

GAFIS Focus Note 3: The impact of gateway dynamics on the business case for small balance savings

Gateway Financial Innovations for Savings (GAFIS) is a special project of Rockefeller Philanthropy Advisors, funded by the Bill & Melinda Gates Foundation and managed by Bankable Frontier Associates (BFA), working with five leading banks: Standard Bank of South Africa, BANSEFI (Mexico), Bancolombia, Equity Bank (Kenya), and ICICI Bank (India).

The GAFIS project aims to leverage the “gateway opportunities” presented by certain existing financial relationships between banks and a large number of the poor in order to offer product innovations that make accumulating savings in a bank account a more attractive proposition for poor clients. Through these innovations, participating banks aim to generate a win-win situation, one in which the business case for serving poor clients is enhanced by strengthening the portfolios of those clients through increased bank savings.

This Focus Note 3 sets forth a framework to analyze the business case for small balance savings, and then identifies a tool kit to improve that business case, including an introduction of certain gateway dynamics which appear to offer specific opportunities to apply such tools.

What Is the Business Case for Small Balance Savings Accounts?

In short, most banks find this business case tough! But there is cause for optimism, and GAFIS is working to craft a tool kit that elaborates the business case and ultimately improves it.

In a convening of the five GAFIS banks in January 2012, we asked our project champions and managers “Why is the business case for small balance savings so difficult,” asking them to allocate 100 points across five choices. Their averaged answers are:

Table 1: The business case for small-balance savings

The business case for small-balance savings is difficult because	
Transactional channels (branches, ATMs, etc.) are too expensive, regardless of accounting rules	45%
Client account activity is too small to work (balances too low, transactions too infrequent)	23%
Intra-bank accounting rules are prejudiced against it	22%
Other	8%
Don't know	2%

Against this backdrop, we note the three key elements of the business case, and we spend the rest of this Focus Note looking at these in more detail through various lenses:

Table 2: The three key elements of the business case

Business case elements
Net interest income (float income)
1. Float revenue from internal treasury
2. Interest expense paid to clients
Fixed costs
3. Origination costs (allocated, amortized)
4. Monthly account maintenance cost (allocated)
Transaction activity contribution
5. Revenue: fee-generating transactions
6. Expense: transaction costs (direct and indirect)

The **first key element** of a business case for savings accounts is **net interest income**, or float income. Of course, float income is a direct function of both average account-balance size and the length of time for which the balance is maintained. All other things being equal, the bigger the balance, and the longer the balance is held in the bank, the greater the float income. Small and short-term balances mean relatively low revenues from this element.¹ Thus, almost by definition, the term “small-balance savings” implies relatively low float incomes. For most of the small-balance savings accounts at GAFIS banks (generally the low-end of the existing mass market client segment), the balances are small and the float incomes are correspondingly small. Therefore, improving the performance of this element involves growing float income among the low-income segment—a challenge that GAFIS confronts head on.

The **second element** of the savings account business case is the **fixed costs** associated with offering savings accounts. These costs have two components. The first is the all-in cost of originating an account, including sales, promotion, KYC, and other associated costs (*“acquisition cost”*). The second is the monthly maintenance cost of keeping an account on the bank’s system (*“monthly maintenance cost”*), which is typically a function of each bank’s internal accounting rules for allocating various direct and indirect costs. Different approaches to origination and to allocating maintenance costs can yield significantly different fixed costs, so thresholds for break-even and for profitability on savings products will vary from bank to bank. GAFIS is testing whether certain identified “gateways” can serve as effective low-cost acquisition strategies. But it’s also possible that bank costing rules inappropriately allocate too much cost to low-income segment accounts, so we have also explored the range of costing allocation methodologies and their implications on the low-balance savings case.

¹ For the rest of this *Focus Note*, we usually do not expressly mention the duration component, but we do build it into our discussion of size—that is, unless otherwise noted, bigger also implies longer. However, the average duration of a savings account portfolio may significantly affect the float rate that the bank should allocate internally for these savings.

The **third element** is the **transaction activity** that occurs in the account, such as various credits or debits (e.g., deposits and withdrawals)—that may be variable contributions to the bottom line. For low-end products, transactions typically carry revenues (fees for certain, but often not all, transactions) and expenses (direct costs of servicing and processing) which vary with the level of usage. Transaction costs also tend to vary significantly both by type (e.g., transactions involving cash tend to be far more costly than those not touching cash) and by channel (e.g., branch tends to be far more costly than “self-service” channels such as ATMs or electronic channels such as computers or mobile phones). GAFIS facilitates thinking around how transaction behavior change (type, frequency, channel) will influence the business case for savings accounts.

