A Framework
For Measuring the Performance and Sustainability of Subsidised Development Finance Institutions

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Summary

This article is a framework for analysing the performance and sustainability of subsidised development finance institutions. The goal is to improve social welfare by measuring performance better. DFIs affect five groups: customers, society, donors, managers, and investors. Each group has its own goals and so asks its own questions about performance. No single indicator completely answers any single question. Human work and smarts are needed to analyse indicators to find ways to improve performance.

I. Introduction

A *framework* is a guide to analysis. This framework covers the performance and sustainability of subsidised development finance institutions. It suggests questions, links questions, and proposes ways to find answers. The goal is to improve social welfare by measuring performance better.

The performance of DFIs affects five groups: customers, society, donors, managers, and investors. Each group has its own goals and so asks its own questions about performance. No single indicator answers any single question, let alone all the questions. It takes human work and smarts analyse measures to find ways to improve performance.

The framework gives measures that inform the questions based on the goals of each group. The measures differ by the opportunity cost of the group, the resources the group entrusts to the DFI, and the group's time frame. This framework builds on the logic the traditional framework for analysing DFIs, the Subsidy Dependence Index and the plethora of formats that followed [Yaron, 1992 and 1992b; Christen, 1997; Rosenberg et al., 1997; Alfaro, 1996; Holtmann and Mommartz, 1996; Khandker et al., 1995; SEEP, 1995; Christen et al., 1995; Benjamin, 1994; Inter-American Development Bank, 1994; and Rosenberg, 1994].

Sustainability is the ability to repeat performance in the future. Such

permanency takes a flexible organization and a structure of incentives that can maintain performance in spite of changes in the environment. Guessing at future performance is qualitative and so takes human work and smarts. No quantitative measure is enough to show sustainability.

Performance is progress toward the mission of development finance. This mission is to make the lives of poor people better. DFIs do this by producing *outreach,* loans and deposits used by the poor. Measuring performance sparks better performance and casts light on bad performance [Von Pischke, 1996]. Measurement is worthwhile if it leads to benefits from better performance that are more than the costs of measurement.

Section II characterises DFIs. Sections III and IV discuss analysis, subsidies, and subsidised resources. Section V discusses measuring performance from the points of view of the five groups with a stake in a DFI. Section VI discusses sustainability.

II. The characteristics of DFIs

Society funds DFIs hoping to better the lives of poor people by cutting the cost of loans and deposits. Even though the poor do not have much money, they still save and borrow in small amounts. There would be little outreach and few DFIs without subsidies from society because handling small loans and small deposits is much more costly than handling big loans and big deposits.

When society funds development finance, it acts like Robin Hood. Governments take resources from rich taxpayers in high-income countries and, through donors, give resources to DFIs selling financial services to the poor in low-income countries. Without DFIs, the poor either would pay more for these financial services or would not have access to them at all. Subsidies are the price society pays for outreach.

Helping the poor through a DFI costs society because the funds entrusted to a DFI have an opportunity cost—the funds could have been used to help the poor in other ways, or the funds could have been kept by taxpayers. Donors want the biggest bang for the buck because the poor are many but the donor dollars are few. This is true whether society is allocating funds between development finance and other development projects or whether donors are allocating funds earmarked for development finance among DFIs.

As firms go, DFIs are oddballs. DFIs get revenue both from sales and from subsidies. The product of DFIs is aimed at the poor and involves money, just what the poor lack. Often DFIs are staffed by people without backgrounds in banking. Donors like DFIs because entry into lending is cheap—all it takes is money.

DFIs and profits

Even though most DFIs are non-for-profits and do not have owners, profits matter to DFIs for at least five reasons. First, profits matter because society is unwilling to fund DFIs to the point of using up all the gains from more outreach [Rosenberg, 1994]. If the profits of a DFI could attract private capital, then development finance would mushroom. Outreach would blossom even without donors. Social benefits would skyrocket, and social costs would shrivel. Profits would enlist private capital for development finance.

Second, profits matter for sustainability, and sustainability matters for repayment. Low profits tell poor borrowers that the DFI is sick, and they will stop repayment. The DFI weakens unto death, and a dead DFI does not help the poor.

Third, profits matter because access to subsidised resources waxes and wanes with the whims of donors. Donors tire, and their moods swing. Funds fade as fads fizzle. Without profits, a DFI will shrink and die when donors withdraw. With profits, a DFI can grow and live even when donors withdraw.

Fourth, profits matter because the DFI could use profits to compensate society for subsidies. If a DFI can repay society, then the DFI is worthwhile for society because the poor get benefits at no cost to society.

