3. Domestic Arrears in Sub-Saharan Africa: Causes, Symptoms, and Cures

Domestic arrears, a form of forced financing prevalent in many sub-Saharan African countries, have increased in recent years.[1] As such, they have become a key economic policy challenge, whether for the clearance of the existing stock or for the prevention of new arrears.

Despite the prevalence of arrears, their causes, effects, and consequences are not well understood. The literature on domestic arrears is limited, presumably reflecting a lack of reliable and comparable data (Box 3.1). Therefore, their true scale and cost may be hidden, and little operational guidance exists as to the best approach to arrears clearance. Studies often attribute arrears accumulation to weak public financial management (PFM) systems and lack of political commitment to agreed financial policies (Khemani and Radev 2009; Pattanayak 2016).[2]

Although a limited amount of arrears accumulation is therefore to be expected in countries with weak PFM systems, their extent and frequency suggest that the causes transcend this weakness. They are thus best examined in a broad macroeconomic context, including to shed light on the role of shocks—such as commodity price declines, political instability, and abrupt tightening of financial conditions—in generating arrears, and the extent to which arrears undermine the effectiveness of fiscal policy.

The new arrears data set specially compiled for this chapter shows that the impact of domestic arrears accumulation is multifaceted and can be substantive. It weakens private sector performance, heightens vulnerabilities in banks, increases procurement costs incurred by governments, and results in poor public service delivery to citizens. In addition, past accumulation of unrecorded arrears could raise the burden of debt, adding to vulnerabilities in countries with limited or no fiscal space.

This chapter sheds light on key aspects of domestic arrears accumulation in sub-Saharan Africa. It investigates the causes of domestic arrears and the different channels through which they affect the economy, followed by a discussion of principles for arrears clearance and prevention. Its main findings are the following:

- Domestic expenditure arrears are pervasive in sub-Saharan Africa and often sizeable. They have increased recently, mainly in commodity-exporting countries and are largely owed to private sector firms. Monitoring of arrears accumulation is generally weak, and many countries have unrecorded arrears, which can be an important source of contingent liabilities and sudden increases in debt burden.

- Domestic arrears accumulation reflects weak fiscal and budgetary institutions, particularly weak PFM systems. In addition, arrears can emerge following large fiscal shocks that may otherwise be difficult to absorb. The impact of fiscal shocks on arrears is larger for countries with weak PFM (when PFM systems are weak arrears accumulate faster in bad times) and countries under a fixed exchange rate regime.

- Domestic arrears can have multifaceted effects on the economy. They are damaging to the private sector and lead to stress on the banking sector, with negative ramifications for growth. They undermine trust in government and the effectiveness of fiscal policy. In particular, the fiscal multiplier declines when spending is mostly financed through arrears and can turn negative when the private sector faces

This chapter was prepared by a team coordinated by Samuel Delepierre, Alexander Massara, and David Stenzel, composed of Moez Ben Hassine, Krisztina Fabo, Hoda Selim, and Martha Woldemichael, with input from Jean Portier and Samuele Rosa and research assistance from Yanki Kalfa, under the supervision of Said Bakhache and Catriona Purfield.

[1] In this chapter, domestic arrears are overdue payments on financial obligations from primary spending.

[2] Other studies developed theoretical models or frameworks to assess the implications of arrears accumulation (Ramos 1998; Diamond and Schiller 1987). The few existing empirical assessments of the macroeconomic effects of arrears accumulation are based on European countries (Checherita-Westphal, Klemm, and Viefers 2015; Connell 2014).

high liquidity constraints, and in cases where there are long delays in clearing arrears.

- Addressing the domestic arrears problem requires specific actions for their clearance. A clearance strategy should be consistent with maintaining macroeconomic stability, anchored on inclusive growth, and implemented transparently. If repayments must be rescheduled, priority should be given to payments that maximize the impact on growth and have a positive distributional effect.

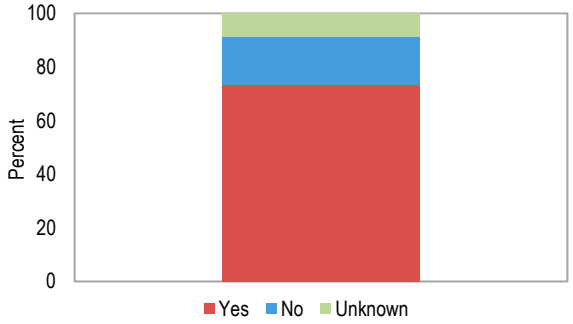
- Prevention of arrears accumulation entails efforts to strengthen fiscal institutions, including PFM systems, and to build buffers. In addition, in the event of sizable exogenous shocks, the availability of external financing can help prevent the accumulation of domestic arrears. Finally, as fiscal institutions improve, countries should put in place mechanisms to monitor arrears and avoid further accumulation.

THE SIZE, COMPOSITION, AND EVOLUTION OF DOMESTIC ARREARS IN SUB-SAHARAN AFRICA

Fact 1: Most sub-Saharan African countries incur arrears.

Many sub-Saharan African countries officially report domestic arrears (Figures 3.1 and 3.2). At the end of 2018, 24 out of 30 countries for which data are available had arrears.[3] Among those, the average stock of arrears was 3.3 percent of GDP, with a maximum of 18 percent of GDP (Republic of Congo). Domestic arrears are particularly high in oil exporters (about 8.5 percent of GDP), countries with a fixed exchange rate regime (4.4 percent), and fragile states (4.1 percent). In addition, countries with a higher level of public debt and a weaker Debt Sustainability Analysis (DSA) risk rating tend to have more arrears (Figure 3.3). While the presence of arrears is not unique to sub-Saharan African countries, low scores for the stock of domestic arrears in public expenditure and financial accountability (PEFA) assessments[4]—which are regularly conducted in many sub-Saharan African countries—further corroborate the prevalence of arrears (Figure 3.4).

Figure 3.1. Sub-Saharan Africa: Share of Countries with Recorded Domestic Arrears, 2018

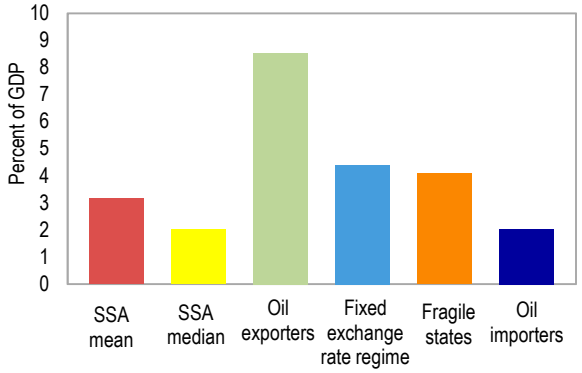


Source: IMF staff calculations.

Fact 2: "Unrecognized" arrears are widespread.

Aside from officially reported arrears, countries also may have a stock of "unrecognized" arrears that is not officially recorded. Unrecognized arrears can be either potential claims awaiting an audit or arrears that exist but have yet to be recorded by the fiscal authorities. They can also take the form of unpaid commitments to utilities or social security funds. They increase a country's debt stock significantly once they are verified, which can suddenly add to debt vulnerabilities.

Figure 3.2. Sub-Saharan Africa: Stock of Domestic Arrears by Country Group, 2018



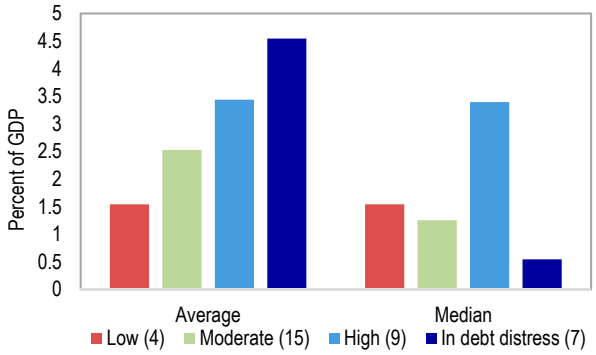
Source: IMF staff calculations.

Note: Sub-Saharan Africa group includes 29 observations. Median group includes 30 observations. Oil exporters group includes 8 observations. Fixed exchange rate regime group includes 21 observations. Fragile states group includes 18 observations. Oil importers group includes 37 observations. SSA = sub-Saharan Africa. See page 60 for country groupings table.

[3] See Annex 3.1. for definitions and data.

[4] PEFA reports assess the PFM performance of a country by providing evidence-based scores for a range of indicators, including the monitoring and stock of expenditure arrears.

