Sharing Sudan's Burden: Options for Post-Secession Debt Apportionment

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***Abstract*:**
Sudan faces an exceedingly high debt burden for an economy of its size. Standing at 80% of Gross Domestic Product (GDP), Sudan's external debt was US$43.6 billion in 2014, of which 87% was arrears. As part of the secession agreement, Sudan would take over all of the pre-secession debt provided Sudan would enter the HIPC process by October 2016, with support from South Sudan. If this fails, negotiations to apportion the debt would ensue. This paper explores potential options for dividing Sudan's external debt at the date of South Sudan secession that take into account different metrics of post-secession debt apportionments around the world. Based on debt division metrics—such as beneficiary rule, population size, GDP, and land size—Sudan's external debt obligations could range between 94 percent of external debt (US$37 billion) and 67 percent of external debt (US$27 billion). South Sudan's debt obligations could range from 6 percent of external debt (US$3 billion) to 33 percent of external debt (US$13 billion). The debt division estimates based on the beneficiary rule are derived utilizing World Bank Group loans as a proxy for evaluating options available for apportioning Sudan's debt burden as it is exceedingly difficult to trace every single loan distributed to Sudan.

***JEL Classification*:** *F35, H60, H63.*
***Key words*:** *External debt, Debt Apportionment Metrics, Beneficiary Rule, Population, Land, GDP.*

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I. Introduction

Sudan is a highly indebted country that has accumulated sizable arrears. Sudan's external debt at end 2014 was estimated at US$ 43.6 billion or 80 percent of Gross Domestic Product (GDP). Most of the external debt is public or publically guaranteed with 87 percent in arrears accumulated since 1970, mainly owed to bilateral creditors and almost equally divided between Paris Clun and non-Paris Club creditors.

The South' secession in 2011 has had fundamental repercussions on Sudan. The loss of three-quarters of oil production owing to the secession of South Sudan brought about a significant correction to past trends in the economy in late 2011 and in early 2012. This loss led to a substantial fiscal deficit, a deterioration of the trade balance, a massive devaluation of the currency and rising inflation, and negative economic growth rates. The secession of the South also resulted in loss of one third of land size, including pasture and grazing space. The impact has been exacerbated by Sudan's arrears, which have curtailed access to many traditional avenues of external financial support, including most sources of concessional financing.

Following the secession of South Sudan, the agreement on economic matters signed between Sudan and South Sudan on September 27, 2012 included the 'zero-option' agreement on external debt. The zero option is a time-bound clause by which Sudan will retain all external debt liabilities if the two states committed to a joint outreach strategy to secure from international creditors a firm commitment to provide comprehensive debt relief of Sudan's external debt, resulting in reaching the HIPC[1] decision point within two years of signing, or a later date as agreed by the two states.

The pace of debt relief process has been slow. The deadline for the zero option agreement elapsed in September 2014. Outreach efforts to secure debt relief were severely affected by the conflict in the South that erupted in 2013, bringing the joint outreach process to a halt. The zero option conditions were not met. Accordingly, the external debt would be apportioned between the two countries based on a formula/metric to be determined within six months after the deadline as stated in the agreement. However, the two countries agreed to extend the zero option deadline to October 2016 and step up their outreach efforts to creditors.

This paper seeks to explore potential scenarios of debt division between Sudan and South Sudan. In the event that international lenders do not forgive Sudan's sovereign debt, measures must be taken to distribute this debt between the two countries. The paper examines several debt division scenarios that take into account different metrics of dividing debt. In particular, the paper proposes a debt division that is based on methods executed historically in the aftermath of various secessions.

While the circumstances of recent secessions notably differ, the method of debt division has remained fairly similar. This method first divides debt into two types: allocated and unallocated. The former represents debt associated with projects that have a clear final beneficiary in one of the states, while the latter corresponds to projects that either take place across both states or lack a locational beneficiary (e.g., budgetary or balance of payment support and policy based lending). After secessions, allocated debt has conventionally been assigned to the benefitting state, whereas unallocated debt is dispersed between the new states. The metric used to apportion unallocated debt could take a variety of forms; generally, however, this apportionment accounts for population, GDP, land size, or other features of the new states. The paper examines scenarios that use different metrics for debt apportionment.

