Mali's tax capacity, including its level of development and structural characteristics. The tax capacity, defined as the maximum level of tax revenue Mali should be able to collect, could provide an appropriate target to guide ongoing fiscal reforms.

C. Estimating Potential Tax Revenue

12. Two methods are employed to estimate tax revenue potential in this paper: the "peer analysis" and the "stochastic tax frontier analysis". First, the peer analysis, which relies on a

standard fixed-effect panel analysis is utilized to estimate Mali's potential tax revenue based on determinants[2] identified in the literature to drive tax revenue collection. The predicted tax revenue based on the country's current characteristics is a proxy of the tax capacity, and the difference with the actual revenue level is the combination of the tax policy gap and the tax gap. In the second step of this analysis, the stochastic tax frontier (Box 1), also a regression-based analysis, which aims to estimate the maximum tax revenue a country can achieve given its characteristics is used to cross-check the robustness of the findings of the peer analysis. The tax frontier is akin to a production frontier with the output being the tax revenue-to-GDP ratio and the inputs being a set of macroeconomic fundamentals (including GDP per capita, consumption, inflation, trade openness and so on). The distance to the frontier captures administrative inefficiencies and policy choices (such as differences in tax legislation of a country, tax rates and exemptions) resulting from differences between actual tax revenue and potential tax.

13. The two analyses are carried out using dataset covering the period 1995–2015 for a sample of 38 sub-Saharan African countries. WAEMU and other sub-Saharan African countries are used as reference groups. The standard fixed-effect panel analysis is used to predict potential tax revenues for total tax and its subcategories (goods and services tax revenue, income tax revenue, and trade tax revenue) while Greene (2005a)'s true fixed effects estimator is used to estimate the technical inefficiencies.

[2] GDP per capita, consumption, gross fixed capital formation, inflation, trade openness (import and exports as a share of GDP), share of agriculture in GDP, share of the urban population, natural resource rents and broad money as a share of GDP.

Box 1. Stochastic Frontier Analysis

Building on a large set of empirical studies, we specify a model similar to that of Aigner, Lovell, and Schmidt (1977); Alfirman (2003) and Pessino (2010 and 2013). The stochastic tax frontier model can be represented as follows:

$$y_{it} = \alpha_i + \beta' x_{it} + v_{it} - u_{it}$$

Where y_{it} is the log of tax to GDP ratio for country *i* at time *t*

α_i represent a set of country-specific intercepts

β is a vector of unknown parameters to be estimated

x_{it} is a vector of tax revenue determinants for country *i* at time *t*

v_{it} is the statistical noise or the disturbance term. It is assumed to be independently and identically distributed N $(0, \sigma_v^2)$ random errors and is independently distributed of the u_{it}

u_{it} represent the level of inefficiency; the "failure" to obtain the maximum amount of tax collection. It is a non-negative random variable associated with country specific factors such as technical inefficiencies and policy issues (such as differences in tax legislation of a country, tax rates and exemptions) which contribute to country *i* not tax potential at time *t*

This analysis seeks to estimate the technical efficiencies of Mali's total tax revenue and its subcategories relative to WAEMU and other sub-Saharan African countries. To do so, we first estimate the technical inefficiencies (u_{it}) and obtain the technical efficiencies as $(1 - u_{it})$.

14. The results from the peer analysis are broadly as expected (Annex I). The coefficient of GDP per capita is positive and strongly significant, suggesting that economic development is associated with higher demand for public expenditure and higher level of tax capacity to pay for the higher expenditure. The value added of agriculture as a proxy for the ease of tax collection has a negative and significant impact, reflecting the fact that in most countries agriculture is tax-exempted and highly informal. Capital investment, measured by the gross fixed capital formation, is expected to have a positive effect on government revenues through the potential expansion of economic activity and tax. Broad money (as a ratio to GDP), as a measure of the degree of economy's monetization has a significant positive impact on the tax potential, suggesting that an economy that is highly monetized will realize high tax revenue than that which is less monetized. Finally, the negative and significant impact of inflation, as a proxy for the quality of macroeconomic management, suggests that higher inflation would reduce the tax-to-GDP ratio due to decrease in purchasing power of consumer and investing capacity of investors (Baunsgaard and Keen, 2009). Other factors including demographic, trade openness, and natural resource rent were not statistically significant.

15. Mali's tax capacity is estimated at 13.2 percent of GDP, suggesting that there is considerable scope to raise revenue. Using the coefficients in Appendix I and the average value of the explanatory variables in 2010–15, it is estimated that Mali could have achieved a total tax-to-GDP ratio of 13.2 percent of GDP compared to the actual collection of 12.6 percent of GDP over the

same period Figure 9. This implies that tax administration inefficiencies, tax evasion and tax policy design cost up to 0.7 percentage point of GDP in revenue annually. Nevertheless, the large increase in the tax revenue ratio in 2015 helped reduce the gap to 0.2 percentage point of GDP assuming an unchanged tax capacity.

16. The results from peer analysis point to the need to raise more tax revenue on trade. Overall, Mali's total tax revenue performs well relative to WAEMU and sub-Saharan African peers as a result of the good performance of the goods and services tax revenue, with a positive tax gap close to 2 percentage points of GDP over 2013-15. At the same time, it is quite possible to improve the collection of trade revenue by 2½-3% of GDP Figure 9.

17. The results of the stochastic tax frontier analysis are broadly similar to those obtained from the SSA peer analysis. Mali's total tax revenue does well largely due to goods and services tax revenue. However, its trade tax revenue is less efficient when compared to WAEMU and other sub-Saharan African countries Figure 10.

D. Conclusion and Main Recommendations

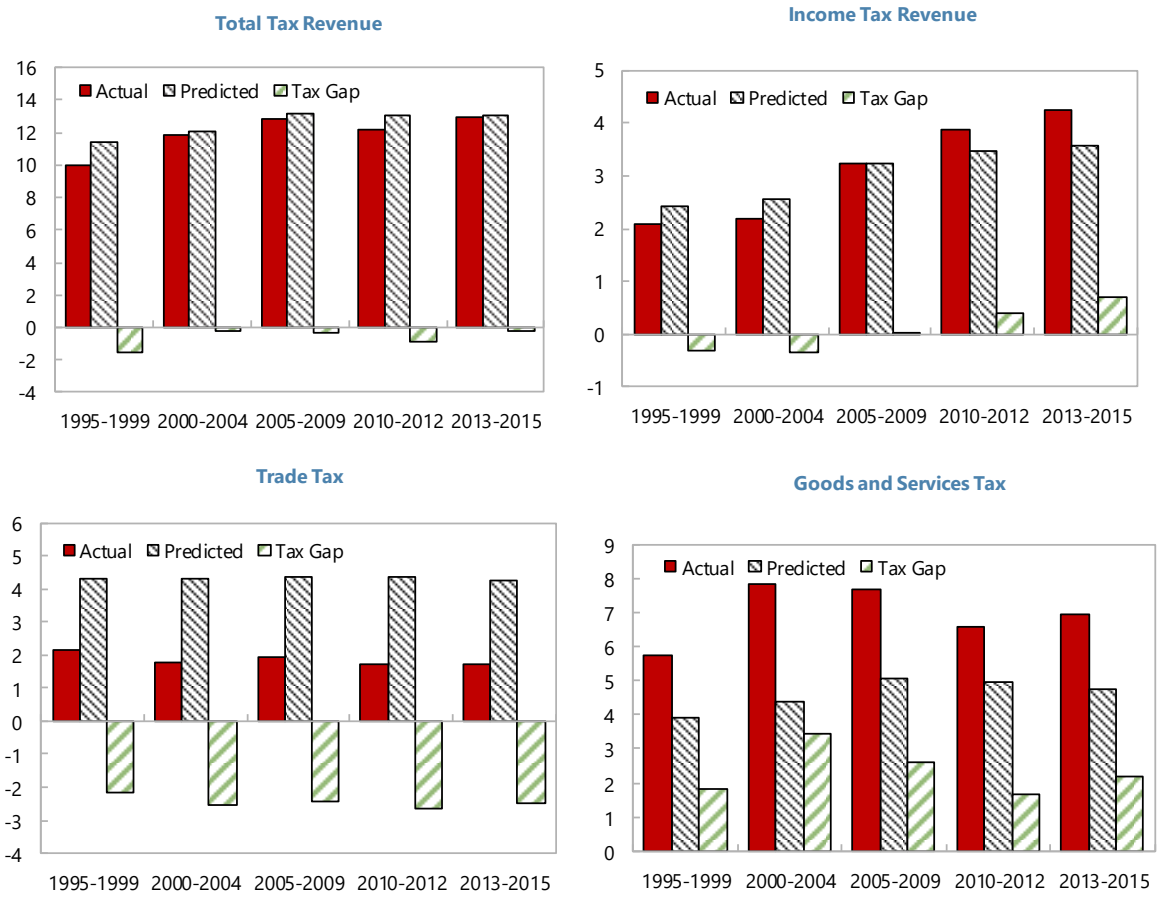
18. Strong revenue performance in recent years helped Mali improve its regional stand, but there is room to further increase tax revenue. The benchmark analysis shows that Mali's tax-to-GDP ratio is below the average of WAEMU and SSA countries, with weakness in trade tax revenue being the most pronounced. Using the peer analysis, Mali's trade tax performance is estimated at about 2 ½-3 percentage points of GDP below their tax capacity in 2010-15. Mali's tax performance is estimated at about 0.7 percentage point of GDP below their tax capacity in 2010-15, implying that there is potential to raise revenue, especially in trade taxes, to finance critical social and growth-enhancing expenditure, while preserving fiscal sustainability.

19. Closing the tax policy and tax gap will require sustained and deep reforms, both in tax policy and tax administration. There is significant revenue mobilization potential through the elimination of tax exemptions. To consolidate progress achieved with the elimination of discretionary exemption in 2017, there is a need to review provisions of the tax and customs codes related to the tax base, duties and taxes to limit the cases of exemptions to considerations of economic policy (regulation, incentive) and social nature (income redistribution) adapted to the current context. Another tax potential relates to property tax, which requires the establishment of a property cadaster, a system drawing up the status and legal status of all landholdings, in the cities first, then the agricultural areas and then the rest of the national territory remains an underutilized source of revenue particularly for the rapidly growing urban centers. In the areas of tax administration, actions include cleaning up the taxpayer registration and accounting, upgrading the IT system and strengthening compliance risk management. And building the capacity of tax agents, including through on the-job training, the use of modern management tools and procedures, the reinforcement of the analysis and control capacities of the tax administrations, particularly in areas experiencing a marked economic growth.

20. A timely implementation of technical assistance advice will be key to move forward. Mali is participating in the IMF capacity building framework, which aims to develop a medium term

strategy to strengthen institutions and includes a component on revenue mobilization.[3] Other donors such as France and the EU are also providing support.

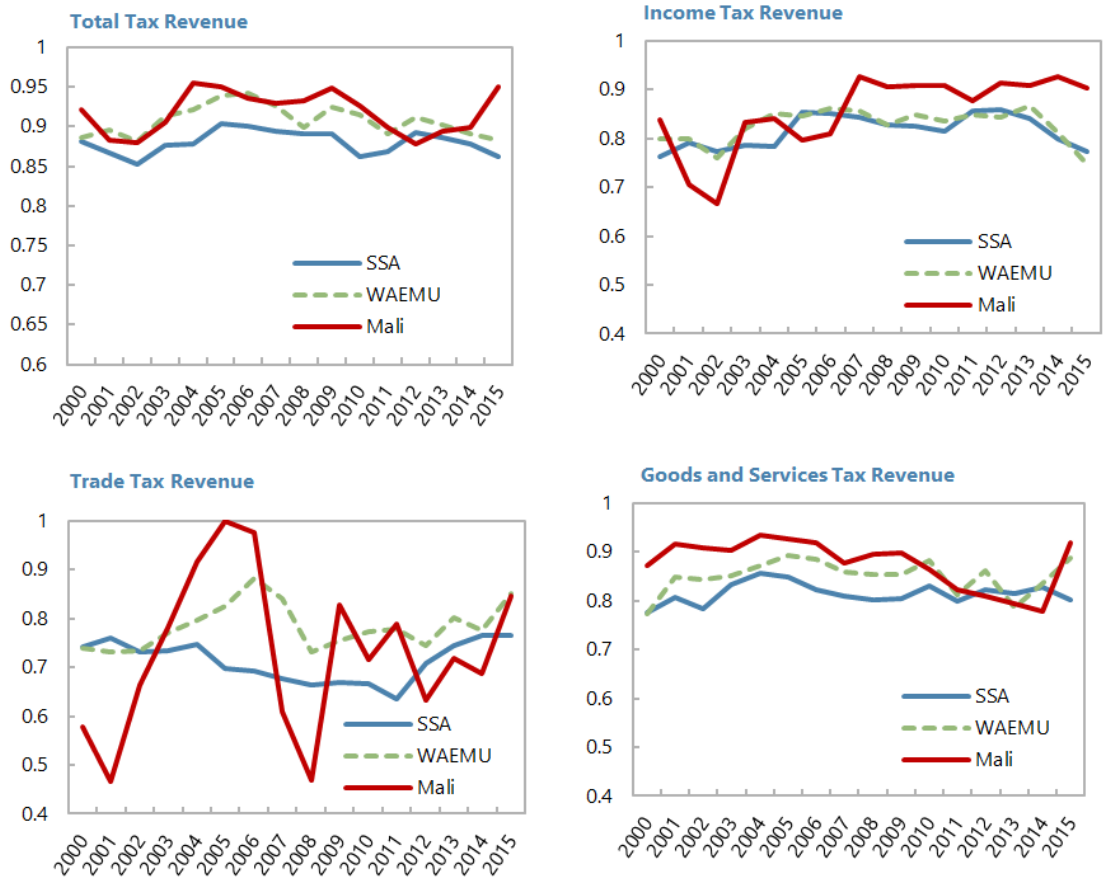
Figure 9. Mali: Tax Performance in Mali and Predicted Values Relative to WAEMU Countries
(in percent of GDP)



Source: IMF staff estimations.

[3] In 2017, the IMF begun implementing capacity building strategies with selected countries in fragile situations. Medium-term strategies for capacity development were discussed with country authorities and will be implemented through focused technical assistance and training. The strategies have monitorable outcomes and goals to strengthen institutions and macroeconomic management.

Figure 10. Mali: Efficiency in Mali by Category



Source:IMF staff estimates.

Annex I. Determinants of Tax Potential in Mali

Determinants of Total Tax Potential

Total Tax Revenue	WAEMU	SSA	SSA_lowinc
GDP per capita	3.030***	1.615*	2.997***
	[0.676]	[0.947]	[0.913]
Inflation, consumer prices (Annual percentage)	-0.046*	0.000	-0.014***
	[0.023]	[0.000]	[0.003]
Imports (percent of GDP)	0.015	0.014	0.002
	[0.037]	[0.010]	[0.009]
Exports (percent of GDP)	0.033	0.014	0.027
	[0.023]	[0.022]	[0.037]
Agriculture (percent of GDP)	-0.043*	-0.017	0.023
	[0.019]	[0.054]	[0.050]
Consumption (percent of GDP)	-0.006	-0.003	-0.003
	[0.004]	[0.003]	[0.003]
Gross fixed capital formation (percent of GDP)	0.094**	0.036	0.029
	[0.029]	[0.034]	[0.037]
Urban population (percent of total)	-0.119	0.003	-0.133
	[0.106]	[0.116]	[0.106]
Total natural resources rents (percent of GDP)	-0.053	0.040	-0.023
	[0.038]	[0.044]	[0.030]
Broad money (percent of GDP)	0.050**	0.089**	0.162***
	[0.021]	[0.044]	[0.045]
Constant	-3.862*	-1.224	-7.445*
	[1.903]	[4.682]	[3.892]
Observations	165	657	408
Number of Countries	8	38	22
R-squared	0.751	0.241	0.510
R2	0.735	0.229	0.498

Robust standard errors in brackets
*** p<0.01, ** p<0.05, * p<0.1

Determinants of Income Tax Potential

Income Tax Revenue	WAEMU	SSA	SSA_lowinc
GDP per capita	1.069*	1.153*	1.930**
	[0.491]	[0.673]	[0.803]
Agriculture (percent of GDP)	0.020	0.025	0.038
	[0.017]	[0.043]	[0.034]
Consumption (percent of GDP)	-0.003	0.001	0.001
	[0.002]	[0.002]	[0.002]
Gross fixed capital formation (percent of GDP)	0.030	0.018	0.010
	[0.019]	[0.020]	[0.021]
Urban population (percent of total)	-0.022	0.063	-0.077
	[0.053]	[0.075]	[0.102]
Total natural resources rents (percent of GDP)	-0.006	0.036	0.026
	[0.031]	[0.022]	[0.019]
Broad money (percent of GDP)	0.005	0.003	0.030
	[0.023]	[0.020]	[0.022]
Public Wage Bill (percent of GDP)	0.136	0.207	0.375***
	[0.129]	[0.127]	[0.121]
Constant	-4.531*	-8.577**	-10.515**
	[2.246]	[4.072]	[4.265]
Observations	159	662	418
Number of Countries	8	38	22
R-squared	0.478	0.256	0.483
R2	0.451	0.247	0.473

Robust standard errors in brackets
*** p<0.01, ** p<0.05, * p<0.1

Determinants of Trade Tax Potential

Trade Tax Revenue	WAEMU	SSA	SSA_lowinc
GDP per capita	0.415	-0.263	0.148
	[0.820]	[0.389]	[0.351]
Inflation, consumer prices (Annual percentage)	-0.017	-0.004***	-0.003***
	[0.017]	[0.001]	[0.001]
Imports (percent of GDP)	0.013	0.007	0.003
	[0.029]	[0.005]	[0.007]
Exports (percent of GDP)	0.018	-0.054***	-0.014
	[0.032]	[0.017]	[0.018]
Urban population (percent of total)	-0.057	-0.022	-0.007
	[0.087]	[0.055]	[0.044]
Total natural resources rents (percent of GDP)	0.015	0.029*	0.004
	[0.037]	[0.016]	[0.022]
Constant	2.665	6.916***	2.582
	[3.060]	[1.567]	[1.621]
Observations	166	705	416
Number of Countries	8	38	22
R-squared	0.063	0.136	0.024
R2	0.0280	0.129	0.00959

Robust standard errors in brackets
*** p<0.01, ** p<0.05, * p<0.1

Determinants of G&S Tax Potential TaPotential

Goods and Services Tax Revenue	WAEMU	SSA	SSA_lowinc
GDP per capita	1.329*	0.641	0.081
	[0.695]	[0.391]	[0.353]
Inflation, consumer prices (Annual percentage)	-0.040**	-0.006***	-0.005***
	[0.013]	[0.002]	[0.001]
Agriculture (percent of GDP)	-0.054	-0.018	-0.005
	[0.030]	[0.015]	[0.018]
Government consumption (percent of GDP)	-0.057*	-0.021	0.006
	[0.030]	[0.039]	[0.036]
Household consumption (percent of GDP)	-0.025	-0.014	-0.009
	[0.035]	[0.010]	[0.008]
Gross fixed capital formation (percent of GDP)	0.046*	0.028**	0.033**
	[0.020]	[0.011]	[0.012]
Urban population (percent of total)	-0.032	0.010	0.076
	[0.075]	[0.051]	[0.050]
Broad money (percent of GDP)	0.003	0.015	0.044**
	[0.028]	[0.028]	[0.021]
Openness (percent of GDP)	0.012	0.018**	0.008**
	[0.009]	[0.008]	[0.004]
Constant	0.625	-0.072	0.695
	[5.681]	[1.827]	[1.899]
Observations	163	645	401
Number of Countries	8	38	22
R-squared	0.520	0.333	0.441
R2	0.492	0.324	0.428

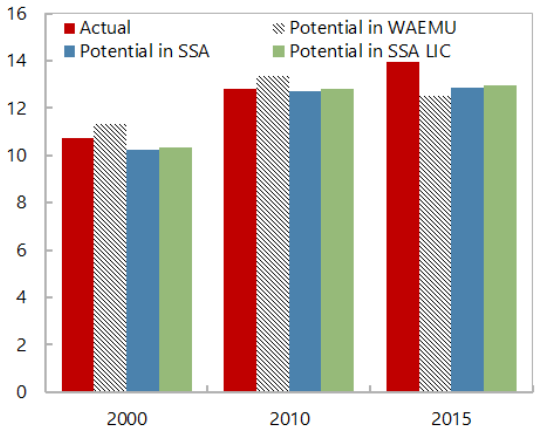
Robust standard errors in brackets
*** p<0.01, ** p<0.05, * p<0.1

Source: IMF staff estimates.

