

# Straightening the Measuring Stick: A 14-Point Plan for Reforming the Definition of Official Development Assistance (ODA)

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## Abstract

The definition of foreign aid—Official Development Assistance, or ODA—is in crisis. The statistical aggregate assumed its current form between 1968 and 1972, and has failed to adjust to the times. In particular, France and Germany are in open dispute with other donors over precisely when, in a world of low interest rates, a loan's terms are soft enough to qualify it as ODA. In December 2012, the member governments of the Development Assistance Committee tasked their secretariat with reviewing the definition of ODA and considering how to develop broader a measure of external development finance. The issues matter because countries benchmark their aid giving against others' giving, and against targets such as 0.7% of gross national income. The ODA definition thus generates incentives to focus on activities qualifying as ODA, at the expense of those that do not. After reviewing the debate, this paper reaches 14 proposals to change or preserve aspects

of the official aid measurement system. The freshest proposals would eliminate incoherency in the system for counting loans as ODA, better aligning the benefit of a loan for the donor (as higher ODA) with the financial benefit for the recipient. In particular: In computing the grant equivalent of loans, drop the fixed discount rate of 10% in favor of Differentiated Discount Rates, whose use virtually all DAC members endorse for measuring subsidy in export credits. Count only the grant equivalent of loans, not their face value, and in so doing, include what are currently non-ODA development loans. End the opacity of data on bilateral non-ODA development loans. Finally, adjust grant equivalents for default risk only for loans that eschew stiff penalties for default and contain automatic risk sharing mechanisms such as reduced payments after economic shocks.

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## Introduction

Etymologically, *counting* is the root of accountability. In its earliest days, the Development Assistance Committee in Paris was tasked by its member governments with supporting a Common Aid Effort, a collective disbursement of foreign assistance to poor nations meant to speed their development and parry the global communist thrust. Among the technocrats' jobs were to track financial flows—they published their first statistical compendium in 1961 (OEEC 1961)—and to study how to measure whether all members were doing their part (Führer 1996, pp. 8–11). Evidently the U.S. saw itself as contributing disproportionately and wanted to leverage greater effort from allies by tallying their aid spending.

The DAC's current framework for tracking aid, and the basis for the grand aid totals for which the DAC is best-known, emerged between 1968 and 1972 (Hynes and Scott 2013). Not coincidentally, it was in those years that calls grew louder for donors to commit to quantitative aid targets. In 1967, the first ministerial meeting of the G-77 proposed a “minimum target...for the official component of aid flows” (Hynes and Scott 2013). In 1968, the second meeting of the U.N. Conference on Trade and Development tiptoed toward 0.75% of gross national income (GNI) as a goal for all wealthy nations. In 1969, the Commission on International Development (“Pearson Commission”), crystallized 0.7% as a goal in its report to the new World Bank president, Robert McNamara (Clemens and Moss 2007).

To assess whether a country met such an aid spending target, consensus was needed on precisely how to define aid spending. That wasn't as simple as it might have seemed. Through protracted negotiation, DAC members arrived at a three-way distinction between Official Development Assistance (ODA, or “aid” in common parlance), Other Official Flows (including development loans charging interest near market rates), and export-promotion credits. And members settled on a (somewhat problematic) formula for when a loan's terms were soft enough to qualify as ODA. Over the years, controversies occasionally flared at the margins over whether, for example, hosting refugees within a donor country's borders is aid. Since donors funded the DAC and wanted to boost their ODA totals, the boundaries of ODA tended to creep outward.

Recently, the debate over ODA definition has rekindled (Severino and Ray 2009; ActionAid 2011; Manning 2011; ECDPM 2012; Hynes and Scott 2012; Greenhill, Prizzon, and Rogerson 2013; Colin 2014). In December 2012, the DAC ministerial body instructed its staff to “elaborate a proposal for a new measure of total official support for development” that would draw more generous boundaries than ODA; and “investigate whether any resulting new measures...suggest the need to modernise the ODA concept” (DAC 2012). The DAC's process could produce recommendations as early as this fall.

The definition of ODA matters. To be sure, quantitative goals and regional one-upmanship are not the sole determinants of how much aid governments give; and raw quantity is not the sole determinant of aid's

impact; and, regardless of how effective, aid is not the sole determinant of economic development. Yet, in the perpetual fights over budgets, when politicians are deciding how much aid to give, an inevitable referent is how much other nations give. In some countries, the 0.7% target has political salience too. As a result, the precise definition of aid—what counts, and how much—creates incentives that influence billions of dollars in spending. The more that the incentives align with actual benefits for development, the more effective will aid programs be.

This paper joins the debate. Section 1 looks at whether to ditch certain activities currently counted as aid. It examines—and mostly leans against—counting the promotion of “development awareness,” the hosting of refugees in donor countries, and the indirect costs of educating of foreign students at domestic universities. Citing earlier work (Roodman 2005), it discusses subtracting from ODA the interest received on ODA loans and the cancellation of non-ODA loans. But it defends two other categories ActionAid (2005) calls “phantom aid”: technical assistance and administrative overhead.

Section 2 looks at whether to *expand* the conception of ODA in certain directions. It favors fuller counting of contributions to U.N. peacekeeping, as well as of private overseas charity to the extent that it is stimulated by tax incentives—both of which the Commitment to Development Index counts (Roodman 2013a). It advocates transparency for non-concessional development finance (Other Official Flows, or OOF). Turning to nontraditional financial instruments, it points out a symmetry between guarantees and payments for performance (P4Ps): one pays out on failure, the other on success. As such, the two raise similar accounting issues. The paper endorses basing the ODA contribution of such instruments on the credits and debits made to the associated provisioning accounts that donors should maintain to prepare for losses and payouts.

Section 2 also endorses the idea of launching a new measure of contributions to global public goods, recognizing that the highest priority for wealthy nations today with respect to developing countries is no longer how to help them achieve economic convergence and win the global competition with communism, but to work together to fight global problems such as climate change and antibiotics resistance. In order to avoid unnecessary political fights, this measure should be allowed to overlap with ODA.

The paper’s most-developed contribution, in sections 3 and 4, relates to the measurement of how concessional (aid-like) loans are. One conclusion might be controversial in the board room of the DAC because it creates winners and losers, but is straightforward for those more objective. Instead of benchmarking loans against the rigid discount rate of 10%/year, which looks archaic in a world of much lower interest rates, the DAC should adopt the Differentiated Discount Rates (DDRs) maintained under the OECD Arrangement on Officially Supported Export Credits, which is a gentlemen’s agreement designed to

limit subsidies in official export guarantees and loans. All DAC members except Iceland participate in the Arrangement, and so have unofficially endorsed its more realistic discounting system.

The knottiest issue in constructing a system of benchmark discount rates is whether to factor in the risk of borrower default; the DDRs do not. The arguments in favor are strong: A 4% loan is surely more concessional going to Liberia than China, since Liberia looks less likely to repay on time, which creates more expected cost for the taxpayer and more expected value for Liberia. Private actors factor in default risk when estimating the value of investments, so why shouldn't public lenders? But I mostly side against those arguments. For they have an uncomfortable flipside: the poorer and more weakly governed the country, the higher the risk of default, the more expected financial cost a loan has for the lender, and the more interest can be charged while still achieving a target level of concessionality. Crudely, the poorer the country, the more OK it is to charge it high interest. For more than 50 years, low-interest lending programs for the poorest nations, such as the World Bank's International Development Association, have embodied exactly the opposite value.

The paper's most innovative element is a third way on factoring default risk into concessionality measurement. For purposes of tallying ODA, a donor could be allowed to discount a loan at a more-favorable default risk-adjusted rate *if the loan contract eschews stiff penalties for default and contains automatic risk sharing mechanisms*. For example, Liberia's payments on a loan could be set to automatically fall if the country suffered a negative economic shock; or Liberia could be guaranteed arbitration in a bankruptcy court-like Sovereign Debt Restructuring Mechanism. Such provisions would avoid the oppositional quagmire of traditional (non-)responses to debt difficulties, which are costly for borrower as well as lender. Then, the DAC could more justifiably treat the probability of default as raising the value of a loan for the borrower.

Finally, the paper makes one more-conventional point: only the grant equivalent of loans (face value minus net present value of debt service) should enter the ODA accounts at disbursement.

Some of these proposals might seem unrealistic because they create losers, donors whose ODA totals would fall. But the political challenges do not loom as large as it might seem. Just counting the grant equivalent, for example, *increases* ODA for most donors. And the switch from 10% to DDRs would hurt France and Germany but help Japan. At any rate, if the DAC wants the ODA construct to retain credibility in a changing world, then it must make some difficult calls to boost coherence and realism.

## **1. What to subtract: Controversial categories**

Development assistance, like love, truth, and beauty, is an important idea with a fuzzy boundary. Some things are obviously aid, such as vaccinating children in indigent nations. Some things are obviously not, such as

bombing Baghdad. Some things are in between. The boundary between aid and not-aid is worth examining for two reasons. First, since the DAC is governed and funded by donors, the boundaries tend to creep outward, to increase donors' aid totals by counting spending on activities that are not aid in spirit. Second, as the world changes, the definition of aid may become mismatched to the times. Such a mismatch can surface as a dispute over whether some novel flow, such as payments for forest protection, should count.

A few categories of aid have been debated long enough that they have become, as it were, conventionally controversial. They are counted as ODA. But in apparent recognition of their disputed status, the DAC data system makes it easy to tag, track, and subtract them. ActionAid's provocative 2005 report *Real Aid* appears central to this history. Two years after ActionAid lambasted donors for larding their ODA budgets with "phantom aid," the DAC developed the aggregate Country Programmable Aid (CPA) to zero in on funds actually reaching recipient governments (Benn, Rogerson, and Steenson 2010). Among the categories excluded:<sup>1</sup>

- *Technical assistance.* Expert advice has been part of the conception of foreign aid at least since Harry Truman's seminal inaugural speech in 1949.<sup>2</sup> Yet technical assistance stands accused of costing much more than it is worth, thanks to hefty per diems, and of routine failure to incorporate adequate understanding of local context. Donors are seen as the true recipients. "In this case," write Chang, Fernandez-Arias, and Serven (1998), "the donor benefits from payments received in return for the technical assistance supplied, and this may greatly reduce the donor's net financial cost." ActionAid (2005) calls technical assistance "phantom aid," "runaway spending on overpriced technical assistance from international consultants."
- *Administrative costs.* Donors may include administrative overhead in ODA. Severino and Ray (2009) decry this practice as "clearly [not] the best incentive to achieving resource-efficient aid bureaucracies." ActionAid calls administrative spending phantom aid too since it never reaches recipients.
- *Imputed public costs of educating foreign students.* Donors may count the public costs of educating students from developing countries at the donors' universities. This category of aid has been a source of dispute within the DAC since Australia proposed it in 1984 (Hynes and Scott 2013, p. 9), for perhaps two reasons. One is that the imputed assistance may not arise explicitly out of a development assistance policy. The second may be that given the large costs of higher education and the lack of

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<sup>1</sup> In addition to the categories listed here, CPA excludes humanitarian and food aid, aid to non-governmental organizations, flows not from main aid agencies, equity investments, and unallocated aid. See undated OECD web page archived at [webcitation.org/6Q57n8ZKz](http://webcitation.org/6Q57n8ZKz).