The Purpose of Assessing the Business Case

There are three primary reasons for developing or analyzing a business case in a bank:

- Conducting an *ex ante* determination of whether to invest in a new project, such as the launch of a new savings product (or modification of an existing one), as at least two GAFIS banks have done with their new GAFIS-supported savings products;
- Conducting an *ex post* determination of whether to continue with an existing project, such as an existing savings product;
- Establishing a framework for staff or partner incentives involved with a product or channel.

Depending on the reason, the nature of the business case and how it is framed may vary. In particular, as an example, it is not uncommon that *ex ante* and *ex post* analyses are done by different areas and are not always consistent in approach.

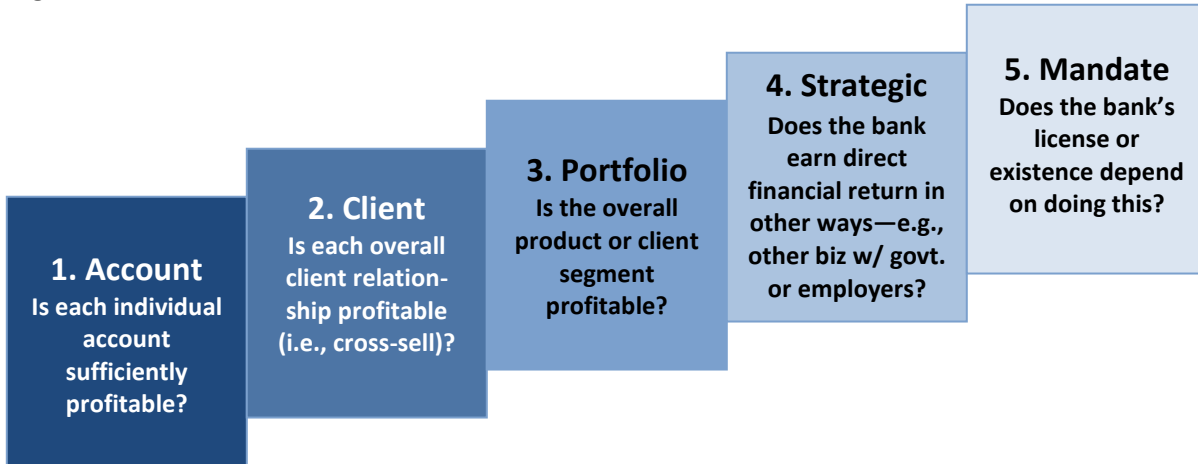
Defining Savings

Bank accounts that are traditionally labeled “savings” or “transactional” usually exhibit a wide range of financial behaviors. After the five participating GAFIS banks engaged in a deep discussion about what constitutes “savings,” GAFIS crafted a definition of savings (or rather several of them) that identifies savings at the account level, using account-level transactional and balance data. We explain the rationale for our approach in GAFIS Focus Notes 1 and 2, and so we do not repeat it here.

Different Perspectives on the Business Case for Small Savings

A legitimate business case can be built for a bank to offer savings at one or more of five distinct levels, as shown in Figure 1 below.

Figure 1: The five levels of business case



The first two levels are focused on *individual* account profitability. But it’s worth considering whether it’s the average account, or the median, or something else—as they each represent very different profiles in terms of balance and transaction patterns, and therefore in resulting profitability. The table below presents a stylized portfolio of basic accounts, based on the actual portfolios across the five GAFIS banks.

Table 3: Stylized version of account level benchmarks

	Bank X Lower End of Mass Market
# of accounts	2.0m
Balances	
Average	\$75
Median	\$10
80 th %'ile	\$35
95 th %'ile	\$275
% of a/c with positive balance	75%

Table 3 presents a stylized balance profile of four different accounts at a given bank: the average, the median, the 80th percentile, and the 95th percentile. The median balance tends to be substantially lower than the average balance (see lightly shaded rows), and the 80th percentile balance is also usually still lower than the average balance. This pattern suggests that sharper segmentation will sharpen the business-case analysis, thus sharpening strategies to improve the business case. Some segments may yield a positive business case while others do not; this knowledge may influence marketing efforts around targeting prospective clients who fit a