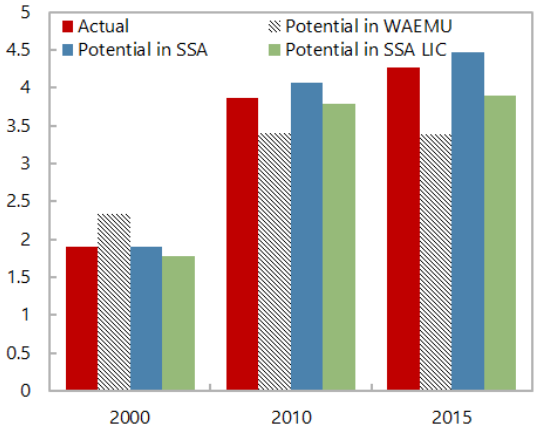
Annex II. Mali's Tax Gap Indicators

Annex Figure: Mali's Tax Gap Indicators

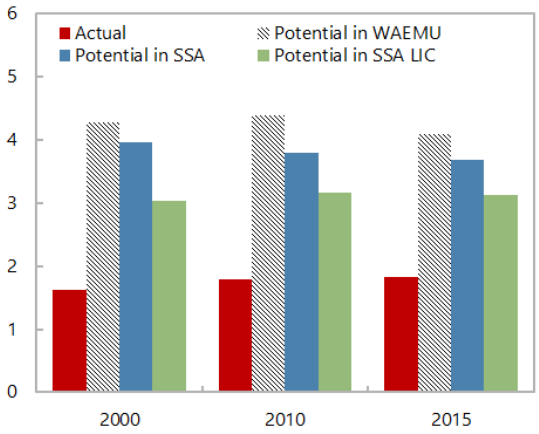
Total Tax Revenue: Actual vs. Potential
(percent of GDP)



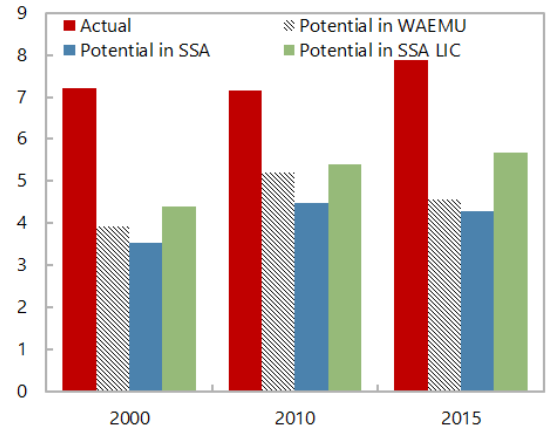
Income Tax Revenue: Actual vs. Potential
(percent of GDP)



Trade Tax (Customs) Revenue: Actual vs. Potential
(percent of GDP)



Goods and Services Tax Revenue: Actual vs. Potential
(percent of GDP)



Source: IMF staff estimations.

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PROFIT-SHIFTING IN MALI: RISKS AND POLICY RESPONSES[1]

Multinational enterprises (MNEs) play a central role in Mali's economy and finances. In 2016, gold exports (dominated by MNEs) accounted for over 80 percent of total exports. MNEs generate over 50 percent of the total turnover of corporations subject to corporate income tax, and slightly over 80 percent of taxable profits. There is indication that profit shifting by MNEs in Mali erodes its revenue base, due to the importance of low-tax jurisdictions as origin of FDI into Mali, insufficient guidance on transfer pricing and absence of effective thin capitalization rules, and the fragmentation of Mali's tax policy framework in various legislations—which increases the risk of incoherent policy making and tax enforcement. On the positive side, Mali's limited network of tax treaties has withholding tax rates close to domestic rates on dividends, interest, and royalties. This paper proposes a strategy with four elements to address more effectively profit shifting risks in key sectors of the Malian economy: (1) keep withholding tax rates in tax treaties (present and future) close to current domestic rates; (2) enrich the recently-enacted transfer pricing regulations with simple methodologies adapted to Mali's economic structure, in particular to inter-company transactions in the mining and telecommunications sectors; (3) introduce effective thin capitalization rules; (4) rethink the use of tax incentives, in particular tax holidays, as a policy tool to encourage investment.

A. Introduction

1. Multination enterprises are major contributors to government revenue in Mali. In 2016, they represented more than 50 percent of the total turnover of companies subject to the corporate income tax (CIT), and more than 80 percent of the CIT (excluding small and medium-size companies).[2] The five largest mining MNEs and the two sole telecommunication operators, dominate the MNE sector: each group accounts for one-third of the CIT. The importance of MNEs for Mali's tax base continues to grow, with the stock of foreign direct investment increasing by more than 80 percent from 2011 to 2015. MNEs have also been diversifying their investments in other economic sectors, such as oil, construction, and financial services.

2. The mining sector, which is the focus of this paper, plays a key role in the economic development of Mali. Gold mining dominates the sector, with reserves estimated in 2017 at 830 tons or 16 years of output at current production levels. Mali has 0.5 percent of the World's gold reserves (Chart 1). Mali is among the five largest gold producers in Africa, with 50.6 tons of production in 2017. The share of the mining sector in GDP declined from a high of 10 percent in 2006 to 6 percent in 2016—in part due to the decline in commodity prices. However, the contribution of gold to Mali's external position has remained strong: gold's share in total exports of goods has consistently exceeded 50 percent since the early 2000s, and was 62 percent and

[1] Prepared by Mehdy Ben Brahim, Mario Mansour, and Irena Jankulov Suljagic

[2] Unless otherwise specified, all tax-related indicators in this paper are based on data provided by the Malian Ministry of Finance and its agencies (primarily the tax and customs administrations).

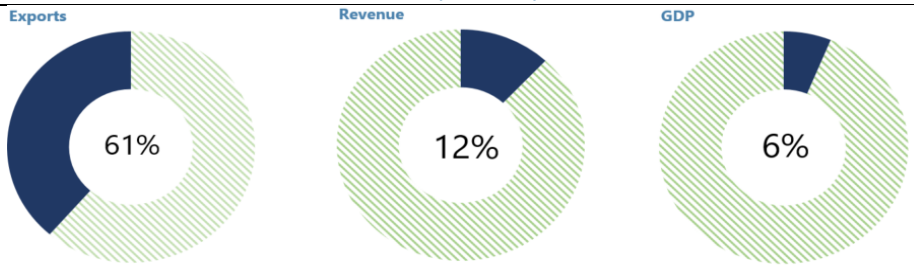
67 percent in 2015 and 2016, respectively. The direct employment effects of large-scale mining are limited, but artisanal mining employment has increased in recent years.

3. This paper assesses the exposure of Mali to the erosion of its tax base through international profit shifting—with a focus on the mining sector—and proposes policy measures to mitigate such risks. The paper is organized as follows: section II describes the main features of Mali's international tax rules; section III provides an assessment of the potential risks of international profit shifting to Mali's tax revenues; and section IV assesses the key international tax issues arising from intra-group transactions in Mali.

Figure 1. Mali: World Gold Reserves
(2016)

Source: S&P Global Market Intelligence.

Figure 2. Mali: Share of the Mining Sector in Mali's Exports, Revenue and GDP
(in 2015)



Source: EITI, 2015.

B. Mali's International Tax System

4. There are two key elements that govern Mali's international tax rules: (1) domestic tax policy, which generally applies to all investments, whether originating in Mali or from foreign countries, and includes the General Tax Code (*Code Général des Impôts,* CGI), three mining codes (1991, 1999, and 2012), the Investment Code, and Mali's recent transfer pricing regulations; (2) bilateral tax treaties, which Mali has signed with partner countries, including other members of

the West African Economic and Monetary Union (WAEMU).

Domestic Law

5. As in most other countries, the primary policy instrument of the domestic law is the CIT (*Impôt sur les bénéfices industriels et commerciaux*), which Mali applies on a territorial basis: profits from sources in Mali are subject to tax in Mali, while profits from sources outside of Mali are exempt. The CIT, which key features are presented in Box 1, is consistent with Sub-Saharan African (SSA) countries, both in terms of its base and rates. However, the interaction of the CIT with various other laws, such as the mining or investment codes, make the overall CIT system complex for investors and the tax administration.

6. The Mining Code (MC) and the Investment code (IC) play a key role in framing the overall tax regime for MNEs operating in Mali. While one of the key policy aims of these codes is to provide incentives for investment and employment, they create complexities and opportunities for tax avoidance strategies that shift profits outside Mali, or inside Mali from taxable to non-taxable (or lightly-taxed) companies.

7. Mining companies in Mali and their subcontractors are governed by mining codes from 1991, 1999 and 2012.[3] The MC defines the main taxes, duties, levies and royalties applicable to mining companies and grants fiscal stability of up to 30 years to eligible MNEs. Some of the rules for determining such taxes are in the MC, in which case they override the general tax law in the CGI; others refer to the CGI. This overlapping of tax rules has created complexity and has inhibited the ability of the government to undertake effective CIT reforms.

8. The mining and investment codes grant exemptions from VAT and customs duties. In 2016, these exemptions amounted to 24 percent of all VAT and customs tax expenditures, and about 21 percent of total tax expenditures.[4] These exemptions are similar across the three mining codes, and consist of temporary admissions and exemptions during the exploration phase and the first three years of production. They also include exemptions from import duties for petroleum products during the entire operation phase. From a tax policy perspective, customs exemptions for intermediate and capital inputs are not all problematic, since their primary purpose is to neutralize the effect of the tariff on the cost of capital. However, customs exemptions provide opportunities to artificially increase the prices of intercompany purchases, and thus reduce the CIT base.

9. The 1991 MC grants a CIT holiday of five years, which is particularly generous considering the life expectancy of mines (10 to 15 years). The 1999 and 2012 MC removed the

[3] The Malian authorities are currently working on a revision of the mining code. Seven out of a total of ten mines currently operate under the 1991 MC, due to lengthy stability clauses, and three operate under the 1999 code.

[4] The estimates used in this paper were provided by the Malian tax and customs administrations. Mali does not publish the methodology, data sources, and the benchmark tax system for its tax expenditures estimates, which makes it difficult to assess their quality.

five-year exemption, but since the 1991 code is still applicable to many projects, several MNEs have been able to continue benefiting from this exemption over recent years, including for mining extension projects.[5] The CIT tax expenditure estimate attributable to the MC is surprisingly low, amounting to 1.2 percent of the CIT paid by MNEs in 2016.

10. CIT rates applied in the mining codes have declined over time. The 1991 MC implemented a CIT rate of 45 percent; the 1999 MC reduced it to 35 percent; the 2012 MC applies the CGI rate of 30 percent, but provides a reduced rate of 25 percent for the first fifteen years of a mine's operation. The current rate is comparable to mining countries in Africa. For example, the top in South Africa is 28 percent, the Democratic Republic of Congo, Tanzania and Niger apply 30 percent.

11. In addition to the CIT and withholding taxes, Mali's laws include specific taxes applicable to sectors which could generate above-normal profits due to country-specific attributes, such as in mining and telecommunications (Table 1). Thus, mining companies are subject to royalties of 6 percent under the 1991 and 2012 code (3 percent under the 1999 code). Telecommunication companies are subject to a turnover tax of 5 percent. These rates are generally consistent with the rates applicable in the region.[6]

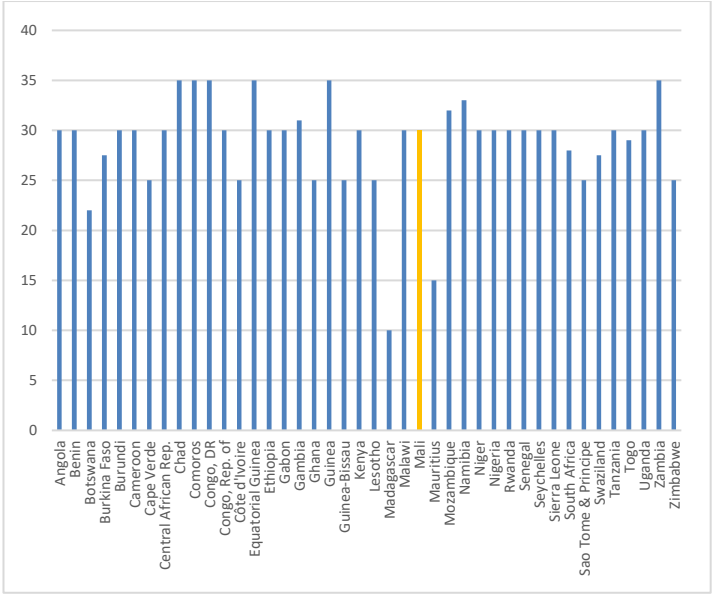
[5] Two mines in activity among the largest and most profitable have benefited in the past few years from CIT exemptions under the 1991 MC.

[6] Although royalties are seen as a tax on rent, they are economically less efficient than other forms of rent taxes (See Boadway and Keen (2010).

Box 1. Key Features of the Malian Corporate Income Tax

The standard CIT rate is 30 percent (reduced from 35 percent in 2012).[1] A minimum tax of 1 percent of turnover applies, even in cases where companies make losses (*Impôt Minimum Forfaitaire*). The CIT is in line with Sub-Saharan Africa (*SSA*) CIT rates (Figure 1), and the base generally follows international standards.[2] It is noteworthy that only two SSA countries had a tax rate below 20 percent in 2015 (Mauritius and Madagascar), and that all others are close to the average of 28.8 percent. Depreciation is deductible in respect of tangible assets, at rates consistent with the economic life of the asset. Losses incurred in accordance with tax rules may be carried forward for three years.

Figure 3. CIT Rates in Sub-Saharan Africa, 2015 (%)



Source: FAD Tax Policy Rates Database.

Withholding taxes apply at rates of 10 percent on distributed dividends, and 15 percent on interest and service fees paid to non-residents. This withholding system reduces the potential benefits of tax rate arbitrage required in profit shifting strategies.[3] One caveat lies in the drafting of article 41 of the General Tax Code (*Code Général des Impôts*, CGI) which refers to interests paid rather than accrued. MNEs can use this article to deduct interest due to foreign affiliates from their CIT base without paying the interests, thus deferring payments of the withholding tax.

1/ Law 2011-078 of December 23, 2011 (budget law for 2012 fiscal year).

2/ Mali is a member of the West African Economic and Monetary Union, which coordinates the setting of domestic tax policy through regional directives. Both the CIT rate and base are subject to directives. See Mansour and Rota-Graziosi (2014) for an overview of the WAEMU tax harmonization framework.

3/ The arbitrage stems from deducting expenses at the standard CIT rate of 30 percent, but paying withholding at lower rates. The incentive to shift profit through deductible expenses depends primarily on this difference.

12. Mali does not currently tax indirect transfer of mining rights, or of any other title or right to assets located in Mali—i.e. transfer of shares of the legal entity owning the rights, as opposed to the direct sale of the rights. This issue has been recognized and analyzed by the Platform for Collaboration on Tax, as a potentially significant source of profit shifting, especially in sectors such as mining and telecommunications.[7] It is of particular interest to Mali given the very high level of FDI into Mali transiting through tax havens (see section III). Mali could consider extending the taxation of gains on such transfers.

[7] Platform for Collaboration on Tax (2017b).

Transfer Pricing Regulations

13. Mali recently enacted transfer pricing regulations, clarifying the application of the arm's length principle (ALP).[8] Introduced in the 1930s in US and European laws, the ALP has been included in article 9 of the OECD and the UN model conventions. It consists in comparing the price of an intragroup transaction to the price that independent companies would have agreed under similar circumstances. Despite its common use worldwide, the ALP has been criticized for its inability to effectively tackle profit shifting and base erosion techniques. Its practical implementation has reached a level of sophistication that is hardly adapted to the capacities of developing countries.

Table 1. Mali: Mining and Telecommunications Royalty Rates

In selected SSA Countries (%)

Country	Mining	Telecommunications
Benin		2%
Burkina Faso	3% to 5%	5%
Côte d'Ivoire	3% to 6%	5%
Congo, DR	3%	
Ghana	5%	
Guinea	5%	
Kenya	5%	
Madagascar	2%	
Mali (MC 2012)	3% + 3%	5%
Mauritania	4% to 6.5%	
Niger		3%
Senegal	3%	2%
Sierra Leone	5%	
South Africa	0.5% to 5%	
Tanzanie	4%	
Zimbabwe	5%	

Sources: Laporte De Quatrebardes and Bouterige (2016) for mining and IBFD for telecommunications.
Note: Countries use various names for the telecommunications turnover taxes, but they are economically equivalent to ad-valorem (percent of turnover) royalties.

14. Mali's transfer pricing regulations are consistent with international standards, but do not apply to intercompany transactions within Mali. This is potentially a significant risk, due to the various preferential regimes for direct and indirect taxes, which create incentives for MNEs to manipulate their transfer prices within Mali—for example, between a profitable mine reaching the end of its life and a new mine (organized as different but related subsidiaries), or between a mine and its related sub-contractors.

15. The regulations introduce documentation requirements based on the OECD Master file/Local file approach as well as a simplified declaration. This is a positive development that will allow Mali to perform risk assessments of profit shifting more effectively, to select the types of audit that have good probability of yielding additional revenues and to perform audits more effectively. The introduction of country-by-country reporting requirements can occur at a later stage, once Mali has developed knowledge and capacity in transfer pricing.

16. The regulations should be expanded to develop rules that target the most important transactions, such as gold exports, and offer clear pricing methodologies to increase tax

[8] Finance laws for 2016 and 2017.

17. Certainty for MNEs. The current regulations are of general application, and do not entail any simplified rules or specific safe harbors.[9] Nevertheless, several characteristics of Mali's economy and policy framework call for simplified methodologies: the capacity of the tax administration is relatively low, particularly in international tax; the number of large MNEs remain limited; and the types of economically significant intercompany transactions are also limited and fairly stable, but important in value.

Table 2. Mali's Tax Treaty Withholding Rates

	Dividends	Interests	Royalties	Technical services	Management services
CGI rates	**10%**	**15%**	**30%**	**15%**	**15%**
Algeria	10%	15%	15%	0%	0%
France	10%	15%	0%	0%	0%
Morocco	5%	10%	10%	0%	0%
Monaco	10%	6%	15%	0%	0%
Russia	15%/10%	15%	0%	0%	0%
Tunisia	0%	5%	10%	0%	0%
WAEMU	10%	15%	15%	0%	0%

Sources: Countries' laws.

18. The only existing safe harbor relates to a limitation on the interest rate charged on related companies debt, which is set at the BCEAO rate plus 2 percentage points.[10] Such a limitation significantly reduces the potential for contentious issues.

Double Tax Treaties

19. Tax treaties can be useful in providing certainty for the tax treatment of investment flows between two countries, and help eliminate double taxation.[11] However, unless they are structured effectively, individually and as a network, tax treaties could create opportunities for tax avoidance strategies, and significantly limit the taxing rights of the source country (in this paper, Mali). As of October 2016, Mali had a multilateral tax treaty with WAEMU partner States, and bilateral treaties with France, Algeria, Russia, Morocco, Tunisia, and Monaco. All these treaties generally follow the UN model convention.

20. Mali's tax treaties have generally maintained the protective role of withholding taxes on payments to non-residents, with some exceptions (Table 2). The most important is the zero withholding on inter-company management and technical services—i.e. the 15 percent rate on such expenses in the CGI does not apply to payments to residents of the treaty partners. This exception could be significant from a base erosion perspective, as technical and management services payments between related companies have increased in importance over the years.

21. Mali should continue negotiating withholding tax rates in its tax treaties in line with

[9] Safe harbors are statutory provisions that relieve taxpayers from general transfer pricing regulations; their purpose is to provide certainty of tax outcomes, when taxpayers follow certain rules.

[10] Under the 1991 MC, the base rate applicable to mining companies was Libor instead of the BCEAO's rate.

[11] Double tax treaties allocate the respective rights to tax between two contracting states.

the general rates in its CGI. Significant variations of rates across treaties and with non-treaty countries should be avoided, as they may generate treaty shopping practices—whereby a multinational would set up residency in a treaty country solely to benefit from its low withholding rates. Such practices require another layer of anti-abuse rules, which can be difficult to implement.

C. Exposure To Tax Avoidance

22. This paper analyses channels and indicators to identify the extent of Mali's exposure to tax avoidance by MNEs. Rather than applying a quantitative approach targeting a high-level estimate of potential tax losses,[12] analysis is based on the patterns of FDI and firm-level data from tax returns, which provide stronger indicators and some quantification of the extent of profit shifting. This section explores the patterns of transactions with low-tax jurisdictions, the profitability of MNEs in Mali and their thin capitalization practices. This is complemented by an analysis of the main intercompany transactions occurring in Mali (see section IV). Together, this section and the next allow for formulating options for more effective policies to protect Mali's tax base derived from MNE's business activities.

Exposure to Low-Tax Countries and Exports Undervaluation

23. Data from the Coordinated Direct Investment Survey (CDIS) suggest that a significant share of FDI into Mali transits through low-tax countries. Over 2011-2015, the three most important origins of FDI into Mali were the UK, Barbados, and Australia (Table 3). The United Kingdom does not report in the CDIS any outward investment in Mali; these investments may therefore be attributed to the British Overseas Territories and Crown Dependencies[13] such as Jersey (e.g. Randgold Group) and the Cayman Islands (e.g. Avnel Gold Mining Group).[14] At the end of 2015, over 60 percent of Mali's inward FDI position was with the UK and Barbados (e.g. Avion Resources Mali).[15]

Table 3. Mali's FDI Inward Position in 2015

Origin country	Total	Equity	Debt	Debt/Equity
USD millions				
Australia	390	16	374	23.1
Barbados	454	30	424	14.2
Canada	144	23	121	5.3
Senegal	112	112	0	0.0
South Africa	109	38	71	1.9
UK	1,380	533	847	1.6
Other countries	463	354	108	0.3
Total World	3,052	1,106	1,946	1.8
Share of total (%)				
Australia	12.8	1.5	19.2	
Barbados	14.9	2.7	21.8	
Canada	4.7	2.1	6.2	
Senegal	3.7	10.1	0.0	
South Africa	3.6	3.4	3.6	
UK	45.2	48.2	43.6	
Other countries	15.2	32.1	5.6	

Sources: IMF Coordinated Direct Investment Survey.

[12] See for instance Crivelli, De Mooij, and Keen (2015).

[13] The CDIS data allows for reporting of investment flows from the British Overseas Territories and Crown Dependencies. Mali could align its reporting to this structure to better assess FDI flows from low-tax jurisdictions.

[14] Extractive Industries Transparency Initiative, Mali Report 2014, December 2016.

[15] Idem.

