




## Does IDA Engage in Defensive Lending?

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**Abstract:** Multilateral development banks are sometimes thought to engage in "defensive lending" -- the practice of extending new loans purely in order to ensure that existing loans are repaid. We empirically examine this hypothesis using data on lending extended by and repayments to the International Development Association (IDA), which is the largest multilateral provider of concessional development loans to low-income countries. We argue that key institutional features of IDA both (i) potentially create incentives for defensive lending and also (ii) enable particularly sharp tests of the defensive lending hypothesis. We find that there is a surprisingly robust partial correlation between disbursements on new IDA loans and repayments on existing loans. However, a closer look at the evidence suggests that defensive lending is unlikely to be a major explanation for this relationship.


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# 1 Introduction

Defensive lending refers to the practice of rolling over the debts of non-creditworthy borrowers in order to prevent non-performing loans from showing up on creditors' balance sheets. Commercial lenders may engage in (and their regulators may condone) such behaviour if the explicit recognition of non-performing loans is financially (and politically) costly. In recent years, a number of critics have argued that multilateral development banks (MDBs) also engage in defensive lending, based on an observed positive correlation between new lending and repayment flows in these institutions. In short, these critics argue that an important motivation for fresh loans to developing countries is simply to ensure that existing loans are repaid.<sup>1</sup> Since countries with heavy debt service obligations may not necessarily be the ones where aid resources will be effectively used, such behaviour would not be consistent with the stated goals of MDBs to provide development finance to support growth and poverty alleviation.

This paper examines the empirical evidence for defensive lending by the International Development Association (IDA), the concessional lending arm of the World Bank. Established in 1960, IDA provides highly-concessional loans to low-income countries, primarily financed by contributions from rich-country donors. The case of IDA is interesting for several reasons. First, it is by far the largest single provider of concessional loans to developing countries, accounting for roughly half of all official lending to developing countries. Second, because it relies heavily on regular donor contributions to finance the bulk of new lending, it has strong political incentives to demonstrate good performance on its existing portfolio.

Third, and perhaps most importantly, over the past 20 years the distribution of IDA lending across countries has been guided by an explicit formula tying per capita IDA allocations to per capita income, a measure of government policy performance, and country size. In our context, this feature of IDA is important because the allocation formula provides a baseline against which to assess defensive lending. In the case of commercial lending, accepted standards of creditworthiness provide a natural benchmark against which to assess whether a loan is provided for defensive or valid reasons.<sup>2</sup> In contrast, much of foreign aid has been allocated according to a sometimes-opaque combination of factors reflecting both strategic and other interests of donors as well as the needs and capacity of recipient countries. The lack of clear and measurable criteria for the allocation of aid means that it is difficult to distinguish development lending for defensive reasons from

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<sup>1</sup> See for example Bulow and Rogoff (2005) and Lerrick (2005).

<sup>2</sup> See for example Peek and Rosengren (2005) who document that Japanese banks provided loans to financially-troubled firms in order to prevent the realization of losses on the banks' own balance sheets. This behaviour was more likely in banks that were close to their minimum capital adequacy requirements.

lending in support of other donor objectives.<sup>3</sup>

In the case of IDA, however, the IDA allocation formula provides a remarkably clear benchmark. We begin by documenting empirically that around half of the variation in IDA commitments is explained by the three variables that explicitly enter into the IDA allocation formula: per capita GDP, a World Bank-constructed measure of policy performance, and population. We then ask whether departures from the allocation formula are explained by measures of the debt burden of the borrowing country. In particular, if defensive lending were operative, we should expect to see more lending to countries that have large debt service obligations relative to their repayment capacity. We document that, even after controlling for variables suggested by the IDA allocation formula, there is a surprisingly strong partial correlation between new disbursements of IDA resources and repayments on outstanding IDA loans. This initial finding is consistent with the findings of other authors who have documented positive correlations between lending and indebtedness measures.

Nevertheless, we provide evidence that this partial correlation should not be interpreted as defensive lending, for at least four reasons: (1) the observed correlation between disbursements and repayments is very strongly affected by a handful of countries entering into non-accrual status with IDA, with both repayments and disbursements on new loans falling sharply in tandem around these episodes – after removing these episodes from our sample the partial correlation between IDA disbursements and debt service obligations largely vanishes; (2) net transfers to even the most heavily-indebted countries are strongly positive, while the hypothesis of defensive lending suggests that they should be small; (3) we find no evidence of greater disbursements in “large” debtors to IDA, whose repayment difficulties would presumably be more politically costly for IDA; and (4) there is no evidence of greater disbursements in countries with weak policy performance that are more likely to experience difficulties servicing a given debt burden. Finally, we also document that there is little evidence that defensive lending may be done indirectly, for example by manipulation of variables that enter the IDA allocation formula itself.

We are not the first to study defensive lending behaviour by multilateral lenders. A number of prior papers have documented positive correlations between lending (either gross, or net of repayments) and measures of indebtedness of the borrowing country (Birdsall, Claessens, & Diwan, 2003; Lerrick, 2005; Ratha, 2005; Cohen, Jacquet, & Reisen, 2006; Marchesi & Missale, 2007; Morrison, 2011). As we discuss in more detail throughout the

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<sup>3</sup> Such an unstated objective could, for example, be that multilateral creditors see their role as stabilizers of the global economic system and hence may deliberately forgo profits because they hope to see a country through a liquidity crisis that may have implications for the stability of the overall financial system (Jeanne & Zettelmeyer, 2001). Or it could simply be that an important factor in driving foreign aid is the strategic and geopolitical ties between aid donors and aid recipients.

paper, we find that all of these studies suffer from one or both of two basic shortcomings: (1) a failure to adequately control for common factors driving new lending and indebtedness that are unrelated to defensive lending, and/or (2) a failure to eliminate purely mechanical sources of co-movement between new lending and indebtedness. Both of these shortcomings potentially lead to upward biases in estimates of defensive lending, as we discuss in more detail below. Finally, a much more subtle test of defensive lending by a multilateral lender is offered by Celasun and Ramcharan (2006). Rather than looking at correlations between repayments and new lending, these authors document evidence that lending by the International Monetary Fund (IMF) is accompanied with less rigorous policy conditionality in countries where the IMF's exposure is high.

This paper also relates to the broader literature on the allocation of foreign aid across recipient countries. Contributions such as Alesina and Dollar (2000) and Rajan and Subramanian (2008) focus on geopolitical relationships between donors and recipients in driving the pattern of aid allocation across countries. Such time-invariant country characteristics are captured by country fixed effects in most of our specifications. Other recent contributions have focused on political influences on World Bank lending. Fleck and Kilby (2006) for example document the effect of US political interests on the allocation of World Bank lending across countries, while Kilby (2009) and Kilby (2012) focus specifically on political influences shaping the timing of disbursements on World Bank loans. Similarly, Kaja and Werker (2010) investigate the impact of holding a seat on the World Bank's Executive Board on lending decisions. While these papers discuss the potential of using aid flows to support geo-political interests of donors, our paper differs in its emphasis on the potential incentives for IDA to engage in defensive lending in order to boost its balance sheet performance.