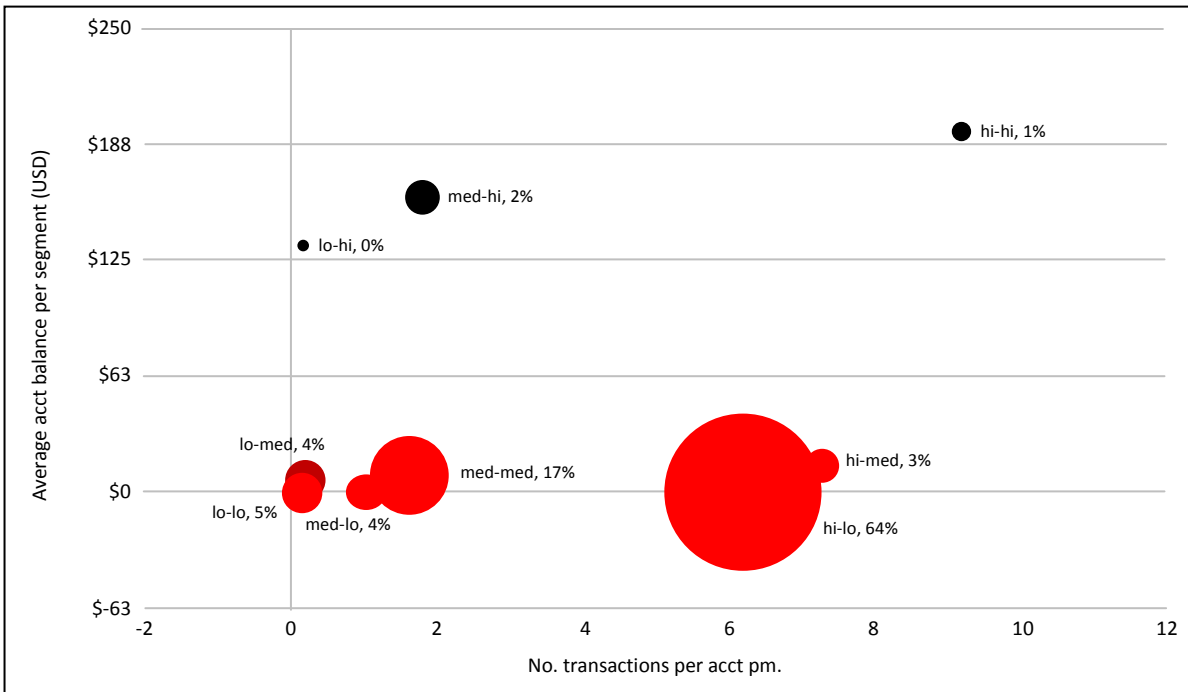
² Westley and Martin found that the business case for small savings accounts can be found at this level, based on data from two small to mid-sized banks which serve low income people. Westley, Glenn D. & Xavier Martin Palomas. 2010. “Is There a Business Case for Small Savers?” *Occasional Paper 18*. Washington D.C.: CGAP, September.

certain segment profile or around encouraging certain profitable behaviors. (We expect a future GAFIS publication to address segmentation in more detail.)

The **portfolio level**, or third level, of business case looks for a product’s or segment’s contribution to profitability as a whole, even if each account or client is not itself profitable. This view may imply that the “average” account is the appropriate benchmark: if the whole portfolio is positive then the average account, but not necessarily the median account, will be profitable as well. The portfolio level is a key measure, since we see a substantial percentage of float income derived from a relatively small percentage of relatively high-balance accounts and clients: within bank savings portfolios, 80% (or more) of balances often arise from 20% (or fewer) of the accounts.

Figure 2, below, presents a segmented view of profitability, based on data from one of the GAFIS banks. This portfolio view reveals that only select sub-segments of the general savings accounts are profitable. This segmentation approach splits accounts into nine sub-segments, showing all combinations of the number of transactions (high, medium, low) and balance size (high, medium, low). In the figure, the first descriptor is the number of transactions and the second is the balance size: so, for example, “low-hi” means “low transactions and high balance.” The bubble size represents the number of accounts in that sub-segment (i.e., the nine groups do not have equal numbers of accounts). A black bubble represents a profitable sub-segment; a red bubble represents an unprofitable one. We again see the importance to the business case of float income from account balances, as the only three sub-segments that are profitable are those with high balances (three black bubbles in top half of the figure). Without a high balance, profitability is elusive (see the six red bubbles towards the bottom).