Fifth, profits matter because society cares about the poor both now and in the future. If losses cause the DFI to collapse, then the poor in the future will not benefit from outreach.

Pricing also affects profits and performance. No one will repay loans that cost too much, and the rich will take loans that cost too little [Stiglitz and Weiss, 1981; González-Vega, 1977].

Most DFIs are not profitable. Their prices are too low, and/or their costs are too high. This scares investors. In most cases, DFIs are born with help from donors, and they survive only with more help.

DFIs are odd. They need subsidies, but they need to outgrow subsidies. They are non-for-profits, but they need profits. They do not have owners, but they need to attract owners. They are not private, but, they need to act as if they were private. DFIs help the poor, but they do so by charging enough to cover costs.

DFIs are too odd to fit in traditional frameworks. Without owners, return-on-equity is meaningless. With net income is inflated by subsidies, return-on-assets is also meaningless [Yaron, 1992a and 1992b].

III. Subsidies and subsidised resources

Analysing subsidy is needed because donors, even if they own shares, do not act like private owners. Unlike private owners, donors are not gambling with their own money. If a donor demands good performance, it helps society more than the donor. An investor's selfishness is more sure than a donor's selflessness.

Subsidised resources are not the same thing as *subsidies*. Donors entrust subsidised resources to DFIs at prices below their opportunity cost. Subsidy is the opportunity cost less what the DFI pays. Most resources from donors are subsidised. Otherwise, most DFIs would not hassle with donors.

To illustrate, suppose society lends a DFI L for a year at an interest rate of c. Suppose $m>c$ is the opportunity cost of a loan of like risk from some point of view. The DFI gains subsidised resources equal to the opportunity cost less what is paid, $L\cdot(m–c)$. The subsidy from the use of the subsidised resources is not $L\cdot(m–c)$ but rather $m\cdot L\cdot(m–c)$. The L lent must be repaid, and so it is neither subsidy nor subsidised resource.

The concept of *subsidised resources* is linked to the concept of *subsidies*. Subsidies from the use of subsidised resources become subsidised resources.

Suppose a DFI got $m\cdot L\cdot(m–c)$ as a subsidy in a period. An unsubsidised DFI would pay this $m\cdot L\cdot(m–c)$. To keep from shrinking, average debt in the period

would have to increase by $m \cdot L \cdot (m–c)/2$. The DFI would pay $m^2 \cdot L \cdot (m–c)/2$ for this extra debt. This $m^2 \cdot L \cdot (m–c)/2$ is a subsidy on subsidised resources from a subsidy.

Six ways a DFI can get subsidised resources

Three of the six ways a DFI can get subsidised resources are explicit, and three are implicit (Figure 1). The DFI gets subsidised resources explicitly when a donor gives the DFI more resources. The DFI gets subsidised resources implicitly when it does not pay the opportunity costs on subsidised resources it already has.

Four of the six ways a DFI can get subsidised resources are non-repeatable, and two are repeatable (Figure 1). Non-repeatable transfers end when a donor leaves. Repeatable transfers do not end when donors leave.

The first way a DFI can get subsidised resources is explicitly as a cash grant accounted for as equity (Figure 1). The subsidy is not the grant itself but rather the opportunity cost of the subsidised resources from the grant. The opportunity cost is that of equity from the point of view of a given stakeholder.

Second, a DFI can get subsidised resources explicitly as a cash grant accounted for as revenue. All grants should be counted as equity. Grants are not revenue because they do not come from the DFI's operations. Still, some DFIs count grants as revenue. Equity changes the same whether grants are counted as revenue or as equity. As always, the subsidy is not the grant itself but rather the

unpaid opportunity cost of the extra equity from the grant.

Third, a DFI can get subsidised resources explicitly as discounts on operating expenses due to grants in kind. Examples are travel, training, technical assistance, cars or computers.

Fourth, a DFI can get subsidised resources implicitly as discounts on debt. The discount is the opportunity cost of debt of like risk less the price the DFI paid to donors. The subsidy is not the discount but rather the unpaid opportunity cost of the use of the subsidised resources from the discount.

Fifth, a DFI can get subsidised resources implicitly as capitalised subsidies. Subsidies are like equity injections and become subsidised resources.

Sixth, a DFI can get subsidised resources implicitly as positive profits. Positive profits belong to owners. If positive profits are not withdrawn but left as positive retained earnings, then they have an opportunity cost just like any other form of equity. But if profits are negative, then there is no opportunity cost. Negative profits are not claims by the DFI on owners.