24. The increase in inward FDI has been mainly in the form of debt, indicating a significant risk to the tax base from thin capitalization.[16] Over 2011-2015, about 84 percent of the increase in FDI (USD 1.38 billion) originated as debt from low-tax countries (UK dependencies and Barbados). This implies that high levels of interest deductions are taken against income generated in Mali. Such income may come from developing new mines, or expanding existing ones, and will have tax consequences for Mali over several years—hence, the importance of analyzing tax-returns data over long periods.

25. The destination of Mali's exports may also indicate exposure to profit shifting through transfer pricing. About 75 percent of exports are destined to South Africa and Switzerland, and this ratio is relatively stable over recent years. This concentration may appear normal given the importance of gold refining in these two countries (especially Switzerland), but it raises the issue whether such exports are valued appropriately for Mali's CIT and royalties. The issue could be complicated by the fact that non-refined gold may be harder to value using readily available price indices. Further analysis identifying the nature of gold exports, the relationship between exporters (in Mali) and importers (in the two recipient countries mentioned), and the structure of prices charged on such exports, could shed more light on base erosion through undervaluation of inter-company export prices.

Profitability of MNEs in Mali

Box 2. An Example of Profit Shifting Through Excessive Interest Deductions

Thin capitalization rules cap the amount of debt for which interest is tax deductible. Interest deductibility is typically restricted if a measure of the company's debt relative to its assets or equity exceeds a certain ratio. The exact definitions of the debt measure in the numerator of the ratio and of assets or equity in its denominator vary across countries. In recent years, the trend in OECD countries, in particular European countries, has been to replace thin capitalization rules with interest limitation rules—e.g., interest as a percent of Earnings before Interest, Taxes, Depreciation and Amortization (EBITDA).

A hypothetical case illustrates the revenue losses due to interest deduction. In both cases shown, invested assets amount to 1,000 million euro, but in the "Related Parties" case, debt from a foreign parent company is 90 percent of assets, leading to excessive interest deductions relative to the "Arm's Length" case, and 19.2 million euros in CIT losses.

Hypothetical Case

No.	(millions of Euro)	Arm's Length	Related Parties
1	Equity	900	100
2	Debt	100	900
3 = 1 + 2	Assets	1000	1000
4 = 2 / 1	Debt/Equity Ratio	0.11	9
5	Interest rate	0.08	0.08
6 = 2 * 5	Deductible interest	8	72
7	CIT rate	0.3	0.3
8 = 6 * 7	Deductible interest * CIT Rate	2.4	21.6
9	CIT value of profit shifting		19.2

[16] See Box 2 for a description and illustration of the effect of thin capitalization on tax revenue. The "Third Parties" example is based on cases encountered in tax returns of mining MNEs resident in Mali.

26. Low profitability of MNEs in Mali is another indicator of international profit shifting. The profitability of MNEs was therefore analyzed and compared with the profitability of domestic companies to distinguish between potential situations of transfer pricing avoidance, and genuine economic factors.[17]

27. Affiliates of MNEs resident in Mali represent a high proportion of total CIT (81 percent), but this share is unequally spread among them. The 10 largest affiliates contribute more than 67 percent of the CIT. The median CIT-to-turnover ratio for all MNEs is 1.1 percent,[18] which is just slightly above the minimum tax of 1 percent of turnover, suggesting a very low tax profitability of affiliates of MNEs resident in Mali, which could be partly the result of profit shifting.

28. The tax profitability of MNEs is on average lower than that of domestic companies, also suggesting profit shifting outside of Mali. For instance, 29.5 percent of MNEs in Mali reported negative taxable results in 2016, against 16 percent for all companies under the normal CIT regime (excluding exempt companies). In addition, 42.7 percent of MNEs paid the minimum CIT in 2016, and more than 31.4 percent over 2014-2016. Given that this period coincides with a decline in the price of gold, an analysis over a longer period is necessary.

29. Further sectoral analysis would be useful to identify more narrowly the channels and the revenue loss associated with tax avoidance. This could include benchmarks on various elements of the revenue and cost structures of companies resident in Mali. The analysis could also be extended to companies resident in other countries with economic structures similar to Mali, and operating in the same economic sectors.

Thin Capitalization

30. Mali's exposure to thin capitalization indicate excessive leverage in the early stages of investment, and a decline thereafter due to the accumulation of earnings. About 35 percent of inward FDI by country of origin in 2015 had debt to equity ratio exceeding 500 percent (Table 4). Investments reported from the United Kingdom show a ratio of 159 percent in 2015, declining

Table 4. Mali's Exposure to Thin Capitalization Risk

Country of Origin	Debt to equity ratio					Share in Total FDI in 2015
	2011	2012	2013	2014	2015	
DE ratio over 5 in 2015						**0.35**
Australia	(18.62)	12.37	10.11	26.31	**23.15**	0.13
Barbados					**14.21**	0.15
Canada				0.76	**5.26**	0.05
Germany					**5.74**	0.02
DE ratio over 1.5 in 2015						**0.49**
South Africa		0.54		1.05	**1.88**	0.04
United Kingdom	2.63	1.30	0.46	0.88	**1.59**	0.45
World	**0.88**	**0.93**	**0.58**	**0.94**	**1.76**	**1.00**

Source: CDIS, and IMF staff calculations.

[17] The analysis in this section is based on firm-level data provided by the *Direction Générale des Impôts* for the most-recent available years (2014 to 2016).

[18] This ratio can be thought of as a "tax return on turnover ratio"—i.e. how much the government shares in each Euro of sales from the mining rent.

from 263 percent in 2011. FDI from Barbados indicate a similar situation, with a large debt injection into Mali in 2015.

31. About 84 percent of FDI into Mali is subject to thin capitalization risk—assuming a debt-equity ratio of 1.5 over the long run is standard practice. This seems particularly the case of mining MNEs, and is confirmed by firm-level data from tax files, which show that the ratios of financial debt to social capital (i.e. original equity contribution) of mining companies are disproportionate relative to the level of total investment. All mining MNEs have subscribed the minimum required social capital (or slightly above), financing the remaining investments by debt.[19] By comparison, similar ratios in the telecommunication industry appear more reasonable. Thin capitalization practices in the mining sector were used despite the limitation in the 1991 MC, which caped the deduction of interest on intercompany debt to the amount of the social capital.

32. This pattern is an indication of excessive interest expenses accruing in the early stages of an investment, creating losses that can be carried forward against future earnings, which in turn defer payments of CIT and the 10 percent priority dividend to the Malian State.[20] The large injection of debt in the early life of projects, will eventually have to be repaid out of accumulated earnings, with no tax consequences.

33. In summary, both the patterns of FDI inflows and firm-level tax data suggest that thin capitalization is undermining Mali's tax base. More effective thin capitalization rules could combine a debt-equity ratio (instead of a minimum original equity contribution) with an interest limitation rule, to capture both the debt level and the interest rate. The latter could be extended to non-related party, including in the domestic context.

D. Strengthening Transfer Pricing Rules

34. This section proposes simplified approaches to strengthen Mali's recently adopted transfer pricing regulations. Clear and easy-to-apply methods should enhance Mali's protection against aggressive transfer pricing practices. The issuance of administrative guidelines, and the development of relevant capacities in the tax administration, are feasible objectives to pursue over the next few years.

35. Considering the importance of the mining and telecommunications in the Malian economy, and the limited types of relatively important transactions that may erode Mali's tax base, this section focuses on the following areas of profit-shifting risks: undervaluation of gold exports; profit shifting within Mali, in particular due to weak ring-fencing rules in the mining sector; pricing and structuring of inter-company services and royalty fees; and, pricing of incoming international calls.

[19] Through the life of a mine, accumulated earnings are likely to increase equity and therefore reduce the debt to equity ratio to a more acceptable level.

[20] The Malian State generally owns 20% of the mines, of which half are entitled to priority dividends.

Valuation of Gold Exports

36. Mali's authorities have good control over the quantity and quality of gold export by MNEs. Mineral content is verified through MNEs' own controls and refining reports are made available to the Malian authorities. While this does not eliminate all risks, it limits blatant abuses. The authorities have plans to develop their own laboratory resources; while this could enhance existing controls, it should be considered from a cost-benefit perspective.

37. The authorities have less information about export prices, which MNEs may understate, thus affecting CIT and royalty revenues. This situation is made particularly more difficult in the mining sector, where the MC maintains a complex fiscal regime by splitting the royalties into two taxes: a tax based on turnover, and an ad-valorem tax based on mine gate prices.

38. A simpler valuation methodology, based on the Comparable Uncontrolled Price, should aim at consistency across the different taxes on turnover. The development of this methodology requires a comparative analysis of transactions between exports to third parties, and exports to related parties, to identify discrepancies and to determine simple rules consistent with independent market practices. Such analysis would be helpful to determine an arm's-length allocation of revenues arising from the difference between quoted ex-mine prices and over-the-counter prices. Given the importance of economic rent in the mining sector, methods based on margins or costs should not be allowed, including for taxes on profits.

Adapting Tax Audits to the Investment Lifecycle

39. The type of tax arbitrage varies over the investment lifecycle, particularly in capital intensive sectors, such as mining. For instance, during a CIT exemption period under the MC (or the investment code for non-mining companies), MNEs may inflate the price of capital goods imported under a customs exemption regime to claim higher amortization charges after the end of the CIT exemption period. At the end of a mine's life, MNEs have an incentive to sell capital goods at a low price to related parties to avoid realizing capital gains.

40. MNEs may extend the benefit from indirect tax exemptions beyond the exemption period. They could artificially increase their stocks of intermediate and capital goods (e.g. spare parts) before the end of the exemption period, to use them for activities taking place after the exemption period. This highlights the importance of extending tax audit to quantities (not only prices), and to the complexity of doing this when exemption regimes are provided for both inputs and profits.

41. Other abuses may arise from mining extension projects. In case of an extension of a project within the same legal entity, the immediate deduction of charges related to the extension may offset profits of existing activities, thus delaying the payment of CIT and priority dividends to the Malian State. In the case of an extension in a separate legal entity, an allocation of expenses and revenues between the related companies may be used to transfer profits to the newly established company which benefits from a CIT exemption. A similar issue arises in case of separate projects

managed by two related parties.

42. Ring-fencing rules should be strengthened, to limit transfer pricing risks across separate but related entities, or across projects within the same legal entity. This means that there should be clearer limitation on consolidation of income and deductions for tax purposes across different activities, or different projects, undertaken by the same taxpayer, and transfer pricing regulations should be applied to intercompany transactions within Mali. This will also facilitate tax audits related to the use of CIT and customs exemptions. The ring-fencing rules should strike a delicate balance between reducing opportunities for base erosion, and encouraging the development of new projects and extension of existing ones.

Intercompany Services

43. The overcharging of technical and management services represents an important risk considering the industrial and technical nature of MNEs in Mali (mining, telecommunications, building, oil, and to a lesser extent financial services). One common technique used in Mali is to charge services based on a fixed percentage of the recipient's turnover, without any guarantee that the service is effectively rendered. The main protection against this abusive practice is the domestic withholding tax of 15 percent. However, as noted earlier, Mali's tax treaties reduce this rate to zero, and hence greatly undermine the effectiveness of such protection.

44. Mali's transfer pricing regulations could be adapted to deal effectively with the supply of services between related companies. The primary approach should be to base such services on cost incurred for services rendered (provided they are justified from a business perspective), and not on turnover of the recipient company. For simplicity, safe-harbors can be used to determine the acceptable margin on the costs of the services provided—as suggested by the UN Practical Manual on Transfer Pricing for Developing Countries—, together with a cap on maximum deductible amounts for all management and technical services, expressed for instance as a percentage of other expenses.

Royalty Fees

45. The main economic sectors in Mali are not highly exposed to tax avoidance through royalty payments to non-resident related parties. Nevertheless, the main protection for Mali against possible abuses through this technique lies in the applicable withholding tax of 30 percent. Mali's tax treaties generally maintain this protection, though with reduced rates. The treaties with France and Russia eliminate fully this protection—royalties paid to residents of these countries should therefore be audited carefully. In this regard, Mali could consider developing a tax audit practice defining a methodology to price inter-company royalties. Considering the absence of relevant third-party data on comparable transactions in the relevant geographic area, a royalty based on profits could be considered.

International Calls

46. The pricing of incoming international calls may be a concern from revenue perspective considering that Mali is generally a receiving country. Besides CIT, a decrease in turnover would also affect other taxes such as the turnover tax on telecommunication companies. Mali has recently enacted a regulation[21] establishing a communication right to access information pertaining to international calls such as volumes and roaming agreements. The effective implementation of this regulation should be monitored and the information gathered can be used to establish clear guidelines regarding intercompany pricing. The use of comparable transactions with third parties would be particularly useful to audit transfer prices.

Developing Effective Transfer Pricing Capacity

47. Transfer pricing is a technically complex field, which draws upon tax, legal, accounting, and economics expertise, as well as its own methodologies. Although this paper does not discuss tax administration capacity issues, it is obvious from discussions with Malian tax inspectors, that Mali needs to develop its human resources in key agencies (tax and customs administrations, and the Ministry of Mines), to effectively enforce the anti-avoidance rules discussed in this paper. The development of a dedicated team, commensurate with the number of MNEs operating in Mali, would allow building a strong centralized expertise to manage the most important cases, and to support tax auditors. Key competencies to acquire are knowledge of MNEs business models and structures, transfer pricing comparability analysis, management accounting, and transfer pricing audit management.

[21] Finance law for 2016.

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THE EXPENDITURE SIDE: MAKING PUBLIC INVESTMENT MORE EFFICIENT[1]

More efficient public spending in Mali is another venue that could increase the "effective" fiscal space as Mali is facing lower donor support, financing constraints and the objective of reaching the WAEMU convergence criteria. This section reviews public expenditure efficiency in Mali in a cross-country context, with a focus on investment spending. Investment was chosen because it stands out as an area which can serve as an important catalyst for economic growth, and because of the Public Investment Management Assessment (PIMA) that was recently undertaken.

A. Introduction

1. Mali faces fiscal challenges as it aims to reach the WAEMU fiscal convergence objective. In the short term, in a context of ongoing insurgencies, Mali faces additional spending needs to improve security and the decentralization process accompanying the peace agreement. In the medium term, the challenge is to achieve its developmental objectives while meeting the fiscal consolidation required by the regional stability objectives. At the same time, donor support is diminishing and regional financing conditions are becoming tighter.

2. Improving the efficiency of public spending can help boost growth and achieve social cohesion when facing budget constraints. While domestic revenue mobilization has helped meets the development needs of growing population, optimizing expenditure efficiency needs to be the other side of a strategy to avoid unsustainable debt levels. A more efficient delivery of public services could yield better outcomes for a given cost. It would also provide for contingency in case the assumptions underpinning the existing fiscal space calculations do not materialize or if financing conditions change and external support doesn't materialize. More efficient public spending can also help support medium-term growth and make the economy more resilient to future shocks.

3. Public investment can serve as an important catalyst for economic growth by supporting or enabling the delivery of key public services, and connecting citizens and firms to economic opportunities. However, the economic and social impact of public investment critically depends on its efficiency.[2] Both theoretical and empirical studies have underscored the positive relationship between high-quality public infrastructure and economy-wide productivity.[3]

4. Efforts to boost investment and foster inclusive growth in Mali have yielded limited results due to the volatile investment budgets and large efficiency gaps in PIM. As other in WAEMU countries,[4] the procyclical nature of public investment has long been an impediment to

[1] Prepared by Benoit Taiclet, Gwénaëlle Suc and Boriana Yontcheva

[2] Cf. IMF Paper on making investment more efficient (2015, Fiscal affairs department)

[3] e.g., Buffie and others, 2012; Ghazanchyan and Stotsky 2013

[4] Cf. Public Investment Efficiency In WAEMU: An Empirical Assessment, IMF Country Report No. 18/107

stable and high growth. Mali is no exception to this pattern: when facing resource shortages and political turmoil, Mali government typically felt compelled to cut its domestically-funded investment while donors were prone to withdraw their financial assistance. Investment expenditure has hence been outstandingly volatile over the past 25 years, with a recent dramatic dip during the 2012-13 crisis. In addition to unstable resources, the efficiency of public investment has been very low due to lapses in governance and management, as well as poor delivery on the investment supply side.

5. In 2017, the IMF and the government of Mali undertook an assessment of trends in infrastructure quality. This assessment evaluated institutional quality of infrastructure management using a new framework— PIMA. The PIMA pictured robust Mali, institutional arrangements for public investment management compared with peer countries. This Mali PIM system has, however, not been able to deliver durable and quality infrastructure. As a result, in 2015 Mali was left with one of the poorest capital stock per capita ratio in the western Africa sub region.

6. Building on the FAD Expenditure Assessment Tool and the 2017 PIMA mission to Mali, this paper aims to explain this paradoxical case of a sound framework yielding a poor efficiency. It reviews the source of public expenditures in a cross country setting with a focus on public investment. Investment was chosen because it stands out as the area where Mali appears to spend more than the average of its South Saharan African peers while having below-average outcomes. This note draws upon a recent IMF technical assistance mission that provided PFM recommendations and it explores way forward to close the efficiency gap in Mali and substantially increase the economic dividends from public investment.

B. Current Expenditure Efficiency: Recovering from the 2012 Dip

7. While the overall level of public expenditure to GDP remains below the SSA average, current spending has risen rapidly over the past five years. The overall level of public expenditure places Mali in the slightly-lower spender category. However, over the past decade, expenditure have grown faster than in the SSA average especially regarding current expenditures.

8. Meeting the developmental needs of a growing population requires boosting the efficiency of public spending. Looking at health, education and infrastructure spending and their outcomes shows that Mali has space to improve the quality of its expenditures.

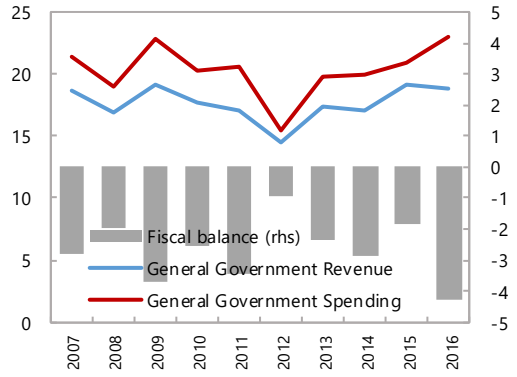
Health

9. The amount of Mali' health related expenditures is broadly in line with peer countries but the outcomes are poor. Health care spending represents about 5.5 percent of GDP, an amount in line with the SSA average and other LICs. However, public spending has dropped. The shift towards rising private spending is likely to generate a gap in coverage for lower income/rural populations. Out of pocket expenses are much higher than in SSA but the number of hospital beds and other qualitative metrics are much lower.

Figure 1. Mali: Overall Level of Current and Capital Expenditures, Trends and Peer Comparisons

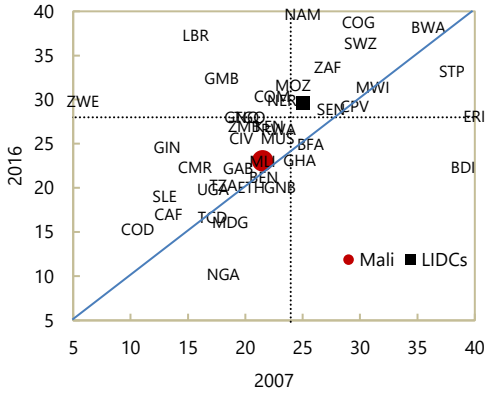
Expenditures have recovered from the 2012 dip

Fiscal Balance (in percent of GDP), 2007–2016



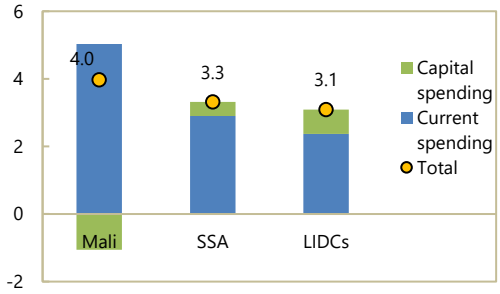
Spending rose in line with GDP

General Government Spending (in percent of GDP)



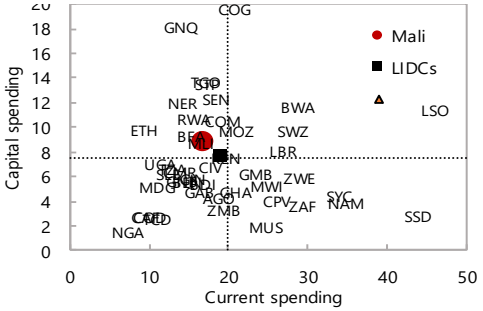
Faster spending growth and mostly on current expenditures

Change in Total Spending (in percent of GDP), 2007–2016



Above LIDC and above SSA for capital spending

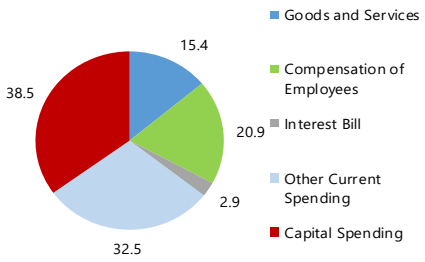
Current and Capital Spending (in percent of GDP)



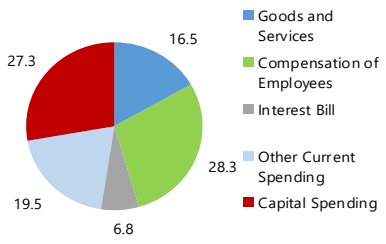
The functional breakdown shows that investment expenditures…

…are much higher than in the SSA average

Mali -- Economic Classification (in percent of total), **2016**



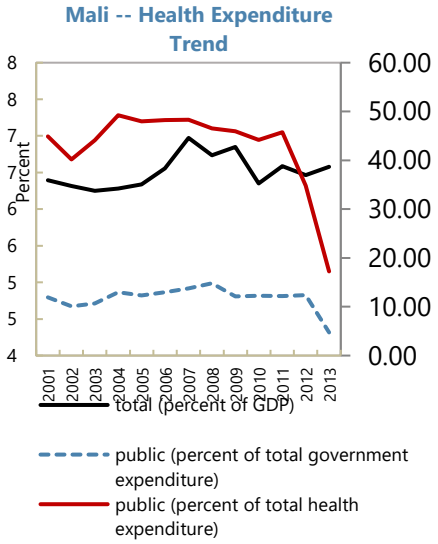
SSA -- Economic Classification (in percent of total), 2016



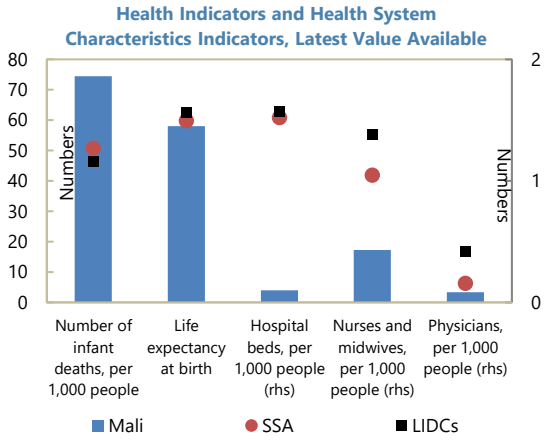
Sources: IMF FAD Expenditure Assessment Tool (EAT), World Economic Outlook.