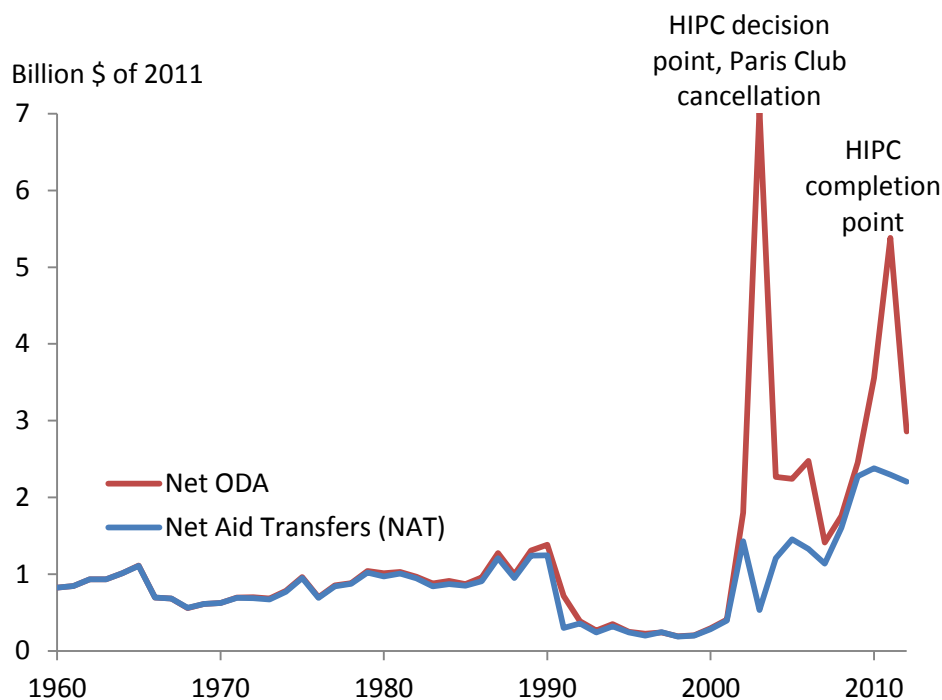
<sup>2</sup> "The material resources which we can afford to use for assistance of other peoples are limited. But our inponderable resources in technical knowledge are constantly growing and are inexhaustible."

explicit budgetary line items corresponding to this aid category, it is easy for authorities to tweak their accounting to increase the imputed expense.

- *First-year costs of hosting refugees in donor nations (also includes voluntary resettlement).* In 1988, rules were agreed to allow the counting of such costs for the first 12 months of refugees' arrival in a donor country (Hynes and Scott 2013, pp. 9–10). The criticism is that while it may be praiseworthy to expend public funds resettling Iraqi refugees in Indiana, this is not assistance for development of poor nations.
- *Debt relief.* Rescheduling and forgiveness of loans originally counted as ODA does not itself count as ODA, because that would be double-counting. But relief on non-ODA loans *does* count as ODA, and that extends to stocks of unpaid interest and late fees on ODA loans (and unpaid interest and late fees on the unpaid interest and late fees, etc.). The 2000's saw unprecedented amounts of official debt cancellation for developing countries, which produced large spikes in Net ODA for some countries even though the write-offs produced no financial transfers in themselves. (See Figure 1, which compares Net ODA to Net Aid Transfers, a measure that excludes debt relief, for the Democratic Republic of Congo. Net ODA spiked twice as the DRC moved through the Heavily Indebted Poor Countries (HIPC) debt relief initiative.)
- *"Development awareness" promotion.* Some development agencies spend money educating their citizenry about global poverty and how to fight it. Presumably they do this to increase private giving and to increase political support for public giving—that is, for their own budgets.

These six categories contained \$24.5 billion in reported ODA spending in 2012, or 17% of total Net ODA of DAC members. (See Table 1.)

Figure 1. Net ODA and Net Aid Transfers (NAT) to the Democratic Republic of Congo, 1960–2012



In my view, as one reads down the list of categories, the rationale for inclusion grows weaker at each step, with “development awareness” being most dubious. DFID’s efforts to educate the British public about development and aid may help explain how the country, as a political matter, reached 0.7% ODA/GNI. But that does not mean that the public relations expenditure should itself count as aid. If spending on development awareness increases public (or private) aid, then it should suffice to measure and count those things directly.

The other cases illustrate the difficulty of drawing a sharp boundary around ODA. Yes, administration isn’t aid disbursement from the recipient’s point of view. But is it obvious that monitoring, evaluation, auditing, and related functions are a waste? Not counting them as ODA—not rewarding aid agencies for oversight and learning—could also create a dangerous incentive (McGillivray 2003, p. 12). In reality, aid passes through multiple agents before final expenditure, each of which incurs overhead. Not counting this item in the DAC’s accounts would drop overhead associated with the first agent but not the rest, and deny the reality that overhead is integral to any enterprise requiring accountability and learning.



**Table 1. Spending by DAC members on selected categories of ODA, 2012**

Donor	Million \$						Share of Net ODA					
	Tech. assistance	Admin-istration	In-donor refugee costs	Imputed student costs	Debt relief	Dev. awareness	Tech. assistance	Admin-istration	In-donor refugee costs	Imputed student costs	Debt relief	Dev. awareness
Australia	496	335	154	0	12	3	9.2%	6.2%	2.8%	0.0%	0.2%	0.1%
Austria	39	32	58	114	106	7	3.5%	2.9%	5.2%	10.3%	9.6%	0.6%
Belgium	102	91	126	51	278	13	4.4%	4.0%	5.4%	2.2%	12.0%	0.6%
Canada	459	282	267	169	198	10	8.1%	5.0%	4.7%	3.0%	3.5%	0.2%
Czech Republic	11	5	10	0	0	1	5.2%	2.3%	4.3%	0.0%	0.0%	0.6%
Denmark	66	162	143	0	1	7	2.4%	6.0%	5.3%	0.0%	0.0%	0.3%
EC	995	736	0	1	64	119	5.7%	4.2%	0.0%	0.0%	0.4%	0.7%
Finland	33	81	23	0	0	10	2.5%	6.1%	1.7%	0.0%	0.0%	0.8%
France	1,067	493	507	931	1,570	9	8.9%	4.1%	4.2%	7.7%	13.1%	0.1%
Germany	610	492	76	887	849	85	4.7%	3.8%	0.6%	6.9%	6.6%	0.7%
Greece	4	10	20	61	0	0	1.3%	3.1%	6.1%	18.6%	0.0%	0.0%
Iceland	2	2	0	0	0	0	8.3%	6.6%	0.8%	0.0%	0.0%	0.6%
Ireland	10	35	0	0	0	6	1.2%	4.3%	0.0%	0.0%	0.0%	0.7%
Italy	22	34	247	0	7	26	0.8%	1.3%	9.0%	0.0%	0.3%	0.9%
Japan	166	794	1	0	5	4	1.6%	7.5%	0.0%	0.0%	0.0%	0.0%
Luxembourg	12	21	0	0	0	3	3.0%	5.2%	0.0%	0.0%	0.0%	0.8%
Netherlands	304	397	339	0	120	7	5.5%	7.2%	6.1%	0.0%	2.2%	0.1%
New Zealand	46	43	19	0	0	0	10.1%	9.6%	4.3%	0.0%	0.0%	0.1%
Norway	267	294	227	0	21	25	5.6%	6.2%	4.8%	0.0%	0.4%	0.5%
Portugal	9	11	1	12	7	1	1.5%	1.9%	0.1%	2.1%	1.2%	0.2%
South Korea	167	59	0	1	0	15	10.5%	3.7%	0.0%	0.1%	0.0%	0.9%
Spain	59	170	23	0	76	42	2.9%	8.3%	1.1%	0.0%	3.7%	2.0%
Sweden	130	240	571	0	0	19	2.5%	4.6%	10.9%	0.0%	0.0%	0.4%
Switzerland	92	196	654	0	15	13	3.0%	6.4%	21.4%	0.0%	0.5%	0.4%
United Kingdom	532	528	45	0	112	19	3.8%	3.8%	0.3%	0.0%	0.8%	0.1%
United States	927	1,855	831	0	64	0	3.0%	6.0%	2.7%	0.0%	0.2%	0.0%
Total	6,626	7,401	4,340	2,228	3,505	444	4.6%	5.1%	3.0%	1.5%	2.4%	0.3%

Likewise, yes, much technical assistance must be ineffective. But just as surely, some of it is extremely effective, when it implants valuable knowledge in the minds of powerful, public-minded people. So technical assistance is not distinguished by having heterogeneous impacts. Nor is it distinguished by being an export of donor-country services, since all aid is ultimately exports, whether provided in kind or through allotments of foreign currency.

To defend in-donor refugee and student costs as aid, one might make a slippery slope argument. Housing Iraqi refugees in Jordan qualifies uncontroversially as aid. Providing exactly the same service to exactly the same people in a wealthier locale, the United States, does not. Why does the location matter more than the nature of the people helped and the nature of the help? On the other hand, one can slide further on this slippery slope. If providing housing and job training to Iraqis in Indiana should qualify as aid, then why

shouldn't doing the same for U.S. citizens? Why should the passport of the recipient matter? Why not count all domestic welfare programs?

Of course, a line must be drawn between domestic and foreign aid. Where? Once refugees arrive in a donor nation, they are likely to stay. As a result, including assistance to them in ODA stretches beyond the breaking point the sensible DAC requirement that development assistance be “administered with the promotion of the economic development and welfare of developing countries as its main objective” (DAC 2013a). With students, however, I find it harder to draw the line at the border. Many visiting students too will end up staying in the host country. But many will go back. And however disconnected from the workings of the development ministry, a policy of giving foreign students access to subsidized education is still a policy; and it comes at a public cost.

These controversies also illustrate a general danger lurking in the debate over the ODA definition, which is the temptation to freight the tabulation of quantity with appraisals of quality. It may be that technical assistance on average provides low value for money. But this is hard to prove, and not obviously more true than for many other kinds of aid. Aid quality assessment is worthwhile (Roodman 2005; Birdsall, Kharas, and Perakis 2012), but it probably can never be done in a way that will command consensus among scholars, let alone the DAC membership. So the definition of ODA should normally avoid questions of quality and err on the high side, taking at face value expenditures whose effectiveness we often have reason to doubt.

As for debt relief, the alternative to DAC's accounting mentioned above, Net Aid Transfers (NAT), removes debt cancellation as well as interest received on ODA loans (Roodman 2005). It is used in the Commitment to Development Index to better discern current policy, on the idea that writing off a bad loan is reconciliation to reality rather than a gift to development (Roodman 2001). However, a more meaningful accounting convention than either the DAC or CDI approaches would be to amortize the costs of debt relief over the years between when default began and when it was formally accepted, revising past ODA levels.

In addition, serious thought should be given to whether debt relief on unpaid late fees and interest on arrears should *ever* be “ODable,” at least to the extent that it accrues at rates above the underlying loan's interest. Under current DAC rules, a debtor can default on a low-interest loan, the interest and fees can mushroom at *market* interest rates, and then the creditor can write off the additional debt stock and count it as ODA—even though no money has moved. For lack of transparency, the extent to which this happens is hard to determine; it appears to have been a major component of the debt loads of Nigeria (Moss 2005) and Myanmar (Roodman 2013b). Counting these write-offs as ODA rewards donors for first maintaining that debtors ought to repay, so that the arrears can compound, then maintaining that they ought not to repay, so that arrears can be written off as assistance.

## 2. What to add: Beyond traditional ODA

Analysts have not confined themselves to saying what should be taken out of ODA. Some advocate adding categories or constructing a fresh alternative to ODA. This section reviews some activities arguably missing from ODA.

### 2.1 Non-concessional financial flows

Oddly, financial flows from the premier institution of the development era, the International Bank for Reconstruction and Development (IBRD), are not ODA, because IBRD loans accrue near-market interest. As the introduction mentioned, the DAC does track non-ODA flows of development finance, called OOF. However, *bilaterals* either do not report the loan terms and transaction-level details to the DAC database, or do not allow the data to be publicly shared. From the DAC website, you can learn how much non-concessional development finance Germany provided to Sub-Saharan Africa, and how much DAC countries as a whole gave Kenya. But you cannot determine how much Germany gave Kenya. Details *are* available on OOF from multilaterals, including the IBRD and European Commission.

Both the opacity of bilateral OOF data and the exclusion of non-concessional finance from ODA look a bit archaic. As more developing countries gain access to private capital markets, it seems strange to obscure the provision of public capital on similar financial terms. Moreover, and bizarrely, much current OOF probably *is* ODA going by the official mathematical criterion for concessionality, even if it is excluded because it emanates from designated non-concessional lending programs. Just before the IBRD ended fixed-rate lending in 2011, it charged 3.61%/year on a 15-year loan with a 3-year grace period; that yields a grant element of 34.5% under the DAC formulas, clearing the 25% threshold for ODA.<sup>3</sup> (Later sections discuss these concepts more fully.) Thus the same loan can be ODA if extended by a bilateral such as France and OOF if extended by an officially non-concessional multilateral.

The opacity of bilateral OOF and the artificiality of the distinction between it and ODA can be remedied in two steps:

- *Including what is now called OOF in ODA, while weighting all loans by their grant elements.* A loan on near-market terms, with a grant equivalent of just 10% of its face value, would no longer be consigned to the statistical Bermuda Triangle of OOF, but count toward ODA at 10 cents on the dollar or euro or pound. This reward for low-concessional lending would better correspond to the benefits, creating a more efficient incentive regime.