Figure 2: Portfolio view of profitability, revealing differences across sub-segments



The **strategic level**, or fourth level, of business case considers revenues that may arise from other lines of business. For example, providing basic bank accounts (even at a loss) may help a bank score higher when competing for lucrative government funding, mandated accounts, or even corporate business (offering accounts to employees of a large corporate or government department). This is similar to the *client level's* generating more net contribution than the *account level (level one)* when other products are *strategically* introduced to the *segment*.

Finally, especially in the context of delivering savings to low-income segments, it is important to acknowledge a fifth, or **mandate-level** business case. This is less defined and measurable than the preceding levels, but it is equally important. Banks' existence and functions are both enabled and constrained by regulations. Regulators' willingness to allow banks to operate freely in areas such as corporate or high-value accounts may depend on an explicit or implicit social contract that they will undertake loss-making but politically important low-end business. This may be seen as strategic corporate social responsibility, but it is different from a bank's decision to take strategic or tactical losses on small accounts. India's Priority Sector Lending is an example of this from the lending side of the business. And state-owned banks may be legally required to provide these savings services irrespective of whether the financial return is negative or positive.

Stylized Savings Product Model

This *Focus Note* is focused primarily on the first level outlined above, the individual account, and to some extent the third level, the product portfolio.

Building on Table 2 above, Table 4 shows a product financial model at the individual account level, informed by but not limited to the experiences across the GAFIS banks. Our stylized model account has an average monthly balance of \$30 and transacts three times per month (one client-initiated credit and two client-initiated debits), yielding a net loss per month of -\$2.30.

Table 4: Financial model of business case elements

Business case elements	
1. Float revenue from internal treasury (@ 5.0%) ³	+ \$0.13
2. Interest expense paid to clients (@ 0.75%)	- \$0.02
Net interest income (based on \$30 average monthly balance)	+ \$0.11
3. Origination costs (\$15, amortized over 36 months)	- \$0.45
4. Monthly account maintenance cost (\$0.60/month allocated)	- \$0.60
Fixed costs	- \$1.05
5. Revenue: fee-generating transactions (2 debits @ \$0.40 each; 1 credit @ \$0)	+ \$0.80
6. Expense: transaction costs (weighted average tx cost of \$0.72/tx) ⁴	- \$2.16
Transaction activity contribution (2 debits & 1 credit, all client-initiated)	- \$1.36
Net profit (loss) per month per account	- \$2.30

³ The 5.0% is net of allowing for deposit insurance and reserve requirements.

⁴ Transaction costs vary widely, and this weighted average is derived from the following detailed breakdown: 0.8 branch tx at \$2.00 each (0.7 credits, 0.1 debits), 1.7 ATM tx at \$0.30 each (all debits), and 0.5 electronic tx at \$0.10 each (0.3 credits and 0.2 debits).

This model account illustrates that the business case for savings is indeed difficult! However, we see a means to improve it, based on the following six business case levers (Table 5). The rest of this *Focus Note* shows how strategically pulling these levers can improve the business case for small savings.

Table 5: Strategically pulling levers can improve the small-savings business case

Business case Elements	Corresponding Levers
Net interest income	
1. Float revenue from internal treasury	1. Increase balances
2. Interest expense paid to clients	2. Increase float margin spread
Fixed costs	
3. Origination costs (allocated, amortized)	3. Decrease origination costs (direct or indirect)
4. Monthly account maintenance cost (allocated)	4. Review allocation methodology to reduce
Transaction activity contribution	
5. Revenue: fee-generating transactions	5. Increase fee-generating activity (if positive margin)
6. Expense: transaction costs	6. Decrease tx costs (e.g., cheaper direct cost channels)

Some levers offer more transformative power than others. The Annex reviews several examples of lever-pulling activities, including many related to gateway dynamics. Table 6 below summarizes the illustrative outputs from the Annex. As shown in the last line of Table 6, pulling all (or at least many) of these levers can turn the negative business case positive. If all the levers are pulled, the resulting \$2.60 positive improvement more than overcomes the negative \$2.30 projected earlier, yielding a net positive of \$0.30 per account per month.