Figure 3.3. Sub-Saharan Africa: Level of Stock of Domestic Arrears and Debt Sustainability Analysis Rating, 2017

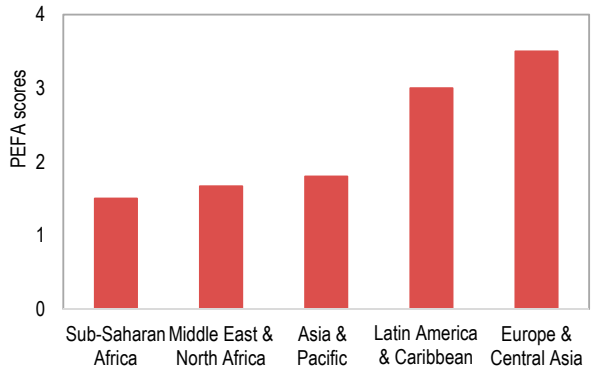


Source: IMF staff calculations.

Note: The Republic of Congo is driving the difference between the average and the median. Number of observations is provided in parentheses.

Unrecognized arrears can emerge because of unrealistic budgeting, weak commitment controls, inability to monitor spending by institutions outside the central government (for example, local governments, state-owned enterprises (SOEs)) without adequate funding and financial oversight, or noncompliance with rules and regulations. In most countries, there is, by definition, little information to provide a precise estimate of their size. The new data set (Box 3.1) indicates that (1) more than half of sub-Saharan African countries have conducted verification exercises since 2005

Figure 3.4. PEFA Scores for Domestic Arrears Stock
(Higher score indicates lower stock of arears)

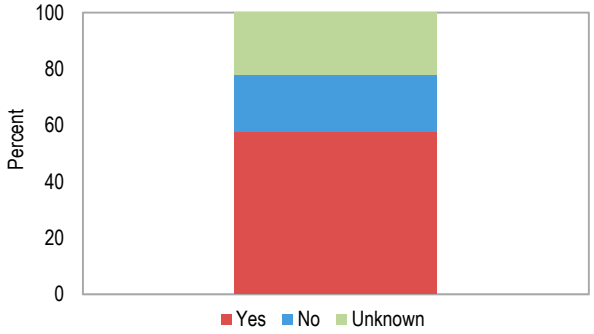


Sources: PEFA 2016 methodology; and IMF staff calculations.

Note: PEFA = public expenditure and financial accountability. Average scores are computed by region: Sub-Saharan Africa (16 countries); Middle East & North Africa (3 countries); Asia & Pacific (5 countries); Latin America & Caribbean (4 countries); Europe & Central Asia (4 countries). A country scores 1 if the stock of expenditure arrears is no more than 2 percent of total expenditure in at least two of the last three completed fiscal years, scores 2 if it is between 2 and 6 percent, scores 3 if it is between 6 and 10 percent and scores 4 if it is above 10 percent.

[5] The assessment is based on the survey.

Figure 3.5. Sub-Saharan Africa: Share of Countries with Unrecorded Domestic Arrears, 2018



Source: IMF staff calculations.

to assess whether there are legitimate unrecorded arrears, (2) more than half of sub-Saharan African countries currently have unverified arrears (Figure 3.5); and (3) while unrecognized arrears were estimated to be up to 2 percent of GDP at the end of 2018, a few countries are likely to have accumulated a much larger stock.

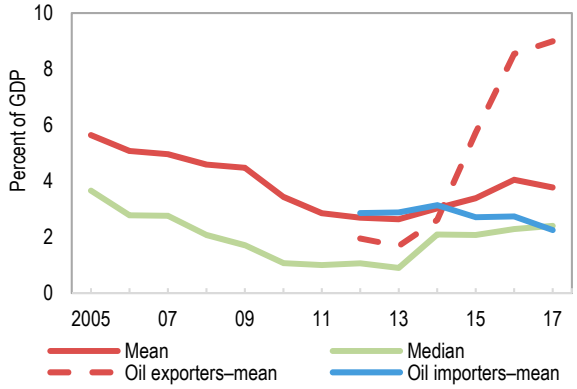
Fact 3: Domestic arrears have increased since 2012.

After declining steadily in the late 2000s, the average stock of arrears has increased recently and peaked at about 4 percent of GDP in 2016 (Figure 3.6). While oil importers, such as Ghana and Guinea-Bissau, have seen a decline in domestic arrears over the last five years, oil exporters have experienced a significant spike (Figure 3.6), reflecting the sizable drop in oil prices in 2014–15. This finding is supported by a text-mining analysis of IMF staff reports. The use of domestic-arrears-related terms increased after 2013, reaching record levels in 2016 and 2017. The discussion of domestic arrears surged particularly in staff reports for oil-exporting countries (Figure 3.7). This suggests that the topic received greater attention during this period.

Fact 4: Arrears to private suppliers of goods and services are the most common

At the end of 2018, most countries owed arrears to private sector suppliers.[5] Arrears to SOEs are also relatively frequent; only a few countries report arrears to government employees (Figure 3.8, panels 1 and 2). This is mirrored in arrears data

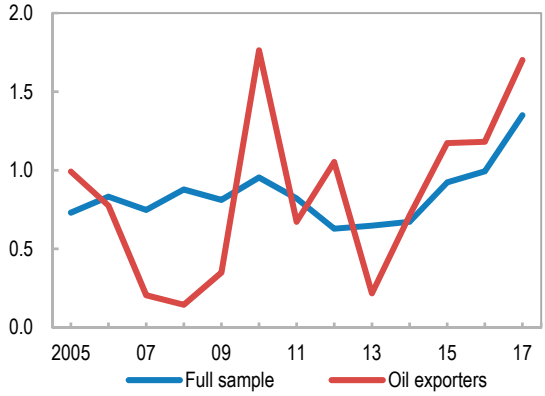
Figure 3.6. Sub-Saharan Africa: Stock of Domestic Arrears, 2005–17



Source: IMF staff calculations.

Note: Results hold after controlling for the change in the sample across time (in 2005, data are available for 19 countries and for 30 countries in 2018).

Figure 3.7. Sub-Saharan Africa: Frequency of Domestic Arrears-Related Terms in IMF Staff Reports, 2005–17



Source: IMF staff calculations.

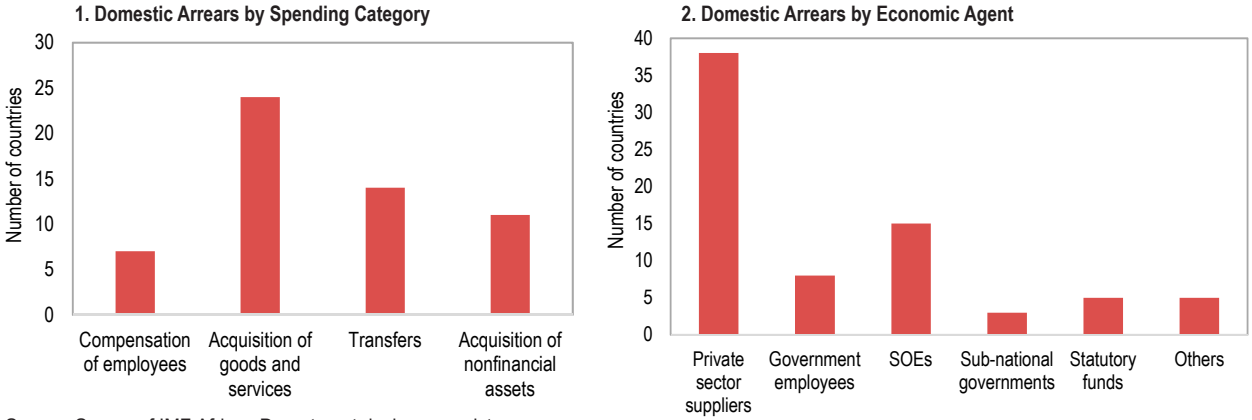
Note: Domestic arrears-related terms per 1,000 words.

broken down by spending categories. Arrears most often accumulate on spending for goods and services (53 percent of all sub-Saharan countries), transfers (31 percent), investments (24 percent), and lastly, wages and salaries. Due to their socioeconomic impact, wage arrears are rare and occur mainly in the context of severe political instability (Central African Republic) or large terms-of-trade shocks (Republic of Congo).

Fact 5: Countries in sub-Saharan Africa have included conditionality related to domestic arrears in two-thirds of their IMF-supported programs.

