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Indicators of Success in Secured Transactions Reform

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Secured transactions laws govern the use of movable property as collateral for loans – tangible property such as equipment and inventories, intangible property such as intellectual property rights and non-titled rights to land; and financial instruments such as accounts receivable, commercial paper and mortgages in securitizations. Effective reform of these laws expands access to credit – borrowers who can offer collateral pay lower interest rates, get larger loans relative to their incomes, and can take longer to repay. This improved access to credit permits increasing the capital stock, GDP, and GDP/person.
However, recent donor-supported reforms differ enormously in their effectiveness. Legal details matter enormously. This note sets out a simple quantitative framework for evaluating the effectiveness of reforms. In this preliminary version, it evaluates the reforms in several east European countries. It sets out the logical framework for the indicators and discusses next steps for their improvement.

What is a reform of the framework for secured transactions?

The legal framework for secured lending against movable property has a few key elements: a new law of secured transactions, derogations of laws conflicting with the new law, and a filing archive in which to file notices of security interests against property. The details of these reforms have been discussed elsewhere. [1]

Measuring success

A reformed framework for secured transactions aims at expanding the use of movable property as collateral for loans. Expanded use of collateral increases access to credit permits putting more capital in place, raising incomes. These gains can be measured directly.[2]

Why indicators?

"Indicators" permit fast and inexpensive evaluations of a large number of reforms. The most useful indicators are those integrally linked to the measure of the economic gain from such systems and reforms.[3] They can be collected quickly enough to give project managers, decision makers, and stakeholders immediate feedback on the success of their projects.

The World Bank has set out several important indicators of secured transaction performance in its Doing Business Indicators and its Enterprise Surveys (formerly Investment

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Climate Assessments). The EBRD has prepared extensive discussions of the state of elements of the reform in each EBRD borrowing member country. Such indicators and desk evaluations can help diagnose the problems in the system.

The indicators in this note differ, however, in that they aim at a single estimate of the combined quantitative importance of the state of the reform, weighting all these problems by their economic importance. The final effect of a reform does not depend on the number of problems that exist, but on their combined effect in reducing the impact of reform. In this conception of an "indicator", the reforms with the greatest problems are those reforms with the least impact on capital and GDP.

Secured lending: effect in increasing GDP[4]

The overall impact of a secured transactions reform is felt first on the capital stock and thence on GDP. With some additional assumptions, reforms can be ranked by their impact on GDP (See Annex). Since a poorly designed reform in a large country may have a larger absolute impact than will a well-designed reform in a smaller country, the indicator presented here uses the percentage impact on GDP as the indicator of success. The indicators of success of different reforms appear in Figure 1.

These numbers immediately permit comparing the reform of secured lending with other reforms. They also permit comparing the comprehensive reform undertaken by Romania, the reform with the greatest impact, with the partial reforms of other countries, with differences in GDP gain apparently more than justifying any extra cost of the more comprehensive approach. .

Biased Indicators?

CEAL undertakes these reforms under contract to different donors and governments. Its own projects appear in the list of countries for which indicators are shown. What keeps CEAL from "cooking the books" – presenting indicators favorable to its own projects?

While ideally such evaluations would be undertaken by skilled and objective arms length evaluators, such a prospect is not in sight. The technique here, instead, relies on open disclosure of method. The derivation of the indicators appears in the annex. The data used to compute the indicator are also publicly available (See Annex). Both derivations and data will be posted on the CEAL web site. These procedures make it possible for any interested party to check the logic and accuracy of the indicators presented. On the CEAL web page, commentators can discuss the indicators in a public forum.

Secured transactions indicators, next steps

New data will be processed into the indicators as that data is made available. Data will be included for countries outside the Balkans and Eastern Europe. Comments on the indicators are welcome, as is information about reforms not presently included, and suggestions about other systems that might be included and new or existing projects that are not included here. Please address these comments to the author at hfleisig@ceal.org.

Secured transactions reform, next steps

These reforms differ enormously in their economic impact. One important issue is obviously diagnosing the reasons for that spread and examining options for improving the performance of the systems that perform less well. That will require more detailed diagnoses of the problems in lagging reforms.

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These can partly be resolved from examining the qualitative World Bank and EBRD indicators cited earlier. Most likely, it will also require some detailed analysis on the ground.