Table 6: Pulling the levers to turn the business case positive

Lever #	Type of change	Description of change	Improvement to biz case
5 & 6	Increase tx revenue & decrease costs per tx	Increase # of fee-earning debits from 2 to 4, while decreasing cost per debit	+ \$0.87
6	Decrease costs per tx	Shift credits away from cash-in at branch and towards cash-in at agent	+ \$0.62
6	Decrease costs per tx	Shift credits away from cash-in at branch and towards electronic money-in	+ \$0.38
3	Lower origination cost	Reactivate existing; or open at agent; or open en masse (G2P contract)	+ \$0.27
4	Modify allocation of monthly maintenance	Successful argument for new paradigm of internal accounting for “branchless” accounts	+ \$0.20
1	Increase float income	Increase balance from \$60 to \$120	+ \$0.11
5	Increase tx revenue	As shift credits to electronic, charge payer 1% of tx amount (e.g., \$30 G2P or salary payment)	+ \$0.08
2	Increase treasury rate	Successful argument for higher rate	+ \$0.07
All			+ \$2.60

The Gateway Proposition

We believe that GAFIS gateways can be leveraged to improve the business case for small savings accounts. We outline some of this specific potential below, after a quick review of the gateway concept.

As introduced in *GAFIS Focus Note 1*, the idea of “gateways to financial innovations for savings” is based on the following perspective: access to an account may be a first step toward financial inclusion, but it is far from the entire path. Even an initially shallow banking relationship can be deepened so that low-income clients use their bank account to accumulate savings. Poor clients may come to the bank’s door in various ways: through a massive account-opening push, the sending and receipt of remittances, or a government program distributing benefits through bank accounts—these basic relationships may not even require an account. Still, such basic interactions provide *gateway opportunities* to deepen financial inclusion. That is, they open the gate for financial institutions to offer well-designed products that mobilize useful savings. And once a poorer client is comfortable with these savings offerings, banks can deepen inclusion even further by offering a broad range of services, including payments, insurance, and credit.

For the purposes of the GAFIS project, *gateway opportunities* are those that bring large quantities of poor customers to the threshold of the formal financial system—to the point at which savings products become both more attractive to the customer and more viable for the financial institution. GAFIS envisages the four key gateways noted below.

Table 7: Gateway opportunities

Net profit (loss) per month per account
1. G2P—Government-to-person transfers
2. P2P—Domestic or international remittances
Existing mass of inactive basic accounts:
3. Accounts opened in large numbers and still in the system, but inactive or underutilized
Scaled platform for micro-transactions:
4. Combination of transaction technology, branchless agent networks, and large customer base using them

GAFIS seeks to tackle the challenges confronting the business case for small-balance savings, outlined above, by testing whether the identified gateways offer meaningful levers to improve the business case, at least when they are linked to attractive savings product offerings.

For instance, the core of GAFIS is developing innovative savings products that attract “sticky” savings—i.e., sustained balances. In 2012, the five GAFIS banks are targeting sticky savings with new or improved savings products that are then combined with appropriate marketing efforts and aimed at low-income segments. These product offerings will include elements ranging from positive incentives (“free insurance”) designed to help build and maintain substantial balances, to goal-oriented marketing coupled with commitment devices (minimum monthly deposits), to illiquidity discipline (several days’ notice required prior to withdrawal), to

more basic savings functionality awareness, each designed with the low-income segment particularly in mind. The participating banks will roll out these products with appropriate tailored marketing messages and typically through new channels, in order to build the awareness and trust that will shift savings behavior and increase balances. This marketing will include efforts to tap directly into the electronic credit streams flowing into the accounts, such as G2P, P2P, and so on.

In contrast to electronic credit streams, cash deposits at branches (within the transaction activity contribution element) represent a large negative influence on the business case. GAFIS wants to pull two levers to improve this.

First, shifting bank account credits from expensive branch cash deposits to relatively inexpensive direct electronic transfers (e.g., G2P, P2P, even B2P, though the latter is not an express GAFIS gateway) will improve the business case by lowering overall transaction costs.⁵

Second, encouraging use of alternative channels for clients who themselves deposit money into their accounts, such as cash-in at an agent (generally cheaper for the bank than cash-in at a branch) or even electronic transfer from one account to another, will similarly improve the business case.

