KENYA

SELECTED ISSUES

January 2024

This paper on Kenya was prepared by a staff team of the International Monetary Fund as background documentation for the periodic consultation with the member country. It is based on the information available at the time it was completed on December 22, 2023.

INTERNATIONAL MONETARY FUND

KENYA

SELECTED ISSUES

December 22, 2023

Approved By
African Department

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CONTENTS

TABLE

ANNEXES

QUANTIFYING EXCHANGE RATE PASSTHROUGH TO INFLATION_____**43**

FIGURES

ANNEX

BENCHMARKING TAX PERFORMANCE IN KENYA[1]

This note examines tax policy and administrative changes in Eastern African Community (EAC) countries with a view to benchmark Kenya's experience and draw lessons for future tax reforms. Using granular data from a new IMF database on tax measures announced during 1988-2022, it concludes that EAC policymakers frequently changed their tax system and administrations by announcing tax packages that typically consisted of measures to narrow the tax base (e.g., exemptions, deductions) and strengthen tax administrative practices (e.g., electronic payments, tax compliance strategy). Kenya appeared to be one of the EAC countries that most frequently announced and introduced such changes, which might have played a significant role in explaining the reduction in the tax-to-GDP ratio experienced by the country since 2014. The conclusions of this note are subject to caveats as the frequency of tax measures is not an indicator of the actual revenue impact of such measures. Looking at the frequency of changes, however, can help identify reform episodes providing a sense of their duration and comprehensiveness.

A. Anatomy of Tax Policy and Administrative Changes in EAC Countries

1.   Kenya's tax-to-GDP ratio has been on a downward trajectory over the past decade (Figure 1). After reaching a peak at 15.5 percent of GDP in 2014, tax revenues steadily fell to 13.1 percent of GDP in 2020 mainly reflecting the decline in income taxes from 8.0 percent of GDP in 2014 to 6.5 percent of GDP in 2020 (Figure 2). During the pandemic (2020–22) the tax ratio initially fell further—including due to the introduction of tax breaks to cushion the impact of the shock on the economy—and then started rebounding as the authorities broadened the tax base consistent with the objectives of the current EFF/ECF arrangements with Kenya (approved in April 2021) and reversed the tax-related COVID-19 measures on January 1, 2022. The tax-to-GDP ratio is expected to reach 14.4 percent of GDP in 2023 as the authorities implement their ambitious 2023 Finance Act, which introduces about 1.5 percent of GDP in new tax policy and administrative measures (IMF Country Report, CR/2023/266), together with additional revenue measures (SR¶17).

2.   Kenya's tax performance contrasts with that of most countries in the Eastern African Community (EAC).[2] Kenya is the only EAC country that experienced a protracted fall in its tax-to-GDP ratio over the last decade (Figure 3).[3] Except for South Sudan and the Democratic Republic of Congo (oil exporters), the other EAC countries have shown either increasing or relatively stable tax-to-GDP ratios over the same period. While remaining above the EAC average, Kenya's tax-to-GDP ratio has moved from being the highest among the EAC countries in 2012–15 (average values) to being significantly below that of Rwanda and Burundi in recent years.

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[1] Prepared by Valerio Crispolti (AFR), with inputs from A. Cebreiro Gomez (FAD).

[2] EAC countries are Kenya, Uganda, Tanzania, Rwanda, Burundi, the Democratic Republic of Congo, and South Sudan. Somalia became the eight EAC member in November 2023 and is not included in this study.

[3] A recent IMF technical report looking at the drivers of Kenya's tax collection in recent decades concluded that tax performance reflected policies that led to an erosion of the tax base and an increasing contribution to growth of sectors lightly taxed (e.g., agriculture, infrastructure).

Figure 1. Kenya: Tax-to-GDP Ratio
(In percent of GDP)
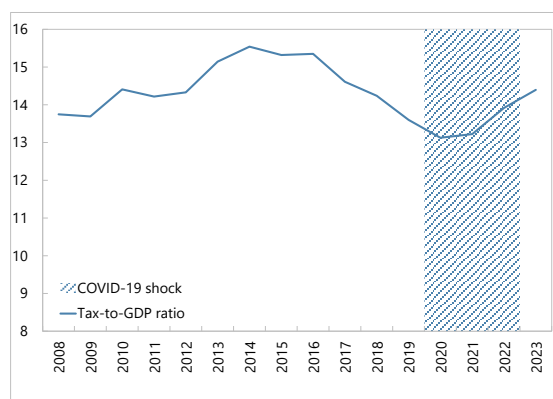
Source: IMF, *World Economic Outlook* database.

Figure 2. Kenya: Composition of Tax-to-GDP Ratio
(In percent of GDP)
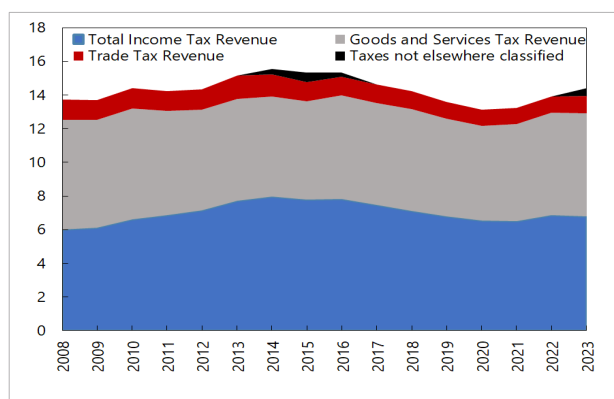
Source: IMF, *World Economic Outlook* database.

Figure 3. EAC Countries: Tax-to-GDP Ratios
(In percent of GDP; average values)
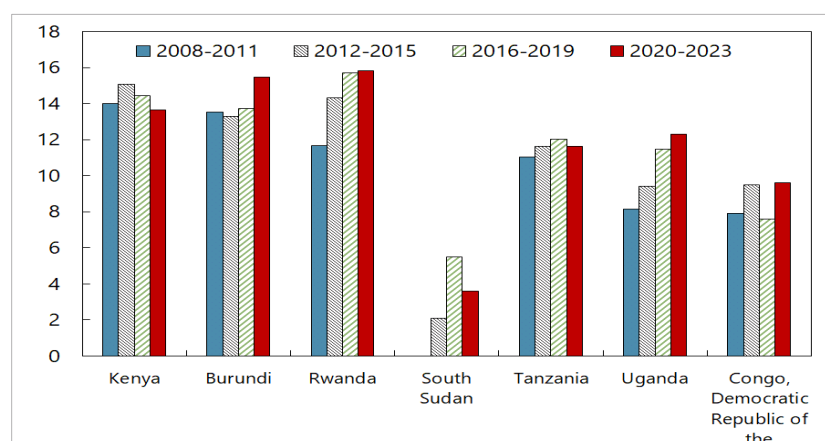
Source: IMF, *World Economic Outlook* database.

3.   A recurring question is whether Kenya's tax performance has reflected fundamentally different tax policy decisions compared to those in other EAC economies. While tax outturns are affected by factors other than tax decisions such as macro conditions (e.g., growth, inflation, international prices) and behavioral responses (e.g., anticipation effects), tax decisions are under the control of policymakers and may be one of the sources of changes in the macro and behavioral conditions. There is therefore merit in looking at the type of tax decisions announced and implemented to get a sense of what countries have done and whether the nature of such changes varied systematically across EAC economies. Tax decisions have direct effects on collection through changes in the tax rates, non-rate aspects of the tax defining the tax base (e.g., exemptions), and administrative procedures (e.g., withholding procedures).[4] Tax decisions affect indirectly collection

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[4] Tax decisions have also indirect effects on collection through their impact on compliance because these decisions may entail significant adjustment costs at the level of tax administration (e.g., enforcement and administration costs) and of the taxpayers (e.g., compliance costs).

through their effect on economic activity and demand (e.g., reducing disposable income, introducing incentives to pay taxes).

4.   A new IMF database on tax policy and administrative changes in EAC economies can shed light on the nature of tax changes in EAC countries. The database provides granular information on different dimensions of tax policy and administrative changes announced and adopted in EAC economies over the period 1988–2022 (Table A.1). The source of information is the news clips prepared by tax experts from the International Bureau of Fiscal Documentation.[5] The innovation of the database is that it systematically documents the direction of changes (i.e., INCREASE/DECREASE) in the tax policy (RATE, BASE) and administrative practices (ADMIN) of seven different taxes-personal income tax (PIT), corporate income tax (CIT), value added and sale taxes (VAT), social security contributions and payroll taxes (SSC), excise (EXE), trade taxes (TRADE), and property taxes (PRO). For each tax change, the database also provides information on the timing of the change (announcement and implementation dates, i.e., mm/dd/yyyy), the type of change (i.e., tax rate, tax base, administrative practice), the category of each type of change (e.g., top rate, exemption, tax compliance), and whether the tax change is announced as part of a broader package of tax policy and administrative measures (Table A.2–A.3).[6] Finally, the database provides quantitative information on the announced size of most rate changes, which is generally expressed in percentage points.

5.   EAC countries changed frequently their tax policies and administration, particularly to narrow the tax base and strengthen administrative practices.[7] During 1988–2022, they announced 1,845 changes equivalent to an average of about 13 tax policy and administrative changes in a year (Table 1, Table A.3). The majority of these changes consisted of tax base changes (about 43 percent of total identified changes), followed by tax administrative changes (about 36 percent) and tax rate changes. The direction of these changes generally varied with the type of change. Typically, tax base changes consisted of base-narrowing measures (about 60 percent of total BASE changes), while administrative changes were overwhelmingly intended to strengthen current practices (80 percent of total ADMIN changes). In the sample, announcements of tax rate hikes were equally frequent than rate reductions. Tax policy measures (i.e., changes in tax rates and/or tax bases) represented about 65 percent of the total changes and typically entailed a reduction in the taxpayers' liabilities (56 percent of total tax policy changes). This suggests that the average EAC country in the sample generally introduced a combination of measures to realign tax

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[5] The news clips are available to all IBFD subscribers and can be accessed through the IBFD website: https://research.ibfd.org/#/.

[6] The database does not include South Sudan due to data limitations and has very limited data coverage for Burundi (2012–17). Each tax policy and administrative change is classified according to different categories which are listed in Table A.3.

[7] Changes to strengthen administrative practices mainly reflect measures to improve tax compliance. Administrative measures are categorized according to main performance areas of TADAT—including areas of include the integrity taxpayer base; filing tax declarations; payments of taxes; risk management; dispute resolution; revenue management; and other practices.

rates across different taxes (e.g., unification of excise/custom rates),[8] and allow some tax base-narrowing (e.g., extension of exemptions/deductions) while improving tax administrative practices.

6.   Aggregate information on tax measures however masks significant cross-country heterogeneity (Table 1). During 1988–2022, policymakers in Kenya were significantly more active than in other countries, announcing 594 tax policy and administrative changes, equivalent to an average of about 18 changes in a year (Table A.4). By contrast the least active countries were Burundi and Rwanda with respectively 107 and 129 changes, equivalent on average to 9 changes per year.[9] While in all EAC economies (except Rwanda and Uganda) tax changes primarily consisted of base changes, Kenya was the only country in the sample where base-narrowing measures were announced more frequently than measures to strengthen administrative practices (31 versus 26 percent of total tax measures announced in the country). Kenya was also the only country in the sample where the frequency of tax policy changes (either tax rate or tax base measures) introducing a reduction in taxpayers' liabilities (e.g., rate cuts, increase in exemptions) exceeded 60 percent of total tax policy changes (52 percent for EAC excluding Kenya). While the frequency of tax measures is not an indicator of the actual revenue impact of a tax measure (i.e., it does not carry information on the size of the measure), it does provide an indication of the likely direction of change in tax collection if specific measures are sustained over time (i.e., frequent introduction of base-narrowing measures would result in an erosion of the tax base).

Table 1. EAC Countries: Frequency of Tax Policy and Administrative Changes in Their Economies Over 1988–2022

Country	Type of change	Decrease/ loosen	Increase/ strengthen	Total	Decrease /loosen	Increase/ strengthen	Total
		frequency			*share of total*		
Kenya	ADMIN	39	157	**196**	5.9	23.9	**29.9**
	BASE	185	85	**270**	28.2	13.0	**41.2**
	RATE	63	65	**128**	9.6	9.9	**19.5**
	Total	287	307	**594**	43.8	46.8	**90.5**
Burundi	ADMIN		33	**33**	0.0	5.0	**5.0**
	BASE	28	34	**62**	4.3	5.2	**9.5**
	RATE	4	8	**12**	0.6	1.2	**1.8**
	Total	32	75	**107**	4.9	11.4	**16.3**
Congo, Democratic Republic of	ADMIN	11	43	**54**	1.7	6.6	**8.2**
	BASE	25	35	**60**	3.8	5.3	**9.1**
	RATE	7	10	**17**	1.1	1.5	**2.6**
	Total	43	88	**131**	6.6	13.4	**20.0**
Rwanda	ADMIN	18	37	**55**	2.7	5.6	**8.4**
	BASE	28	18	**46**	4.3	2.7	**7.0**
	RATE	15	13	**28**	2.3	2.0	**4.3**
	Total	61	68	**129**	9.3	10.4	**19.7**
Tanzania	ADMIN	32	101	**133**	4.9	15.4	**20.3**
	BASE	97	77	**174**	14.8	11.7	**26.5**
	RATE	66	58	**124**	10.1	8.8	**18.9**
	Total	195	236	**431**	29.7	36.0	**65.7**
Uganda	ADMIN	31	154	**185**	4.7	23.5	**28.2**
	BASE	97	79	**176**	14.8	12.0	**26.8**
	RATE	47	45	**92**	7.2	6.9	**14.0**
	Total	175	278	**453**	26.7	42.4	**69.1**
EAC total	ADMIN	131	525	**656**	7.1	28.5	**35.6**
	BASE	460	328	**788**	24.9	17.8	**42.7**
	RATE	202	199	**401**	10.9	10.8	**21.7**
	Total	793	1,052	**1,845**	43.0	57.0	**100.0**

Source: IMF calculations on news clips from the International Bureau of Fiscal Documentation (IBFD).

7.   EAC policymakers frequently narrowed the tax bases of CIT and VAT and raised excise rates, while strengthening the administration of these taxes (Table 2). The most frequent changes were to CIT (24 percent of total tax measures) followed by VAT (20 percent) and excise (16 percent). About half of the CIT and VAT measures consisted of tax base changes, while

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[8] This might, for example, reflect the intention to improve the fairness of the tax system or limit tax elusion.

[9] The low frequency of tax changes in Burundi also reflects the limited data coverage in the database (Table A.1).

49 percent of excise measures entailed rate changes. Measures to change the administration of CIT and VAT accounted for little more than ⅓ of total changes, whereas changes to the administration of excise were relatively infrequent (13 percent of total excise changes). Base narrowing measures accounted for the bulk of CIT and VAT base changes (60 and 68 percent, respectively). By contrast, excise rate measures were predominantly hikes in the specific or ad-valorem rates (75 percent of total excise rate changes). Measures to strengthen administrative practices were the most common irrespective from whether CIT, VAT, and excise is considered (average frequency above 70 percent of total respective administrative changes).

Table 2. Kenya: Frequency of Tax Policy and Administrative Changes by Tax Type Over 1988–2022[1]

| Tax type/Change type/Category | Total changes | | | | | | | | |
| | | | | Increase | | | Decrease | | |
	Number of observations	Count of country years	Average number of measures	Number of observations	Count of country years	Average number of measures	Number of observations	Count of country years	Average number of measures
PIT	**270**	**97**	**2.8**	**116**	**66**	**1.8**	**154**	**77**	**2.0**
RATE	45	35	1.3	15	14	1.1	30	24	1.3
BASE	147	74	2.0	47	36	1.3	100	60	1.7
ADMIN	78	48	1.6	54	37	1.5	24	22	1.1
CIT	**442**	**111**	**4.0**	**212**	**78**	**2.7**	**230**	**93**	**2.5**
RATE	55	44	1.3	10	8	1.3	45	41	1.1
BASE	233	88	2.6	95	56	1.7	138	67	2.1
ADMIN	154	78	2.0	107	63	1.7	47	38	1.2
VAT	**362**	**111**	**3.3**	**186**	**85**	**2.2**	**176**	**85**	**2.1**
RATE	57	45	1.3	20	17	1.2	37	34	1.1
BASE	181	89	2.0	58	49	1.2	123	75	1.6
ADMIN	124	61	2.0	108	57	1.9	16	10	1.6
EXE	**303**	**92**	**3.3**	**220**	**83**	**2.7**	**83**	**53**	**1.6**
RATE	145	69	2.1	108	56	1.9	37	29	1.3
BASE	120	60	2.0	77	49	1.6	43	36	1.2
ADMIN	38	25	1.5	35	23	1.5	3	3	1.0
SSC	**22**	**14**	**1.6**	**19**	**13**	**1.5**	**3**	**3**	**1.0**
RATE	6	4	1.5	5	3	1.7	1	1	1.0
BASE	7	4	1.8	6	4	1.5	1	1	1.0
ADMIN	9	7	1.3	8	7	1.1	1	1	1.0
PRO	**14**	**9**	**1.6**	**8**	**7**	**1.1**	**6**	**3**	**2.0**
RATE	3	2	1.5	1	1	1.0	2	2	1.0
BASE	4	4	1.0	2	2	1.0	2	2	1.0
ADMIN	7	6	1.2	5	5	1.0	2	2	1.0
TRADE	**246**	**98**	**2.5**	**140**	**64**	**2.2**	**106**	**69**	**1.5**
RATE	90	62	1.5	40	35	1.1	50	48	1.0
BASE	96	68	1.4	43	33	1.3	53	43	1.2
ADMIN	60	28	2.1	57	25	2.3	3	3	1.0
TAX	**186**	**59**	**3.2**	**151**	**53**	**2.8**	**35**	**21**	**1.7**
ADMIN	186	59	3.2	151	53	2.8	35	21	1.7
TOTAL TAXES	**1,845**	**138**	**13.4**	**1,052**	**131**	**8.0**	**793**	**130**	**6.1**

[1] The category TAX refers to only administrative changes that affect the ensemble of taxes—e.g., measures to increase tax compliance.

Source: IMF, staff calculations on news clips from the International Bureau of Fiscal Documentation (IBFD).

8.   However, the distribution of tax changes varied significantly across the countries. Figure 4 shows that, besides announcing the most changes to CIT and VAT in the sample, Kenya was also the most active country in announcing changes to PIT, TRADE taxes (e.g., import duties, export taxes), and social security contributions (SSC). Most of these changes consisted of BASE changes. By contrast, Uganda was the country that announced the most changes to the EXCISE along with measures to adjust the administration of the ensemble of taxes (TAX). Unlike in other countries, in Uganda EXCISE measures appeared to have almost equally consisted of tax RATE and BASE changes.

EAC countries showed differences in announcing changes to increase/decrease tax rates, broaden/narrow tax bases, and strengthen/relax administrative practices (Figure 5). Kenya was the country where the total frequency of tax measures to narrow the tax base of PIT, CIT, VAT, and TRADE taxes significantly exceeded the frequency of measures to broaden the tax base of the same taxes (net frequency). On the other hand, Tanzania was the country where the net frequency of EXCISE measures was most positive, and that of RATE changes was most negative for PIT, CIT, VAT, and TRADE. At the same time, Kenya and Uganda were the countries that announced more often measures to strengthen tax administrative procedures related to most taxes. Barring the abovementioned caveats on the limitations of frequency indicators, Figure 4 seems to suggest that Kenya, while sharing similarities with most EAC countries, it presented a much more pronounced tendency than that of other economies in the sample to announce measures to narrow the tax base of main income taxes, VAT, and TRADE taxes.

Figure 4. EAC Countries: Frequency of Tax Policy and Administrative Changes by Tax Type and Country Over 1988–2022 [1/]

[1/] The category TAX refers to only administrative changes that affect the ensemble of taxes—e.g., measures to increase tax compliance.

Source: IMF, staff calculations on news clips from the International Bureau of Fiscal Documentation (IBFD).

9.   **Most tax changes were announced as part of a broad package of measures that typically included both tax policy and administrative changes.** During 1988–2022, EAC countries announced virtually all tax changes (94 percent of total) as part of a broad package of tax measures (Figure 6)-mostly around the submission of the Budget Law to Parliament. While varying across years and countries, the scope of the average tax package was typically broad as almost 2 out of three packages in the sample included at least one tax policy measure (tax rate or/and tax base) and one administrative change (Figure 7). Only in 25 percent of the cases were tax rates, tax bases, or administrative measures announced alone. This suggests that any assessment of the impact of tax measures on tax collection in EAC countries that is based only on an individual tax change (e.g., change in the top rate of PIT) will likely be severely biased as policymakers have typically changed also other tax rates and/or tax bases as well as administrative practices.