Finally, our paper relates to the broader discussion in the development community on the merits of grants versus loans as vehicles for aid delivery, and the role of debt relief, in creating good incentives for both aid donors and aid recipients.<sup>4</sup> A number of authors have argued that an advantage of grant aid is that it removes incentives for defensive lending, precisely because grants do not need to be repaid whereas loans do. A similar argument has been made for debt relief, which also removes any incentive for lenders to allocate new loans in order to ensure repayment of old ones. Our empirical evidence against defensive lending casts some doubt on the importance of these particular motivations for grant aid, and for debt relief, at least in the case of IDA.

In Section 2 we describe in more detail the IDA allocation formula and show that it has strong predictive power for IDA lending. In Section 3 we study the residual variation in this relationship, and document that it is

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<sup>4</sup> See for example Cohen et al. (2006) as well as the Meltzer Commission Report on International Financial Institutions Advisory Committee (IFIAC, 2000).

strongly correlated with the indebtedness of the borrowing country. However, we provide several arguments why this partial correlation should not be interpreted as evidence of defensive lending. Section 4 concludes.

## 2 The Potential for Defensive Lending by IDA

To see why IDA might face incentives to engage in defensive lending, some further institutional details are required. IDA is set up as a revolving-fund, in which new loans are financed by a combination of repayments of old loans (referred to as "reflows"), transfers from profits made by the non-concessional lending arm of the World Bank Group, the International Bank for Reconstruction and Development (IBRD), and donor contributions. Donor contributions primarily take the form of regular triennial "replenishments" of IDA resources. The amounts of these contributions are negotiated and agreed upon by the donors following a review of the performance of past IDA lending. Because IDA loans are highly concessional with very long maturities (standard IDA terms involve a grace period of 10 years followed by a 30 year repayment period), donor contributions have accounted for the bulk of IDA's financing since its creation in 1960. For example, between 2000 and 2006, donor contributions to IDA totaled \$36.5 billion, while repayments of IDA loans totaled just \$8.1 billion.<sup>5</sup>

The administration and design of IDA lending is entrusted to the staff and management of the World Bank, and this work is financed by service charges that are proportional to the value of IDA credits extended. Between 2001 and 2006, these service charges averaged \$795 million and were roughly equal to the annual administrative expenses of IDA, which averaged \$778 million over the same period.<sup>6</sup> These service charges account for a very significant share of the operating budget of the combined operations of IDA and IBRD. In particular, on average over the same period, service charges on IDA lending accounted for 46 percent of the combined administrative expenses of IDA and IBRD. This can create incentives for those who administer IDA resources to ensure the continuation of regular donor contributions to IDA, as well as regular reflows which can be recycled into new lending.

The institutional dependence of the World Bank on IDA lending potentially creates incentives for defensive lending. First, the willingness of donors to provide fresh resources during each IDA replenishment is likely to depend on their perception that these resources are being used well. Ideally, this perception would be based on careful evaluations of the de-

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<sup>5</sup> IDA Annual Report, Special Purpose Financial Statements, Statement of Cash Flows (various issues). Donor contributions refer to direct contributions, as well as indirect contributions through the HIPC Trust Fund and from IBRD.

<sup>6</sup> IDA Annual Report, Special Purpose Financial Statements, Income Statement (various issues). Service charges refers to both service and commitment charges.

velopment impact of all IDA-financed projects. But for many of the long-gestation projects that IDA resources finance, detecting quantifiable benefits even over the long term can be difficult even when these projects are well-executed. As a result, perceptions of the effective use of resources may also be influenced by more readily-observable variables, such as the performance of the IDA portfolio. A significant fraction of non-performing loans in IDA's portfolio could be interpreted as signaling the ineffective use of aid resources, and might lead donors to scale back their contributions to IDA.

Second, and closely related to the first, it is in the institutional interest of the World Bank to develop and maintain a steady stream of reflows into IDA. As these reflows grow in importance over time they provide a predictable pool of resources that can be used to finance new IDA lending. In contrast, triennial donor contributions to the IDA replenishments are less certain and are more subject to fluctuations in the political agendas of the donors.<sup>7</sup> To the extent that defensive lending can ensure repayments, and so demonstrate the viability of the IDA model of a revolving lending fund, there might be incentives to engage in such defensive lending.

Third and finally, rules governing IDA lending imply that the failure of a debtor country to make scheduled repayments triggers a prompt halt in new lending and disbursements on existing loans to that country<sup>8</sup>. Such interruptions in lending are highly disruptive to ongoing projects, and moreover contribute to difficult relationships between the World Bank and borrowing countries. A desire to avoid such disruptions might also create incentives for defensive lending. Of course this last consideration is not unique to IDA, but nevertheless may contribute to incentives for defensive lending in the case of IDA.

Set against these potential incentives for defensive lending is another key feature of IDA that works against the defensive lending incentive: its explicit formula for the allocation of resources across countries. As noted in the introduction, we use this formula as a benchmark against which to assess the importance of defensive lending: in particular we examine whether deviations from this formula are correlated with measures of the indebtedness of borrowing countries. We describe this formula in some detail as it provides justification for the set of control variables used in our subsequent empirical work.<sup>9</sup> This formula, known as the "Performance Based Alloca-

<sup>7</sup> See for example "Hungry Like the Wolf", *Economist* (December 7, 2006) which describes negotiations over IDA replenishments as a "begathon" and a "fraught business". During the controversy over former World Bank President Paul Wolfowitz, the suggestions from various donors that they would withhold contributions to IDA in response further illustrate the riskiness (from the standpoint of the World Bank) of relying solely on replenishments as a source of financing for IDA.

<sup>8</sup> According to rule OP 13.40 of the Operational Manual of the World Bank, no new loans are to be presented for approval to the Board of Directors, once a country has been 30 days overdue on its debt service payments on an existing loan. When a loan payment becomes 60 days overdue, all disbursements on existing loans to the country are suspended.

<sup>9</sup> For a much more detailed description of the PBA and empirical evidence on the extent to

tion" (PBA), is used to determine an initial allocation of available IDA resources across IDA-eligible countries, known as the "normative allocation". Eligibility for IDA is based on per capita GNP: in 2006, for example, the threshold for eligibility was \$1,025 US at market exchange rates. In addition, a number of small countries with per capita incomes higher than this threshold are included based on the "Small Island Economy" exception. The PBA then delivers the "normative allocation" of IDA resources across eligible countries based on the following formula:

$$\text{Per Capita Allocation}_{ct} = A_t \cdot (\text{Policy}_{ct})^\alpha \cdot (\text{Per Capita Income}_{ct})^{-\varphi} \quad (1)$$

where Per Capita Allocation refers to the PBA of new IDA resources to country  $c$  in year  $t$ ; Policy is an index of borrower policy performance described in more detail below; Per Capita Income is per capita GDP measured at market exchange rates;  $\alpha$  and  $\varphi$  are positive constants measuring the elasticity of IDA allocations to policy and the level of development of the country<sup>10</sup>; and  $A_t$  is a constant (across countries) that is chosen to ensure that total allocations across all countries exhaust IDA resources available for lending in the period.