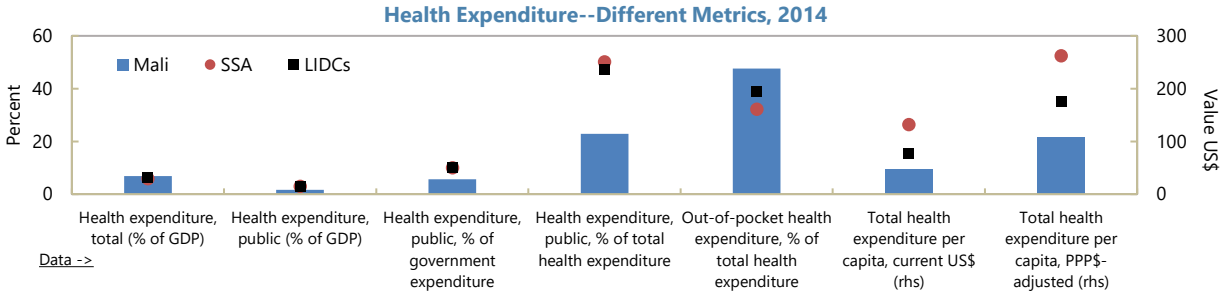
Figure 2. Mali: Health Expenditures, Trends and Peer Comparisons

Dropping public health expenditure are compensated by private ones



Outcome well below peer countries





Source: IMF FAD Expenditure Assessment Tool (EAT), World Bank, World Health Organization.

Education

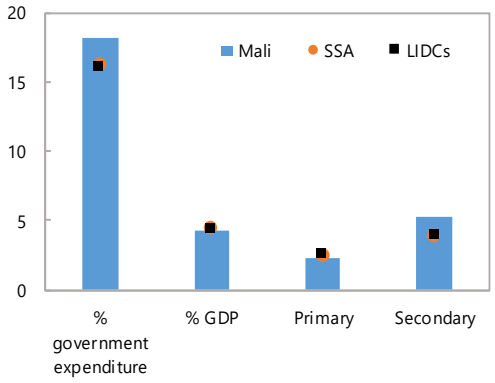
10. Mali spends relatively more on education but outcome indicators point to insufficient educational results. Education expenditure stood at 18 percent of total government expenditure, a 2-percentage point higher than in other SSA countries, but the PPP$-adjusted per capita amount is significantly lower than in SSA and LICDs average. Similarly, the 60 percent net enrollment ratio in primary schools is significantly lower than the SSA average of 80 percent and the adult literacy only half the one in peer countries.

Figure 3. Mali: Education Expenditures and Outcomes: Peer Comparisons

Mali spends more as a share of total expenditures

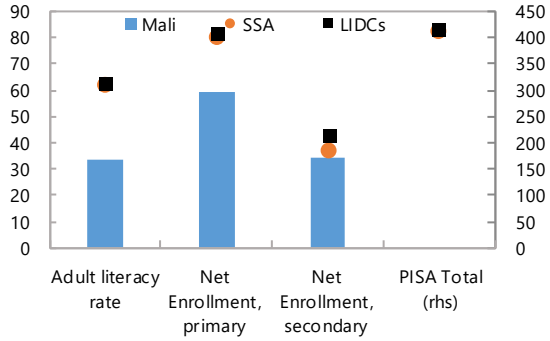
Government Education Expenditure

Latest Value Available



But enrollment is lower and adult literacy poor

Education Indicators



Source: IMF FAD Expenditure Assessment Tool (EAT), World Bank.

C. Capital Expenditure Outcomes: Volatile Resources yielding Poor Results

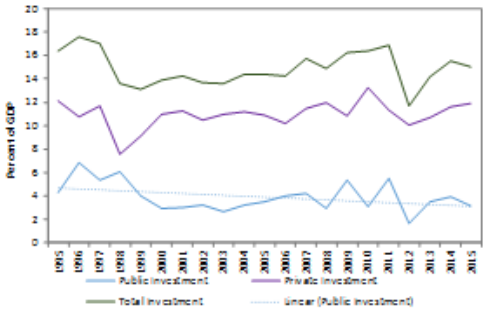
11. Income volatility and the 2012 crisis have brought public investment to a low point in Mali. Over 25 years, the public investment effort (e.g. public gross fixed capital formation) shows a steady decline in the share of public investment in GDP (Figure 4) and a high volatility of public investment efforts, with a standard deviation of 1.7 percent of GDP year on year. These trends can be explained by the increase in GDP during the period considered (with an average growth of 4.6 percent); a lower growth in public investment; volatile external financing; and the country's vulnerability to macroeconomic and geopolitical shocks, particularly in 2012.

12. The government of Mali has attempted to generate domestic resources for public investment but had with limited success. The share of national resources allocated to capital spending remained at approximately 40 percent during the period 2004-2015, with a particularly pronounced decline during the 2012 crisis, when the authorities were forced to discontinue investment so that wages and other priority expenditure could be covered. (Figure 5). Consequently, a substantial part of capital spending is supported by Mali's development partners. However, as disbursement depend on the compliance with project/program criteria the share of this external support in public investment has varied in the range of 20-50 percent.

Figure 4. Mali Investment Patterns

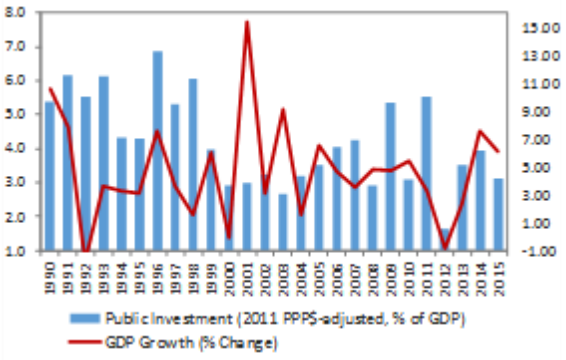
Total, public, and private investment[1]

Public investment is volatile and consistently declining ……..



Public investment and GDP growth

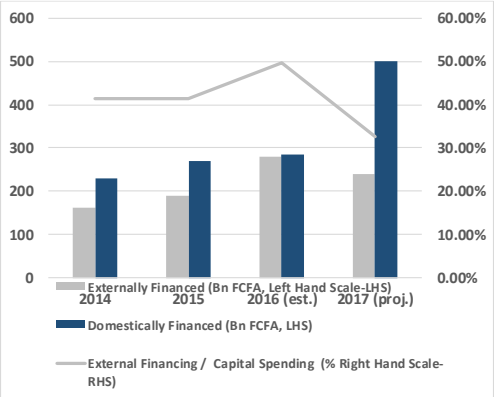
but it has been correlated with growth since 2004



Source : MALI PIMA, 2017, TA report Taiclet, Suc and al.

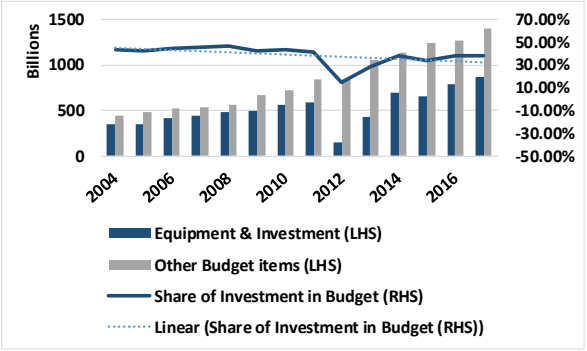
Financing sources for capital expenditure (billions of CFAF)

Domestic financing to investment has increased over the past four years



Share of capital expenditure in the budget (percentage of GDP)

spending in the budget is flat and prone to cuts.



1/ Unless otherwise indicated: data in 2011 U.S. dollars, purchasing power adjusted, percentage of GDP.

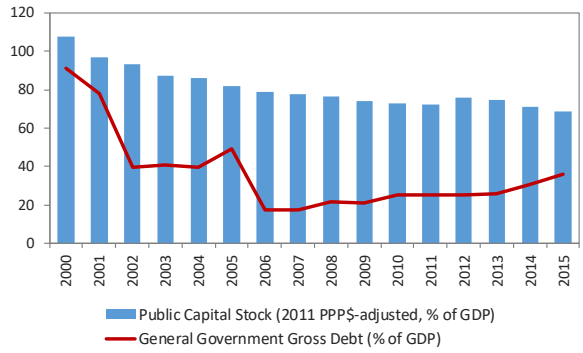
Source: Mali Central Gouvernement Budget and staff calculation.

13. The existing infrastructure is declining. The stock of fixed capital represented approximately 110 percent of GDP in 2000 and less than 70 percent of GDP in 2015 (Figure 5) as infrastructure building did not keep up with economic growth. The fixed capital stock per capita declined by approximately 17 percent between 2000 and 2015 (in constant U.S. dollars, subject to purchasing power adjustment, per capita). As a result, the stock of fixed capital per capita is now much lower than in other WAEMU countries (Figure 5). This substantial erosion in public assets can be explained by difficult geopolitical, climate, and environmental conditions and insufficient efforts to maintain and renew the country's existing infrastructures.

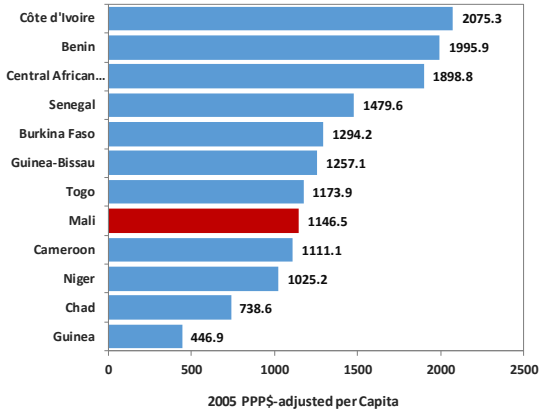
Figure 5. Mali Debt and Capital

Government capital spending has yielded few and eroding assets overtime

Stock of public capital and public debt



Stock of public capital stock per capita (2015)



Source : MALI PIMA, 2017, TA report Taiclet, Suc and al.

D. Efficiency of Public Investment: Mali Does not Get Value for its Money

How to Measure Public Investment Efficiency?

14. The economic and social impact of public investment critically depends on its efficiency. The efficiency of investment can, positively or adversely, impact the quality of and access to social infrastructure (e.g., schools and hospitals), and, to a lesser extent, economic infrastructure (e.g., roads and electricity). Comparing the value of public capital (input) and measures of infrastructure coverage and quality (output) across countries reveals average inefficiencies in public investment processes of around 30 percent. The economic dividends from closing this efficiency gap are substantial: the most efficient public investors get twice the growth for their public investment than the least efficient.

15. The IMF has developed a comprehensive measure of how much quality infrastructure a country gets for its public investment efforts. The Public Investment Efficiency indicator (PIE-X) estimates the relationship between the public capital stock and indicators of access to and the quality of infrastructure assets. Countries with the highest levels of infrastructure coverage and quality (output) for given levels of public capital stock and income per capita (inputs) form the basis of an efficiency frontier and are given a PIE-X score of 1 (Figure 6). Countries are given a PIE-X score of between 0 and 1, based on their vertical distance to the frontier relative to peer best performers. The less efficient the country, the greater the distance from the frontier, and the lower its PIE-X score. Three measures of infrastructure quality and access are considered in constructing the frontier[5]:

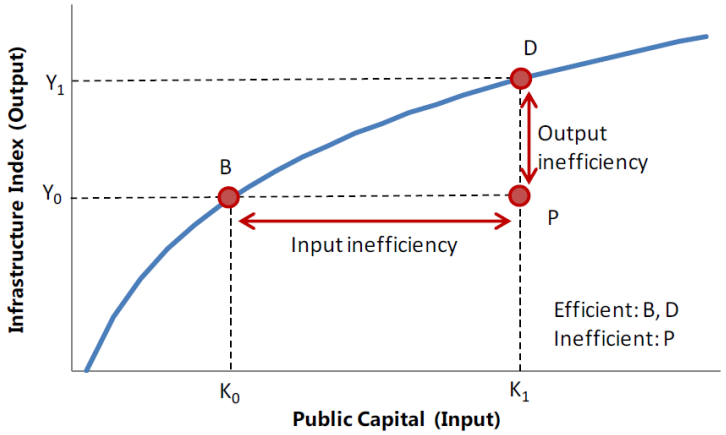
- A *physical indicator,* which combines data on the volume of economic infrastructure (length of road network, electricity production, and access to water) and social infrastructure (number of secondary teachers and hospital beds). While this indicator provides a sense of the coverage of infrastructure networks and physical output of public investments, it does

not fully measure the quality of the infrastructure.

- A *survey-based indicator* based on the World Economic Forum's survey of business leader's impressions of the quality of key infrastructure services. While this indicator provides a measure of the quality of infrastructure assets, it is affected by individual perception biases and fails to capture the coverage dimension adequately.

- A *hybrid indicator*, which combines the physical and survey-based indicators into a synthetic index of the coverage and quality of infrastructure networks.

Figure 6. Mali: Constructing the Public Investment Efficiency Frontier



source: IMF Board paper making public investment more efficient 2015.

Assessing the Quality of Public Investment in Mali

16. Public investment has been a corner stone in Mali development plans. Approximately 40 percent of the projected expenditure over 2016-18 is devoted to investment, with emphasis on access to health and education infrastructures, drinking water, electricity, and improving access to landlocked parts of the country.

17. Access to public infrastructures has improved despite the attrition in public investment. Access to infrastructures is measured using several different indicators, as a proportion of the population: the number of teachers per thousand inhabitants, kilometers of road per thousand inhabitants, the number of hospitals per thousand inhabitants, and the percentage of the population that has access to drinking water. These indicators have improved in recent years, with the noteworthy exception of health (Figure 7). The effects of decentralization (particularly to the municipalities) on grassroots level infrastructures, efforts to improve access, major hydro-agricultural programs, and investment plans of major public enterprises and agencies, are among the factors to explain this progress.

18. The quality of infrastructures, perceived as good as against other comparable countries, has been on the decline since 2012. The perception of the quality of the country's infrastructures has been assessed through surveys and compared to peer countries. Over a 10-year period, the quality of Mali's infrastructures has been quite similar to its comparators (Figure 7). Between 2010 and 2012, Mali was even above average in this connection. Unfortunately, the country's position has deteriorated since 2012, which suggests that fixed capital stock attrition is ultimately affecting the quality of the essential infrastructures.

Assessing the Efficiency Gap in Mali

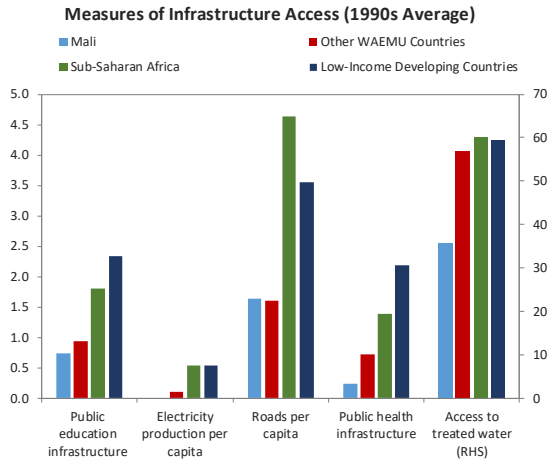
19. The IMF's calculations show that public investment efficiency levels are relatively low in Mali. Against PIE-X, Mali is rated 0.57 on a scale of 0 to 1 (Graphic 9), which is below the average of 0.64 for Sub-Saharan African countries and of 0.73 for emerging countries. As a result, Mali stands far from the efficiency frontier.

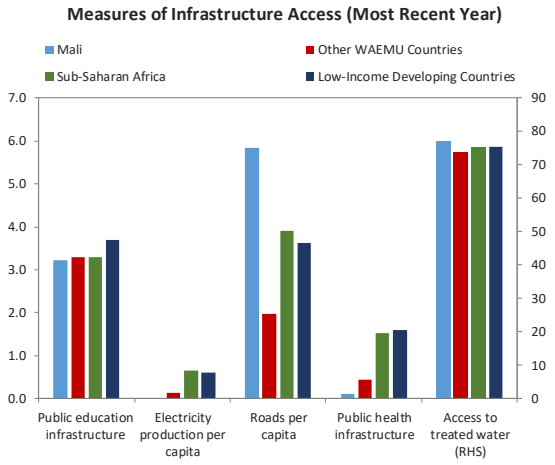
20. The efficiency gap reflects the insufficient volume and coverage of Mali's infrastructures rather than their quality. These findings in fact reflect a highly contrasting perception of Mali's infrastructures with:

- A good quality component of 0.81 as compared with an average of 0.78 in emerging countries and 0.80 in Sub-Saharan African countries;
- A poor physical component of the indicator measured with access to infrastructures of 0.32, as against a world average of 0.59 and an average of 0.46 for Sub-Saharan African countries;
- A combined efficiency gap reflecting the two above components (Graphic 2.14) of 0.43, as compared with 0.27 for other countries of the world.

Figure 7. Mali: Access to Public Infrastructures

Access to public infrastructures has improved overtime, albeit with the noteworthy exception of health infrastructures.

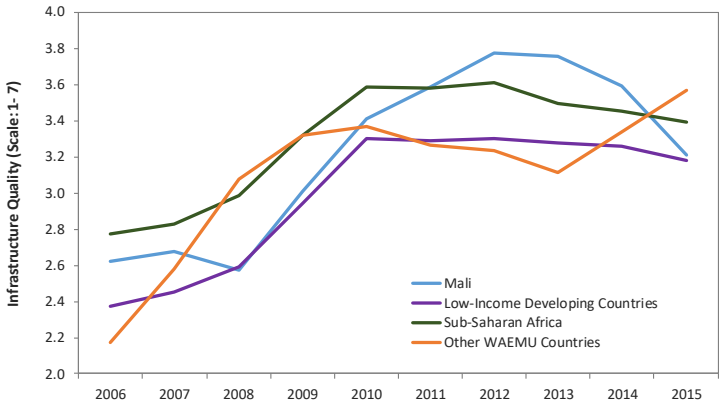




Source: World Development Indicators (2015)

Figure 8. Mali: Perception of the quality of infrastructures

The quality of infrastructures, perceived as good as against comparable countries, has been on the decline since 2012



Source: World Economic Forum (2015).

Note on Sources used for these graphics:

1- World Development Indicators (2015)

The units vary to reflect the measurements used to assess access to the infrastructures considered. Left scale: access to public school infrastructures is measured with the number of secondary school teachers per 1,000 persons; electricity production per inhabitant in kWh per 1,000 persons; roads per inhabitant in kilometers per 1,000 persons; and access to health infrastructures in hospital beds per 1,000 persons. Right scale: Access to treated water is measured as the percentage of the population that benefits from this service.

2- World Economic Forum (2015)

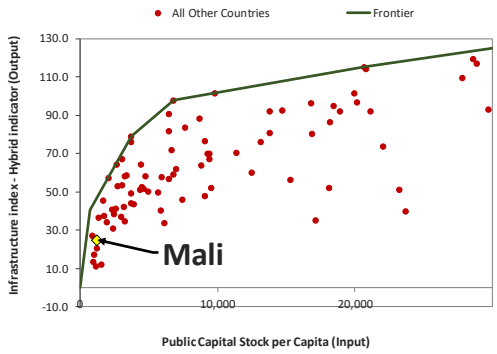
The data have been compiled by the World Economic Forum based on opinion surveys conducted by infrastructure sector in each country involved. The methodology and size of the panels vary depending on the sector.

Figure 9. Mali: Efficiency Indicators

Mali does not get value infrastructure for the money it spends

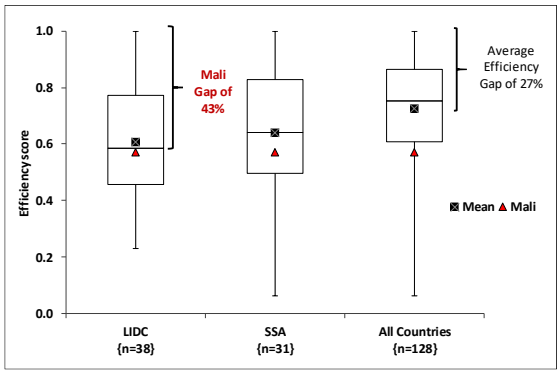
Efficiency Indicator threshold (hybrid indicator)

Mali stands low among other countries in terms of quality and quantity of fixed capital.