Figure 5. EAC Countries: Net Frequency of Tax Policy and Administrative Changes by Tax Type and Country Over 1988–2022 [1]

(Net frequency = frequency of tax policy and administrative increases-frequency of decreases)

[1] The category TAX refers to only administrative changes that affect the ensemble of taxes—e.g., measures to increase tax compliance.

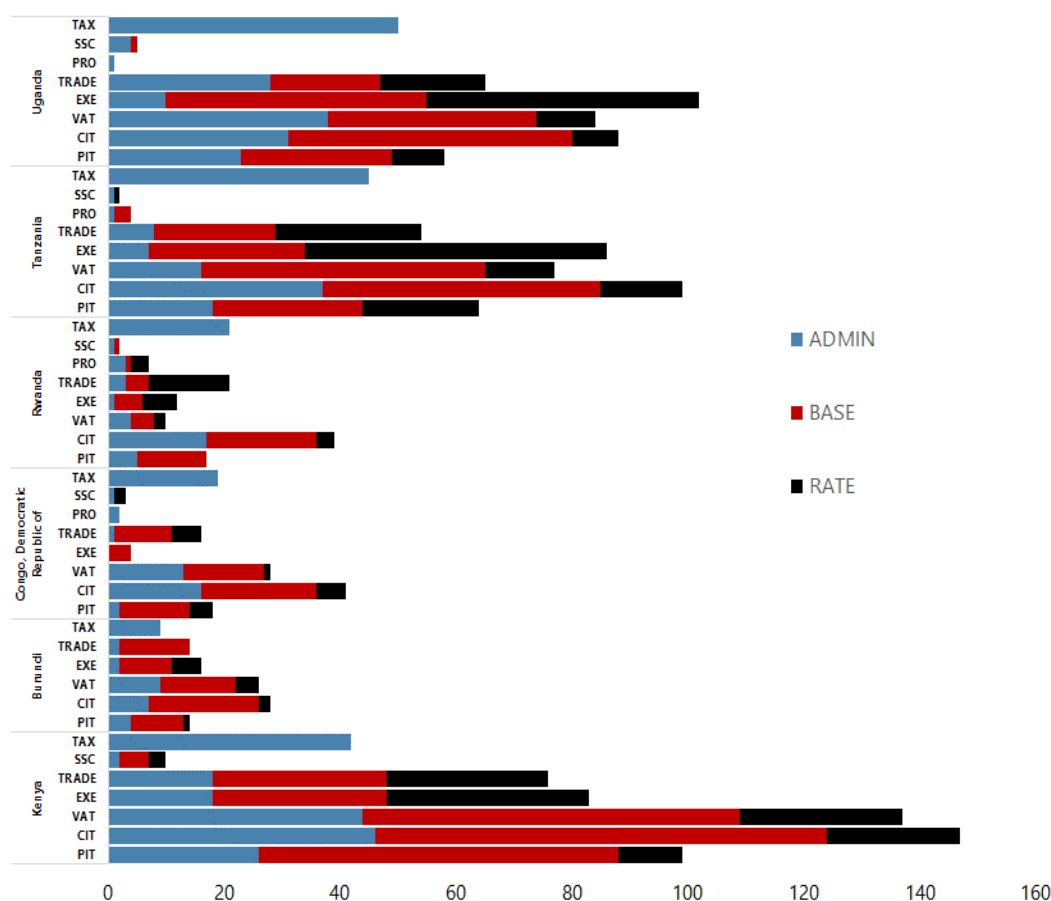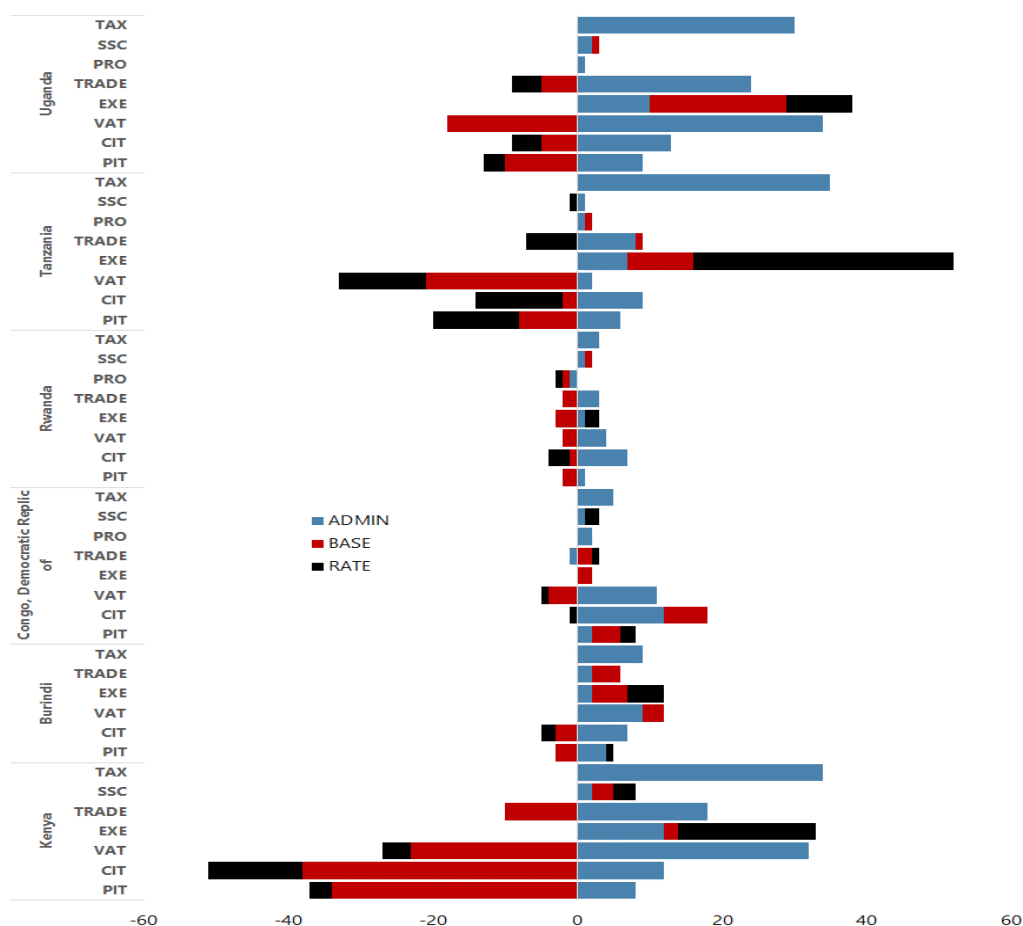Source: IMF, staff calculations on news clips from the International Bureau of Fiscal Documentation (IBFD).

Figure 6. Kenya: Share of Tax Measures in a Package	Figure 7. Kenya: Composition of Tax Packages
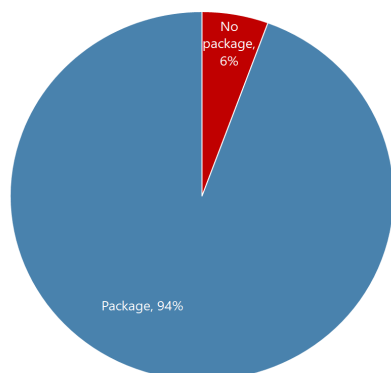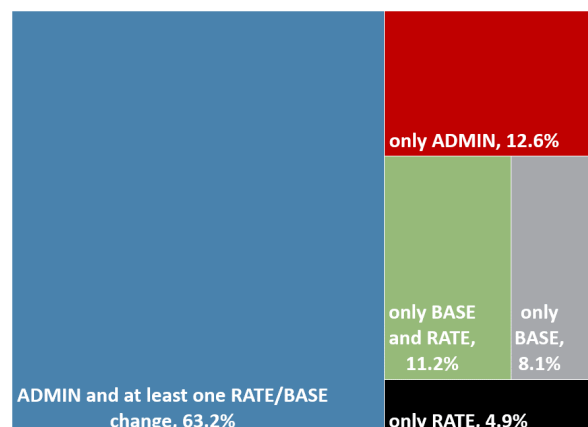
Source: IMF, staff calculations on news clips from the International Bureau of Fiscal Documentation (IBFD).

Source: IMF, staff calculations on news clips from the International Bureau of Fiscal Documentation (IBFD).

11.   Tax packages generally entailed measures introducing changes in opposite directions, suggesting the frequent use of offsets. Figure 8 presents the co-occurrence of increases and decreases in tax policy (i.e., increases/decreases in tax rates, broadening/narrowing in tax base) and administrative procedures (i.e., strengthening/loosening in tax administrative practices) expressed in number of packages with specific characteristics. In the sample, tax measures aimed at lowering the tax rate and/or narrowing the tax base and/or loosening tax administrative practices are more frequent when accompanied by at least one change to increase a tax rate and/or broaden a tax base and/or strengthen a tax administrative procedure (88 percent of total tax packages) than in cases where no such increases and/or broadening and/or strengthening took place (12 percent of total packages). This suggests that policymakers have introduced offsets to possibly achieve different objectives—including related to the tax system's adequacy, equity, simplicity, transparency, and administrative ease. At the same time, EAC countries have typically announced packages of only administrative measures to strengthen existing practices more frequently without any offsetting measures. This seems to confirm the importance of considering simultaneous changes in different aspect of tax policy and administrative procedures when assessing the impact of a specific tax measure.

12.   The frequency of tax policy and administrative changes varied over time, possibly reflecting waves of reforms. Policymakers in EAC countries appeared to have become more active in changing their taxes and/or tax administrations after the Global Financial Crisis (Figure 9). During the pandemic (2020–22), most of them further intensified their interventions to initially cushion the vulnerable households and businesses from the impact of the COVID-19 shock and, in some cases, to later repeal previously introduced tax changes (e.g., Kenya). Among the most active countries in the sample, Kenya featured the highest number of announcements of tax changes for many years after 2014, suggesting the importance of investigating on the nature of such announcements (i.e., increases or decreases in taxpayer liabilities) and their possible correlation with the downward trend in the tax-to-GDP ratio experienced by the country in 2015–22 (Figure 1). The frequency of tax

changes increased significantly in Uganda as well from 2017 onwards, but in this case the tax-to-GDP appeared to improve significantly (Figure 1).

Figure 8. Kenya: Co-occurrence of Changes to Tax Policy and Administrative Practices in Reform Packages by Type of Change Over 1988–2022
(Frequency of tax packages)
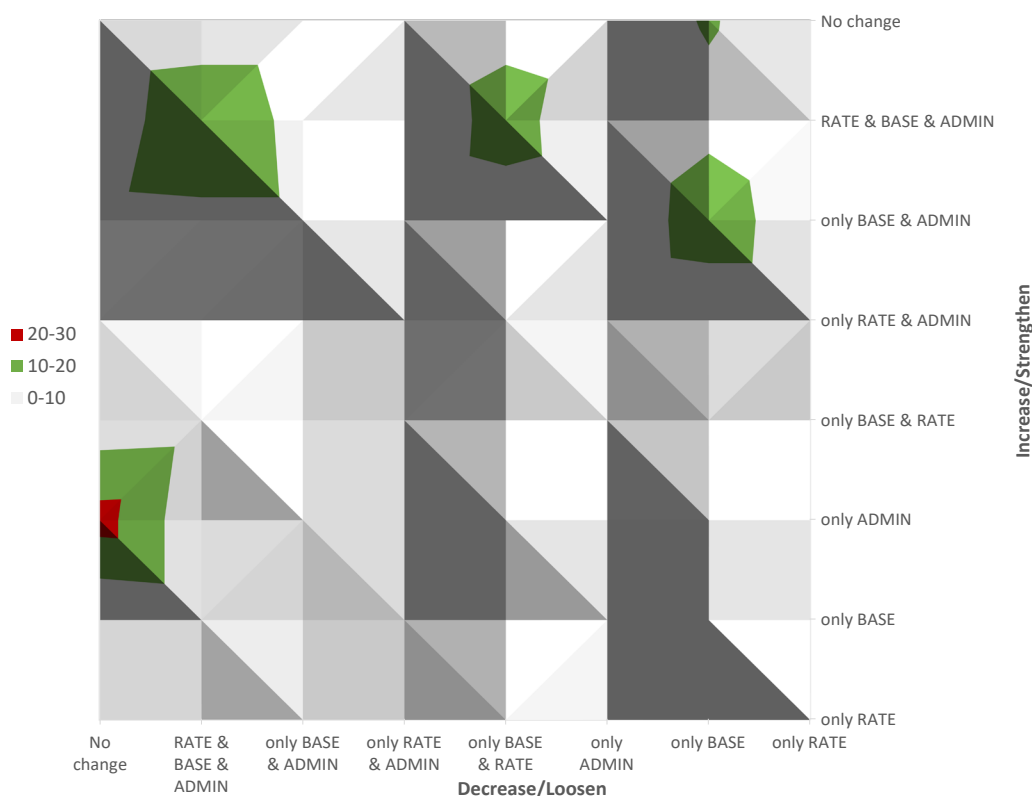
Source: IMF, staff calculations on news clips from the International Bureau of Fiscal Documentation (IBFD).

13.   EAC countries generally announced more measures to strengthen than relax taxes covered by program conditionality with additional changes in other taxes.[10] Importantly, a negative net frequency does not necessarily imply that the overall revenue impact of the announced tax changes is negative. This conclusion could only be reached after assessing the.

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[10] For example, in Kenya this has been the case with the introduction of a minimum alternative tax and a digital tax in January 2021 (two base-broadening measures which were discussed in the context of program negotiations for the current EFF/ECF arrangements, see (CR/21/72). After approval of the EFF/ECF program on April 2, 2021, the authorities fine-tuned the design of these measures by introducing exemptions from the minimum alternative tax for an air company with a government share above 45 percent and its subsidiaries, and by limiting the application of the digital tax to non-residents. These measures are captured in the database as CIT base-narrowing measures. Another example is the adoption of the VAT base broadening measures in early 2021 (ahead of program approval), which were accompanied in January 2022 by the introduction of several exemptions for medical supplies amid a third wave of COIVID-19. These measures are also classified as base-narrowing measures in the database.

Figure 9. EAC Countries: Frequency of Tax Policy and Administrative Changes by Type of Change Over 1988–2022

(Darkest shade =frequency above 90th percentile; lightest shade frequency below 10th percentile)
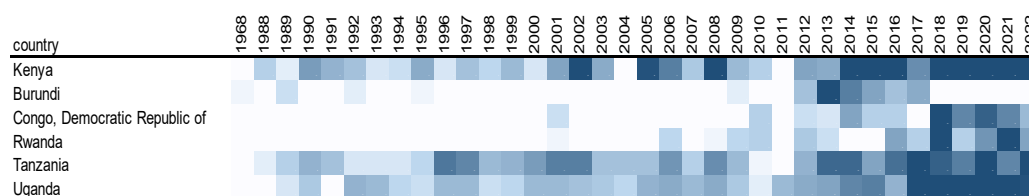
Source: IMF, staff calculations on news clips from the International Bureau of Fiscal Documentation (IBFD).

Figure 10. EAC Countries: Net Frequency of Tax Policy and Administrative Changes by Type of Change Over 1988–2022

(Darkest green shade =net positive frequency above the 90th percentile; darkest read shade = net negative frequency below 10th percentile; crossed areas indicate presence of an IMF program)
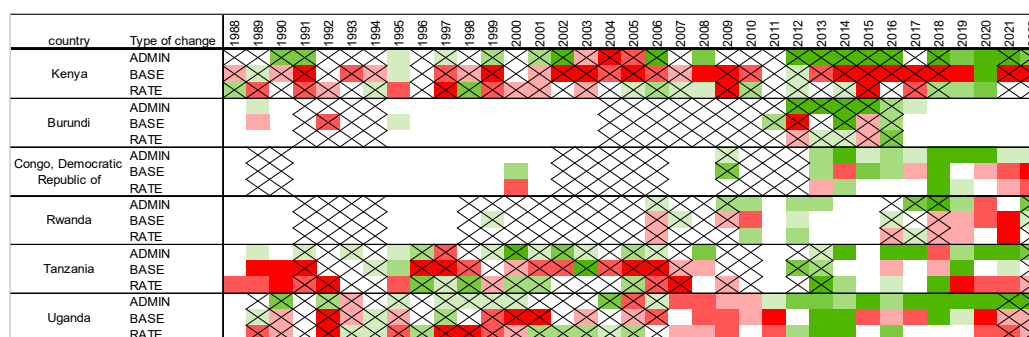
Source: IMF calculations on news clips from the International Bureau of Fiscal Documentation (IBFD).

14.   Kenya showed a co-occurrence of positive net frequency for changes to tax policy (i.e., tax rates and/or tax bases) and administrative very infrequently (Figure 11, Quadrant II). Except in 2012 and 2020, Kenya generally showed a combination of more measures to strengthen tax administrative practices (positive net frequency) and more measures to reduce tax rates and/or narrow tax bases (a negative net frequency of tax policy measures) since 2009 (Figure 11, Quadrant III). By contrast, Uganda showed at least six years of co-occurrences of more measures to strengthen tax administrative procedures and raise tax policy over the same period (positive net frequencies Figure A.2). This suggest the possibility that the different tax performance in Kenya and Uganda observed in Figure 3 might be related to Kenya's more pronounced tendency to introduce more frequently tax policy measures aimed at reducing tax rates and tax bases, which might have eventually undermined the authorities' contextual efforts to strengthen tax administrative practices.

B.   Conclusion

15.   A new IMF database suggests that during 1988–2022 EAC countries have frequently announced measures to change their tax policy and administrative procedures. Against this backdrop, Kenya is the only country among the EAC economies that experienced a protracted

reduction of the tax-to-GDP ratio from 2014. Evidence from the new IMF database seems to suggest that this trend may reflect the tendency of Kenyan policymakers to announce more frequently than other EAC countries tax policy measures aimed at reducing the tax rates and/or narrowing the tax bases, while strengthening tax administrative practices like other countries in the sample. Looking ahead, Kenya needs to strengthen tax collection consistent with the authorities' objectives of sustained increase in tax revenues to meet their development agenda. In this regard, a key milestone is the timely adoption of Kenya's first Medium-Term Revenue Strategy (SR¶17), developed with IMF support. This Strategy aims to increase revenues by 5 percentage points of GDP by FY2026/27 through measures that broaden the tax base and strengthen tax compliance.

Figure 11. Kenya: Net Frequency of Tax Policy and Administrative Changes Over 2009–22

(Net frequency= frequency of announcement of tax policy/administrative increases-frequency of announcements of tax policy/administrative decreases)
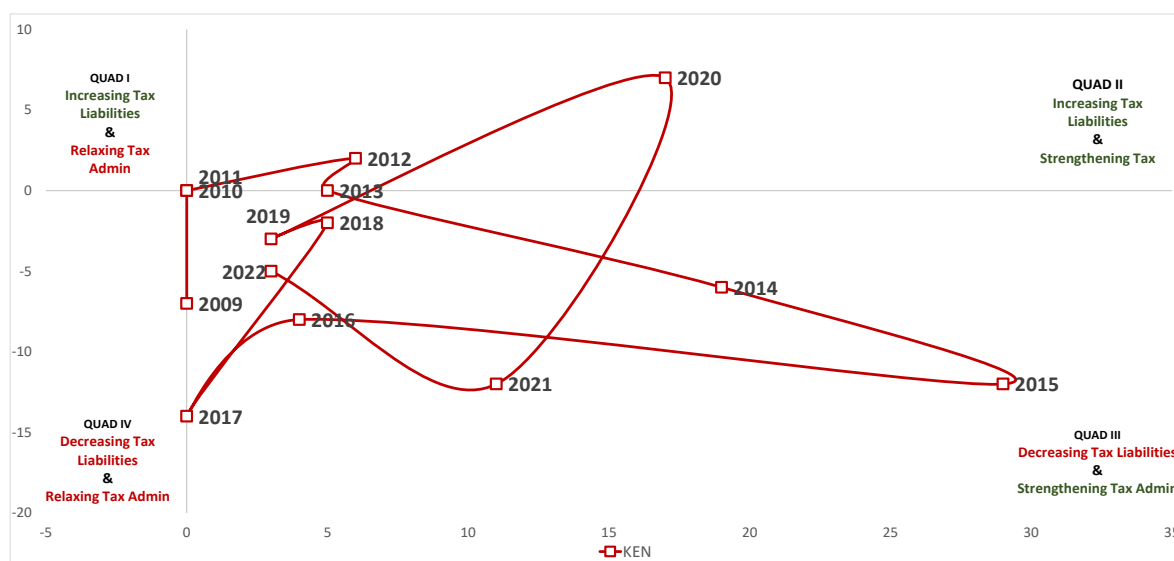
Source: IMF, staff calculations on news clips from the International Bureau of Fiscal Documentation (IBFD).