II. Sudan's macroeconomic context

[1] In 1996, the IMF and the World Bank Group launched the Heavily Indebted Poor Countries (HIPC) Initiative to reduce the debt burdens of poor countries and to ensure that no poor country faces an unmanageable debt burden. The Initiative was enhanced in 1999 to broaden, deepen, and accelerate the debt relief efforts and directly link them to poverty reduction and social policies. Of the 39 countries participating in the program, 33 are Sub-Saharan African countries. Between 2001 and 2013, debt-servicing costs went down by on average 1.8 percentage points of GDP in HIPCs.

The economy slowly recovered following the South Sudan secession in 2011. Real GDP growth shows some continuation of recovery in 2015 (3.7 percent), reflecting the third year with positive economic growth after two consecutive years of actual negative growth rates in 2011 and 2012 (Table 1). Contributing only 0.2% of GDP in 2014, oil revenues have declined drastically in the country, creating a revenue shock that has posed a great economic challenge for the country. Additionally, political instability and armed conflict reduced oil production in South Sudan by a third three months after the start of its civil war in December 2013. This has clear negative implications for Sudan, since the heightened conflict increases uncertainty related to oil transit fee revenues. The fundamental challenge to Sudan's growth performance remains its weak agriculture, stagnant manufacturing, and volatile domestic and regional political factors.

Table 1: Sudan's Main Macroeconomic Indicators, 2011-2015

	2011	2012	2013	2014	2015
GDP growth	-0.3	-2.2	3.5	3.7	3.7
Inflation (end of period)	18.9	44.4	41.9	28.7	15.5
Public finance (in percent of GDP)					
Total government revenue	18.0	9.8	9.9	11.4	12.0
o/w Tax revenue	6.4	6.1	6.1	6.1	6.6
o/w Grants	0.3	0.4	0.7	0.5	0.7
Government expenditure and net lending	17.8	13.5	12.1	12.4	13.3
Current expenditure	16.3	11.7	12.0	11.6	10.5
o/w Wages and salaries	5.4	4.8	4.3	3.7	3.5
o/w Interest			1.4	0.9	
Capital expenditure	1.7	1.6	1.1	1.1	1.2
Net lending					
Primary fiscal balance, incl. grants	1.3	-2.2	-1.8	-0.3	-1.1
Overall Fiscal balance, incl. grants	0.2	-3.7	-2.3	-1.0	-1.2
Domestic			1.9	0.9	
External			0.4	0.1	
Current account balance (in percent of GDP)	-0.4	-9.2	-8.6	-6.5	-6.3

Source: IMF Article IV Consultations Report 2014 and IMF –Sudan Aide Memoire of the Staff Visit June 25, 2015.

Sustaining high economic growth calls for structural transformation and development of non-oil sectors, but this has proven to be challenging to realize. The agricultural sector has potential to lead sustainable growth given its low current productivity, yet the sector's contribution to GDP has been declining in the past decade. The manufacturing sector has remained stagnant since 2000, and the service sector is small relative to other countries within the same level of development. Furthermore, numerous factors constraint the development of the private sector. Poor financial infrastructure and institutions coupled with political and economic instability preclude sustained growth of the private sector.

Sudan is a highly indebted country. Standing at 80% of GDP, Sudan's external debt was US$44 billion at the end of 2014, of which 87% was arrears. The breakdown of Sudan's total external debt shows the vast majority of loans are owed to bilateral organizations such as the Paris Club and non-Paris Club countries (with 70% of debt). Multilateral organizations such as the World Bank Group, IMF, and Arab Fund for Economic and Social make up 13% of total external debt (Table 2). A similar share of debt is owed to commercial creditors. The bulk of Sudan's external debt is inherited from the time when it was unified with South Sudan. The main Paris Club bilateral creditors include Austria, the United States, France, Italy and the United Kingdom; large non-Paris Club creditors include Kuwait, Saudi Arabia, and China.

The composition of bilateral lending has changed in recent years. While bilateral lending level has remained fairly constant between 2012 and 2014, the share of total outstanding debt owed to the Paris Club has declined from 37% in 2012 to 31% in 2014, compared to the increase in non-Paris Club countries' share from 36% in 2012 to 39% in 2014. This trend marks a shift in lending away from Western bilateral creditors.