The extent of domestic arrears conditionality in IMF arrangements provides further evidence of widespread domestic arrears accumulation. Since 2002, more than two-thirds of IMF arrangements in sub-Saharan Africa include conditionality related to domestic arrears (Figure 3.9).[6] In more than half of the programs in the region, conditionality often took the form of quantitative targets, either to prevent arrears accumulation, maintain it below a certain level, or reduce the stock of arrears. Structural conditionality occurred somewhat less frequently and largely focused on audits of domestic arrears or specific measures to better monitor or prevent arrears accumulation.

Figure 3.8. Sub-Saharan Africa: Domestic Arrears Breakdown, Number of Countries

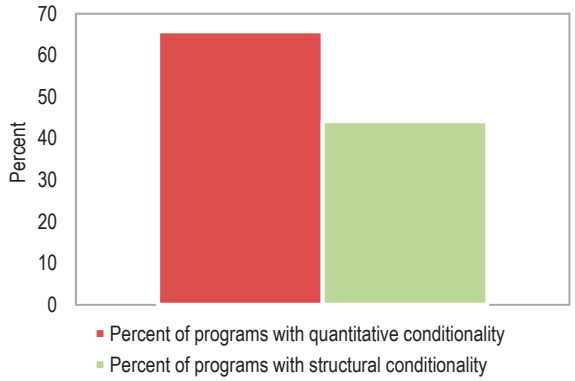


Source: Survey of IMF African Department desk economists.

Note: SOE = state-owned enterprise.

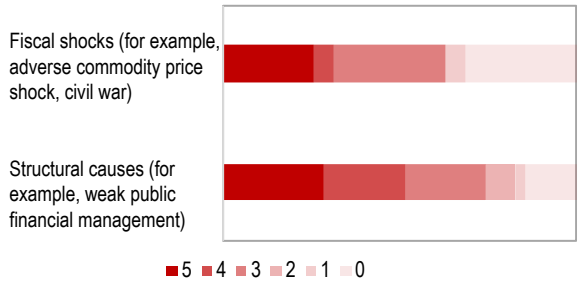
[6] Of a total of 111 IMF arrangements with 36 different sub-Saharan African countries since 2002, 78 arrangements included domestic-arrears-related conditionality.

Figure 3.9. Sub-Saharan Africa: Domestic Arrears Related Conditionality in IMF Arrangements, 2002–18



Sources: IMF, Monitoring of Fund Arrangements database; and IMF staff calculations.

Figure 3.10. Sub-Saharan Africa: Causes of Domestic Arrears Accumulation



Source: Survey of IMF African Department desk economists.
Note: 0 = not significant and 5 = highly significant.

CAUSES OF DOMESTIC ARREARS ACCUMULATION

Countries have accumulated expenditure arrears due to both structural and cyclical factors (Figure 3.10). The former primarily includes weak fiscal and PFM institutions, which underpin arrears accumulation in nearly every case. Cyclical factors including shocks, which amplify weakness in PFM systems, are those that adversely impact government resources and lead to funding shortages, or that exert spending pressures. They can include economic downturns, commodity price shocks, tightening of external financing conditions, natural disasters, and internal shocks such as conflict and political instability.

Structural Causes of Arrears Accumulation

Arrears accumulation can be the result of weaknesses at various stages of the expenditure cycle. The formulation of unrealistic budgets, a lack of commitment controls, poor cash management, delays in processing payments, deliberate deferral of payments, or inadequate sanctions for noncompliance could all result in arrears accumulation.[7] This is broadly confirmed by the association between the stock of domestic arrears and fiscal governance indicators. For example, the stock of arrears is negatively correlated with indicators that measure revenue and expenditure outturns compared to initial projections, the effectiveness of spending controls, and liquidity management (Figures 3.11). The stock of arrears is positively correlated with the level of public debt and the long-term volatility of fiscal deficits (Figure 3.12), again suggesting that weak fiscal discipline is an important driver of arrears accumulation.

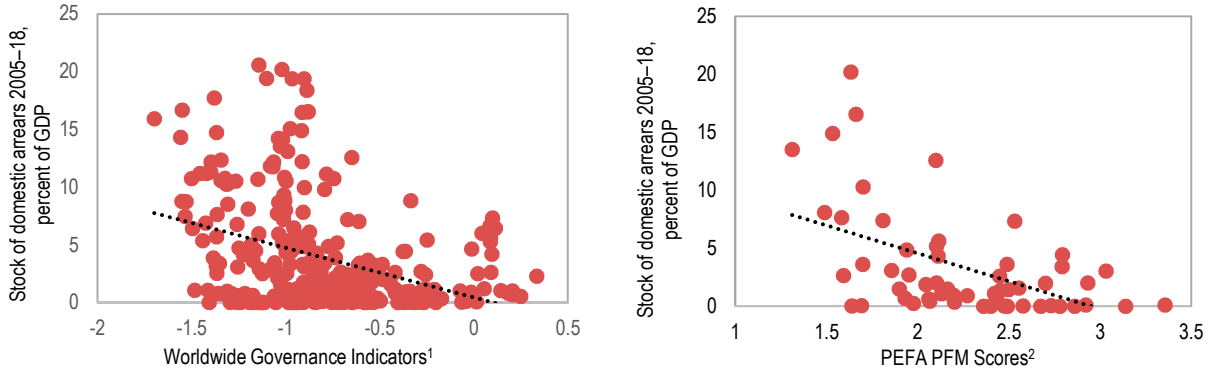
Cyclical Causes of Arrears Accumulation

Although weak fiscal institutions are a root cause of domestic arrears accumulation, high levels of arrears are generally driven by difficult-to-absorb large shocks. Shocks can have various triggers—for example, an economic recession or slowdown, a fall in commodity prices, internal (political, security) instability, a public health crisis, or natural disasters. A government can react to the resulting revenue decline by raising noncommodity revenues and/or cutting spending. When the adjustment is too large and unfeasible, and when more financing (including from donors) is unavailable, resorting to "forced borrowing" by accumulating arrears to close the remaining financing gap may be an inevitable outcome. In addition, institutional disruption (notably in the case of conflict) can undermine the government's ability to honor its financial obligations on time.

Large fiscal shocks are a leading indicator of substantial arrears accumulation. For example, the five oil exporters of the Central African Economic and Monetary Community (CEMAC)—Cameroon, Chad, Equatorial Guinea, Gabon, and Republic of Congo—had to cope with significantly lower fiscal revenues following the dramatic oil price decline in 2014–15. Similarly, Lesotho experienced a sudden drop in Southern African Customs Union revenues in 2016, which

[7] For a comprehensive discussion on the relationship between weak PFM systems and arrears, see Flynn and Pessoa (2014).

Figure 3.11. Sub-Saharan Africa: Selected Governance Indicators and Stock of Domestic Arrears, 2005–18



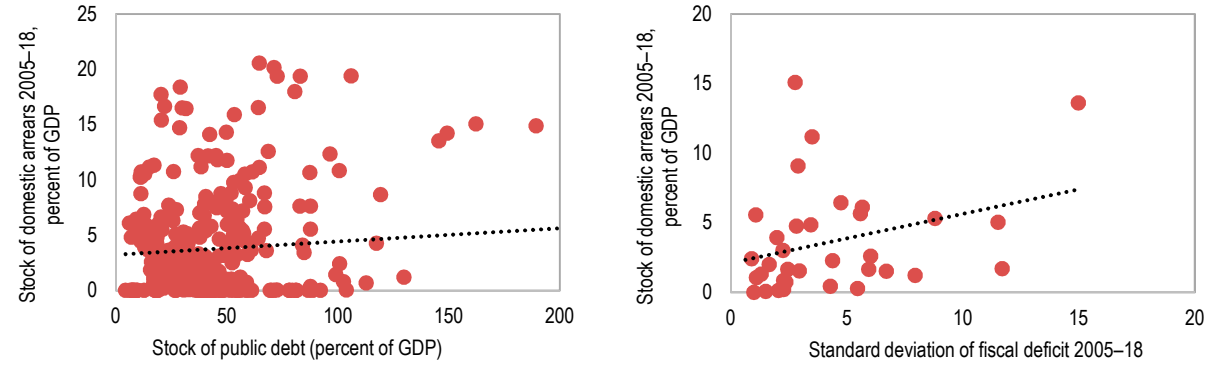
Source: IMF staff calculations.

Note: PEFA = public expenditure and financial accountability; PFM = public financial management. Public expenditure and financial accountability alphabetic scores converted into numerical values.

[1] Simple average of Worldwide Governance Indicators covering 2005–17.

[2] Simple average of the six public financial management categories using the public expenditure and financial accountability 2011 classification.