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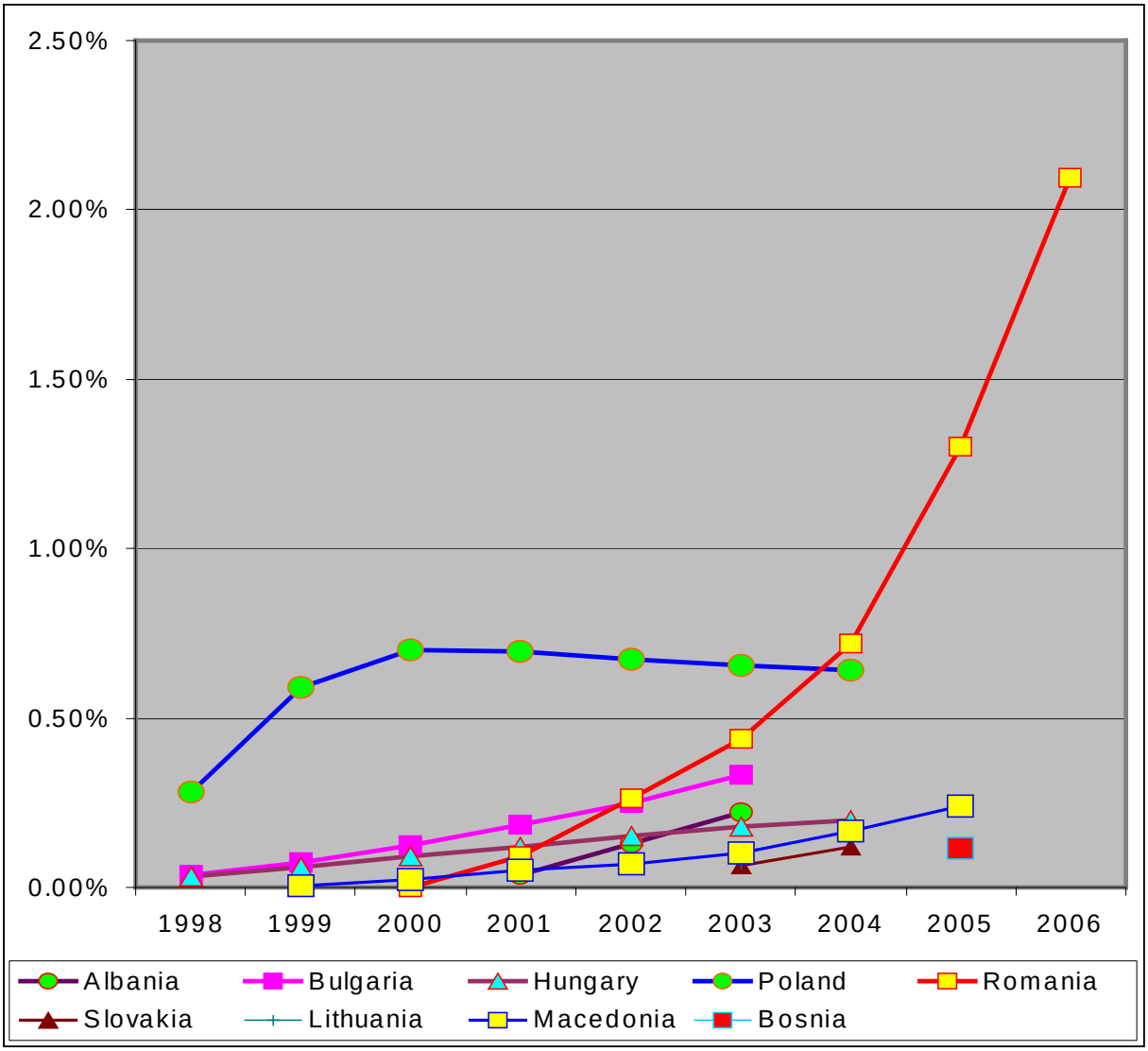
Effectiveness of Secured Transactions Reform

(Gain from the reform as percentage of GDP)



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Annex: Derivation of Indicator