Several remarks are in order about this formula. First, the PBA given by this formula is not the same as disbursements or even commitments of new loans to a country during the three-year IDA period, as there are a number of steps between these allocations and actual new lending to countries. The normative allocations produced by the PBA are discussed and adjusted by the management of IDA to reflect a variety of considerations. This results in a set of "agreed allocations" by country. These are then aggregated by regions and the total agreed allocations are made available to each regional vice-presidency in the World Bank. Each vice presidency then develops a lending program based on these resources, with some discretion on how they are allocated across countries within the region.

Given normal lags in project and loan preparation, as well as a typical disbursement period of eight to ten years for IDA credits, there are considerable lags between the initial normative allocation of resources given by this formula and actual disbursements of funds to borrowers. Regions also have some flexibility in shifting IDA commitments over time in order to respond to shocks, or to accommodate large and indivisible lending projects. Even for initial normative IDA allocations, this formula does not hold exactly for several additional reasons. The main ones are that (a) there are lower and upper limits on allocations, with each IDA-eligible country receiving a minimum total allocation of 3 million SDRs, and a maximum per

which it in practice guides IDA lending, see Moorthy & Orzan (2007).

<sup>10</sup>These weights have varied over time, and in the most recent part of our regression sample have been  $\alpha=2$  and  $\phi = 0.125$ .

capita allocation of \$US 20, and (b) special adjustments to the allocations for "blend" countries that are eligible for borrowing from both IDA as well as non-concessional IBRD lending.

Second, there have been non-trivial changes in the precise measure of policy used in the PBA system, as well as the PBA formula itself. Country Policy and Institutional Assessment (CPIA) ratings, prepared by World Bank country economists, were initiated for the specific reason of guiding concessional lending by IDA (and initially also non-concessional IBRD lending as well). The CPIA methodology itself has evolved over time into its current format of ratings assigned on a scale of one to six for 16 different criteria that are then averaged to obtain the overall CPIA index.<sup>11</sup> The policy measure actually used in the PBA formula has also evolved, to (a) include measures of procurement and portfolio performance on individual IDA loans, and (b) place greater weight on the particular dimensions of the CPIA that measure "governance". The formula itself has undergone various changes at the request of IDA donors. For example, during the 1990s some discontinuities were introduced to increase the exponent on policy in countries with good policy performance, thus increasing the sensitivity of IDA allocations to good policy performance. For these reasons, the PBA variables will not perfectly predict actual annual disbursements to individual countries – however they do explain a significant portion of the cross-country and over-time variation in actual disbursements.

Since Equation (1) is linear in logarithms, our baseline empirical specification has the log of IDA disbursements per capita as the dependent variable, and the set of control variables includes the logarithm of per capita GDP in dollars at market exchange rates, the logarithm of policy, and a full set of year dummies. We have obtained the precise measure of policy actually used in IDA allocations since 1990, whose definition has varied over time as noted above. Prior to 1990 we simply use the CPIA itself, which was in fact the measure of policy performance used by IDA during this time. The year dummies capture the growth over time in the overall size of IDA, i.e. increases in  $A_t$  in Equation (1). We also include the logarithm of population to capture in a simple way the strong relationship between country size and IDA allocations per capita that is introduced by the minimum and maximum per capita IDA allocations described above. Finally, the error term in these benchmark regressions captures empirical deviations from the PBA formula. In the next section we will examine the extent to which these de-

<sup>11</sup> These criteria are organized into four broad clusters covering "Economic Management" (three indicators), "Structural Policies" (three indicators), "Policies for Social Inclusion/Equity" (five indicators), and "Public Sector Management and Institutions" (five indicators). Each indicator is scored according to a detailed set of criteria, and staff are also provided with a set of reference data sources. An elaborate benchmarking and review process is also carried out centrally to ensure comparability within and between geographic regions. Details on the current form of the CPIA and how it is used in the IDA allocation process can be found at [www.worldbank.org/ida](http://www.worldbank.org/ida).



viations are driven by defensive lending considerations.

Table 1 reports the results from estimating these benchmark IDA allocation regressions. In the first column, the dependent variable is the logarithm of disbursements on IDA loans per capita. We pool all country-year observations over the 20-year period 1984-2003, and include year dummies to capture the overall size of the IDA envelope in each year. All three variables are highly significant predictors of IDA disbursements and enter with the expected signs, with higher per capita incomes and higher population associated with smaller per capita IDA allocations, and better policy performance associated with larger per capita IDA allocations. The overall fit of the regression, as summarized by the R-squared, is a respectable 0.33, indicating that the variables entering the IDA allocation formula do in fact explain a significant share of the variation in actual IDA disbursements.

**Table 1 - IDA Allocation Regressions**

	(1)	(2)	(3)	(4)	(5)
<i>Dependent Variable</i>	log(Disbursements/Capita)	log(Commitments/Capita)	log(Disbursements/Capita)	log(Disbursements/Capita)	log(Disbursements/Capita)
<i>Time Period</i>	1984-2003	1984-2003	1984-1993	1994-2003	1984-2003
log(GDP Per Capita)	-0.298*** (0.097)	-0.087 (0.058)	-0.508*** (0.146)	-0.235** (0.110)	----
log(Population)	-0.315*** (0.046)	-0.456*** (0.026)	-0.369*** (0.056)	-0.278*** (0.050)	----
log(Policy Performance)	1.149*** (0.192)	0.756*** (0.112)	0.778*** (0.258)	1.469*** (0.259)	1.260*** (0.188)
Year Dummies	Yes	Yes	Yes	Yes	Yes
Country Dummies	No	No	No	No	Yes
Number of Observations	1200	909	520	680	1227
Number of Countries	82	82	68	78	83
R-Squared	0.328	0.498	0.374	0.317	0.585

All regressions are estimated by OLS. Heteroskedasticity-consistent standard errors clustered by country in parentheses. \* (\*\*) (\*\*\*) indicates significance at the 10% (5%) (1%) level.