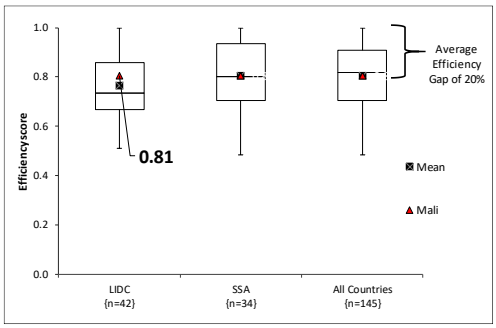
Efficiency indicator (PIE-X)

And it stands in the worst quartile for PIM efficiency



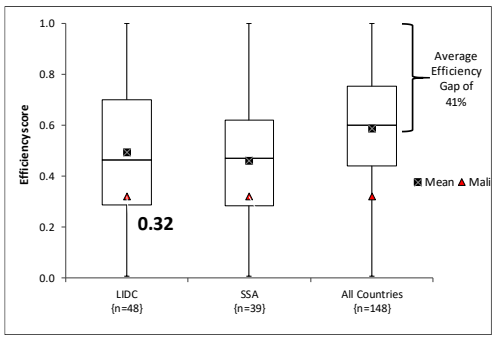
Efficiency indicator (PIE-X), quality component

The quality component compares well with SSA Countries



Efficiency indicator (PIE-X), physical component

However, the physical component (0.32) is utterly poor, as against an SSA average of 0.46.



Source: PIMA data base and IMF staff estimates.

E. Underlying Causes of Inefficiencies: A Strong, Yet Under Performing Management Framework

21. Efficiency of public investment management (PIM) institutions is a driver for investment efficiency. Many factors may have an impact on infrastructure quality and economic performance (i.e. the level of economic development, structural characteristics of the economy, the quality of governance, geography, and climate). However, a growing body of literature underscores the role that the legal, institutional, and procedural arrangements for public investment management play in determining the level, composition, and impact of public investment (see Box 1).

Box 1. Public Investment Management: Literature Review

Empirical studies underscore the importance of fiscal institutions for public investment performance. Weak institutions are associated with higher levels of investment, but also greater volatility in investment expenditure and lower quality of infrastructure (Tanzi and Davoodi, 1997; Keefer and Knack, 2007; and Grigoli and Mills, 2013). By contrast, higher public investment efficiency is generally associated with stronger institutions and low dependency on natural resource revenues (Albino-War and others, 2014). The Public Investment Management Index (PIMI) developed by showed wide variations in the efficiency and effectiveness of PIM across middle- and low-income countries. Yet, because the index relied largely on secondary-data sources, it could not evaluate all key institutions specific to public investment and depended on proxies for others. Nonetheless, using a PIMI-adjusted capital stock, Gupta and others (2014) found that the quality of PIM is an important determinant of the productivity of public capital.

The literature on PIM practices highlights the importance of transparency and well-governed institutions at key stages of the investment cycle:

- **Planning:** Balassone and Franco (2000), Creel and others (2007), and Schaechter and others (2012), discuss the role of *fiscal rules* in ensuring sustainable levels of public investment. OECD (2014) underscores the importance of effective, integrated *strategic planning* at the *national and subnational level*. Schwartz and others (2008) discusses the institutional arrangements needed to maximize the gains and minimize the risks associated with *PPPs*. OECD (2005) provides detailed guidance on the financial oversight and governance of *state-owned enterprises*, many of which operate in the infrastructure sector.

- **Allocation:** Dabla-Norris and others (2012), and Fainboim and others (2013) stress the importance of *medium-term budget frameworks*, *the unification of current and capital budgets*, and *consolidation of extrabudgetary funds* to the effective allocation of investment to the most productive sectors. Rajaram and others (2014) highlight the contribution of transparent and rigorous *project appraisal and approval* procedures to ensure that projects are selected based on credible estimates of their costs and benefits.

- **Implementation:** Dabla-Norris and others (2012), Flyvberg (2009), and Rajaram and others (2014) all underscore the role of firm *expenditure controls*, efficient *liquidity management*, regular *project execution* reporting and strong project management arrangements in ensuring that investment projects are delivered on time and on budget. The IMF's Government Finance Statistics Manual 2014 (GFSM 2014) discusses the benefits of regular *reporting on the condition and value of the resulting infrastructure assets* for fiscal monitoring and investment planning purposes.

How to Assess the Public Investment Management Framework?

22. Fund staff has developed a Public Investment Management Assessment (PIMA) tool to assess the quality of public investment management practices. The PIMA evaluates 15 key institutions for planning, allocation, and implementing public investment. These PIM institutions are a subset of the broader framework of budget institutions that govern the public financial management process. The PIMA includes elements similar to other PIM diagnostic tools, but provides a more comprehensive assessment of the public investment decision-making process at three key stages:

- **Planning** sustainable levels of investment across the public sector. This component of the PIMA is used to determine whether Mali has (i) fiscal principles or rules to preserve investment; (ii) national and sectoral plans defining investment strategies; (iii) effective coordination between central and local administrations in the area of investment; (iv) transparent management of public-private partnerships (PPPs); and (v) regulation of infrastructure enterprises to promote competition.

- **Allocating** investment to the right sectors and projects. This component of the PIMA assesses whether Mali: (i) conducts multiyear budgeting with transparent and predictable appropriations for investment; (ii) issues a comprehensive budget, so that all public investments are included in the budget documentation, and are Parliament-authorized; (iii) implements a unified budget process; (iv) conducts ex ante project assessments; and (v) implements a project selection system.

- **Implementing** projects on time and on budget. The third pillar of the PIMA aims to ensure that productive, sustainable assets are delivered. It determines whether all players: (i) have an investment protection mechanism; (ii) ensure that the funds are available; (iii) ensure transparency in project execution; (iv) manage implementation of projects; and (v) monitor public assets.

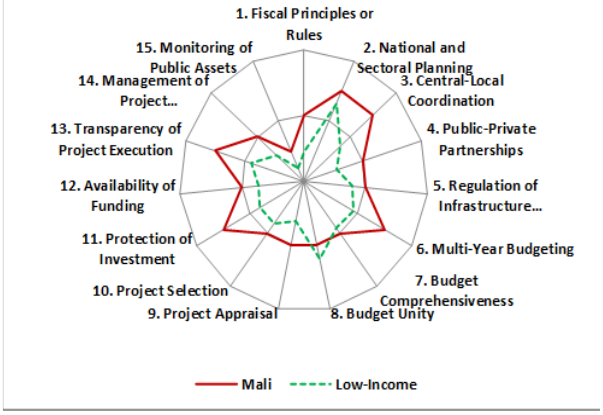
A Relatively Strong Public Investment Management Framework in Mali

23. In Mali, institutional institutions for public investment management are robust. Compared with peer countries, the framework for PIM is strong, and rather well implemented. The assessment of 15 institutions (or components) of the management framework brings to light generally good scores at or above average levels for LICs in almost all components (Figure 10). Only a few weaknesses are noticeable: the nascent (i.e. passed in late 2016) legal framework for PPPs has yet to be implemented; oversight of public enterprises is less than effective; processes for appraisal and selection of projects need improvements; investment financing is hampered by poor cash projections; and fixed assets are not properly accrued, and poorly maintained.

Figure 10. Mali and Comparable Countries

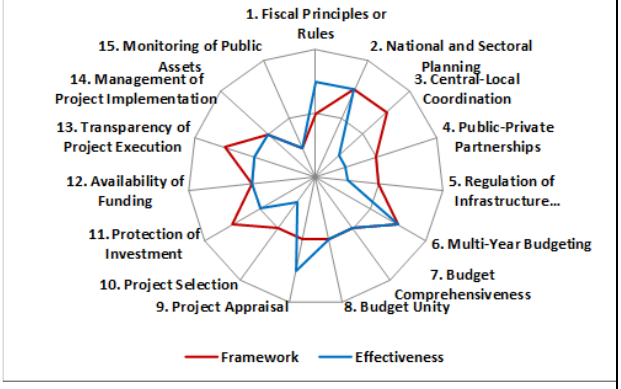
Institutional Framework for Public Investment Management

Compared with peer countries, Mali framework is robust…



3.2 Institutional Framework and its Effectiveness

…….and relatively well implemented



Source: Mali PIMA report, Taiclet Suc et al.

24. This rather good PIM system paradoxically fails to deliver durable and quality fixed capital formation. As highlighted in section II, in spite of this relatively strong framework, public investment management has not been able to deliver durable and quality infrastructure. Mali PIM efficiency gap is wider than comparator countries. On average, about 43 percent of the potential value of public investment in Mali is lost to inefficiencies in the investment process.

How to Explain the Efficiency Gap?

25. Several factors that make up the efficiency gap may be identified. It is hard to quantify how much inefficiency account in the Mali efficiency gap, but we can name and somewhat document some factors.

- **Corruption and fraud.** Numerous surveys and indicators (i.e. the Transparency International Corruption Perception Index; the Ibrahim Index of African Governance (IIAG); and the World Bank Country Policy Institution Assessment on transparency and good governance) have been consistently, identifying corruption as a major problem in Mali. IMF staff have identified it as a serious obstacle to growth and investment. A 2015 technical note (Stefan Klos and Milan Cuc's) makes the case for a fight against corruption on economic grounds. It provides evidence that real GDP growth could have been approximately 0.7 percent higher per year over 2008-13 if Mali had not experienced a deterioration in indicators of corruption during that period.

- **Cost overruns, and time delays.** These constitute general patterns for investment projects across LIC countries (Adam, Josephson and Lindahl, 2014). In Mali, media outlets frequently report about infrastructure projects of considerable size, with costs exceeding budget and completion times reaching further. In 2017, the special investment budget (a list of ongoing projects) still included many long-lasting projects, some of which should have been completed. Only 7 percent of the total number of projects were alive and well underway, while 50 percent were in the near or past completion phases, some with more than 10-year maturities.

- **Inadequate infrastructure maintenance.** Maintenance cost are not assessed or only for projects with large costs exceeding CFAF 1 billion. Albeit with a few exceptions there are generally no budget lines specifically related to recurring expenditure (upkeep, maintenance, and renovation) for infrastructures, as they are built.

- **Suppliers difficulties to deliver quality infrastructure.** The construction industry in Mali is facing dauting challenges including: the costs of imported raw materials and equipment in landlocked Mali; poor human capacity; shallow financing access; and operational difficulties including climate and insecurity.

F. Way Forward: How to Fill the Efficiency Gap?

26. Besides a few needed improvements, there is no need to revamp the PIM framework. Urgency however resides in increasing its efficiency by raising public investment managers' accountability and stewardship. It requires capacity building, strong oversight on results, and anti-corruption safeguards. At a technical level, the government reforms should in addition involve the following three main priority areas (see figure 11):

- **Strengthen the social-economic impact of investment spending** through enhanced processes for project selection, and a better management of the risks associated with PPPs and public enterprises.

- **Better reflect the investment effort** by accurately accounting fiscal resources for public investment, and improving the classification of capital-related costs.

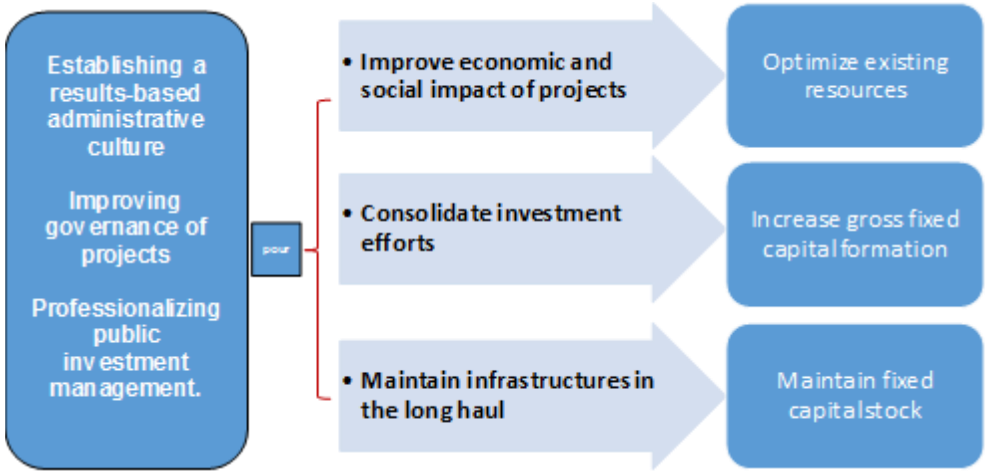
- **Maintain existing infrastructure in the long term** with a sound planning and execution of maintenance expenditures, and the involvement of civil society and local governments in oversight of maintenance works.

27. These priorities are fully consistent with Mali's reforms underway. The implementation of the West African Economic and Monetary Union's harmonized framework involves investment-friendly reforms including fixed-asset management, program-based budget, cash management and accountability frameworks for managers. All above mentioned actions are consistent with, and will benefit from these ongoing reforms.

28. In the short run, the Malian authorities are focusing on the following priorities (see also Mali 2018, memorandum of economic and fiscal policies):

- **To introduce a stronger result-oriented culture in investment management:** performance contracts for investment projects will be phased in, in conjunction with the World Bank, with a view to creating an incentive system for investment project performance. This tool will be applied to new World Bank projects from March 2018.
- **To improve and streamline the process for project management**, the government plans to update and issue a manual to: (i) introduce regulatory developments related to PPPs in June 2018; and (ii) connect the Planning and Statistics Units to the Public Investment Management Database (SIGIP) (Public Investment Database).
- **To streamline project costing,** the government will seek technical assistance to improve the adoption of a cost price based on standard units for the construction of road infrastructures, buildings, irrigation schemes and hydraulic structures.

Figure 11. Mali: Architecture of PIM Reforms in Mali



Source : Mali PIMA report, Taiclet Suc et al.

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FINANCIAL STABILITY, DEVELOPMENT AND INCLUSION IN MALI[1]

The Malian financial system is segmented and dominated by foreign-owned commercial banks. Six banks out of 13 account for 77.5 percent of the sector in terms of total assets. Banks have been very active in the regional sovereign bond primary market since 2009. Credit growth remains steady and consists of mainly short-term and medium-term loans. The microfinance sector is recovering from its 2009 crisis but immense challenges remain in terms of household confidence, access to financing, supervision, asset quality, and resolution. Financial inclusion is lagging, but the acceleration of the development of mobile banking, while carrying regulatory and supervisory challenges, is an opportunity to deepen the financial system, increase the formal sector, and promote long-term economic growth. This paper takes stock of the profile of financial system and discusses its contribution to the economy amid severe security challenges.

A. Profile of The Financial System

1. International and regional banks largely dominate the financial sector. In 2016, the banking sector comprised 13 commercial banks of which six banks accounted for about 77.5 percent of both total assets and deposits. There are seven international banks and five regional banks, accounting for nearly 86 percent of both total assets and deposits. The banking sector's balance sheets increased by 14.2 percent in 2016 to reach CFAF 4,336.2 billion at end-2016. Banks' net income amounted to CFAF 45.6 billion at end-2016. Credits to the private sector increased by 16.7 percent in 2016 to reach 2,195 CFAF billion, while customer deposits increased moderately by 6.4 percent to reach CFAF 2,528 billion at end-2016. Balance sheets from other financial institutions increased by 26.5 percent in 2016, to reach CFAF 33.9 billion at end-2016. The share of Malian banks' total assets in the WAEMU is estimated at 13.3 percent.

Text Table: Financial Sector Structure, 2016

Institutions	No. of institutions	Total Assets (billion CFAF)	Credits to the private sector (CFAF billion)	Private deposits (CFAF billion)
Banks	13	4,346.5	2,202.3	2,528.5
Non-banks financial institutions (NBFIs) 1/	3	33.9	0	0
Microfinance institutions (MFIs) 2/	10	133.2	93.7	68.5
Total	**26**	**4,503.3**	**2,296**	**2,597**

1/ excluding insurance companies

2/ excluding MFIs that are not subject to the Article 44 of the law 007-06-2010.

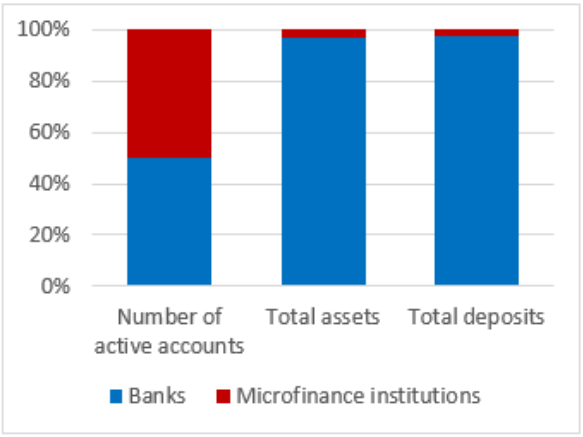
Source: BCEAO.

[1] Prepared by Alexandre Nguyen-Duong.

2. The microfinance sector plays a significant role in financial inclusion (Figure 1). There are 101 licensed microfinance institutions (MFIs), of which 33 are considered in operation.[2] Individual MFIs are considerably smaller than commercial banks in terms of assets but have the same number of deposit accounts. Ten of these 33 operating MFIs are subject to the Article 44[3] and account for about 3 percent of total assets in the financial sector. Credits to the private sector from MFIs amounted to about CFAF 93.7 billion at end-2016, a 14.5 percent increase from end-2015. Non-performing loans are slowly declining and are estimated at about 6.1 percent of total loans. Nearly 50 percent of MFIs loans have been contracted for agricultural purposes. Customer deposits increased to CFAF 68.5 billion, a 9.4 percent increase from end-2015.

Figure 1. Mali: Comparison Between Banks and Microfinance Institutions

(percent)



Source: BCEAO; CSS/SFD

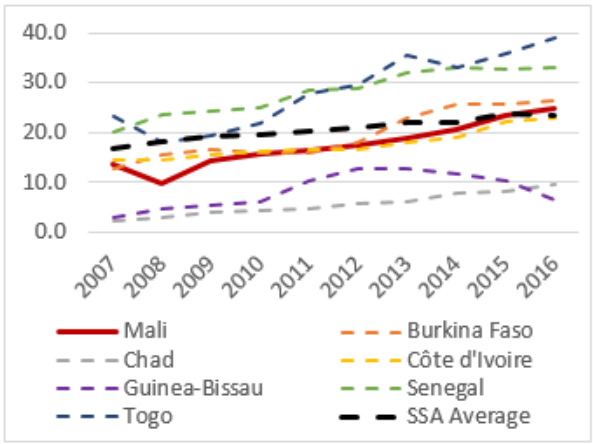
B. Financing the economy

Banking Sector

3. Mali's private credits to GDP ratio has been growing steadily since the 2008 financial crisis to converge to the regional average, amid an unfavorable geopolitical context and a subdued rule of law environment. Mali's ratio of domestic credits to the private sector as a percentage of GDP is about 25 percent at end-2016 (Figure 2). The WAEMU and Sub-Sahara Africa (SSA) averages are estimated at 29 percent of GDP and 23.5 percent of GDP respectively. The ratio of domestic credits to the private sector as a percentage of GDP is often used as a proxy for

Figure 2. Mali: Private Credits to GDP

(percent of GDP)



Source: BCEAO; FinStats

[2] In June 2017, 23 MFIs lost their license. 54 MFIs were considered for losing their license, of which 16 are pending the Ministry's final approval. MFIs that are considered inactive consist essentially of small retail structures, lacking reliable data. Some of them never started their activities.

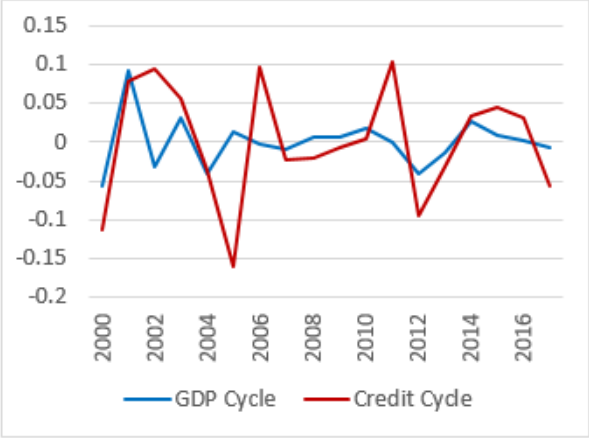
[3] MFIs that have deposits or credits greater than CFAF 2 million are subject to the Article 44 of the law 007-06-2010Large MFIs. They are supervised and regulated by the banking commission of the BCEAO.

measuring financial depth. The development of the formal private sector depends on better and broader access to bank credits as well as an improved business environment.[4]

4. Credit to the private sector has expanded significantly along with strong economic performance and outlook (Figure 3). Data from 2000 to 2017 show a correlation between the GDP and credit cycles with a lag of one to two years. A Granger causality test indicates that the GDP cycle leads to credit cycle. The credit cycle tends to spike as the GDP cycle has already started to decline. Typically, a declining phase of the credit cycle is associated with increasing NPLs, which linger on banks' balance sheet.

