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Senegal: Selected Issues

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SENEGAL

Selected Issues

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I. INTRODUCTION

1.   This selected issues paper provide background information to the staff report for the 2006 Article IV Consultation discussions with Senegal.

2.   The staff report discusses the structural reforms undertaken by the authorities and highlights the challenges ahead in two crucial areas of establishing effective fiscal management and raising the growth of the economy. It notes the growing contingent liabilities of the government arising from the operations of public enterprises and entities and measures needed to raise the lackluster performance of the export sector. The topics covered in this selected issues paper support the discussion of these key challenges in the staff report.

Fiscal risks in Senegal: Do they matter?

3.   Comprehensive monitoring of fiscal activities undertaken by all parts of the government is essential for effective fiscal management. Fiscal analysis should include public enterprises, public-private partnerships, and government support to private enterprises, in order to enhance transparency and reduce the probability for unrecorded liabilities to surface unexpectedly. In Senegal, as in other countries, fiscal activities of the operations of the entire public sector are not fully covered in the fiscal accounts, mainly because the quantification of fiscal activities and contingent liabilities pose significant methodological challenges. Based on the Fund's Fiscal Affairs Department's framework to assess the fiscal risks posed by the public enterprise sector, Section II analyzes the extent to which accounting for the activities of the nonbudget public sector and the contingent liabilities that have emerged in recent years, would change Senegal's fiscal deficit. The analysis shows that the resulting change in the fiscal position and outlook is significant. It is therefore essential that these fiscal risks be carefully monitored by the government and gradually incorporated in the budget to the extent feasible.

Export competitiveness and the exchange rate in Senegal

4.   The export sector in Senegal has not performed very strongly over the past ten years. The authorities are in the process of developing an accelerated growth strategy that focuses on enhancing the performance of this sector. Section III attempts to contribute to this process by analyzing the possible underlying causes of the lackluster export performance. The Section documents the declining contribution of the export sector to economic growth and concludes that it can be attributed to a combination of declining competitiveness (as indicated by the appreciation of the real effective exchange rate—REER) and falling world demand for some of Senegal's exports. The Section then examines whether the appreciation of the REER has resulted in misalignment vis-à-vis the underlying equilibrium exchange rate. Such misalignment would call for corrective macroeconomic measures. However, the analysis does not provide conclusive evidence of such misalignment. Therefore, the Section argues that policies aimed at tackling the erosion of competitiveness should focus on structural reforms that affect the underlying equilibrium exchange rate, such as the low productivity and high cost of labor in Senegal, the business climate, and export diversification.

II. Fiscal Risks in Senegal: Do They Matter?[1]

5. **Effective fiscal management requires comprehensive monitoring of fiscal activities undertaken by all parts of the government**. Fiscal analysis that includes public enterprises (PEs), public-private partnerships (PPP), and government support to private enterprises, reduces the probability for unrecorded liabilities to surface unexpectedly. It also improves transparency, which is a key factor for a clear and comprehensive picture of the scope and impact of fiscal policy, as well as market confidence and good governance.

6. **This chapter assesses the extent to which accounting for losses of PEs, fiscal risks of PPPs, and government support to private enterprises would change Senegal's fiscal deficit**. The central government fiscal deficit is projected to increase from about 3 percent of GDP in 2004–05 to 5½ percent in 2006–07. However, deficits in the nonbudget public sector and contingent liabilities that have emerged in recent years are not captured in government accounts, and accounting for these may change the fiscal position and outlook.

7. **The chapter concludes that fiscal risks posed by PEs, PPPs, and government support to private enterprises are significant.** Government contingent liabilities from loss-making PEs, PPPs, and government guarantees could amount to 10½–11 percent of GDP in 2007 and accounting for fiscal risks could raise the fiscal deficit by about 2 percent of GDP (Table 1).[2]

Table 1. Fiscal risks from the operations of SOEs, PPPs, and government guarantees
(in percent of GDP)

	2007
Fiscal deficit	**2.5**
PEs' net operating losses 1/	0.3
Airport PPP	0.5
Restructuring of ICS	1.3
Reconstitution of SAR's capital	0.4 2/
Stock of contingent liabilities (e.o.p)	**10.4 to 11**
Liabilities of loss-making PEs 1/	6.6
Airport PPP	3.0
Restructuring of ICS	0 to 0.7
Reconstitution of SAR's capital	0.8

1/ Estimates based on 2005 outcome.
2/ Already included in staff projections.

[1] Prepared by Taline Koranchelian.

[2] The inclusion of loss-making PEs in the fiscal accounts may raise the fiscal deficit by about 0.3 percent of GDP annually. In 2007–10, the appropriate accounting for the construction of the new airport under a PPP scheme would also raise the fiscal deficit by about 0.5 percent of GDP annually; and the call for either the government explicit guarantee to ICS or the implicit contingent liability in the case of restructuring ICS will likely raise the 2007 fiscal deficit by another 1.3 percent of GDP at least. Furthermore, the government assumption of the reconstitution of SAR's capital, although already included in the above-mentioned staff projections, accounts for 0.6 percent of GDP per year in 2007–08.

8.   **The rest of the paper is organized as follows:** Section I analyzes the fiscal risks posed by PEs and assesses SENELEC's financial position; Section II discusses the potential risks that PPPs can pose in Senegal; and Section III examines the potential fiscal impact of government support to private enterprises (including through guarantees). The chapter concludes with some recommendations to improve the monitoring, accounting and reporting of these risks.

A.   Fiscal Risks of Public Enterprises

Background

9.   **PE operations pose fiscal risks in many countries.** In some cases, fiscal activities are not appropriately compensated through the budget, leading to losses. In other cases, excessive borrowing has undermined profitability. Enterprises that consistently run losses and/or accumulate excessive debt often need to be rescued by the government. As the quantification of fiscal activities and contingent liabilities pose significant methodological challenges, the key issue becomes how to identify and monitor the enterprises that represent the main sources of fiscal risk.

The Fund's Fiscal Affairs Department has recently developed a framework to assess the fiscal risks posed by the PE sector.[3] The main motivation for its development was to analyze which PEs should be covered by the fiscal indicators and targets on which national fiscal policies are based and evaluated. The framework uses criteria related to four broad areas of performance:

(i)   **Managerial independence** (pricing and employment policies). This criterion helps determine if there is government interference in employment and wage policies, or through price setting at below cost.

(ii)   **Relations with the government** (subsidies and transfers, quasi-fiscal activities, and regulatory and tax regime). This criterion tries to ascertain whether the government maintains an arm's length relationship with PEs.

(iii) **Financial conditions** (profitability, market access, creditworthiness). This criterion is meant to provide a perspective on the magnitude of PEs' risks; and

(iv)   **Governance structure** (periodic audits by external auditors, publication of comprehensive annual reports, shareholders' rights). This criterion helps assess whether a basis for accountability to the public is in place.

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[3] The framework is presented in "Public Investment and Fiscal Policy—Lessons from the Pilot Country Studies" (www.imf.org).

B. Overview of the Public Enterprise Sector in Senegal

10. **The PE sector in Senegal is limited**. Currently, there are 27 PEs (18 fully state-owned and 9 with a majority state stake) spread over most business sectors, including agriculture, industry, construction, power supply, finance, insurance, tourism, media, transportation, telecommunications, and international trade (Table 2).[4] These enterprises vary in size, with the five largest enterprises accounting for about 85 percent of total assets and equity. The share of the state in the capital of PEs is estimated at about US$320 million (4 percent of GDP) at end-2004, with 75 percent concentrated in the electricity company (SENELEC).

