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West Africa Reproductive Health Commodity Security

*Study Phase 1
Task Report: 2*

Reproductive Health Commodity Pricing: Potential Benefits
of Pooled Procurement



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Reproductive Health Commodity Pricing: Potential
Benefits of Pooled Procurement

Raja Rao



DELIVER

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Summary

Governments in West Africa, their donors, and other health partners have been increasingly concerned about achieving reproductive health commodity security (RHCS) in the region. Contraceptive prevalence rates (CPR) in the sub-region are among the lowest in the world; the prevalence rates in most countries are below 10 percent. Recent Demographic and Health Surveys (DHS) and other data, however, indicate that the unmet need for reproductive health (RH) commodities is, in many cases, three times the current use rates for contraceptives. Part of the reason for low CPR and high unmet need in the region is the lack of access and information, and other impediments related to demand generation. Another cause is the absence of adequate financing for RH commodities.

This report examines the potential savings for governments in the sub-region and for donors by pooling procurements of RH commodities. By using international reference prices (IRPs) as a baseline, a comparison can be made with unit prices that are achievable by pooling commodity requirements among Economic Community of West African States (ECOWAS) countries. A further comparison can then be made with prices that two countries in the sub-region (Ghana and Burkina Faso) are currently paying. Strictly in terms of cost savings, the feasibility of pooled procurement is uneven; it is made more complicated by the multiple and overlapping financing sources that currently exist for RH commodities. However, if the sub-region successfully implements a pooled procurement model, the cost savings that can result in lower unit prices, can be used to finance additional procurements, mitigating part, but not all, of the enormous RH commodity financing burden faced by countries in the sub-region.

Reproductive Health Tracer Commodities

Study partners established a list of 22 reproductive health (RH) tracer commodities that represent a cross-section of commodities needed to provide RH services (see table 1). These commodities were sub-categorized into contraceptives, sexually transmitted infection (STI)/HIV/opportunistic infection (OI), antenatal, obstetrics/neonatal, and other. To determine the lowest IRP for each commodity, a number of sources were used to establish a benchmark for further price comparisons.

Table 1. Reproductive Health Tracer Commodities

Product	Dosage/Strength	Product	Dosage/Strength
Contraceptives		Antenatal	
Male condom	52 mm	Tetanus vaccine	Inj/.5 ml
Injectable	Vial/150 mg/1 ml	Iron	Tab/65 mg
IUD	Copper device	Folic Acid	Tab/5 mg
Implant	Rod/36 mg	Fansidar	Tab/500 mg/25 mg
Combined oral pill	Tab/.03/.15 mg	OB/NEONATAL	
STI/HIV/OI		Oxytocin	Amp/10IU
Nevirapine	Tab/200 mg	Ergometrine	Inj/.2 mg
Nevirapine	Syrup/50 mg/5 ml	Ergometrine	Tab/.2 mg
Benzathine penicillin	Vial/1.44 g/2.4 million IU	Other	
Cotrimoxazole	Tab/480 mg	Gloves (examination)	Piece
Doxycycline	Tab/100 mg	Gloves (surgical)	Pair
Metronidazole	Inj./500 mg/100 ml	ORS	Sachet/1000 ml
Metronidazole	Tab/250 mg		

Comparing International Reference Prices and Pooled Procurement Prices

After the IRPs were established, demand forecasts were developed for 2002–2010 for each ECOWAS country to determine the total RH tracer commodity demand for the sub-region. By aggregating the total demand for the sub-region, the potential *pooled volume* of RH tracer commodities was determined. As a next step in determining the potential price benefit from regional bulk purchases, the aggregated volume of RH commodities were presented to a number of procurement agents and suppliers; they provided a unit price that they could probably offer, based on the aggregated volume of RH tracer commodities.

Based on the quoted unit prices for the pooled volume of RH tracer commodities for the sub-region, a 14 percent unweighted average savings is possible, compared to the lowest IRPs. While this is only an estimate provided by procurement agents, and the averages provided are unweighted, it indicates that bulk procurements can have an affect on unit prices. As table 2 indicates, the unit price reductions were most significant for contraceptives at 28 percent, while the savings in the *Other* category (examination and surgical gloves, and ORS) were minimal at 2 percent. The combined oral pill showed the greatest price reduction. Reference prices indicated .35/cycle. However, when the sub-region’s projected demand was aggregated, the total projected volume amounted to nearly 26 million cycles for 2004, resulting in a lower .22/unit—a 60 percent reduction over the IRP.