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<sup>3</sup> Rate from undated World Bank web page, [webcitation.org/6PfeoxpVk](http://webcitation.org/6PfeoxpVk). Calculation assumes a standard 10% discount rate and semiannual, equal principal payments ([webcitation.org/6Pfw2OT3t](http://webcitation.org/6Pfw2OT3t)).

- *Complete, public reporting of bilateral OOF, including loan terms and actual transactions on each loan.* If the IBRD can do it, presumably bilaterals can too. Full reporting would be a public good in itself. And it could be done even if low-concessionality loans did not enter ODA as just proposed; however, counting them in ODA would create a helpful incentive, since loans claimed as ODA would need to be fully, publicly documented.

## **2.2 Guarantees and payments for performance**

Donors appear to be using more non-traditional financial instruments, such as loan guarantees; purchase guarantees; Cash on Delivery Aid (Birdsall and Savedoff 2011) and other payments for performance (P4P); and equity investments.<sup>4</sup> These depart from grants and loans in structurally accepting financial risk.

There is a symmetry between loan guarantees and payments for performance: loan guarantees pay for nonperformance. Both thereby accept risk. Because of this kinship, the two raise similar accounting issues.

I see four ways to quantify the cost or value of guarantees and P4Ps as aid (see also DAC Working Party 2013):

1. *Counting actual financial flows—fees received, pay-outs made—as they occur.* This appears to be current practice. With regard to guarantees, Severino and Ray (2009) lambast the method. “In the case of guarantees the perversion is extreme, as the official definition allows for their inclusion only if they are called. *Make bad development finance, and thou shall be rewarded.* [Emphasis in original.]” On the flipside, donors committing performance-based aid receive no credit for *committing* pay-outs—only for actual payouts if and when they occur.
2. *Counting credits and debits to provisioning accounts, net of fees received.* To manage their finances responsibly, agencies must estimate their risk exposure and set aside funds—provisions—to absorb possible payouts. They should credit or debit provisions as the amount at risk and the magnitudes of the perceived risks evolve. These accounting transactions could be a good proxy for the true financial cost of guarantees and P4P commitments. Using them would allow the DAC to count these risk-embracing instruments as aid as they are issued.<sup>5</sup>
3. *Estimating the cost of guarantees and P4P commitments via financial models encoded in formulas.* The Minimum Premium Rate formula of the OECD Export Credit Arrangement, described in section 0, is an

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<sup>4</sup> Currently equity investments, net of realized gains, count as ODA. This seems difficult to improve upon.

<sup>5</sup> An analogous practice would answer the Birdsall (2013) criticism of DAC’s decision to defer the counting of funds Norway committed to Brazil for slowing deforestation. In that case, the hitch was not that Brazil had not yet slowed deforestation enough to earn the money, but that it had not presented specific project proposals for the use of funds. The money had not disbursed to Brazil, and yet it was effectively 100% provisioned for, as it was sitting in a designated bank account. (*Development Today* 2013.)

example, for the case of loan guarantees. For more exotic instruments, such as equity guarantees and P4Ps, it would probably be hard to achieve consensus on formulas.

4. *For guarantees, using the amount guaranteed or estimating the amount leveraged.* E.g., Mirabile, Benn, and Sangaré (2013) find that public guarantees mobilized \$15 billion for development purposes between 2009 and 2011.

Method 1 is clearly not optimal, though the criticism that it rewards failure is perhaps most compelling as a sound bite. My impression is that public guarantors such as OPIC and MIGA prize their financial independence, which militates against sloppy guarantee issuance. If agencies are reasonably prudent, then aggregate net flows on guarantees, plus administrative costs, are a reasonable long-term proxy for the financial burden of their guarantee programs.

Method 2 is attractive as both meaningful and practical. Overall totals for credits and debits to provisions should be available from audited financial statements of the guarantors. Break-outs by receiving geography should be feasible. The method might create an incentive to inflate ODA in the short term through over-provisioning, but the concern is second order since over-provisioning in one year should reduce provisioning in following years.

Method 3 could work for loan guarantees since the OECD already has a well-developed precedent in the MPR. However, as we move beyond loan guarantees, the risks become more imponderable, and a universal valuation methodology probably becomes a bridge too far. Methods 1 and 2 look more adaptable to innovation in financial instruments.

Method 4 would be wrong-headed. Guarantees are hardly unique as instruments of leverage. Almost every kind of aid is justified, implicitly or explicitly, as being more useful than direct delivery of cash to poor people—that is, with producing more value than they cost. Roads are said to leverage private investment. Training is supposed to leverage domestic human capital. Pilot projects aim to influence mainline government programs. Aid for these projects enters ODA based on cost, not leveraged value. To treat guarantees differently would be to add apples to oranges.

### **2.3 Private charity**

Adelman (2003) argues that it is fallacious to interpret ODA as a measure of national generosity as long as it excludes private aid. This criticism has some validity if interpreted narrowly to urge the inclusion of private overseas charity—as distinct from remittances and private capital flows, which are clearly not aid. (Most remittances are cross-border intrafamily transfers.) The critique has validity to this degree because the deep reason for measuring aid is to hold *societies* accountable for contributing to such goals as minimizing human

suffering. The central government is one agent of society in discharging such responsibilities. But it is not the only one.

That said, ODA has always assessed government effort, and that should probably not change now. Among DAC members, central governments are designed to be agents of society. It is more realistic to hold the government of the Netherlands than the entire society of the Netherlands to account.

For the Commitment to Development Index, Roodman and Standley (2006) take a middle road, which is to estimate the amount of overseas private overseas giving that is attributable to incentives for charity embedded in personal income tax codes (deductions and credits). Also rewarded is having a low overall tax take, which leaves more money in private hands for charity. Underlying data on total private overseas giving come from the DAC database (Table 1); information on marginal and average tax rates comes from OECD publications; details of tax incentives for charity are collected through a survey; certain elasticities are culled from the literature. For 2011, the method attributes \$11.5 billion of the \$23.3 billion in private overseas charity in DAC nations to public policy, as against \$126.7 billion in public aid (Roodman 2013a).

The method has many limitations. It does not factor in the incentives embedded in taxes other than the income tax. For lack of data, it does not break the totals out by receiving country. And there may be data problems: the Hudson Institute (2013) contends that many DAC members are underestimating overseas private charity in their reporting to the DAC.

Still, the method demonstrates the viability of factoring in public charity, and could provide a starting point for a DAC effort to do so.

## **2.4 Peacekeeping**

In 2006, the DAC agreed that 6% of a country's contributions to most U.N. peacekeeping operations could qualify as ODA (DAC 2013b, p. 5). Operations touching Israeli and Cypriot soil are excluded.

6% is a peculiar number. Is peacekeeping aid or not? Once again, the slope is slippery. Non-military, humanitarian assistance to a country in crisis is uncontroversially ODA. Just as surely, posting 10,000 blue-helmeted troops in Liberia in 2003 to maintain a fragile peace contributed to that country's development (Radelet 2007, p. 7). Australia accepting a UN Security Council mandate to put 5,400 troops in Timor-Leste in 1999 in order to halt Indonesian repression—that begins to strain the spirit of ODA. Clearly beyond the conception of ODA is the toppling of the Libyan government in 2011 by the United States and other western powers, though they too acted with a UN mandate.

CGD's Commitment to Development Index rewards *all* those activities (Roodman 2013a). However, it places them under the rubric of Security, not Aid. The methodology starts with 100% of financial contributions to the U.N. peacekeeping. It then estimates the cost of personnel contributions to such operations, as well as the cost of *maintaining* that capacity to second personnel (O'Hanlon 2004). Finally, it does the same for non-UN operations that are backed by an international mandate, such as the intervention in Libya. For no DAC member save Slovakia does this broad measure of spending on peacekeeping and forcible humanitarian interventions surpass ODA.<sup>6</sup> But for many donors, it would represent a nontrivial addition to ODA. (See Table 2.)

But as just suggested, much of this spending should *not* enter ODA. A defensible yet conservative place to draw the line would be at counting only contributions to the budgets for U.N. peacekeeping operations in developing countries—at 100%, not 6%. (First column of Table 2.) All 100% of this work is, to quote the DAC's definition of ODA, “administered with the promotion of the economic development and welfare of developing countries as its main objective” (DAC 2013a).<sup>7</sup>

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<sup>6</sup> Data are unavailable for DAC members Iceland and Slovenia.

<sup>7</sup> See also Brzoska (2008), p. 144.

**Table 2. Spending on internationally mandated security-related activities, Commitment to Development Index methodology, and Net ODA, 2011 (% of GDP or GNI)**

Donor	U.N. Peacekeeping Operations			Total, previous columns	Net ODA
	Financial contributions	Cost of personnel contributions	Non-U.N. PKO & humanitarian interventions		
Australia	0.01%	0.03%	0.09%	0.14%	0.34%
Austria	0.02%	0.04%	0.06%	0.11%	0.27%
Belgium	0.02%	0.02%	0.04%	0.07%	0.54%
Canada	0.01%	0.02%	0.04%	0.07%	0.32%
Czech Republic	0.00%	0.01%	0.04%	0.05%	0.12%
Denmark	0.02%	0.04%	0.08%	0.14%	0.85%
Finland	0.02%	0.04%	0.06%	0.12%	0.53%
France	0.02%	0.02%	0.09%	0.13%	0.46%
Germany	0.02%	0.01%	0.04%	0.06%	0.39%
Greece	0.01%	0.01%	0.06%	0.08%	0.15%
Ireland	0.01%	0.07%	0.04%	0.12%	0.51%
Italy	0.02%	0.02%	0.05%	0.09%	0.20%
Japan	0.02%	0.00%	0.00%	0.02%	0.18%
Luxembourg	0.01%	0.00%	0.03%	0.04%	0.97%
Netherlands	0.02%	0.02%	0.06%	0.10%	0.75%
New Zealand	0.01%	0.06%	0.05%	0.13%	0.28%
Norway	0.01%	0.07%	0.07%	0.15%	0.96%
Poland	0.00%	0.02%	0.02%	0.05%	0.08%
Portugal	0.01%	0.04%	0.04%	0.09%	0.31%
Slovakia	0.01%	0.06%	0.02%	0.10%	0.09%
South Korea	0.00%	0.01%	0.00%	0.01%	0.12%
Spain	0.01%	0.01%	0.02%	0.05%	0.29%
Sweden	0.02%	0.02%	0.05%	0.09%	1.02%
Switzerland	0.01%	0.01%	0.05%	0.07%	0.46%
United Kingdom	0.02%	0.03%	0.08%	0.13%	0.56%
United States	0.01%	0.00%	0.06%	0.08%	0.20%

Source: Roodman (2013, p. 54), DAC statistics.

## 2.5 Global public goods

As long as the world is marked by both high inequality and high absolute poverty, there will be a case for development assistance, and ODA will be useful to measure. Yet the world has changed since the 1960s, when the moral pressure for aid and the definition of ODA took their current forms. For wealthy nations, the dominant challenge is no longer to *assist* poorer countries, out of whatever combination of morality and geopolitics. It is to work *with* increasingly powerful development countries in order to stave off global public bads such as climate change and antibiotics resistance.



Donors only achieved precise definition and measurement of ODA after a crescendo of public calls for commitments to aid targets. Perhaps a similar moment is arriving for funding global public goods (GPGs). At climate negotiations in Cancún in 2010, industrial countries pledged to start a Green Climate Fund that would disburse \$100 billion/year by 2020 (Birdsall and Leo 2011).

Birdsall, Kharas, and Perakis (2012) offer one useful model for measuring GPG contributions. One indicator in the Quality of Official Development Assistance (QuODA) index counts contributions to UN peacekeeping contributions and ten other global initiatives, from the Consultative Group on International Agricultural Research (CGIAR) to the Global Environmental Facility to the International Initiative for Impact Evaluation (3ie).<sup>8</sup>

The prospect of measuring financial contributions to GPGs raises a structural question for ODA—the profoundest in this paper, being a surface manifestation of epochal shifts in international relations (Kharas and Rogerson 2012). Has the time come to create a new aggregate that aspires to the same stature as ODA, which would deemphasize “assistance” in favor of global cooperation on shared challenges? If so, should it replace, complement, or overlap with ODA? If overlap is to be avoided, which subcategories of ODA need deprecating?