11. **Overall, the PE sector is not performing well**. About one quarter of the total number of PEs reported losses in 2004. Total losses were equivalent to 0.2 percent of GDP in 2004, while in 2005, SENELEC's operating losses alone accounted for 0.1 percent of GDP.[5] Losses are concentrated in postal services, urban transport, and social housing—typical areas of poor public enterprise performance. The combined outstanding debt of the 27 enterprises to the financial sector was about 5 percent of GDP in 2004, and the debt ratio (liabilities/assets) amounted to 62 percent.

C. Government Oversight

12. **The government does not carry out a comprehensive monitoring of PEs to assess fiscal risks.** In 2004, the Ministry of Finance set up a unit, "*Cellule de Gestion et de Contrôle du Portefeuille de l'Etat*," to monitor PE activity. However, the unit lacks both human and technical capacity. It collects data from PEs on quarterly and annual bases, but with extended lags, sometimes over a year.

13. **The reports prepared by the unit are not sufficiently informative, as their content is limited to a description of the main indicators of each enterprise**. Absent a thorough analysis, the unit is not in a position to judge which PEs pose a potential risk to the budget in the short term. Furthermore, the unit does not consolidate the accounts of the sector, which hampers the capacity of the government to capture the fiscal risks that currently exist in some enterprises or could emerge in the future if the financial position of an enterprise is unexpectedly weakened.

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[4] 11 PEs were privatized or liquidated in the run up to the completion point under the enhanced HIPC Initiative.

[5] SENELEC did not incur losses in 2004.

Table 2. Senegal: Public Enterprises, 2004
(In millions of CFAF, unless otherwise indicated)

Company	Sector	Number of Employees 1/	Wage bill	Total Equity	Government's Share (in percent)	Total Sales	Total Assets	Net profit (Losses)	Liabilities towards the financial sector	Total Liabilities	Debt Ratio (in percent)
SENELEC	Electricity	1,855	16426.0	119,434	100	122,385	231,852	1,588	86,898	135,858	58.6
RTS	Media	540	2897.5	7,000	100	3,232	19,441	(524)	1,365	4,444	22.9
SN HLM	Social housing	193	882.6	6,000	100	1,427	18,398	(639)	2,935	12,591	68.4
SN PAD	Port	416	5374.8	5,000	100	18,169	91,878	1,352	6,449	19,101	20.8
SONES	Water	82	731.9	3,927	100	13,666	205,320	384	88,229	102,096	49.7
La Poste	Postal Services	1,835	n.a	2,900	100	n.a.	n.a	(6,651)	3,508	87,449	n.a
SICAP	Housing	46	818.1	2,743	90	5,787	26,174	252	5,378	20,489	78.3
SAED	Agriculture	300	1347.5	2,500	100	58	83,176	232	14	3,444	4.1
SIRN	Infrastructure	8	43.2	1,928	99	160	15,593	(446)	15,499	15,581	99.9
DAKAR DEM DIK	Urban Transport	n.a	1963.4	1,500	77	2,576	755	(3,321)	n.a.	7,805	1,033.3
CEREEQ	Engineering	60	196.2	1,239	100	411	884	140	n.a.	9,801	1,108.2
SAPCO	Tourism	60	307.1	1,200	99	933	959	211	n.a.	3,148	328.3
PETROSEN	Energy	40	372.3	1,200	99	368	17,942	113	6,938	8,302	46.3
ONA	Sanitation	119	767.3	1,200	100	2,996	70,521	384	352	1,491	2.1
ISRA	Agriculture	470	2358.7	411	100	n.a	8,598	n.a.	748	3,174	36.9
CNQP		n.a	n.a.	393	100	n.a.	n.a	n.a	n.a	n.a	n.a
ONFP	Education	22	61.8	228	100	389	1,248	5	n.a	111	8.9
FGA	Insurance	16	n.a.	200	50	n.a.	n.a	n.a.	n.a.	n.a.	n.a
CICES	International trade	78	299.8	140	59	459	2,146	(117)	96	3,062	142.7
SODAGRI	Agriculture	73	341.6	120	54	16	1,298	27	n.a.	266	20.5
LONASE	Lottery	274	2570.5	110	100	30,031	3,472	428	441	50,605	1,457.3
ANCAR 2/	Agriculture	218	1035.6	91	51	21	2,248	-	64	1,161	51.6
SSPP Soleil	Media	165	970.4	27	55	1,689	1,950	(121)	628	4,444	227.9
SNR	Finance	62	n.a	25	100	n.a	n.a	n.a	n.a	n.a	n.a
APS	Media	51	187.0	23	100	57	546	231	165	761	139.2
MSAD		62		17	100	25	n.a	n.a	n.a.	n.a.	n.a
ITA	Agriculture	73	292.0	5	100	49	734	56	276	587	80.0
Total available		7,118	40,245	159,562	...	204,903	805,137	(6,417)	219,982	495,771	62
Total (in percent of GDP)			1.0	3.8		4.9	19.2	(0.2)	5.2	11.8	
Memorandum Item											
SENELEC (2005)	Electricity	1,855	18262.0	119,434	100	129,210	261,818	(4,031)	87,397	182,287	69.6

Source: Senegalese authorities.

1/ Number of employees.

2/ In 2005, the government reduced its shares in ANCAR's capital to 42 percent.

D.   Assessment of Fiscal Risks

14.   **Fiscal risks are concentrated in a few large PEs and are likely to raise the fiscal deficit by 0.3 percent of GDP.** The electricity company "SENELEC", the postal company "*La Poste*", and the urban transportation company "DAKAR DEM DIK", constitute the main sources of fiscal risk in light of their weak financial situation. Accounting for the combined losses of these three nonprofitable enterprises could worsen the 2005 fiscal position by 0.3 percent of GDP. There are indications that this situation will continue in 2006. Moreover, contingent liabilities raised by the debt of these three enterprises amounted to 7 percent of GDP at end 2005.

15.   **The assessment of fiscal risks based on FAD's framework is carried out for SENELEC only**.[6] This is mainly because of the systemic importance of SENELEC as well as the availability of financial information.

Criterion 1.   Managerial independence

16.   **SENELEC lacks managerial independence.** Domestic electricity tariffs do not reflect international prices. Based on international prices for fuel and SENELEC's cost structure, the regulatory commission "Commission de Régulation du Secteur de l'Energie" sets the amount of revenues that SENELEC should receive during the year. In light of the difference between international and domestic prices and that set by a price-setting formula, every quarter, the commission suggests to the government to either increase electricity tariffs (by a specific percentage) or provide direct budgetary transfers to SENELEC (of a specific amount). Furthermore, since the formula for setting electricity prices does not reflect SENELEC's cost structure appropriately, the government does not compensate fully and on time for SENELEC's losses stemming from higher oil prices.[7] Furthermore, the government payments for its electricity consumption come with important time lags. The ministerial cabinet appoints the board of directors and the executive director of the enterprise. The board of directors consists of nine members, eight of which are representatives of the government. However, employment and wage policies are independent of the civil service.

Criterion 2.   Government relations

17.   **SENELEC undertakes important fiscal activities.** The government subsidizes SENELEC (0.5 percent of GDP in 2005) to compensate for the losses arising from regulated below-market prices. However, this compensation is based on a formula that does not reflect

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[6] SENELEC is a joint stock enterprise that owns and operates 67 percent of the power sector in Senegal. It is governed by the Senegalese Law on Business Organizations and the Law on Energy.

[7] A decision to raise electricity tariffs and increase the share of fuel in the electricity formula are under consideration.

adequately SENELEC's cost of fuel in electricity production and is done with important delays.[8] Besides, SENELEC's debt to the government amounted to 0.2 of GDP in 2005.