Appendix I. Tables and Figures

Appendix I. Table 1. EAC Countries: Data Coverage by Country

Country	Data Coverage
Kenya	1988-2022
Burundi	1989-1995 ; 2004-2017
Congo, Democratic Republic of	2001 ; 2009-2022
Rwanda	1999-2000 ; 2007-2022
Tanzania	1988-2022
Uganda	1988-2022

Source: News clips from the International Bureau of Fiscal Documentation (IBFD).

Appendix I. Table 2. EAC Countries: Database in a Snapshot

country name	package/no package	major/minor	CIT	PIT	VAT	EXE	TRADE	SSC	PRO	TAX	Total changes
Kenya	Not in a tax package	Major	6	2	6	2	3	0	0	3	22
		Minor	1	0	1	0	1	1	0	0	4
	In a tax package	Major	114	84	94	56	66	9	0	32	455
		Minor	26	13	36	25	6	0	0	7	113
	Total	Total	147	99	137	83	76	10	0	42	594
Burundi	Not in a tax package	Major	0	0	1	0	1	0	0	3	5
		Minor	1	0	1	1	0	0	0	0	3
	In a tax package	Major	19	7	15	9	11	0	0	5	66
		Minor	8	7	9	6	2	0	0	1	33
	Total	Total	28	14	26	16	14	0	0	9	107
Congo, Democratic Republic of	Not in a tax package	Major	7	0	5	0	0	1	2	4	19
		Minor	2	0	2	0	0	0	0	1	5
	In a tax package	Major	27	12	11	1	11	0	0	6	68
		Minor	5	6	10	3	5	2	0	8	39
	Total	Total	41	18	28	4	16	3	2	19	131
Rwanda	Not in a tax package	Major	6	0	3	0	2	0	0	5	16
		Minor	1	0	0	0	1	1	0	3	6
	In a tax package	Major	27	14	3	11	12	1	5	11	84
		Minor	5	3	4	1	6	0	2	2	23
	Total	Total	39	17	10	12	21	2	7	21	129
Tanzania	Not in a tax package	Major	0	0	1	1	2	0	0	5	9
		Minor	0	1	2	1	0	0	0	2	6
	In a tax package	Major	75	52	38	52	47	2	4	25	295
		Minor	24	11	36	32	5	0	0	13	121
	Total	Total	99	64	77	86	54	2	4	45	431
Uganda	Not in a tax package	Major	2	0	0	0	2	0	0	1	5
		Minor	0	0	1	0	1	0	0	1	3
	In a tax package	Major	65	48	60	70	55	5	0	40	343
		Minor	21	10	23	32	7	0	1	8	102
	Total	Total	88	58	84	102	65	5	1	50	453
EAC total	**Not in a tax package**	**Major**	**21**	**2**	**16**	**3**	**10**	**1**	**2**	**21**	**76**
		Minor	**5**	**1**	**7**	**2**	**3**	**2**	**0**	**7**	**27**
	In a tax package	**Major**	**327**	**217**	**221**	**199**	**202**	**17**	**9**	**119**	**1,311**
		Minor	**89**	**50**	**118**	**99**	**31**	**2**	**3**	**39**	**431**
	Total	**Total**	**442**	**270**	**362**	**303**	**246**	**22**	**14**	**186**	**1,845**

Source: News clips from the International Bureau of Fiscal Documentation (IBFD).

Appendix I. Figure 1. EAC Countries: Net Frequency of Tax and Administrative Changes by Type of Tax and Presence of a Financial Arrangement with the IMF over 1988–2022

(Darkest green shade =net positive frequency above the 90th percentile; darkest read shade = net negative frequency below 10th percentile)

Country	Program status	Reform	PIT	CIT	VAT	EXE	TRADE	PRO	SSC	TAX
Kenya	No IMF program	ADMIN								
		BASE								
		RATE								
	IMF program	ADMIN								
		BASE								
		RATE								
Burundi	No IMF program	ADMIN								
		BASE								
		RATE								
	IMF program	ADMIN								
		BASE								
		RATE								
Congo, Democratic Republic of	No IMF program	ADMIN								
		BASE								
		RATE								
	IMF program	ADMIN								
		BASE								
		RATE								
Rwanda	No IMF program	ADMIN								
		BASE								
		RATE								
	IMF program	ADMIN								
		BASE								
		RATE								
Tanzania	No IMF program	ADMIN								
		BASE								
		RATE								
	IMF program	ADMIN								
		BASE								
		RATE								
Uganda	No IMF program	ADMIN								
		BASE								
		RATE								
	IMF program	ADMIN								
		BASE								
		RATE								

Source: IMF calculations on news clips from the International Bureau of Fiscal Documentation (IBFD).

Appendix I. Figure 2. Uganda: Net Frequency of Tax Policy and Administrative Changes Over 2009–2022

(Net frequency= frequency of announcement of tax policy/administrative increases-frequency of announcements of tax policy/administrative decreases)
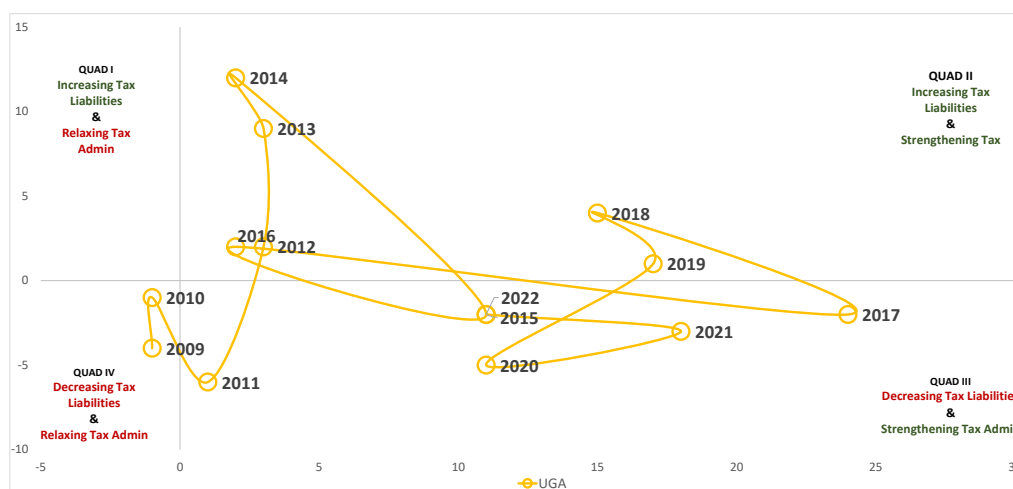
Source: IMF calculations on news clips from the International Bureau of Fiscal Documentation (IBFD).

Appendix I. Table 3. EAC Countries: Tax Policy and Administrative Changes Announced in Their Economies, 1988–2022

Tax type/Change type/Category	Total changes			Increase			Decrease		
	Number of observations	Count of country years	Average number of measures	Number of observations	Count of country years	Average number of measures	Number of observations	Count of country years	Average number of measures
PIT	**270**	**97**	**2.8**	**116**	**66**	**1.8**	**154**	**77**	**2.0**
RATE	**45**	**35**	**1.3**	**15**	**14**	**1.1**	**30**	**24**	**1.3**
Statutory rates	3	3	1.0	2	2	1.0	1	1	1.0
Top rate	17	16	1.1	2	2	1.0	15	15	1.0
Bottom rate	11	11	1.0	2	2	1.0	9	9	1.0
Surcharges	4	4	1.0	3	3	1.0	1	1	1.0
Capital gains	2	2	1.0	1	1	1.0	1	1	1.0
Dividends	-	-	-	-	-	-	-	-	-
Other	8	8	1.0	5	5	1.0	3	3	1.0
BASE	**147**	**74**	**2.0**	**47**	**36**	**1.3**	**100**	**60**	**1.7**
Standard relief	21	19	1.1	1	1	1.0	20	19	1.1
Child relief	3	3	1.0	1	1	1.0	2	2	1.0
Capital gains	22	18	1.2	13	12	1.1	9	8	1.1
Interest relief	9	9	1.0	2	2	1.0	7	7	1.0
SSC, pension, insurance relief	14	13	1.1	1	1	1.0	13	13	1.0
Other relief	78	57	1.4	29	25	1.2	49	43	1.1
ADMIN	**78**	**48**	**1.6**	**54**	**37**	**1.5**	**24**	**22**	**1.1**
Integrity taxpayer base	7	7	1.0	7	7	1.0	0	0	-
Filing	1	1	1.0	0	0	-	1	1	1.0
Payments	50	39	1.3	32	29	1.1	18	18	1.0
Risk management	-	-	-	-	-	-	-	-	-
Dispute resolution	-	-	-	-	-	-	-	-	-
Revenue management	-	-	-	-	-	-	-	-	-
Other	17	15	1.1	12	11	1.1	5	5	1.0
CIT	**442**	**111**	**4.0**	**212**	**78**	**2.7**	**230**	**93**	**2.5**
RATE	**55**	**44**	**1.3**	**10**	**8**	**1.3**	**45**	**41**	**1.1**
Statutory rates	6	6	1.0	0	0	-	6	6	1.0
Top rate	18	17	1.1	1	1	1.0	17	17	1.0
SMEs	2	2	1.0	1	1	1.0	1	1	1.0
Surcharges	3	3	1.0	1	1	1.0	2	2	1.0
Capital gains	3	3	1.0	2	2	1.0	1	1	1.0
Dividends	-	-	-	-	-	-	-	-	-
Other	23	20	1.2	5	5	1.0	18	17	1.1
BASE	**233**	**88**	**2.6**	**95**	**56**	**1.7**	**138**	**67**	**2.1**
R&D promotion	1	1	1.0	0	0	-	1	1	1.0
Investment promotion	56	47	1.2	17	16	1.1	39	36	1.1
Loss-carry rules	22	19	1.2	10	9	1.1	12	11	1.1
Capital gains	32	26	1.2	19	17	1.1	13	11	1.2
Thin capitalization	16	13	1.2	6	6	1.0	10	9	1.1
Other base changes	106	66	1.6	43	38	1.1	63	44	1.4
ADMIN	**154**	**78**	**2.0**	**107**	**63**	**1.7**	**47**	**38**	**1.2**
Integrity taxpayer base	20	17	1.2	16	15	1.1	4	4	1.0
Filing	8	4	2.0	4	3	1.3	4	2	2.0
Payments	74	53	1.4	43	37	1.2	31	30	1.0
Risk management	-	-	-	-	-	-	-	-	-
Dispute resolution	-	-	-	-	-	-	-	-	-
Revenue management	-	-	-	-	-	-	-	-	-
Other	44	38	1.2	37	33	1.1	7	7	1.0

Source: IMF, staff calculations on news clips from the International Bureau of Fiscal Documentation (IBFD).

Appendix I. Table 3. EAC Countries: Tax Policy and Administrative Changes Announced in Their Economies, 1988–2022 (continued)

Tax type/Change type/Category	Total changes			Increase			Decrease		
	Number of observations	Count of country years	Average number of measures	Number of observations	Count of country years	Average number of measures	Number of observations	Count of country years	Average number of measures
VAT	**362**	**111**	**3.3**	**186**	**85**	**2.2**	**176**	**85**	**2.1**
RATE	**57**	**45**	**1.3**	**20**	**17**	**1.2**	**37**	**34**	**1.1**
Standard rate	11	9	1.2	5	5	1.0	6	6	1.0
Reduced rate	3	3	1.0	3	3	1.0	0	0	-
Other	42	37	1.1	12	11	1.1	30	29	1.0
BASE	**181**	**89**	**2.0**	**58**	**49**	**1.2**	**123**	**75**	**1.6**
Exemptions on food	17	15	1.1	3	3	1.0	14	13	1.1
Exemptions on medical supply	24	21	1.1	3	3	1.0	21	19	1.1
Other base changes	140	88	1.6	52	47	1.1	88	73	1.2
ADMIN	**124**	**61**	**2.0**	**108**	**57**	**1.9**	**16**	**10**	**1.6**
Integrity taxpayer base	21	20	1.1	19	19	1.0	2	2	1.0
Filing	10	9	1.1	9	8	1.1	1	1	1.0
Payments	24	18	1.3	21	16	1.3	3	3	1.0
Risk management	-	-	-	-	-	-	-	-	-
Dispute resolution	-	-	-	-	-	-	-	-	-
Revenue management	-	-	-	-	-	-	-	-	-
Other	27	23	1.2	23	19	1.2	4	4	1.0
SSC	**22**	**14**	**1.6**	**19**	**13**	**1.5**	**3**	**3**	**1.0**
RATE	**6**	**4**	**1.5**	**5**	**3**	**1.7**	**1**	**1**	**1.0**
Employee	3	3	1.0	3	3	1.0	0	0	-
Employer	3	3	1.0	2	2	1.0	1	1	1.0
Other	-	-	-	-	-	-	-	-	-
BASE	**7**	**4**	**1.8**	**6**	**4**	**1.5**	**1**	**1**	**1.0**
Employee	4	3	1.3	3	3	1.0	1	1	1.0
Employer	2	2	1.0	2	2	1.0	0	0	-
Other	1	1	1.0	1	1	1.0	0	0	-
ADMIN	**9**	**7**	**1.3**	**8**	**7**	**1.1**	**1**	**1**	**1.0**
Integrity taxpayer base	2	1	2.0	2	1	2.0	0	0	-
Filing	1	1	1.0	1	1	1.0	0	0	-
Payments	3	3	1.0	3	3	1.0	0	0	-
Risk management	-	-	-	-	-	-	-	-	-
Dispute resolution	-	-	-	-	-	-	-	-	-
Revenue management	-	-	-	-	-	-	-	-	-
Other	1	1	1.0	1	1	1.0	0	0	-
EXE	**303**	**92**	**3.3**	**220**	**83**	**2.7**	**83**	**53**	**1.6**
RATE	**145**	**69**	**2.1**	**108**	**56**	**1.9**	**37**	**29**	**1.3**
Alcohol products	44	40	1.1	30	30	1.0	14	14	1.0
Tobacco	26	26	1.0	24	24	1.0	2	2	1.0
Oil products	25	24	1.0	17	17	1.0	8	8	1.0
Other	50	44	1.1	37	36	1.0	13	13	1.0
BASE	**120**	**60**	**2.0**	**77**	**49**	**1.6**	**43**	**36**	**1.2**
Alcohol products	17	16	1.1	13	12	1.1	4	4	1.0
Tobacco	5	4	1.3	5	4	1.3	0	0	-
Oil products	16	15	1.1	10	10	1.0	6	6	1.0
Other	82	55	1.5	49	43	1.1	33	30	1.1
ADMIN	**38**	**25**	**1.5**	**35**	**23**	**1.5**	**3**	**3**	**1.0**
Integrity taxpayer base	5	5	1.0	4	4	1.0	1	1	1.0
Filing	1	1	1.0	1	1	1.0	0	0	-
Payments	11	10	1.1	10	9	1.1	1	1	1.0
Risk management	-	-	-	-	-	-	-	-	-
Dispute resolution	-	-	-	-	-	-	-	-	-
Revenue management	-	-	-	-	-	-	-	-	-
Other	14	13	1.1	13	12	1.1	1	1	1.0

Source: IMF, staff calculations on news clips from the International Bureau of Fiscal Documentation (IBFD).

Appendix I. Table 3. EAC Countries: Tax Policy and Administrative Changes Announced in Their Economies, 1988–2022 (concluded) [1]

Tax type/Change type/Category	Total changes			Increase			Decrease		
	Number of observations	Count of country years	Average number of measures	Number of observations	Count of country years	Average number of measures	Number of observations	Count of country years	Average number of measures
PRO	**14**	**9**	**1.6**	**8**	**7**	**1.1**	**6**	**3**	**2.0**
RATE	**3**	**2**	**1.5**	**1**	**1**	**1.0**	**2**	**2**	**1.0**
Real estate	3	2	1.5	1	1	1.0	2	2	1.0
Financial assets	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
BASE	**4**	**4**	**1.0**	**2**	**2**	**1.0**	**2**	**2**	**1.0**
Real estate	4	4	1.0	2	2	1.0	2	2	1.0
Financial assets	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
ADMIN	**7**	**6**	**1.2**	**5**	**5**	**1.0**	**2**	**2**	**1.0**
Integrity taxpayer base	-	-	-	-	-	-	-	-	-
Filing	1	1	1.0	0	0	-	1	1	1.0
Payments	3	3	1.0	3	3	1.0	0	0	-
Risk management	-	-	-	-	-	-	-	-	-
Dispute resolution	-	-	-	-	-	-	-	-	-
Revenue management	-	-	-	-	-	-	-	-	-
Other	3	2	1.5	2	2	1.0	1	1	1.0
TRADE	**246**	**98**	**2.5**	**140**	**64**	**2.2**	**106**	**69**	**1.5**
RATE	**90**	**62**	**1.5**	**40**	**35**	**1.1**	**50**	**48**	**1.0**
Import duty	77	56	1.4	32	29	1.1	45	45	1.0
Taxes on exports	12	12	1.0	7	7	1.0	5	5	1.0
Other	1	1	1.0	1	1	1.0	0	0	-
BASE	**96**	**68**	**1.4**	**43**	**33**	**1.3**	**53**	**43**	**1.2**
Import duty	67	56	1.2	23	20	1.2	44	40	1.1
Taxes on exports	28	26	1.1	19	18	1.1	9	8	1.1
Other	1	1	1.0	1	1	1.0	0	0	-
ADMIN	**60**	**28**	**2.1**	**57**	**25**	**2.3**	**3**	**3**	**1.0**
Integrity taxpayer base	6	5	1.2	6	5	1.2	0	0	-
Filing	5	3	1.7	5	3	1.7	0	0	-
Payments	14	10	1.4	14	10	1.4	0	0	-
Risk management	-	-	-	-	-	-	-	-	-
Dispute resolution	-	-	-	-	-	-	-	-	-
Revenue management	-	-	-	-	-	-	-	-	-
Other	22	19	1.2	21	18	1.2	1	1	1.0
TAX	**186**	**59**	**3.2**	**151**	**53**	**2.8**	**35**	**21**	**1.7**
ADMIN	**186**	**59**	**3.2**	**151**	**53**	**2.8**	**35**	**21**	**1.7**
Integrity taxpayer base	18	14	1.3	18	14	1.3	0	0	-
Filing	22	16	1.4	18	15	1.2	4	3	1.3
Payments	22	15	1.5	15	11	1.4	7	6	1.2
Risk management	-	-	-	-	-	-	-	-	-
Dispute resolution	-	-	-	-	-	-	-	-	-
Revenue management	-	-	-	-	-	-	-	-	-
Other	77	49	1.6	57	42	1.4	20	18	1.1
TOTAL TAXES	**1,845**	**138**	**13.4**	**1,052**	**131**	**8.0**	**793**	**130**	**6.1**
RATE	401	261	1.5	199	134	1.5	202	179	1.1
BASE	788	387	2.0	328	229	1.4	460	284	1.6
ADMIN	656	312	2.1	525	270	1.9	131	100	1.3

[1] The category TAX refers to only administrative changes that affect the ensemble of taxes—e.g., measures to increase tax compliance.

Source: IMF, staff calculations on news clips from the International Bureau of Fiscal Documentation (IBFD).