I say: Create a new aggregate, and allow it to overlap with ODA. Aggregates such as ODA are useful for reifying vague concepts, educating the public and putting pressure on decision makers. The need for states rich and poor to embrace a broader conception of global responsibility could hardly be more urgent. Statistical overlap with ODA would be acceptable since the two could overlap conceptually (projects serve multiple objectives, and it is possible to assist and cooperate the same time). And given the presumptive legitimacy of overlap, attempting to reduce donors’ ODA totals by moving some flows to the new aggregate might provoke political antagonism just when consensus is needed. That said, if overlap were allowed, it should be clearly reported. This way, those wanting to sum ODA and contributions to GPGs into a larger aggregate could do so without double-counting.

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<sup>8</sup> The ten are: “Advance Market Commitments (AMC), Consultative Group on International Agricultural Research (CGIAR), Extractive Industries Transparency Initiative Multi-Donor Trust Fund (EITI-MDTF), Global Environmental Facility (GEF), Global Forum for Health Research (GFHR), International Finance Facility for Immunizations (IFFIm), International Initiative for Impact Evaluation (3ie), Montreal Protocol Fund (MPF),...and two new climate investment funds, the Clean Technology Fund and Strategic Climate Fund” (Birdsall, Kharas, and Perakis 2012, p. 27). Peacekeeping accounts for \$9 billion of the \$11 billion in GPG spending recorded for 2009—and in my view doesn’t belong. The UN Department of Peacekeeping Operations is far from a global public good in itself, a universally accessible police force ready to dispense law and order worldwide. Yes, we all benefit indirectly from peace abroad, but by that rationale all aid funds public goods.

### 3. When is a loan aid?

#### 3.1 The status quo

To count as ODA, a loan must first meet the generic tests for ODA. It must flow from an official agency to either a qualified multilateral institution or a country on the DAC List of ODA Recipients. And its main objective must be development, which excludes military aid and credits for export promotion.

In addition, an ODA loan is one that is “concessional in character *and* conveys a grant element of at least 25 per cent (calculated at a rate of discount of 10 per cent) [emphasis added]” (DAC 2013a). A strict reading of that phrase imposes two tests: a loan must be “concessional in character” and it must clear the stated mathematical threshold.<sup>9</sup>

All loans passing both tests enter the accounts on a capital flow basis. That is, disbursements are counted positively, in full, as they happen, and repayments are counted negatively, in full, as they happen (they are what Net ODA is net of). Interest payments on ODA loans are *not* subtracted from Net ODA, in an apparent analogy with the balance-of-payments concept Net Foreign Direct Investment (FDI), from which return of capital is subtracted but not repatriation of earnings. The Net Aid Transfers (NAT) measure mentioned earlier (Roodman 2005) questions this exclusion, subtracting interest along with principal repayments.

Today, the main ODA-related controversy is over the definition of concessionality. Unfortunately, the DAC guidelines do not define “concessional in character” (DAC 2013c). When interest rates were higher, the mathematical criterion of 10% was reasonably strict. But interest rates have fallen so far in wealthy nations that the ambiguity has left room for dispute. Today, it is easy for donors to borrow long-term at under 2%, lend at several percent higher, and still achieve a grant element exceeding 25% when discounting at 10% per year. Some donors, along with former DAC Chair Richard Manning (2013), argue that such loans are not concessional in character since they are profitable if repaid on schedule. But France, Germany, and the European Investment Bank (EIB) dissent, pointing out that a realistic assessment of the risk of default predicts net losses for the lenders (DAC 2013e).

For the moment, DAC members have agreed to disagree on whether default risk should enter the definition of “concessionality in character” (DAC 2013e). But the situation is worse than a failure to achieve consensus on principles: different donors’ aid giving is being assessed by different standards. France, Germany, and the EIB are submitting to the DAC secretariat data on loans that would fail stricter tests of concessionality. *And the DAC secretariat, rather than imposing a uniform standard, is allowing each donor to define “concessionality in character” for*

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<sup>9</sup> According to the DAC Glossary, loans the concessionality of loans multilaterals is assessed purely on whether they issue from a soft lending window. [oecd.org/dac/dac-glossary.htm#Grant\\_Element](https://oecd.org/dac/dac-glossary.htm#Grant_Element).

*itself*. At least theoretically, the same loan could be aid when extended by France and not aid when extended by the U.K.

As a result, the integrity of the DAC statistics has been compromised, It is something of a crisis, and it is why the DAC members asked the secretariat to perform the top-to-bottom review of ODA now underway.

Presumably all involved recognize that the status quo is problematic and unsustainable. (And to be clear, the DAC secretariat staff are merely doing their jobs, as directed by the DAC members.) Interests and ideas will interact to shape the resolution, which under the DAC's self-imposed deadline (DAC 2012) should take place by the end of 2015.

The best outcome would be an agreement on a mathematical formula that a) incorporates a discount rate or system of discount rates that improves on the fixed 10% by tracking with the interest rate environment; and b) explicitly confronts whether and how to factor in default risk. At the level of principle, the first change would be uncontroversial: almost no one defends the current 10% rate. And more-realistic alternatives are already available. The question of whether to factor in default risk is tougher.

### **3.2 Alternative discount rate systems**

In at least three other contexts, international institutions have confronted the challenge of choosing meaningful discount rates for measuring the value and cost of loans: the OECD Trade and Agriculture Directorate, in its support for the Export Credit Arrangement; the IMF in its methodology for distinguishing between hard and soft loans, used for monitoring threats to fiscal stability under adjustment programs; and the IMF again, in its system for assessing the sustainability of external borrowing by low-income countries. The systems derive from common roots.

All are relevant to the DAC's task, in several ways. Their existence gives the lie to protestations that were apparently once expressed within the DAC membership (Hynes and Scott 2013) that a system more complex than the fixed 10% "raised conceptual difficulties and...computational complexities [that] would be costly in resources." Evidently, modern technocrats with modern computers actually can handle the deliberations and calculations needed to improve on 10%. Second, the existing examples demonstrate the political viability of moving beyond 10%: governing bodies of multilateral institutions have endorsed them. Third, they are sources of ideas, models that can be copied in part or in full. Finally, to the extent they are copied, they convey the power of precedent.

All the examples are built on Commercial Interest Reference Rates (CIRRs). As set forth in the Export Credit Arrangement, CIRRs are based on representative central government bond yields for each donor currency.<sup>10</sup> A margin of 1% is added for administrative costs on the part of the donor as lender. A lending government may choose to gazette a single 5-year rate, or provide rates for three tiers ( $\leq 5$  years, 5–8.5 years, and  $> 8.5$  years) as most now do. CIRRs are updated monthly. They are computed only for parties to the Arrangement, namely the European Union and all other DAC members save Iceland.<sup>11</sup> But they could be easily extended to other countries that have established markets in medium-term sovereign bonds.

The OECD and IMF methodologies take moving averages of CIRRs. They differ from each other—and have evolved—in the length of the window over which they average, in the schedule of updates, in the margins added to reflect higher borrowing costs at long maturities, in any rounding that is performed, and in whether they differentiate by currency or use the U.S. rate for all countries. In fact, the two IMF systems were merged into a single, simpler one last October. (See Table 3.)

The differences between the two systems appear to reflect differences in purpose and perhaps political context. The purpose of the IMF system is to estimate how loans made today will affect the finances of borrowers in years to come. The estimates are inherently inexact because of underlying uncertainties about revenue growth, exchange rates, and inflation, among other variables. This imprecision produces rapidly diminishing returns to sophistication (differentiation of discount rates by maturity, differentiation by currency, frequent updates). Meanwhile, the desire for year-to-year stability in the projections favors a long window for the moving average. The use of a single rate for all currencies sidesteps the need to compute CIRRs for China and other countries that are not parties to the Export Credit Arrangement; it may be politically expedient too since the international tension over the renminbi-dollar exchange rate makes sensitive any comparison of currencies within the IMF.

In contrast, the Export Credit Arrangement takes the point of view of the lender, which makes its job easier.<sup>12</sup> To measure the extent of subsidy, the system does not need to make, say, 30-year economic projections for borrowing nations. Instead, it can compare what a lender pays now for 30-year credits to what the lender charges now for the same. And since no projections are needed, the stability thereof is not a concern. These circumstances favor the Arrangement's use of discount rates that are more frequently updated, more sensitive to recent interest rate movements, and less coarsely rounded.

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<sup>10</sup> The Euro bond yields are from AAA-rated sovereigns (OECD 2014b).

<sup>11</sup> Australia, Canada, the European Union, Japan, New Zealand, Norway, South Korea, Switzerland, and the United States. Current values are at [oe.cd.org/tad/xcred/cirrs.pdf](http://oe.cd.org/tad/xcred/cirrs.pdf).

<sup>12</sup> It is not clear why the Arrangement adds another 0.75% for loans shorter than 15 years to a benchmark discount rate that is usually based on maturities above 8.5 years (typically 10), and that already includes a margin of 1% for administrative costs. Perhaps the Arrangement's participants negotiated the benchmark upward, to everyone's comfort.

**Table 3. Current IMF and OECD systems for calculating discount rates**

Institution	IMF	OECD
Name	Unified rate (introduced October 2013)	Differentiated Discount Rates (DDRs)
Purpose	Monitoring compliance with limits on non-concessional borrowing under IMF programs; debt sustainability analysis for low-income countries	Monitoring compliance with subsidy limits under Export Credit Arrangement
Base	CIRR for longest available tenor (usually >8.5 years)	CIRR for longest available tenor (usually >8.5 years)
Currency	US \$	Lender-specific
Window for moving average	10 years	6 months
Margin over CIRR average	1.15%	0.75% for <15 years 1.00% for 15–20 years 1.15% for 20–30 years 1.25% for ≥30 years
Rounding	Nearest 1%	Nearest 0.1%
Update schedule	Frozen pending review in 2015	Each January

*Sources: IMF (2013); OECD (2014).*

### **3.3 Methods for incorporating default risk**

The methodologies just described assess the cost and value of loans assuming they are serviced on schedule. They do not consider something private lenders pay close attention to, the risk of default. As a narrow financial matter, the likelihood of default raises the cost of a loan for the lender and raises the value for the borrower.

Two methods for incorporating default risk into the measurement of concessionality are present in the current debate. They differ in in the mathematical form and in the underlying data sets relied upon to gauge creditworthiness.

The more intuitive method was put forth by Canada, France, Germany, and Spain (DAC Working Party 2012a)—though their proposal appears meant more to demonstrate the practicality of factoring in default risk than to advocate strongly for a particular approach. Their idea is to infer a default-risk spread by comparing certain prices in financial markets, then add the spread to the discount rate used in measuring the concessionality of a loan. The riskier a country is perceived to be, the higher this spread, the higher the adjusted discount rate, the lower the net present value of the stipulated debt service, and the larger the grant element.

In particular, Damodaran (2013) has built a database of two kinds of prices that are useful in estimating default risk: yields on dollar- and euro-denominated bonds issued by sovereigns; and prices of credit default swaps (CDSs) on such bonds. CDSs are derivatives that represent bets that governments will (not) default on their bonds. The holder of a CDS is entitled to compensation by the issuer if there is a default, with the compensation usually being the face value of a loan expressed in dollar or euro terms. Because the issuer takes ownership of the original claim after default, and might eventually recover much of its value from the defaulting borrower, the price of a CDS reflects not only the probability of default but the likely cost.

Damodaran finds, for example, that a Brazilian 10-year dollar-denominated bond yielded 2.50% in January 2013, which is 0.74% more than a U.S. government-issued one. Meanwhile CDSs on such Brazilian bonds cost 0.77%/year more than those for the U.S.<sup>13</sup> These figures suggest that financial markets equated Brazilian default risk to an extra 0.75%/year in interest.

Many developing countries lack hard-currency bond and CDS markets, so Damodaran cannot run the same calculations for them. But many are nevertheless rated, as sovereigns, by credit rating agencies, which provides a bridge for extrapolation. For each Moody's category (A1, A2, etc.), Damodaran computes an average spread among the countries for which he has bond or CDS market data. This allows estimation of default spreads for any Moody's-rated nation. To further broaden coverage, Canada et al. suggest assigning unrated countries, which tend to be the poorest, to a low Moody's category such as Caa2. The spread ranges from 0.85% for A1-rated sovereigns to 10% for Caa3.