Table 2. Comparison of International Reference Price and Pooled Volume Price

Commodities	Dosage	IRP	Pooled Price	Variance (%)
Contraceptives				
Condom	Condom	0.026	0.020	-31
Injectable	Inj.	0.893	0.850	-5
IUD	IUD	0.404	0.310	-30
Implant	Rod	26.565	23.000	-16
Pill	Tablet	0.347	0.217	-60
Subtotal Average				-28
STI/HIV/OI				
Nevirapine tabs	Tablet	0.145	0.143	-2
Nevirapine syrup	Syrup	2.232		
Benzath. pen. 2.4 MIU	Vial	0.236	0.203	-16
Co-trimoxazole 480 mg	Tablet	0.009	0.008	-9
Doxycycline 100 mg	Tablet	0.008	0.008	-8
Metronidazole	Inj.	0.775	0.688	-13
Metronidazole tab 250 mg	Tablet	0.004	0.004	-9
Subtotal Average				-9

(continued)

Commodities				
Antenatal				
Tetanus vaccine.5ml	Inj.	1.020	0.952	-7
Iron (tabs) 65mg	Tablet	0.002	0.002	-10
Folic acid 5 mg	Tablet	0.003	0.003	-9
Fansidar (tabs) 500/25 mg	Tablet	0.020	0.019	-7
Subtotal Average				-8
Obstetrics/Neonatal				
Oxytocin10/IU	Ampoule	0.095	0.093	-2
Ergometrine injection	Inj.	0.158	0.140	-13
Ergometrine (tabs) .2 mg	Tablet	0.013	0.009	-44
Subtotal Average				-20
Other				
Gloves (examination)	Piece	0.025	0.025	-1
Gloves (surgical)	Pair	0.160	0.153	-5
ORS 1000 ml	Sachet	0.060	0.059	-1
Subtotal Average				-2
Total Average				-14

Cost Comparison

The prices in table 2 assume that countries in the sub-region are able to obtain unit prices at or near the IRP for the RH tracer commodities. If this were the case, the aggregate savings for the RH tracer commodities would be substantial. Table 3 indicates the total estimated cost of the RH tracer commodities for 2002–2010. The first column indicates the cost for meeting the estimated demand for each commodity using IRFs. The second column uses the same set of demand projections but the cost is based on the potential bulk (pooled) procurement of the sub-regions demand for the same period.

Table 3. Aggregate Costs of Reproductive Health Tracer Commodities 2002–2010: Comparison of International Reference Prices and Pooled Procurement Unit Prices

RH Tracer Commodities	IRP (U.S.\$)	Pooled (U.S.\$)
Contraceptives		
Condom (male)	27,203,458	20,759,660
Implant	18,424,634	15,952,064
Injectable	54,923,148	52,307,760
IUD	1,647,731	1,263,566
Pill	92,337,762	63,084,752
STI/HIV/OI		
Nevirapine (tabs)	387,011	381,291
Nevirapine syrup	1,896,242	1,971,004

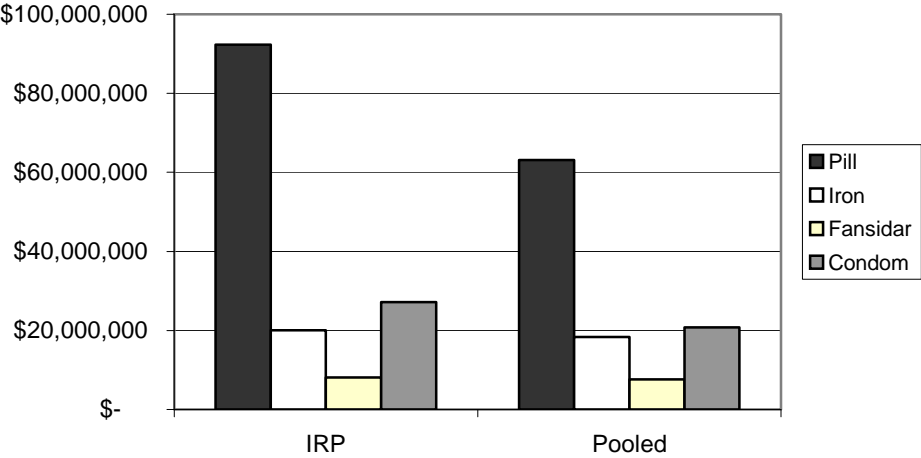
(continued)