Also, insofar as fixed costs remain a challenge and may be susceptible to changing cost accounting paradigms, GAFIS can help on two fronts. First, certain gateways offer the possibility of supporting a low-cost acquisition strategy, either by leveraging the existing relationship between the client and the bank (e.g., KYC or other process already completed) or by leveraging the economies of scale generated by opening large numbers of accounts with little need for proactive sales (e.g., G2P contracts with government). Second, GAFIS may help participating banks formulate a legitimate argument that accounting allocation standards should be changed to open the door more widely to low-income segment initiatives, due to shifting paradigms around new, cheaper (e.g., branchless) channels and/or platforms, which are emerging in at least two of the five participating banks.

Conclusion

This *Focus Note* has set forth a framework to better understand the business case challenges of small savings, and has identified a tool kit of levers designed to address these challenges. The primary tools include developing innovative new savings products and marketing strategies designed to attract and grow sticky savings, targeting an increase in float income. GAFIS sees this as a win-win for the client and the bank. This is also where GAFIS's supply- and demand-side components meet.

In addition, the various gateway dynamics offer additional levers with the potential to improve the business case, as they offer the possibility of increasing balances, decreasing account acquisition

⁵ Worth noting is that this not only reduces the bank's transaction costs but the clients' too, as it can eliminate the need to travel to the branch and stand in line.

costs, and/or improving the economics of transaction activity (e.g., optimizing new lower-cost channels such as agents and mobile phones). Also, new products built primarily on new simplified channel paradigms may warrant new (or at least modified) approaches to cost accounting.

In sum, as Table 6 shows, the GAFIS toolkit draws a road map starting from the negative business case at the individual account level (Level 1) toward a positive business case at the same level. The Annex illustrates a detailed path within this road map. This *Focus Note* therefore frames the challenge for the GAFIS banks to meet, and therefore also sets GAFIS's supply-side action research agenda. Further information from ongoing work will inform a later publication in which we will review the extent to which the potential business case improvements outlined herein have been achieved in practice.

Annex: A Detailed Look at How the Levers Improve the Business Case

This Annex examines how pulling the six levers described above can yield specific, incremental business-case improvements. We believe that the levers are complementary, not mutually exclusive. In other words, all these levers are available, and if all of them are pulled together, the negative picture (average loss of $-\$2.30$ per account per month) painted in Table 4 above can turn positive (average profit of $+\$0.30$ per account per month), as shown in Table 6 above.

Table 8 illustrates how pulling the first two levers affects the first element of the business case, net interest income.

- The “Lever 1, Higher balances” column illustrates a $\$0.11$ improvement⁶ to the business case if the bank doubles the average monthly balance from $\$30$ to $\$60$ (note the red arrow pointing at “ $\$60$ ”). Increasing savings in the bank is a core focus of GAFIS, specifically working on improving product design and marketing for the low-income segment. Of course, the objective is to do this without having to go up-market—preferably by creating a proposition that makes it easier for the poor to put/leave a larger portion of their portfolios in the bank (see GAFIS *Focus Note 2*).
- The “Lever 2, Higher float rate” column illustrates a $\$0.07$ improvement⁷ to the business case if the bank increases the rate allocated to these deposits, from 5% to 8% (see the second red arrow). Some banks may do so in recognition of the relative stickiness of these deposits at the portfolio level (i.e., high numbers of small balances tend not to shift quickly, and thus are more reliable as a funding base over time and in the aggregate), which can justify a higher internal allocation rate.

Table 8: Pulling levers 1 & 2

			Change resulting from pulling Lever #	
			Lever 1, Higher balances	Lever 2, Higher float rate
1	Interest revenue: Balance (USD)	\$30	\rightarrow \$60	\$30
	Float income @ 5% \rightarrow 8%	$+\$0.13$	$+\$0.26$	$+\$0.20$
	Interest paid @ 0.75%	$-\$0.02$	$-\$0.04$	$-\$0.02$
	Net interest income	$+\\$0.11$	$+\\$0.22$	$+\\$0.18$
2	Fixed costs	$-\$1.05$	$-\$1.05$	$-\$1.05$
3	Transaction activity contribution (3 tx)	$-\$1.36$	$-\$1.36$	$-\$1.36$
4	Net result	$-\\$2.30$	$-\\$2.19$	$-\\$2.23$

⁶ This is the difference between the $+\$0.11$ of net interest income in the first numeric column, compared to the $+\$0.22$ in the changed scenario. This is the net change within the green-highlighted row, reflecting the aggregate of the change in the yellow-highlighted cells.