The other method at hand for quantifying default risk is embedded in the Export Credit Arrangement. To limit subsidy, the Arrangement defines Minimum Premium Rates (MPRs) for credit risk insurance that export credit agencies provide to private lenders, or implicitly provide to themselves if they lend directly. Unlike the spreads just derived, which are added to the annual discount rate, MPRs are conceived as one-time, up-front fees expressed as a percentage of the loan amount. For example, for a borrower seen as safe, the MPR on a

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<sup>13</sup> The U.S. CDS cost is 0.67%/year. This may reflect counterparty risk more than default risk; since counterparty risk is probably similar for all countries, Damodaran takes the U.S. as the default-risk-free CDS benchmark.

40-year loan might be 10%, which is equivalent to an annual interest spread of about 0.5% if the balance declines linearly to zero. For a borrower perceived as riskier, the MPR could be as high as 50%.

The MPR formula has many moving parts. These include such factors as whether the borrower is a sovereign or a private party, the fraction of the loan amount that is insured for commercial risk (*PCC*), the fraction covered for political risk (*PCP*), and an OECD-stewarded country risk classification (OECD 2014, Annex VIII). A country's risk classification, like a grade from a private rating agency, can be updated at any time.

Fortunately, the MPR formula would simplify for the vast majority of aid loans, which are made to sovereigns in hard currency and are effectively 100% self-insured. The general formula is

$$MPR = \left[ \frac{(a_i HOR + b_i) \max(PCC, PCP)}{0.95} (1 - LCF) + \frac{c_{in} PCC}{0.95} HOR (1 - CEF) \right] QPF_i PCF_i BTSF$$

where  $i = 1 \dots 7$  is the borrowing country's OECD risk category. Rather than copying the definitions of all those terms from the Agreement, I will report that for hard-currency loans with sovereign lenders and borrowers,  $PCC = PCP = BTSF = QPF = 1$  and  $LCF = CEF = c_{in} = 0$ .<sup>14</sup> Meanwhile,

$$PCF_i = 1 + \frac{\max(PCC, PCP, 0.95) - 0.95}{0.05} \times \text{percentage of cover coefficient}$$

Combining and simplifying, the minimum premium rate is

$$MPR = \frac{a_i HOR + b_i}{0.95} (1 + \text{percentage of cover coefficient})$$

The terms remaining in this formula need explaining. *HOR* (Horizon of Risk) represents the average number of years a unit of lent capital remains outstanding, considering both the disbursement and repayment schedules. It is *expressed* as the term of a loan having the same horizon of risk but the following (common) terms: no grace period and semiannual, equal principal payments. In particular, the general *HOR* formula is

$$HOR = \text{length of disbursement period} / 2 + 2(\text{weighted avg life of repayment period} - 0.25)$$

For example, a loan disbursed immediately and in full and cleared 10 years later in a single balloon payment would have a weighted average life of repayment period of 10 and an  $HOR = 0/2 + 2(10 - 0.25) = 19.5$  years. To repeat, this slightly peculiar number is the term, in years, of a loan with semiannual, equal

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<sup>14</sup> I thank David Drysdale of the OECD Trade and Agriculture Directorate for assistance in understanding this formula.

principal payments that has the same average number of years a unit of lent capital remains outstanding (and thus exposed to default risk).<sup>15</sup>

In the simplified MPR formula above, the  $a_i$  coefficient is closest in meaning to a risk spread adder to the annual discount rate; it varies from 0.09% to 1.10% depending on the borrower’s OECD risk classification.  $b_i$  represents elements of risk that do not vary with the loan term. The *percentage of cover coefficient* captures a certain moral hazard, the nonlinear increase in a loan guarantor’s risk as its guarantee surpasses 95% of the loan amount and the lender’s “skin in the game” dwindles to zero.<sup>16</sup> (See Table 4.)

**Table 4. Parameters in Export Credit Arrangement Minimum Premium Rate formula that depend on country risk classification**

OECD risk classification ( <i>i</i> )	$a_i$	$b_i$	<i>percentage of cover coefficient</i>
1	0.090%	0.350%	0.000%
2	0.200%	0.350%	0.337%
3	0.350%	0.350%	0.489%
4	0.550%	0.350%	1.639%
5	0.740%	0.750%	3.657%
6	0.900%	1.200%	5.878%
7	1.100%	1.800%	8.598%

Source: OECD (2014), pp. 128, 131.

An MPR enters a concessionality calculation as follows. Using a discount rate that does not reflect default risk, the net present value (NPV) of required future debt service is computed. Now, an MPR of 10%, say, indicates an expectation that the NPV of actual debt service will be 90% of that required debt service. So the default-risk-adjusted grant element is

$$\text{adjusted grant element} = 1 - (1 - \text{unadjusted grant element}) \times (1 - \text{MPR})$$

As Canada et al. point out (DAC Working Party 2012a), any system that factors in default risk *ex ante* should not also do so *ex post*, in order to avoid double-counting. If the DAC begins to discount for default risk, then it should cease counting any debt relief as ODA, a change advocated in section 1 for other reasons.

<sup>15</sup> The weighted average life of repayment period of an annuity loan, one with fixed total payments like a U.S. mortgage, is derived in the appendix. Since DAC does not collect information on repayment schedules, all loans are modeled below as being completely disbursed on the commitment date, even though loans typically are disbursed in installments. Overestimating the lender’s time of exposure to risk in this way does impart some upward bias to the HOR, MPR, and risk-adjusted grant element.

<sup>16</sup> Arguably this factor should be dropped when assessing direct-made aid loans, since it reflects an agency problem that disappears when lender and guarantor are the same. On the other hand, the lack of a private lending agent subject to private sector discipline may well reduce the care with which aid loans are made and the increase default risk.



### 3.4 Discussion

The options arrayed above pose a few choices in devising a system for measuring concessionality of development loans:

- *Which discount rate system to use*, options being:
  - Sticking with the current 10%
  - Adopting the new IMF system
  - Adopting the Export Credit Arrangement's Differentiated Discount Rates
  - Synthesizing a novel system from these examples
- *Whether to incorporate default risk*
- *If so, how*, options being:
  - Defining market-based spreads to be added to the discount rate
  - Adopting the Export Credit Arrangement's Minimum Premium Rate system, with its fixed coefficients tied to the OECD classification of countries by risk level
  - Synthesizing a novel system from these examples

I argue for copying the Arrangement's DDRs; against incorporating default risk in most cases; and once more for copying the Arrangement if default risk is to be incorporated. Here, I defend these choices. In the next section, I implement them.

Copying the Export Credit Arrangement is easy to defend. However unofficial, the Arrangement is endorsed by all DAC members except Iceland. It is the fruit of years of tough negotiating. And while it contains debatable and arbitrary choices, the same would go for any other system, because of the inherent uncertainties in estimating cost of funds and default risk. The Arrangement's formulas are fit enough to our purpose that it is doubtful that an alternative could be so superior as to justify the risk of entering a quagmire by reopening negotiations.

The IMF discount rate system, while a credible option, is designed for a different purpose. Its inertia—the 10-year averaging window and the potentially infrequent updates—may be a strength from the IMF's point of view, as it stabilizes long-term debt projections. But it is a weakness from the point of view of measuring the concessionality of current loan commitments. In this context, there is little justification for heavily weighting the interest rates of 5–10 years ago. The most relevant benchmark is the donor's borrowing rate now.

Finally, to the extent that the DAC decides to more fully track non-ODA flows, consistency across flow types will become more important. The distinction between export and development finance is not always clean. It will be problematic if a loan's concessionality depends substantially on whether it is categorized as an export

credit or ODA/OOF. The OECD, of which the DAC is essentially a part, should harmonize its methodologies.

That said, there may be room for judicious improvement. For example, a formal process could be instituted to periodically review the parameters in Table 4 in light of empirical analysis like Damodaran's. Perhaps, for instance, over time default spreads are narrowing.

The issue of *whether* to incorporate default risk is more difficult. The argument in favor has merit. The IMF's Balance of Payments Manual, which instructs governments on tracking international financial flows, emphasizes that financial transactions should be valued in comparison to market prices (IMF 1993, §93)—and market prices include risk premia. Likewise, the DAC's 1970 annual report clarified that the phrase “concessionality in character” referred to market prices (Hynes and Scott 2013).

But on balance, I think default risk should not be factored in, at least when assessing standard aid loans enforced under standard international processes. Default certainly does raise the cost of lending for the lender. But the way the international aid system works today, default also imposes costs on the borrower. And that is why it is usually considered a bad idea to make high-interest loans to the poorest, riskiest countries, even though—factoring in the probability of default—the expected financial value may be positive for them. Factoring in default risk would valorize high-interest loans to indigent nations, which could still come out “concessional” once the probability of losses was recognized. That would undermine the conceptual basis for the World Bank's International Development Association (IDA) and other soft lending programs. It is hard for me to see how such a premise could prevail in the DAC discussions.

To drill into this paradox, imagine an extreme case. Suppose France could choose between giving Senegal a grant of €50 million or a one-month loan of €100 million at 0% interest, with a 50% chance of repayment. Going by the Canadian/French/German/Spanish argument on behalf of discounting for default risk (DAC Working Party 2012a), these two options would have equal expected economic cost for France and equal expected economic value to Senegal. In reality, if France made the loan and Senegal defaulted, the French government would turn from a beneficent donor to an insistent loan collector. One indicator of France's likely stance is its practice of carrying loans made to developing countries on its books at face value (GAO 2000, p. 149), structurally denying the probable costs of default. As loan collector, France might halt further aid. Or it might enter a quagmire of defensive lending, making new loans ad hoc with which Senegal could repay old, raising fiscal uncertainty in Senegal. The default might trigger provisions in the loan agreement allowing France to charge penalties and market-rate interest, which would steadily compound the debt. Any debt forgiveness would take years and, France would insist, be negotiated at the Paris Club, where all the rich-country creditors unite on one side of the table to face poor debtors singly.

Default is not merely a zero-sum financial event that shifts expected value from lender to borrower like the giving of a grant or the lowering of an interest rate or the triggering of a CDS. Default takes place within institutional and geopolitical contexts that cause it to rebound at great cost onto the borrower too. If donors more smoothly accepted default as part of the risky business of development, then the rationale for factoring in default risk would be more persuasive.