In the second column we repeat the results, but replacing the dependent variable with log IDA commitments per capita. This choice of dependent variable is more appropriate from the standpoint of assessing the empirical performance of the PBA formula, as the PBA governs commitments of new loans, while disbursements in a given year reflect commitments, and hence PBA ratings, over the past several years. Not surprisingly, in this case we find a substantially higher R-squared of 0.5, and a pattern of significance of coefficients that is quite similar to the previous column. Nevertheless, for most of the paper we will use disbursements per capita as the key dependent variable, since from the standpoint of defensive lending, only actual disbursements in a given year can be used to finance debt service obligations falling due during that period, and so only disbursements can be used to implement a strategy of defensive lending.<sup>12</sup>

<sup>12</sup> We do however note that our results below are quite similar if we look at commitments rather than disbursements. We also obtain broadly similar results with a Tobit specification to deal with the significant number of zeros in the commitments variable (about

In the next two columns we divide the time period in half and report results separately for the period 1984-1993 and 1994-2003. The main distinction between these two periods is that the magnitude and significance of the effect of policy performance increases sharply in the latter period, with the coefficient nearly doubling in size. This captures the greater policy selectivity in IDA's lending in recent years compared with earlier ones. Interestingly, the estimated magnitude of the elasticities of per capita IDA allocations to policy and per capita income are quite close to those in the stated formula. The estimated elasticity with respect to per capita income is -0.23 and we cannot reject the null hypothesis that it is equal to the value currently used in the PBA formula, which is -0.125. Similarly, the estimated elasticity with respect to policy is 1.47 and we do not reject the null hypothesis that it is equal to its current PBA value of 2 (at the 5 percent significance level).

In the last column of Table 1 we report results including country dummies, so as to ascertain the extent to which the IDA allocation formula explains the within-country over-time variation in disbursements on IDA loans. In these regressions we drop the per capita income and population variables as they exhibit virtually no variation within countries over time relative to their cross-country variation.<sup>13</sup> We continue to find a highly significant relationship between the measure of policy performance and IDA disbursements, and the magnitude of the elasticity at 1.26 is very similar to what we found in the pooled between and cross-country variation in the data. This finding is quite striking as it indicates that the PBA formula predicts very well not only the between-country variation, but also the within-country over-time variation in IDA lending.

### 3 Testing for Defensive Lending by IDA

We begin our tests for defensive lending by augmenting the basic regressions in Table 1 with measures of IDA's exposure to each country. If defensive lending considerations in part motivate IDA lending, we should expect to find a positive correlation between measures of indebtedness of the borrowing country and disbursements of IDA credits. In particular, we would expect to find that, other things equal, countries with heavier debt burdens or larger debt service obligations to IDA would receive greater disbursements on new loans.

We consider two alternative measures of borrowers' indebtedness: total

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1/3 of the sample, as opposed to less than 10 percent of the sample in the case of the disbursements variable).

<sup>13</sup> We do this throughout the paper whenever we add country effects to the regression. Our results however are essentially identical if we include these variables. Typically in the specifications with country effects per capita GDP enters negatively but no longer significantly, and population enters negatively and significantly, although much less so than in specifications that rely on the cross-country variation in the data.

debt service paid to IDA in a given year, and the year-end total stock of IDA debt outstanding, both expressed as a share of the GDP of the borrowing country.<sup>14</sup> We lag the stock of debt variable by one year to remove a purely mechanical source of correlation between the two: new disbursements of IDA loans in a given year imply an increase in the stock of debt outstanding at the end of the same year.<sup>15</sup> Also, we enter both debt variables in logarithms, for two practical reasons. First, this allows us to interpret the estimated slope coefficients as elasticities, since the dependent variable is also in logarithms. Second, due to a few countries with very high debt stocks and debt service obligations, the unconditional relationship between IDA lending and these variables is highly non-linear. In logarithms however the relationship is much closer to linear, and the estimated slope coefficients are much less sensitive to extreme observations in the sample.

**Table 2 - Debt, Debt Service, and IDA Lending**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Time Period	1984-2003	1984-2003	1984-2003	1984-2003	1984-1993	1994-2003	1984-1993	1994-2003
log(GDP Per Capita)	0.180* (0.108)	0.094 (0.115)	----	----	0.209 (0.167)	-0.009 (0.117)	----	----
log(Population)	-0.199*** (0.036)	-0.234*** (0.041)	----	----	-0.216*** (0.042)	-0.228*** (0.052)	----	----
log(Policy Performance)	1.018*** (0.168)	0.879*** (0.179)	1.250*** (0.188)	1.046*** (0.184)	0.522*** (0.158)	1.199*** (0.258)	0.729*** (0.251)	0.992*** (0.221)
log(IDA Debt Outstanding/GDP)	0.389*** (0.060)	----	0.125* (0.071)	----	----	----	----	----
log(Total IDA Debt Service/GDP)	----	0.306*** (0.064)	----	0.222*** (0.084)	0.559*** (0.087)	0.170*** (0.061)	0.268* (0.153)	0.179*** (0.078)
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country Dummies	No	No	Yes	Yes	No	No	Yes	Yes
Number of Observations	1170	1137	1172	1137	471	666	471	666
Number of Countries	81	80	81	80	61	76	61	76
R-Squared	0.430	0.411	0.587	0.630	0.579	0.342	0.749	0.664

Dependent Variable is log(Disbursements per Capita).

All regressions are estimated by OLS. Heteroskedasticity-consistent standard errors clustered by country in parentheses. \* (\*\*) (\*\*\*) indicates significance at the 10% (5%) (1%) level.

In the first two columns of Table 2 we add the total stock of IDA debt outstanding, and the current flow of debt service paid to IDA, as explanatory variables in the simple pooled regressions. Both enter very highly significantly and positively, indicating that higher indebtedness to IDA as cap-

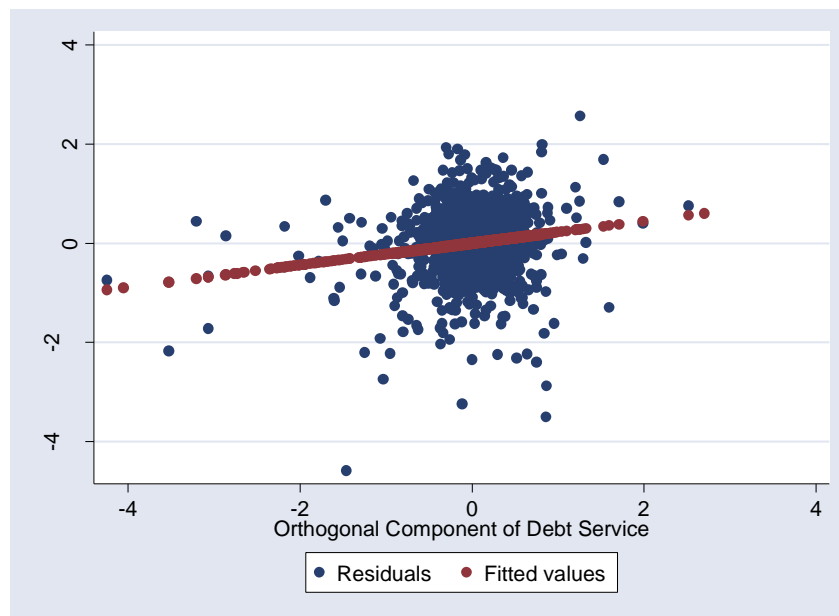
<sup>14</sup> One might also examine whether IDA engages in defensive lending vis-a-vis other creditors. In this case, one could ask whether measures of total debt service or indebtedness vis-a-vis all creditors, and not just IDA, is significantly correlated with IDA repayments. In unreported results we have investigated this, and we find that typically, measures of overall indebtedness are much less significantly correlated with IDA lending.