Criterion 3. Financial conditions

18. **SENELEC's fragile financial situation raises serious contingent risks to the government.** The company's financial position has been deteriorating since 2005. Its poor financial situation is due to a combination of low tariffs, management problems, high technical losses, and general operating inefficiencies. Over the last two years, its profitability has also been affected by the government decision to compensate SENELEC rather than to increase tariffs based on a market-based pricing formula that takes account of the increase of international oil prices.[9] Thus, the use of an inaccurate formula as well as delays in its implementation (i.e., government compensation) have further added to SENELEC's losses. As a result, and after accounting for the government compensation, SENELEC's operating losses amounted to 0.1 percent of GDP in 2005 (Table 3). In 2006, SENELEC has also started to incur arrears (mainly to suppliers).[10]

19. **In light of its arrears, the company's capacity to access to new sources of finance is restricted**. At end 2005, SENELEC's debt to the financial sector was about 2 percent of GDP, and its total liabilities, including arrears to suppliers, accounted for 4 percent of GDP. Because of its buildup of arrears, suppliers have recently stopped providing SENELEC with lines of credit, and in 2006, GTI, a major supplier of electricity to SENELEC has interrupted its supply to the company.

Criterion 4. Governance structure

20. **Although there are concerns about SENELEC's transparency**, it accounts are audited by an international audit company and its annual reports are publicly available.

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[8] The formula assumes that fuel constitutes 34 percent of the cost of electricity production, while actually it costs SENELEC 54 percent.

[9] In 2005–06, electricity prices increased by about 27 percent (10 percent in November 2005 and 15 percent in September 2006) in Senegal, while international oil prices rose by about 80 percent.

[10] As of October 2006, SENELEC's arrears amounted to about one percent of GDP.

	2004	2005	2004	2005
	(in millions of CFAF)		(in percent of GDP)	
Revenue net of VAT	129,210	139,681	3.1	3.1
Operating expenses	128,278	147,511	3.1	3.3
Wages and salaries	18,262	19,106	0.4	0.4
Other	110,016	128,405	2.6	2.8
Net operating result	932	(7,829)	0.0	(0.2)
Financing expenses	3,365	6,943	0.1	0.2
Balance of extraordinary activities	4,022	10,741	0.1	0.2
Net profit/loss	1,588	(4,031)	0.0	(0.1)
Net acquisition of nonfinancial assets	12,596	17,149	0.3	0.4
Net lending/borrowing	(11,008)	(21,180)	(0.3)	(0.5)

Source: SENELEC.

1/ On accrual basis.

E. Fiscal Risks of Public-Private Partnerships

Background

21.   **Public-private partnerships (PPP) can potentially be more efficient than traditional public procurement of assets and services**, **but they may also entail significant fiscal risks**. For the government, PPPs can support increases in infrastructure investment without immediately adding to government borrowing. At the same time, better management in the private sector and its capacity to innovate can lead to increased efficiency, better quality, and lower cost services. For the private sector, PPPs offer new business opportunities in areas where the public sector was, in many cases, the only supplier. However, PPPs can also be used to bypass spending controls, and to move public investment off budget and debt off the government balance sheet, while the government still bears most of the risk involved and faces potentially large fiscal costs.

22.   **Fiscal risks related to PPPs are generally due to weaknesses in the legal and institutional frameworks, as well as to inadequate policy formulation**. They appear as a result of one or a combination of the following factors: (i) the legal framework does not clearly specify the roles and responsibilities of parties involved; (ii) the government does not have a proper institutional setup to handle and oversee PPPs, including through an appropriate evaluation, accounting and reporting framework; and (iii) the government lacks ability to prioritize and select investment projects within a comprehensive investment planning program.

23.   **Fiscal risks emerge also when the main motivation behind the government's decision to undertake a PPP is not primarily related to achieving value-for-money (VfM)**. Thus, when PPPs bypass normal expenditure controls and involve public liabilities and debt off budget and off the balance sheet of the government, they typically entail hidden

and often higher costs in achieving the public policy purpose and may thereby limit the fiscal policy flexibility of the government in the future.

24.   **In practice, the fiscal consequences of these risks can be direct or contingent, or explicit or implicit liabilities, and can take several forms**:[11] future commitments from the budget to honor minimum income guarantees; contingent liabilities in the form of guarantees to secure private financing; commitments to purchase the output of the private partner by making regular payments; bailing out of the private partner when the latter becomes financially distressed; and renegotiations with the franchise holder to increase investment expenditure on infrastructure assets in the short run in exchange for additional future cash flows for the private partner, which results in foregone future revenues for the government.

Public-private partnerships in Senegal

25.   **Currently, there are three PPPs in Senegal**. These consist of:

- A 10-year renewable contract with a Senegalese private water company "S*énégalaise des Eaux* (SDE)" for the management and supply of water in Senegal signed in 1996. The contract is based on an availability fee, which depends on the amount of water produced and sold, and amounts to about one percent of 2005 GDP. The private partner is also responsible for financing investments related to the renewal of the water network.

- A 10-year power purchase agreement between SENELEC and GTI signed in 1999. GTI is responsible for developing, building and operating a 50 MW power plant, with electricity sold to SENELEC. The contract amounts to 2 percent of 2005 GDP.

- A 15-year power purchase agreement between SENELEC and a private consortium signed in 2006. The private partner is responsible for developing, building and operating a 67.5 MW heavy fuel power plant (Kounoune I) and to sell the electricity produced to SENELEC. The contract amounts to 2 percent of 2005 GDP.

26.   **Other PPPs are under preparation**. The most important one consists of the construction and operation of the new Blaise Diagne international airport. The investment needed for the construction of the airport is estimated at about US$300 million (3½ percent of GDP) spread over three to four years of construction. A new company with 55 percent private ownership was set up in March 2006 to implement the project, but no PPP contract with clear risk sharing has been signed yet. The company's capital amounts to US$200,000. Project costs are expected to be financed through a new airport tax (effective since

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[11] Direct liabilities occur when the government has a fiscal obligation in any event, while contingent liabilities are linked to particular events. Explicit liabilities are those created by a law or contract, while implicit ones reflect public and interest group pressures.

April 2005) of € 30 per passenger on international flights, 12 which will be used to secure capital market loans to finance the project. The tax will be collected by the International Air Travel Association (IATA), transferred to an escrow account in an international commercial bank, and used exclusively to repay a loan obtained by the newly created company. The annual revenue, which will remain outside the budget, is estimated at about 0.4 percent of GDP. Another project consists of a toll-highway project to link Dakar to Thies, co-financed by the World Bank, at a cost 3 percent of 2005 GDP. Another small project is the installation and operation of an agricultural export-promoting zone in Dakar, for which the pre-selection of bids is currently underway. Finally, the government recently rejected a build-operate contract for a commercial center proposed by the Kaolack local government, in light of the limited risk borne by the private sector.

Assessment of fiscal risks

27. **The fiscal risks of PPPs are important in Senegal.** A weak legal, institutional, and accounting and reporting framework is compounded by lack of transparency and accountability of individual projects. This create risks of misuse of public funds.

- **The legal framework governing PPPs does not clearly indicate the risk sharing between the public and the private sector**. In February 2004, the National Assembly passed a new concession law (Build-Operate-Transfer contracts). The law, drafted by the government with technical assistance from the World Bank, aims at awarding concessions through transparent bidding procedures. However, the law does not clearly list the elements that should be included in concession contracts (e.g., the nature of the government's financial and nonfinancial obligations, the duration of the contract, guarantees of performance, circumstances under which either party may terminate or seek renegotiation of the contract, any applicable provision on *force majeure*, etc.). Thus, the legal framework does not cover properly the fiscal risks that may arise from PPPs and leaves room for the negotiation of each concession contract in individual circumstances.