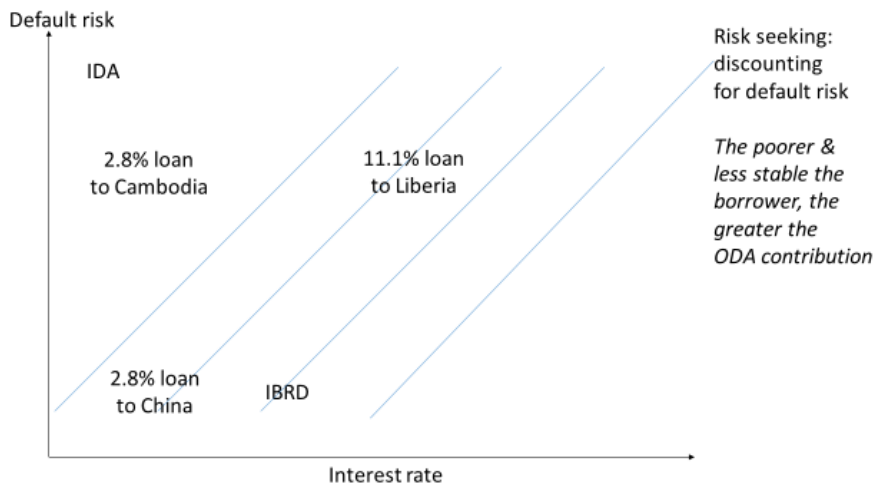
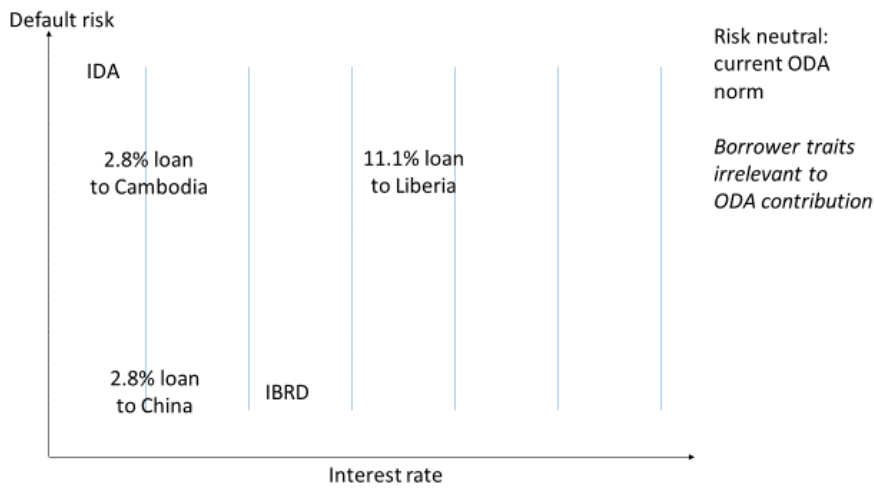
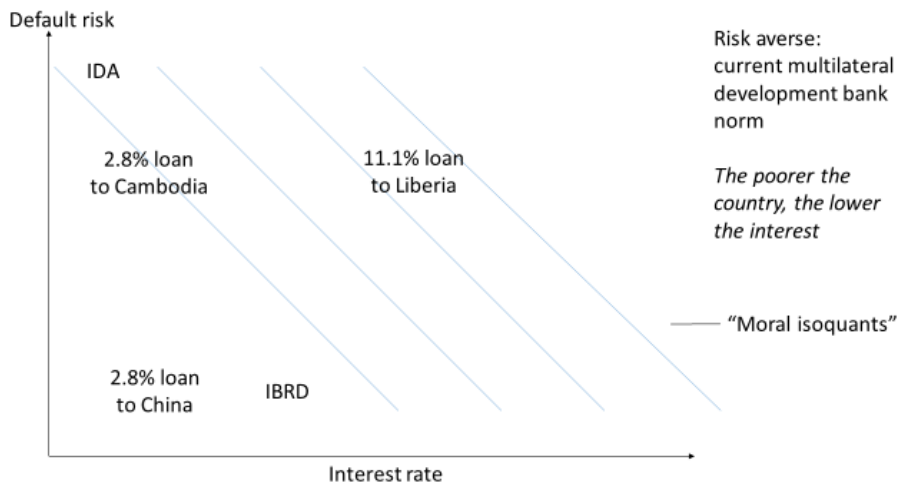
Figure 2 depicts the conceptual issues more abstractly. In a space whose dimensions are interest rate and default risk, it places the World Bank's concessional and non-concessional lending arms, the IDA and IBRD, along with some hypothetical loans to Liberia and China. Each also contains "moral isoquants"—lines along which loans would be deemed equally appropriate. In the first graph, the isoquants run from top-left to bottom-right, embodying the norm that poorer, and thus riskier, countries should be charged less interest. Under this "risk-averse" norm, an 11.1%-interest development loan to a poor country such as Liberia might be deemed beyond the frontier of acceptability. In the second graph, the isoquants are vertical, reflecting the fact that under current ODA accounting rules, the riskiness of the borrower plays no role in computing a loan's contribution to ODA. This is "risk neutrality": 2.8% loans to Liberia and China score the same. The final graph depicts the norm implied by discounting for default risk. Roughly speaking, this "risk-seeking" norm equates a 11.1% loan to Liberia with a 2.8% loan to China, since it puts them on the same isoquant.<sup>17</sup>

On the one hand, these abstract graphs point up that even the current ODA system is out of alignment with the values embedded in multilateral development banks, whose creators evidently worried about exhausting the debt servicing capacity of the poorest nations—whose creators understood, in other words, that default is not simply a financial benefit for the borrower. On the other hand, the graphs show how discounting for default risk would carry the ODA system even farther from the multilateral bank norm.

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<sup>17</sup> Using methodologies described below for discounting for default risk, I estimate that U.S. loans made in 2012 with 10 years' grace; 30 years for repayment; semiannual, equal principal payments; and charging 2.8% (to China) or 11.1% (to Liberia) would both achieve grant elements just over 25%. These estimates use a U.S. DDR for 2012 of 3.9%.

Figure 2. “Moral isoquants” implied by multilateral development practices, current ODA accounting, and discounting for default risk



One intriguing option is for the DAC to *only discount for default risk for loans that eschew stiff penalties for default and contain automatic risk sharing mechanisms*. For example, Guillaumont et al. (2007) and Cohen, Jacquet, and Reisen (2006, 2007) propose that instead of lending on soft terms to low-income countries, donors lend to them on hard terms and set aside funds to cover debt service when the borrowers experience certain price shocks. Any funds left over after full repayment might be disbursed as grants. The approach could be extended to capital account shocks and exchange rate shocks. The idea is share risk while minimizing moral hazard by tying the triggers to external events rather than factors under the borrower’s control.

Another way to earn a risk-based concessionality assessment could be to provide in the loan contract for arbitration of any default under a bankruptcy court–like Sovereign Debt Restructuring Mechanism (Krueger 2002; CIEPR 2013) rather than traditional Paris Club treatment.

With such provisions, default would become more truly a zero-sum game, with losses for the lender matched by benefits for the borrower. The risk-based view of concessionality would become more accurate.

### **3.5 Filtering and weighting**

Having measured the concessionality of a loan by whatever means, a new question arises: is the loan concessional enough to be “concessional”? Is it aid? The IMF requires a grant element of at least 35%, and more under special circumstances (IMF 2013). The Export Credit Arrangement usually imposes a ceiling of 35% for most countries and 50% for least-developed countries (LDCs; OECD 2014a, §38). But the DAC has always required only 25%. Hynes and Scott (2013) recount the debate over this number, circa 1969. “While the Secretariat with the support of some members pressed for a high grant element, perhaps even as high as 60%, the need for a consensus quickly reduced this considerably to 20%.” “Reaching agreement on the definition of the minimum grant element of 25% was a major achievement and took years to negotiate.”

The question of threshold begs a deeper one: should there be a threshold at all? Filtering with a threshold is conceptually problematic. The cleavage at a particular line is arbitrary at the margin. One can construct examples of two loans with nearly identical terms, producing grant elements of 24.99% and 25.01% respectively. Though indistinguishable in practice, one is ODA and one is not. Meanwhile, one can construct pairs that differ only in the interest rate, but enough so that one has a grant element of 25.01% the other 80%. Since both would qualify as ODA and would enter the accounts on a capital flow basis, they would affect ODA equally despite delivering quite different grant equivalents.

A more coherent approach is to *weight* loans in proportion to their grant elements. Loans with grant elements as low as 1% could be counted—but at only a cent on the dollar.

Specifically, weighting could be implemented in two ways. Disbursements and debt service could be booked as they occur, as under the current system, but each transaction would be multiplied by the grant element of its loan. Or—in a step that would be more radical in the DAC and more conventional in the rest of the world—*only* disbursements would enter aid totals, again weighted by grant element. In other words, aid totals would just include the grant equivalents (net present values) of loans, at disbursement (Chang, Fernandez-Arias, and Serven 1998; Hynes and Scott 2013; Colin 2014).

There is no grand rationale for the status quo, for counting capital flows that are associated with loans on one side of a bright concessionality line. On the contrary, the status quo is conceptually incoherent and arbitrary at the margin. Just counting the grant element, on the other hand, is rooted in basic economics.

## **4. Simulations**

Changing the definition of ODA affects incentives and it affects headline aid totals. The distinction between incentives and totals matters because a definitional change might noticeably perturb only a few donors' headline aid numbers even as it modified incentives for all. Incentives should matter more than the headlines. But the effects on totals are still interesting: they give insight into the magnitude of some of the issues at stake and the subtle features of the alternatives proposed here. They also have implications for the political prospects of potential definitional changes.

Using historical data, I simulate the effects of various changes to the ODA definition on ODA totals. An accompanying spreadsheet provides a simple interface onto many of these calculations. The discussion here emphasizes the most complex part of the analysis, relating to loans.

### **4.1 Methods**

The removal of some or all of the “controversial categories” of aid discussed in section 1 is straightforward, except in the case of debt relief. Since 2006, entries in the DAC's project-level Creditor Reporting System database have carried an “aid type” code, which was probably designed with these controversies in mind. Virtually none of the aid in 2006–12 with these codes is reported as loans. I treat them as pure grants in order to prevent this exclusion from interacting with the calculations involving loans, which are complex as they stand.

Removal of debt relief is handled separately, along with netting out of interest received, as described in Roodman (2005), producing Net Aid Transfers (NAT).

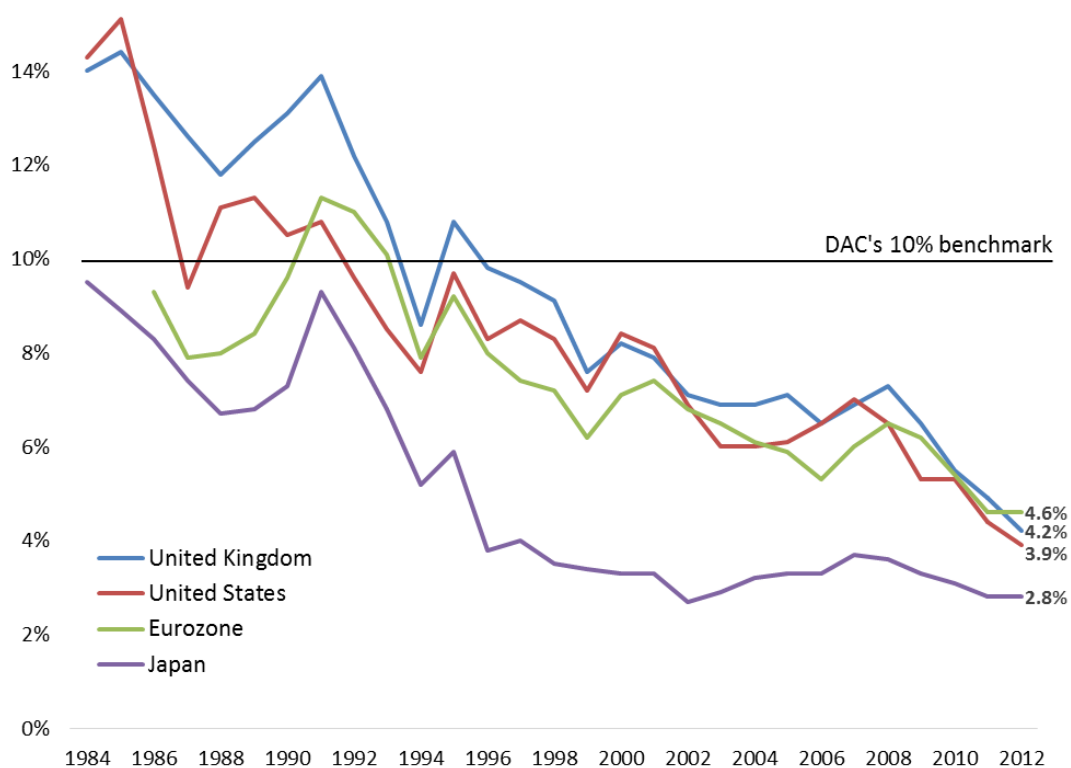
Three discounting methods are simulated:

- Discounting with the DAC’s fixed 10%.
- Discounting with the relevant DDR, as in the Export Credit Arrangement.
- Discounting with the DDR and then multiplying the NPV of debt service by  $1 - MPR$ , as described in section 3.3. This is labelled “DDR+risk” or “DDRR” for short.

These methods are each applied in up to four ways:

- Filtering for a minimum grant element of 25% (current practice).
- Filtering for a minimum grant element of 35%, following the IMF and the Export Credit Arrangement (done with DDR discounting only, the discounting system closest to the IMF’s and the Arrangement’s).
- Weighting disbursements and return flows by the grant element, booking them as they happen.
- Weighting by grant element, counting disbursements only (i.e., only counting the grant equivalent of loans).

**Figure 3. Differentiated Discount Rates (DDRs) for loans lasting at least 30 years, 1984–2012**



DDRs are calculated per the latest Export Credit Arrangement (OECD 2014a, §40), using historical CIRR data for 1983–2013 (OECD 2014d). The CIRR used for a given year and currency is the simple average of

the six monthly values for August 15 of the previous year to February 14 of the given year. The computed DDRs for major currencies are plotted in Figure 3. For lack of underlying CIRRs, loans made before 1983—and payments made on them thereafter—could not be discounted with DDRs. (This could be remedied with additional data collection. On the other hand, if the DAC switched to just counting grant equivalents of loans, as advocated here, the need to match current debt service to old loans would disappear.)