<sup>15</sup> Somewhat surprisingly this potential source of mechanical correlation between stock of debt measures and disbursements is not recognized by all authors in this literature. For example, Birdsall et al. (2003) regress net transfers on loans from official creditors on the contemporaneous present value of future debt service obligations. Since the latter is an end-of-period measure and the former measures the flow of new lending during the period, there is a mechanical source of positive correlation between the two which biases up estimates of defensive lending.

tured by either of these two measures, is associated with significantly higher disbursements of IDA loans. The estimated magnitudes are also non-trivial. In the case of the stock of debt, a 10-percent increase in the IDA debt-to-GDP ratio is associated with a 3.9 percent increase in per capita IDA disbursements, and a 10 percent increase in the IDA debt service-to-GDP ratio is associated with a 3.1 percent increase in per capita disbursements. In the next two columns of Table 2 we examine the within-country relationships by adding country fixed effects and as before dropping per capita income and country size. This greatly reduces the magnitude and significance of the estimated coefficients on the indebtedness variables. The coefficient on the stock of debt measure falls by two-thirds and is now significant only at the 10 percent level. The coefficient on the debt service variable falls by one-third but remains highly significant at the one percent level.

Since this is a key benchmark finding, in Figure 1 we report the partial scatter corresponding to this relationship, and we verify that it is not driven by a few visually-obvious extreme observations. The remaining columns of Table 2 split the sample in half at 1994 and report results for the debt service variable. We find that both with and without country fixed effects, the estimated coefficient on debt service is significantly positive in both sub-periods, although substantially larger in the first period than in the second period.

**Figure 1 - Partial Scatter of Fixed-Effects Relationship Between Debt Service and Disbursements**



It is useful to pause for a moment to emphasize why the results in Table 2 are quite remarkable. Observing a simple correlation between disbursements on IDA loans and either of our measures of country indebtedness to

IDA would not be very surprising. If some countries have persistently good policy performance, they would attract a lot of IDA lending and so end up with large stocks of debt owed to IDA, as well as large debt service obligations. At the same time, persistent good policy performance would make them candidates for continued high volumes of lending. Thus it would be perfectly natural to observe a positive unconditional correlation between either of our two measures of indebtedness and disbursements on IDA loans, as this correlation would be driven by a third factor, persistent cross-country differences in policy performance. And similarly, we might expect countries that are small, or have low per capita incomes, to be persistent recipients of IDA lending and so display a positive unconditional correlation between indebtedness and disbursements on new IDA loans.

For this reason, we do not think that the unconditional correlation between lending and repayments documented by authors like Lerrick (2005) is at all compelling evidence of defensive lending. We note also that Ratha (2005) does find some evidence of a correlation between IDA commitments as a share of GDP and the total debt service obligations of borrowing countries. However, these regressions do not control for policy performance, per capita income, and population. The persistent-over-time component of these variables will drive both new lending and repayments on existing loans, and so we cannot interpret this correlation as evidence of defensive lending<sup>16</sup>

This is precisely why we have emphasized the unique role of the PBA formula in the IDA allocation process, as it provides us with an explicit institutional justification for a particular set of control variables that drive lending decisions and so allows us to control for these omitted variables in the unconditional relationship. And despite having done so, and despite the strong explanatory power of the PBA variables, we find a strongly significant relationship between indebtedness and new disbursements conditional upon these variables. Moreover, we have seen that for the debt service variable at least, this significant relationship survives the inclusion of country fixed effects, which can be interpreted as controlling for any unobserved (by us) but time-invariant dimensions of policy performance or other character-

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<sup>16</sup>In contrast, Cohen et al. (2006) do control for policy, but use much broader measures such as inflation and civil and political rights, which need not correspond to the precise policy measure used to allocate IDA lending. Any persistent differences between their proxies for policy and those used by IDA could also drive new lending and repayments and thus spuriously suggest defensive lending. In contrast, Morrison (2011) uses the World Bank's CPIA measure, which is close, but not identical to, the measure used in IDA allocations (as discussed in Section 2, the PBA formula relies on a different weighting of CPIA components, and also includes indicators of existing project portfolio performance). He finds evidence of a partial correlation between IBRD debt outstanding and IDA disbursements, conditional on the CPIA. However, this correlation is difficult to generalize because it necessarily reflects only the relationship between these two variables in the handful of "blend" countries that are eligible to borrow from both IDA and IBRD.

istics that make countries attractive for IDA lending.<sup>17</sup>

The foregoing discussion also suggests a reason to focus more closely on the partial correlation between disbursements and debt service paid rather than the stock of debt outstanding. This has to do with the fairly long disbursement periods as well as the long grace periods associated with IDA credits. A typical IDA credit, once agreed upon, is disbursed over a multi-year period, typically between five and eight years, and standard IDA credits also have a grace period of 10 years during which no repayments are made. The multiple-year disbursement schedule implies that disbursements we observe at year  $t$  to a given borrowing country reflect lending decisions made, and the information available regarding the borrower, over the past several years. And similarly, the stock of debt at the end of year  $t-1$  reflects lending decisions and the information on which they are based, over the past several years and more.<sup>18</sup> To the extent that lending decisions are made based on policy or other factors not explicitly captured by the PBA, this overlap in information sets implies that we might very well observe positive partial correlations between the stock of debt measure and new IDA disbursements. In contrast, the 10-year grace period in IDA credits means that any debt service that we observe in year  $t$  reflects lending decisions, and the information upon which they were based, from 10 or more years prior to  $t$ . This makes it much less likely to observe a correlation between debt service paid to IDA and new disbursements from IDA driven by common (but unobserved by us) policy factors. In light of this, in the discussion that follows we focus on the debt service variable, which in any case is much more significantly correlated with new disbursements.<sup>19</sup>

Thus far we have seen that there is a surprisingly strong and significant

<sup>17</sup> Of course there is also a less-than-benign interpretation of these unobserved time-invariant country characteristics. It could be that past lending and current disbursements are driven by strategic and/or geopolitical characteristics of borrowing countries. We have investigated this possibility by controlling for the politically-motivated component of overall aid flows as constructed by Rajan and Subramanian (2008). We do not however find that this particular variable has much explanatory power for IDA disbursements.

<sup>18</sup> This potential source of mechanical correlation between disbursements and debt stocks coming through long disbursement periods potentially biases up the correlations between net lending and debt stocks reported in Birdsall et al. (2003) and Marchesi and Missale (2007).