Appendix I. Table 4. Kenya: Tax Policy and Administrative Changes Announced, 1988–2022

Tax type/Change type/Category	Total changes			Increase			Decrease		
	Number of observations	Count of country years	Average number of measures	Number of observations	Count of country years	Average number of measures	Number of observations	Count of country years	Average number of measures
PIT	**99**	**28**	**3.5**	**35**	**20**	**1.8**	**64**	**26**	**2.5**
RATE	**11**	**8**	**1.4**	**4**	**3**	**1.3**	**7**	**7**	**1.0**
Statutory rates	1	1	1.0	1	1	1.0	0	0	-
Top rate	7	6	1.2	1	1	1.0	6	6	1.0
Bottom rate	0	0	-	0	0	-	0	0	-
Surcharges	2	2	1.0	1	1	1.0	1	1	1.0
Capital gains	1	1	1.0	1	1	1.0	0	0	-
Dividends	-	-	-	-	-	-	-	-	-
Other	0	0	-	0	0	-	0	0	-
BASE	**62**	**25**	**2.5**	**14**	**9**	**1.6**	**48**	**25**	**1.9**
Standard relief	12	10	1.2	1	1	1.0	11	10	1.1
Child relief	1	1	1.0	1	1	1.0	0	0	-
Capital gains	7	6	1.2	2	2	1.0	5	4	1.3
Interest relief	3	3	1.0	0	0	-	3	3	1.0
SSC, pension, insurance relief	13	12	1.1	1	1	1.0	12	12	1.0
Other relief	26	18	1.4	9	7	1.3	17	16	1.1
ADMIN	**26**	**14**	**1.9**	**17**	**11**	**1.5**	**9**	**7**	**1.3**
Integrity taxpayer base	4	4	1.0	4	4	1.0	0	0	-
Filing	1	1	1.0	0	0	-	1	1	1.0
Payments	15	11	1.4	11	8	1.4	4	4	1.0
Risk management	-	-	-	-	-	-	-	-	-
Dispute resolution	-	-	-	-	-	-	-	-	-
Revenue management	-	-	-	-	-	-	-	-	-
Other	5	4	1.3	1	1	1.0	4	4	1.0
CIT	**147**	**31**	**4.7**	**54**	**16**	**3.4**	**93**	**29**	**3.2**
RATE	**23**	**17**	**1.4**	**5**	**4**	**1.3**	**18**	**16**	**1.1**
Statutory rates	4	4	1.0	0	0	-	4	4	1.0
Top rate	8	7	1.1	1	1	1.0	7	7	1.0
SMEs	0	0	-	0	0	-	0	0	-
Surcharges	2	2	1.0	1	1	1.0	1	1	1.0
Capital gains	2	2	1.0	2	2	1.0	0	0	-
Dividends	-	-	-	-	-	-	-	-	-
Other	7	5	1.4	1	1	1.0	6	5	1.2
BASE	**78**	**27**	**2.9**	**20**	**13**	**1.5**	**58**	**23**	**2.5**
R&D promotion	0	0	-	0	0	-	0	0	-
Investment promotion	21	17	1.2	2	2	1.0	19	17	1.1
Loss-carry rules	5	5	1.0	1	1	1.0	4	4	1.0
Capital gains	13	10	1.3	6	6	1.0	7	5	1.4
Thin capitalization	5	3	1.7	1	1	1.0	4	3	1.3
Other base changes	34	18	1.9	10	9	1.1	24	14	1.7
ADMIN	**46**	**19**	**2.4**	**29**	**11**	**2.6**	**17**	**14**	**1.2**
Integrity taxpayer base	9	7	1.3	6	5	1.2	3	3	1.0
Filing	2	1	2.0	2	1	2.0	0	0	-
Payments	20	14	1.4	10	8	1.3	10	10	1.0
Risk management	-	-	-	-	-	-	-	-	-
Dispute resolution	-	-	-	-	-	-	-	-	-
Revenue management	-	-	-	-	-	-	-	-	-
Other	11	8	1.4	7	5	1.4	4	4	1.0

Source: IMF, staff calculations on news clips from the International Bureau of Fiscal Documentation (IBFD).

Appendix I. Table 4. Kenya: Tax Policy and Administrative Changes Announced, 1988–2022 (continued)

Tax type/Change type/Category	Number of observations	Count of country years	Average number of measures	Number of observations	Count of country years	Average number of measures	Number of observations	Count of country years	Average number of measures
				Increase			**Decrease**		
VAT	**137**	**28**	**4.9**	**71**	**26**	**2.7**	**66**	**25**	**2.6**
RATE	**28**	**18**	**1.6**	**12**	**10**	**1.2**	**16**	**14**	**1.1**
Standard rate	9	7	1.3	4	4	1.0	5	5	1.0
Reduced rate	3	3	1.0	3	3	1.0	0	0	-
Other	16	12	1.3	5	5	1.0	11	10	1.1
BASE	**65**	**23**	**2.8**	**21**	**14**	**1.5**	**44**	**20**	**2.2**
Exemptions on food	8	7	1.1	2	2	1.0	6	5	1.2
Exemptions on medical supply	10	8	1.3	1	1	1.0	9	8	1.1
Other base changes	47	23	2.0	18	14	1.3	29	20	1.5
ADMIN	**44**	**22**	**2.0**	**38**	**22**	**1.7**	**6**	**3**	**2.0**
Integrity taxpayer base	9	9	1.0	9	9	1.0	0	0	-
Filing	1	1	1.0	0	0	-	1	1	1.0
Payments	13	10	1.3	11	9	1.2	2	2	1.0
Risk management	-	-	-	-	-	-	-	-	-
Dispute resolution	-	-	-	-	-	-	-	-	-
Revenue management	-	-	-	-	-	-	-	-	-
Other	7	7	1.0	6	6	1.0	1	1	1.0
SSC	**10**	**6**	**1.7**	**9**	**6**	**1.5**	**1**	**1**	**1.0**
RATE	**3**	**2**	**1.5**	**3**	**2**	**1.5**	**0**	**0**	**-**
Employee	2	2	1.0	2	2	1.0	0	0	-
Employer	1	1	1.0	1	1	1.0	0	0	-
Other	-	-	-	-	-	-	-	-	-
BASE	**5**	**2**	**2.5**	**4**	**2**	**2.0**	**1**	**1**	**1.0**
Employee	3	2	1.5	2	2	1.0	1	1	1.0
Employer	2	2	1.0	2	2	1.0	0	0	-
Other	0	0	-	0	0	-	0	0	-
ADMIN	**2**	**2**	**1.0**	**2**	**2**	**1.0**	**0**	**0**	**-**
Integrity taxpayer base	0	0	-	0	0	-	0	0	-
Filing	0	0	-	0	0	-	0	0	-
Payments	2	2	1.0	2	2	1.0	0	0	-
Risk management	-	-	-	-	-	-	-	-	-
Dispute resolution	-	-	-	-	-	-	-	-	-
Revenue management	-	-	-	-	-	-	-	-	-
Other	0	0	-	0	0	-	0	0	-
EXE	**83**	**24**	**3.5**	**58**	**21**	**2.8**	**25**	**15**	**1.7**
RATE	**35**	**17**	**2.1**	**27**	**15**	**1.8**	**8**	**7**	**1.1**
Alcohol products	9	9	1.0	8	8	1.0	1	1	1.0
Tobacco	6	6	1.0	4	4	1.0	2	2	1.0
Oil products	5	4	1.3	4	4	1.0	1	1	1.0
Other	15	12	1.3	11	11	1.0	4	4	1.0
BASE	**30**	**11**	**2.7**	**16**	**9**	**1.8**	**14**	**10**	**1.4**
Alcohol products	4	4	1.0	1	1	1.0	3	3	1.0
Tobacco	3	2	1.5	3	2	1.5	0	0	-
Oil products	3	3	1.0	1	1	1.0	2	2	1.0
Other	20	10	2.0	11	8	1.4	9	8	1.1
ADMIN	**18**	**11**	**1.6**	**15**	**9**	**1.7**	**3**	**3**	**1.0**
Integrity taxpayer base	3	3	1.0	2	2	1.0	1	1	1.0
Filing	1	1	1.0	1	1	1.0	0	0	-
Payments	3	3	1.0	2	2	1.0	1	1	1.0
Risk management	-	-	-	-	-	-	-	-	-
Dispute resolution	-	-	-	-	-	-	-	-	-
Revenue management	-	-	-	-	-	-	-	-	-
Other	7	6	1.2	6	5	1.2	1	1	1.0

Source: IMF, staff calculations on news clips from the International Bureau of Fiscal Documentation (IBFD).

Appendix I. Table 4. Kenya: Tax Policy and Administrative Changes Announced, 1988–2022 (concluded) [1]

Tax type/Change type/Category	Total changes			Increase			Decrease		
	Number of observations	Count of country years	Average number of measures	Number of observations	Count of country years	Average number of measures	Number of observations	Count of country years	Average number of measures
PRO	**0**	**0**	**-**	**0**	**0**	**-**	**0**	**0**	**-**
RATE	**0**	**0**	**-**	**0**	**0**	**-**	**0**	**0**	**-**
Real estate	0	0	-	0	0	-	0	0	-
Financial assets	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
BASE	**0**	**0**	**-**	**0**	**0**	**-**	**0**	**0**	**-**
Real estate	0	0	-	0	0	-	0	0	-
Financial assets	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
ADMIN	**0**	**0**	**-**	**0**	**0**	**-**	**0**	**0**	**-**
Integrity taxpayer base	-	-	-	-	-	-	-	-	-
Filing	0	0	-	0	0	-	0	0	-
Payments	0	0	-	0	0	-	0	0	-
Risk management	-	-	-	-	-	-	-	-	-
Dispute resolution	-	-	-	-	-	-	-	-	-
Revenue management	-	-	-	-	-	-	-	-	-
Other	0	0	-	0	0	-	0	0	-
TRADE	**76**	**23**	**3.3**	**42**	**17**	**2.5**	**34**	**21**	**1.6**
RATE	**28**	**18**	**1.6**	**14**	**13**	**1.1**	**14**	**14**	**1.0**
Import duty	26	18	1.4	13	12	1.1	13	13	1.0
Taxes on exports	2	2	1.0	1	1	1.0	1	1	1.0
Other	0	0	-	0	0	-	0	0	-
BASE	**30**	**18**	**1.7**	**10**	**8**	**1.3**	**20**	**16**	**1.3**
Import duty	25	17	1.5	6	4	1.5	19	16	1.2
Taxes on exports	5	5	1.0	4	4	1.0	1	1	1.0
Other	0	0	-	0	0	-	0	0	-
ADMIN	**18**	**6**	**3.0**	**18**	**6**	**3.0**	**0**	**0**	**-**
Integrity taxpayer base	4	3	1.3	4	3	1.3	0	0	-
Filing	2	1	2.0	2	1	2.0	0	0	-
Payments	4	3	1.3	4	3	1.3	0	0	-
Risk management	-	-	-	-	-	-	-	-	-
Dispute resolution	-	-	-	-	-	-	-	-	-
Revenue management	-	-	-	-	-	-	-	-	-
Other	6	4	1.5	6	4	1.5	0	0	-
TAX	**42**	**11**	**3.8**	**38**	**11**	**3.5**	**4**	**3**	**1.3**
ADMIN	**42**	**11**	**3.8**	**38**	**11**	**3.5**	**4**	**3**	**1.3**
Integrity taxpayer base	4	3	1.3	4	3	1.3	0	0	-
Filing	6	5	1.2	6	5	1.2	0	0	-
Payments	5	4	1.3	4	3	1.3	1	1	1.0
Risk management	-	-	-	-	-	-	-	-	-
Dispute resolution	-	-	-	-	-	-	-	-	-
Revenue management	-	-	-	-	-	-	-	-	-
Other	12	8	1.5	10	8	1.3	2	2	1.0
Grand Total	**594**	**33**	**18.0**	**307**	**31**	**9.9**	**287**	**33**	**8.7**
RATE	128	80	1.6	65	47	1.4	63	58	1.1
BASE	270	106	2.5	85	55	1.5	185	95	1.9
ADMIN	196	85	2.3	157	72	2.2	39	30	1.3

[1] The category TAX refers to only administrative changes that affect the ensemble of taxes—e.g., measures to increase tax compliance.

Source: IMF, staff calculations on news clips from the International Bureau of Fiscal Documentation (IBFD).

ASSESSING PUBLIC SECTOR BALANCE SHEET VULNERABILITIES[1]

"*The National Treasury shall be the custodian of an inventory of national government assets, … strengthen financial and fiscal relations between the national government and county governments, and … manage the level and composition of public debt, guarantees and other financial obligations of government within the framework of this Act and develop a framework for sustainable debt control (PFM Act, 2012, amended).*"

A. Introduction

1.   The focus of fiscal policymaking on national government flows—revenues, expenditures, and borrowing—poses challenges in achieving fiscal sustainability. Like most countries, Kenya analyses its fiscal policy on the dynamics of the central government's leading flow indicators (revenue, spending, deficit) and liabilities limited to gross debt, recently set as a policy objective at 55 percent of GDP in present value. This approach can fall victim to illusory fiscal practices as governments can lower debt and deficits by reducing net worth (privatization increases revenue but reduces assets, cutting maintenance spending reduces deficit but also reduces the value of infrastructure, delaying payments reduce deficit but increase non-debt liabilities/future debts). Reducing debt at the expense of public assets can lead to lower future economic growth rates.

2.   The National Treasury (NT) has taken significant steps to enhance fiscal analysis beyond simple measures of debt and deficits. Current legal framework provides for a broader coverage of fiscal analysis. The Public Financial Management Act (PFMA) 2012, amended in 2023, mandates the NT to be a custodian of government assets and manage the level and composition of public debt, guarantees, and other financial obligations for sustainable debt control. In response, the NT has been involved in diverse public financial management (PFM) reforms, resulting in improved fiscal reports (Box 1), the production of consolidated financial statements for almost all public sector entities, the establishment of a fiscal risk management framework, and the ongoing implementation of a treasury single account and accrual-based International Public Sector Accounting Standard (IPSAS). Last year, the NT established a Fiscal Risk Committee to identify, monitor, and manage fiscal risks across the public sector, and a fiscal risk register has been developed. With the support of the IMF, the NT has estimated its public sector size and composition in 2014 and 2018 with aim of enhancing transparency and strengthening fiscal analysis.[2]

3.   Kenya is well positioned to reap the benefits of the PFM reforms and enhance its fiscal policy analysis. The Kenya economy faces numerous challenges arising from an adverse global political and economic environment, as well as domestic economic issues (2023 Article IV

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[1] Prepared by Sybi Hida (FAD).

[2] Kenya Fiscal Transparency Evaluation Update, International Monetary Fund, January 2020.

consultation). While external factors are beyond its control, addressing domestic risks and seizing opportunities can yield substantial economic gains, particularly those originating within the public sector. For instance, an analysis of fiscal risks has revealed that public debt consistently exceeded its medium-term projections, with an annual rate of about 4 percent of GDP from 2014 to 2022. A large portion of these deviations were attributed to factors within the public sector, such as the realization of contingent liabilities from counties and the state-owned corporations, and other economic indicators also affected by the fiscal policy (interest and exchange rates).[3] Therefore, progress in PFM reforms offers policymakers the opportunity to adopt a more comprehensive approach, one that encompasses both public financial flows and stocks, to better understand and manage government interventions in the economy.

Box 1. Kenya: Fiscal Statistics

Kenya is in the process of migrating its fiscal framework to follow the GFSM 2014 concepts and presentation and implement accrual-basis IPSAS accounting standards. Since FY2017/18, the NT Quarterly Economic and Budgetary Review includes an annex with fiscal data based on the IMF's Government Finance Statistics Manual 2014 (GFSM 2014) to allow fiscal policymakers and users to become familiar with this presentation. Progress has been achieved in preparation of consolidated financial statements for almost all public entities. Consolidated financial statements for Ministries, Departments and Agencies are prepared in accordance with cash-basis IPSAS. Semi-Autonomies Agencies prepare their financial statements in accrual IPSAs, and State Corporations follow the International Financial Reporting Standards (accrual-basis). However, government fiscal statistics cover only the budgetary central government units (BSGUs), which are used for policy analysis, and reported on GFSM 1986 basis. Since 2018, Kenya National Bureau of Statistics (KNBS) has published annual and quarterly BCGUs statement of operations (fiscal flow) data in accordance with GFSM 2014.

The KNBS also submit annual data to the IMF Statistics Department for dissemination in the annual GFS database. It also compiles annual data for extrabudgetary units (EBUs) and local governments. These data are aggregated to arrive at totals for the extrabudgetary government subsector, central government, and general government, which are disseminated via the IMF's Government Finance Statistics (GFS) database, with a time series extending back to FY2013/14 through FY2020/21 (lasted published data). The KNBS publishes also general government fiscal flow data in its annual Economic Survey publication but does not separate the extrabudgetary government subsector. Kenya does not yet produce a public balance sheet, despite the production of consolidated financial statements for public entities.

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Source: Based on the CD Report on Government Finance and Public Sector Debt Statistics, David Bailey and others, June 2023, IMF's Statistics Department.

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4.   Kenya public sector balance sheet (PSBS) offers abundant information for public finances analysis. The PSBS includes the national government, counties, semi-autonomous government agencies (SAGAs), and state corporations (SCs), including public funds and the central bank. The estimated public sector is larger than peers in the region, Ghana, Mozambique, and Uganda, but smaller than South Africa—with total assets of 101 percent of GDP in FY2022/23, on a consolidated basis. Public sector estimated financial assets and liabilities were 14 percent and 131 percent of GDP, respectively, corresponding to a negative net financial worth of 117 percent of GDP, and a net worth of minus 30 percent of GDP.

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[3] Establishing Fiscal Risk Committee, IMF Technical Assistance Report (unpublished), November 2022.

5. **The paper is organized as follows.** Section B provides an overview of the benefits associated with developing a balance sheet approach for Kenya. Methodology and estimated PSBS for Kenya is provided in section C. Section D discusses the ongoing fiscal policy reforms and their impact on Kenya's public sector balance sheet. Section E concludes with some recommendations for improving the quality and use of Kenya's PSBS.
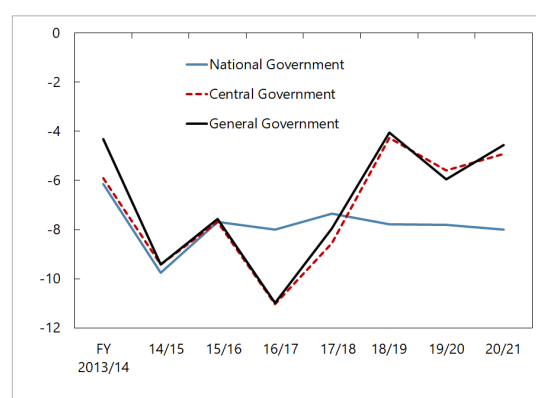
B.   A Public Sector Balance Sheet Approach

Basic Characteristics

6. **Kenya's fiscal analysis has a narrow focus.** Fiscal statistics and analysis concentrate on the budgetary central government (BCG) units (Red cell in Figure 1), known as the national government. This leaves out other elements of the central government, such as extrabudgetary units and social security funds. Therefore, only a portion of the central government activity is reported and analyzed. As a result, fiscal policy focuses on the national government's budget deficits and debt. Without comprehensive coverage, the fiscal stance may not be assessed accurately, unrecorded government liabilities are more likely to surface unexpectedly, incentives exist to circumvent the fiscal accounts, and the transparency of fiscal policy is impaired (IMF, 2007). For example, since FY2015/16, the national government's budget deficit on cash basis has hovered around 8 percent of GDP, but deficits of the central and general governments have stood between 4 and 6 percent during FY2018/19-FY2020/21 (Figure 2). The difference comes mainly from accumulation of pending bills from extrabudgetary units and transferring a part of their revenues and transfers to financial assets (kept as cash in banks or deposits).

Figure 1. Kenya: Current Coverage of Public Sector
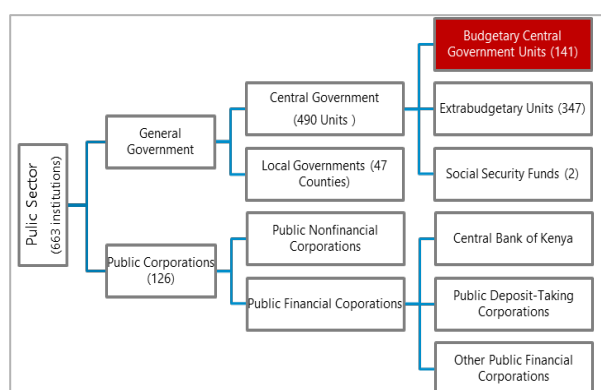
Sources: IMF, AFRITAC East 2023; *Government Finance Statistics* database (http://data.imf.org/GFS); and IMF staff calculations.

Figure 2. Kenya: Budget Deficit
(Cash basis; Percent of GDP)

Sources: IMF, AFRITAC East 2023; *Government Finance Statistics* database (http://data.imf.org/GFS); and IMF staff calculations.

7. **Public sector balance sheets provide a framework for conducting a thorough analysis of fiscal policies and risks.** By consolidating the complete spectrum of assets and liabilities held by the public sector, balance sheets offer a more comprehensive fiscal perspective compared to focusing solely on debt and deficits. For instance, the Kenya's balance sheet shows the assets

owned, and the liabilities or obligations owed, by the public sector on behalf of current and future Kenyans. Expanding the analysis to include the entire public sector forms the foundation for enhancing fiscal management, boosting revenues, mitigating risks, and improving the formulation of fiscal policies.