Figure 3.12. Sub-Saharan Africa: Selected Fiscal Variables and Stock of Domestic Arrears, 2005–18



Source: IMF staff calculations.

represented about one-third of total government revenues. In these cases, fiscal adjustment and the drawdown on buffers could not prevent an accumulation of arrears following the shock (Figure 3.13). In cases such as Liberia in the early 2000s and the Central African Republic in 2013, severe political instability and conflict resulted in a stock of arrears well above 5 percent of GDP.

Empirical analysis seems to confirm that expenditure arrears accumulate following fiscal shocks and that some country characteristics can exacerbate the impact (Figure 3.14).[8] There is evidence that:

- Lower growth, a decline in the commodity terms of trade, and political instability are associated with a larger stock of domestic arrears. A one standard deviation decline in GDP growth, the commodity terms of trade, and an indicator of political stability and violence[9] results in a 0.9, 0.6, and 1 percentage point increase in the domestic arrears to GDP ratio, respectively.

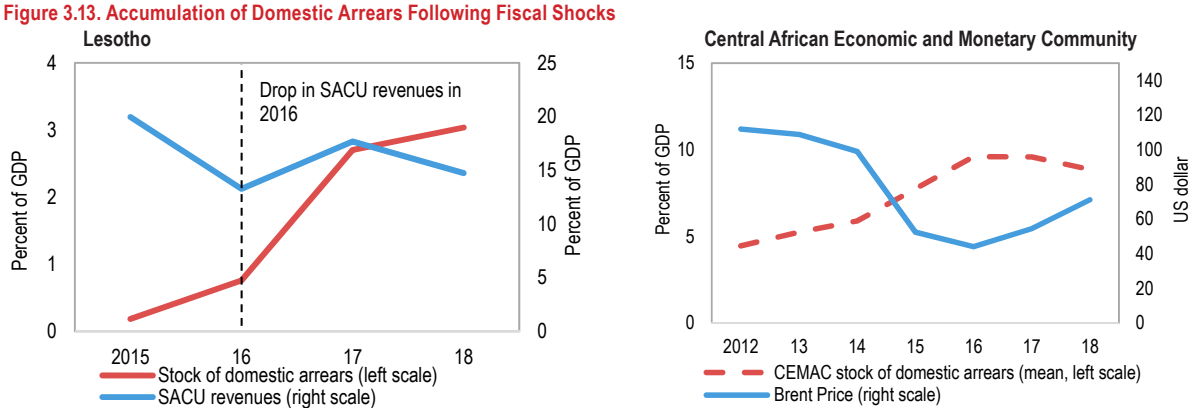
- Using an alternative measure of oil shocks[10] seems to yield a larger increase in domestic arrears in countries under fixed exchange rate regimes. A one standard deviation decline in the share of oil GDP in total GDP in countries

[8] IMF staff used a cross-country panel regression model with country and year fixed effects on 45 countries during the period 2005–18. See annexes 3.1 and 3.3 for details on the data sources and specifications.

[9] From the Worldwide Governance Indicators.

[10] Notwithstanding some endogeneity problems, IMF staff used the fall in the share of oil GDP in total GDP as a proxy of oil shocks.

Figure 3.13. Accumulation of Domestic Arrears Following Fiscal Shocks



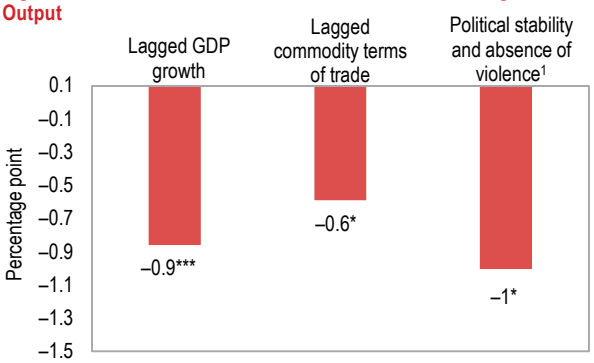
Source: IMF staff calculations.

Note: CEMAC = Central African Economic and Monetary Community; SACU = South Africa Customs Union.

with fixed exchange rate regimes is associated with a 4.3 percentage point increase in the domestic-arrears-to-GDP ratio. Similarly, the impact of oil shocks tends to be larger on the stock of domestic arrears in countries with weak governance. A one standard deviation decline in the share of oil GDP in total GDP results in a 3.2 (1.2) percentage point increase in the domestic-arrears-to-GDP ratio for countries with weak (good) governance.

In addition, the election cycle could also be a determinant of arrears accumulation. Evidence suggests that fiscal deficits are higher in election years, with pressure coming from consumption spending, which could trigger arrears accumulation in the absence of strong fiscal controls.[11] Data show that some countries in sub-Saharan Africa undergoing either presidential or parliamentary elections tend to experience a small spike in arrears.[12]

Figure 3.14. Causes of Domestic Arrears Accumulation Regression Output



Source: IMF staff calculations.

Note: Dependent variable is the stock of domestic arrears in percent of GDP. Coefficients show the effect of a one standard deviation increase in lagged GDP growth, lagged commodity terms of trade, political stability and absence of violence on the stock of domestic arrears. ***, **, and * indicate statistical significance at the 1, 5, and 10 percent level, respectively.

[1] Worldwide Governance Indicators.

These findings suggest that the causes of significant arrears accumulation go beyond weak PFM systems. Macroeconomic factors are also key determinants. For example, under a fixed exchange rate regime, negative external shocks, such as a commodity price shock, cannot be softened by exchange rate depreciation. The burden of adjustment rests exclusively on fiscal policy, making arrears accumulation more likely, particularly in countries with limited fiscal space and weak PFM. Fiscal space and the existence of fiscal buffers help cushion a shock, as a higher deficit could be financed either by drawing on financial assets or new debt issuance.

SYMPTOMS: MACROECONOMIC EFFECTS OF DOMESTIC PAYMENT ARREARS

A large and/or persistent accumulation of expenditure arrears has an adverse impact on the real, financial, and social sectors through multiple channels (Figure 3.15).[13]

[11] Ebeke and Ölcer (2013).

[12] Because the source data are reported annually, they do not capture arrears that accumulate and are cleared within the year.

[13] Some of these transmission channels can be found in Diamond and Schiller (1987) and Flynn and Pessoa (2014).

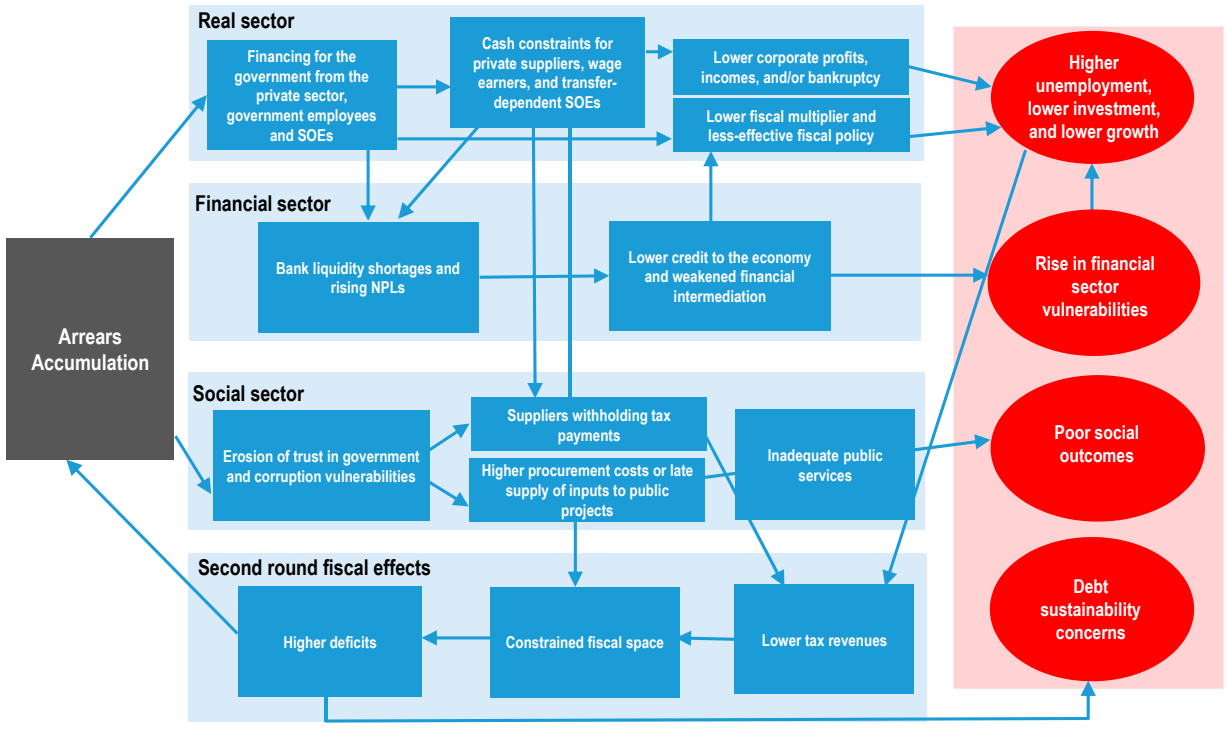
Arrears can affect private sector activity and growth outcomes. By providing the government with discretionary and nontransparent financing, arrears enable a government to divert resources from the private sector and SOEs, which become more cash constrained. This leads to lower corporate profits and household income, possible bankruptcies, and eventually lower aggregate demand that would result in higher unemployment and lower growth.