Computing MPRs requires similar historical excavation because they depend on a country's OECD risk classification. Classification histories begin in 1999 (OECD 2014c). In order to push coverage back farther, an extrapolation modeled on that of Canada et al. (described in section 3.3) is performed, mapping Moody's sovereign ratings for foreign-currency loans (meaning hard-currency loans), which are available farther back in time, to OECD risk categories. The Moody's (2011) rating histories begin in 1949, with an Aaa for the United States. But many developing countries did not receive their first rating until much later. India's first, for example, came in 1988. Unfortunately, it does not appear possible to estimate a representative rating for a country before its first actual rating, because it is not obvious that countries lacking ratings belonged in one of the lowest categories. India's first rating was a respectable A2. The upshot again is that the simulated discounting system cannot be computed for all aid loans being serviced even today, unless the switch is made to just counting grant equivalents at disbursement.

The mapping between Moody's foreign-currency bond ratings and OECD risk categories is achieved by computing, for each Moody's category, the median OECD category for all country-year observations for which both Moody's and OECD ratings are available. Observations of country-years are taken on July 1 of a given year. (See Table 5.)

Another limitation is that the DAC's data are far from complete for loans that are OOF, i.e., nonconcessional by the current 10%/25% standard. Yet some of these loans would ideally be included in alternative measures simulated here. Before 1995, DDRs were often above DAC's 10% discount rate, meaning that some conventionally nonconcessional loans *would* be concessional under the alternatives proposed here—and yet cannot be counted, for lack of data. In addition, conventionally nonconcessional loans would deserve inclusion in the methodologies that weight rather than filter, even if at only a few pennies on the dollar.

The most vexed part of the implementation is mapping loan transactions to loan terms data in order to compute the grant element associated with each transaction—which, again, is needed unless the advocated switch is made to just counting grant equivalents at disbursement. The DAC's Creditor Reporting System database generally records loan terms (the basis for all of the above calculations) separately from loan transactions (disbursements, principal repayments, interest payments). In principle, there should be no problem: the DAC reporting directives instruct submitters to assign each loan a unique CRS ID that should



appear in all records associated with a given loan. This identifier does allow mappings in the majority of cases. But sometimes submitters have changed the ID of a loan. And some loans being serviced within the period of study were committed before 1973, when the CRS database begin, so their terms are unavailable. In other cases, the terms associated with a CRS ID are reported more than once.

**Table 5. Median OECD risk classification for each Moody’s foreign-currency rating category**

Moody's foreign-currency rating	OECD risk classification
Aaa	0
Aa1	0
Aa2/Aa	2
Aa3	2
A1	2
A2/A	2
A3	2
Baa1	3
Baa2/Baa	3
Baa3	3
Ba1	4
Ba2	5
Ba3	5
B1	6
B2	6
B3	7
Caa1	7
Caa2	7
Caa3	7
Ca	7
C	7
Withdrawn rating	7

For each loan transaction, the mapping algorithm looks for CRS records containing loan terms that are associated with the same donor, recipient, and CRS ID (the last after removing certain suffixes). If there are multiple matches, they are sorted by year (newer ones given preference), and, within year, by the *initialreport* field, which is 1 for first reports of loans and 3 for subsequent reports. If no match is found, the algorithm is repeated but matching on *agencycode* and *projectnumber* instead of *crsid*. If still no match is found, the grant element associated with a transaction is not calculated.

Table 6 shows total ODA loan disbursements and principal repayments by bilateral donor for 1995–2012, along with subtotals of flows for which DAC (10%), DDR, and DDRR grant elements could be computed.

Non-ODA loans that would warrant inclusion in some of the simulated methodologies, as explained above, are missing from *all* sums.

**Table 6. Completeness of data for DAC, DDR, DDDR concessionality methodologies, ODA loans, 1995–2012 (million current \$)**

Donor	Disbursements				Principal payments			
	Total ODA loans	With DAC grant element	With DDR grant element	With DDDR grant element	Total ODA loans	With DAC grant element	With DDR grant element	With DDDR grant element
Australia	305	305	305	305	0	0	0	0
Austria	117	40	40	0	147	91	91	9
Belgium	299	299	299	253	632	209	209	18
Canada	250	249	249	247	916	550	550	124
Denmark	5	5	5	0	428	236	236	0
Finland	19	15	15	2	61	48	48	3
France	24,325	21,611	21,611	16,845	14,680	12,787	12,787	3,361
Germany	21,030	18,075	18,075	12,428	18,362	9,037	9,037	1,969
Italy	2,622	1,915	1,915	1,144	3,098	1,793	1,793	492
Japan	98,140	97,025	97,025	77,597	85,125	79,920	79,920	30,597
Kuwait	1,452	1,451	1,451	1,336	1,060	978	978	501
Netherlands	159	3	3	0	3,996	1,193	1,193	121
Nordic Dev.Fund	135	0	0	0	52	0	0	0
Norway	4	0	0	0	48	40	40	18
Portugal	2,085	2,080	2,080	1,858	165	164	164	152
South Korea	2,205	2,053	2,053	1,903	273	261	261	103
Spain	5,924	3,703	3,703	2,964	1,723	288	288	178
Sweden	80	62	62	26	7	2	2	1
Switzerland	0	0	0	0	83	0	0	0
United Arab Emirates	373	285	285	274	537	151	151	150
United Kingdom	0	0	0	0	17	0	0	0
United States	3,790	1,080	1,080	519	13,838	3,817	3,817	34

Where DDR or DDDR grant elements cannot be computed, one imputation is performed: the conventional DAC 10% grant element is used if available. This introduces a conservative bias into the estimates of the impacts of switching from DAC to DDR or DDDR concessionality.

A final step to compensate for missing loan terms data, in aggregating up to the level of the donor-recipient-year, is pro-rating. It is done separately for disbursements and reflows, and in the latter case the ratios are based on total principal *and* interest payments in order to maximize use of available information. The pro-rating ratios are computed at the level of the *donor-year*, not *donor-recipient-year*. This is done in part for consistency—a pro-rated donor-year value is then exactly equal to the sum of the corresponding pro-rated donor-recipient-year values—and in part for lack of adequate information for pro-rating in many donor-recipient-year cells.

To be precise, let  $D$  be disbursements,  $P$  principle repayments, and  $I$  interest payments; let subscripts  $d$ ,  $r$ , and  $t$  index donor, recipient, and time; let  $F$  be a positive flow variable, such as disbursements on loans with a DDR grant element of at least 25%; and let  $\sim$  hats indicate sums over loans for which  $F$  is computable; then the prorated values of  $F$  are

$$\bar{F}_{art} = \tilde{F}_{at} \frac{D_{art}}{\bar{D}_{at}}.$$

If  $F$  is instead a negative flow variable—based on debt servicing—then the formula is

$$\bar{F}_{art} = \tilde{F}_{at} \frac{P_{art} + I_{art}}{\bar{P}_{at} + \tilde{I}_{at}}.$$

$D_{art}$ ,  $P_{art}$ , and  $I_{art}$  are taken from the DAC database's Table 2a.

The grant element calculations conform to DAC (2013c, Annex 14) standards. In particular, define:

- $G$  = length of the grace period (years)
- $N$  = length of the repayment period (years)
- $p$  = number of repayments/year
- $r_g$  = grace period interest rate/year
- $r_r$  = repayment period interest rate/year
- $d$  = discount rate/year
- $d' = p \left( (1 + d)^{\frac{1}{p}} - 1 \right)$ , the un compounded discount rate/year.<sup>18,19</sup>

Then the grant element as a fraction of the loan amount is:

$$\begin{aligned} & 1 - (Gr_g + Nr_r + 1)(1 + d)^{-(G+N)} && \text{for balloon payment loans} \\ & 1 - \frac{1}{d'} \left[ r_g - (1 + d')^{-G} \left( r_g - r_r \frac{1 - (1 + d')^{-N}}{1 - (1 + \frac{r_r}{p})^{-Np}} \right) \right] && \text{for annuity loans} \\ & 1 - \frac{1}{d'} \left[ r_g - (1 + d')^{-G} \left( r_g - r_r + \frac{1}{N} (1 - (1 + d')^{-N}) \left( \frac{r_r}{d'} - 1 \right) \right) \right] && \text{for equal principal payments loans} \end{aligned}$$

Derivations are in the appendix. Setting  $d = 0.1$ , these formulas exactly match the DAC-computed *grantelement* field for the 2,027 loan commitments with requisite data reported during 1998–2012. (See Figure 4.) Some discrepancies appear in earlier years (1973–97), but given the perfect match later, these are unlikely to reflect deviations from current DAC practice. (See Figure 5.)

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<sup>18</sup> Additional details needed to match the DAC:  $p$  is 1 if the CRS field numberrepayment is 0 or empty.  $r_g$  = interest1 if that is expressed as a fixed rate, or else interest2.  $r_r$  = interest2 if the latter is not 0 or empty; otherwise interest1.

$G = \max(0, \text{repaydate1} - \text{commitmentdate})$  if that is at least  $365/p$ ; otherwise 0.  $N = \text{repaydate2} - \text{repaydate1} + 1 / p$  if  $G > 0$ ; otherwise  $\text{repaydate2} - \text{commitmentdate}$ .

<sup>19</sup> The formulas assume that interest compounds not at all for balloon loans and annually otherwise.

Figure 4. Scatter plot of grant elements computed by DAC and in this replication, all 2,027 loan commitments reported during 1998–2012 with requisite data

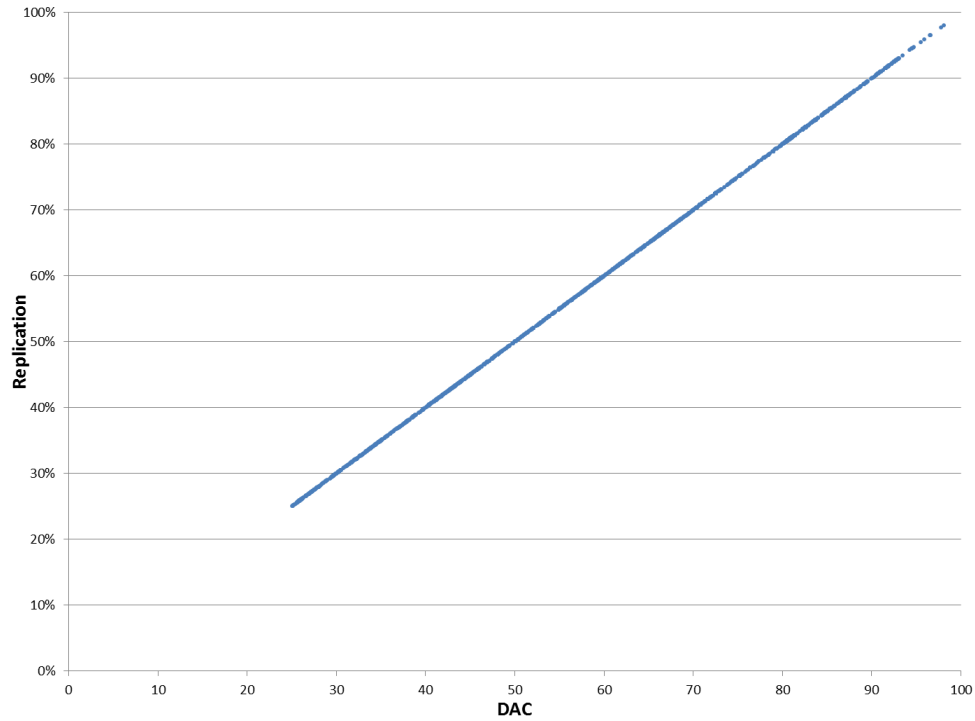
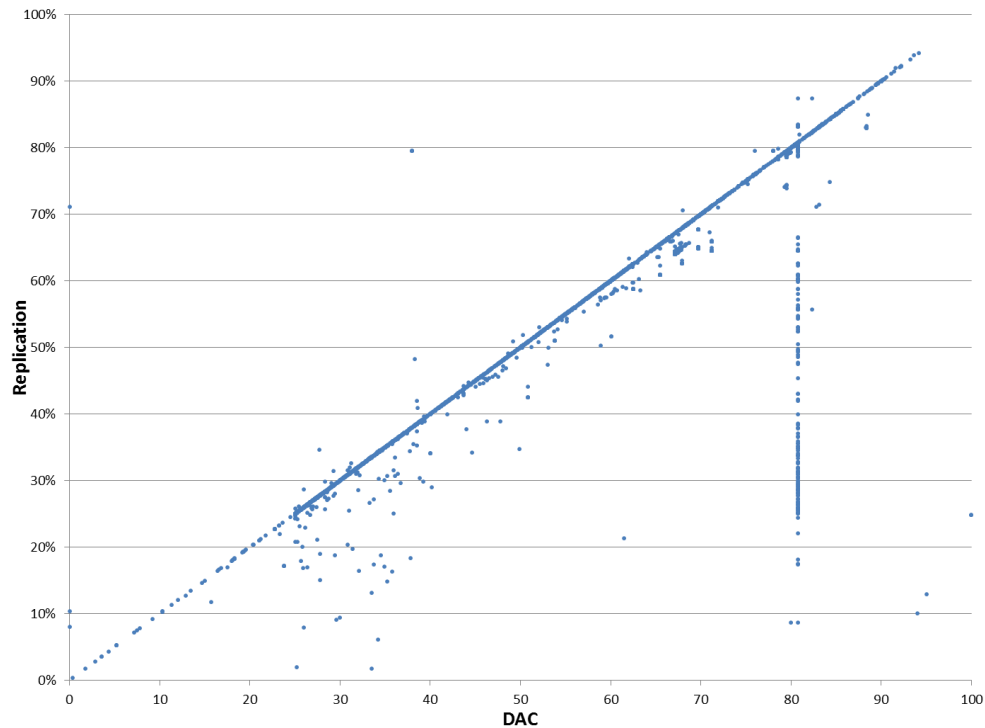