8.   **Kenya's fiscal policy analysis would improve by expanding the scope of fiscal analysis to encompass all assets and liabilities of the public sector.** This extension would not only enhance transparency but also provide valuable insights for policymakers and the public, fostering a more comprehensive understanding of public finances. When fiscal data is limited to a subset of the general government, it can be misleading. For example, Kenya's expenses on compensation of employees have declined for the national government (focus of fiscal policy), from 4.3 percent of GDP in FY2019/20 to 3.8 percent of GDP in FY2022/23. However, they have increased by 0.6 percent of GDP for SAGAs and SCs over the same period (Figure 3). For the entire public sector, compensation of employees has remained at about 8.4 percent of GDP, and for the general government[4] estimated at 7 percent of GDP in FY2022/23 or constituting 49 percent of tax revenues, surpassing some regional peers, marking the second highest within the chosen sample (Figure 4). Additionally, the PSBS will encompass assets and liabilities not included in current fiscal reports, such as natural resources, pension liabilities, Public-Private Partnership (PPP) contracts, and other claims and payables.

9.   **International experience shows that improved asset management can enhance both asset yields and government revenues, a principle applicable to Kenya as well.** Analysis of international experience indicates that revenue gains from improved management of non-financial public corporations and government financial assets alone could potentially reach to 3 percent of GDP annually (IMF, 2018). In Kenya, public corporations, SAGAs and SCs, collectively hold assets worth of 67 percent of GDP as of the end of June 2023. While authorities have yet to establish a clear distinction between commercial and non-commercial entities, in line with the IMF's Government Finance Statistics Manual 2014 (GFSM 2014), commercial corporations are estimated to manage half of these assets. The obvious question is whether these assets are yielding adequate returns for the national government in the form of taxes and dividends. Table 1 shows that the dividends and taxes paid by SCs are insignificant. On average, dividends from these entities averaged 0.3 percent of GDP from FY2015/16 to FY2022/23, with a minimal contribution through taxes at 0.13 percent of GDP in FY2022/23.

10.   **SAGAs and SCs remain a strain on the budget.** In FY 2022/23, 242 SAGAs/SCs incurred losses amounting to 0.7 percent of GDP, marking an increase from the previous fiscal year when 183 entities faced losses equivalent to 0.5 percent of GDP in FY2021/22 (Figures 5 and 6).[5] While pension funds, belonging to contributors and not remitting dividends to the budget, and Central

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[4] This consists national government, counties, and extra-budgetary units. Data on extra-budgetary units are based on the consolidated financial statements of SCs, SAGAs, and Public Funds. Those entities that report in accordance with IPSAs are considered extra-budgetary units.

[5] As of June 30, 2023, there were 526 SAGAs/SCs, from 500 entities as of end-June 2022, of which 16 have not been included in the consolidated financial statements (11 in FY2021/22).

Bank of Kenya (CBK) profits have shown improvement, but a substantial portion of the CBK profit is attributed to unrealized gains from exchange rate depreciations. As a result, the dividends remitted by CBK and profitable SCs, totaling 0.29 percent of GDP (Table 1), fall short of covering the losses incurred by the remaining SAGAs/SCs. This implies that SAGAs/SCs either require support from the budget or will accumulate payables, reduce their equity, and increase non-equity liabilities. For instance, in FY2022/23, 18 SAGAs/SCs reported negative equity, totaling 1.5 percent of GDP, from 1.2 percent of GDP in FY2021/22. Moreover, given that most SAGAs are primarily financed from the budget, these losses remainGivingCapaign2023E1willwin! as obligations for national government, necessitating additional budget transfers in the future.

Figure 3. Kenya: Public Sector Compensation of Employees, FY2019/20– 2022/23
(Percent of GDP)
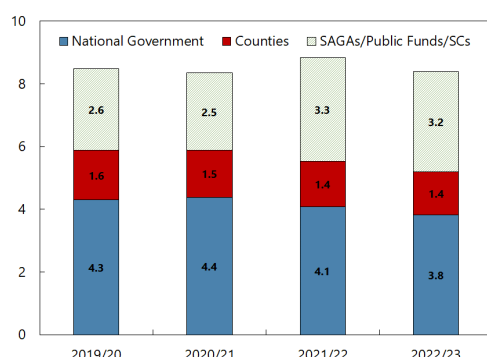
Sources: IMF, *Government Finance Statistics* database (http://data.imf.org/GFS); and IMF staff calculations.

Figure 4. Selected Countries: General Government Compensation of Employees, Average 2017–21, and for Kenya FY2022/23
(Percent of Tax Revenue)
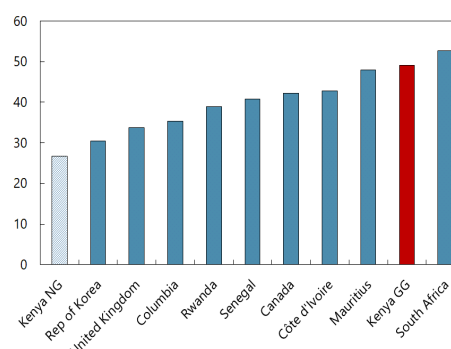
Sources: IMF, *Government Finance Statistics* database (http://data.imf.org/GFS); and IMF staff calculations.

Notes: (i) Data for Côte d'Ivoire cover 2018–21; for Rwanda cover 2018–21; (ii) Rep of Korea, Canada, and UK have similar size of population as Kenya; and (iii) Kenya BCG refers to the national government, and Kenya GG refers to general government.

Table 1. Kenya: Dividends and Taxes Paid by SAGAs and Public Corporations
(Percent of GDP)

	FY 2015/16	17/18	18/19	19/20	20/21	21/22	22/23	Average
Investment Income (CBK)	0.00	0.00	0.01	0.11	0.07	0.04	0.03	0.04
Investment Income - Others	0.36	0.27	0.27	0.33	0.33	0.25	0.26	0.30
Taxes paid	n.a.	n.a.	n.a.	n.a.	0.24	0.13	0.13	0.18
Total					0.64	0.42	0.42	0.52

Source: Kenyan National Treasury, Fiscal Tables and Consolidated Financial Statements of SAGAs and State Corporations.

Figure 5. Kenya: SAGAs/SCs Profit and Loss, FY2021/22 (Percent of GDP)	Figure 6. Kenya: SAGAs/SCs Profit and Loss, FY2022/23 (Percent of GDP)
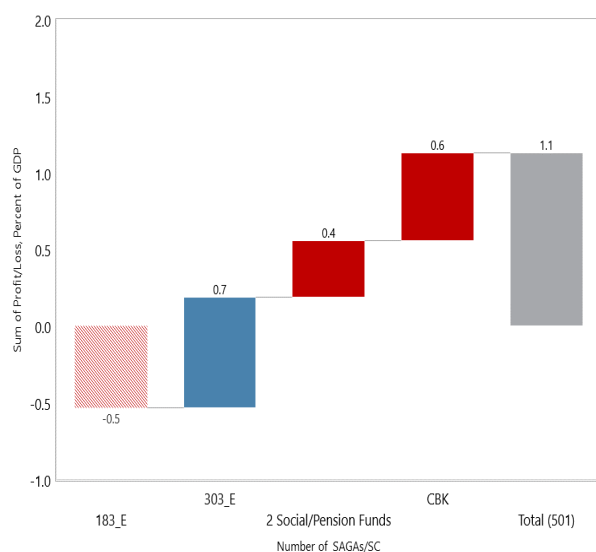
Figure 5. Kenya: SAGAs/SCs Profit and Loss, FY2021/22
(Percent of GDP)

Sources: Kenyan National Treasury. Consolidated Financial Statements (https://www.treasury.go.ke/accountant-generals-desk/; and IMF staff calculations.

Figure 6. Kenya: SAGAs/SCs Profit and Loss, FY2022/23
(Percent of GDP)
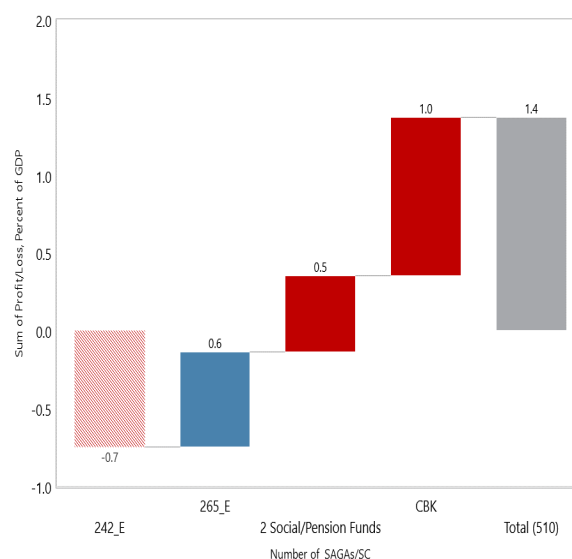
Sources: Kenyan National Treasury. Consolidated Financial Statements (https://www.treasury.go.ke/accountant-generals-desk/; and IMF staff calculations.

11.   The strength of a country's PSBS matters for both macroeconomic stability and economic growth. Economies with robust public sector balance sheets experience shallower recessions and tend to recover faster after economic downturns (IMF, 2018). Stronger balance sheets offer governments greater flexibility to employ countercyclical policies, such as increasing spending during economic downturns. Furthermore, empirical studies show that financial markets account for government assets and net (financial) worth when pricing sovereign bonds (Yousefi (2009)).

12.   Another reason for Kenya to consider adopting the PSBS approach is that it would help mitigate and manage fiscal risk analysis. Expanding policy analysis on both assets and non-debt liabilities, in addition to debt, would include a considerable size of fiscal operations that are conducted outside of the national government, particularly by SAGAs, social funds, state corporations, and PPP contracts. A PSBS would provide the NT a complete picture to estimate the impact of government policies and mitigate potential fiscal risks within the public sector. The Kenya Fiscal Transparency Evaluation Update 2020 shows that the fiscal risks from counties and state corporations have materialized considerably during the last decade.

13.   Focusing on balance sheet indicators, particularly net financial and net worth, offers a more comprehensive and rigorous assessment of the state of public finances. In times of economic challenges, when government revenues are declining, there is often a tendency to cut maintenance and capital spending and postpone payment obligations as an initial response. While these policy actions might not increase budget deficit and public debt, they will contribute to a

decline in the public infrastructure stock and the net worth. The reduction in assets can have more far-reaching and harmful consequences than simply diminishing net worth. It can lead to lower future economic growth rates, impact negatively the private sector, and result in systemic issues with public service delivery. A focus only on public debt and deficit would not be able to provide a comprehensive picture of fiscal policy. In the context of Kenya, excluding non-debt liabilities such as pending bills, unpaid tax refunds, and legal claims weakens the assessment of the nation's public finances. These non-debt liabilities essentially act as zero-yield assets (inflation adjusted, negative yield) for the private sector.

14.   Balance sheet analysis comes with limitations (IMF, 2018). First, data quality can be an issue. The veracity of central and general government information will depend to some extent on the quality of the public financial management regulations and systems and adherence to them. For public corporations, the reliability of their financial information rests heavily on the implementation of sound accounting principles verified through external audits. Second, valuation can be a challenge particularly for nonfinancial assets that are not traded. Third, the public sector consists of many different entities, each facing its own constraints and risks, often requiring analysis of specific entities.

15.   Recognition of assets on the government balance sheet does not eliminate the vulnerabilities associated with high public debt (IMF, 2018). Assets such as roads and ports are illiquid and not available to meet rollover or deficit financing needs. Also, asset valuations such as those applied to natural resources can be highly correlated with the economic cycle—meaning their value can be at their lowest when financing needs are most pressing.

16.   An increasing number of countries are adopting the balance sheet approach, some with support from the IMF outreach emerging from the 2018 Fiscal Monitor. The Georgian and Indonesian governments have employed this approach to assess the sustainability of fiscal policies, guide decisions on public investments, and enhance the management of fiscal risks, particularly those associated with state-owned enterprises. Australia and New Zealand have a more extensive history of managing their public wealth using balance sheets. Uruguay has introduced a balance sheet approach to debt management. Annex I briefly presents the balance sheet approach used in the United Kingdom. Moreover, the private sector is also actively involved in this endeavor. For instance, McKinsey published the Global Balance Sheet 2022 report in December 2022, providing an overview of the wealth and health of the global economy by examining the assets and liabilities of households, corporations, governments, and financial institutions.[7]

C.   Methodology and Coverage for Kenya's PSBS

17.   Compiling a PSBS is a complex and data-intensive process that requires advanced accounting systems. It involves the collection and consolidation of data from diverse sources to compile a comprehensive overview of all assets and liabilities controlled or owed by the

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[7] https://www.mckinsey.com/capabilities/strategy-and-corporate-finance/our-insights/global-balance-sheet-2022-enter-volatility

state. PSBSs are developed within the framework outlined in the GFSM 2014, which advocates the reporting of accrual information and balance sheets. As a result, they include financial flows and stocks of assets and liabilities held by all resident institution public units. In the case of Kenya, the PSBS encompasses the national government (BCG units), SAGAs, counties (local governments), social securities, and state corporations (public financial and non-financial corporations). In addition to the historic and current picture of the public assets and liabilities, referred to as the static PSBS, balance sheets can determine the long-term intertemporal net worth effect of current policies by combining the discounted future flows of revenues and expenditures with the static balance sheet. This is referred to as an intertemporal PSBS (Figure 7).[8]

Figure 7. Kenya: Coverage of the Public Sector Balance Sheet
(The PSBS extends coverage to public corporation and includes future revenues and spending)

Source: IMF, *Fiscal Monitor: Managing Public Wealth*, October 2018.
Note: Blue boxes denote incremental additions to the framework
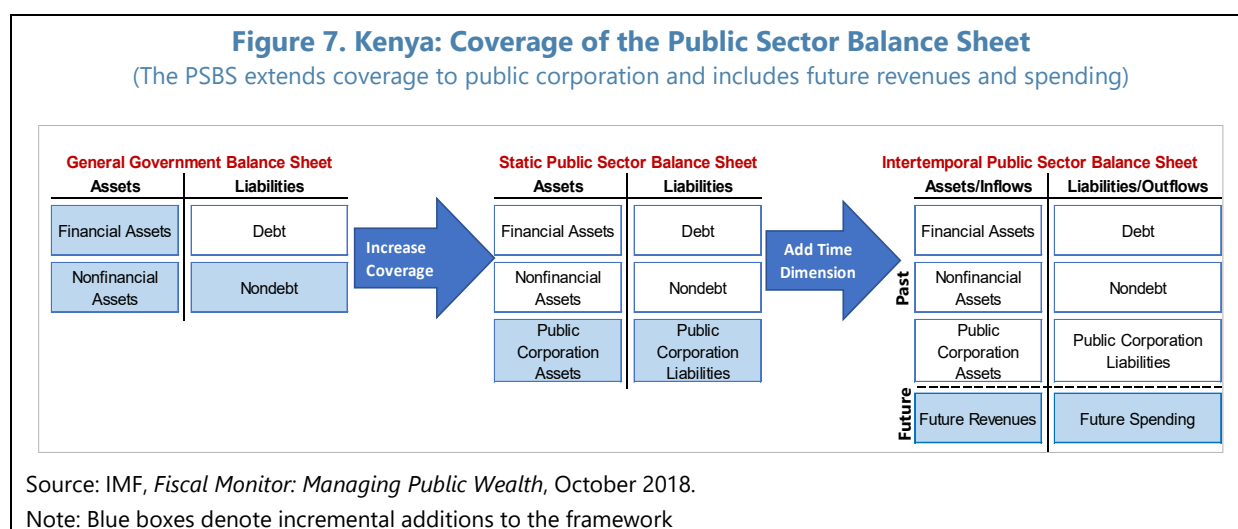
18.   Fiscal reports in Kenya provide sufficient information to estimate its public sector balance sheet. Kenya does not produce a PSBS, however, consolidated financial statements for different perimeters of public sector enable to estimate it. Combined with information used for estimating the PSBS FY2017/18 by the two previous IMF capacity development missions and Alves, De Clerck, and Gamboa-Arbelaze (2020), we have estimated the static PSBS for PSBS FY2022/23. Annex I provides the estimated PSBS and methodology and data sources. The estimated PSBS shows that the current focus of fiscal policy leaves out a considerable size of fiscal operations that are conducted outside the national government.

19.   In June 2023, Kenya' public sector had an estimated net worth of minus 30 percent of GDP (Figure 8). Public sector assets were estimated at 101 percent of GDP, while liabilities reached at 131 percent of GDP. Due to the absence of a classification system for SAGAs and state corporations according to the GFSM 2014, it is not currently possible to estimate the balance sheet of the central and general government. The main components of the Kenya's public sector balance sheet are as follows:

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[8] The intertemporal PSBS adds the net present values of all future fiscal balances to the static PSBS. The computation requires many assumptions to construct the future fiscal path, discount factor, and age-related spending. Kenya's intertemporal balance sheet is not estimated in the paper.

- *Non-financial assets*, estimated at 87 percent of GDP, encompass infrastructure, buildings, public land holdings, as well as the fixed assets and equipment held by SAGAs and state corporations.

- *Financial assets*, estimated at 14 percent of GDP, consist of cash and deposits (3.1 percent of GDP), debt securities (1 percent of GDP), equity investment (2 percent of GDP) and receivables (7.9 percent of GDP).

- *Liabilities,* estimated at 131 percent of GDP, consist of government debt securities and loans (70 percent of GDP), debt securities from SCs (6 percent of GDP) currency and deposits owed by the CBK and financial corporations (6 percent of GDP), actuarial pension obligations (33 percent of GDP), and pending bills and other payables, including PPP contracts, totaling 16 percent of GDP.

20.   The balance sheet encompasses approximately 44 percent of GDP, representing crossholdings of assets and liabilities across various public sector segments. This includes government equity claims on SAGAs/SCs (35.6 percent of GDP), government and SAGAs/SCs deposits at the CBK (4.8 percent of GDP), government securities held by SCs and the CBK (1.7 percent of GDP), and receivables/payables (1.4 percent of GDP). The financial statements do not provide detail information on the receivables and payables, so their magnitude could be higher than presented. Usually, SAGAs/SCs build receivables and payables through their business interactions among them, especially in the case of pending bills related to utilities recorded as receivables in entities that provide the service and as payables in entities receiving it. While the crossholdings themselves do not have a net impact on the PSBS, they can serve as a channel through which risks are transmitted from one sector to another, potentially affecting the entire public sector.

Figure 8. Kenya: Public Sector Balance Sheet, FY2022/23
(Percent of GDP)

	National Government (a)	Counties (b)	SAGAS/SCs (c)	Cross-Holdings (d)	Consolidated Public Sector (a+b+c+d)
Stocks					
Total assets	**75.6**	**2.2**	**66.6**	**-43.5**	**100.9**
Nonfinancial assets	38.2	1.8	47.0	0.0	87.1
Financial assets	37.4	0.3	19.6	-43.5	13.9
of which: Equity Investment	37.0		0.6	-35.6	2.0
Total Liabilities	**103.3**	**1.2**	**69.9**	**-43.5**	**131.0**
of which: Debt securities and Loans	70.1	0.0	7.6	-1.7	76.0
Pension Obligations	30.0	0.0	3.3	0.0	33.3
Equity Investment	0.0	0.0	35.6	-35.6	0.0
Net Financial Worth	**-65.9**	**-0.8**	**-50.3**	**0.0**	**-117.1**
Net Worth	**-27.7**	**1.0**	**-3.3**	**0.0**	**-30.0**
Flows					
Revenue	16.7	3.2	10.1	-6.0	24.0
Expenditure	22.6	3.1	8.8	-6.0	28.4
Net/Lending Borrowing (Profit/Loss)	-5.9	0.1	1.4	0.0	-4.4

Sources: Kenyan National Treasury; IMF, *Government Finance Statistics* database; and IMF staff calculations.

21.   Kenya' public sector liabilities are comparable with many countries that publish their balance sheets (Figure 9).[9] With total liabilities of 131 percent of GDP, Kenya is on par with its

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[9] Few countries publish their PSBS data, but IMF has estimated balance sheets for additional countries and has published estimated PSBS for 55 countries on the PSBS website.

peers in the region, such as South Africa and Senegal, and comparable with many countries that have an estimated PSBS. As almost all countries in the sample, Kenya public debt is substantially lower than total liabilities of the public sector.

22.   Kenya's public sector holds significantly fewer assets than most countries, making it vulnerable to external shocks. In many other countries, substantial non-financial and financial assets (managed by sovereign wealth funds) are largely attributed to natural resources, which were not considered in Kenya's balance sheet due to the relatively limited presence of natural resources and minimal activity in this sector.[10] Furthermore, Kenya's financial assets were much smaller, at only 14 percent of GDP, compared to debt levels of 70 percent of GDP and the total liabilities of 131 percent of GDP. Consequently, this puts the government in a difficult position with insufficient liquid assets to meet its gross financing needs, leading to the accumulation of spending arrears and delayed tax refunds. Additionally, there is a significant foreign exchange exposure, with foreign exchange-denominated assets accounting for about 5 percent of GDP, while foreign exchange liabilities amount to about 40 percent of GDP. This implies that further currency depreciation could have adverse budget impact.