<sup>19</sup> We note in passing that other papers such as Birdsall et al. (2003) have focused on stock-of-debt rather than flow-of-debt-service measures of indebtedness and so are subject to this source of upward bias. In contrast Ratha (2005) in our view appropriately focuses on flow measures of debt service. We also note that in our specifications, the left-hand and right-hand side variables of interest are normalized by different factors: we have IDA disbursements per capita as the dependent variable and debt service as a share of GDP as the key right-hand side variable of interest. In contrast, all three papers mentioned above normalize both sides by GDP. To the extent that there is measurement error in the denominator, this raises the risk of a mechanical source of positive comovement between disbursements as a share of GDP and measures of indebtedness as a share of GDP, again resulting in upward biases in estimates of defensive lending.

partial correlation between measures of indebtedness to IDA and disbursements on new IDA loans. We have also argued that it is difficult to justify this relationship by arguing that there are unobserved cross-country and over-time fluctuations in policy performance or factors that make countries good candidates for IDA lending but are not explicitly captured in the PBA formula. At first glance this evidence might suggest that defensive lending considerations are operative for IDA: controlling for the ostensible determinants of IDA allocations, countries that are more indebted to IDA and/or have greater debt service obligations to IDA get greater disbursements of IDA loans. Nevertheless, there are four reasons that a defensive lending interpretation of these results may not be appropriate.

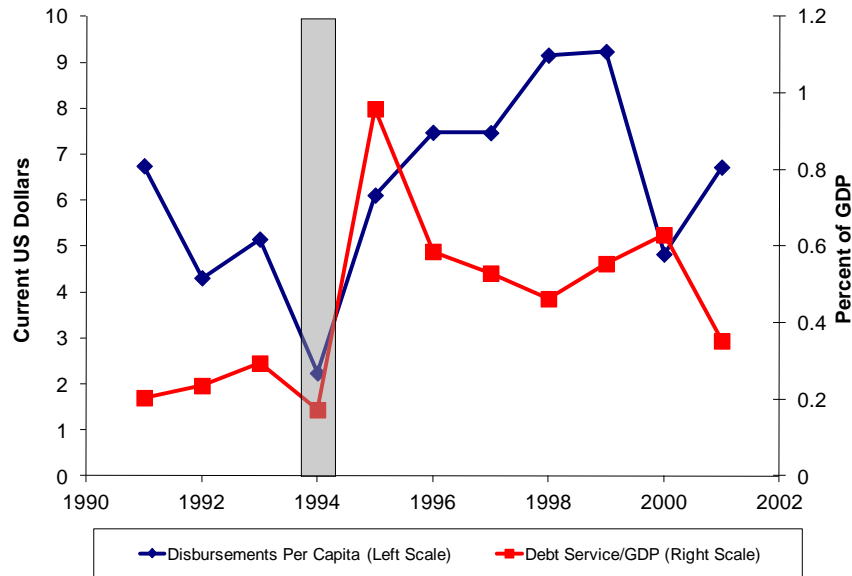
First, we observe that the statistical significance of the relationship between debt service paid and disbursements is largely driven by a handful of episodes of countries entering into and exiting from non-accrual status with IDA. Entry into non-accrual status with IDA occurs more or less automatically if scheduled debt service payments to IDA are late by more than sixty days, and this in turn more or less automatically triggers a halt in IDA disbursements. Conversely, exits from non-accrual status generally involve a significant payment of debt service including past arrears, combined with a resumption of disbursements. Episodes such as these will therefore naturally feature a positive correlation between disbursements and repayments. Figure 2 illustrates one such episode in our sample. Around the time of the 1994 genocide, Rwanda briefly entered, and then exited from non-accrual status with IDA (the period indicated with a gray rectangle). Around this time per capita disbursements and debt service as a share of GDP both fell sharply and then recovered quickly afterwards, generating a strong positive correlation between the two measures.<sup>20</sup>

We note first that these episodes are rare. In the full set of 1687 country-year observations on IDA-eligible countries between 1984 and 2003 we find that 154 observations, or slightly less than 10 percent of the sample, correspond to countries in non-accrual status, with most of these observations concentrated in a handful of countries. For our purposes, the within-country over-time fluctuations in non-accrual status are empirically important. In our regression sample we have just 14 cases of countries entering non-accrual status and 14 cases of countries exiting, yet it turns out that these cases are highly influential in driving the partial correlation between debt service paid and new disbursements.<sup>21</sup> To document this, we construct a dummy

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<sup>20</sup> Note that disbursements on an annual basis do not fall to zero as Rwanda entered non-accrual status near the end of the 2003 and exited again in early 2004, so that it did not spend a full calendar year in non-accrual status.

<sup>21</sup> This is smaller than the total number of entries into and exits from nonaccrual status because our regression sample is restricted to observations where debt service and disbursements are both positive (since both variables are entered as logarithms). We thus do not have in our regression sample episodes of nonaccrual status that lead to complete halts in disbursements.

**Figure 2 - Debt Service and Disbursements Around Non-Accrual Episodes**


variable taking on the value of one in country  $j$  in year  $t$  if a country entered into or exited from non-accrual status in years  $t-1$ ,  $t$  or  $t+1$ . We then show that the statistical significance of the partial correlation between debt service and disbursements disappears when we eliminate observations corresponding to these windows around changes in non-accrual status.

**Table 3 - Alternative Explanations**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Time Period	1984-2003	1984-2003	1984-2003	1984-2003	1984-2003	1984-2003	1984-2003	1984-2003
log(GDP Per Capita)	----	----	----	----	-0.032 (0.126)	----	0.091 (0.115)	----
log(Population)	----	----	----	----	-0.374*** (0.072)	----	-0.234*** (0.041)	----
log(Policy Performance)	0.988*** (0.187)	0.734*** (0.160)	0.715*** (0.158)	0.743*** (0.189)	0.877*** (0.185)	0.976*** (0.175)	0.812*** (0.251)	0.988*** (0.234)
log(Total IDA Debt Service/GDP)	0.211** (0.085)	0.183 (0.117)	0.185* (0.103)	0.121 (0.134)	0.413*** (0.085)	0.507*** (0.112)	0.322*** (0.076)	0.236** (0.102)
Interaction with Rank Among IDA Debtors	----	----	----	----	-0.004* (0.002)	-0.008*** (0.002)	----	----
Interaction with Dummy for Good Policy	----	----	----	----	----	----	-0.027 (0.061)	-0.031 (0.071)
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country Dummies	Yes	Yes	Yes	Yes	Yes	No	Yes	No
Number of Observations	1098	1032	1068	845	1137	1137	1137	1137
Number of Countries	80	80	80	64	80	80	80	80
R-Squared	0.631	0.655	0.649	0.680	0.426	0.652	0.411	0.630

Dependent Variable is log(Disbursements per Capita).

All regressions are estimated by OLS. Heteroskedasticity-consistent standard errors clustered by country in parentheses. \* (\*\*) (\*\*\*) indicates significance at the 10% (5%) (1%) level. Column (2) drops entry and exit episodes. Column (3) drops entry episodes only. Column (4) drops 16 countries that were in non-accrual status at any point during the sample period.