Large and protracted arrears added to the complexity of the debt situation. At the end of 2014, Sudan's arears stood at US$38 billion in nominal terms, about 87% of total external debt. The arears vary from 100 percent for bilateral and commercial creditors to 50 percent for multilaterals (Table 2).

Table 2: Sudan's External Debt Stock as at end 2014 (in millions of US$)

Creditor	Nominal (Including Arrears)	In Percent of Total Debt Outstanding	Arrears(Principal and Interest)	Arrears in Percent of Total Outstanding
Total	**43660**	**100%**	**38175**	**87%**
Multilateral	**5678**	**13%**	**2870**	**51%**
IDA	1432	3%	786	63%
IMF	1416	3%	1416	100%
Arab Fund for Economic & Social Dev.	1180	3%	100	8%
AfDB Group	474	1%	317%	67%
Others	1176	3%	252	21%
Paris Club	**13596**	**31%**	**13464**	**99%**
France	1614	4%	1614	100%
United States	2539	6%	2407	95%
Austria	2833	6%	2833	100%
Japan	948	2%	948	100%
Italy	1239	3%	1239	100%
United Kingdom	1196	3%	1196	100%
Belgium	1027	2%	1027	100%
Others	2200	5%	2200	100%
Non-Paris Club	**17032**	**39%**	**14487**	**85%**
Kuwait	8689	20%	8689	100%
Saudi Arabia	2830	6%	2830	100%
China	1957	4%	984	50%
Others	3556	8%	1984	56%
Commercial Creditors	**7354**	**17%**	**7354**	**100%**
Commercial (London Club)	4487	10%	4487	100%
Others	637	1%	637	100%
Suppliers	2230	**5%**	2230	100%

Source: Central Bank of Sudan External Debt Unit, 14th Annual Report, Sudan External Debt Position as of 31st December, 2014, Khartoum, Sudan.

Sudan continues to be assessed in debt distress and its overall debt dynamics remain unsustainable. As the IMF and IDA have jointly indicated in their debt sustainability analysis for Sudan, this level of debt remains unsustainable. All external debt ratios were well above the indicative thresholds with the Net Present Value of debt to GDP 166% (compared to a threshold of 30%), and debt service to exports 36% (compared to threshold of 15%). The 2013 DSA showed deterioration in all indicators following a significant decline in GDP, exports and government revenue (Table 3). Sudan's high and unsustainable debt stress necessitates that measures be taken for external debt relief or division of debt between Sudan and South Sudan if debt relief does not take place.

However, obtaining external debt forgiveness comes with its own obstacles. In order to successfully receive HPIC debt relief, Sudan must reach out to its major creditors (listed in Table 2), normalize relations with international financial institutions and implement reform measures. Sudan undertook a formal outreach mission to Berlin in December, 2014 as well as some additional outreach activities in early 2015. While additional outreach activities had been expected in 2015, the conflict in South Sudan brought the joint outreach process to a halt. Discussions are now underway within Government circles as to when/how to revive the outreach process. Active consideration is also being given to the 'zero option' which expires in October 2016. Should there be no indication of forthcoming debt relief, Sudan will commence discussions with South Sudan on reapportioning sovereign debt obligations. The zero option deadline has been extended twice since South Sudan's secession.

Table 3: Summary of Sudan's Debt Burden Threshold

	2013	Indicative threshold
Present Value of debt-to GDP	166	30
Present Value of debt-to exports	1500	100
Present Value of debt-to revenues	1649	200
Debt service-to exports	36	15
Debt service-to-revenues	39	18

Source: Joint Bank –Fund Debt Sustainability Analysis—Update 2013, International Monetary Fund and International Development association, September 2013, Table 3, page 5.