The traditional SDI wrongly counts negative profits as negative subsidised resources. If a donor grants G to a new DFI at the start of a period and if profit in the period is $-G$, then the traditional SDI says the subsidy was zero. But an unsubsidised DFI would have paid $G \cdot m_{et}$ more than the subsidised DFI paid.

IV. Analysis of subsidised DFIs

Analysis is a tool that gets information from data to help answer a question that matters to someone. *Qualitative analysis* is subjective. It can be learned but not taught. *Quantitative analysis* is objective. It can be learned and taught.

Analysis is human. The *analyst* is a particular person who makes assumptions, who collects, manipulates, and interprets data, and who documents the process and the information. Teasing information from data takes human skill because the process is holistic, synthetic, and idiosyncratic.

Qualitative analysis depends on the personality, experience, intelligence, and performance of the analyst. Every case is a special case, and there is no small set of principles useful in all cases. Frameworks guide qualitative analysis with lists of questions. Getting information from qualitative data takes, besides time and effort, experience and intelligence. These inputs are costly, and quality varies.

The processes of quantitative analysis are standard enough to be taught. Although special cases exist, there is a small set of principles useful in most cases. Frameworks for quantitative analysis specify what data to collect and how to manipulate it. The inputs of time, energy, and knowledge of the process are still costly and variable, but less so than for qualitative analysis. Still, interpreting and synthesising information is qualitative and so depends on the analyst.

The analysis of the performance and sustainability of DFIs is qualitative. Sustainability depends on future performance, and future performance can only be guessed by a human. The guess is informed by past and present performance and by a holistic understanding of the DFI and of DFIs in general.

Good analysis is constructive. It uses measures of past and present performance to suggest how to get better in the future [Inter-American Development Bank, 1994]. Good analysis shows what technological and organizational changes are needed. It also tells whether subsidies are likely to help or to hinder, how much subsidy is just enough, and what forms of subsidised resources should be best.

Good indicators tell what to change and how much to change. Useful indicators are also tools to mark progress and to set goals. Any change in performance forecast for the future should be supported by evidence of a margin with room to change and that is controlled by the DFI.

Good analysis looks to the future because that is where change can be. But the future is unknown, so good analysis is grounded in the present and in the past. The best forecast of the future is the present; the next-best forecast is the past.

Just like all new firms, all new DFIs lose money. It takes time and growth to dilute start-up costs, to hone technology, and to exploit economies of scale. But

unlike most old firms, almost all old DFIs keep losing money. This means that it takes human skill to forecast whether trends in past and present performance is enough to ensure good performance in the future.

Analysing progress over time takes benchmarks and peer comparisons [Christen, 1997; Koch, 1992]. If few DFIs are at their goals, then their progress matters more than their state. But the speed and the trajectory of progress is hard to judge without benchmarks over the life of the DFI.

Trends are patterns of change in performance. Trends matter if the levels of performance are still too low. But levels also matter. Improvement is not enough, and improvement matters only as a signal of the likelihood of reaching absolute goals. Levels and trends must be judged together.

V. Measuring performance from the points of view of stakeholders

Five groups have stakes in the performance of a DFI: customers, society, donors, managers, and investors (Figure 2). Each of the five stakeholders has its own goal, and so each group asks its own question about performance. Each group has its own opportunity cost for the resources that it entrusts to the DFI. Some groups care only about performance from now on, but some groups also care about performance from birth on. Finally, each group has its own measure of performance. The measures differ, but they are still related (Figure 3).

Performance from the point of view of customers

The *customers* of a DFI are poor borrowers and poor depositors in low-income countries. The DFI is one of many sources of financial services. The poor could borrow from relatives or moneylenders [Adams and Fitchett, 1994]. They could save in commercial banks or by stuffing cash in the mattress.

Surplus from the DFI is the difference between the benefits less costs of using the DFI and the benefits less costs of not using the DFI. The goal of customers is to maximise their own welfare by maximising surplus (Figure 2).

If customers get positive surplus from using a DFI, then they will use it repeatedly. If they do not use it repeatedly, they must be doing better elsewhere. For customers, good performance is measured by repeated use.

One-shot use is not a good measure of the performance of a DFI for customers. Although poor people will use a DFI only if they expect positive surplus, expectations can be mistaken.

If customers are care about their own welfare, then they can be trusted to measure the performance of the DFI from their point of view. No analyst is needed. Repeated use does not imply any other level of performance (Figure 3).