The results are reported in the first four columns of Table 3. In the first column, we repeat our baseline regression of disbursements on pol-



icy performance and total debt service, including a full set of country and year dummies, but restricting ourselves to the slightly smaller sample for which we have data on changes in non-accrual status.<sup>22</sup> As before, we find a strongly significant partial correlation between debt service and disbursements, with an estimated coefficient of 0.21 and a standard error implying significance at nearly the one percent level. In the second column, we drop just 66 country-year observations, or 6 percent of our sample, corresponding to these windows around changes in non-accrual status. Doing so causes the estimated coefficient on debt service to drop slightly in magnitude, and more importantly, to lose statistical significance at conventional levels. This indicates that the significant correlation between debt service and disbursements that we have seen thus far is driven largely by the handful of countries entering in or exiting from non-accrual status.

A possible objection to this finding is that exits from non-accrual status may precisely constitute defensive lending. According to this objection, countries exiting from non-accrual status are able to make the required payments of debt service (and possibly also accumulated arrears) precisely because they are receiving new disbursements. To address this objection we further distinguish between entries and exits. In particular, in column (3) of Table 3 we drop only episodes corresponding to entry into non-accrual status, and we find that the results are quite similar to those in column (2) where we dropped both entry and exit events (although now the coefficient on debt service is marginally statistically significant). This indicates that most of the partial correlation between total debt service and disbursements is driven by entry into non-accrual status rather than exits from non-accrual status. Finally, in column (4) of Table 3 we drop all countries that entered into or exited from non-accrual status at any point during the sample period. In this smaller sample of 845 country-year observations we find only a very weak and statistically insignificant correlation between debt service and disbursements. Taken together, this evidence suggests that much of the observed partial correlation between debt service and disbursements is driven by abrupt declines in lending and repayments in a few countries going into non-accrual status, and thus is difficult to interpret as evidence of defensive lending.

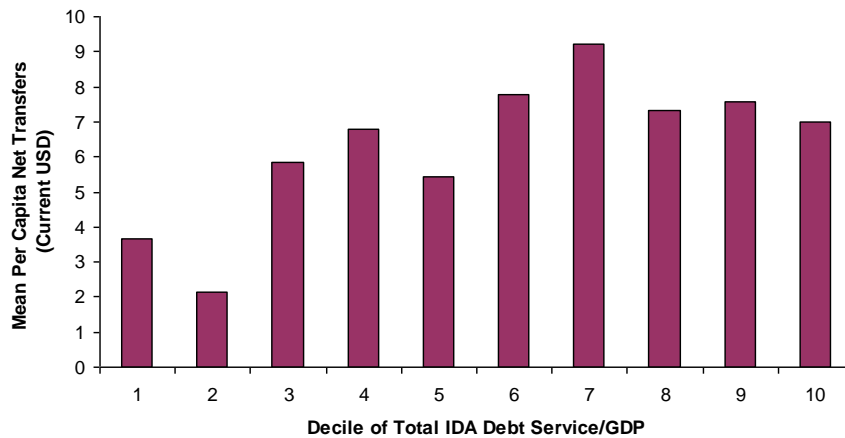
A second reason to question the interpretation of a correlation between debt service and disbursements as defensive lending is that the estimated magnitude of the response of disbursements to debt service is implausibly large under the hypothesis of defensive lending. A striking feature of IDA is that net transfers, i.e. the difference between disbursements on new loans and repayments of old loans, is strongly positive for virtually all active IDA borrowers. This can be seen most clearly in Figure 3, which reports net transfers on IDA loans (i.e. disbursements less debt service paid) as a

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<sup>22</sup> Our dummy variable for non-accrual status spans the period 1984-2003. We thus have data on *changes* in non-accrual status only for 1985-2003.

share of GDP, averaging by decile of IDA debt service as a share of GDP. If the objective of defensive lending were simply to cover the debt service

**Figure 3 - Net Transfers by IDA, By Decile of Debt Service/GDP**



obligations of a borrower through fresh lending, we might expect to see net transfers be close to zero in countries with the heaviest debt service obligations (i.e. towards the right-hand-side of Figure 3. However, we see that net transfers are positive on average for all deciles of the distribution of IDA debt service. Moreover, net transfers are (weakly) increasing with IDA debt service ratios, whereas the defensive lending hypothesis would suggest the relationship should be negative. In richer stories of defensive lending, the lender might lend more than the immediate debt service obligations of the borrower, if the additional lending could be used to increase the likelihood of servicing future obligations. While the exact amount would depend on model assumptions and country circumstances, it seems at least somewhat implausible that net transfers would be as large as those shown in Figure 3.

Another way to see this is to notice that our estimates imply that the response of new disbursements greatly exceed debt service due. Recall that both variables are entered in logarithms so that the estimated slope coefficient is an elasticity. Converting this into absolute changes implies that a one-dollar increase in debt service is associated with an increase in disbursements of  $(\beta \text{ Disbursements/Debt Service})$  dollars, where  $\beta$  is the estimated slope coefficient which ranges from about 0.2 to 0.3. Thus in any country where the ratio of disbursements to debt service is greater than between  $3.33=1/0.3$  and  $5=1/0.2$ , our estimates suggest that new disbursements are much greater than what would be required simply to cover existing debt service obligations to IDA. In our sample, the 25th percentile of the ratio of disbursements to debt service is 4.5, suggesting that in roughly three-quarters of all countries the absolute magnitude of the response of new disbursements to debt service due is larger than required to cover current debt service obligations.

Third, we do not find evidence that the correlation between debt service and disbursements is stronger in countries that account for a large share of IDA's portfolio. The intuition for this test is simple: if defensive lending were operative, we would expect IDA to have a stronger incentive to engage in defensive lending in countries that loom large in its own portfolio, since presumably the political and financial costs of explicitly recognizing non-performance would be greater in such large borrowing countries. To capture this possibility, we construct a variable measuring the rank of each country in IDA's portfolio of loans outstanding in each year.<sup>23</sup> We then interact this with the debt service variable and introduce it in the benchmark regressions without and with country fixed effects. We report these results in columns (5) and (6) of Table 3. Surprisingly, we find that the interaction term enters negatively and, and weakly significantly, suggesting that the partial correlation between debt service and disbursements is higher among smaller borrowers. We think this pattern is difficult to reconcile with the hypothesis of defensive lending, which would predict the opposite sign.<sup>24</sup>

Fourth, we do not find that the correlation between debt service and disbursements is greater in countries with poor policy performance. The argument here too is straightforward. Thus far we have been assuming that high debt service to GDP ratios indicate borrowers that are likely to have difficulties servicing their debts, and thus are likely to be candidates for defensive lending. Research has documented that in addition to high debt burden indicators, the quality of a country's policy and institutional performance as measured by the CPIA has strong predictive power for episodes of debt servicing difficulties (Kraay & Nehru, 2006). In the present context this suggests a further interactive effect: if defensive lending were important, we should expect to find that the partial correlation between debt service and disbursements is higher in countries with poor policy performance. To investigate this we create a dummy variable taking on the value one if a country's CPIA score is greater than 3.5, which is roughly the median CPIA score in the entire regression sample. We then interact this with debt service and include the interaction in our baseline regressions with and without country fixed effects (columns 7 and 8 of Table 3). Although this interaction enters negatively as would be expected under the hypothesis of defensive lending, it is insignificantly different from zero.<sup>25</sup>

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<sup>23</sup>We use this rank variable as a measure of size because the distribution of shares in the IDA portfolio is highly skewed with a few large borrowers such as China, India, Indonesia, Pakistan and Nigeria accounting for a large share of IDA credits outstanding.

