Financial Sector Indicators Note: 1
Part of a series illustrating how the Financial Sector Development Indicators (FSDI) project enhances the assessment of financial sectors by expanding the measurement dimensions beyond size to cover access, efficiency and stability. Data on these dimensions, as well as other information relevant for financial sector assessment, is intended to become available online during Spring 2006.

Measuring banking sector development

- Traditional measures of size and depth of banking systems limit assessment
- New measure on access to banking, efficiency and stability enhance the analyses

Conventional measures of banking sector
The traditional indicators utilized for assessing the size, depth and development of a country’s banking (financial) sector are:
- The ratio of M2 to GDP
- The ratio of private credit to GDP.

In particular, both these measures have been used to show the causal effects of financial development on economic growth. However, both measures have some limitations:
- The ratio of M2 to GDP captures the degree of monetization in the system, but does not capture the degree of bank intermediation.
- The ratio of private credit to GDP does not control for non-performing loans and more generally, the quality of credit allocation.
- Both measures do not capture the broad access to bank finance by individuals and firms, the quality of bank services and the efficiency of providing banking services.
- In general, the quality and availability of indicators on financial stability is limited and the documentation of institutional framework supporting banking lacks robustness.

New indicators for going beyond the size
The Financial Sector Development Indicators (FSDI) project has compiled indicators that go beyond size, and can help assess access, efficiency and stability of financial systems across and within countries. Banking systems can score very differently on each of these four dimensions. It is therefore important to consider these dimensions jointly and in various combinations. The conventionally used, as well as new indicators relevant for assessment of banking system are summarized in the table above. The
indicators within each dimension are also
summarized in a composite index for the pur-
poses of benchmarking and classifying coun-
tries.

The majority of the new indicators refer to
access to finance. These indicators summarize
the ability of households and firms in a country
to access finance and the actual usage of
banking services. New indicators on efficiency
include the number of days it takes to clear a
check or to do a wire transfer in a country, a new
measure of the degree of bank competition, and
information on the degree of state or foreign
ownership of banks. New indicators on the
stability of the banking sector, among others,
comprise market-based measures of the prob-
ability of default of banks in a country, and data
on the quality and performance of corporate
sector and household borrowers, thus incorpo-
rating the user side of finance. In addition, the
stability dimension includes some of the new
financial stability indicators collected by the IMF,
such as information on large loan exposures
and concentration of lending activity.

The FSDI also comprises data on the develop-
ment of other parts of the financial sector, such
as capital markets and insurance, thus captur-
ing the relationships between the banking and
various other sectors. There are also new
indicators on the quality of the legal infrastruc-
ture that supports bank finance, such as creditor
rights, bankruptcy framework, credit information,
and bank regulation and supervision.

Access limited in low-income countries
Utilizing information from new indicators, it
becomes clear that while the difference between
the high-income and developing countries is
relatively less pronounced in terms of size and
depth, it is quite stark in terms of access. Using
the traditional measure of financial development,
private credit to GDP, the difference between the
rich and poor countries is comparatively less
pronounced. The ratio of private credit to GDP
varies from 15 percent in low income countries
to 95 percent in high income countries, or in
other words a 6-fold difference. However, ac-
cess to finance varies widely across countries,
both in terms of high versus low-income and
within developing countries themselves. The
number of bank accounts per person in high-
income countries is on average 2.2, compared
to an average of 0.1 in low-income countries, or
a 22-fold difference. In Madagascar, only 14 out
of 1000 people have a bank account, while in
Austria; on average people have more than 3
bank accounts. Such a comparison, otherwise
restricted without information on bank accounts,
suggests that access to finance is particularly
curtailed in low income countries.

Number of bank accounts per person
This measure is an indicator of the use of banking
services. Based on a questionnaire circulated among
bank regulatory agencies and publicly available data,
information on the number and value of deposits for 54
countries for the year 2004 was collected. A higher
number of bank accounts is interpreted as a signal of
greater use of services. This is the first compilation and
analysis of consistent and comparable cross-country data
on the outreach or penetration of banking systems.
The limited access to bank finance is also highlighted in the relationship between traditional measures of size (or depth and development) and other new data on access to banking. The chart (top) shows the relationship between M2/GDP (a traditional measure of financial depth) and the number of bank accounts (deposits) per person, which is a proxy for the use of banking services. The data on bank accounts are collected using an extensive survey of bank regulatory agencies. The data show that, especially at intermediate levels of financial development, financial size and access to banking are not correlated. This illustrates the importance of comparing data on access to finance when assessing financial development in countries.