Performance from the point of view of society

Society is all people. The goal of society is to maximise social benefits less social costs (Figure 2). DFIs are one way to do this. Society may want to give a weight w_p to benefits for the poor in low-income countries and a lower weight w_r for costs for the rich in high-income countries.

DFIs benefit the poor by cutting the price of loans and deposits. Lower prices mean lower costs for customers and so bigger surpluses. Social benefit is the sum of the surpluses enjoyed by customers.

DFIs cost the rich because giving to DFIs means taking from taxpayers. Taxpayers would benefit if taxes were cut. Social costs are the opportunity costs of resources entrusted to DFIs from the point of view of taxpayers.

Society cares about performance both from birth on and from now on. Performance from birth on matters because society hopes to get more from those

DFIs to whom it has given more. Performance from birth on also matters because development finance is a gamble. If most DFIs perform poorly, then society might want to stop funding them in order to bet at some other development game with a higher social payoff. Without help from society, there would be no DFIs, so all benefits from DFIs from birth on are caused by social costs from birth on.

Society also cares about performance from now on. Taking past costs as sunk, more funding may increase social welfare more than other options could. Extra funding from now on causes only those benefits that would not happen without the extra funding.

A *worthwhile* DFI has a positive discounted expected value of the stream of social benefits less social costs from some point in time. Worthwhileness for society does not imply any other level of performance except that of repeated use (Figure 3). Customers count only benefits to customers. Society counts both benefits to customers and costs to taxpayers.

Measuring social costs, at least in the past, is cheap. Social costs are the subsidies from the point of view of society on the subsidised resources entrusted to the DFI.

Measuring social benefits, even in the past, is costly [David and Meyer, 1983; Von Pischke and Adams, 1980]. This is true even though repeated use by

customers implies that social benefits are positive. The cost of measuring social benefits is high but falling [Pitt and Khandker, 1996; Hulme and Mosley, 1996; and Khandker, 1996].

Social benefits are an unknown multiple *b* of average debt (or deposits). Measuring average debt is cheap. *Pseudo-benefit-cost analysis* looks at what *b* would have to be to make discounted benefits more than discounted costs. Examples include Binswanger and Khandker [1995] and Gale [1990]. Pseudo-benefit-cost analysis recognises that while the goal of society is to maximise social benefits less social costs, measuring social costs is cheaper than measuring social benefits. If the benefit-cost rule itself were judged by a benefit-cost rule, measuring costs without benefits might beat measuring both benefits and costs.

Given an average loan portfolio LP_t, a lower bound on subsidies S_t and a discount rate δ, then a lower bound on *b* is:

$$b = \left(\sum_{t=1}^{T} \delta^t \cdot w_r \cdot S_t \right) \cdot \left(\sum_{t=1}^{T} \delta^t \cdot w_p \cdot LP_t \right)^{-1} . \qquad (1)$$

If *b* is small, then a benefit-cost analysis at time 0 with the knowledge at time *T* would probably have judged the DFI to be worthwhile for society. How small is small needs human talk, as does picking the weights and discount rates.

Pseudo-benefit-cost analysis from a point in the past up to the present is cheap because all the data are known. Pushing into the future is less accurate and

more costly because it takes forecasting. Still, even if funds sunk into a DFI in the past were wasted, society wants to know if more funding would be worthwhile.

Performance from the point of view of donors

Donors give funds to DFIs that were taken from taxpayers by governments. The opportunity cost for donors is the return that the poor could have had in the funds' best other use. Just like society, the ostensible goal of donors is to maximise social benefits less social costs. Altruistic donors would use the same measures as society.

But donors are organizations staffed by people. These people want to help the poor, and they also want to keep their good jobs and to climb the career ladder. Often the goal of donors is to help the poor while moving money and while being linked to DFIs judged as good.

One way to do this is to make development finance big. Given a budget, donors want to buy as much outreach as they can (Figure 2). Several donors seem to espouse the goal of saturating the market for development finance [Christen, 1997; Rosenberg, 1994]. Donors assume that DFIs are worthwhile for society.

Rosenberg [1994] notes that donors do not have the funds to saturate the market. He then reasons that donors should give funds in ways so as to make DFIs so profitable as to attract funds from the market. The goal of donors of making

development finance big might match the goal of society of maximising social welfare; if DFIs are socially worthwhile, then big DFIs are even more worthwhile.

Commercial leverage answers the question of donors of how much finance for the poor is sparked by a dollar of subsidised funds. Commercial leverage is the ratio of average non-subsidised resources over average subsidised resources.

