

## SME Banking Advisory Services: Cost-Benefit Analysis

### I. Project Assumptions

Please fill in the GREEN BOXES with your assumptions.

<b>Project Budget</b>	<b>Enter value</b>
1. IFC project budget (excluding in-kind)	\$80,000
2. Project fee paid by bank (client) to IFC	\$8,000
3. Value of other resources allocated by bank to IFC project	\$1,000
4. Value of resources allocated by bank to establish systems	\$6,000
5. Project contribution paid by donors to IFC	\$35,000
6. Cash and in-kind expenditures incurred directly by donors	\$10,000

<b>Economic and Fiscal Data</b>	<b>Enter value</b>
1. Discount rate	3.00%
2. Population	3,500,000
3. PPP conversion factor (WDI database)	0.831

<b>Loan Size and Profitability</b>	<b>Enter value</b>
1. What is the average SME loan size?	\$50,000
2. Average gross rate of return (RoR) on loans	10.00%

<b>Banking Reforms</b>	<b>Enter value</b>
1. Pre-project interest rate charged by bank to borrowers	8.00%
2. Post-project interest rate charged by bank to borrowers	7.50%
3. Pre-project bank borrowing rate	5.25%
4. Post-project bank borrowing rate	4.00%
5. Pre-project NPL rate	10.00%
6. Post-project NPL rate	6.00%
7. Pre-project administrative cost per deposit account	\$15
8. Post-project administrative cost per deposit account	\$7
9. Pre-project average annual fees per deposit account	\$20
10. Post-project average annual fees per deposit account	\$25

Based on the project assumptions that you entered above, the project is expected to result in the following changes:

<u>Expected Changes and Calculations</u>	
Pre-reform bank spread	2.75%
Post-reform bank spread	3.5%
1-(pre-reform NPL rate)	90.0%
1-(post-reform NPL rate)	94.0%

Pre-reform net RoR on loans	2.00%
Post-reform net RoR on loans	2.50%
Change in avg. annual fees/depositor	\$5
Change in admin. cost/depositor	\$8

## **II. Projected Growth in SME Deposit Accounts and Loans**

Please fill in the GREEN BOXES with your assumptions.

<b>SME Deposit Accounts</b>	<b>Enter value</b>
1. How many deposit accounts w/SMEs does the bank have now?	12,000
2. Five years from now (after the IFC project), how many deposit accounts with SMEs do you expect the bank to have?	15,000
3. What percentage of these deposit accounts do you think the bank would have had WITHOUT the project?	80%

According to your projections, the compound annual growth rate in the number of SME deposit accounts with the project is 4.56% and the compound annual growth rate in the number of SME deposit accounts without the project is 0.00%. According to these growth rates, the bank is expected to have 12,000 SME deposit accounts even without the project, and an additional 3,000 SME deposit accounts as a direct result of the project.

This is shown in the following table:

<u>Projected Increase in Client Bank's SME Deposit Accounts</u>					
<u>No. of Deposit Accounts</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>
With project	12,548	13,120	13,719	14,345	15,000
Without project	12,000	12,000	12,000	12,000	12,000
Difference	548	1,120	1,719	2,345	3,000

<b>SME Loans</b>	<b>Enter value</b>
1. How many SME loans does the bank have outstanding?	10,000
2. Five years from now (after the IFC project), how many SME loans do you expect the bank to have?	12,000
3. What percentage of these loans do you think the bank would have made WITHOUT the project?	85%

According to your projections, the compound annual growth rate in the number of SME loans with the project is 3.71% and the compound annual growth rate in the number of SME loans without the project is 0.40%

According to these growth rates, the bank is expected to have 10,200 SME loans outstanding even without the project, and an additional 1,800 SME loans as a direct result of the project. This is shown in the following table:

Projected Increase in Client Bank's SME Loans					
No. of Loans	Year 1	Year 2	Year 3	Year 4	Year 5
With project	10,371	10,757	11,156	11,570	12,000
Without project	10,040	10,080	10,120	10,160	10,200
Difference	332	677	1,036	1,411	1,800

Displacement	Enter value
1. Of the 1,800 SME loans that the client bank is expected to make as a result of the project, what percentage displace loans that would have been made by other (non-client) banks?	80%

### III. Estimated Benefits and Costs

This section is automatically generated based on the assumptions that you entered above.