Figure 3. Mali: Credit and GDP Cycles

(Hodrick-Prescott Decomposition, percent)



Source: BCEAO; IMF staff estimates

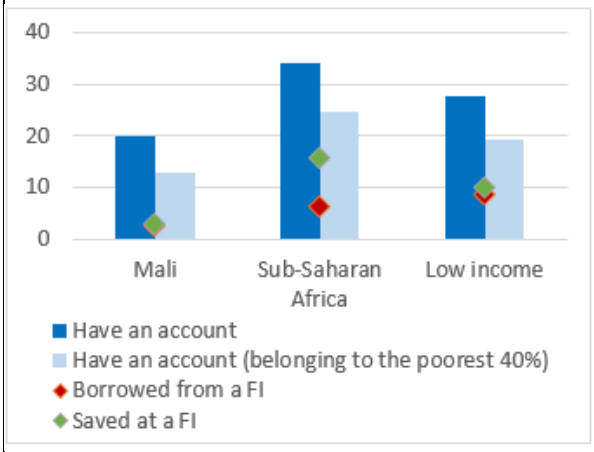
5. Access to finance remains low compared to benchmarked countries. Credits to the private sector per capita remain well below SSA average (Figure 4). Only 3 percent of Mali's population contracted a loan from a financial institution in 2014 while nearly 33 percent borrowed from friends and family. Overall, about 40 percent of Mali's population borrowed any money in 2014. These results are in line with the number of bank accounts per capita, which is often used as a proxy for financial inclusion, and remains well below the SSA average. The percentage of firms with a line of credit is estimated at 26.3 percent in 2016, which is above the regional average of 22.6 percent. However, the same indicator for small firms drops to about 13.8 percent, in line with the regional average.

6. Banks' credits to the economy are concentrated in trade and other services sectors (Figure 5). The sectorial composition of credits remained broadly stable over the last five years and is similar to the WAEMU composition with the exception of the hotels, restaurants, wholesale and retail trade sector. In Mali, this sector captures 43.2 percent of total credits as of June 2017 compared to 31.4 percent at the regional level. Overall, the tertiary sector accounts for nearly 73 percent of total credits to the economy while contributing to slightly more than a 1/3 of GDP. On the other end, the primary and secondary sectors capture around 27 percent of total credits while contributing to nearly 2/3 of GDP. Most notably, the agriculture sector, which accounts for about 43 percent of GDP and employ directly and indirectly millions of workers, capture around 4 percent of total credits. Farmers typically rely on cash transactions outside the formal banking system and do not have a bank account. Their financial needs are usually addressed by other farms, family, and microfinance institutions.

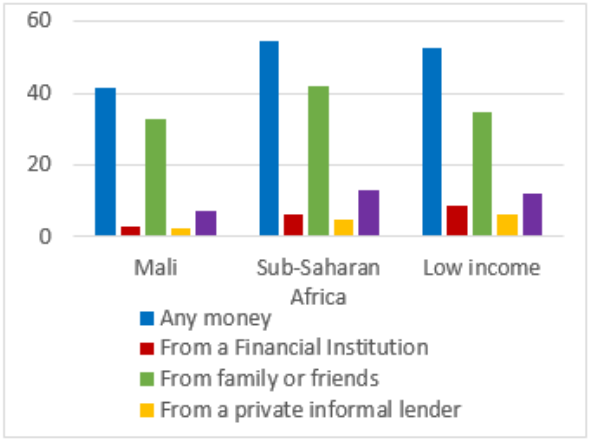
[4] Other aspects, such as access to financial services, efficiency, and stability, should be also considered when assessing financial depth (Cihak et al., 2012). Additionally, substantial amounts of credit do not always correspond to broad use of financial services, because credits can be concentrated among the largest firms and wealthiest individuals.

Figure 4. Mali: Financial Inclusion, 2014

Financial services usage
(percent of population)



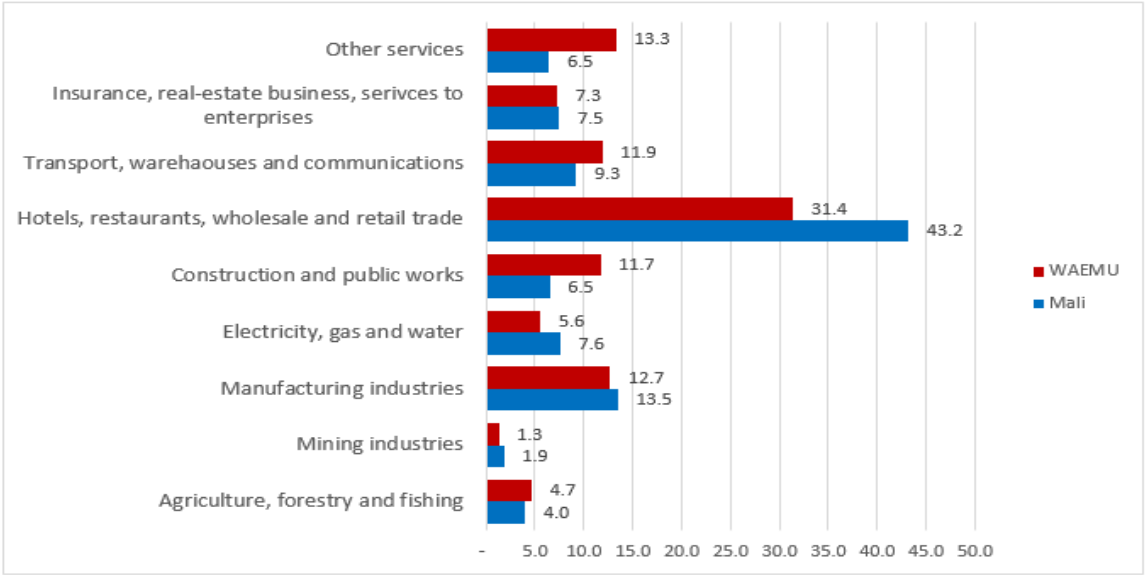
Source of borrowing, 2014
(percent of population)



Source: World Bank, World Development Indicators.

Figure 5. Mali: Credits to the Economy by Sector

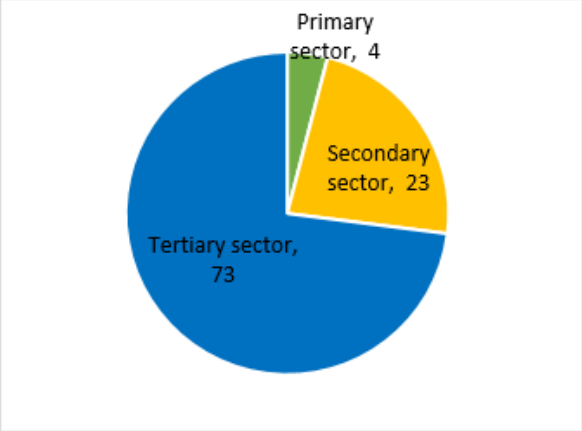
Credits by Sector, June 2017
(percent of total credits)



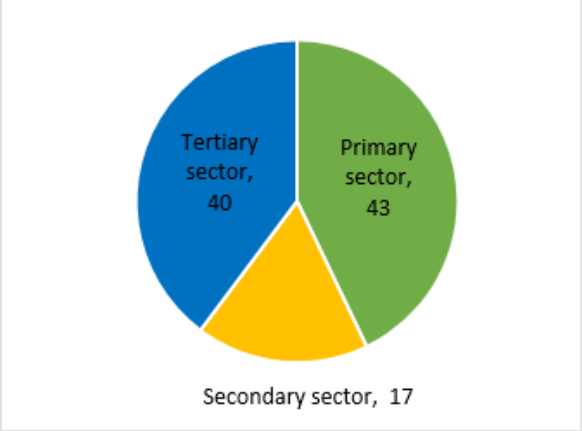
Source: BCEAO

Figure 6. Mali: Credits to the Economy and Nominal GDP

Share of credits to the economy, June 2017
(percent of total credits to the economy)



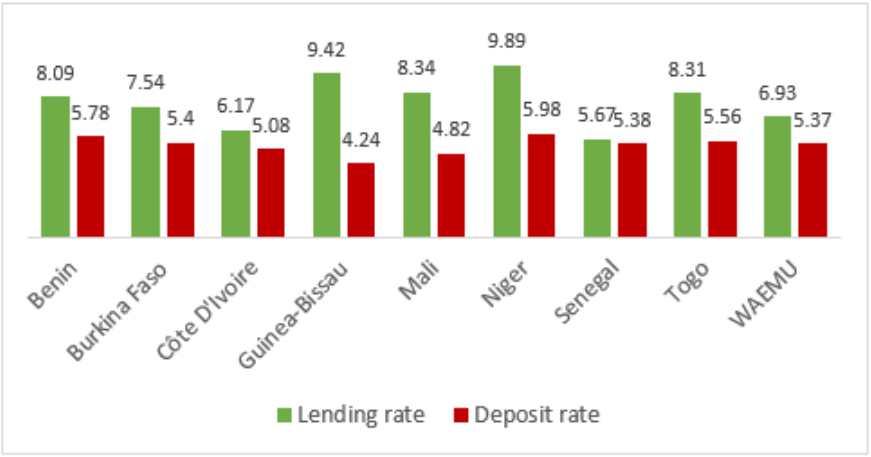
Share of nominal GDP, 2017 (Est.)
(Percent)



Source: BCEAO, staff estimate.

7. Cost of lending is higher than in peer countries. The average bank lending rate in Mali is estimated at 8.3 percent in 2016, which is above the regional average of 7.0 percent (Figure 7). The average interest has been overall declining since 2010, reflecting to some extent favorable monetary policy from the BCEAO and improved macroeconomic condition. Bank deposit rate is estimated at 4.8 percent compared to a regional average of 5.4 percent. The spread between lending and deposit rates in the Malian banking sector is among the highest in the WAEMU zone, reflecting relatively high credit risk and risk transformation.

Figure 7. Mali: Bank Lending and Deposit Rates, 2016
(percent)



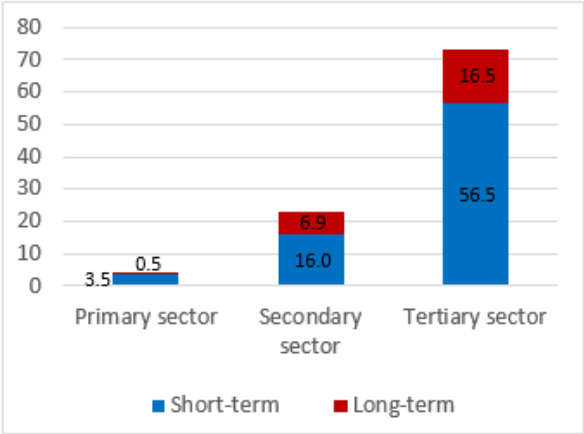
Source: BCEAO.

8. Short-term credits largely dominate total credits to the private sector. Short-term credits to the private sector account for about 76 percent of total credits (Figure 8). It is significantly higher than the WAEMU average which is estimated at about 46 percent to total credits as of end-

2016. Sectoral shares in short-term credits remain stable overtime, reflecting to some extent credit rollover over a long period. The share of agriculture nonetheless shows some volatility because it is highly sensitive to the production of cash crops. The agriculture sector captures around 2 percent of all long-term credits while the hotels, restaurants, warehouse and retail trade sector captures nearly 33 percent.

Figure 8. Mali: Share of Short-Term and Long-Term Credits to the Economy by Sector

(percent)



Source: BCEAO.

9. To cope with a scarcity of long-term financing, Malian firms tend to use short-term loans to finance investments with longer maturities. The uncertainty about contracting full financing for long-term projects increases risk and de-incentivizes appetite for long-term investments. Long-term bank financing has a greater impact on economic growth than short-term financing because long-term projects tend to have higher returns adjusted for risks. Shorter-term credit allows firms to finance working capital and other short-term investments, whereas firms need long-term loans to insure themselves against liquidity risks and afford longer-term investments that contribute to long-term productivity growth.

10. The lowering of the transformation ratio in 2015 has been associated with a slight surge in short-term credits with longer maturities. The transformation ratio imposes a limit on long-term assets to long-term liabilities. It was reduced to 50 percent in 2015 from 75 percent. The share of medium-term credits to total credits has increased from 33 percent in 2014 to 35 percent in 2016. The decline in the maximum transformation enabled a surge in credits with longer maturities, financed with short-term resources. As a result, the possibility of an asset-liability mismatch has increased.

11. The financial environment constrains the supply of long-term loans. Liquidity risk tied to long-term projects, difficulties in enforcing contracts, information asymmetry, and macroeconomic and political instability are major factors that make banks reluctant to provide firms with long-term credits. Stronger rule of law, infrastructure, and credit information collection and dissemination tend to lead to higher bank lending to the private sector.

- Malian's banks often lack long-term resources, and because they must comply with prudential liquidity ratios, they have less capacity to extend long-term financing. The share of short-term credits in Mali's banking sector is comparable to the share of demand deposits. Foreign participation to provide long-term resources remains marginal and banks lack access to international markets for mobilizing long-term capital. The current regulation on liquidity ratios requires that at least 75 percent of a bank's short-term liabilities be covered by short-term assets, and the regulation on the transformation ratio similarly

requires that at least 50 percent of medium-and-long-term bank assets be financed by resources of comparable maturity. In June 2017, 10 banks out of 13 complied with the liquidity ratio, and 11 banks out of 13 complied with the transformation ratio. Excess liquidity among some large banks de-incentivizes the need for securing long-term resources, which in turn could limit the supply of long-term credits.

- The long-term government bond market remains shallow and only provides limited yield curve information that in turn complicates the pricing of long-term credits to the private sector.

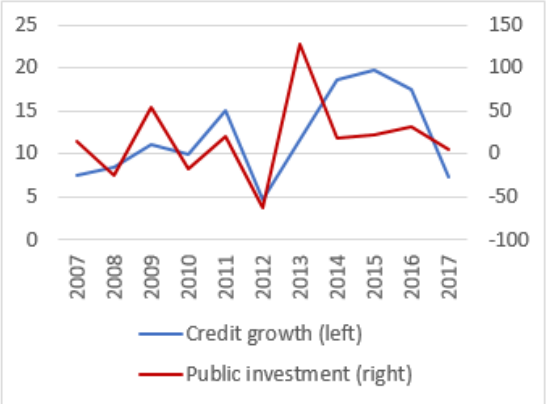
- Mali's legal uncertainty and judicial processes undermine both creditors and investors rights and raise perception of risk associated with investment. A weak legal environment, coupled with strong perceived corruption from market participants, prevents creditors from gaining possession of collateral or liquidating firms to meet obligations. In addition, Mali's business environment is hampered by inadequate investors protection. To encourage bank lending, the rule of law needs to be clear and its enforcement effective. This is even more important for long-term credits that carry higher risk for creditors and increase uncertainty about the capacity of the borrower to repay.

12. Long-term lending is hampered by lack of information on the solvency and quality of borrowers. The public credit registry at the BCEAO is incomplete and only focuses on delinquent loans. In addition, banks lack the tools and knowledge to assess projects properly. This increases reliance on collateralization which can limit or drive up the cost of access to credit. On the demand side, low-skilled entrepreneurs may not be able to design bankable projects and provide reliable and comprehensive financial information about projects.

13. Credit to the private sector is correlated with public investment (Figure 9). Public projects create business opportunities to contractors in different sectors. Banks provide short-term loans to suppliers based on public sector invoices, thus creating a link between public investments and private sector credits. A Granger causality test indicates that public investments tend to lead credit growth. Consequently, official payment delays and arrears may have a significant impact on banks' solvency. This link between public investment and private sector credit is supported empirically. The IMF's SSA Regional Economic Outlook[5] provides estimates of the drivers of private sector credit in Africa.

Figure 9. Mali: Public Investment Growth and Credit Growth

(percent)

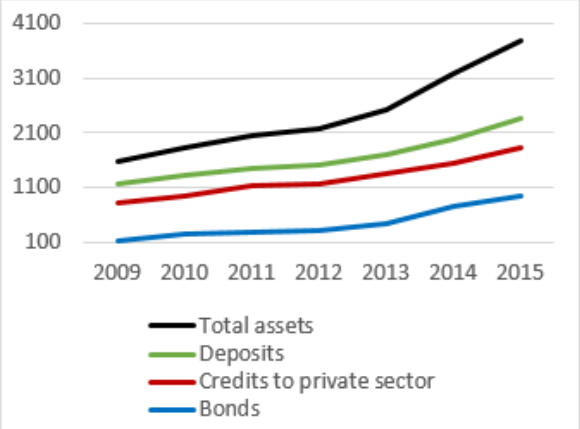


Source: Authorities; BCEAO; IMF staff estimates.

[5] International Monetary Fund, *Regional Economic Outlook: Sub-Saharan Africa*, Washington DC, April 2016.

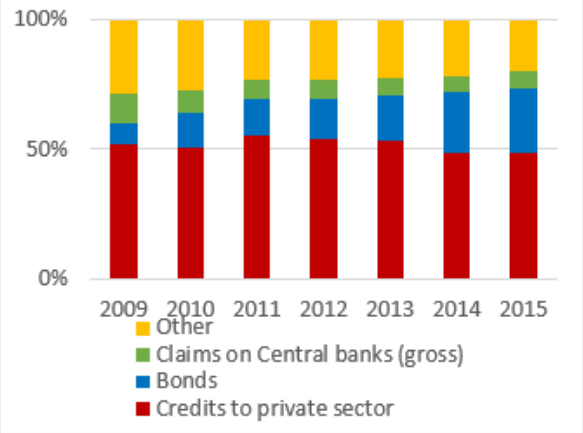
14. While bank assets are still dominated by short-term credits to the private sector, the share of government bonds has increased steadily since 2012 (Figure 10, Figure 11). Short-term credits to the private sector accounted for 48.6 percent of total assets at end-2015, a reduction of about six percentage points compared to end-2012. In the meantime, the share of government bonds increased from 15.3 percent of total assets at end-2012 to nearly 25 percent at end-2015. This shift in the composition of bank assets was driven by a large expansion of banks' balance sheet thanks to a favorable regulatory framework and profitable refinancing opportunities. The balance sheet of the banking sector increased by 75 percent between 2012 and 2015. Credit growth remains broadly in line with deposit growth.

Figure 10. Mali: total assets, credits, bonds, and deposits in the banking sector
(End of year, CFAF billion)



Source: BCEAO

Figure 11. Mali: asset composition in the banking sector
(End of year, percent of total assets)



Source: BCEAO

The Sovereign-Bank Nexus

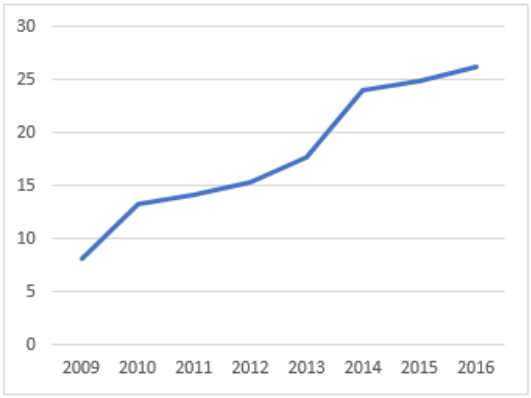
15. Mali's public sector plays a sizeable role in the real economy. For instance, large capital expenditures are usually carried by the public sector rather than by private companies. They can enable a more favorable environment for businesses to develop. Expansion of basic infrastructures, such as power, fuel, transport, and telecommunication, can foster higher growth and shift potential GDP upward. In Mali, most large infrastructure projects are externally financed.

16. Malian banks hold a substantial amount of public debt. Banks hold sovereign debt for several reasons. The relative safe status of sovereign exposures gives them a key role in the operation of financial systems, transforming sovereign debt into a source of liquidity, a safe haven during financial stress, and a reference for market pricing. These characteristics make sovereign instruments widely accepted collateral to financial transactions and important assets for the operation of the banking system.

17. The link between banks and sovereign is a growing concern. Government securities from Mali account for about 26 percent of total assets in Mali banking sector in 2016, compared to 7.5 percent in 2009. The share of government securities to total assets has increased steadily since

2009, thanks to favorable refinancing opportunities from the BCEAO (Figure 12). Sovereign distress would have an immediate and direct impact on bank balance sheets and on profitability. Since banks absorb a sizable portion of bond issuances, their distress may lead to problems in the sovereign bond market. About 85 percent of Mali government bonds are issued via the UMOA-Titres agency. The other debt instruments are government bonds through syndication (2016, 2017) and Sukuk (2018). WAEMU banks are the main investors on the market as only 4 percent of Mali government bonds are held by banks on behalf of their customers. The secondary market for bills and bonds remains underdeveloped. Market interventions by non-sovereign issuers—including nonbank financial institutions, private companies, and regional and international institutions remain scarce.

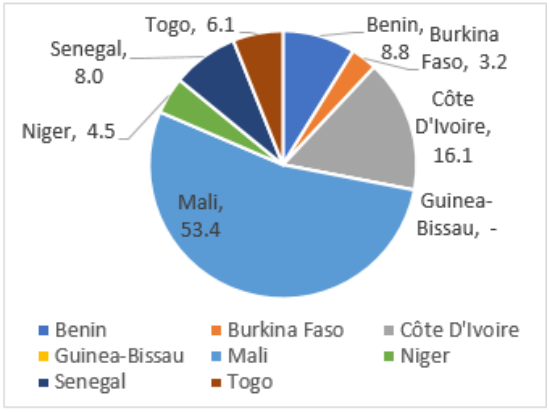
Figure 12. Mali: Share of Government bonds in the Domestic Banking Sector
(End of year, percent of total assets)



Source: BCEAO; Staff estimate.