- **There is no proper institutional framework to assess, monitor, and handle PPPs**. The new concession law stipulates that the Council for Infrastructure (CI)— established in 2005—should provide its opinion on all PPP contracts before the cabinet approval.[13] However, in practice the CI is not in a strong position to guide PPP policies and projects. Its opinion is mandatory only at the stage of the signature

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[12] A tax of € 1 was also instituted for domestic flights.

[13] The Council for Infrastructure comprises representatives of the government, parliament, private sector, and consumers), and has three permanent staff. Its mandates include proposing amendments to the existing legal framework on concessions; expressing its opinion about specific PPP projects; and monitoring and evaluating the implementation of PPPs.

of contracts, hampering its ability to help improve the design of contracts by advising for an appropriate risk sharing in contracts. Besides, the Ministry of Finance does not collect information on potential fiscal risks of PPPs and does not monitor the implementation of PPPs. At the same time, in an environment of weak public investment planning, no value-for-money assessments are undertaken for PPPs.

- **The Ministry of Finance does not report the fiscal risks from PPPs in the fiscal accounts.** Currently, neither the debt nor the contingent liabilities arising from PPPs are captured in government financial statements, and there are no specific accounting or disclosure rules for PPPs. The government's decision to keep the financing of the airport project outside the budget is not consistent with best practices, including those recommended in the Fund's Manual on Fiscal Transparency. The project has the potential to increase extrabudgetary activities by about one percent of GDP per year during the construction phase (three–four years), half of which would be financed through the off-budget earmarked airport tax. Moreover, the project would not be subject to the procedures in force for government contracts, even though it is financed primarily with public resources.

28.   **The implementation of the new airport project, as a PPP, is not transparent and raises government contingent liabilities by 3½ percent of GDP**. Despite the legal requirement, a build-operate-transfer contract that distributes risks (mainly construction, availability, and demand risks) between the public and the private sector is not in place, and the fiscal implications (both actual and contingent) of the contract are neither assessed nor reflected in the fiscal accounts. A public-private company has been created with a very limited capital.[14] However, Given the insignificance of the capital of the newly established company's relative to the cost of the project, and absent clear risk distribution between the two parties, it would be advisable to report the total cost of the project (3½ percent of GDP) as government contingent liabilities. Assuming that financing the construction of the airport is over four years, and given that the annual revenue from the airport tax amounts to about 0.4 percent of GDP per year, there will be a need for an additional government spending of about 0.5 percent of GDP per year in 2007–11.

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[14] The World Bank has expressed reservations regarding the procedures used for the choice of the private partner, for which one of the conditions was Senegalese nationality.

F. Government Support to Private Enterprises

Background

29.   **Government support to private enterprises can take the following forms**:

- **A government guarantee**, which legally binds a government to take on an obligation should a clearly specified uncertain event materialize. Thus with a loan guarantee, the government will be committed to making loan repayments on behalf of a private borrower that defaults. Governments provide a number of loan guarantees (e.g., to farmers, small businesses, home buyers, and students) and other financial guarantees, including in some countries trade and exchange rate guarantees, income, profit and rate of return guarantees, and minimum pension guarantees.

- **An implicit contingent liability**, which arises when there is an expectation that the government will take on an obligation despite the absence of a contractual or policy commitment to do so. Such an expectation is usually based on past or common government practices, like providing relief in the event of uninsured natural disasters, or bailing out PEs, public financial institutions, subnational governments, or strategically important private firms that get into financial difficulties.

30.   **A defining characteristic of guarantees and other contingent liabilities is uncertainty.** It is the uncertainty as to whether the government will have to pay, and if so, the timing and amount of spending, that is the principal source of the complexity that guarantees and other contingent liabilities pose for accountants and statisticians, and for fiscal management.

31.   **Nevertheless, guarantees and other contingent liabilities may bear important fiscal risks**. Government accounting and budgeting systems typically create a bias in favor of guarantees and other contingent liabilities over other forms of spending which is subject to more rigorous budget scrutiny. As a result, guarantees and other contingent liabilities can cause several problems, including bypassing fiscal constraints and undermining good governance. Guarantees and other contingent liabilities may also have potentially significant fiscal consequences, which can be particularly severe if they are exposed during crises. To address these risks, countries usually require that guarantees receive parliamentary approval, charge risk-based fees for guarantees, or maintain contingency funds.

Government guarantees and other contingent liabilities in Senegal

32.   **Explicit government guarantees are almost nonexistent in Senegal**. There are no government guarantees on enterprises' external debt. In February 2006, the government has guaranteed the domestic loans of the largest chemical company *Industries Chimiques du*

Sénégal (ICS) (47 percent owned by the government).[15] The company suspended operations during most 2006, due to a shortage of working capital. Concerned that the inability of ICS to repay its loans could adversely affect the soundness of some banks,[16] the government guaranteed the company's debt to domestic banks—amounting to 1½ percent of GDP—and all interest falling due.

33.   **More generally, the resort to implicit contingent liabilities has increased in Senegal in 2005–06**. With the increase in international oil prices and the consequent rise in energy subsidies, treasury difficulties have emerged. In order to avoid the accumulation of arrears and adversely affect the financial health of major energy companies (i.e., SAR and SENELEC), the government agreed with these companies and commercial banks that the companies would obtain bank loans equivalent to the unpaid amounts of subsidies and that the government would reimburse these loans at maturity. More recently, the government agreed to reconstitute the capital of the refining company *Société Africaine de Raffinage* (SAR) through a similar bank-loan arrangement (amounting to 1.3 percent of GDP) over two years. In addition, potential government contribution to the recapitalization of ICS—currently under consideration—constitutes an implicit contingent liability (see below).

Assessment of fiscal risks

34.   **The government explicit guarantee or implicit contingent liability to ICS loan is expected to raise the fiscal deficit by at least 1.3 percent of GDP in 2007.** A plan for the rehabilitation of ICS is currently under discussion with creditors. It involves rescheduling ICS debt (4.3 percent of GDP) and a capital injection (1.5 percent of GDP). If the negotiations are not concluded in a timeframe set by a local court, the government will be required to assume the repayment of ICS loans to banks (1.3 percent of GDP). By contrast, if the current negotiation is concluded, the government will contribute to the increase in capital by writing off its loan to ICS (0.2 percent of GDP). However, since the current negotiation will still keep the ICS capital short of its original level by 1.3 percent of GDP, the government may also need to fill in this gap. Furthermore, because the debt-restructuring plan entails writing off half of ICS debt and rescheduling the remaining half, and given the potential impact of writing-off 50 percent of ICS debt to the banking sector, the government may also need to take over 50 percent of ICS guaranteed debt to banks (0.6 percent of GDP). In other words, the restructuring of ICS may raise the government contribution to 2 percent GDP. In either case, it is likely that additional spending amounting to at least 1.3 percent of GDP may occur in 2007.

35.   The government implicit guarantee for the reconstitution of SAR's capital would raise the fiscal deficit by about 0.4 percent of GDP in 2007. In order to accept to provide

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[15] The activity of the ICS accounts for about 2 percent of GDP and 10 percent of exports.

[16] ICS is the single largest borrower in Senegal, accounting for 7 percent of total bank credit.

SAR with loans amounting to 1.2 percent of GDP, banks required that the government earmark revenue to reimburse SAR's debt through over two years. To that end, the government introduced a new margin in the price structure of petroleum products that would limit the pass-through of declining international prices. Part of the resources generated by the margin would be earmarked outside the budget for the reimbursement of SAR's debt to banks. However, according to the authorities' projections, these resources account for only 0.2 percent of GDP in 2007.[17] Thus, a remaining 0.4 percent lacks identified financing in 2007.[18] Depending on the price of oil in 2008, a deficit of 0–0.6 percent of GDP could also result from this subsidy.