A secured transactions system is more effective the more movable property serves as collateral. Consequently, an indicator can be derived from the data on filing archive filings and some commonly available data on GDP and population. It also requires values for some parameters such as average loan size, difference in interest rates on secured and unsecured loans, and the shares of labor and capital in production. Assuming these values are the same across countries means that most of them drop out of the final indicator. However, refinements in these assumed values would reduce errors in estimating the size of differences among reforms of secured transactions. However, such refinements will affect the rankings of all reform projects and, therefore, are unlikely to change the order of the rankings. That is, Romania may not be ten times better than the worst reform, but it will nearly surely still be the best reform.[5]

Model-based indicators such as the one set out here will yield better results as data are refined. In the end, such indicators will perform better in assessment than will indicators that are plausible but not model based. Without a model, different qualitative indicators cannot be summed or integrated. Therefore, they cannot be used to compare the overall effect of one system of secured lending with that of another system. Such qualitative indicators can be useful in diagnosing problems in systems. However, they cannot assess the system as accurately as model based indicators. It takes a model to beat a model; it takes a number to beat a number.

Physical efficiency

Comparing secured transactions reform across countries requires examining more than the number or amount of secured loans. Comparing that size alone could permit a relatively ineffective reform in large country to appear better than a very effective reform in a smaller country. Rather, the physical indicator of efficiency considers the total amount of secured lending relative to the movable capital stock.

1. Indicator = Total Secured Loans [TSL]/Movable capital stock [Km] = (number of security interests filed in the archive [F]* average loan size [ALS])/Km

The average loan size (ALS) depends on output (Y) per person (L). The greater output per person, the greater will be the average loan size. We assume that relation is invariant (k) with respect to per capita income so that

2. ALS = k*(Y/L)

We compute the average secured loan size based on practices across several countries. Loans typically equal the present value of payments equal to 38% of Y/L, made on a loan with a maturity of 1-5 years, at interest rates ranging between 3% and 10%. Under those circumstances, the expected value of k is .97. This is somewhat sensitive to the interest rate, so some bias in relative performance would be produced if interest rates differed substantially among countries. The movable capital stock (Km) is about 1/3 of the physical capital stock. The physical capital stock is about 2.5 times GDP (Y). Therefore,

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3. Indicator = F*k*(Y/L)/(5/6)Y= (F/L)*(6/5)*k=F/L*(6/5)*.97=1.16* (F/L)

Welfare Indicator

What is the value of the physical efficiency indicator described above. We can further link the intensity of use of the archive to physical investment and thence to income change. We assume that loans secured by movable property are used to finance investment or consumer durables. Accordingly, the change in the capital stock is

4. $\delta K=F*ALS=f*k*(Y/L)$

The percentage increase in the capital stock is

5. $\delta K/K = F*k*(Y/KL)$

For a Cobb-Douglas production function, $Y=K^aL^{1-a,}$ the elasticity of output with respect to capital (E (Y/K) = a. Taking a=.33 and K/Y as 2.5, the percentage increase in output arising from the reform is

6. $\delta Y/Y = a*\delta K/K =.33*F*.97*1.25*(1/L) = .4*F/L$

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[1] See, recently, Heywood Fleisig, Mehnaz Safavian, Nuria de la Peña, Reforming Collateral Law (Washington, DC: World Bank, 2006)

[2] See note 4 for further references.

[3] For a discussion of the need for model-based indicators, see Heywood Fleisig, Neil Roger, and Syed Mahmood, "Project Performance and Development Impact Indicators for Projects in Private Sector Development: A First Edition Note" (World Bank, Private Sector Development Department, Washington, D.C., 1995; available at http://www.ceal.org)

[4] The indicator set out in this paper is based on Lance Girton, "Legal Blueprint for Strengthening Property Rights: Efficient Financial Markets Issues in the Indicators for Secured Transactions" (Center for the Economic Analysis of Law, Washington, D.C., 2004), and Heywood Fleisig and Nuria de la Peña, "Indicators of Legal Issues in the Blueprint Matrix for the Accountability of Property Rights" (Center for the Economic Analysis of Law, Washington, D.C., 2005), both prepared for Chemonics, Inc., with the support of the U.S. Agency for International Development and available at http://www.ceal.org..

[5] Such errors may have a more serious effect on the accuracy of comparisons of one reform with another. For example, is it more important to reform the legal framework for secured lending or the system of civil registration? Since each measure will involve assumptions about different parameters, the estimate of the effect of one reform may be systematically over or underestimated compared to the effect of another.

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