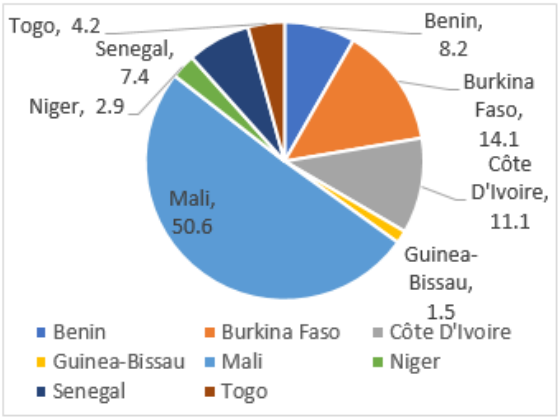
18. Half of Malian government securities issued via the UMOA-Titres agency are held by Malian banks. Similarly, 53.4 percent of WAEMU's government securities held by Malian banks were Mali's government securities (Figure 13, Figure 14). Some linkages can also be observed between Mali and Côte d'Ivoire. Government bonds from Côte d'Ivoire account for 16.1 percent of Malian banks government bonds portfolio, while banks from Côte d'Ivoire holds 11.1 percent of Mali's government bonds. Also, banks from Burkina Faso hold 14.1 percent of Mali's government bonds while Banks from Mali hold 3.2 percent of Burkina Faso's government bonds.

Figure 13. Share of WAEMU's government securities held by Malian banks, Oct. 2017
(percent)



Source: UMOA-Titres

Figure 14. Share of Mali's government securities held by WAEMU's banks, Oct. 2017 (percent)

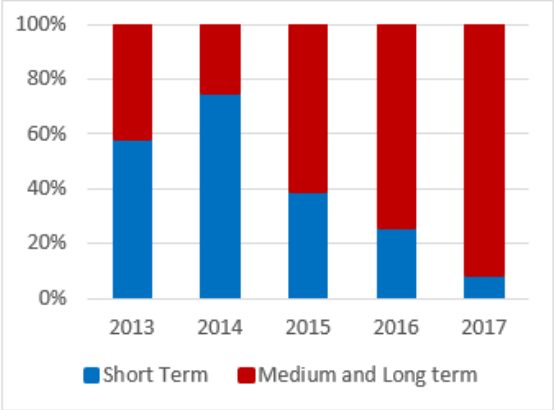


Source: UMOA-Titres

19. The maturity of government securities is progressively expanding, thus adding pressure on the long-term credits to the private sector market. In addition to a sharp increase in banks' holding of government securities, banks tend to hold more bonds with longer maturity. At end-2017, Mali's domestic debt, which is mostly held by Malian banks,[6] was composed of 9 percent of short-term securities[7] and 91 percent of medium and long-term securities (Figure 15). While there is no direct evidence of crowding out of the private sector, this higher ratio of medium and long-term bonds could put some pressure on the issuance of long-term loans to the private sector as banks must comply with the transformation ratio.[8] It is typically deemed safer and easier for commercial banks to hold long-term government bonds than long-term credits to the private sector. Sovereign debt instruments benefit from more favorable regulatory rules, rarely become nonperforming assets, can be used as collateral to obtain liquidity, and do not require due diligence to assess the credit worthiness and viability of the long-term project associated with the loan.

Figure 15. Mali: Public Domestic Debt

(Percent of Total Domestic Debt)



Source: Authorities.

20. Favorable regulations create incentives for banks to invest in government securities. WAEMU-regulation applies a zero-risk weight for sovereign, irrespective of their rating. WAEMU-debt typically has a rating around the "highly speculative" B category, to which the standardized approach in the Basel II framework assigns a risk weight of 100 percent. However, under this framework, supervisors can exercise discretion and set a lower risk weight for sovereigns provided that the exposures are denominated and funded in national currency.[9]

21. Government securities are currently exempted from exposure requirements. While banks may face some challenges to comply with the new capital requirements[10] due, in part, to their high exposure to non-sovereign-single-name borrowers, the new regulation could enable the BCEAO to specify a ceiling for sovereign exposure. This could in turn could put pressure on the WAEMU-debt market while providing an incentive to diversify the pool of investors.

[6] About 2/3 of Mali's domestic debt is held by Malian bank which corresponds to about 50 percent of all government securities held by Malian banks.

[7] Duration lower than one year.

[8] The transformation prudential ratio requires that at least 50 percent of medium-and-long-term bank assets be financed by resources of comparable maturity

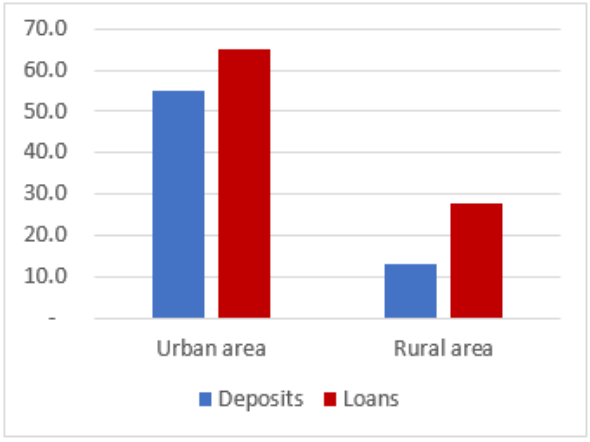
[9] Government bonds and bills from Mali are only denominated in national currency. Mali has not issued EURO bonds.

[10] The new regulatory capital requirements are scheduled to be phased in from January 2018 and are expected to be fully applied by end-2022.

Microfinance

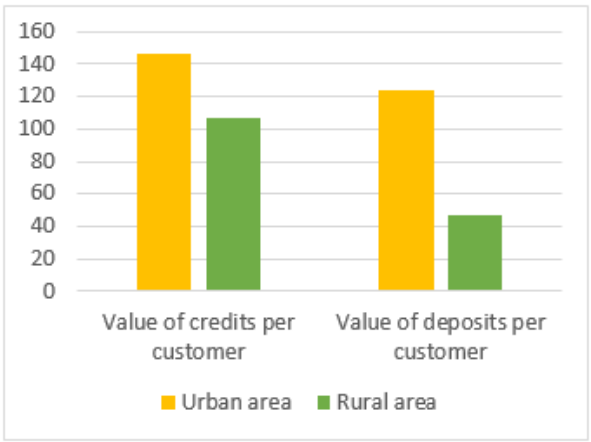
22. Microfinance institutions operating in rural areas lack financial resources. Credit-to-deposit ratio is much higher in rural than in urban area, underlying the need for greater efforts to mobilizing financial resources, including domestic deposits. Credit-to-deposit ratio is estimated at about 217 percent in rural areas compared to 119 percent for MFIs operating in urban areas at end-2016. MFIs must comply with a coverage ratio of medium and long-term assets to medium and long-term liabilities of 100 percent. Only 6 MFIs complied with this regulatory rule in Mali at end-2016. Accordingly, further credit growth should be supported by greater efforts to mobilize domestic deposits. Non-performing loans ratios are similar in both rural and urban areas. The total amount of credits in the MFI sector is estimated at CFAF 93 billion (4.2 percent of the financial system) at end-2016, of which CFAF 27.9 billion in rural area (30 percent of loans in the MFI sector and 1.3 percent of the financial system). Most of the loans are contracted for agricultural purposes. Deposits accounted for CFAF 68.5 billion (2.7 percent of the financial system), of which CFAF 12.3 billion in rural area (0.5 percent of the financial system; Figure 16). In urban area, the value of credits per customer is estimated at CFAF 146 thousand and the value of deposits per customer is CFAF 124 thousand. In rural area, on the other hand, the value of credits per customer is slightly lower than the one in urban areas with CFAF 107 thousand, but the value of deposits per customer is significantly lower with CFAF 47 thousand (Figure 17).

Figure 16. Mali: Microfinance Institutions Under Article 44, 2016
(CFAF Million)



Source: CSS/SFD

Figure 17. Mali: Credits and Deposits per Customer
(CFAF Thousand)



Source: CSS/SFD

23. Financial access to savings, credits, and insurance products by households, micro-entrepreneurs, and poor farmers is seriously affected by a confidence crisis in the microfinance sector. The financial distress of major MFIs[11] in 2009, coupled with the aftermath of the 2012 coup d'état, started a crisis in the sector. It has negatively impacted the system in terms of

[11] Two majors MFIs (Union Kondo Jigima and Union Jéméni) have closed in 2009. Their total deposits is estimated to 8.9 billion CFA francs.

bank refinancing, client deposits, and overall confidence in MFIs. Many low-income depositors have lost their savings and lost faith in the integrity of the system. Total assets and deposits growth are slowly recovering, thanks in part to *Microcred* which started its operations in 2014, but refinancing by banks and other financial institutions remain challenging. While the sector does not appear to pose a major risk to financial stability, its weakness undermines confidence by the population in financial institutions and may be a hurdle to raising financial inclusion, and ultimately economic growth. There are close to 1 million microfinance clients and about 1.4 million beneficiaries.[12]

24. Progress on implementing the National Emergency Plan for Microfinance is underway. The Minister of Economy and Finance has issued ministerial orders withdrawing the licenses of MFIs that have been audited and needed to be liquidated. The supervision program and the capacity of the CCS/SFD is being strengthened. The National Emergency Plan for Microfinance was adopted by the council of Ministers in March 2015, in line with the regional plan adopted by the WAEMU council in 2012. The Emergency Plan is under the responsibility of the CCS/SFD. It comprises the following measures: i) restructuring of the sector (including depositor compensation mechanism), ii) implementation of the legal framework, iii) capacity building for supervisory body (CCS-/SFD) and promoting body (AP/SFD), iv) support for viable MFIs, v) improved support to develop the infrastructure of the sector, and vi) expansion of microfinance services.

25. The Malian supervisory body CCS/SFD lacks capacity and resources. The WAMU Banking Commission is responsible of the supervision for large MFIs[13] and the Malian supervisory body (CCS/SFD) remains responsible for smaller MFIs. The CCS/SFD provides regular supervision reports to the BCEAO and the Banking Commission is involved in one or two missions per year. Supervision of the MFIs involves on-site and off-site inspections. However, it remains challenging due to insufficient resources, too few inspections, and limited follow-up or monitoring.[14] In 2013-2014, the Banking Commission carried out 2 on-site supervision missions for large MFIs.

26. Off-site supervision remains weak. The annual statistical and financial reports of the MFIs must be sent six months after the end of the financial year. In 2014, only 22 institutions submitted their annual report on time and in compliance with the requirement. Financial penalties were decided for the MFIs that did not respect the submission deadline, but the decision to apply them was not taken by the Ministry.

Leasing

27. Mali's leasing market is shallow and underdeveloped. There is one leasing institution[15] in Mali, which specialized in leasing truck and commercial transport vehicles, and one lessor,[16] which is

[12] Clients and beneficiaries' numbers differ because mutual group are considered as one client that serve a group comprised of 8-15 persons.

[13] Total savings or outstanding loans exceeding CFAF 2 billion, under the Article 44 of law 007-06-2010.

[14] The CCS carried out about 20 supervision missions per year between 2010 and 2014.

[15] Alios Leasing.

[16] Equibail, which is a division of Bank of Africa.

a division of a commercial bank. Leases account for less than one percent of banks and non-bank financial institutions assets at end-2016. The share of leases has been declining in relative and absolute terms.

28. Specific legislation needs to be enacted to provide a sound legal basis and ensure an appropriate fiscal and recovery regime for leasing. New legislation on leasing has not yet been adopted in Mali. For the moment, the regional WAEMU financial regulation allows both banks and non-banks financial institutions to offer leasing products, but they are treated as credit product. Consequently, the current legal framework is inefficient and inappropriate. Procedures for recovery of leased property in the event of default by the lessee are cumbersome. Lessors are not treated as owners of the leased property and thus must go through the same time-consuming and costly recovery procedures as other creditors. Leasing can only develop and achieve its development role on the SME sector as a secured term financing product if leasing institutions can easily repossess and sell the leased equipment in case default. Developing the leasing industry could also help deepen Mali's capital markets. Leasing institutions book medium term assets that provide other financial institutions with a diversification of investment opportunities.

Box 1. Leasing: Bridging the Financing Gap

Lease financing can contribute to bridge the financing gap experienced by Small and Medium Enterprises (SMEs) in Mali. Banks in developing countries have little appetite and incentive to outreach to SMEs, which they consider riskier and costly to serve due to small transaction sizes. In addition, lease financing can substitute more efficiently to long-term loans. In Mali, SMEs generally lack access to financing, as banks typically tend to focus on top-tier commercial and retail clients, leaving a wide-open "SME Finance gap". As such, leasing institutions (specialized, bank-owned, or captive of equipment manufacturers) are particularly well-suited to meet the investment needs of SMEs:

- Secured financing – Leasing companies develop better capabilities than commercial banks in physical asset management, repossession, evaluation and remarketing. In countries where contract enforcement and ownership rights are properly set, lease financing does not require real-estate nor cash collateral.
- Cash-flow financing – Leasing companies develop a strong understanding of the use of the financed assets, and are better able than banks to assess the adequacy of purchased equipment against client needs; they understand better the cash-flows generated by the financed asset, and can take these into account in their credit underwriting methodology.
- SMEs business development – Helped by a strong product and client segment focus, leasing companies outreach to SMEs directly and through point-of-sale financing ("vendor programs"), in a much more proactive way than traditional banks, that tend to cater mainly to the walk-in customer.
- Lower internal processing cost – Leasing institutions are more focused and specialized than banks and generally does not require additional collateral. consequently, lease financing is made available to SMEs more effectively and with lower internal processing costs than term loans.

Mobile Banking

29. The market for mobile financial services is witnessing a significant growth in Mali. Since 2013, most large Malian banks provide mobile access to banking services and some are deploying E-money services. Two mobile operators, *Malitel* and *Orange-Mali* offer demand deposit, mobile transfer and payment services through E-money. The value of E-money transactions in the mobile banking sector in Mali increased by 33.6 percent in 2016, reaching 2,193 billion CFAF. Similarly, the volume of transactions increased by 39.3 percent, corresponding to about 140 million operations in 2016. The number of E-money accounts saw a significant increase as well, reaching 6.9 million accounts, but only 1/3 of them are considered active. About 25 percent of the working population has an active E-money account at end-2016.

30. Commercial banks are entering the mobile banking market through partnerships with mobile operators or through their own mobile banking application. In this context, linkages between banks and mobile operators are building up and the operating model is diversifying the scope of mobile financial services. Competition among actors is increasing. On one hand, banks are competing with mobile operators to capture new segments of customers (essentially all smartphone users) and on the other hand, mobile operators are competing with banks to provide a broader menu of financial services. Under the current regulation, mobile operators cannot provide remunerated deposits, such as term deposits, and loans to their customers, such as microcredits. The development of new operating models between banks and mobile operators could help achieve higher financial inclusion, which in turn would reduce the extent of the cash and informal economy.

Text Table: Mali: Mobile banking: selected indicators

	2014	2015	2016
Value of transactions (billions of CFAF)	811	1,641	2,193
Value of transactions (percent of GDP)	11.4	21.2	26.4
Volume of transactions (million)	54.5	100.3	139.7
Number of E-money accounts (million)	3.8	5.1	6.9

Source: BCEAO

31. Mali has become a key player in the WAEMU mobile banking market. Mali accounts for roughly 20 percent of the mobile banking market in the WAEMU. In 2016, Mali ranked third in terms of value (CFAF 2,193 billion) and volume (139.7 million) of transactions (Figure 17). Côte d'Ivoire ranked first (48 percent of total value of transactions and 38 percent of total volume of transaction) and Burkina Faso ranked second (21 percent of total value of transactions and 20 percent of total volume of transaction). In the WAEMU, the total value of transactions is estimated at CFAF 11,500 billion and the total volume of transactions is estimated at CFAF 735 million. Mali, Burkina Faso and Côte d'Ivoire account for around 83 percent of total value of transactions and 76.6 percent of total volume of transactions.

32. Most of mobile banking customers in Mali use their E-money account for cash-in/cash-out transactions and to recharge their mobile phone credits (Text Table).

- **Cash-In/Cash-Out.** In 2016, there were around 76 million cash-in/cash-out transactions (51.2 percent of total volume) for an estimated amount of CFAF 1,625 billion in Mali (74.1 percent of total value). This indicates that a strong preference in holding and using cash for payments and saving persist among customers who are often new to banking services. CFAF 868.9 billion were injected as E-money and CFAF 756.7 billion were withdrew as CFAF cash. The net injection of E-money is estimated at about 112.2 billion in 2016.

- **Person-to-person (P2P) transactions.** Domestic P2P transactions captured 9.2 percent of total volume or CFAF 415.3 billion in terms of value. P2P transfers between Mali and other WAEMU countries are marginal (0.2 percent of the volume of P2P transactions) but they correspond to 22.2 percent of total value of P2P transactions. New partnerships between banks and mobile operators that have a regional footprint are expected to increase intra-regional P2P transactions.

- **Person-to-business (P2B) transactions.** Payments to businesses (P2B) transactions are developing since 2013. The volume of P2B transactions increased from 0.7 million in 2013 to nearly 5 million in 2016. Similarly, the value of transactions increased from CFAF 12.7 billion in 2013 to CFAF 100.8 billion in 2016.

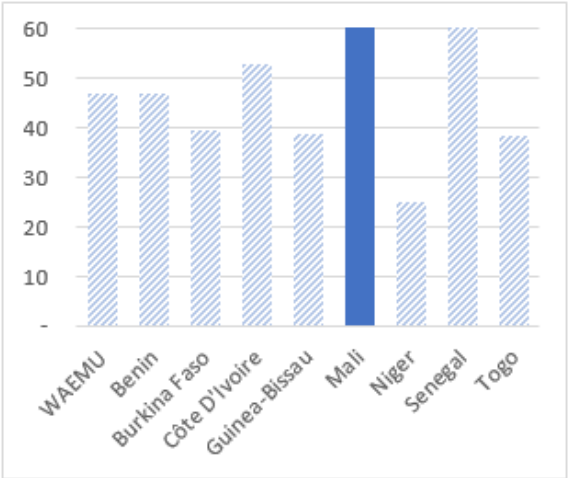
- **Mobile recharge transactions.** Most mobile banking customers use their E-money account to refill their mobile phone credits. In 2016, nearly 30 percent of the mobile transactions addressed that purpose, but they corresponded to 1.5 percent of total value of transactions (CFAF 32.9 billion).

- **Government-to-person transactions (G2P).** G2P transactions or P2G transactions do not exist in a systematic way in Mali and are at best marginal.

33. Mali has the highest penetration ratio among WAEMU countries. There are 11.1 million of unique mobile subscribers in Mali. This corresponds to a penetration ratio of 60.5 percent, compared to 40 percent in 2014 (Figure 18). When only considering the adult population,[17] the coverage ratio is 118.3 percent. Mobile networks cover about 40 percent of the country. In WAEMU, the number of unique subscribers is estimated at 55 million which corresponds to a coverage ratio of about 47 percent. In Mali, 26.5 percent of mobile subscribers were smartphone users at end-2016, which corresponds to about 2.9 million people.

Figure18. WAEMU: Penetration Ratio

(percent)



Source: GSMA; BCEAO.

[17] In this context, the adult population corresponds to people older than 16 years old.

34. The mobile banking market in Mali is not as deep and inclusive as it seems. There are about 6.9 million of E-money accounts in Mali in 2016. This corresponds to 18.9 percent of all E-money accounts in the WAEMU while the population in Mali accounts for about 15 percent of the region. Only 2.2 million are considered active.[18] There are only a few hundred accounts opened for businesses. In addition, the gender distribution of E-money account is uneven as only about 1/3 of the users are women. The high percentage of inactive accounts in Mali highlights the strategy and competition among mobile banking providers in Mali which have been keen on opening massively E-money accounts that end up being unused. Also, among the 43,842 Cash-In/Cash-Out agents deployed in Mali, the highest number of agents for a WAEMU country, less than 2/3 are active. In comparison, there are 12,675 agents in Burkina Faso and 93 percent of them are considered active.

35. However, mobile banking has nevertheless outperformed the microfinance and banking sectors in terms of population coverage. With about 2.2 million of E-money accounts, the mobile banking sector has rapidly overtaken both the banking and the microfinance sectors in terms of accounts within the last five years. There are about 1.3 accounts in the microfinance sector and 1.3 accounts in banking sector. Microfinance institutions tend to focus on small businesses and farmers and banks tend to focus on medium to large enterprises and the wealthier segments of the population. The slow recovery of the recent microfinance sector crisis has likely, to some extent, promoted further the fast rise of the mobile banking sector in Mali. Banks are facing competition from mobile operators which offer basic financial services and a fleet of agents covering a greater geographical zone than branches and ATM at a very minimal cost. Consequently, banks are competing to offer attractive mobile financial services, are expending their customer base, and are establishing new partnerships with mobile operators.

36. While the mobile banking sector fosters a higher level of financial inclusion, it does not cover all financial needs necessary to boost growth in the economy. While usage and acceptance by individual have increased very rapidly since 2013, they have been slower for enterprises. E-money account services do not currently offer credit and term deposit which would benefit SME particularly as they do not always have access to banking services. Partnerships between financial institutions and mobile operators to offer these services to holders of E-money accounts in compliance with the current regulatory framework of the BCEAO are lagging compared to other WAEMU countries. There was one partnership between a bank and mobile operator at end-2016, compared to five partnerships in Burkina Faso or in Côte d'Ivoire.