G. Conclusions and Recommendations

36. **Fiscal risks are significant and not effectively monitored in Senegal**. This situation calls for action to improve government monitoring and reporting of fiscal risks. In particular:

- **The institutional capacity to monitor and analyze fiscal risks raised by PEs, PPPs, and government support to private enterprises should be stepped up.** Thus, the authorities should strengthen the capacity of the central unit of the Ministry of Finance (MoF) in charge of monitoring PE activities. The responsibility of the unit should also be expanded to include monitoring of government guarantees and commitments under PPP contracts. For the latter, the unit needs to develop an enhanced procedure for supervising PPP liabilities and operations.

- **The reporting requirement from PEs should be enforced**. PEs should submit quarterly financial data (including on their liabilities with details on those guaranteed by the government) to the central unit at MoF. Enterprises that do not comply with this requirement should be sanctioned.

- **The government should disclose information on government guarantees and contingent liabilities**. Information on the government guarantee to the ICS should be disclosed in budget documents, within-year fiscal reports, and end-year financial statements. Contingent liabilities associated with the implementation of the new airport project as well as liabilities of PEs not guaranteed by the government— excluding intra-enterprise liabilities—should also be included in the above-mentioned reports.

- **SENELEC's operating losses should be included in fiscal reports as a memorandum item.** Losses of the magnitude generated by SENELEC should be included in the fiscal accounts. However, given the difference in the accounting

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[17] The authorities' projections assumes a price per barrel of US$60 in 2007.

[18] Staff projections of a deficit of 5.5 percent of GDP in 2007 include this operation.

systems between the enterprise sector and the government (accrual versus cash), it would be advisable to include the financial results of SENELEC as a memorandum item in the fiscal tables.

- **The reports prepared by the central unit of the MoF in charge of monitoring PE activities need to be improved significantly**. In particular, the reports should provide clear information on the overall financial situation (including the indebtedness) of the PE sector, highlight the enterprises that pose major fiscal risks, and provide information on the financial results and debt of these enterprises. The reports should also provide detailed information contingent liabilities raised by PPPs as well as on government guarantees that are likely to be called up during the year and over the medium term with the view of including them in the fiscal accounts.

III. EXPORT COMPETITIVENESS AND THE EXCHANGE RATE IN SENEGAL[19]

A. Introduction

1.   **The performance of the export sector in Senegal has been relatively weak over the past ten years**. Evidence suggests that the boost to exports provided by the 1994 devaluation of the CFA franc (CFAF) has gradually eroded, and that the devaluation has not been successful in permanently raising export performance in Senegal (Table 4).

2.   **Based on the analysis of this paper, efforts to enhance the performance of the export sector in Senegal should focus on structural reforms.** The relatively weak performance of the export sector reflects two main factors: (i) a decline in competitiveness, and (ii) the concentration of exports in products whose markets are in long-term decline. The appropriate policies to address the decline in competitiveness depend on whether or not this decline is the result of misalignment of the real effective exchange rate (REER) vis-à-vis the underlying equilibrium rate. Such misalignment would call for corrective macroeconomic measures. However, the analysis does not find conclusive evidence of exchange rate misalignment. This finding is robust across a range of different econometric methodologies. The paper therefore concludes that efforts to boost the performance of the export sector should focus on structural reforms to raise labor productivity, reduce the high cost of labor, improve the business climate, and diversify exports.

3.   **The rest of this paper is organized as follows**: The next section documents the performance of the export sector in Senegal. Section C assesses the reasons for the lackluster performance of the export sector. Section D analyzes whether the decline in competitiveness reflects a real exchange rate misalignment. Section E concludes with policy recommendations.

Table 4. WAEMU: Growth and Exports (1989–2005)

	Average GDP Growth Rate			Average Export Growth Rate			Average Contribution of Exports		
	1989–1993	1994–1999	2000–2005	1989–1993	1994–1999	2000–2005	1989–1993	1994–1999	2000–2005
	(annual percentage change in national currency at constant prices)								
Benin	3.83	4.57	4.25	5.29	8.95	1.43	0.68	1.19	0.19
Burkina Faso	4.92	6.24	5.70	6.15	1.28	11.95	0.71	-0.19	1.22
Côte d'Ivoire	0.29	6.36	-0.43	24.03	3.85	2.42	6.10	1.50	0.99
Guinea-Bissau	3.14	-0.14	0.90	7.58	34.66	8.83	-0.23	2.86	2.40
Mali	6.70	5.01	4.81	9.85	11.68	7.90	1.44	2.07	1.87
Niger	-0.59	3.77	3.41	-3.39	4.50	5.33	-0.64	0.70	0.84
Senegal	1.68	3.79	4.36	3.20	2.95	1.19	1.04	0.83	0.27
Togo	-1.66	4.60	1.83	-13.23	11.19	5.96	-4.03	2.55	1.85

Source: IMF World Economic Outlook (WEO)

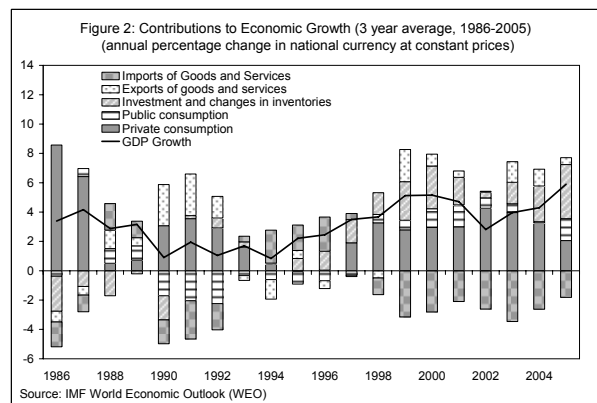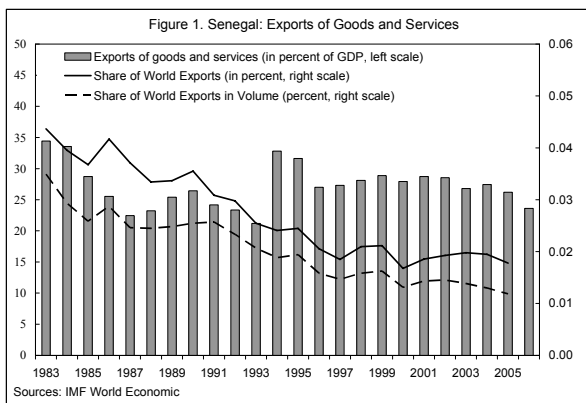
[19] Prepared by Magnus Saxegaard.

B. Background

4.   **Senegal's export performance has not provided a major impetus to economic growth over the past ten years.** After an initial boost of more than ten percentage points following the 1994 devaluation, the exports to GDP ratio has declined by approximately 20 percent. As a result, the ratio is only 5 percentage points higher than in 1993 and similar to its level in 1990 (Figure 1). In line with this development, the contribution of exports to economic growth has been gradually declining (Figure 2), whereas in the years preceding the devaluation, export growth was one of the most important drivers of economic growth. Over the last five years, export growth in Senegal has been the lowest among the WAEMU countries, even though average GDP growth was relatively high. As a result, the contribution of exports to economic growth in Senegal was the second lowest in the region (Table 4).