Sudan has taken recent actions to lay the groundwork for debt relief. A medium term vision is articulated in an Interim Poverty Reduction Strategy Paper (I-PRSP) completed in 2012 and Sudan has started preparing its full PRSP. A Status Report has been prepared on the IPRSP period (2012-2014) with the view to guide the preparation of the full PRSP by end -2016. A main finding of the Status Report is that government pro-poor expenditures have increased since 2012 in spite of the economic contraction following South Sudan secessions and the adverse conditions facing the country such as economic sanction and high debt burden, and lack of access to concessional resources. Also as part of the preparation of the PRSP, the new household survey of 2015/16 would update the 2009 National Baseline Household Survey (NBHS) that provided the base for a first comprehensive assessment of living conditions in Sudan since 1978. The 2009 survey revealed that nearly half of the population are poor (i.e. a poverty rate of 46.5%).

Sudan has implemented 14 IMF Staff Monitored Programs (SMPs) over the period 1997-2010, but the Government and the IMF have not been able to conclude a successor SMP in the absence of an adequate macro-fiscal adjustment. These 14 SMPs programs greatly helped in designing and implementing reforms in monetary policy operations, tax policy, and public financial management and performance under the programs has been broadly satisfactory. [2] However, due to disagreement over exchange rate flexibility, inflation targeting and quasi fiscal activities of the Central Bank of Sudan discussions on the policy framework that could be supported under a new SMP had not yet been finalized.[3] The absence of a SMP raises concerns regarding the anchor for macroeconomic policy-making as well as the country's broader strategy around debt relief.

In 2010, some leading creditors asked the World Bank Group and IMF to co-lead a Technical Working Group on Debt to support Sudan's technical preparation for debt relief (e.g., debt reconciliation, debt management advice, and technical consultations with major creditors). The Group would help Sudanese officials to know the extent and composition of Sudan's foreign debt, and on the technical requirements for Sudan to benefit under the HIPC debt relief processes. That group met five times and provided a forum in which to discuss remaining technical challenges. However, more substantive progress toward debt relief would require Sudan to pursue direct engagement with its all major creditors, in a negotiating forum.

It is also important to note that the debt forgiveness provided, even in the most optimal situation, would not cover all of Sudan's current debt burden. Application of traditional debt relief mechanisms under the HIPC framework would reduce Sudan's debt burden by 48 percent to about US$23.5 billion in present value terms.[4]

[2] Notable achievements under previous SMPs include the credible maintenance of macroeconomic stability, and the implementation of a comprehensive reform agenda to improve capacity in economic management. However, some problems persist, including (i) weak build-up of international reserves due in part to an insufficiently flexible exchange rate; (ii) rising expenditure pressures, particularly in the implementation of the CPA; and (iii) slow implementation of reforms in the area of domestic financing and arrears clearance, as well as public financial management.

[3] The Quasi fiscal activities of the Central Bank of Sudan include support to public enterprises, agriculture-related investments, and gold purchases.

[4] World Bank Group. *Interim Strategy Note (FY2014-2015) for the Republic of Sudan.* Report No. 80051-SD, Washington D.C.: The World Bank Group, 2013.

Thus, given that Sudan would still have to service a portion of its debt regardless of the HPIC debt relief outcome, the country must evaluate ways of dividing debt accrued before the secession between itself and South Sudan.

Longstanding US sanctions against Sudan have adversely affected Sudan's access to finance and trade and re-solving Sudan's debt is critical to enabling the government to access concessional development financing. US economic sanctions against Sudan started in 1997, banning US-Sudan business dealings. The US sanctions against Sudan also generate additional costs and difficulties for international trade and foreign direct investment. Sudanese banks have recently experienced a breakdown in their correspondence relations with foreign banks. In early 2014, the French bank—BNP Paribas—was fined US$8.9 billion by the US authorities for breaking US sanctions against Sudan and other countries. This has led to over compliance by non US banks with US sanctions against Sudan. As a result, Sudan's trade has been adversely affected and the shortage of foreign exchange has worsened.

III. Experience of past secessions debt apportionments

The post-secession debt division experiences of several countries would provide a foundational model for evaluating options available for apportioning Sudan's existing debt burden. The recent history of secessions between Pakistan and Bangladesh, former Yugoslavia, the Czech Republic and Slovakia, Ethiopia and Eritrea, Serbia and Montenegro, and Serbia and Kosovo depict the array of considerations taken into account when approaching the issue of distributing sovereign debt among successor states after a secession. This section analyses these cases in further detail in order to best understand how Sudan and South Sudan should move forward with the debt division process.