Maximising commercial leverage would maximise outreach for a given level of donor help. It would also let donors move funds while giving them incentives to do so in ways that strengthen the ability of DFIs to live without donors. This is good if it helps DFIs reach more poor people at a lower social cost.

Donors care about performance both from birth on and from now on. Past performance matters because past subsidies make subsidised resources with an opportunity cost now. Donors expect more from DFIs which got more. Future performance matters because donors want a big return for present disbursements.

Commercial leverage implies only repeated use (Figure 3). A DFI that could not keep its customers could not attract market funding.

Donors do not get the benefits of their decisions, nor do they bear the costs. If there is any feedback, it is often misdirected or deflected [Adams, 1988]. No one has an incentive to be a gadfly or a whistleblower. Measuring commercial leverage is a way to goad donors to do good.

Performance from the point of view of managers

Managers coordinate the resources entrusted to the DFI. Managers care about performance because they care not only about the poor but also about their own jobs (Figure 2). The managers of a DFI often enjoy unusually high pay and the perk of helping the poor. Low-income countries have few jobs so good. If the DFI shrinks and dies when donors withdraw, then managers will lose their good jobs. Thus, managers ask the question of how far the DFI is from being able to survive without donors.

To keep their jobs, managers must maintain the real value of the subsidised resources donors leave behind. In addition, debt from donors must be replaced with debt from the market. For managers, the opportunity cost of subsidised resources is the inflation rate. The opportunity cost of debt from donors is the market price of debt of like risk.

The managers of a DFI ignore sunk costs. They care only for performance from now on. Managers will keep their jobs if the DFI can maintain the real value subsidised resources while paying market rates to replace debt from donors. The DFI can survive as a going concern without paying society for all of its costs.

There are five levels of performance from the point of view of managers. Each step is necessary, but not sufficient, for the next step (Figure 3).

Accounting profitability is the lowest step. It implies positive net income before taxes. The DFI met its obligations and maintained its nominal size.

Most DFIs are so bad that accounting profitability, when reached, is loudly trumpeted. But accounting profitability is usually misleading or meaningless. It does not comfort managers. It ignores taxes on profits, includes revenue grants, and excludes expenses covered by discounts. It also ignores the cost of inflation and the risk premium on debt from the market absent from debt from donors.

Without accounting profitability, a DFI is dying. In spite of help from donors, it is shrinking, even in nominal terms. With accounting profitability, a DFI is living, but it might be shrinking in real terms.

Operational profitability is the second step. It implies positive true profits. *True profits* are accounting profits less taxes, revenue grants, and discounts. An operationally profitable DFI could have met its obligations and maintained its nominal size even if donors had stopped non-repeatable transfers. But an operationally profitable DFI might still shrink in real terms.

Financial profitability is the third step. A DFI is financially profitable if true profits are positive even after compensating for the effects of inflation on subsidised resources. A financially profitable DFI might still shrink in real terms if it replaced debt from donors with debt from the market.

Financial self-sufficiency is the fourth step. A DFI is financially self-sufficient if true profits would be positive even after compensating for the effects of inflation on subsidised resources and after replacing debt from donors with debt from the market. It could meet its obligations without shrinking even without donors. Financial self-sufficiency makes managers comfortable because they can keep their jobs if donors leave. Managers have no selfish reason to aim higher.

Financial self-sufficiency matters from all points of view even though it is not sufficient for good performance for society or for investors. Without financial self-sufficiency, performance tends to slip and then spiral downward by any measure from any point of view.

Private profitability is the fifth and top step. It means true profits are so high that the DFI could have replaced all of its subsidised resources with market resources and still met its obligations without shrinking in real terms.

If opportunity costs are measured as suggested by Benjamin [1994], then the SDI [Yaron, 1992a and 1992b] measures private profitability from now on. The modified SDI measures private profitability from birth on [Schreiner, 1997]. The two measures differ in that the modified SDI does not omit capitalised subsidies and recognizes that negative profits are not negative subsidised equity.

Subsidy is not the same as *compensated subsidy*. *Subsidy* is the opportunity

cost less what the DFI pays. *Compensated subsidy* is subsidy less true profits. In the short run, negative compensated subsidy implies private profitability from now on. In the long run, negative compensated subsidy implies private profitability from birth on.

Financial self-sufficiency versus private profitability

Financial self-sufficiency is a low hurdle because subsidised resources usually overwhelm debt from donors. The opportunity cost of subsidised resources for managers is only the rate of inflation. The opportunity cost of debt from donors is higher due to its premium for risk. But the average opportunity cost for all subsidised resources for managers will be weighted close to inflation.