5.   **Senegal's share of world exports has declined continuously since 1983 (Figure 1).** In volume terms, the share in 2005 was 66 percent lower than in 1983. The erosion of Senegal's share of world exports has been particularly severe in the phosphate, fertilizer, and groundnut oil sectors. In these three sectors, Senegal's share in value terms has more than halved since 1995 (Table 5). In recent years, the decline of Senegal's exports in value terms has been somewhat less pronounced due to the increase in the price of oil, which has raised the value of Senegal's export of refined petroleum to neighboring countries.

C. Causes Underlying the Weak Performance of Senegal's Export Sector

6.   **The relatively weak performance of the export sector in Senegal could be attributable to a combination of an erosion of competitiveness and a decline in Senegal's export markets.** A deterioration in competitiveness represents an increase in the price of domestic tradable goods relative to foreign tradable goods.[20] However, because this is not directly observable, we rely on movements in the REER based on unit labor costs (REERL) and the REER based on CPI (REERP) to draw inferences about competitiveness. The analysis of Senegal's export markets are based on a comparison between the growth of export volumes and prices for the products that Senegal exports, and total world exports.

Figure 1. Senegal: Exports of Goods and Services

Exports of goods and services (in percent of GDP, left scale)
Share of World Exports (in percent, right scale)
Share of World Exports in Volume (percent, right scale)

Sources: IMF World Economic

Figure 2: Contributions to Economic Growth (3 year average, 1986-2005)
(annual percentage change in national currency at constant prices)

Imports of Goods and Services
Exports of goods and services
Investment and changes in inventories
Public consumption
Private consumption
GDP Growth

Source: IMF World Economic Outlook (WEO)

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[20] See Agénor (2004).

Table 5. Senegal—Market Share of World Exports (in percent)

	1995	2000	2001	2002	2003	2004	2005
Refined Petroleum	0.001	0.002	0.003	0.003	0.004	0.004	0.005
Fish	0.061	0.047	0.048	0.052	0.048	0.051	0.057
Phosphoric Acid	0.579	0.452	0.561	0.921	0.765	0.756	1.738
Fertilizers	0.029	0.009	0.014	0.016	0.021	0.018	0.010
Groundnut Oil	3.794	3.493	3.989	2.897	1.404	1.125	1.881
Phosphate	0.285	0.152	0.124	0.117	0.056	0.042	0.036
Groundnut Cake	1.659	5.458	4.575	5.052	1.638	1.771	2.834
Total	0.024	0.017	0.019	0.019	0.020	0.019	0.018

Sources: IMF Staff Estimates, WEO, and United Nations Comtrade Database

7. **The REERL provides evidence of declining international competitiveness (Figure 3).** This indicator is particularly useful as a proxy for Senegal's export competitiveness as labor costs represent the largest component of the total cost of production. Senegal's REERL has appreciated by nearly 55 percent since the 1994 devaluation, implying a loss of nearly 58 percent of the competitiveness gains resulting from the devaluation (Table 6).[21]

8. **The deterioration in the REERL reflects mainly an increase in unit labor costs in Senegal.**[22] Data from the World Bank's 2005 Investment Climate Assessment (ICA) indicate that (a) wages in Senegal (in US dollar terms) are high relative to those in most sub-Saharan Africa countries, and (b) labor productivity in Senegal is low relative to successful exporters such as South Africa and China. The forthcoming World Bank Country Economic Memorandum (CEM) on the labor market suggests that Senegal's low labor productivity reflects (i) a shortage of skilled labor; (ii) the crowding out of skilled labor by the public sector and emigration; (iii) employment discrimination; and (iv) the relatively high number of public holidays. The high cost of labor in Senegal in US dollar terms, although partly due to the recent appreciation of the Euro against the US dollar, is also a reflection of high labor taxes.

Figure 3: Senegal: REER based on Unit Labor Costs, 1980-2004

Figure 4: Senegal: REER based on the CPI, 1980-2005
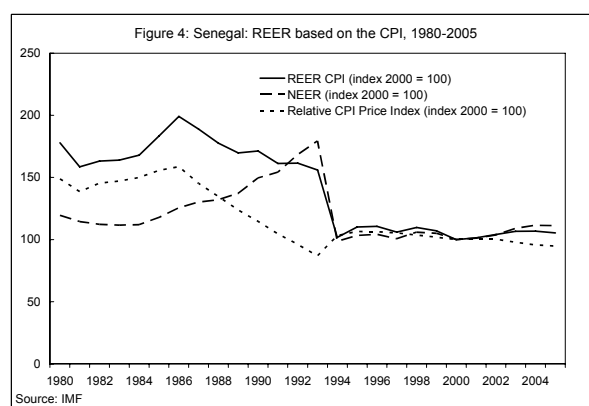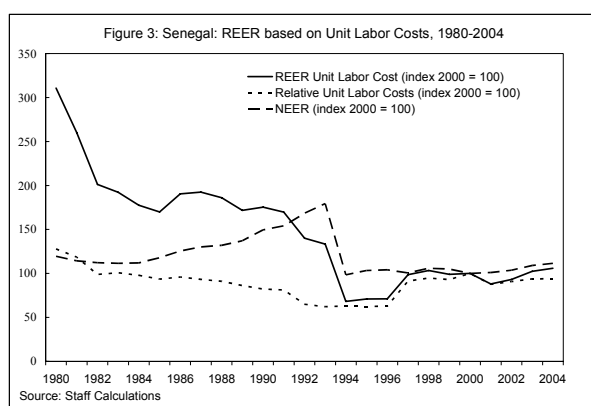
[21] The 1994 devaluation resulted in a deprecation of the REERL of 65 points. Between 1994–2004, the REERL index appreciated by 38 points or 58 percent of the depreciation observed during the devaluation.

Table 6. Senegal: Evolution of Unit Labor Costs (index, 2000=100)

	1993	1994	2001	2002	2003	2004
Senegal unit labor cost	66.58	65.94	89.00	93.02	96.07	95.52
of which: wages	26.60	36.10	110.41	121.60	127.65	134.69
of which: value added	53.31	73.06	124.05	130.72	132.87	141.01
Main trading partners unit labor cost	107.05	104.69	101.46	102.28	102.31	101.60
Unit labor cost REER	133.39	68.27	87.98	93.28	102.54	105.80
of which: relative unit labor cost	62.20	62.98	87.72	90.94	93.90	94.01

Sources: Country authorities and IMF Staff Estimates

9. **The evolution of the REERP also indicates a decrease in competitiveness, but substantially less than the decline indicated by the REERL.** The REERP depreciated by 35 percent as a result of the devaluation and has since appreciated by 5 percent (Figure 4), suggesting that 7 percent of the competitiveness gains associated with the devaluation have been lost. However, the REERP has certain disadvantages: consumer prices include the price of imported final goods, which tend to reflect movements in the nominal exchange rate.[23] Also, controls on some utility and transport prices reduce the usefulness of the REERP as a proxy of competitiveness. Hence, there is a possibility that the REERP understates the decline in competitiveness in Senegal.

10. **The performance of Senegal's export sector also reflects the concentration in products, some of which have been facing declining world demand.** In 2005, exports of refined petroleum products, fish, and phosphoric acid accounted for nearly 50 percent of total exports (Table 7). With the notable exception of oil, during 1994–2005 the average growth in exports (in US dollars) of the products that Senegal exports was below the overall average growth of total world exports (Figure 5).[24] For some products, notably phosphoric acid and groundnut oil, this has been accompanied by relatively low average price increases.