⁷ Again, this is the difference between the $+\$0.11$ of net interest income and the $+\$0.18$ in the last column. This is the net change within green-highlighted row, reflecting the change in the yellow-highlighted cell.

Table 9 below illustrates how pulling levers three and four affect the second element of the business case, fixed costs.

- The “Lever 3, Lower-cost acquisition” column illustrates a \$0.27⁸ improvement to the business case if the bank cuts the cost of originating an account from \$15 to \$6 (and assuming a constant 36 month amortization period, from \$0.45/month to \$0.18/month). This change may be available from many angles, including:
 - Opening new accounts via the agent channel.
 - Activating existing underutilized (perhaps dormant) accounts or cross-selling a new “pure” savings account to an existing transaction account holder, each should involve fewer opening procedures (this is an identified GAFIS gateway).
 - Opening new accounts en masse (perhaps using agents) through a G2P contract empowering this (this is an identified GAFIS gateway).
- The “Lever 4, Reduced allocation of costs” column illustrates a \$0.20⁹ improvement to the business case if the bank changes the monthly maintenance charge allocated to these accounts by one-third, from \$0.60 to \$0.40. Banks may choose this option for accounts in products that warrant a fundamental shift in the approach to costs previously perceived as fixed across all accounts (e.g., less reliance on traditional channel or platform infrastructure), and at least one GAFIS bank seems headed in this direction.

Table 9: Pulling levers 3 & 4

			Change resulting from pulling Lever #	
			Lever 3, Lower-cost acquisition	Lever 4, Reduced allocation of costs
1	Interest income	+ \$0.11	+ \$0.11	+ \$0.11
2	<i>Fixed costs</i>		<i>Cut cost to \$6</i>	<i>Cut cost by 1/3</i>
	Customer acquisition, 36 mo. amortization	- \$0.45	- \$0.18	- \$0.45
	Allocated account maintenance charge	- \$0.60	- \$0.60	- \$0.40
	Fixed costs	- \$1.05	- \$0.78	- \$0.85
3	Transaction activity contribution (3 tx)	- \$1.36	- \$1.36	- \$1.36
4	Net result	- \$2.30	- \$2.03	- \$2.10

Table 10 below illustrates how pulling the final two levers affect the third element of the business case, transaction activity contribution.

⁸ This is the difference between the -\$1.05 of fixed costs in the first numeric column, compared to the -\$0.78 in the changed scenario. This is the net change within green-highlighted row, reflecting the change in the yellow-highlighted cell.

⁹ This is the difference between the -\$1.05 of fixed costs in the first numeric column, compared to the -\$0.85 in the last column. This is the net change within green-highlighted row, reflecting the change in the yellow-highlighted cell.

Table 10: Pulling levers 5 & 6 for debit transactions

		Stylized	Change resulting from pulling Lever #
			Levers 5 & 6, More revenue-earning <i>debit</i> tx & Lower-cost <i>debit</i> channels
1	Interest income	+ \$0.11	+ \$0.11
2	Fixed costs	- \$1.05	- \$1.05
3	Transaction activity contribution		
	# of debit tx via trad'l channels (incl ATM) (revenue = \$0.40, cost = \$0.365 ¹⁰)	2	→ 1
	# of debit tx via electronic channels (revenue = \$0.40, cost = \$0.10)	0	→ 3
	# of credits via trad'l channels (revenue = \$0, cost = \$1.43 ¹¹)	1	1
	Revenues from tx	+ \$0.80	+ \$1.60
	Costs from tx	- \$2.16	- \$2.09
	Transaction activity contribution	- \$1.36	- \$0.49
4	Net result	- \$2.30	- \$1.43

The far right column illustrates two distinct improvements to the business case (net change within green-highlighted row, reflecting the aggregate of the changes). Here, element three is shifting by moving both levers at once:

- In this example, pulling Lever 5 increases the number of fee-generating debit transactions from 2 to 4 (across all channels, reflected by red arrows), which increases revenues by \$0.80 (\$0.40 per debit).
- In addition, pulling Lever 6 pushes debit transactions from traditional channels to more purely electronic channels (such as mobile payments or transfers (P2B or P2P)), decreasing transaction costs (\$0.10 for an electronic debit). The cost per debit transaction is lowered (from \$0.365 to \$0.17). The total debit transaction cost decreases (from \$0.73 to \$0.66) even though there are twice as many debit transactions.