The split between Pakistan and Bangladesh in 1971 is one of the first secessions to occur. An eventual agreement was reached to divide debt between the two states, but it was not without prolonged negotiations and challenges. Originally, Bangladesh refused to assume liability for any debt aside from that attributed to ongoing projects visibly taking place in the country[5]. However, the World Bank Group asked Bangladesh to accept liability for all projects from which it benefitted and made Pakistan the legal guarantor of the debt. An agreement was ultimately reached in which Bangladesh would assume 84% of the US$113.1 million the World Bank Group had originally requested it assume.

The case of the Socialist Federal Republic of Yugoslavia represents a dissolution rather than a secession, resulting in the formation of five independent republics. The SFRY debt to IRBD reached US$2 billion, and so it was vital that the successor states reach an effective agreement. In direct negotiations with creditors, the five new republics agreed to their debt apportionments granted a plan for arrears elimination. The actual division of this debt varied based on creditor. The World Bank Group used the final beneficiary rule, whereas the IMF generated a key for dividing debt based on relative economic strength of the seceding states, which other creditors adopted.

The division of debt between the Czech Republic and Slovakia after the dissolution of Czechoslovakia in 1992 was relatively clear and straightforward given that both states completely complied with the points of negotiation. The IMF divided the national debt on a 2.29:1 ratio based on the population size of the two successor states and the World Bank Group followed suit but removed debt granted for projects benefitting a single state from the calculation of national debt. The swift compliance of these countries is attributable to their reliance on the financial assistance of international creditors along with their intent to associate with the industrialized world.

[5] Bangladesh strong stance reflected the lack of legal precedence of debt division as it was the first case.

The secession of Eritrea from Ethiopia in 1993 represents an interesting case in which old debt was not apportioned to the seceding state. Instead, Ethiopia assumed this debt and also honored credit used for the recovery and rehabilitation of Eritrea before the new country became a World Bank Group member state. Since Ethiopia wanted to retain its membership and associated credit shares, this case is unique in that past debt was not divided between the two states.

The split of Serbia and Montenegro (SaM) in 2006 represents a case in which much of the negotiation process occurred pre-secession. Members of the two-state union of SaM had signed a Constitutional Charter outlining the division of assets and liabilities in the event of a split. Thus when Montenegro seceded from the union, much of the division followed the specifications of the Constitutional Charter. While some of the loans to the IMF and the World Bank Group required renegotiations, the rest was settled via mutual agreement and as a result, Montenegro attained member states status in international organizations relatively quickly.

Kosovo seceded from Serbia in 2008 and was granted IBRD membership the following year. In becoming a member state, the country accepted liability for loans granted to its predecessor states from which it directly benefitted. The apportionment of loans to Kosovo followed a protocol similar to that used after the dissolution of SFRY, when the loans SFRY owed were consolidated into six separate loans (named A to F) and allocated to different locations within the former state based on the beneficiary rule. Loans A and B were assigned to Serbia and C to Kosovo.

Table 4: Summary of Debt Apportionment Methods Used in Past Secessions

Example	Date	Apportionment Methods
Bangladesh-Pakistan	1971	Beneficiary rule
Dissolution of SFRY	1991	Beneficiary rule, economic factors
Czech Republic-Slovakia	1992	Beneficiary rule, population size
Ethiopia-Eritrea	1993	No debt apportionment; Ethiopia assumed all the debt
Serbia-Montenegro	2006	Mutual agreement
Serbia-Kosovo	2008	Beneficiary rule

Source: Author's compilation.

IV. Analysis of Sudan's debt

The paper uses World Bank Group loans as a proxy for evaluating options available for apportioning Sudan's debt burden as it is exceedingly difficult to trace every single loan distributed to Sudan. The division of external debt faces many difficulties, including the lack of data specifying the ultimate geographic beneficiary of past loans; and the lack of such data would require a loan by loan analysis of loan expenditures by geographic region (i.e. Sudan and Southern Sudan prior to the secession). Fortunately, the World Bank Group's clear documentation of its lending history makes it feasible for further analysis. As an IDA-eligible country, Sudan was able to benefit fully of the World Bank Group's concessional financing since its independence. However, conflict, arrears, inability to service Bank's debt, and Sudan's changed status to non-accrual led the Bank's activities to cease in 1994. Following the signing of the 2005 Comprehensive Peace Agreement (CPA), the Bank re-opened the office in Khartoum and a new sub-office in Juba in 2006. Given Sudan's non-accrual status and only non-lending activities were possible, the Bank's re-engagement was made possible by two Multi-Donor Trust Funds (MDTFs)—one for the Government of South Sudan, MDTF-South (US$370 million), and the other for the Government of National Unity, MDTF-NS (US$240 million), with the Bank as administrator on behalf of contributing donors and the government. Both trust funds ended in December 2013 and complemented by government financing (e.g., MDTF-NS was complemented by $350 million in parallel government financing,