RH Tracer Commodities	IRP (U.S.\$)	Pooled (U.S.\$)
Benzathine penicillin	919,079	789,259
Cotrimoxazole	759,321	699,647
Doxycycline	1,924,024	1,778,419
Metronidazole (tabs)	384,224	351,199
<i>Antenatal</i>		
Tetanus vaccine	11,840,340	11,840,220
Iron (tabs)	20,103,160	18,332,163
Folic Acid (tabs)	116,075,094	106,326,545
Fansidar (tabs)	8,077,982	7,577,294
<i>Obstetrical/Neonatal</i>		
Oxytocin	4,250,144	4,249,077
Ergometrine (tabs)	457,078	439,912
<i>Other</i>		
Gloves (examination)	1,964,632	1,947,595
Gloves (surgical)	5,233,857	5,000,862
ORS	27,035,955	27,055,912
Total	395,844,876	342,108,200

Table 3 also indicates that the 14 percent unit price variation can result in a potential \$53 million savings for the sub-region between 2002–2010. For the RH commodities, where a significant demand is expected, the savings are more significant. The price variation on condoms, for example, (.026 versus .02) can likely result in a \$7 million savings. For the combined oral pill, the savings are closer to \$30 million for the same period. However, where there is a slight demand relative to the other commodities (e.g., nevirapine for prevention of mother-to-child transmission [PMTCT], tetanus vaccine) the savings are negligible.

Figure 1 shows the total aggregate price (2002–2010) for select RH tracer commodities. In addition to condoms and pills, potential cost savings exists for Fansidar and iron tablets, if the sub-region is able to obtain the pooled procurement price through sole source purchasing.

Figure 1. IRP vs. Pooled Price for Select RH Commodities 2002–2010



Impact of Nigeria

The RH commodity demand projections for all ECOWAS countries also revealed the impact that Nigeria would have in any potential pooled procurement mechanism. As the most populous country in West Africa, Nigeria's projected demand for the basket of RH commodities is 52 percent of total demand. Without Nigeria's participation in a pooled procurement system, demand for folic acid, for example, is reduced from 36 billion to 20 billion units in the sub-region (as an aggregate) for 2002–2010. The demand for condoms decreases from 1 billion to 500 million (see table 4).

Table 4. ECOWAS Region Reproductive Health Tracer Commodity Demand 2002–2010 Inclusive and Exclusive of Nigeria

RH Tracer Commodities	With Nigeria	W/O Nigeria
Contraceptives		
Condom (male)	1,037,982,987	528,641,343
Implant	693,568	213,733
Injectable	61,538,541	31,232,715
IUD	4,076,020	877,132
Pill	290,713,142	163,377,726
STI/HIV/OI		
Nevirapine (tabs)	2,666,372	1,173,644
Nevirapine syrup	849,571	351,995
Benzathine penicillin	3,897,576	1,851,152
Co-trimoxazole	88,562,903	50,596,336
Doxycycline	228,002,497	131,583,574
Metronidazole (tabs)	92,420,689	51,468,585
Antenatal		
Tetanus vaccine	12,443,741	6,483,558
Iron (tabs)	12,221,441,955	6,681,485,126
Folic acid (tabs)	36,664,325,865	20,044,455,377
Fansidar (tabs)	407,381,398	222,716,171
Obstetrical/Neonatal		
Oxytocin	45,836,857	22,733,967
Ergometrine (tabs)	48,879,059	15,711,390
Other		
Gloves (examination)	77,903,805	42,441,032
Gloves (surgical)	32,685,369	14,353,349
ORS	455,486,733	184,857,641

Comparing Prices in Ghana and Burkina Faso

As part of the RH commodity pricing analysis, two RHCS country assessments were conducted in Ghana and Burkina Faso in April and May 2004. Assessment teams identified actual prices paid by the Ministries of Health and donors for many of the commodities on the tracer list. The objective of collecting the country price data was to confirm the accuracy of the reference prices and, therefore, determine the feasibility, on the basis of cost, of a pooled procurement system. Prices paid at the country level were then compared to both IRPs and the pooled volume prices quoted by major suppliers.