BCA from Perspective of the Client Bank						
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
<b>Benefits</b>						
Additional net commercial loan revenue from increased profit on loans		\$4,091,171	\$4,107,406	\$4,123,706	\$4,140,071	\$4,156,500
Additional net commercial loan revenue from additional loans made		\$545,629	\$1,113,686	\$1,705,013	\$2,320,482	\$2,961,000
Additional banking service fees		\$73,692	\$88,009	\$102,979	\$118,632	\$135,000
Reduction in admin. costs (e.g. back office, loan selection and processing)		\$92,166	\$88,158	\$83,966	\$79,583	\$75,000
<i>Sub-total benefits</i>		\$4,802,658	\$5,397,258	\$6,015,663	\$6,658,768	\$7,327,500
<b>Costs</b>						
Client cost-share (cash)	\$8,000					
Client cost-share (other)	\$1,000					
Start-up cost for implementation of new systems	\$6,000					
<i>Sub-total costs</i>	\$15,000					

<u>Net Benefits</u>	-\$15,000	\$4,802,658	\$5,397,258	\$6,015,663	\$6,658,768	\$7,327,500	
<u>NPV</u>	-\$15,000	\$4,662,775	\$5,087,434	\$5,505,184	\$5,916,229	\$6,320,766	<b>\$27,477,387</b>

#### **BCA from Perspective of the Bank's SME Clients**

	<u>Year 0</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	
<u>Benefits</u>							
Return on loans		\$2,659,181	\$2,824,537	\$2,996,298	\$3,174,703	\$3,360,000	
Consumer surplus from introduction of new (non-lending) services		Non-quantifiable, but likely to be positive					
<i>Sub-total benefits</i>		\$2,659,181	\$2,824,537	\$2,996,298	\$3,174,703	\$3,360,000	
<u>Costs</u>							
<i>Sub-total costs</i>		\$0	\$0	\$0	\$0	\$0	
<u>Net Benefits</u>		\$2,659,181	\$2,824,537	\$2,996,298	\$3,174,703	\$3,360,000	
<u>NPV</u>		\$2,581,729	\$2,662,397	\$2,742,037	\$2,820,683	\$2,898,366	<b>\$13,705,211</b>

#### **BCA from Perspective of Other (non-client) Banks**

	<u>Year 0</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	
<u>Benefits</u>							
<i>Sub-total benefits</i>		\$0	\$0	\$0	\$0	\$0	
<u>Costs</u>							
Reduction in profit from displacement of loan borrowed		\$328,372	\$670,242	\$1,026,117	\$1,396,521	\$1,782,000	
Reduction in profit from displacement of deposit accounts		Non-quantifiable, but likely to be a loss.					
<i>Sub-total costs</i>		\$328,372	\$670,242	\$1,026,117	\$1,396,521	\$1,782,000	
<u>Net Benefits</u>		-\$328,372	-\$670,242	-\$1,026,117	-\$1,396,521	-\$1,782,000	
<u>NPV</u>		-\$318,808	-\$631,768	-\$939,042	-\$1,240,791	-\$1,537,169	<b>-\$4,667,578</b>

#### **BCA from Perspective of Consumers and Society**

	<u>Year 0</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	
<u>Benefits</u>							
Increase in consumer surplus		Non-quantifiable, but likely to be positive					
Increase in income for new employees		Non-quantifiable, but likely to be positive					
<i>Sub-total benefits</i>							
<u>Costs</u>							
<i>Sub-total costs</i>							
<u>Net Benefits</u>		Non-quantifiable, but likely to be positive					
<u>NPV</u>		Non-quantifiable, but likely to be positive					

<b>BCA from Perspective of IFC</b>						
	<u>Year 0</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>
<u>Benefits</u>						
Improvements in IFC image	Non-quantifiable					
Client cost-share (cash)	\$8,000					
Donor cost-share (cash)	\$35,000					
<i>Sub-total benefits</i>	\$43,000					
<u>Costs</u>						
IFC project expenditures	\$80,000					
<i>Sub-total costs</i>	\$80,000					
<u>Net Benefits</u>	-\$37,000					
<u>NPV</u>	-\$37,000					<b>-\$37,000</b>

<b>BCA from Perspective of Donors</b>						
	<u>Year 0</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>
<u>Benefits</u>						
Improvements in donor image	Non-quantifiable					
<i>Sub-total benefits</i>	Non-quantifiable					
<u>Costs</u>						
Donor cost-share (cash)	\$35,000					
Other donor project expenditures	\$10,000					
<i>Sub-total costs</i>	\$45,000					
<u>Net Benefits</u>	-\$45,000					
<u>NPV</u>	-\$45,000					<b>-\$45,000</b>

<b>Summary of Costs and Benefits</b>	
<u>Affected Party</u>	<u>Net Benefit/Cost</u>
Client Bank	\$27,477,387
Other Banks	-\$4,667,578
Banks, net	\$22,809,810
Bank Customers	\$13,705,211
Consumers/Society	0
IFC	-\$37,000
Donors	-\$45,000
<b>NPV OF PROJECT</b>	<b>36,433,021</b>

<b>NPV OF PROJECT PER CAPITA</b>	<b>10.41</b>
<b>NPV OF PROJECT PER CAPITA, PPP-ADJUSTED</b>	<b>12.53</b>
<b>RATIO: NPV OF PROJECT / PROJECT COSTS</b>	<b>455.41</b>
<b>RATIO: NPV OF PROJECT / IFC COSTS</b>	<b>984.68</b>