Private profitability is a high hurdle because it supposes the DFI would replace subsidised resources with equity from investors. Equity is riskier than debt and so has a higher opportunity cost. This weights the average opportunity cost for all subsidised resources far above inflation.

Financial self-sufficiency for managers implies commercial leverage for donors and repeated use for customers (Figure 3). But financial self-sufficiency does not imply worthwhileness for society since the opportunity cost of society is usually higher than the average opportunity cost of managers.

In contrast, private profitability is sufficient for social worthwhileness. The

social problem is that managers have no selfish reason to push past financial self-sufficiency to private profitability. One way donors can prod managers is to measure performance and to threaten to leave even before the DFI is financially self-sufficient if the DFI is not heading to private profitability.

Performance from the point of view of investors

Investors are private people with money to invest. Investors have more money than donors, so they could fund more development finance. But investors care not for the poor but for profit (Figure 2). Investors see the poor not as a mission but as an untapped niche. Investors ask the question of whether investing in a DFI will make them richer.

Investors in a DFI expect dividends and/or increased retained earnings at least as big as those they could get in investments of like risk. If returns are smaller, then investors count the shortfall as an extra investment. In the long run, investors expect their total investment to earn at least its opportunity cost.

Private profitability from birth on or from now on will attract investors (Figure 3). Private profitability from now will attract investors to the DFI now, regardless of how bad an investment the DFI would have been from birth.

Private profitability from birth on means that the DFI could have replaced subsidised resources with equity from investors from the start. It also means the

DFI, if liquidated, could return all the resources entrusted to it. If a DFI has been privately profitable from birth, then investors would not only want to buy into it, but they would also want to start DFIs from scratch.

Private profitability from now on for managers is sufficient, but not necessary, for a DFI to be worthwhile from now on for society (Figure 3). Private profitability from now on does not imply worthwhileness from birth on for society because it ignores capitalised subsidies and looks only at accounting equity.

Private profitability from birth on is sufficient, but not necessary, for a DFI to have been worthwhile from birth on for society. This is true because the opportunity cost of investors is higher than the opportunity cost of society.

Relations among the measures of performance from different points of view

Figure 3 shows the relations among the measures of performance from different points of view. Arrows imply sufficiency but not necessity. An important case is private profitability from birth on for investors. Private profitability implies all the other levels of performance except sustainability.

One level of performance can be reached even though a second level, sufficient but not necessary for the first, is not reached. For example, a DFI could be worthwhile for society from now on without being worthwhile from birth on. Likewise, a DFI could be worthwhile from now on for society without being

privately profitable from now on for investors. In fact, a DFI could be worthwhile for society from birth on and/or from now on without reaching any other level of performance except repeated use.

Financial self-sufficiency for managers is not sufficient for worthwhileness for society. The only level sufficient for worthwhileness for society is private profitability for investors. In fact, few DFIs are privately profitable from now on. Even fewer, if any at all, have been privately profitable from birth on. Without private profitability, society cannot be sure of worthwhileness, but managers do not have selfish incentives to strive for private profitability once the DFI is financially self-sufficient.

Society needs to know if development finance is worthwhile because society spends a lot on development finance. For example, the Global Microcredit Summit in Washington D.C. in Feb. 1997 sought a budget of $21.6 billion to support the goal of taking development finance to 100 million of the world's poorest people by 2005 [The Economist, 1997]. But without private profitability, only benefit-cost analysis can tell society if subsidising DFIs is worthwhile. Benefit-cost analysis is so costly that pseudo-benefit-cost analysis, informed by human judgement, probably is better.

VI. Sustainability

Sustainable means repeatable. Sustainability has two facets: the sustainability of a transaction and the sustainability of an organization. Sustainable transactions are repeatable. Sustainable organizations have the structure and the incentives to repeat transactions.

The sustainability of a transaction

Subsidy is linked to the sustainability of transactions (Figure 4). Trades between private entities are repeatable and thus are sustainable. Such voluntary trades are not subsidised. The price is set not by fiat nor by law but rather by supply and demand.

By definition, voluntary trades have market prices. Each party spends its own resources. In most cases, most of the costs and benefits are internalised by the traders. Each party can be trusted to do a secret benefit-cost analysis. In many cases, a trade that is worthwhile for the traders is also worthwhile for society.

Voluntary trades between private entities are repeatable and thus sustainable because they are selfish and voluntary. The future is unknown, but traders who judge a trade as good now would probably do the same in the future.