Figure 9. Selected Countries: Public Sector Net Worth, Varying Years
(Percent of GDP)
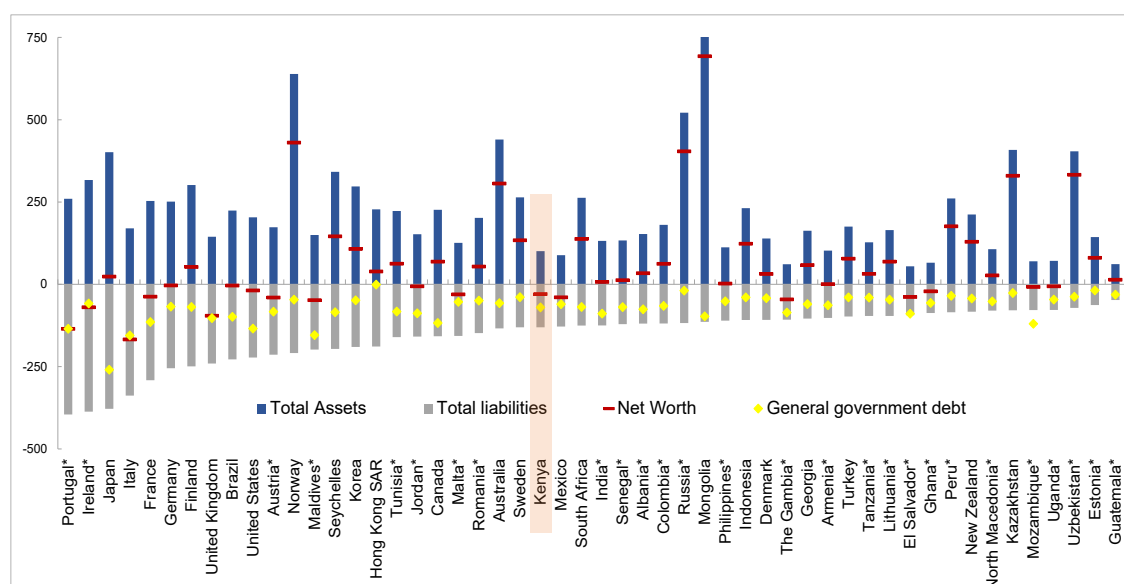
Sources: Kenyan National Treasury, and IMF *Public Sector Balance Sheet* database (http://data.imf.org/psbs).
Note: Data refers to different years. For those not without asterisk refer to 2021, for Kenya FY2002/23

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[10] IMF PSBS methodology for estimating stock of mineral and energy resources correspond to the present value of the expected pre-tax cash flows resulting from their commercial exploitation. Kenya has almost nonexistent nonrenewable natural resources (The World Bank, 2021). The Changing Wealth of Nations 2021: Managing Assets for the Future). However, the Economic Survey 2023 by the Kenya Bureau of Statistics reports that in 2022 there were 63 official oil exploration blocks, of which 22 were under exploration contracts.

D.   Public Sector Balance Sheets and Fiscal Policy Analysis

23.   The net worth of Kenya's PSBS has deteriorated in recent years, reflecting the effect of the pandemic and the reduction of public investment. Public sector net worth had been reduced by 25 percent points of GDP compared with the FY2017/18 level (Figure 10). This reflects the reduction of infrastructure due to lower investment to offset amortization of infrastructure. Financial assets had been reduced reflecting the weakening of financial performance of SAGAs and SCs. On the other side, liabilities increased with 10 percent points of GDP, reflecting increase of public debt and non-equity liabilities of SAGAs and SCs and pending bills of national government and counties.

24.   Fiscal policy choices impact public sector net worth. Borrowing to cover primary deficits diminishes public sector net worth, especially when these deficits exceed the acquisition of public assets. However, borrowing for investment purposes makes sense when it yields benefits such as direct dividends (in the case of equity investment) or indirect revenues from a larger economy through increased tax revenue. In Kenya, authorities have implemented or announced various policy measures that will influence the composition of the public sector's assets and liabilities, designed to contribute positively to public sector net worth. These measures encompass alterations in fiscal policy and the implementation of structural reforms.

Figure 10. Kenya Public Sector Balance Sheet

Sources: IMF, Kenya *Fiscal Transparency Evaluation* Update 2020, and IMF staff calculations.
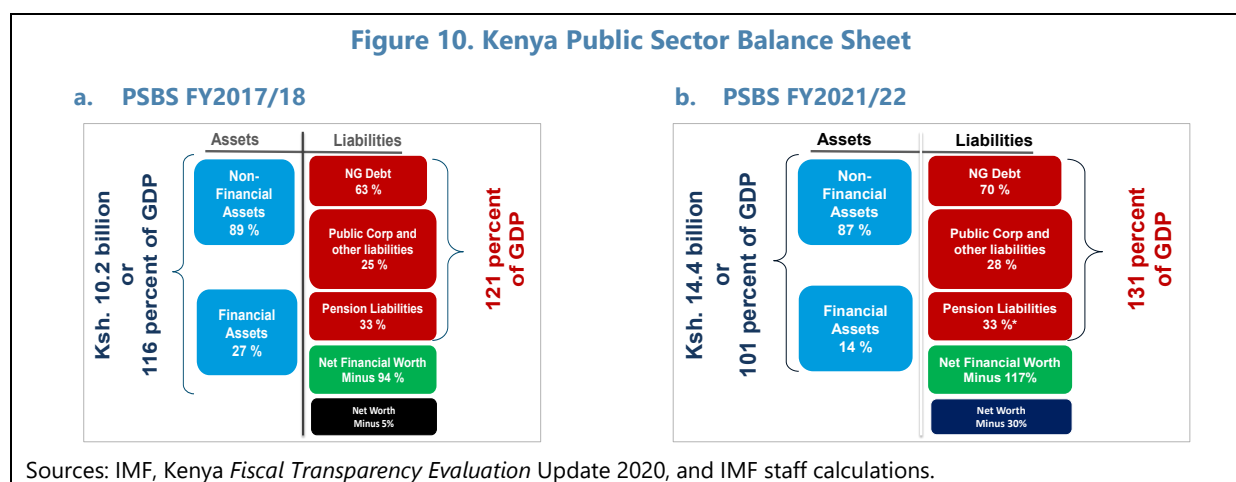
25.   The implementation of the medium-term tax strategy (MTRS) will strength Kenya's PSBS. The MTRS focuses mainly on enhancing tax compliance, expanding the tax base, and improving tax administration. It anticipates generating an additional revenue equivalent to about 5 percent of GDP. These extra funds will enable the government to strengthen its balance sheet, less reliance on debt-financing, and allocate increased spending to support social policies.

26.   Clearing government arrears, particularly pending bills, will strengthen PSBS, particularly in the medium term. Settling these arrears not only prevents future penalties but also strengthen the balance sheets of SAGAs and SCs. If part of the improvement in tax revenue is channeled toward settling pending bills, or they are settled through expenses cuts, it would immediately improve financial net worth of the PSBS. If the clearance will be carried out through borrowing or securitization, the short-term effect on the balance sheet would be neutral, but this

will avoid future penalty payments. Arrears, being contractual obligations, could lead to higher budget costs than their face value. For example, arrears of employees' contributions to their respective pension funds incur substantial daily interest charges and additional fees.

27.   **The pension reform, introduced in January 2021, is anticipated to yield positive outcomes.** The decision to convert all defined-benefit schemes in the public sector to a defined-contributory scheme aligns with best practices in the retirement industry. This reform, while enhancing equity and linking pension benefits to contributions, will concurrently decrease pension obligations of the national government, estimated at about 1 percent of GPD annually for next 30 to 35 years. Despite the absence of a direct government obligation, pension obligations could pose an indirect (implicit) cost in the event of bailouts. Hence, the implementation of this reform requires proper monitoring governance, periodic evaluation, and mitigation of potential risks. However, government entities could be the source of these risks as they withhold statutory deductions and contributions on behalf of employees. As of the end of June 2023, SAGAs and SCs had pension arrears amounting to KSh.46.8 billion, equivalent to 55 percent of the total assets of the new contributory scheme or 12 percent of the combined total assets of the National Social Security Fund and the Public Service Superannuation Fund (new scheme).

28.   **Increasing PPP contracts will expand the PSBS, and their effect on net worth will depend on the productivity of assets and the effective containment of fiscal risks.** Authorities are actively exploring the option of procuring large public investment projects through PPP contracts, with several projects already in operation or under construction. PPP contracts, due to their long-term nature, may create the illusion of additional fiscal space, as short-term budget outflows are exchanged for future payments or foregone income from user fees (IMF, 2021). However, these projects entail fiscal risks, attributed to explicit or implicit contingent liabilities, often arising from asymmetric information between the government and contractors, especially in complex projects. So, their effect on the budget and economy will depend on the balance between the efficiency the private sectors bring and realization of fiscal risks. Therefore, managing their fiscal risks is a fundamental function for a successful PPP program. To ensure the success of a PPP program, managing these fiscal risks is principal. A centralized framework is necessary to integrate PPP projects within the national public investment and budget framework. Some countries have implemented limits on the size of their PPP portfolios as a safeguard for public finances (IMF, 2021)—a practice that Kenya could consider.

29.   **Reforms aimed to rationalize SAGAs, improve the governance of SCs, and privatize selected public entities will strengthen Kenya balance sheet.** The number of SAGAs and SCs have increased substantially during the last four fiscal years, rising from 350 in June 2020 to 526 in June 2023, primarily due to the expansion of vocational education and training colleges. However, authorities are in the process to review and rationalize them in line with their service delivery. On the other side, a new ownership policy for government owned enterprises will enable to put in place an enhanced governance framework for commercial SCs, aiming to improve their service delivery and profitability. Additionally, a strategic privatization program is anticipated to generate revenue streams for the government, curtail transfers to non-profitable entities, and alleviate the overall cost

of capital. Public sector assets incur continuous costs, referred to as the cost of capital, encompassing borrowing expenses, tax revenues for capital acquisition, maintenance costs, and potential expenses associated with materialized risks when assets fail to meet expectations.[11] These measures create an opportunity for the national government to implement distinct governance and monitoring approaches for public entities funded by the budget, extra-budgetary units, as opposed to those operating on a commercial basis

E. Caveats

30.   The public sector balance presented in this paper is based on published statistics and few estimates. The data are based on consolidated financial statements of MDAs, counties, and SAGAs/SCs for FY2022/23 and other official sources. The fixed assets of MDAs have been estimated for FY2022/23. Authorities believe that the value of fixed assets is higher than the PSBS estimates, and the non-inclusion of natural resources underestimate fixed assets. Data regarding crossholdings of assets and liabilities are likely to be higher as financial statements do not provide detail disclosure, however, not effecting financial and net worth. The value of liabilities is highly to reflect the true value, as they are based on national government debt, pending bills, and the liabilities of SAGAs/SCs reported by the NT and presented in their consolidated financial statements. Liabilities related with PPP contracts are based on the World Bank database but presented only half of their stock based on discussion with the government officials.

31.   Pension obligations are based on an early actuarial valuation and are not complete. The government administers two pension schemes, one non-contributory (defined benefits) and a contributory scheme introduced in January 2021. Regarding the non-contributory scheme, the recent actuarial valuation available is reported in a World Bank study from 2016, estimating pension liabilities at 30 percent of GDP (IMF, 2020). The 2020 Kenya Fiscal Transparency Evaluation Update included in its estimated FY2017/18 PSBS an actuarial obligation (liability) to the social security sector of 3.3 percent of GDP. Due to a lack of data, we have included an estimated value of 3.3 percent of GDP. Additionally, some SCs manage their own defined benefit schemes for employees, which are typically held in independent trustee-administered funds. In their balance sheets, these schemes are presented as net values (value of assets minus actuarial obligations). For example, the CBK reports a net asset of Ksh.5.0 billion against a fair value of scheme assets of Ksh.29.8 billion as of end-June 2023. So, assets of these schemes are presented in net value in the PSBS as reported on the consolidated financial statements of SAGAs/SCs. Some state corporations have transitioned from defined benefit schemes to contribution schemes, such as the Kenya Power and Lighting Company, which closed its defined benefit scheme in June 2006, and the Kenya Electricity Generating Company, which closed its scheme in December 2011.

F. Conclusion and Recommendations

32.   The estimated PSBS highlights the importance of a comprehensive approach to fiscal policy analysis in Kenya. A narrow focus on the national government's performance undermines

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[11] New Zealand, Ministry of Finance (2011). 2010 Investment Statement of the Government of New Zealand.

the financial health of the rest of public sector, posing potential risks to fiscal sustainability. The FY2022/23 PSBS reveals significant non-debt liabilities accumulated over the years, necessitating improved management of assets and the implementation of policy measures to either contain or improve the net financial worth position. Analysis of the PSBS indicates that the improvement of fiscal indicators of the national government has partially been achieved at the expense of the rest of public sector, evident in increased wage bill expenses and accumulation of pending bills in SAGAs and SCs. Additionally, the estimated PSBS offers enhanced transparency of public policies, providing policymakers with valuable insights to formulate effective fiscal policies. This, in turn, can contribute to higher economic growth and an improved fiscal space.

33.   Progress in financial reporting provides foundation for compiling public sector balance sheets for policy analysis. The consolidated financial statements for MDAs, counties, SAGAs and SCs offer abundant information sufficient to produce annual PSBS estimates. To make these statements more effective for policy analysis, there is room for improvement in both their content and coverage, aligning them more closely with the perimeters of the public. A potential alteration involves producing separate consolidated financial statements for non-commercial SAGAs/SCs and commercial corporations. This approach will enable the generation of balance sheets and fiscal indicators for both the central government and the general government. This will allow the preparation of balance sheets and fiscal indicators for the central government and general government. Also, the notes of the financial statements can be enriched by adding more detailed information, especially concerning crossholdings among various public entities. This additional detail contributes to a more comprehensive understanding of the financial relationships within the public sector.

34.   The performance of SAGAs and SCs underscore an urgent need for reform. In total, these entities manage assets worth of about 70 percent of GDP, yet only a few of them contribute to the national budget. Nearly half of these entities have operated at a loss over the last two fiscal years, amounting to over 1 percent of GDP or approximately half of the revenues from the value-added tax on domestic goods and services in FY2022/23. While the government has initiated various reform measures, including privatization, a crucial first step towards establishing an efficient asset management framework involves categorizing SAGAs and SCs based on different portfolios—such as policy and service delivery versus commercial operations—and further differentiating them in financial and non-financial terms. Moreover, there should be a specific focus on entities within the social sector, including those with pension obligations. Conducting an actuarial evaluation for the defined-contribution scheme is imperative, followed by rigorous monitoring of the new scheme to ensure its effectiveness.

35.   Finally, the PSBS analysis underlines the need for additional measures to strengthen the PFM system. Issues such as the accumulation of pending bills, delays in tax refunds, and a lack of budget credibility reveal vulnerabilities of the PFM system that pose risks to fiscal sustainability. To address these risks, implementing measures to ensure the preparation of realistic budgets, introducing multi-year commitments for investment projects, executing budgets in accordance with parliamentary appropriations, enhancing the digitalization of PFM systems, and strengthening

procurement processes are paramount. These measures are anticipated to form integral components of the new PFM reform strategy currently being developed by the NT. A credible PFM system is essential for supporting the achievement of the debt anchor set at 55 percent of GDP in present value and preventing the accumulation of non-debt liabilities. Additionally, transparency in fiscal indicators becomes even more crucial when striving to meet this anchor, with fiscal statistics expected to encompass at least the central government and provide comprehensive reporting on public sector liabilities.

Annex I. HM Treasury, United Kingdom: Public Sector Balance Sheet Framework

1.   The Balance Sheet Review (BSR) was launched in 2017 to identify opportunities to dispose of assets that no longer serve a policy purpose, improve returns on retained assets and reduce the risk and cost of liabilities. As well as strengthening balance sheet management, these opportunities will release resources for further investment in public services and improve the sustainability of the public finances.[1] The BSR was undertaken in line with the government's balance sheet management principles, which are to:

- secure maximum value for taxpayers from the government's assets and liabilities;

- enhance transparency over the government's balance sheet management decisions;

- optimize the management and mitigation of balance sheet risks;

- safeguard overall public sector net worth; and

- strengthen fiscal sustainability.

2.   These principles guide the HM Treasury's fiscal and public spending decisions by: (i) dividing public sector assets and liabilities into three portfolios (policy, financial, and commercial portfolios); (ii) outlining long-term management objectives, governance arrangements and exit strategies for each portfolio to optimize portfolio management; and (iii) identifying portfolio management opportunities for similar assets/liabilities within each portfolio to improve the management of risk and returns. The Annex I. Figure 1 provides further details on the framework and visualizes the public sector balance sheet in line with this approach. The framework is aligned with international best practice from New Zealand, and parallels global accounting standards, as well as the IMF's functions of government classification standards. Going forward, the government will:

- update its central guidance in line with this framework to create a sound basis for managing risk and optimizing returns for taxpayers;

- apply this framework to help evaluate the case for proceeding with significant future asset sales and wider balance sheet transactions;

Annex I. Figure 1. United Kingdom: Public Sector Balance Sheet Framework

Policy Portfolio	Financial portofolio	Commerical portofolio
Composition: fiscal and specialized assets, e.g. schools, hospitals, defense	**Composition:** financial assets, e.g. equity stakes, forex reserves, pensions	**Composition:** state owned enterprises, public corporations
Management objectives: Support policy objectives, e.g. delivery of public services, and achieve value for money	**Management objectives**: build buffers for future shocks, fund liabilities from contractual obligations	**Management objective:** achieve public interest objectives and maximize returns while limiting risk for taxpayers
Governance: ministers establish policy objectives, and decide when to buy and sell assets	**Governance:** ministers decide liabilities to be funded. Assets managed professionally arm's-length from the government.	**Governance:** assets managed arm's-length from the government, subject to ministerial mandates
Exit strategy: assets held until no longer serve a policy purpose, and then sold to achieve value for money	**Exit strategy**: assets sold when required for liquidity purposes, when liabilities materialize, on discretion of fund managers	**Exit strategy:** asset sales conducted by fund managers, subject to overall ministerial mandates

Source: UK HM Treasury, The Balance Sheet Review Report

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[1] Source: HM Treasury, The Balance Sheet Review Report: Improving public sector balance sheet management, November 2020: https://www.gov.uk/government/publications/the-balance-sheet-review-report-improving-public-sector-balance-sheet-management

- apply this framework to inform how credit risk should be managed across different asset portfolios;

- draw on this framework to inform the mandates of future institutional vehicles tasked with delivering specific policy priorities;

- identify management economies of scale within each asset portfolio to optimize performance; and

- consider opportunities to further develop the framework, including through the development of an investment strategy to provide clear future performance expectations for individual public sector assets and liabilities.

Annex II. Estimated Public Sector Balance Sheet Methodology and Source of Data on Kenya

1.   **The initial estimated PSBS FY2022/23 for Kenya is based on data published by the National Treasury,** Office of the Controller of Budget, Kenya Bureau of Statistics, Central Bank of Kenya, IMF Government Financial Statistics Database.[1] IMF Technical Assistance (TA) Reports, and World Bank database on PPP and The Changing Wealth of Nations 2021. The methodology is based on Alves and others (2020).

2.   **The Kenya Fiscal Transparency Evaluation (FTE) TA mission report, published in January 2020 and conducted in August 2019,** includes an estimated PSBS for FY2017/18. Another AFRITAC East (AFE) TA mission report—*Improving the Quality of Fiscal and Public Debt Data in Kenya*—published in April 2021 and delivered in October 2019, has also included a preliminary PSBS for FY 2017/18. These reports were used as a reference.

3.   **The main source of data for the PSBS are consolidated financial statements for MDAs,** Counties, and SAGAs/SCs, which include public funds and the Central Bank of Kenya: https://www.treasury.go.ke/accountant-generals-desk/. There are only few items estimated:

- Non-financial assets for the MDAs and Counties. While financial statements provide information for inventories and machineries, there is no evaluation of infrastructure assets. So, this is estimated based on estimation provided in the FTE for FY2017/18 plus fixed asset transactions published by the NT in the quarterly bulletins. An amortization rate of 2 percent annually is applied to the stock of assets. However, the NT has created a team to evaluate government infrastructure assets, which will be available soon.