The 52 World Bank Group/IDA loans/credits granted to Sudan prior to 2005 (excluding the two trust fund grants that were exclusively targeting the north and the south) are examined to determine the approximate *apportionment of Sudan's sovereign debt to the two successor states.* Given that 87% of Sudan's US$44 billion debt consists of arrears, the approximately US$1.4 billion of World Bank Group principal loan debt amassed prior to 2005 constitutes a large enough portion of total principal loans (about 25%) to be used as a proxy. Additionally, the World Bank Group sample spans across major lending categories (such as agriculture, transportation, and power), further representing a strong proxy for Sudan's total debt burden (Table 5).

In order to determine a proper method of debt division, we use criteria similar to what was executed after previous secessions around the world. Closely examining project completion and assessment reports along with other supporting documents for each World Bank Group project, we classify the loans dispersed between 1958 and 2005 into three main categories: allocated to Sudan, allocated to South Sudan, and unallocated. As previously mentioned, the allocated categories represent loans that have a single, clear beneficiary located in one of the two successor states, whereas the unallocated category lacks a locational focus. For example, the Rahad Irrigation Project would be marked "allocated to Sudan" given its focus on a particular locality in one of the successor states, and the Emergency Drought Recovery Project would be marked "unallocated" because it benefitted localities in both successor states.

Table 5: World Bank Group Lending to Sudan by Sector, 1958-2005

Sector	Amount (US$ million)	Percent
Agriculture and Irrigation	827	60
Transportation	295	22
Energy and Mining (power)	192	14
Education	34	2
Finance	16	1
Technical Assistance	10	1
Total	1374	100

Source: World Bank Group Image Bank website (www.worldbank.org/imagebank and author's classification.

Utilizing this methodology, we classify US$1.4 billion of World Bank Group loans into the three categories previously described in an attempt to determine the apportionment of Sudan's debt burden. From the 52 projects examined, 32 are allocated to Sudan, 2 to South Sudan, and the remaining 18 are unallocated. These categories constitute 68%, 2%, and 30% of the value of total debt attributed to World Bank Group loans, respectively (Annex 1).

In the event that the international community does not forgive Sudan's sovereign debt, these findings reveal a plausible method for debt division based on the beneficiary of the associated loan. In this case, 68% of the total debt would be directly apportioned to Sudan, 2% to South Sudan, and 30% would be distributed between the two using various methods. As observed from past post-secession debt distributions, the unallocated debt has often been distributed based on successor states' population size, GDP, land size, or a combination of these indexes. The following section examines debt division scenarios in detail.

V. Scenarios for dividing Sudan's external debt at end 2011

This section explores several scenarios for apportioning Sudan's external debt, following South Sudan secession in 2011. [6] According to the Central Bank of Sudan, external debt outstanding was US$39.8 billion at end 2011.

<u>*Scenarios 1: Debt division with beneficiary rule and population size.*</u> One possible method of debt distribution would apply the beneficiary rule adopted in past secessions to distribute debt allocated to the two successor

[6] Central Bank of Sudan External Debt Unit, 14th Annual Report, Sudan External Debt Position as of 31st December, 2014, Khartoum, Sudan.

states. In this case, Sudan's allocated debt is 68% of total debt and South Sudan's allocated debt is 2% of the total. In one scenario, the remaining unallocated debt—constituting 30% of the total debt burden—is split based on population size. The population sizes of Sudan and South Sudan were 39.4 million and 11.9 million, respectively). [7] If one uses population size, Sudan would assume 77% of the unallocated debt and South Sudan would assume 23%. Thus combining allocated and unallocated shares, Sudan would assume 91% of total debt (US$36.2 billion), and South Sudan would assume 9 % of total debt (US$3.6 billion).