Ghana: Comparison of International Reference Prices and Country Prices

An assessment team collected unit price information for 18 of 22 RH commodities on the tracer list from the Ghana Ministry of Health (MOH) procurement unit and country donors. Procurement records for Nevirapine syrup, benzathine penicillin, doxycycline, and ergometrine tablets were not found. For the records that were found, the most recent procurements were used to obtain unit price information. Several records from 2003 were used, as well as some from the first quarter of 2004. Based on the information available, Ghana is able to obtain a 57 percent total unweighted average lower price compared to the lowest international reference price. As table 5 indicates, the procurement unit obtained a 330 percent and 407 percent lower price for metronidazole tablets and folic acid tablets, respectively. As categories, the unit prices Ghana is able to achieve over IRPs exceeds 100 percent for STI/HIV/OI and antenatal RH commodities.

It is likely that at least part of the reason the Ghana MOH can obtain such significant price reductions is that it procures many of its RH commodities (and essential medicines) from local manufacturers. Procurement records indicate that folic acid was purchased through a local manufacturer, M&G Pharmaceuticals. Similarly, ergometrine injections were purchased through another local supplier, Mission Pharmaceuticals, which resulted in a 35 percent lower price.

Ghana: Comparison of Pooled Procurement and Country Price

A second comparison was made using the pooled volume price quoted by suppliers and the actual prices obtained in Ghana. Surprisingly, while the pooled volume price, as expected, was lower than the IRPs, *the total unweighted average for the list of RH tracer commodities was still 43 percent lower than the volume price quoted by suppliers.* The price difference for folic acid and metronidazole remained significant; a comparison between each category of RH commodities (except contraceptives) indicated a lower country price between 31 and 84 percent. This very simple price comparison indicates that it would be difficult to justify the participation of Ghana (based on price alone) in a sole source pooled procurement system for four out of the five RH commodity categories.

Table 5. Reproductive Health Commodity Price Variance

Commodities		RH Commodity Prices				IRP Variance			Pooled Variance	
	Dosage	IRP	Pooled Price	Ghana	Burkina Faso	Pooled Price (%)	Ghana (%)	Burkina Faso (%)	Ghana (%)	Burkina Faso
Contraceptives										
Condom	Condom	0.026	0.020	0.041	0.030	-31	36	13	51	33
Injectable	Inj.	0.893	0.850	0.803	0.790	-5	-11	-13	-6	-8
IUD	IUD	0.404	0.310	1.800	1.000	-30	78	60	83	69
Implant	Rod	26.565	23.000	26.180	23.883	-16	-1	-11	12	4
Pill	Tablet	0.347	0.217	0.270	0.204	-60	-28	-70	20	-6
Subtotal Average						-28	15	-4	32	18
STI/HIV/OI										
Nevirapine tabs	Tablet	0.145	0.143	0.193		-2	25		26	
Nevirapine syrup	Syrup	2.232	2.232			0				
Benzath. pen. 2.4 MIU	Vial	0.236	0.203		0.139	-16		-69		-45
Cotrimoxazole 480 mg	Tablet	0.009	0.008	0.007	0.007	-9	-25	-24	-15	-14
Doxycycline 100 mg	Tablet	0.008	0.008		0.010	-8		14		20
Metronidazole	Inj.	0.775	0.688	0.180	0.440	-13	-330	-76	-282	-56
Metronidazole tab 250 mg	Tablet	0.004	0.004	0.002	0.004	-9	-79	6	-64	14
Subtotal Average						-8	-103	-30	-84	-16
Antenatal										
Tetanus vaccine .5 ml	Inj.	1.020	0.952	0.600		-7	-70		-59	
Iron (tabs) 65 mg	Tablet	0.002	0.002	0.002	0.002	-10	14	3	22	12
Folic acid 5 mg	Tablet	0.003	0.003	0.001	0.002	-9	-407	-86	-364	-71
Fansidar (tabs) 500/25 mg	Tablet	0.020	0.019	0.048	0.026	-7	59	24	61	28
Subtotal Average						-8	-101	-20	-85	-10
Obstetrics/Neonatal										
Oxytocin10/IU	Ampoule	0.095	0.093	0.065	0.130	-2	-46	27	-43	29
Ergometrine injection	Inj.	0.158	0.140	0.117	0.161	-13	-35	2	-20	13
Ergometrine (tabs) .2 mg	Tablet	0.013	0.009			-44				