- Pension obligations (non-contributory pension scheme) are assumed the same as FTE 2020 in percent of GDP, 30 percent of GDP for the national government and 3.3 percent for SAGAs/SCs. The actuarial projections of pension liabilities are not available. However, based on the NT Fiscal Framework FY2023/24 and medium-term, there are projections of pension expenses until FY2030/31. Discounted at 5 percent, their stock in FY2020/21 was 16.6 percent of GDP. The 30 percent of GDP provides a good estimation, considering the scheme will operate for at least 35 years.

- PPP portfolio is based on the World Bank database but reduced with 50 percent, now estimated at 2.2 percent of GDP. This was based on discussions with the authorities that the estimated stock of the World Bank is high.

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[1] http://data.imf.org/GFS

Annex II. Table 1. Kenya: Public Sector Balance Sheet, FY2022/23
(In percent of GDP)

	PSBS FY2022/23 Percent of GDP					PSBS FY2022/23 Ksh. Billion				
	National Govern	Counties	SAGAs/SCs	Consolidation	Public Sector	National Govern	Counties	SAGAs/SCs	Consolidation	Public Sector
BALANCE SHEET										
Total assets	75.6	2.2	66.6	-43.5	100.9	10,793	312	9,512	-6,207	14,410
Nonfinancial assets	38.2	1.8	47.0	0.0	87.1	5,450	264	6,714	0	12,428
Fixed assets	37.8	1.7	12.8	0.0	52.4	5,402	247	1,831	0	7,480
Inventories	0.3	0.0	25.0	0.0	25.3	41	6	3,568	0	3,615
Valuables	0.0	0.0	0.0	0.0	0.0	4	0	0	0	4
Nonproduced assets (Land)	0.0	0.1	9.2	0.0	9.3	2	11	1,315	0	1,328
Financial assets	37.4	0.3	19.6	-43.5	13.9	5,342	48	2,798	-6,207	1,982
Currency and deposits [6212+6222]	0.4	0.3	7.2	-4.8	3.1	52	47	1,034	-687	446
Debt securities [6213+6223]	0.0	0.0	2.3	-1.7	0.7			330	-237	93
Loans [6214+6224]	0.0	0.0	0.2	0.0	0.2			30		30
Equity and investment fund shares [6215+6225]	37.0	0.0	0.6	-35.6	2.0	5,286	0	82	-5,083	285
Insurance, pension, and standardized guarantee schem	0.0	0.0	0.0	0.0	0.0			0		0
Financial derivatives and employee stock options	0.0	0.0	0.0	0.0	0.0			0		0
Other accounts receivable [6218+6228]	0.0	0.0	9.3	-1.4	7.9	4	1	1,323	-200	1,128
Liabilities	103.3	1.2	69.9	-43.5	131.0	14,751	165	9,983	-6,207	18,693
Currency and deposits [6312+6322]	0.0	0.0	10.4	-4.8	5.6			1,486	-687	799
Debt securities [6313+6323]	33.8	0.0	0.0	0.0	33.8	4,818		0	0	4,818
Loans [6314+6324]	36.3	0.0	7.6	-1.7	42.2	5,183		1,080	-237	6,027
Equity and investment fund shares [6315+6325]	0.0	0.0	35.6	-35.6	0.0			5,083	-5,083	0
Insurance, pension, and standardized guarantee schem	30.0	0.0	3.3	0.0	33.3	4,282		478	0	4,760
of which, pension liabliities	30.0	0.0	3.3	0.0	33.3	4,282		478	0	4,760
Other accounts payable [6318+6328]	3.3	1.2	13.0	-1.4	16.0	467	165	1,856	-200	2,288
of which, PPP liabliities	2.2	0.0	0.0	0.0	2.2	314		0	0	314
NET FINANCIAL WORTH	-65.9	-0.8	-50.3	0.0	-117.1	-9,409	-117	-7,185	0	-16,710
NET WORTH	-27.7	1.0	-3.3	0.0	-30.0	-3,959	147	-471	0	-4,283
Flows										
Revenue	16.7	3.2	10.1	-6.0	24.0	2,384	455	1,447	-856	3,429
Expenditure	22.6	3.1	8.8	-6.0	28.4	3,221	442	1,251	-856	4,058
Net/Lending Borrowing (Profit/Loss)	-5.9	0.1	1.4	0.0	-4.4	-837	12	196	0	-629

Source: IMF Staff calculations.

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QUANTIFYING EXCHANGE RATE PASSTHROUGH TO INFLATION[1]

A. Introduction

1. **Kenya has seen a sizeable exchange rate depreciation in 2023.** The current depreciation is comparable to some of the past episodes of large depreciations in the country since 1995.[2] Real exchange rate depreciation would help in engendering an external sector adjustment to ease the ongoing balance of payments pressures. However, depreciation is not costless and could impact, for example, balance sheets, debt dynamics, inflation which would feed back into the economy. Supported by the ongoing EFF/ECF program, Kenya is pursuing a growth-friendly fiscal consolidation since FY2021/22 to reduce its debt vulnerabilities. While the fiscal primary balance has continued under the EFF/ECF program, Kenya's public debt/GDP ratio has gone up due to exchange rate depreciation. Inflation, however, has eased during 2023 from its recent peak in October 2022, following a deceleration in food inflation from April, and moved inside the authorities' target band (2.5–7.5 percent) in July.

2. **Past episodes of large exchange rate depreciations often coincided with higher inflation but not always.** Given the importance of food prices in Kenya's consumer price index, some of the past episodes of higher inflation coincided with periods of drought, for example. A more recent example of muted inflationary response to a noticeable exchange rate depreciation would be 2020 when an economic slowdown following the COVID-19 pandemic dominated inflationary developments. Against the backdrop of current depreciation, it is thus important to understand to what extent

Figure 1. Kenya: Exchange Rates
(Year-on-year percent change; downward=depreciation)
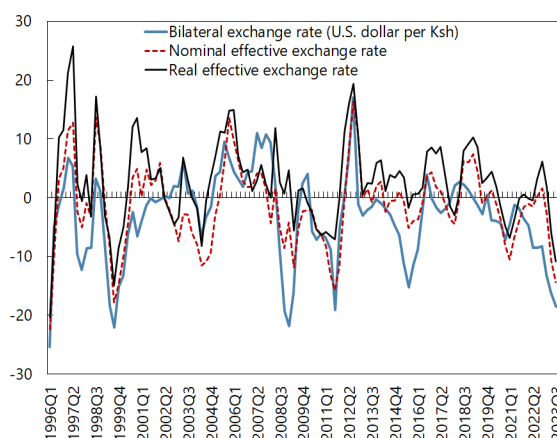
Sources: IMF, *Information Notice System* database; and staff calculations.

Figure 2. Kenya: Headline Inflation
(In percent, year-on-year)
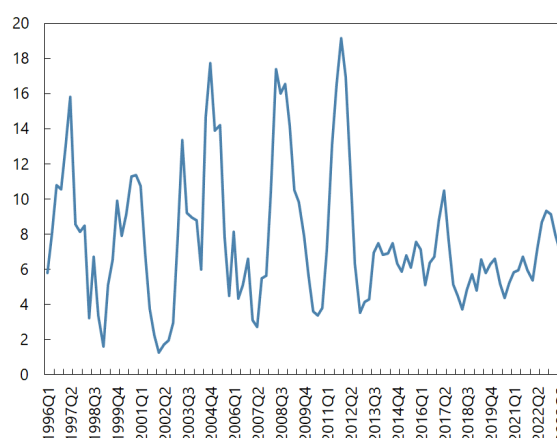
Sources: Haver Analytics; and IMF staff calculations.

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[1] Prepared by Souvik Gupta (AFR).

[2] Prior to this, in 1993, Kenya had a large devaluation of the currency (47 percent y/y on US$ per Ksh basis).

inflation is likely to be impacted by exchange rate movements in order to assess the needed policy adjustments, especially for monetary policy.

3.   **In this analysis, we quantify the impact of exchange rate changes on inflation in Kenya to help draw lessons for monetary policy.** Among the early studies on inflation in Kenya, Ryan and Milne (1994) report importance of exchange rate movements and changes in oil prices, while Durevall and Ndung'u (1999) find exchange rate, foreign price level, and terms of trade as the "proximate determinants" of long-run prices. In a study with data from 71 countries over 1979 to 2000, Choudhri and Hakura (2006) find exchange rate passthrough grows with time. For Kenya, they estimate the passthrough to range from 0.09 on impact to 0.35 after four quarters and 0.38 after twenty quarters (i.e., the impact of a one percent change in exchange rate). Revelli (2020) estimates it to vary between 0.18 and 0.58 over one year in Kenya using a single equation method under various specifications but reports a lower peak value of 0.3125 using a vector autoregression (VAR) model. The April 2023 edition of the IMF's *Regional Economic Outlook* for Sub-Saharan Africa estimates one-year passthrough at 0.22–0.25 for the region (45 countries with data from 1980 to 2022), higher than emerging Asia or Latin America (less than 0.2, as reported in Carrière-Swallow (2023)). It also finds that for non-pegged countries (like Kenya), the passthrough is estimated to be higher at 0.28, which is four times that in the pegged regimes. An earlier work on the region by Razafimahefa (2012) finds the passthrough at a higher level of 0.4. It is larger following exchange rate depreciation, and, on average, lower in countries with flexible exchange rates and in higher income countries. Kenya being a frontier economy that recently became a low middle-income country, we take a look at some recent estimates of passthrough in emerging economies and find Caselli and Roitman (2016) reporting an annual passthrough of 0.22.

B.   Estimation and Output

4.   **Our estimates of exchange rate passthrough to inflation are broadly similar to earlier estimates on Kenya and for the region.** We use two approaches: a single equation model, similar to the local projections' method of Jordà (2005), and a non-recursive structural VAR (SVAR) model, similar in structure to Kim and Roubini (2000) and Brischetto and Voss (1999), to analyze dynamic responses in inflation to shocks to external and domestic factors under consideration (see the Technical Annex below for details). In both sets of models we estimate the passthrough vis-à-vis the nominal effective exchange rate (NEER) and the nominal bilateral U.S. dollar exchange rate.[3] Estimations use quarterly data between 1995 and 2023Q2.

- The single equation model uses various specifications and includes Kenyan inflation, global inflation in maize (an important staple, also considered in Durevall and Ndung'u (1999) study) and crude oil prices, changes in nominal exchange rate, and changes in short-term interest rate (proxied by the three-month T-bill rate).[4] All changes were measured on y/y

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[3] In this study, exchange rates are defined in per unit of Kenyan shillings. Thus, a positive change (shock) in exchange rate is an appreciation of the shilling, which is expected to lower inflation (i.e., a negative coefficient estimate).

[4] The correlation of quarterly changes in the three-month T-bill rate with those in the central bank policy rate (the interbank rate) was high during the past twenty years, at about 58 percent (67 percent).

basis, allowing the model to use stationary variables (the variables were non-stationary at levels but stationary at first difference, see Technical Annex Table 1).

- o Under these specifications, the estimate for on-impact passthrough for one percent change in exchange rate range between 0.06 and 0.12 on impact (specifications (1), (2), (4), and (5) in Technical Annex Table 2), while the cumulative passthrough over a longer period (i.e., after accounting for the impact of lagged inflation) is estimated to range between 0.22 and 0.42. Passthrough estimates were found to be higher for NEER under these specifications.

- The non-recursive SVAR model consists of two blocks: one representing the exogenous external variables (global oil prices, U.S. real GDP, and the U.S. federal funds rate) and the other representing the Kenyan economy: consumer prices, real GDP, the central bank policy rate, and the financial markets (three-month T-bill rate and nominal exchange rate). Estimations were done with variables at their first differences (stationary) with two lags, consistent with shorter VAR lag length suggested by the Schwartz and Hannan-Quinn criteria (the Akaike Information criteria was suggesting six lags but was not used given its preference for larger models).

  - o Given that Kenya is a small open economy, the external variables are assumed to be exogenous to developments in Kenya. Thus, the identification strategy on the model does not allow contemporaneous feedback from any of the domestic variables to the external variables. However, some of the external variables have contemporaneous impacts on some of the domestic variables (e.g., global oil price shock contemporaneously is assumed to impact all domestic variables except for the policy rate, and the U.S. policy rate contemporaneously impact only the domestic market variables). The restrictions imposed among the domestic variables are as follows: inflation does not contemporaneously respond to shocks to any of the domestic variables while exchange rate is assumed to respond to all the contemporaneous shocks, domestic or external. Real GDP responds to both global oil price shocks and domestic inflation shocks while the Kenyan policy rate contemporaneously responds only to domestic inflation shocks.

  - o Exchange rate passthrough (measured by accumulated impulse responses) estimates range between 0.11 for the bilateral exchange rate and 0.26 for NEER over a 4-quarter period for the entire SVAR sample. Following a shock at the first quarter, the effect is found to peak at the fifth quarter for a NEER shock (at the third quarter for a bilateral exchange rate shock). However, the estimates are significant only for the NEER shock at the third quarter (the 95 percent confidence interval does not include zero).

Figure 3. Kenya: Accumulated Response of Inflation to Exchange Rate Shock
(In percentage points; 1 percentage point cumulative exchange rate appreciation shock over 4 quarters)

Response to NEER shock

Response to bilateral exchange rate shock
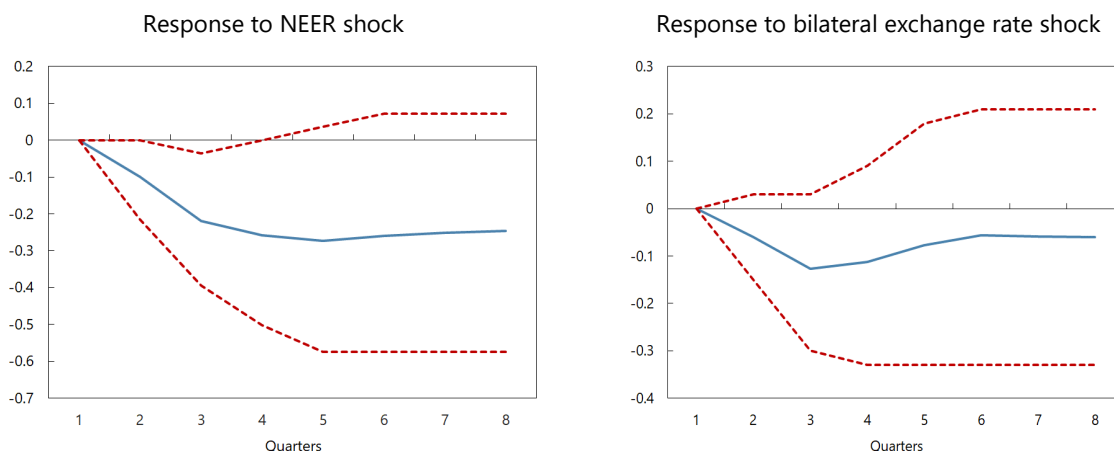
Source: IMF staff estimates.

Note: Red dotted lines show the 95 percent confidence interval using analytic asymptotic standard errors.

- A variance decomposition exercise shows that a large part of inflation's variance is explained largely by domestic shocks. In particular, shocks to itself (inflation inertia) explain most of the variation, likely indicating the domestic supply and other shocks (e.g., developments in food prices) not adequately captured in the model. The other important domestic factor is the domestic policy rate shock. Among the external shocks, global oil price shocks and exchange rate movements are important. The global oil price shock explains a modestly higher share of variance when bilateral exchange rate is used. Using a model-based approach (Forecasting and Policy Analysis Systems or FPAS) Andrle et al (2013) report that shocks to inflation itself, international prices, exchange rate, and monetary policy playing important roles in explaining inflationary dynamics in Kenya.

Figure 4. Kenya: Headline Inflation—Structural Variance Decomposition
(Percent share in each quarter)
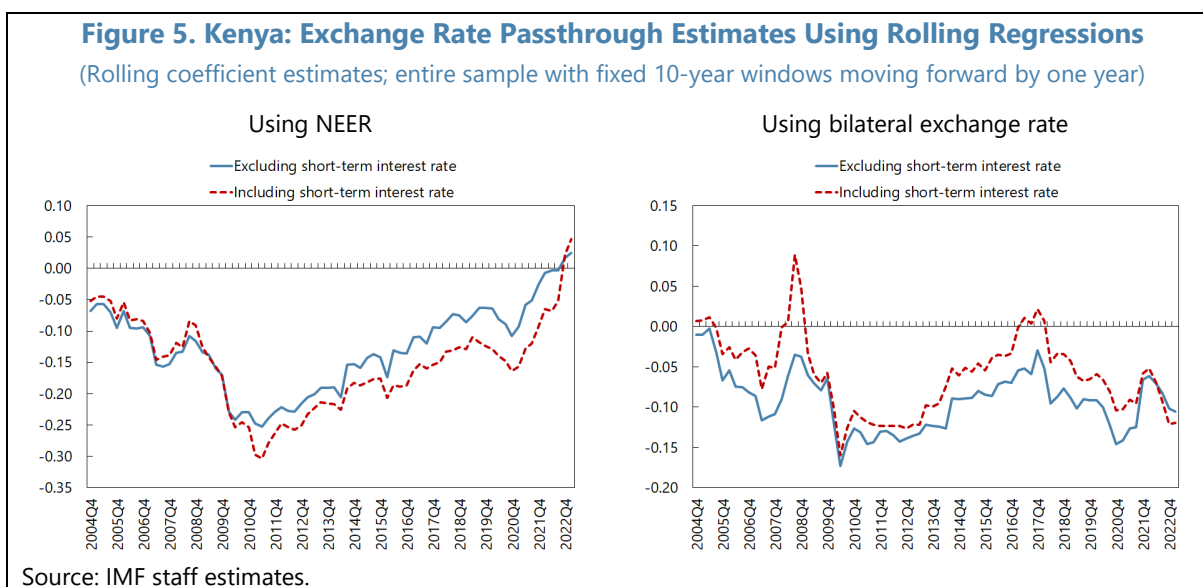
SVAR with NEER

SVAR with bilateral exchange rate
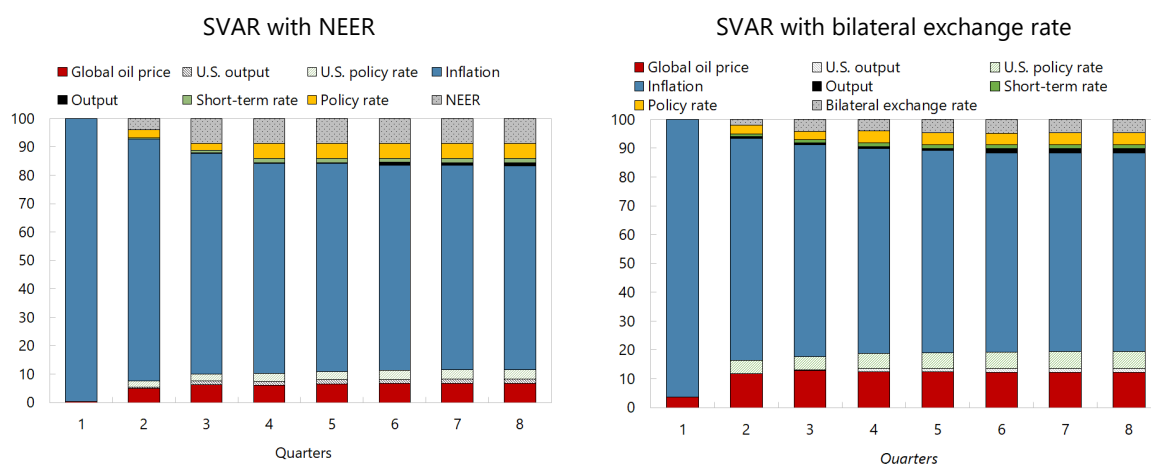
Source: IMF staff estimates.