Even donations are repeatable if they come from private people. A private benefactor can be trusted to judge whether the benefits are more than the costs.

For example, churches live on sustainable donations from private people.

In contrast, trades involving non-private entities are not repeatable and thus are not sustainable. The parties choosing to trade are not the owners of the traded resources. The costs and benefits are mostly external to the traders. Therefore, the secret benefit-cost analysis of the traders cannot be trusted to match the benefit-cost analysis for customers or for society.

Feedback makes markets work. But with DFIs and donors, the feedback loop is blocked. Trades between DFIs and donors are not repeatable and thus are not sustainable because they are not selfish. Donors are fickle. They stop trading with a DFI when they lose their omniscience and/or their altruism. This will happen long before private traders lose their selfishness.

Trades with donors are not repeatable. Such non-private trades are usually subsidised. Although private entities can be trusted to watch out for themselves, non-private entities cannot be trusted to look after everyone else.

Subsidy is linked to sustainability in that most trades with non-private entities usually do not carry a market price and so do carry a subsidy and in that trades with non-private entities are not sustainable. But subsidy and sustainability are not always linked. Some subsidies repeat even after donors leave (Figure 1). Also, some non-subsidised trades are not sustainable.

For example, gifts from non-private organizations funded by private people are not subsidised, but the analyst must judge their sustainability. For example, private donations fund churches, and some churches fund DFIs. But, earmarked collections not withstanding, the people funding the church do not directly chose to fund the DFI. That choice is made by people in the church organization. Like donors, church leaders allocate someone else's money.

The privateness of a DFI's partner in trade tells whether to impute a subsidy. But knowledge of privateness does not always signal sustainability. Knowledge of privateness helps in some cases, but it cannot do all the work.

The sustainability of an organization

Sustainable organizations have a structure and a set of incentives that let them keep making sustainable trades. Sustainable DFIs help the poor now without harming their ability to help the poor in the future. The other performance concepts are based in the past and the present; sustainability is based in the future.

Sustainable organizations are permanent because their operations are repeatable. They can meet their obligations without shrinking in real terms.

Sustainability is not the same as *subsidy independence* [Yaron, 1992a and 1992b]. If it were, then no private firm would go bankrupt.

A *self-sustainable* organization is sustainable without help from non-

private entities. *Sustainability* does not imply *self-sustainability*. For example, a DFI that is financially self-sufficient for managers might be sustainable, but it is not self-sustainable unless it is also privately profitable for investors (Figure 3).

Financial self-sufficiency for managers means a DFI is alive now and not shrinking in real terms. But one year of good marriage does not guarantee happily ever after, and one period of good performance does not guarantee sustainability. Keeping good performance over time takes rules that motivate managers to adapt and to adjust the rules themselves [Chaves and González-Vega, 1996].

Sustainability needs *meta-rules*—rules for changing rules. Good meta-rules let an organization perform well over time without extraordinary labour, luck, or leaders. The market changes, and so must the DFI if it is to do well.

Sustainability and mission

A DFI might win sustainability but lose its mission. For example, a DFI might switch from small loans to poor people to big loans to rich people. This would increase profits, financial self-sufficiency, and private profitability. Commercial banks do this, and many are sustainable and even self-sustainable. But they do not serve the poor.

Development-finance sustainability means a DFI is sustainable and keeps its mission for the poor. *Development-finance self-sustainability* means a DFI is

development-finance sustainable without help from non-private entities. Development-finance self-sustainability implies a DFI is worthwhile from now on for society. But development-finance sustainability does not necessarily imply anything about performance for society (Figure 3).

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Figure 1: Ways a DFI can get subsidised resources

<table>
<tr><th>Form</th><th>Explicit or implicit</th><th>Repeatable or non-repeatable</th></tr>
<tr><td>1. Equity grants
2. Revenue grants
3. Discounts on operating expenses</td><td>Explicit</td><td rowspan="2">Non-repeatable</td></tr>
<tr><td>4. Discounts on debt from donors
5. Capitalised subsidies
6. Positive profits</td><td rowspan="2">Implicit</td></tr>
<tr><td></td><td>Repeatable</td></tr>
</table>