Arrears can raise financial sector vulnerabilities. To the extent that arrears prevent private companies, households, and SOEs from adequately servicing their loans, the banking sector could suffer a deterioration in the quality of its assets and see a rise in nonperforming loans (NPLs). This could weigh on the supply of credit and result in lower investment, ultimately feeding back into fiscal revenue shortfalls and weakened economic activity. The intensity of these indirect linkages will depend on the initial soundness of the financial sector, as well as the size and pace of arrears accumulation.

Persistent arrears can result in weaker social outcomes. Arrears can undermine trust in the government's fiscal position if government suppliers or SOEs anticipate payment delays. This may lead agents to withhold their tax payments until claims are settled, charge higher prices to compensate for late payments, and/or delay the supply of inputs for government projects, especially if they are financially constrained. Agents may also resort to informal payments to speed up the settlement process (Diamond and Schiller 1987; Garamfalvi 1997), which can result in corruption. These additional expenses lead to higher public procurement costs, undermining public service delivery (Flynn and Pessoa 2014) and weakening social outcomes.

Persistent arrears can create second-round fiscal costs. A vicious circle can set in if the negative direct effects of arrears reinforce each other, leading to even weaker economic activity and heightened fiscal stress, which can contribute to even higher financing gaps.

Figure 3.15. Transmission Channels of Domestic Arrears Buildup to the Economy



Source: IMF staff.
Note: NPL = nonperforming loan; SOE = state-owned enterprise.

Regression analysis, which should be interpreted with caution given the limitations on arrears data, confirms the adverse effects of domestic arrears buildup on the economy, with poor government payment discipline hampering growth and the activities of the public and private sectors, as well as the financial sector (Figure 3.16).[14] Specifically:

- A 1 percentage point increase in the accumulation of arrears is associated with a fall in real GDP per capita growth in the range of 0.3 percentage point. The use of the synthetic control method, an alternative approach that aims to isolate the effect of arrears accumulation on growth in a given country, shows a similar result—namely, that countries may witness a significant shift in real GDP per capita growth following a large buildup of arrears.[15]

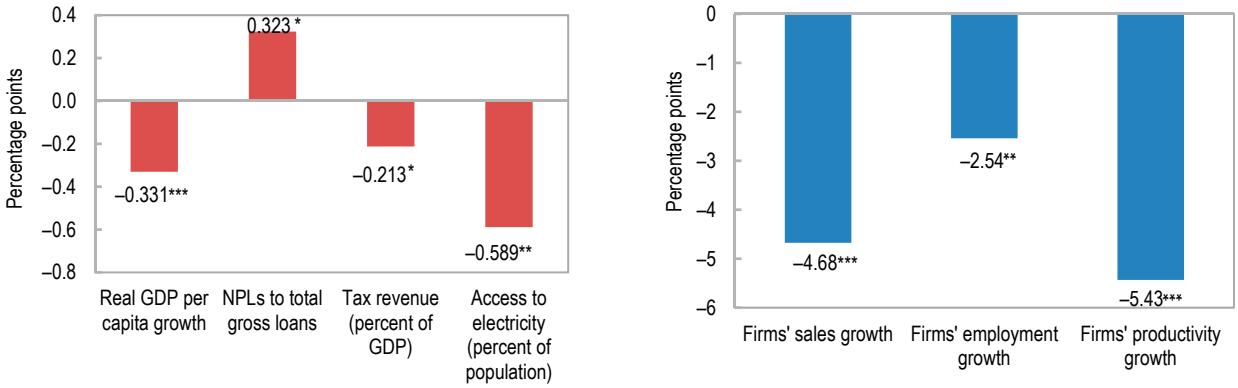
- The effect of arrears on the banking sector is reflected in the NPL-to-total-gross-loans ratio, estimated in the range of 0.3 percentage point, which suggests that liquidity-constrained government suppliers, SOEs, and transfer-dependent households struggle to meet their financial obligations, with negative repercussions on banks' asset quality.

- Government payment arrears accumulation translates into reduced tax revenue as companies that are owed arrears could decide to withhold tax transfers.

- Public service delivery is also hampered as the government incurs higher procurement prices that shrink resources available for investing in social sectors. A 1 percentage point increase in arrears buildup is associated with a fall of about 0.6 percentage point in the proportion of the population having access to electricity.

- The corporate sector is also affected, with arrears buildup weakening firms' productivity and sales performance, and diluting their ability to create jobs. Not surprisingly, the impact of domestic arrears on the private sector varies across firms (Figure 3.17). While all firms experience a decline in sales growth, those more exposed to the government, as measured by participation in public procurement markets, witness a larger decline due to the direct effect of nonpayment by the government. In the same vein, firms more exposed to the banking sector through a bank loan record a slower pace of job creation, which highlights the financial transmission channel of arrears buildup.

Figure 3.16. Sub-Saharan Africa: The Macroeconomic Impact of Domestic Payment Arrears



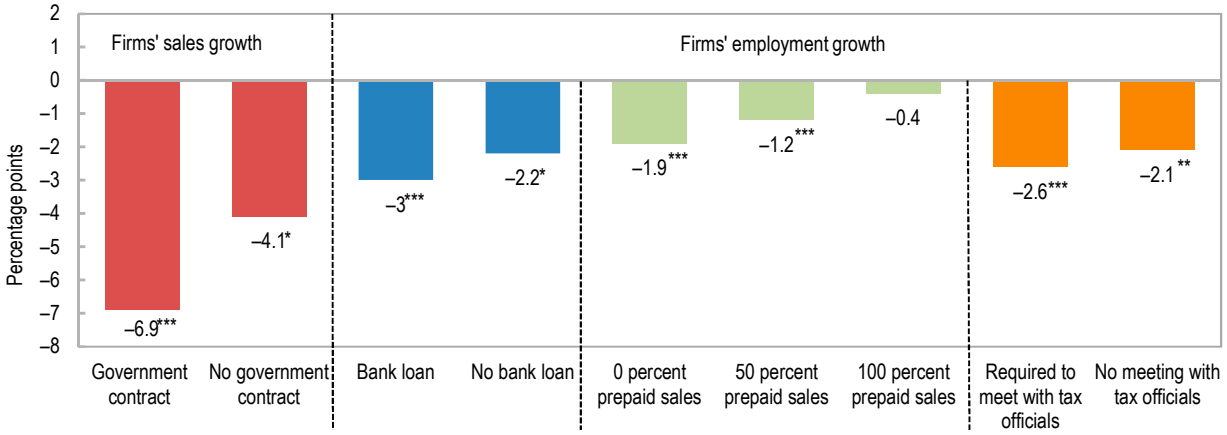
Sources: IMF African Department Desk Survey; IMF Financial Soundness Indicators; World Bank Enterprise Surveys; World Development Indicators; IMF, World Economic Outlook database; and IMF staff calculations.

Note: Coefficients show the effect of a 1 percentage point of GDP increase in the accumulation of arrears.***, **, and * indicate statistical significance at the 1, 5, and 10 percent level, respectively. See Annex Tables 4.1–4.5 for details.

[14] A description of the econometric approach and full regression tables are provided in Annex 3.4.

[15] The synthetic control method was developed by Abadie and Gardeazabal (2003) and extended by Abadie, Diamond, and Hainmueller (2010). It compares a treated country with an estimated counterfactual, the synthetic control, which is a linear combination of untreated countries. Weights are chosen so that the synthetic control resembles the treated country in all relevant pretreatment (for example, pre-arrears accumulation) characteristics. Details on the synthetic control method, robustness checks, and associated results with caveats can be found in Annex 3.4. Results remain robust when the control group covering the world is restricted to SSA countries that did not witness a sharp arrears buildup in the aftermath of the oil price shock.