Figure 5: Senegal: Export Performance by Product, 1994-2005

Source: IMF Staff Calculations and UN Comtrade

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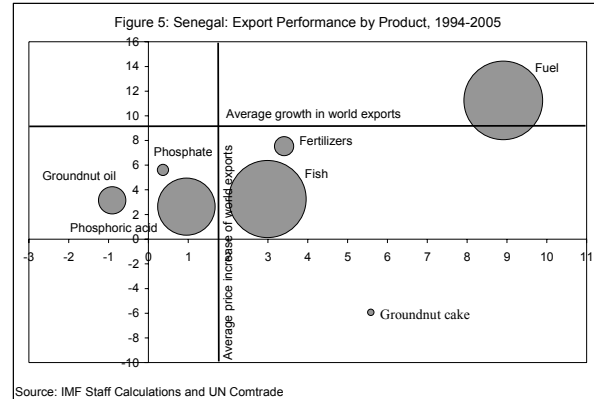
[22] This is particularly true in 1997, when unit labor costs increased by 43 percent.

[23] For example during the 1994 devaluation the rise in relative prices prompted by the rise in the domestic currency price of imported goods, partially offset the devaluation of the nominal exchange rate.

[24] Figure 5 shows that most of Senegal's export products are positioned below the heavy horizontal line that represents the average growth in world exports (8.8 percent) during the period 1994–2005. Some of Senegal's export products are positioned to the left of the heavy vertical line that represents the average rate of price increases of world exports (1.7 percent). The combination of relatively low growth in export volumes and in prices implies that demand for these products has been expanding less rapidly than demand for world exports.

Table 7. Senegal: Composition of Exports (in percent of Total Exports)

	1995	2000	2001	2002	2003	2004	2005
Refined Petroleum	1.81	8.73	12.29	12.82	14.96	14.45	19.86
Fish	27.85	25.88	24.63	24.41	22.46	21.10	19.08
Phosphoric Acid	8.05	7.25	7.65	12.34	9.49	10.12	10.53
Fertilizers	4.25	1.46	2.17	2.35	3.13	2.74	1.20
Groundnut Oil	9.22	7.28	7.81	4.99	2.96	1.72	2.42
Phosphate	3.40	2.24	1.86	1.64	0.73	0.55	0.42
Groundnut Cake	1.19	1.68	1.96	1.37	0.48	0.45	0.14

Source: IMF Staff Estimates

These two factors suggest a decline in world demand rather than world supply for these products. For other products, notably world fish exports, which have been affected by declining stocks, the analysis suggests a decline in world supply.

D. The Equilibrium REER and Exchange Rate Overvaluation

11.   **The decline in competitiveness implied by the movements in the REER may reflect an appreciation of the underlying equilibrium REER (EREER) or an overvaluation of the REER relative to the equilibrium rate.** The underlying EREER is the REER which results in simultaneous attainment of internal and external balance in the economy.[25] Internal equilibrium is achieved when the nontradable goods market clears in the present period and is expected to clear in future periods. External equilibrium is achieved when the current account balance is at a sustainable level consistent with long-run capital flows.

12.   **Whether or not the REER is misaligned vis-à-vis the underlying equilibrium rate has important implications regarding policies to improve Senegal's external competitiveness.** Sustained departures of the REER from equilibrium imply the existence of macroeconomic imbalances that need to be corrected through macroeconomic adjustment. On the other hand, movements of the REER in line with EREER do not necessarily require corrective macroeconomic measures. Instead, structural reforms aimed at improving the competitiveness of the export sector may be warranted to influence the economic fundamentals that affect the EREER.

13.   **The analysis in this section does not provide conclusive evidence that Senegal's REER is misaligned.** Due to lack of data on the REERL, the analysis below is based on the REERP. As shown in the previous section, the REERL suggests a much greater loss of

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[25] This is the fundamental equilibrium exchange rate framework (Edwards, 1989b), which is one of several different approaches to measuring the EREER.

competitiveness than the REERP, since the 1994 devaluation. Hence, an analysis using the REERL could lead to a different conclusion regarding exchange rate misalignment.[26]

14. **To analyze the evidence of misalignment, if any, we use the following long-run relation between the REER and its fundamentals**:[27]

$$\ln(REER) = \alpha_0 + \alpha_1 \ln(TOT) + \alpha_2 \ln(GOV) + \alpha_3 \ln(INV) + \alpha_4 \ln(PROD) + \alpha_5 \ln(OPEN) + \varepsilon_t$$

where ln denotes the natural logarithm, ε_t is an error term with the usual properties, and:

- *TOT* is defined as the terms of trade. An increase in *TOT* will increase the demand for domestic goods, resulting in an increase in the relative price of nontradables and an increase in the REER. Hence, the expected sign is *positive*.

- *GOV* is defined as the share of government consumption in GDP and is a proxy for government demand for nontradables, the data on which are not available. An increase in government spending will lead to either an increase or a decrease in the REER depending on the share of government spending on tradable and nontradable goods. The expected sign is therefore *ambiguous*.

- *INV* is defined as the share of investment in GDP. If we assume that there is a high import content in investment, which is the case in Senegal, a rise in the share of investment in GDP will shift spending towards tradable goods and thus cause a real effective depreciation. Hence, the expected sign is *negative*.

- *PROD* is a measure of technological progress and is proxied by real GDP per capita in Senegal relative to its trading partners. The inclusion of technological progress captures the Balassa-Samuelson effect: an increase in productivity relative to another country raises relative wages, thus increasing the price of nontradables relative to tradables. Hence, an increase in productivity will lead to an appreciation of the REER and the expected sign is *positive*.

- *OPEN* is a measure of the degree of capital controls and restrictions. A reduction in controls will tend to increase the total amount of trade. The equilibrium response of the REER will depend on whether this leads to a deterioration or an improvement in the current account. If the current account deteriorates, a depreciation of the REER is required, whereas the reverse is true if the current account improves. Hence, the expected sign is *ambiguous*.

15. **We estimate the above model using several different econometric techniques.** First, we estimate the model using the Autoregressive Distributed Lag (ARDL) approach (see Pesaran

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[26] An analysis based on the REERL would, however, imply a different estimate of the EREER. Hence, it is not possible to say whether using the REERL would have yielded an over or an undervaluation.

[27] The measurement and plots of each variable together with data sources are given in the appendix.

and Shin, 1999) and the Johansen (1988, 1995) approach to cointegration analysis.[28,29] Second, we compare the results using the aforementioned single country methods to estimates from different panel techniques (FMOLS, PMG) using data for every WAEMU country.[30,31] The model was estimated on annual data for Senegal for the period 1970 to 2005.[32]

16.   **The results using the ARDL, the Johansen approach, and the panel data approaches to cointegration are broadly consistent with the predictions from economic theory.** Table 8 presents the estimated elasticities of the cointegrating relation for the different econometric technique together with their t-statistics (in brackets).[33] The results suggest that an improvement in the terms of trade and productivity lead to an appreciation of the REER, whereas an increase in investment as a share of GDP depreciates the REER. The effect of an increase in the share of government consumption and openness depends on the econometric technique.[34]

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[28] All variables were found to be first-difference stationary at the 1 percent level using the Augmented Dickey-Fuller test. The bounds test for a level relationship in the model estimated using the ARDL approach was significant at the 10 percent critical value band tabulated in Pesaran, Shin and Smith (2001). Johansen's test for cointegration strongly supported the existence of one cointegrating vector. The estimated models appear reasonably well specified. Details of these tests are available from the author upon request.

[29] The strength of the ARDL approach relative to the Johansen methodology is that it does not require testing whether variables are stationary or have a unit root, which introduces pre-testing uncertainty. The simplicity of the framework also makes it powerful in small samples.

[30] Guinea-Bissau was excluded due to the fact that it joined WAEMU in 1997.