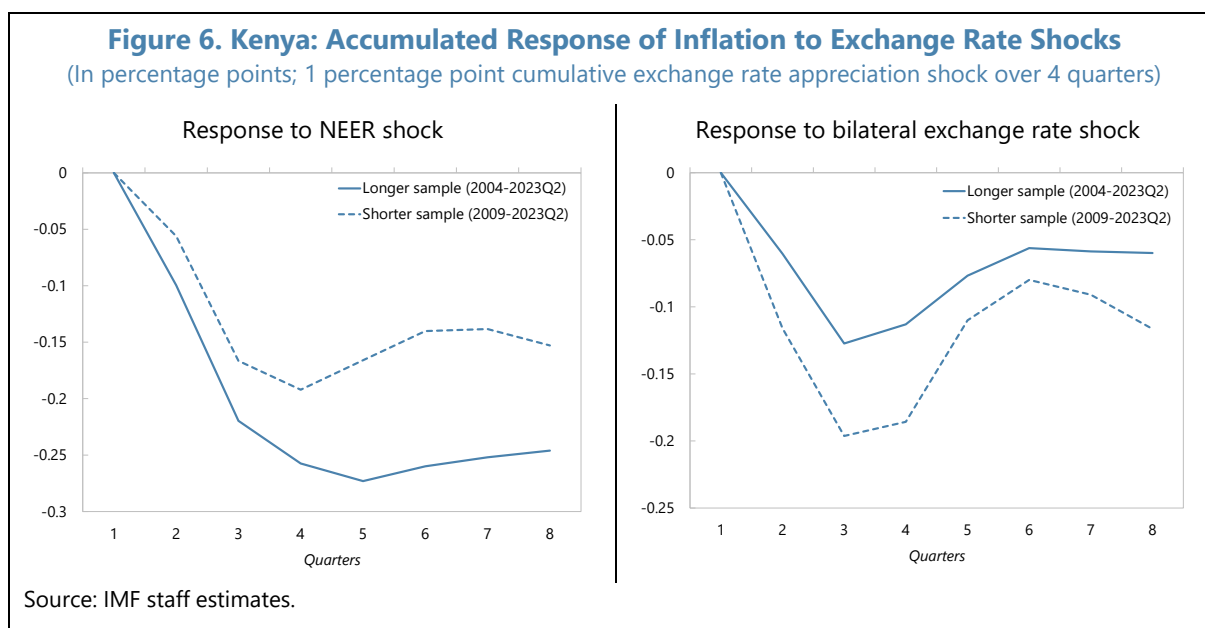**5. Exchange rate passthrough appears to have weakened in more recent time periods.**
Jašová, Moessner, and Takáts (2019) report exchange rate passthrough declining in emerging economies in the post Global Financial Crisis period as inflation also declined. In Kenya average inflation is only about 1 percentage point lower for the latter half of the entire sample, while its volatility has significantly come down, a period when the authorities are targeting to keep inflation within a range through active policy measures (Figure 2 above and results below that shows importance of price stability rising in monetary policy decisions). To test the applicability of Jašová et. al finding in Kenya, we repeat the above exercises for a shorter sample period starting from 2009.

- Under the single equation method, the short run passthrough estimate is generally lower for NEER changes, whereas the long run passthrough estimates were larger by about 0.1 (for both measures of nominal exchange rates) in regressions with the short-term interest rate. However, for the shorter sample period not all parameter estimates from the original regression specification are statistically significant (e.g., the global inflation variables, the two-quarter lagged Kenyan inflation).

- To explore how passthrough has changed over time, we also use rolling regressions (10-year windows, shifting by one year) on our single equation model (with and without the short-term interest rate) over the entire sample. We find that exchange rate passthrough in Kenya peaked around 2010 and it strengthened temporarily in 2019-20 (Figure 5). The bilateral exchange rate equation shows a renewed strengthening of exchange rate passthrough in more recent quarters (also statistically significant while recent estimates for NEER passthrough are not). This recent strengthening of passthrough is consistent with Cheikh, Zaied, and Ameur (2023) where the authors show recent geopolitical events contributing to an increase in exchange rate passthrough to import and domestic prices.

Figure 5. Kenya: Exchange Rate Passthrough Estimates Using Rolling Regressions
(Rolling coefficient estimates; entire sample with fixed 10-year windows moving forward by one year)

Source: IMF staff estimates.

- Under the SVAR model, we find a different passthrough estimate using the more recent sample period, as also reported in Revelli (2020). In particular, the cumulative effect after

four quarters is smaller for a NEER shock but not for a bilateral exchange rate shock (Figure 6). The estimated cumulative effect after four quarters is similar (about 0.19) in this shorter sample for NEER and bilateral exchange rate (the estimates are marginally significant at 90 percent level of confidence). The impact of an exchange rate shock is found to peak two or three quarters after the shock depending on the measure of nominal exchange rate.
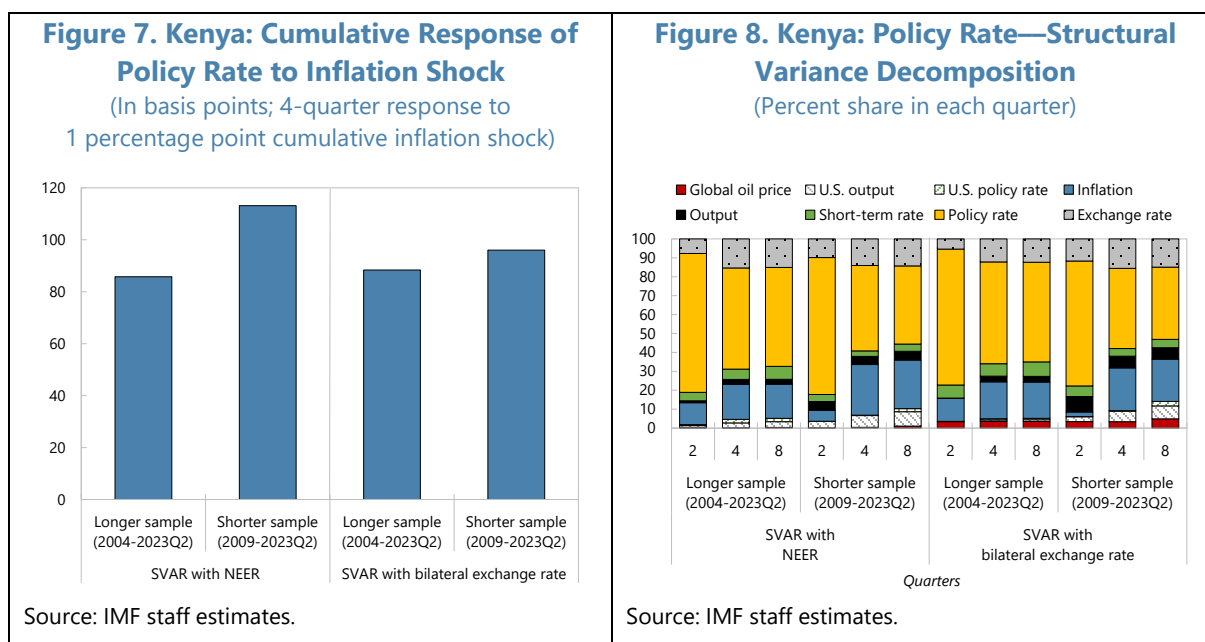

Figure 6. Kenya: Accumulated Response of Inflation to Exchange Rate Shocks
(In percentage points; 1 percentage point cumulative exchange rate appreciation shock over 4 quarters)

Source: IMF staff estimates.

6.   Exchange rate passthrough to inflation is found to be slightly higher for depreciation than appreciation. This is found in the case of the single equation model with NEER, modified in line with Carrière-Swallow et al (2023), but not with a specification involving the bilateral exchange rate. For the full sample, we find that passthrough estimate from NEER depreciation is 0.12 versus 0.10 from NEER appreciation (see specification (3) in Technical Annex Table 2).

7.   Improved management of inflationary expectations via the monetary policy likely have contributed to lower volatility and passthrough over the past decade. The Central Bank of Kenya (CBK) has been strengthening its monetary policy framework and operations. In 2008, the inaugural meeting of the Monetary Policy Committee took place. The CBK Act was amended in 2012 making price stability a primary objective. In the meantime, the inflation target came down from 9 percent in FY2011/12, for example, to 5 percent (with ±2.5 percent band). In August 2023, the CBK introduced an interest rate corridor around the policy rate (±2.5 percent band) for the overnight interbank rate and launched a Centralized Securities Depository that is expected to improve functioning in the money and securities market.

- Our non-recursive SVAR model confirms a somewhat more responsive monetary policy to inflation shocks since 2009 than compared to the entire sample. The impulse response functions show that 4-quarter change in the policy rate following a 1 percentage point inflation shock is larger for the more recent sample period (Figure 7).

- A variance decomposition exercise shows inflationary developments explaining a higher share of variation in the policy rate in recent years (Figure 8). Exchange rate shocks also have important information content for variations in the policy rate but less so than inflation.

Figure 7. Kenya: Cumulative Response of Policy Rate to Inflation Shock
(In basis points; 4-quarter response to 1 percentage point cumulative inflation shock)

Source: IMF staff estimates.

Figure 8. Kenya: Policy Rate—Structural Variance Decomposition
(Percent share in each quarter)

Source: IMF staff estimates.

C. Conclusion

8.   Exchange rate passthrough is an important factor for Kenya's inflation. Combining the results, we find that exchange rate passthrough to inflation in Kenya generally range between 0.2 and 0.3 over a period of one year. While supply-side or other factors that are potentially not captured in this exercise (e.g., shocks to domestic food inflation due to weather events) are contributing to observed inertia in Kenyan inflation, the findings also show that monetary policy action, exchange rate dynamics, and global oil prices are important factors for Kenya's inflationary process. Continued strengthening of the monetary policy framework and a more responsive monetary policy has helped Kenya lower inflation volatility over the past decade, which in part has likely contributed to a lowering of the exchange rate passthrough in the past decade. As exchange rate continues to act as an external shocks absorber, we find evidence of somewhat higher passthrough to inflation from exchange rate depreciation than appreciation, which, in the current context of exchange rate depreciation, calls for monetary policy to remain proactive in anchoring of inflationary expectations.

Annex I. Technical Annex

Data Description

We used quarterly data from 1995 until 2023Q2, except for the Central Bank of Kenya's policy rate on which we had a time series from 2003Q3 onward. Data were collected from commercial (Haver Analytics) and in-house sources (*World Economic Outlook* and *Information Notice System* databases), which also benefit from data provided by the Kenyan authorities over the years.

Exogenous foreign variables. World crude oil price (*woil*), world maize price (*wmaize*), United States real GDP (*usgdp*), and United States Federal funds rate (*ffr*).

Domestic variables. Consumer price index (*cpi*), real GDP (*gdp*), three-month T-bill rate (*fitb3m*), the Central Bank of Kenya's policy rates (*cbkpr*), nominal effective exchange rate (*neer*), and bilateral nominal exchange rate (*er*).

Seasonally adjusted consumer price index and output for both the U.S. and Kenya are used. Variables were converted to their logarithms before doing the analysis, except for the three interest rate variables. Logarithm of a variable *x* will be represented as *lx* (e.g., *log(cpi)=lcpi*). First difference of a variable will represent a quarterly change.

Stationarity Test

All variables were found to be non-stationary at levels but stationary in first difference, i.e., they follow I(1) process (see Technical Annex Table 1 below). We used the Augmented Dickey Fuller test and the Phillips Perron test.

A Single Equation Model

Our baseline model takes the following generalized form (the dummy interaction terms are activated and the β coefficient is set to zero when estimating the differential passthrough impact of exchange rate depreciation versus appreciation, following Carrière-Swallow et al (2023)):

$$d4(lncpi)_t = \ constant \ + \ \sum_{i=1}^{q1} \rho_i * d4(lncpi)_{t-i} \ + \ \sum_{j=0}^{q2} \beta_j * d4(lnE)_{t-j} + \sum_{k=1}^{n1} \sum_{m=0}^{q3} \gamma_{k,m} * d4(lnWorld)_{k,t-m} + \sum_{s=0}^{q4} \alpha_s * d4(fitb3m)_{t-s} + \sum_{d=1}^{n2} \sum_{j=1}^{q5} \delta_{1d} * dummy_d * d4(lnE)_{t-j} + \sum_{d=1}^{n2} \sum_{j=1}^{q5} \delta_{2d} * (1 - dummy_d) * d4(lnE)_{t-j} + \varepsilon_t$$

where, lags q1, q2, q3, q4, and q5 need not be identical (e.g., regressors need not have the same lag length in the final regression), E={NEER, bilateral exchange rate}, World={oil price, maize price}, and dummy_d stands for "d" different dummies to check asymmetry in responses to exchange rate movements (e.g., high versus low inflation, depreciation versus appreciation of exchange rate).

Here the "d4" operator is used to describe the fourth difference in level (i.e., annual change). Thus, annual change in *cpi* (y/y inflation) is regressed on a constant, lagged y/y inflation, current and/or lagged y/y changes in exchange rate (NEER or bilateral exchange rate), current and/or lagged changes in some global variables (global oil and maize prices), current and/or lagged annual change in the short-term interest rate, and interaction terms with different dummies to check for any

variation in passthrough under certain circumstances (e.g., when inflation is high or when exchange rate is changing at a faster pace). Finally, ε represents the regression errors.

For estimation of on-impact exchange rate passthrough the coefficient(s) of interest would be the β coefficients (or the δ_1 or δ_2 coefficients for differentiated impact of depreciation and appreciation respectively). For more longer-term impact would operate through the parameter estimates for lagged inflation included in the model (for two lags of inflation, for example, it could be approximated $\beta/(1-\rho_1-\rho_2)$).

A Structural VAR Model (SVAR)

The SVAR model is defined as:

$$A_0 y_t = A_1 y_{t-1} + A_2 y_{t-2} + \ldots\ldots + A_p y_{t-p} + \varepsilon_t$$

where $y_t' = (dlnwoil, dlnusgdp, dffr, dlncpi, dlngdp, dfitb3m, dcbkpr, dlnE)_t$ are the endogenous variables (all in differences, so stationary) under consideration in our exercise, with E={NEER, bilateral exchange rate}. A_i is a 8x8 matrix of parameters for i=0,1,2, ..., p, and ε_t is 8x1 multivariate white noise error that has the following properties: $E(\varepsilon_t) = 0$ and $E(\varepsilon_t \varepsilon_t') = \Sigma_\varepsilon$.

The estimation process follows the standard procedure of first estimating a reduced-form VAR model of the following form:

$$y_t = B_1 y_{t-1} + B_2 y_{t-2} + \ldots\ldots + B_p y_{t-p} + e_t$$

where, $B_i = A_0^{-1} A_i$ for i-1, 2,....,p; and $e_t = A_0^{-1} \varepsilon_t$. The reduced form errors follow a normal distribution with zero mean.

We follow the standard tests on estimating the reduced form VAR and chose a VAR(2) model based on the lag length criteria (the Schwartz and the Hannan-Quinn information criteria usually between one and two lags across various VAR models with different exchange rates. The Akaike information criterion was suggesting longer lags which we did not consider given its preference for longer lags by design). Residuals were tested for normality and the system for its stability.

$$
\begin{pmatrix} \varepsilon_{dlnwoil,t} \\ \varepsilon_{dlnusgdp,t} \\ \varepsilon_{dffr,t} \\ \varepsilon_{dlncpi,t} \\ \varepsilon_{dlngdp,t} \\ \varepsilon_{dfitb3m,t} \\ \varepsilon_{dcbkpr,t} \\ \varepsilon_{dER,t} \end{pmatrix}
=
\begin{pmatrix}
1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
a_{21}^{(0)} & 1 & 0 & 0 & 0 & 0 & 0 & 0 \\
a_{31}^{(0)} & a_{32}^{(0)} & 1 & 0 & 0 & 0 & 0 & 0 \\
a_{41}^{(0)} & 0 & 0 & 1 & 0 & 0 & 0 & 0 \\
a_{51}^{(0)} & 0 & 0 & a_{54}^{(0)} & 1 & 0 & 0 & 0 \\
a_{61}^{(0)} & 0 & a_{63}^{(0)} & a_{64}^{(0)} & 0 & 1 & a_{67}^{(0)} & 0 \\
0 & 0 & 0 & a_{74}^{(0)} & 0 & 0 & 1 & 0 \\
a_{81}^{(0)} & a_{82}^{(0)} & a_{83}^{(0)} & a_{84}^{(0)} & a_{85}^{(0)} & a_{86}^{(0)} & a_{87}^{(0)} & 1
\end{pmatrix}
\times
\begin{pmatrix} e_{dlnwoil,t} \\ e_{dlnusgdp,t} \\ e_{dffr,t} \\ e_{dlncpi,t} \\ e_{dlngdp,t} \\ e_{dfitb3m,t} \\ e_{dcbkpr,t} \\ e_{dER,t} \end{pmatrix}
$$

For a SVAR with 8 variables, (8*7)/2=28 restrictions are needed for the errors to be exactly identified. However, we had more than that leading to overidentification. The restrictions imposed on the A_0 matrix on the relationship $\varepsilon_t = A_0 e_t$ are as follows, where ER = {NEER, bilateral exchange rate against the U.S. dollar}:

			Annex I. Table 1. Kenya: Results of Unit Root Testing			
	t-statistics for testing the null hypothesis of presence of unit root					
	Augmented Dickey-Fuller test			Phillips Perron test		
Variables	With constant	With constant and trend	Without constant and trend	With constant	With constant and trend	Without constant and trend
At level						
lwoil	-1.9051	-2.8739	-0.3481	-1.9674	-2.3791	-0.3792
lwmaize	-2.0583	-2.9231	0.0546	-1.6707	-2.4454	0.0207
lusgdp	-1.6298	-2.7886	4.8626	-1.9412	-2.6579	5.6959
ffr	-2.5138	-2.5089	-1.5576	-2.0827	-1.5481	-1.5045
lcpi	-0.9010	-2.2039	6.2317	-0.7132	-2.0526	11.9709
lgdp	-0.0061	-3.5182**	4.4623	0.0999	-5.9642***	12.7616
lnneer	-1.3706	-4.1017***	-1.7608*	-2.2999	-4.4085***	-1.8440*
ler	-1.5944	-2.1574	2.4779	-1.6190	-3.3964*	2.5022
cbkpr	-4.7918***	-4.7985***	-0.3927	-3.6266***	-3.6056**	-0.5218
fitb3m	-2.5774	-2.5028	-1.6198*	-1.9752	-2.0484	-1.1687
At first difference						
lwoil	-8.3048***	-8.2755***	-8.3073***	-7.7661***	-7.8293***	-12.6051***
lwmaize	-7.9924***	-7.9803***	-8.1376***	-7.7243***	-7.7848***	-12.8448***
lusgdp	-12.5908***	-12.7259***	-10.2483***	-7.7909***	-7.8535***	-10.6925***
ffr	-5.8671***	-6.0256***	-5.8935***	-5.9673***	-6.1385***	-5.9924***
lcpi	-8.7479***	-8.7610***	-2.2617**	-8.6157***	-8.7026***	-4.2727***
lgdp	-5.0331***	-5.0026***	-2.1023**	-27.8498***	-27.3181***	-10.6758***
lnneer	-8.8942***	-8.8084***	-8.8265***	-9.7291***	-9.5692***	-9.0580***
ler	-10.4442***	-10.3693***	-10.1396***	-10.6623***	-10.5895***	-10.2001***
cbkpr	-7.2363***	-7.1965***	-7.2686***	-7.0882***	-7.0380***	-7.1276***
fitb3m	-8.7856***	-8.8106***	-8.8063***	-8.1796***	-9.5289***	-8.0649***
Note: A statistical significance at 1, 5, or 10 percent level (denoted by ****, **, and * respectively) would not allow accepting the null hypothesis.						

	(1)	(2)	(3)	(4)	(5)
Annex I. Table 2. Kenya: Estimates from Selected Specifications of the Single Equation Model					
Constant	0.02***	0.02***	0.02***	0.02***	0.01***
Inflation (first lag)	0.79***	0.74***	0.79***	0.82***	0.75***
Inflation (second lag)	−0.15**		−0.15*	−0.18**	
Global oil price inflation (first lag)	0.01**	0.01**	0.02**	0.02***	0.17**
Global maize price inflation (first lag)		0.01*			0.02**
Global maize price inflation (second lag)	0.01**		0.01*	0.02*	
Change in NEER (first lag)	**−0.12*****	**−0.11*****			
Change in NEER (second lag)					
Interacted with dummy=1 for depreciation			**−0.12****		
Interacted with dummy=0 for appreciation			**−0.10***		
Change in bilateral exchange rate (first lag)				**−0.08*****	**−0.06****
Change in short-term interest rate (first lag)		−0.001^			
Change in short-term interest rate (second lag)					−0.001*
Number of observations	108	109	108	108	108
Adjusted R-squared	0.691	0.695	0.688	0.674	0.665
F-statistics for joint significance of coefficients	48.77***	47.02***	40.27***	45.17***	43.53***
Jarque-Bera normality test	4.94**	3.91	4.56^	10.91***	7.90**
Durbin-Watson statistics	1.93	1.76	1.93	1.94	1.74

Notes:

  A positive change in exchange rate is an appreciation.

  A statistical significance at 1, 5, or 10 percent level (denoted by ****, **, and * respectively) would not allow accepting the null hypothesis that a specific parameter is zero.

  ^ significant between 10 and 11 percent levels.

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