Figure 3.17. Sub-Saharan Africa: The Heterogenous Effect of Domestic Payment Arrears on Private Sector Performance



Sources: IMF African Department Desk Survey; IMF Financial Soundness Indicators; World Bank Enterprise Surveys; World Development Indicators; IMF, World Economic Outlook database; and IMF staff calculations.

Note: Coefficients show the effect of a 1 percentage point of GDP increase in the accumulation of arrears.***, **, and * indicate statistical significance at the 1, 5, and 10 percent level, respectively. See Annex Tables 4.1–4.5 for details.

In contrast, firms with a higher proportion of prepaid sales suffer less. Results also suggest that the adverse effect of arrears buildup on the corporate sector is compounded by the presence of burdensome regulatory procedures.

- Arrears accumulation may undermine government legitimacy by influencing citizens' attitudes toward trust, corruption, and public service delivery (Figure 3.18). The correlation between the stock of domestic arrears and indicators of citizens' perceptions from Afrobarometer[16] shows that higher levels of arrears are associated with lower trust among citizens in their leaders and their ability to manage the economy. Individuals are also more likely to perceive widespread corruption among public officials and to report difficulties in accessing basic health services.

Financing spending through arrears accumulation undermines the effectiveness of fiscal policy. It generally leads to a shift of resources from the creditor to the government that is tantamount to taxation, as typically no interest is paid to those who supply arrears financing. The effect depends on three factors, namely the extent to which spending is financed through arrears, how long it takes to repay the arrears, and the extent of liquidity constraints in the private sector. The larger the arrears, the longer they remain outstanding, and the less liquidity there is in the economy, the smaller the spending multiplier. Under some extreme circumstances, the multiplier can be negative. For example, in countries with a stressed banking sector and existing arrears, spending through additional arrears may actually be contractionary. Box 3.2 uses a dynamic stochastic general equilibrium (DSGE) model to illustrate how the fiscal multiplier is affected by domestic arrears in sub-Saharan Africa.

CURES: CLEARANCE AND PREVENTION OF ARREARS

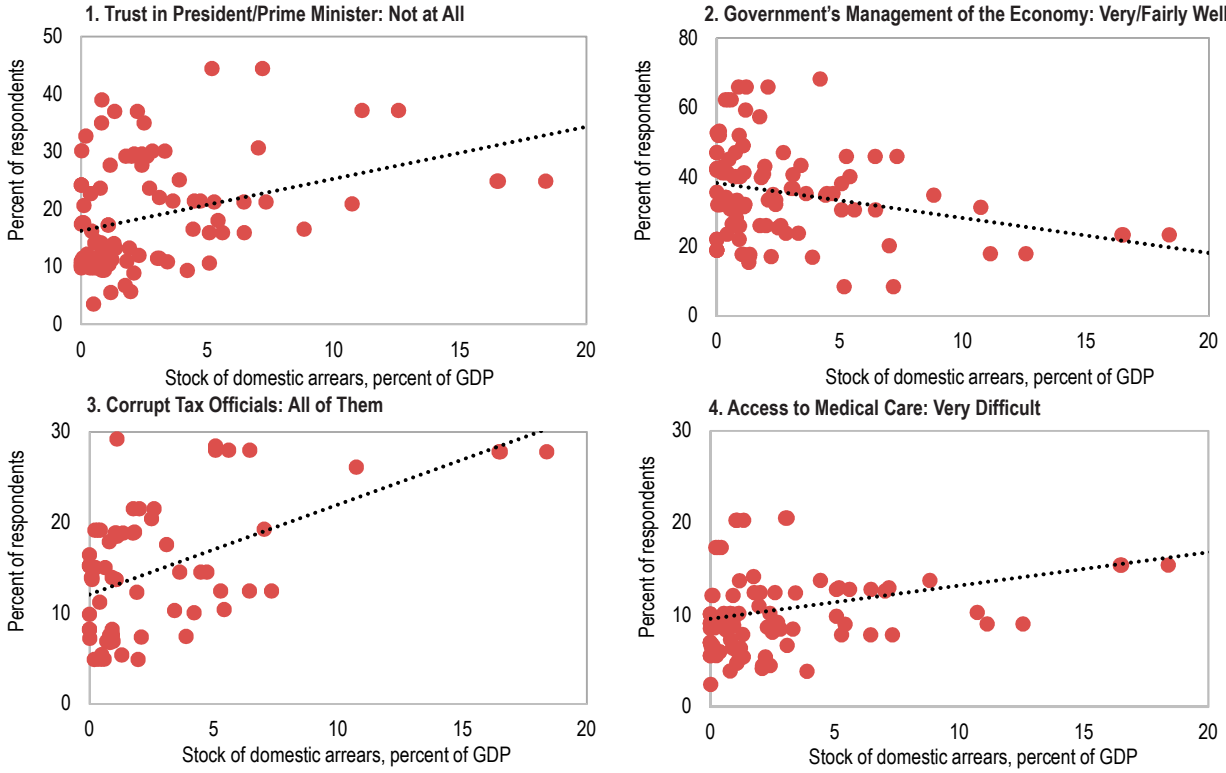
When arrears exist, every effort should be made to clear them and to prevent new accumulation. Clearance entails three main steps: verification, development of a payment and prioritization strategy, and liquidation. Steps to prevent additional arrears must be taken in parallel.

Clearance

An independent and comprehensive stocktaking and verification of arrears is the first step in the clearance process. Such verification is necessary because often during the accumulation period when controls are weak, the scope for corruption is wide and can lead to illegitimate claims. In Ghana (2017) and in the Republic of Congo (2019) for instance, audits led to the rejection of a large share of the initial stock of arrears. In addition,

[16] Afrobarometer is a publicly available database on pan-African national public attitude surveys regarding democracy, governance, and society.

Figure 3.18. Sub-Saharan Africa: Government Payment Discipline and Public Attitudes toward Trust, 2005–18



Sources: Afrobarometer; IMF African Department Desk Survey; and IMF staff calculations.
Note: The stock of arrears is lagged by one year.

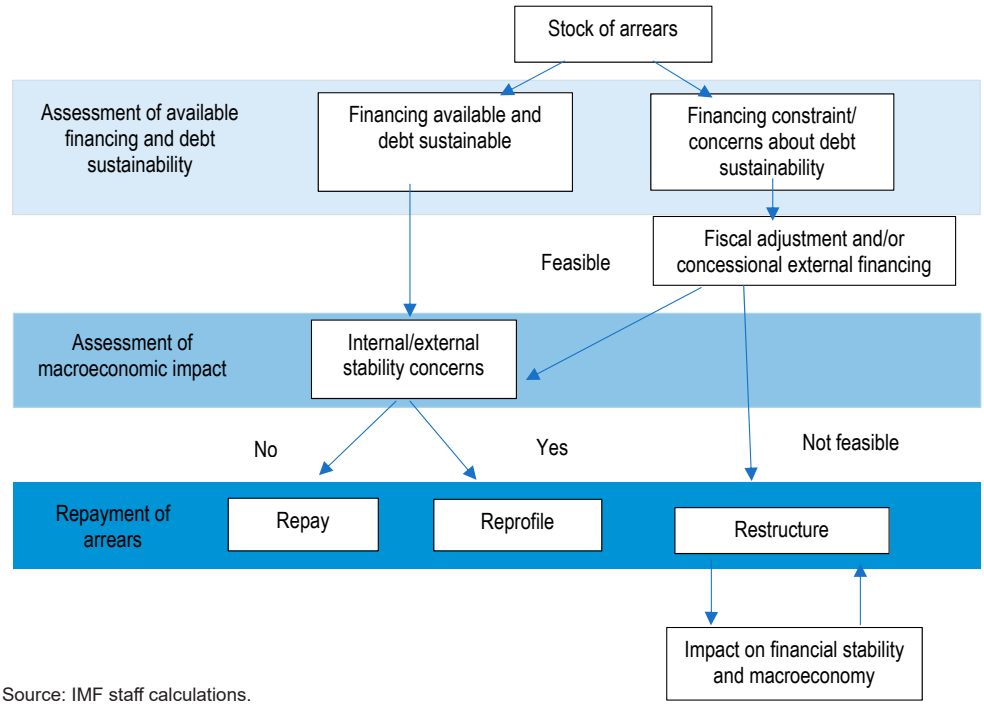
verification should classify the size and type of expenditure arrears, to whom they are owed, when the arrears were incurred, and if any penalties on the arrears will be applied, all of which are necessary to design the clearance strategy.[17] The verification exercise should cover as much of the public sector as possible (for example, SOEs and local governments) rather than just the line ministries.