<sup>24</sup>In contrast, using the same rank measure of debtor size, Depetris and Kraay (2007) do find some suggestive evidence that debt relief (from all sources) is more likely to go to low-income countries that are larger borrowers (vis-a-vis all multilateral lenders).

<sup>25</sup>The work of Birdsall et al. (2003) suggests another interpretation of this interaction. They document that net transfers from official creditors are negatively correlated with the CPIA measure policy performance in countries that are highly-indebted to multilateral creditors. This would correspond to a negative interactive effect that we find here.

The evidence thus far suggests that while there is a significantly-positive partial correlation between disbursements on IDA lending and debt service paid to IDA, we do not think that this correlation should be interpreted as evidence of defensive lending. There is however a further possibility for defensive lending: it could be that defensive lending is not done overtly, by increasing disbursements beyond what is prescribed by the PBA formula to countries with incipient debt servicing difficulties. Rather it could be done more covertly by influencing the variables driving PBA allocations.<sup>26</sup> In particular, it is possible that defensive lending is accomplished by giving better-than-warranted CPIA scores to countries with incipient debt servicing difficulties. This would result in higher-than-warranted commitments and eventual disbursements to the country, but yet would not evidence itself as a significant partial correlation between disbursements and debt service after controlling for policy performance.

**Table 4 - Is Defensive Lending Done Through Policy Performance Measure?**

Time Period	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	1993-2003	1993-2003	1993-2003	1993-2003	1993-2003	1993-2003	1993-2003	1993-2003
Rule of Law	1.013*** (0.126)	0.424* (0.245)	1.016*** (0.125)	0.448* (0.246)	----	----	----	----
Government Effectiveness	----	----	----	----	1.406*** (0.090)	1.012*** (0.158)	1.401*** (0.091)	1.008*** (0.161)
log(Total IDA Debt/GDP)	-0.047 (0.054)	-0.140 (0.201)	----	----	0.002 (0.036)	0.033 (0.168)	----	----
log(Total IDA Debt Service/GDP)	----	----	-0.044 (0.044)	0.013 (0.097)	----	----	-0.015 (0.031)	-0.012 (0.080)
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country Dummies	No	Yes	No	Yes	No	Yes	No	Yes
Number of Observations	324	324	324	324	333	333	333	333
Number of Countries	75	75	75	75	75	75	75	75
R-Squared	0.364	0.709	0.364	0.708	0.598	0.768	0.599	0.768

Dependent Variable is IDA Country Performance Rating.

All regressions are estimated by OLS. Heteroskedasticity-consistent clustered by country standard errors in parentheses. \* (\*\*) (\*\*\*) indicates significance at the 10% (5%) (1%) level.

A simple way to test for this possibility is to examine whether measures of country indebtedness have predictive power for IDA country performance ratings after controlling for other measures of policy performance. We do this in Table 4, where we use data from the Worldwide Governance Indicators project (Kaufmann, Kraay, & Mastruzzi, 2006) as alternative mea-

Their interpretation however focuses on "policy selectivity", arguing that aid donors are less selective in the allocation of development loans to countries with high levels of debt. However we do not find this interaction to be statistically significant, possibly because we consider a much larger sample of IDA recipients and not simply the set of African countries that they study.

<sup>26</sup> This approach is closely related to that of Celasun and Ramcharan (2006) who study whether the IMF dilutes its lending standards by imposing weaker program conditions or by waiving conditions for countries whose obligations outstanding to the IMF represent a bigger share of the institution's overall balance sheet. They find this type of dilution is present in loans financed by the IMF's own resources, where incentives for defensive lending are stronger.

asures of policy performance. We consider two of the six measures from this dataset, Rule of Law, and Government Effectiveness, as ones that correspond most closely to what the IDA country performance ratings are measuring.<sup>27</sup> Although these indicators have the advantage of covering all IDA borrowers, they have a more limited time dimension and are available only 1996, 1998, 2000, and annually since 2002. We then report results of pooled and fixed-effects regressions in this shorter panel, including in turn the stock of IDA debt and the flow of IDA debt service as proxies for incipient debt servicing difficulties that might be met with defensive lending-type behaviour. The evidence here is uniformly negative: we find no cases where the debt burden indicators have any significant explanatory power for IDA country performance ratings, suggesting that defensive lending is not operating through this indirect channel.

## 4 Conclusions

Multilateral development lenders have often been thought to engage in defensive lending to ensure repayment of loans outstanding. In this paper we have studied the extent to which lending by IDA, by far the largest multilateral source of concessional development loans, is motivated by defensive lending considerations. We have argued that the institutional dependence of the World Bank, which administers IDA on behalf of donors, creates potential incentives for defensive lending. Moreover, the unique institutional features of IDA, and particularly its formula for allocating lending across countries, provide a particularly clean basis for testing this hypothesis. We have seen that, conditional on the variables that explicitly drive IDA allocations (per capita income, population, and policy performance), there remains a strong partial correlation between measures of indebtedness to IDA and new disbursements on IDA loans. This relationship, which is suggestive of defensive lending, holds even when we control for all unobserved, time-invariant country characteristics through the use of country fixed effects.

Nevertheless, we have argued that this partial correlation should not be interpreted as evidence for defensive lending, for at least four reasons: (1) the observed correlation between disbursements and repayments is largely driven by a handful of countries entering into non-accrual status with IDA, with both repayments and disbursements on new loans falling sharply in tandem around these episodes; (2) net transfers to even the most heavily-indebted countries are strongly positive, while the hypothesis of defensive

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<sup>27</sup> The WGI indicators are composite indicators averaging information on perceptions of governance and institutional quality from a large number of distinct respondents. One of the ingredients of the WGI is the CPIA itself, which contributes to the strong correlation between the IDA policy performance measure and the WGI indicators. This however does not affect the interpretation of the coefficients on the indebtedness variables.

lending suggests that they should be near zero; (3) we find no evidence of greater disbursements in "large" debtors to IDA, whose repayment difficulties would presumably be more politically costly for IDA; and (4) there is no evidence of greater disbursements in countries with weak policy performance that are more likely to experience difficulties servicing a given debt burden.

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