(continued)

Commodities	RH Commodity Prices					IRP Variance			Pooled Variance	
	Dosage	IRP	Pooled Price	Ghana	Burkina Faso	Pooled Price (%)	Ghana (%)	Burkina Faso (%)	Ghana (%)	Burkina Faso
Subtotal Average						-20	-41	14	-31	21
Other										
Gloves (examination)	Piece	0.025	0.025	0.020	0.025	-1	-27	-3	-26	-2
Gloves (surgical)	Pair	0.160	0.153	0.110	0.145	-5	-46	-11	-39	-6
ORS 1000 ml	Sachet	0.060	0.059	0.027	0.100	-1	-126	40	-123	41
Subtotal Average						-2	-66	9	-63	11
Total Average						-14	-57	-10	-43	3

Burkina Faso: Comparison of International Reference Prices and Country Prices

Of the 22 RH tracer commodities, unit prices for 18 were obtained from CAMEG, the central stores unit charged with procurement for the public sector. The total unweighted price variance between the lowest IRPs and those obtained by the Burkina Faso MOH procurement unit, CAMEG, was 10 percent, based on the most recently available procurement records (see table 5). In each category, the prices obtained were significantly higher than those obtained in Ghana, except for contraceptives. However, as in Ghana, Burkina was able to achieve the greatest procurement price reductions for metronidazole and folic acid (76 percent and 86 percent). Burkina Faso is also purchasing STI/HIV/OI and antenatal commodities at 30 percent and 20 percent lower than the lowest IRPs. In contrast, CAMEG is paying between 14 and 40 percent more for number commodities, including doxycycline, Fansidar, oxytocin, and oral rehydration solution (ORS).

Burkina Faso: Comparison of Pooled and Country Price

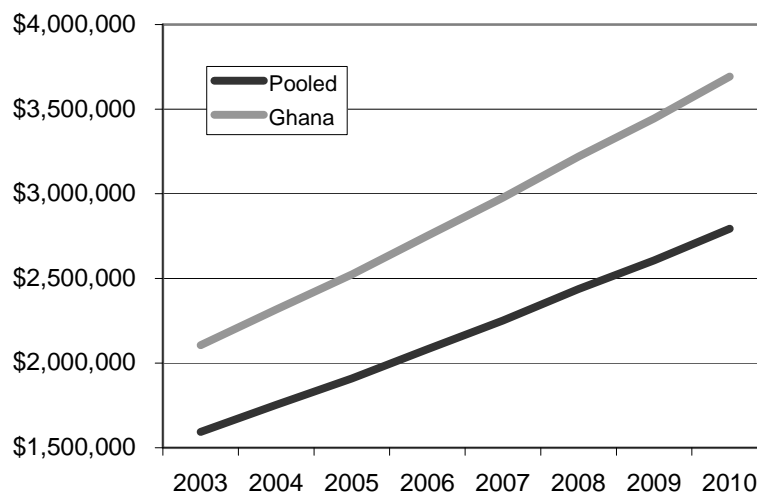
Comparing the unit prices paid by CAMEG with the pooled procurement prices quoted by suppliers indicates little variation as a total unweighted average. In fact, Burkina Faso is paying 3 percent more compared to the illustrative pooled price (see table 5). Examination gloves and implants, for example, indicate minimal price variance (.145/.16 and 23.00/23.88). However, CAMEG is procuring at higher prices for oxytocin (29 percent), Fansidar (28 percent), doxycycline (20 percent), and ORS (41 percent) when compared with the pooled prices. By category of RH commodities, Burkina Faso is paying more for OB/neonatal, other (gloves and ORS), and contraceptives. This preliminary price comparison indicates that there is scope for price reductions for a number of RH commodities.