Second, after the verification phase, a payment and prioritization strategy should be developed and approved by the relevant fiscal authorities. It may also be desirable to create an arrears committee. While arrears represent debt that is already overdue, often it is not possible to pay the entire stock at once because it is too large (relative to debt sustainability considerations or available financing) or because such rapid clearance would undermine macroeconomic stability. Figure 3.19 offers a stylized representation of different scenarios:

- The outstanding stock of arrears should be paid swiftly if market or donor financing is available, debt sustainability is ensured, and other macroeconomic objectives, such as low inflation and external stability, are not jeopardized by the repayment.
- Designing a repayment strategy becomes more complex if available financing is limited or if debt sustainability is already a concern. Options include undertaking fiscal adjustment or generating additional financing by selling assets to make space for arrears clearance. If this is feasible, a gradual repayment of the full amount of the claims, consistent with maintaining macroeconomic stability, would be appropriate.
- However, in cases where the government's repayment capacity is too constrained, even in the medium term, a restructuring of claims, which may include a reprofiling and/or a discount on these claims, becomes necessary.

[17] Flynn and Pessoa (2014) provides an in-depth discussion of practical steps to ensure proper verification of arrears.

Figure 3.19. Repaying Arrears—Stylized Decision Tree



Source: IMF staff calculations.

This process should be guided by transparency and an open exchange of information with creditors. Considering their preferences for repayment modalities and ensuring uniformity of treatment would help facilitate voluntary participation whenever possible. In such a scenario, financial sector stability considerations should be placed at the forefront. Bank stress tests are useful when assessing the impact of restructuring scenarios on banks' balance sheets. If the restructuring leads to a depletion of banks' capital, a recapitalization plan would need to be developed with minimal fiscal costs, especially if the government is already facing liquidity and/or debt sustainability constraints. For example, the accumulation of arrears in CEMAC countries has increased stress on banks. Any restructuring plan that includes large haircuts on private sector claims should be accompanied by an assessment of the effects of the restructuring on the private sector's ability to service its bank loans and how this could affect bank solvency (which depends on the link between arrears and NPLs). Stress tests conducted for the Republic of Congo point to the financial risks stemming from very large haircuts.[18] The results also show that if banking sector losses are too severe, the government may be forced to recapitalize banks to prevent insolvency, often at large fiscal costs.

- If repayments must be sequenced, prioritization should be based on a clear set of criteria guided by the impact on macro stability and inclusive growth. For example, repaying: (1) wage arrears and arrears to small-scale suppliers (Togo, 2018) with weak balance sheets can lead to a positive fiscal impulse, given that it would relieve the liquidity constraints, support aggregate demand, and dampen the potential for social pressures; (2) arrears to companies still in operation and individuals who have defaulted on their bank loans, especially if the banking sector is facing vulnerabilities and has not provisioned for these losses;[19] and (3) arrears to suppliers of critical social services, such as health. With

[18] See IMF (2019).

[19] Empirical work shows a domestic debt restructuring may harm the solvency of the domestic financial system if there are concerns for ex ante financial soundness (Erce-Dominguez and Diaz-Cassou 2010). In turn, banking insolvency can also lead to output losses (De Paoli, Hoggarth, and Saporta 2009).

regard to vintage, considerations related to equity and the effect on economic activity need to be balanced, particularly for arrears whose holders may have written them off partially or fully. Other factors that should weigh on prioritization include the financial penalties and legal risks associated with postponing the payment of arrears, especially if they could be fiscally costly. Priorities should be set transparently to safeguard against corruption.

- Beyond these macroeconomic considerations, there can be other relevant factors determining the repayment strategy. Clearance operations can be complex to administer and may need to be spread over time, for example, to ensure proper identification of claimants. In addition, discounts could be considered—for example, in cases of subdued expectations of repayment, or in exceptional circumstances such as civil war, where governments have negotiated with creditors who may recognize the debt but will accept a discounted repayment.

Third, once prioritization is established, multiple options for liquidating the arrears should be considered. These options can include one or a combination of the following:

- *Cash payment.* To the extent resources are available (from donors, through fiscal adjustment, or from domestic sources), outright cash payment would be the simplest and most effective way to clear arrears. This is currently the case in Lesotho, where the authorities are clearing some arrears by making direct payments to suppliers from cash raised through additional domestic debt issuance.

- *Bilateral agreement with creditors.* The government can agree with creditors to restructure overdue claims, either by explicitly turning them into contractual debt or implicitly, by announcing a new repayment schedule, as was the case in post-conflict Liberia. The government should openly engage with creditors, share relevant information, and consider the claimants' preferences about repayment modalities. One option could consist of early repayment in exchange for a discount, giving firms in urgent need of cash an opportunity to obtain liquidity. Another option could consist of full repayment but over a longer period. As a third option, the government can encourage banks to pay borrowers in exchange for a claim against the state. Although such schemes may be complicated and not fully transparent, they could be designed to ease liquidity constraints for the private sector, reduce bank NPLs, and allow the state to defer payments, as evidenced in the case of Gabon and the Libreville Club arrangement.

- *Securitization.* A securitization of arrears would transform them directly into marketable government debt. Options could include the issuance of promissory notes, or Treasury bills and bonds, directly to creditors, as in the case of Madagascar in 2016. This way the government sets clear payment terms and gives creditors the option to access liquidity by selling the debt instruments. However, market liquidity for public debt in many countries in the region is structurally low, which could be exacerbated by issuing such securities in times of stress. This can lead to steep discounts on secondary markets.

- *Netting arrangements.* If a creditor also has liabilities to the government, for example tax obligations, both parties may agree to cancel their respective claims without actual payments. Although not advisable, such arrangements are popular between entities of the public sector, for example the central government and SOEs. However, such arrangements undermine transparency and accountability as not all payments and revenues are accounted for on a gross basis. Netting of tax liabilities could also undermine future tax compliance.

Prevention

Preventing the accumulation of arrears requires a combination of PFM reforms, sound fiscal policy, and political commitment. On the PFM side, credible budgeting, better commitment and expenditure controls, proper liquidity management, and enforcement for noncompliance by line ministries are key elements. PFM reforms are of paramount importance in cases where the

cause of arrears accumulation is structural. Fiscal authorities should regularly monitor arrears. Line ministry surveys should supplement the monitoring process in countries where procurement occurs outside official budgeting channels. Once arrears are formally recognized, debt offices should oversee their clearance. Other possible prevention measures include explicitly defining arrears through legislation and stipulating interest payments when commitments are officially in arrears.

Sound fiscal policy must accompany PFM reforms to safeguard against shocks. For example, countries that rely heavily on natural resources would be well served by strengthening domestic revenue mobilization and diversifying revenue sources. Building buffers in good times to tap during a downturn is another important measure. A fiscal rule could be used to instill countercyclical fiscal policy, build buffers, and resist political pressure for additional expenditures. A fiscal rule would also support budget credibility and could help maintain market access during downturns.

For countries with limited fiscal space and policy levers, the availability and timeliness of external financing from donors is often key to preventing arrears accumulation following severe exogenous shocks. This is particularly the case in countries in fragility (Central African Republic, Chad, Democratic Republic of the Congo), which usually have small buffers, limited capacity for policy adjustment, and weak PFM. In these cases, official external financing can help smooth the transition, especially in cases where the shock is temporary and PFM systems are being strengthened. However, official financing is often not provided with sufficient timeliness, and comes after a large stock of domestic arrears has already accumulated as a result of an exogenous shock and amid PFM weaknesses. For example, in Chad, following the sizable oil price shock in 2014–15, despite dramatic spending cuts of more than 10 percent of non-oil GDP, the country accumulated arrears exceeding 3 percent of GDP, as donor support was not available.

CONCLUSION

Using a newly constructed database on domestic arrears in sub-Saharan Africa, this chapter shows that financing spending through arrears is common, but not unique, to many countries in the region and can have adverse economic impacts. At the same time, arrears monitoring is weak, and many countries have unrecorded arrears, which can be an important source of contingent liabilities. The new data set built for this chapter using data from country authorities in the region is a starting point.

Domestic arrears accumulation is associated with weak fiscal institutions and PFM systems, but arrears accumulate faster in bad times. The accumulation of large stocks of arrears is often driven by exogenous factors such as adverse terms-of-trade shocks and political instability, which reduce fiscal space and limit policy levers. Indeed, the stock of domestic arrears increased in recent years, particularly in oil-exporting countries after the 2014–15 price shock. They also tend to be higher in countries with fixed exchange rate regimes and limited financing options, and in countries in fragile situations.