Table 2: Characterising the point of view of those with a stake in a DFI

	1. Goal to maximise	2. Question	3. Opp. cost	4. Point of view in time		5. Measure
				From birth on	From now on	
1. Clients	Own benefits less costs	Would I be better off using the DFI than not?	N/A	No	Yes	Repeated use
2. Society	Benefits of poor in LDCs less costs of rich in HICs	Would society be better off funding the DFI than not?	Return to society in best other use	Yes	Yes	Social benefits less social costs
3. Donors	Dev. fin. for poor	How much dev. fin. is sparked by donor resources?	Return to poor in best other use	Yes	Yes	Commercial leverage
4. Managers	Own utility	Could the DFI live without more donor resources?	Cost to DFI of inflation or in market	No	Yes	Financial self-sufficiency
5. Investors	Own utility	Would I be better off investing in the DFI than not?	Return to investor in investment of like risk	Yes	Yes	Private profitability

Figure 3: Relations among measures of performance

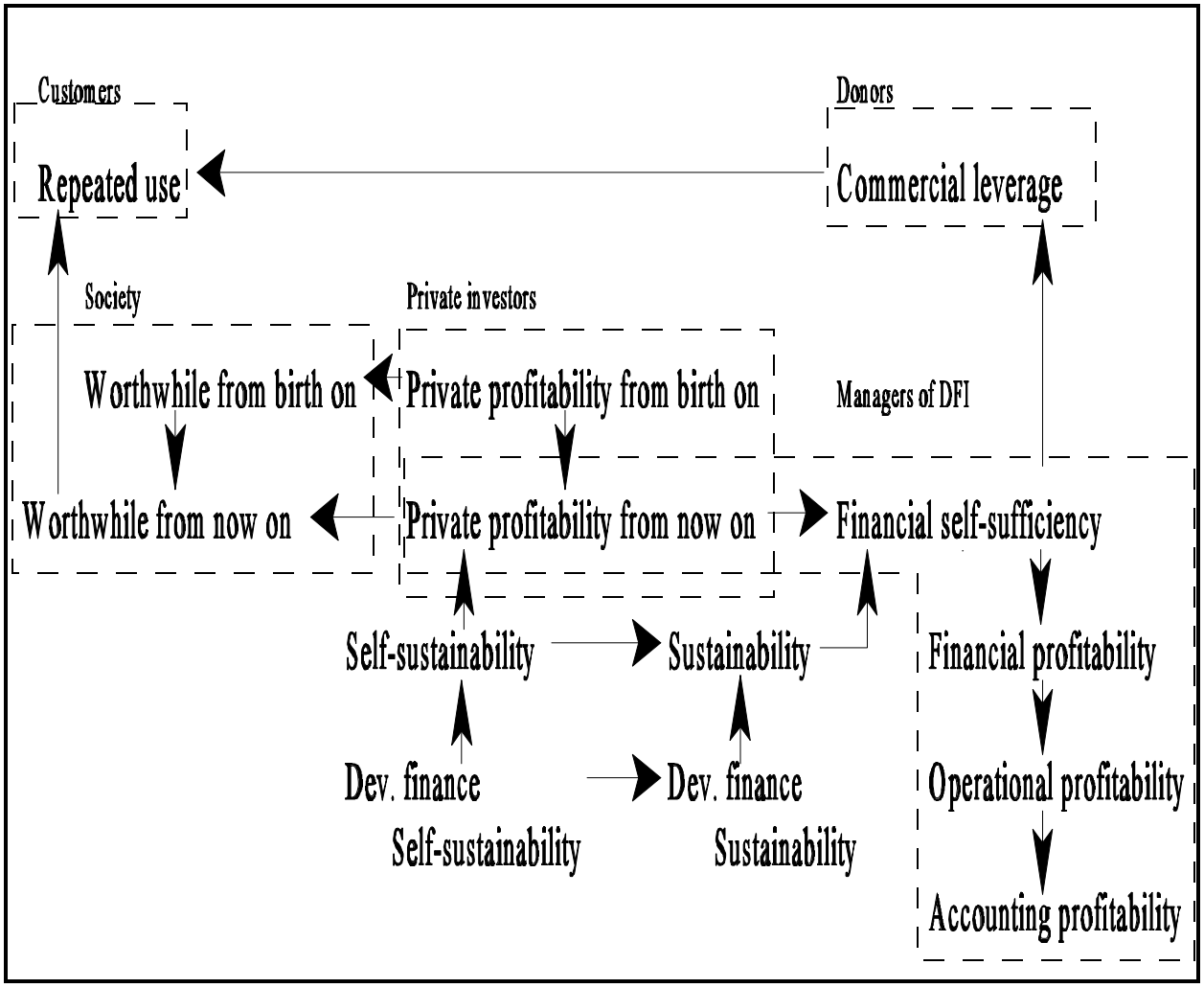

Figure 4: Relations among types of trades and sustainability