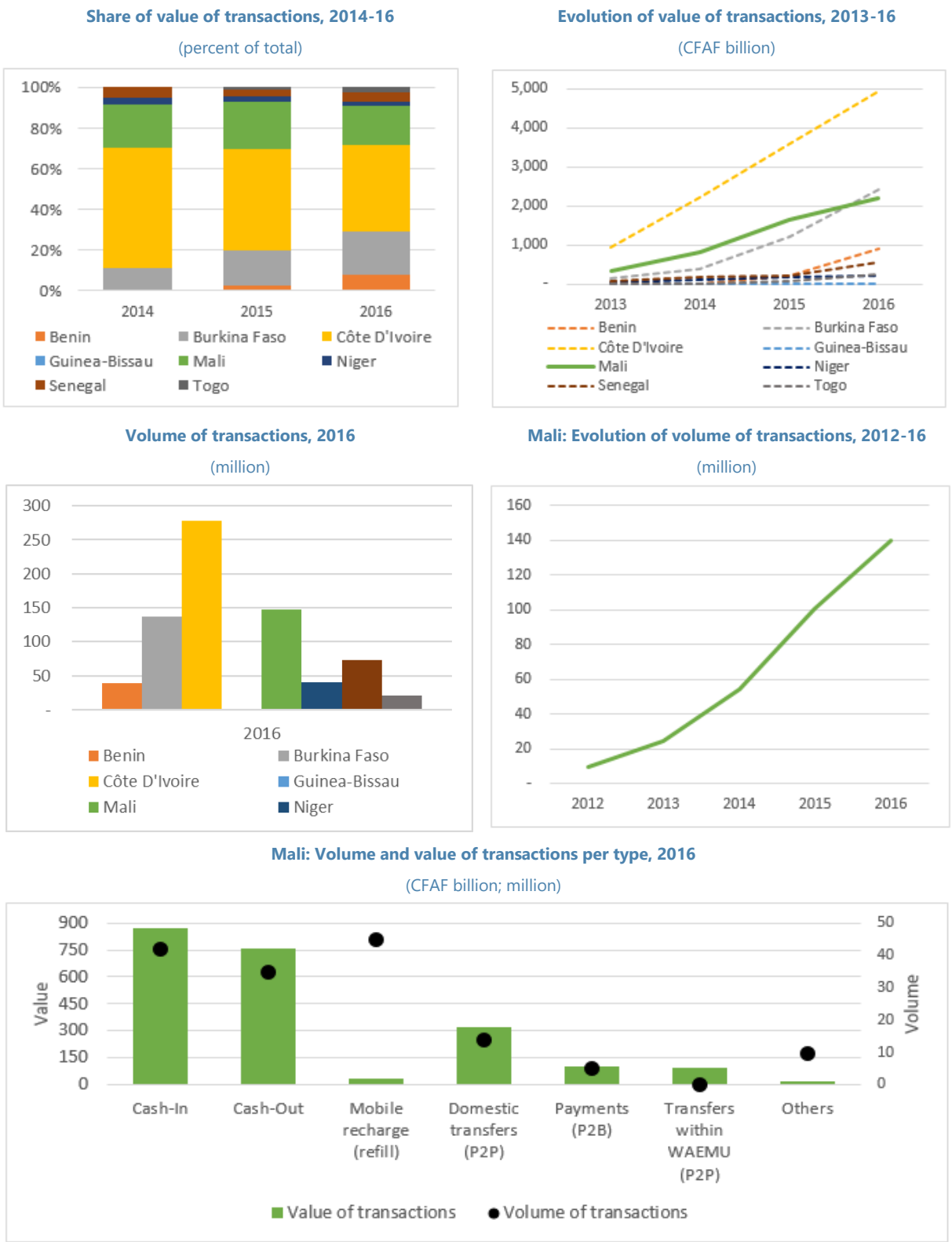
37. In Mali, no businesses accept mobile payments through electronic payment terminals and only a few carry out transactions at end-2016. There were 4.98 million person-to-business (P2B) transactions in 2016, corresponding to about 3.3 percent of total volume. Similarly, the value of P2B transactions is estimated at CFAF 100.8 million (4.6 percent of total value of transactions) in 2016. There are 921 businesses registered to carry out mobile transactions, of which 241 are considered active. In comparison, in Burkina Faso, which accounts for a similar share of the mobile banking market in the WAEMU, there are 5,532 businesses registered that can carry out transactions, of which 1,529 are considered active. In 2016, no businesses accept mobile payments through

[18] An E-money account is considered active if at least one financial transaction occurred within 90 days.

electronic payment terminals in Mali.

38. Government-to-Person transfers (G2P) could increase mobile banking adoption and in turn improve financial inclusion of both people and businesses. G2P payments programs (wage payment and other transfers to and from SMEs) can target segments of populations that tend to be typically financially excluded. They require appropriate communication from the government about timing of payments, cost for beneficiaries (cash-out cost, transfer cost), and how the system works. A lack of understanding by clients on how the system works and how to use it with confidence could slow and limit adoption. G2P payments programs would also require a robust and developed agent network to ensure that G2P transfers do not generate liquidity stress that could trigger a negative feedback loop in the mobile banking sector and in the overall financial system.

Figure 19. Mali: Value and Volume of Transactions in Mobile Banking Sector

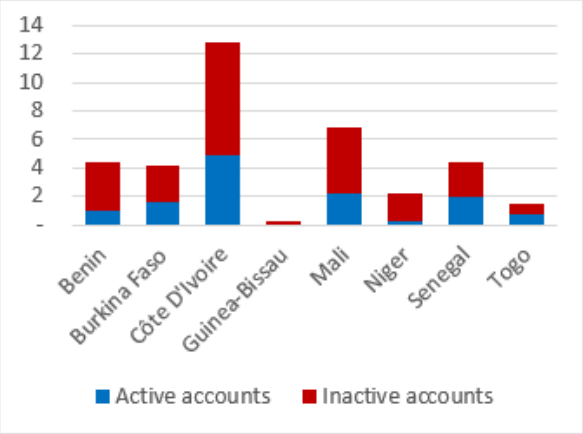


Sources: BCEAO; GSMA

Figure 20. Mali: E-money accounts and usage

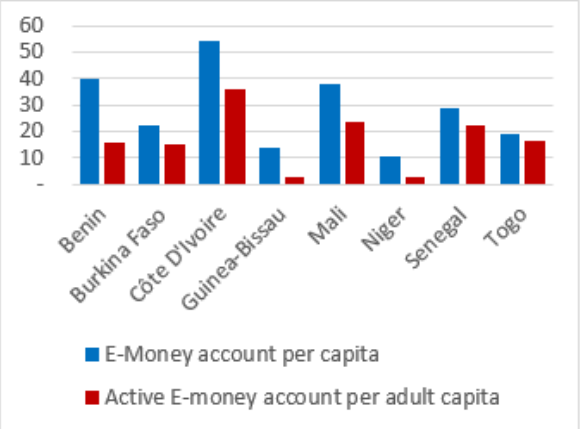
Number of E-money accounts

(million)



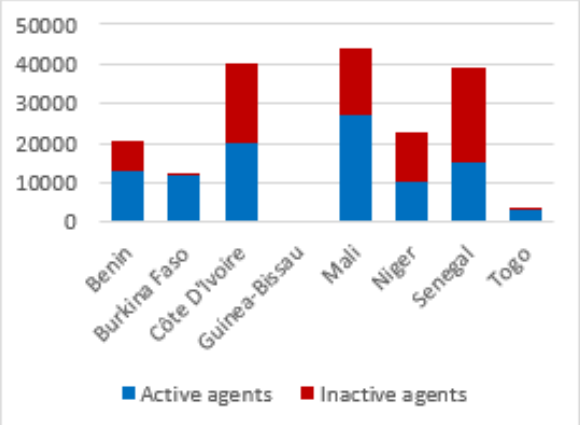
E-money accounts to population

(percent)



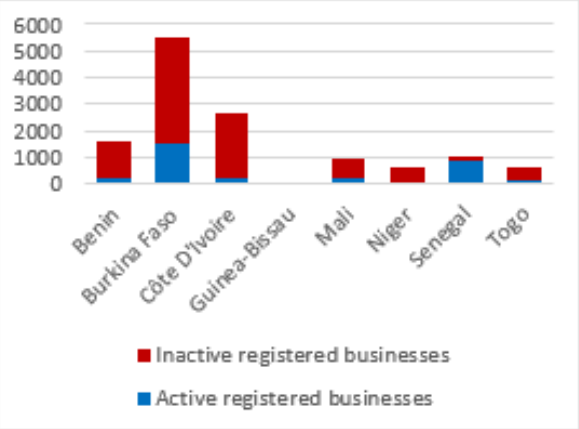
Number of cash-in/cash-out agents

(unit)



Number of registered businesses to carry out transactions

(unit)



Sources: BCEAO; GSMA

C. Providing Financial Stability

Maintaining Assets Quality

39. Banking sector soundness indicators remained somewhat stable but asset quality continues to be a source of concerns and liquidity ratios have recently deteriorated (Text Table).

- The average bank capital adequacy ratio remains above the WAEMU norm of 11.5 percent. All banks but one complies with the regulatory rule.
- The stock of NPLs remains stable at a relatively high level of 17 percent on average. The provisioning rate is on a declining trend. The yearly average in 2017 was 56.9 percent of NPLs compared to 66.1 in 2016, resulting in a 21 percent increase of NPLs net of provision on average.
- Non-operating assets to capital continues to be an issue. Nearly half the banks do not comply with the WAEMU norm of 15 percent of capital.
- Most banks comply with the liquidity ratio but the aggregate figure has deteriorated. It fell from 86.9 percent in 2016, above the WAEMU norm of 75 percent, to 67.3 percent in 2017.

Text Table: Financial Stability Indicators, 2017

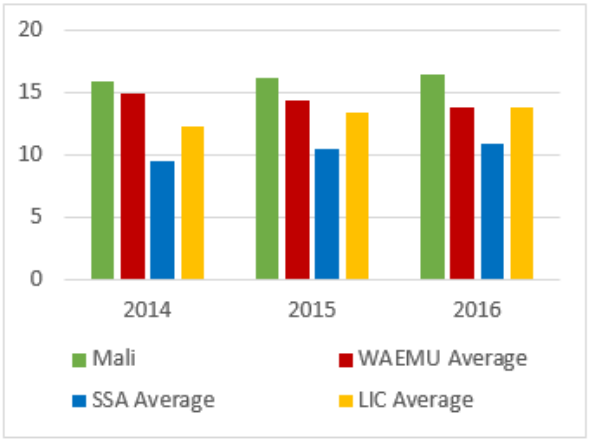
	Regulatory capital to weighted assets (percent)	Non-performing loans to total loans (percent)	Non-operating assets to capital (banks complying to total)	Liquidity coverage ratio (percent)	Return on assets (percent)
Mali – Dec. 2016	14.2	16.4	9/13	86.9	1.1
Mali – Dec. 2017	14.3	16.7	7/13	67.3	1.4
Memo item: WAEMU regulatory benchmarks	>11.5	Not applicable	<15 percent of capital	>75	Not applicable

Source: BCEAO

40. Asset quality appears to be relatively weak in Mali compered to benchmarked countries (Figure 19, Figure 20). The net NPLs to net total loans ratio has deteriorated in recent years to reach 8.2 percent in June 2017 while it has remained broadly constant in the region. Gross nonperforming loans (NPL) and provisions to gross nonperforming loans were respectively 16.7 percent and 57.9 percent at end-2017. These ratios include a large volume of old claims that should no longer be included in banks' balance sheets. The write-off of old claims that have been provisioned is virtually non-existent owing to the legalistic justification requirements of the tax authorities. Banks generally cannot produce the certificate required by the tax authorities attesting that all recovery efforts have been exhausted to obtain a deduction of losses. Banks rarely resort to

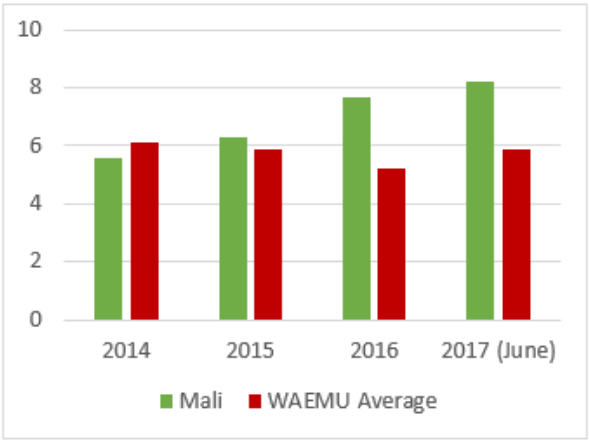
judicial recovery because of persistent dysfunctions of the judiciary authorities. The gross amount that should no longer appear on banks' balance sheets is estimated to be at least CFAF 50 billion, which corresponds to about 13 percent of nonperforming loans at end-2016. Without these old claims, it is estimated that NPL would be about 4 percentage points less. Moreover, the high concentration of credits, whether sound or impaired, could lead to a high volatility in the ratios as the largest banks typically have the same large borrowers.

Figure 21. Mali: NPLs to total gross loans
(percent)



Sources: BCEAO; FinStat 2018

Figure 22. Mali: Net NPLs to total loans
(percent)



Sources: BCEAO; FinStat 2018

41. The slow progress in making credit information available undermines asset quality and access to credits. The BCEAO maintains a public credit registry that contains uncomplete and lagged negative information and current outstanding to banks. Not only negative but also positive information enable banks to better predict default probabilities for borrowers, thus reducing portfolio risk and improving access to credits. The adoption of the uniform regional law on credit bureaus by four Member States, including Mali, has been passed and a new private credit information bureau (BIC) is intended to fill the current information gaps in credit reporting. However, its complete implementation is lagging and banks remain reluctant to fully participate.

The Sovereign-Bank Nexus

42. The financial health of banks and sovereigns is intertwined in a "sovereign-bank nexus" that multiplies and accelerates vulnerabilities in each sector, exacerbating risks of adverse feedback loops. Banks and sovereigns are linked by multiple interacting channels: (i) the sovereign-exposure channel (banks hold large amounts of sovereign debt); (ii) the safety net channel (banks are protected by government guarantees) and; (iii) the macroeconomic channel (banks' and governments' health affect and are affected by economic activity). Evidence suggests that all three channels are empirically relevant.

43. In Mali, the macroeconomic channel remains the main driver of the sovereign-bank nexus. In Mali's undiversified formal economy and in the context of severe security challenges and social tensions, any economic shock in the agriculture or mining sector would immediately weaken

the sovereign fiscal position as well as banking activities. Since the real sector in Mali is often directly or indirectly related to government expenditure and large public investment programs, large fiscal imbalances would trigger a reduction in public capital expenditure and an increase in accumulated arrears vis-à-vis their suppliers. The soundness of the banking sector would then be negatively impacted, which in turn would slow credit growth and deteriorate assets quality.

Regulatory and Supervisory Frameworks Development

44. A set of ambitious regulatory reforms was adopted by the regional Council of Ministers in June 2016. These new regulations included the adoption of Basel II and III capital standards, the introduction of consolidated supervision (including over WAEMU-based financial holding companies), and the tightening of the large exposure limit. Transitional implementation arrangements were introduced spanning from 2018 until 2022.

- The Basel II and III regulations introduced capital requirements for operational and market risks. By end-2022, WAEMU banks must meet a minimum common equity Tier 1 capital ratio of 7.5% and a minimum total capital ratio of 11.5%, both inclusive of a 2.5% capital conservation buffer. Additional systemic and countercyclical capital buffers, yet to be defined, will also be required. This implies a significant step-up from the 8% minimum total capital ratio under the existing Basel I-based approach. The denominator in these ratios will also change, due to the move to Basel II risk-weighted assets. The direction and magnitude of change will depend on banks' risk exposures. The overall impact of the new framework will be higher capital requirements in aggregate. In addition, the single large exposure limit was reduced to 25% of banks' Tier 1 capital.

- Other measures include (i) the adoption of a new banking chart of accounts; and (ii) the reorganization of the Banking Commission to integrate the monitoring of crisis resolution processes and supervision of large microfinance institutions and other specialized institutions such as mobile money firms.

Annex I. Microfinance Institution System

Table 1. Mali: Breakdown of microfinance institutions by legal status, June 2017

Type of microfinance institutions	No. of institutions	No. of members (percent)
Mutual	52	-
Network	*18*	
Stand-alone structure	*34*	
Association	36	-
Limited liabilities companies	13	-
Total	**101**	**-**

Active microfinance institutions	No. of active institutions	No. of members (percent)
Mutual	15	62.5
Association	15	36.4
Limited liabilities companies	3	1.1
Total active microfinance institutions	**33**	**100%**

Source: CCS/SFD-Mali

Microfinance Institutions System

	2013	2014	2015	2016 Est.	2017 Est.
Number of accounts	1,140,164	1,213,121	1,083,060	1,007,104	1,065,421
Deposits (CFAF billion)	50.0	58.2	62.6	68.5	76.8
Credits (CFAF billion)	60.5	73.6	81.8	93.7	100.3
Of which non-performing loans (percent)	11.5%	8.0%	6.6%	6.1%	4.9%

Source: CCS/SFD-Mali

Table 2. Mali: Banking System Structure, 2016

	Government of Mali	Private resident	Non-resident	Capital (CFAF billion)	Assets (CFAF billion)	Assets (percent of total)	Number of accounts
All banks (13)	**15.1**	**22.3**	**62.6**	**175.5**	**4,312.7**	**100.0**	**1,339,486**
BDM	40.9	10.7	48.3	25.0	710.4	16.5	166,720
BMS	22.6	75.1	2.3	34.6	611.8	14.2	212,671
ECOBANK	0.0	6.5	93.5	10.0	601.0	13.9	202,275
BOA-MALI	0.0	14.6	85.4	10.3	514.0	11.9	226,370
BIM	10.5	38.5	51.0	10.0	412.6	9.6	253,439
BNDA	36.5	0.0	63.5	23.5	407.0	9.4	131,441
Banque Atlantique	0.0	43.0	57.0	11.0	278.0	6.4	53,955
CORIS	10.0	0.0	90.0	11.0	167.5	3.9	6,466
BCI	0.0	0.0	100.0	9.8	141.4	3.3	7,302
BCS	3.3	0.0	96.7	14.3	136.9	3.2	24,779
BSIC-MALI	0.0	0.0	100.0	11.0	136.5	3.2	22,640
BICI-M	0.0	15.2	84.8	5.0	132.0	3.1	14,823
Orabank (branch)	-	-	-	-	63.5	1.5	16,605
All non-bank financial institutions	**49.9**	**42.4**	**7.7**	**6.8**	**33.8**	**100.0**	
FGSP	50.1	42.9	7.0	5.6	21.3	62.9	-
FGHM	48.9	40.0	11.1	1.2	9.4	27.8	-
SAFCA-ALIOS FINANCE (branch)	-	-	-	-	3.1	9.2	-

Source: BCEAO.

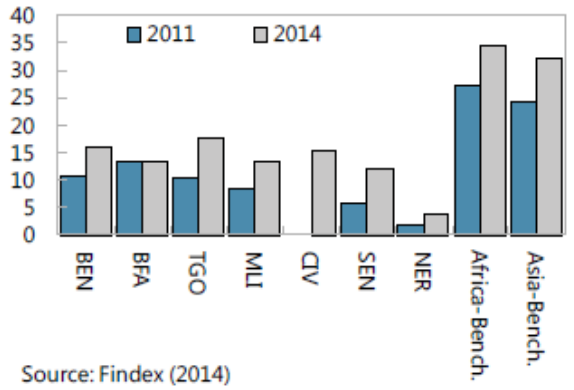
Annex III. Selected Financial Inclusion Indicators

Figure 1. Mali: Selected Financial Inclusion Indicators

Access to an account at a financial institution has increased in most WAEMU countries, including Mali, but remains far below benchmark levels.

Account at a Financial Institution

(percent of People Age 15+)

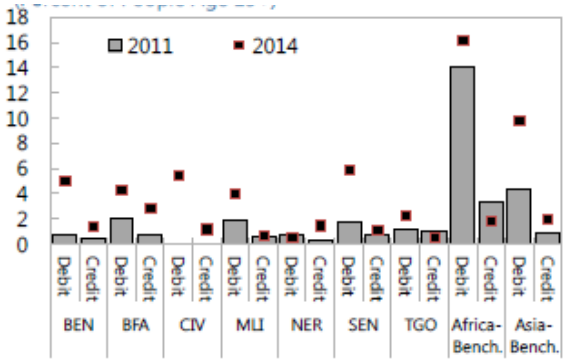


Source: Findex (2014)

Penetration of credit and debit cards remains low.

Debit or Credit Card

(percent of People Age 15+)

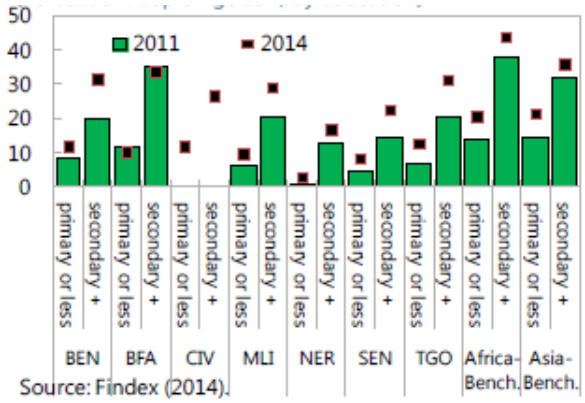


Source: Findex (2014).

The less educated parts of the population are less likely to have an account at a financial institution.

Account at a Financial Institution

(percent of People Age 15+, by Education)

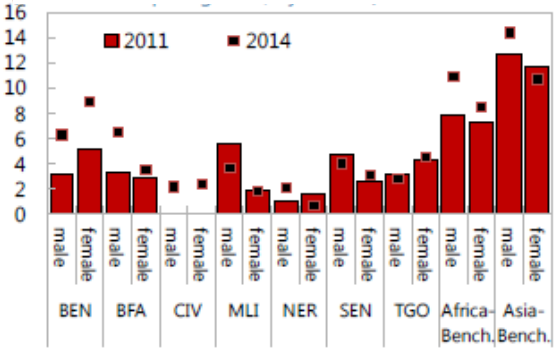


Source: Findex (2014).

The percent of women borrowing from financial institution is lower than that for men in Mali.

Borrowed from Financial Institution

(percent of People Age 15+, by Gender)



Source: Findex (2014).

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