Table 11 below illustrates the impact on the business case if we again pull levers 5 and 6, but this time showing shifting *credit* behavior instead of debit behavior. Again, the far right column illustrates two distinct improvements to the business case (net change within green-highlighted row, reflecting the aggregate of the changes in the yellow-highlighted cells), resulting from moving both levers at once.

- Even if we assume that the total number of credit transactions stays constant at one per month, pulling Lever 5 can increase the number of fee-generating credit transactions

¹⁰ This \$0.365 is the weighted average per debit transaction of: 0.1 branch debits at \$2.00 each, 1.7 ATM debits at \$0.30 each, and 0.2 electronic debits at \$0.10 each.

¹¹ This \$1.43 is the weighted average per credit transaction of: 0.7 branch credits at \$2.00 each, 0 ATM credits, and 0.3 electronic credits at \$0.10 each.

from 0 to 0.2 (see the red arrows). This could be done, for example, by encouraging those paying the accountholder to issue e-payments (e.g., G2P, P2P, or B2P), instead of in ways that lead to cash deposits at the branch. If we assume 1% fee to the bank on a \$40 payment pushed into the account, this is a \$0.40/credit (multiplied by 0.2 credits per month yields a \$0.08 business case improvement (top row of yellow highlights).

- Additionally, this same shift pulls Lever 6 to decrease costs on branch cash deposits. Using the above example of shifting 0.2 credits from the branch channel (at a cost of \$2.00/tx) to electronic credits (at \$0.10/tx) (see the red arrows) yields a significant \$0.38 business-case improvement (bottom yellow row).

Table 11: Pulling levers 5 & 6 for credit transactions

			Levers 5 & 6, Revenue-earning <i>credit</i> tx & Lower-cost <i>credit</i> channels	
1	Interest income	+ \$0.11		+ \$0.11
2	Fixed costs	- \$1.05		- \$1.05
3	Transaction activity contribution			
	# of debit tx via trad'l channels (incl ATM) (revenue = \$0.40, cost = \$0.365)	2		2
	# of credits via branch channel (revenue = \$0, cost = \$2.00)	0.7	→	0.5
	# of credits via electronic channels (revenue = \$0 → \$0.40, cost = \$0.10)	0.3	→	0.5
	Revenues from tx	+ \$0.80		+ \$0.88
	Costs from tx	- \$2.16		- \$1.78
	Transaction activity contribution	- \$1.36		- \$0.90
4	Net result	- \$2.30		- \$1.84

Finally, Table 12 illustrates the impact on the business case by shifting *credit* activity away from the branch toward the agent channel. In the above illustration (Table 10), even after shifting some credit activity to electronic channels, we still assume 0.5 credits per month occur at the branch, meaning there is still room to shift this 0.5 credits per month out of the branch (top red arrow). Of course, it's unrealistic to expect all credits to become immediately electronic, as there is still high demand for cash-in (i.e., as long as the economy is not cashless or even cash-lite). However, cash-in need not occur at the branch (expensive), but can be shifted to agents (“cash merchants”)—and we are beginning to see significant implementation of this system among some banks.

If we assume an agent transaction costs the bank \$0.45 (\$1.55 cheaper than a \$2.00 branch transaction), a shift of 0.4 credits from the branch to the agent (bottom red arrow) can yield a very significant \$0.62 business case improvement (net change within green-highlighted row, reflecting the change in the yellow-highlighted row).

Table 12: Pulling levers 5 & 6 with the agent channel

		Stylized	Change resulting from pulling Lever #
			Level 6, Lower transaction costs by shifting credits to cheaper agent channel
1	Interest income	+ \$0.11	+ \$0.11
2	Fixed costs	- \$1.05	- \$1.05
3	Transaction activity contribution		
	# of debit tx via trad'l channels (incl ATM) (revenue = \$0.40, cost = \$0.365)	2	2
	# of credits via branch channel (revenue = \$0, cost = \$2.00)	0.7	→ 0.3
	# of credits via electronic channels (revenue = \$0, cost = \$0.10)	0.3	0.3
	# of credits via agent channels (revenue = \$0, cost = \$0.45)	0	→ 0.4
	Revenues from tx	+ \$0.80	+ \$0.80
	Costs from tx	- \$2.16	- \$1.54
	Transaction activity contribution	- \$1.36	- \$0.74
4	Net result	- \$2.30	- \$1.68

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