Concentration does not imply low efficiency
For the bank efficiency dimension, FSDI includes not only traditional measures of bank profitability (e.g. return on assets) and efficiency (e.g. ratio of operating costs to assets) but also information on the structure of banking system and measures of the competitiveness of the banking systems (e.g. percentage of banks assets that are foreign or state-owned, or the three-bank concentration ratio).
The general notion is that a more concentrated banking sector is less efficient. However, the chart (bottom, previous page) below shows that the three-bank asset concentration is not correlated with the ratio of operating cost to assets, a traditional measure of efficiency. This suggests that one should not focus solely on concentration ratios as a measure for competition when making inferences about the efficiency of the banking sector.

But less depth does indicate less efficiency
Financial depth and efficiency, on the other hand, appear more closely correlated. The chart (top) shows the ratio of M2/GDP (financial depth) against the ratio of average operating costs-to-total assets, a traditional measure of bank operating efficiency. The figure shows quite clearly that countries with less deep banking systems also have less efficient banks.

Banking and corporate vulnerabilities
For the stability dimension of the financial sector, FSDI covers not only traditional CAMEL-type indicators using banks’ balance sheets, but also indicators based on the balance sheets of corporate borrowers. The combination of banking and corporate sector indicators provides a more comprehensive picture of the health of the banking sector. The chart (bottom) shows that firms’ financial leverage, measured as the ratio of corporate debt-to-equity, is positively correlated with the banks share of non-performing loans in the banking sector. This illustrates the relationship between the vulnerability of the corporate sector and the quality of banking sector assets.

Legal rights facilitate intermediation
Finally, FSDI contains detailed information about the legal and regulatory infrastructure for the banking sectors, including creditor rights and supervisory rules and practices. The main variables for this set of information are presented in table below. Legal protection of creditor rights features as an important determinant of bank lending. The chart (next page) shows the strong correlation between private credit-to-GDP, a measure of financial intermediation, against an index of legal rights that measures the degree to which collateral and bankruptcy laws facilitate lending.
Legal rights index

This index, reflecting the legal rights of borrowers and lenders, measures the degree to which collateral and bankruptcy laws facilitate lending. It is based on data collected through study of collateral and insolvency laws, supported by the responses to the survey on secured transactions laws. The index includes 3 aspects related to legal rights in bankruptcy and 7 aspects found in collateral law. A score of 1 is assigned for each of the following features of the laws:

- Secured creditors are able to seize their collateral when a debtor enters reorganization — there is no “automatic stay” or “asset freeze” imposed by the court.
- Secured creditors, rather than other parties such as government or workers, are paid first out of the proceeds from liquidating a bankrupt firm.
- Management does not stay during reorganization. An administrator is responsible for managing the business during reorganization.
- General, rather than specific, description of assets is permitted in collateral agreements.
- General, rather than specific, description of debt is permitted in collateral agreements.
- Any legal or natural person may grant or take security in the property.
- A unified registry that includes charges over movable property operates.
- Secured creditors have priority outside of bankruptcy.
- Parties may agree on enforcement procedures by contract.
- Creditors may both seize and sell collateral out of court.

The index ranges from 0 to 10, with higher scores indicating that collateral and bankruptcy laws are better designed to expand access to credit.

Intermediation correlated with creditor’s legal rights

Private credit to GDP (%)  

![Graph showing the correlation between legal rights index and private credit to GDP.](image)

R² = 0.2504

Infrastructure and regulations

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Availability of information through the FSDI Web site

Data on traditional, as well as new indicators for assessment of banking sectors will all become available through the FSDI interactive Web site, currently under construction. Such indicators, along with various other variables, would form part of an overall framework for assessing financial sectors that would be available online. Provision of regional and country details in the Web site will offer users the flexibility of customizing information to their unique requirement.