The analysis highlights the multifaceted and adverse effects of domestic arrears on the economy. These arrears are found to weaken private sector activity and undermine financial stability. Importantly, arrears reduce the ability of fiscal policy to support the economy, by reducing (even turning negative under some circumstances) the multiplier effect of government spending. Beyond the economic ramifications, evidence suggests that arrears weaken government credibility, as public institutions are considered less trustworthy, more prone to corruption, and less capable of delivering public services. The breadth and depth of the effect of arrears cast doubt on the merit of resorting to this form of financing.

When arrears exist, clearance efforts should top countries' policy agendas. This requires an independent and comprehensive verification of arrears, including careful checking of the validity of claims to address governance concerns. Next, a payment strategy should be developed based on an assessment of available financing, debt sustainability, and the macroeconomic impact of the clearance. If repayments must be sequenced, prioritization should be guided by the impact on macroeconomic stability and inclusive growth and should be transparently negotiated and communicated to the public.

Strong PFM systems are critical in preventing new arrears from accumulating. Sound fiscal policy needs to complement PFM reforms and safeguard against future shocks through building buffers, mobilizing revenue, and diversifying revenue sources.

Timely external financing is another important element. Fiscal adjustment in countries hit by severe exogenous shocks and with limited market access can reach its limits. This is particularly true for countries in fragile situations. In these cases, timely availability of external financing from donors following severe shocks, alongside efforts to strengthen PFM and fiscal institutions, is often key to preventing arrears accumulation.

Further improving our understanding of the causes and effects of arrears requires better data. Going forward, a concerted effort by country authorities, international organizations, and the wider public should focus on strengthening the monitoring and reporting of domestic arrears. Their macroeconomic impact is too important to be ignored.

Box 3.1. Domestic Arrears Data Collection Exercise

A key challenge in assessing domestic arrears is the lack of data, compounded by the absence of standardized definitions and coverage. This is often the result of weak fiscal accounting systems and irregular audits. As such, no existing cross-country database on domestic arrears in sub-Saharan Africa exists.

To generate a reliable data source for this chapter, a survey of arrears was conducted among IMF desk economists working on sub-Saharan Africa. Using data sourced from country authorities, the survey collected data and information on the size, composition, causes, and impact of arrears for the period 2005–18. Survey results, which revealed that stock data were more widely available, were supplemented with data from IMF staff reports and staff estimates. To bridge data gaps, country-specific information was also considered, and periods when arrears accumulated (as opposed to when arrears were reported) were identified. To better inform the gap-bridging exercise, additional sources were used. For example, text mining techniques were used to identify instances when domestic arrears are referenced in IMF staff reports. The data were cross-checked against information found in the public expenditure and financial accountability assessments of all sub-Saharan African countries since 2005.

Further work is still needed to build a comprehensive arrears database, based on more regular and methodical reporting and monitoring systems across the region.

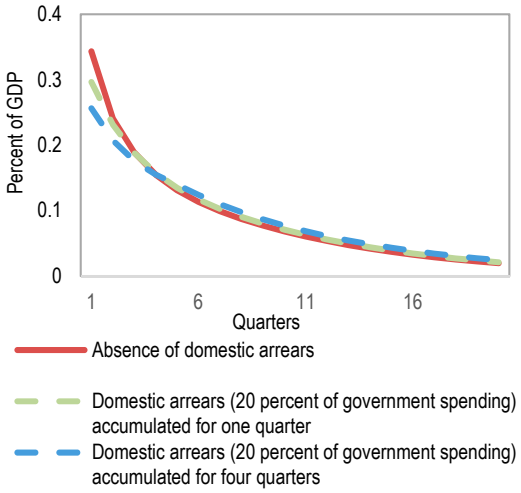
This box was prepared by Krisztina Fabo.

Box 3.2. Arrears Accumulation and Fiscal Multipliers

A dynamic stochastic general equilibrium (DSGE) model illustrates how financing spending through the use of arrears negatively affects the government's ability to use fiscal policy to stimulate economic activity.[1] The main assumptions of the model are as follows: (1) government spending is financed through taxes and arrears to private companies; (2) companies are liquidity constrained, have to borrow from banks to finance their activities and offset the impact of domestic arrears on their balance sheet, and use their capital as collateral for bank loans; (3) banks apply a deeper haircut on private companies' collateral whenever the government accumulates domestic arrears, which reduces their access to credit; and (4) the government clears arrears after one or more periods by paying the face value of arrears without compensating for inflation.

The model is calibrated using government spending equal to 25 percent of GDP and a stock of arrears of 5 percent of GDP. The impact on GDP of an unanticipated 1 percent of GDP increase in government expenditure is simulated.

Figure 3.2.1. Fiscal Multiplier, Percent of GDP



Source: IMF staff calculations.

This box was prepared by Moez Ben Hassine.

[1] See Annex 3.5 for more details on the DSGE model used in this section.

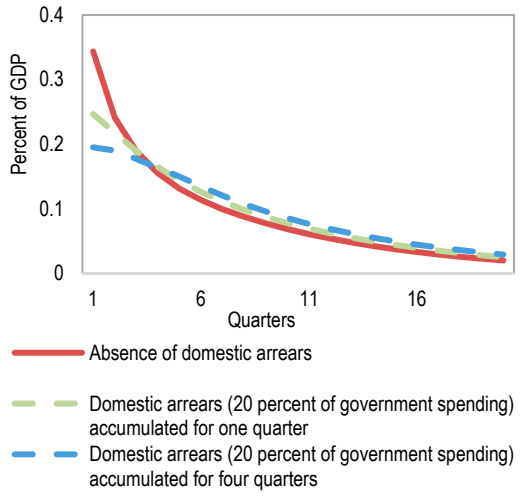
The model shows that the fiscal multiplier is lower when government expenditure is financed through domestic arrears accumulation; the longer the arrears remain outstanding, the smaller the fiscal multiplier (Figure 3.2.1). In fact, by accumulating arrears, the government reduces resources available in the private sector for production and investment, which diminishes the expansionary effect of government spending on aggregate demand. The impact of the accumulation period on the size of the fiscal multiplier declines over time.

The private sector's liquidity situation can amplify the impact of domestic arrears on the fiscal multiplier (Figure 3.2.2). In fact, if the private sector faces liquidity constraints and the banking sector is not able to accommodate the extra demand for credit due to domestic arrears accumulation—either for liquidity or solvency reasons—the private sector will have to significantly adjust its level of production and investment downward, which reduces the expansionary effect of government spending on aggregate demand.

The fiscal multiplier could be substantially lower and can even be negative if government expenditure is mostly financed through arrears accumulation for a long period and the private sector is under liquidity constraints (Figure 3.2.3). In this case, the negative impact of arrears on the private sector that is amplified by financial frictions will offset the expansionary effect of government expenditures. The results are consistent with the literature,[2] which stipulates that fiscal multipliers are dependent on the state of the economy, the presence of financial frictions, and the efficiency of public spending.

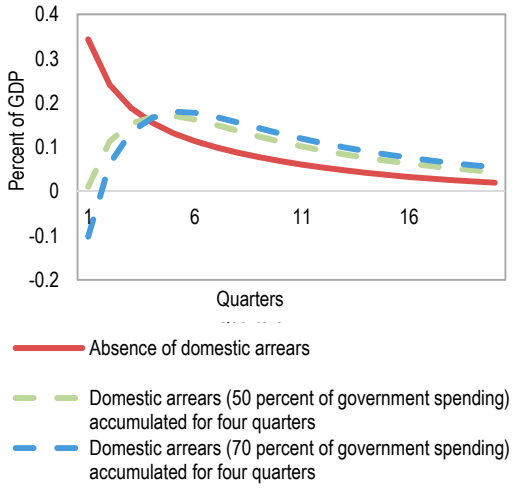
Although the parameters that generate the negative multiplier are generally extreme, they may be present in countries already suffering from some form of stress. For example, a country with high debt service and existing arrears may need to excessively use arrears to finance spending. This, coupled with the presence of a liquidity shortage in the banking sector, may make the spending contractionary.

Figure 3.2.2. Fiscal Multiplier Under Private Sector Liquidity Constraints



Source: IMF staff calculations.

Figure 3.2.3. Fiscal Multiplier Under Private Sector Liquidity Constraints and Long Arrears Repayment Period



Source: IMF staff calculations.

[2] Ilzetzki, Mendoza, and Vegh (2013), Auerbach and Gorodnichenko (2013a, 2013b), Blanchard and Leigh (2013), Batini and others (2014).

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