Scope for Pooled Procurement

The most recent unit price information obtained through the Ghana and Burkina Faso RHCS country assessments indicates that the scope for a future pooled procurement mechanism in the sub-region should probably focus first on contraceptives. Donors and lenders in Ghana are paying a total average of 15 percent more for contraceptives (condoms, injectables, IUDs, implants, and pills) compared to the lowest IRP (see table 5). In Burkina Faso, the price variance at 4 percent, compared to IRPs, is less significant. However, when the country prices are compared to the pooled procurement price (based on the aggregate demand of the sub-region), the price variations become more significant, indicating the potential for large savings through volume purchases. As table 5 indicates, Ghana is paying 32 percent and Burkina Faso 18 percent above pooled prices for contraceptives. The only contraceptive that each country is paying less for are injectables (pooled: .85; Ghana: .803; Burkina Faso: .79). If Ghana and Burkina Faso were able to obtain the pooled procurement price for contraceptives, the resulting savings over the next several years would probably be several million dollars.

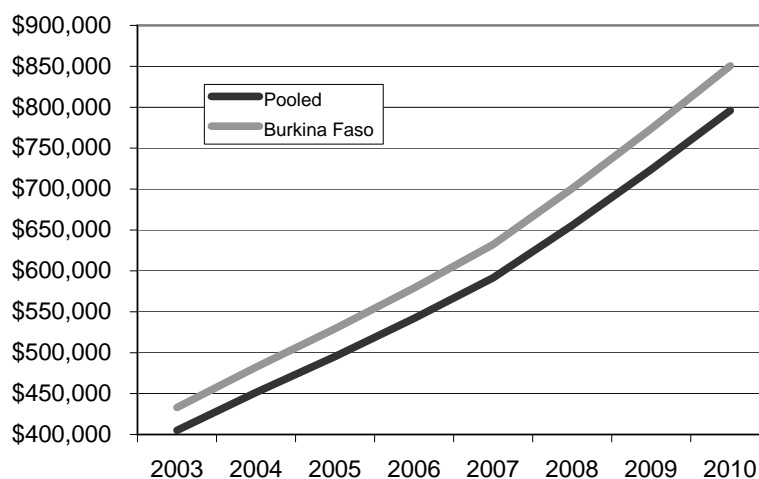
As figure 2 indicates, based on the contraceptive unit prices differences between prices obtained in Ghana and quoted pooled procurement prices, savings in 2003 is more than \$500,000, rising to nearly \$900,000 in 2010. The aggregate savings (2003–2010) is more than \$5.0 million dollars.

Figure 2. Contraceptive Costs 2003–2010: Price Comparison between Ghana and Pooled Procurement Prices



Compared with Ghana, potential savings on contraceptives for the same period are less significant in Burkina Faso due to the lower price variance and relatively smaller size of the population. However, there is scope for savings (see figure 3).

Figure 3. Contraceptive Costs 2003–2010: Price Comparison between Burkina Faso and Pooled Procurement Prices



In 2003, the savings amount to under \$30,000, rising to over \$50,000 in 2010. If Burkina Faso were to obtain the pooled procurement prices for contraceptives, the aggregate savings between 2003–2010 would be over \$300,000 (see table 6).

Table 6. Contraceptive Costs and Savings by Year: Ghana and Burkina Faso

Potential Pooled Procurement and Current Country Prices									
	2003 (U.S.\$)	2004 (U.S.\$)	2005 (U.S.\$)	2006 (U.S.\$)	2007 (U.S.\$)	2008 (U.S.\$)	2009 (U.S.\$)	2010	TOTAL
Pooled	1,593,079	1,752,485	1,909,456	2,082,187	2,252,057	2,437,091	2,606,621	2,794,257	\$17,427,233
Ghana	2,106,250	2,316,565	2,524,146	2,752,036	2,976,660	3,220,493	3,444,663	3,692,618	\$23,033,431
Pooled	404,995	451,470	495,447	542,001	591,419	655,616	723,818	795,981	4,660,746
Burkina Faso	432,968	482,467	529,420	579,127	632,174	700,725	773,543	850,662	4,981,087
Ghana Savings	513,171	564,080	614,690	669,849	724,603	783,401	838,042	898,362	5,606,199
B.F. Savings	27,973	30,996	33,973	37,126	40,755	45,109	49,725	54,682	320,340
% Savings Ghana									24%
% Savings Burkina Faso									6%