Scenario 2: Debt division with beneficiary rule and GDP. Another approach would also adopt the beneficiary rule for the division of allocated debt, but would divide unallocated debt based on the countries' GDPs. The GDPs of Sudan and South Sudan in current US$ were US$73.8 billion and US$13.3 billion, respectively. Based on this metric, Sudan would assume 85% of the unallocated debt and South Sudan assume 15%. This would mean that Sudan is apportioned 94% of total debt (US$37.4 billion) and South Sudan is apportioned 6% (US$2.4 billion).

Scenario 3: Debt division with beneficiary rule and GDP per capita. A third approach would still use the beneficiary rule for allocated debt but would split unallocated debt based on GDP per capita. GDP per capita in 2014 was US$1,876 in Sudan and US$1,115 in South Sudan. By this method, Sudan would assume 87% of total debt (US$34.6 billion) and South Sudan would assume 13% of total debt (US$5.2 billion).

Scenario 4: Debt division with population Size. Alternatively, the division of debt could not include the beneficiary rule at all, effectively ignoring the distinction between allocated and unallocated debt. Instead, all debt could be apportioned based on population size. Under the population approach, each person assumes an equal share of the external debt as borrowing was undertaken by the government on behalf of, and to the benefit, the entire country. In contrast to the beneficiary rule, the required calculation of diving the debt under this scenario is simple given the availability of population data. External debt is apportioned on a per capita basis, with the share of external debt to be assumed by the seceding state determined in proportion to the seceding state's population head. In this case, Sudan would assume 77% of total debt (US$30.6 billion) and South Sudan would assume 23% (US$9.2 billion

Scenario 5: Debt division with land size. Similarly, total debt could be divided based on land size, disregarding the classification of debt as allocated or unallocated. Thus the seceding state would take its fair share of the debt, in equal proportion to the seceding state's income. This scenario suggests that Sudan would assume 67% of total debt (US$26.7 billion), and South Sudan should assume 33% (US$13.1 billion).

Scenario 6: Debt Division with Gross Domestic Product (GDP). Lastly, total debt could be divided based on the seceding state's percentage share of all goods and services produced domestically, i.e., GDP. This scenario proposes that Sudan would assume 85% of total debt (US$33.8 billion), and South Sudan would assume 15% (US$6.0 billion).

VI. Concluding Remarks

While Sudan faces an exceedingly high external debt burden for an economy of its size, prospects for obtaining debt forgiveness are poor. Resolving Sudan's unsustainable external debt is of paramount importance for the successful adjustment to the impact of South Sudan's secession, sustaining macroeconomic stability, and for supporting inclusive growth and reducing poverty. However, in order to receive HPIC debt relief, Sudan must reach out to its major creditors, normalize relations with international financial institutions and implement reform measures and enhanced economic management. Sudan and South undertook outreach activities in late 2014 and early 2015, but the conflict in South Sudan brought the joint outreach process to a halt. Reviving the outreach process is critical as the zero option, which has been extended twice since South Sudan's secession, is scheduled to expire in October 2016. If this happens, Sudan will commence discussions with South Sudan on apportionment of the external debt. One the other hand, if Sudan qualifies for HIPC assistance, a significant amount of external debt would still remain on its books even after debt relief.

[7] The last population census was conducted in 2008. The 2008 Sudan Population Census showed that the country's total population was 39.2 million, of which the population of South Sudan was 8.3 million. The figures used in this analysis are estimates for 2011 as the upcoming Population Census is scheduled for 2018.

Table 6: Scenarios for Dividing Sudan's Debt Using Different Debt Apportionment Metrics

	Sudan	South Sudan
Scenario1: Debt Division with Beneficiary Rule and Population Size		
% of total debt	91%	9 %
Amount in US$ billion	36.2	3.6
Scenario 2: Debt Division with Beneficiary Rule and GDP		
% of total debt	94%	6%
Amount in US$ billion	37.4	2.4
Scenario 3: Debt Division with Beneficiary Rule and GDP per Capita		
% of total debt	87%	13%
Amount in US$ billion	34.6	5.2
Scenario 4: Debt Division with Population Size		
% of total debt	77%	23%
Amount in US$ billion	30.6	9.2
Scenario 5: Debt Division with land Size		
% of total debt	67%	33%
Amount in US$ billion	26.7	13.1
Scenario 6: Debt Division with Gross Domestic Product (GDP)		
% of total debt	85%	15%
Amount in US$ billion	33.8	6.0

Source: Author's calculations.