[31] Panel techniques have the benefit of pooling long-run information in the panel of countries, thus bringing additional cross-country information to bear upon the estimation, whilst allowing for heterogeneous dynamics. The FMOLS estimator allows for heterogeneous cointegrating vectors whereas PMG assumes long-run homogeneity across countries.

[32] Chudik and Mongardini (2006) suggests that the REER in Senegal is undervalued. The analysis in this paper differs from theirs, however, because the panel data used in this study (a) employs both single-country and panel data techniques for robustness, and (b) includes only WAEMU countries, rather than all non-oil producing countries in SSA, thereby reducing the heterogeneity among the countries in the sample.

[33] As a rule of thumb, the parameter is significant at the 10 percent level when the t-statistic is above 1.8, at the 5 percent level when the t-statistic is above 2, and at the 1 percent level when the t-statistic is above 3. The exact thresholds depend on the degrees of freedom.

[34] The elasticities have the correct sign regardless of econometric technique in instances where theory predicts an unambiguous effect on the EREER as explained above. In instances where the expected sign is ambiguous, the results depend on the econometric technique.

Table 8: Estimates of Long-Term Relation 1/

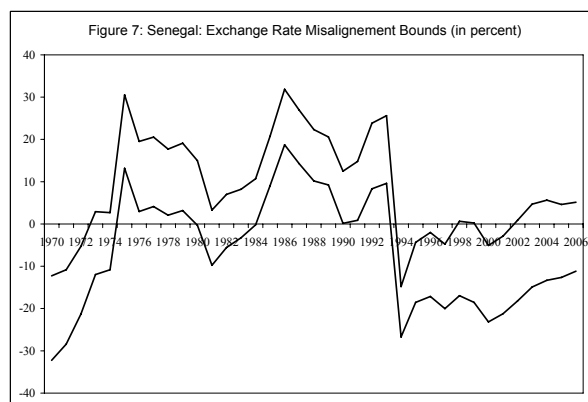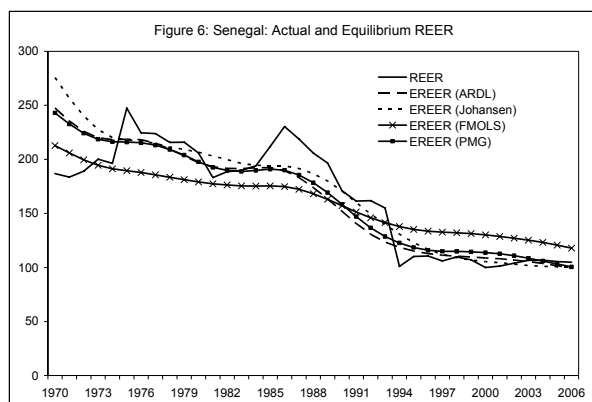|	Single Country		Panel Data	
	ARDL	Johansen	FMOLS	PMG
Constant	1.94	3.72	5.05	3.00
	[1.24]			
Terms of trade	0.61	0.25	0.13	0.48
	[2.27]	[1.84]	[5.31]	[4.25]
Government consumption	-0.08	0.21	-0.12	-0.05
	[-0.24]	[1.57]	[-2.63]	[-0.49]
Investment	-0.18	-0.37	-0.10	-0.21
	[-0.83]	[-4.43]	[-3.33]	[-2.48]
Productivity	1.38	1.47	0.57	0.80
	[4.33]	[9.45]	[2.02]	[9.26]
Openness	0.17	-0.09	-0.05	0.07
	[0.52]	[-0.81]	[-1.18]	[0.53]
Half-life of deviation 2/	-1.34	-3.01	n.a.	-2.07

1/ Numbers in brackets refer to t-statistics.
2/ The half-life of deviation is derived from the error correction model. A half-life of -1 implies
   that 50 percent of any misalignment will be corrected in 1 year.

17.   **The results provide no conclusive evidence of REER misalignment in 2005.** The
EREER is calculated using the parameter estimates in table 8 and the long term components of
the fundamentals.[35] Figures 6 and 7 display, respectively, the evolution of the EREER for each
econometric technique and the implied misalignment bounds.[36] The results show that Senegal has
experienced frequent episodes of significant misalignment—up to 30 percent—during the course
of the sample. In the period leading up to the 1994 devaluation, the results suggest that the REER
was overvalued by 10–25 percent depending on methodology. In 2005, however, results are
inconclusive, with the estimates ranging from a 5 percent overvaluation to a 11 percent
undervaluation.

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[35] As in Tsangarides (2006) we use the Hodrick-Prescott filter to obtain a smooth estimate of the long-run
component of each of the fundamentals. Consistent with the results in Ravn and Uhlig (2006) we use a smoothing
factor of 6.25 for the annual data used in our estimation.

[36] The misalignment bounds are calculated as the maximum percentage deviation away from the EREER implied by
the different econometric techniques and do not take into account the statistical uncertainty surrounding the point
estimates underlying this maximum deviation.

18. **Movements in the EREER have largely been driven by changes in the share of investment expenditure in GDP and productivity.** The different econometric techniques suggest that the EREER has depreciated between 13–18 percent over the last decade. Holding all other fundamentals constant, increases in the long-term component of the share of investment in GDP, by itself, would have resulted in a depreciation of 6–21 percent in the EREER, depending on methodology. Similarly, the deterioration in the long-term component of productivity, by itself, would have resulted in a depreciation of 2–5 percent.

Figure 6: Senegal: Actual and Equilibrium REER

Figure 7: Senegal: Exchange Rate Misalignement Bounds (in percent)

E. Conclusions and Recommendations

19. **Senegal's weak export performance reflects a combination of a high concentration of exports in products, some of which have been facing falling world demand, and a decline in competitiveness, although there is no conclusive evidence that the latter is the result of a sustained overvaluation of the REER.** After the 1994 devaluation, the Senegalese REER went through episodes of undervaluation which lasted until 2002 (Figure 7). Thereafter, however, there is no conclusive evidence of REER misalignment. This implies that we cannot conclude with any degree of certainty that the deterioration in competitiveness is the result of macroeconomic imbalances that need to be corrected. Instead, structural reforms are needed to tackle both a possible decline in competitiveness and the lack of export diversification.

20. **Efforts to enhance competitiveness need to address the low productivity and high cost of labor in Senegal and focus on measures to improve the investment climate.** Specific measures to tackle the rising unit labor costs, including raising human capital, will be proposed in the World Bank's forthcoming Country Economic Memorandum on the labor market. As noted in the Staff Report, efforts to improve the business environment need to focus on, among other things, (i) reducing the fiscal burden on the private sector; (ii) reducing the burden of administrative procedures, including those relating to creating new enterprises; (iii) facilitating access to bank financing; and (iv) improving infrastructure, notably in the transport and energy sector. The speedy implementation of these reforms will be key to increasing the contribution of the export sector to economic growth.

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Appendix I. Variable Definitions and Sources

The dataset consists of annual observations for the period 1970–2006. The countries' real effective exchange rates prior to 1980 were unavailable in the INS database and were constructed based on CPI indices from the *World Economic Outlook* as in Abdih and Tsangarides (2006) and Tsangarides (2006).

The variable acronyms, definitions and sources are:

REER The real effective exchange rate
    Source: INS database and staff calculations.

GOV   Public consumption expenditure to GDP ratio
    Source: World Economic Outlook.

TOT   Terms of trade
    Source: World Economic Outlook.

INV   Gross capital formation to GDP ratio
    Source: World Economic Outlook

PROD   Real per capital GDP relative to main trade partners, normalized to 1 in 2000, using weights from the INS database
    Source: World Economic Outlook

OPEN   Sum of exports and imports to GDP ratio
    Source: World Economic Outlook

Appendix II. Senegal: Plots of Cointegrating Variables