The paper explores possible options for debt division between Sudan and South Sudan based on previous experiences of post-secession debt apportionment metrics around the world. These debt division metrics include beneficiary rule, population size, land size, GDP and GDP per capita, or a combination of these metrics. Accordingly, Sudan's external debt obligations could range between 94 percent of external debt (US$37 billion), according to beneficiary rule and GDP metrics, and 67 percent of external debt (US$27 billion) according to land size metric. For its part, South Sudan's debt obligations could range from 6 percent of external debt (US$3 billion) to 33 percent of external debt (US$13 billion). Debt apportionment estimates under the beneficiary rule are derived utilizing World Bank Group loans as a proxy for evaluating options available for apportioning Sudan's debt burden as it is exceedingly difficult to trace every single loan distributed to Sudan**.**

Annex (1) **List of World Bank Group Projects in Sudan by loan Type, 1958-2005**

Allocated to Sudan			Allocated to South Sudan			Unallocated		
P002566	Power Project (02)	23	P002561	Southern Region Agricultural Rehabilitation Project (01)	10.7	P002591	Highway Project (03)	16
P002551	Expansion of Railways and Water Transport Facilities Project	39	P002576	Southern Region Agricultural Rehabilitation Project (02)	15	P002579	Agricultural Rehabilitation Program Project (01)	65
P002572	Mechanized Farming Project (03)	16				P002588	Agricultural Rehabilitation Program Project (02)	50
P002575	Port Project (01)	22				P002568	Domestic Aviation Project	29
P002592	Agricultural Rehabilitation Program Project (03)	85				P002614	Public Enterprise & Economic Management Project	9
P002554	Railway Project	31				P002640	Emergency Flood Reconstruction Project	75
P002613	Western Savannah Project (02)	10.6				P002590	Education Project (03)	15.4
P002585	Western Savannah Project (01)	13				P002560	Highway Maintenance Project	7
P002555	Education Project (01)	8.5				P002570	Savannah Development Project	17
P002581	Blue Nile Pump Scheme Rehabilitation Project	32				P002567	Industrial Bank of Sudan Project (02)	7
P002587	Gezira Rehabilitation Project	80				P002595	Petroleum Technical Assistance Project	12
P002557	Mechanized Farming Land Clearance Project	5				P002583	Technical Assistance Project (02)	6
P002600	Power Project (04)	38				P002645	Emergency Drought Recovery Project	16
P002578	New Halfa Irrigation Rehabilitation Project	40				P002569	Technical Assistance Project (01)	4
P002586	Port Project (02)	25				P002597	Agricultural Research, Extension and Training Project	22
P002571	Railway Project (04)	20				P002577	Highway Project (02)	41
P002564	RAHAD IRRIG. II	20				P002558	Mechanized Farming Project (02)	11.3
P002559	Rahad Irrigation Project	42				P002565	Education Project (02)	10
P002608	South Kordofan Agricultural Project	19.7						
P002593	Stock Route Project	5.5						
P002582	White Nile Pump Scheme Rehabilitation Project	35						
P002617	Drought Recovery Program Project	20						
P002580	Power Project (03)	65						
P002574	Agricultural Research	15						
P002601	Southern Kassala Agricultural Project	20						
P002596	Power Rehabilitation Project	30						
P002556	Power Roseires Khartoum Transmission System Project	24						
P002552	Managil Irrigation Project	15.5						
P002589	Sugar Rehabilitation Project	60						
P002584	Agricultural Services Project (01)	18						
P002573	Power Project (02)	25						
P002553	Expansion of Railways and Water Transport Facilities Project	32.5						
Total (USD)		**935.3**			**25.7**			**412.7**

Source: World Bank Group Image Bank website (www.worldbank.org/imagebank and author classification.