Figure 5. Scatter plot of grant elements computed by DAC and in this replication, all 4,209 loan commitments reported during 1973–97 with requisite data



## 4.2 Results

How much recent lending owes its inclusion in ODA to the DAC's unrealistic 10% discount rate? Figure 6 plots estimates of total disbursements on ODA loans whose concessionality falls below 25% when switching from 10% to the more realistic DDRs. French and German lending of this sort has greatly expanded since the global financial crisis, from a combined \$1 billion in 2007 to \$4.3 billion in 2012 (in 2011 dollars). It turns out that Japan's ODA totals have harbored even more debatably concessional lending since 1996. This perhaps should be unsurprising since Japan is the biggest aid lender in the group and has the lowest domestic interest rates, thus the toughest concessionality test.

**Figure 6. ODA loan disbursements with grant element below 25% when discounting with DDRs**

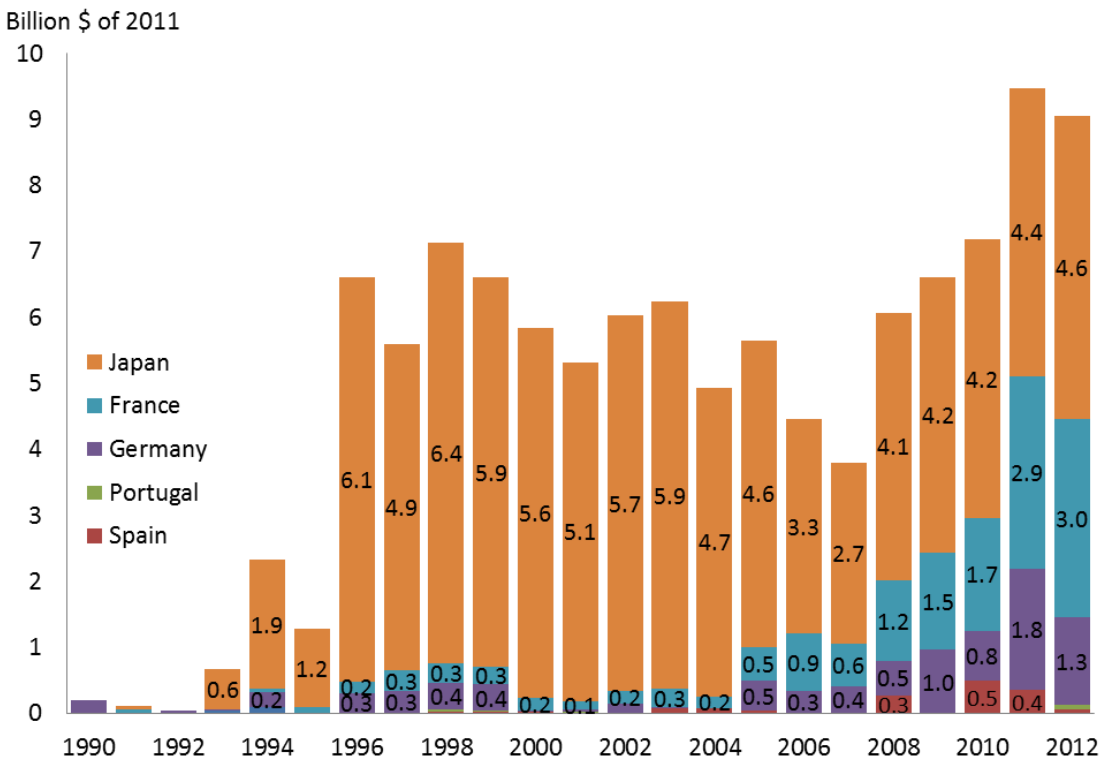
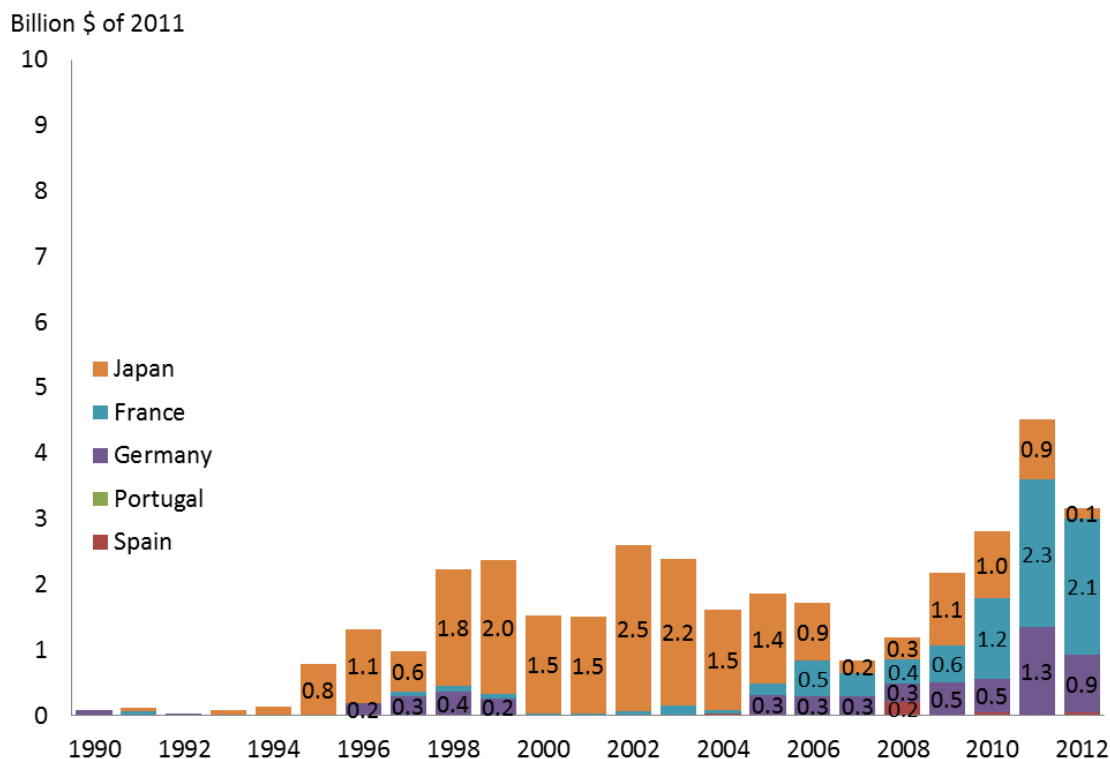


Figure 7 is the same except that it factors in default risk using MPRs. As expected, the quantity of lending failing the 25% concessionality test shrinks substantially. This is especially so for Japan, indicating that much of its lending that is non-DDR-concessional (in Figure 6) is only barely so. Still, it is notable that about half of French and German ODA lending still does not appear concessional: \$2.1 billion of France's \$3.8 billion in ODA lending in 2012 would be excluded, as would \$0.9 billion of Germany's \$1.9 billion. This means that a methodology implementing the spirit of a proposal endorsed by France and Germany (DAC Working Party 2012a) by applying formulas they also have endorsed (in the Export Credit Arrangement) rejects much of

their current lending as ODA. This result is in tension with these two countries' public defense of all their ODA loans as ODA (DAC 2013e).

**Figure 7. ODA loan disbursements with grant element below 25% when discounting with DDRs and adjusting for default risk**

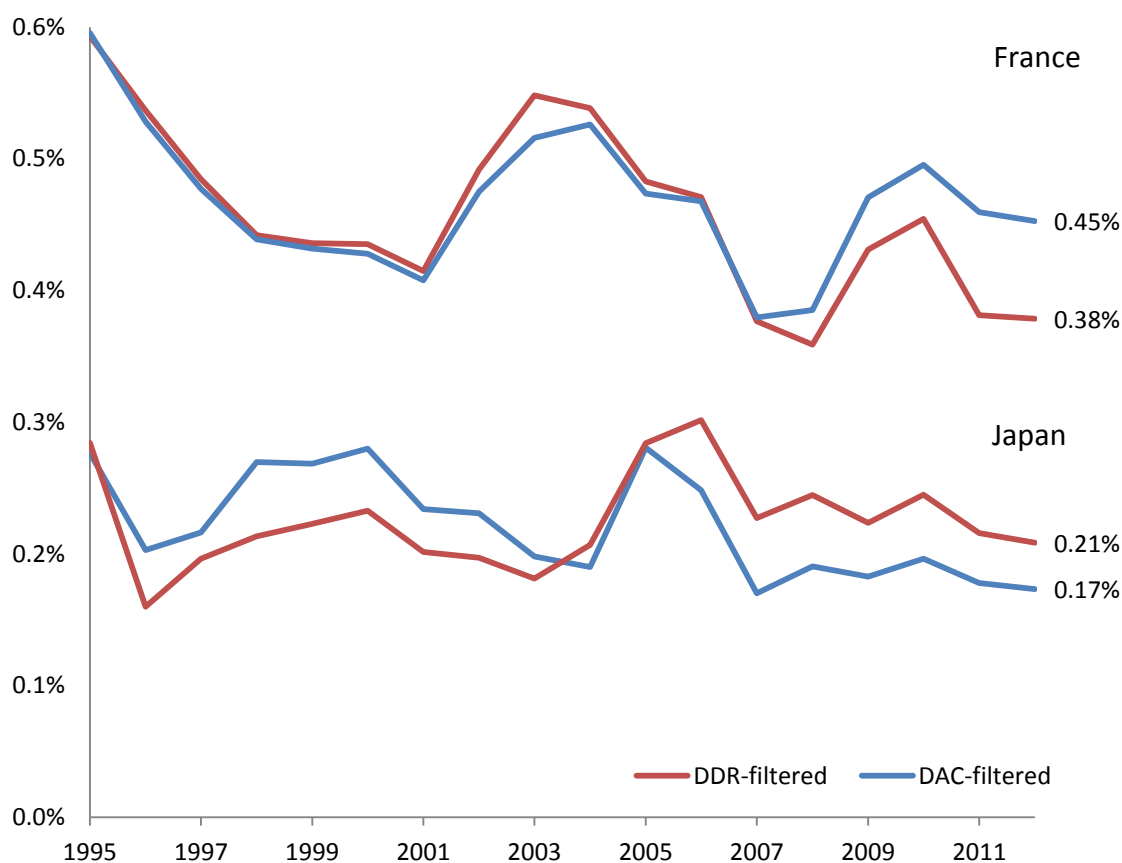


We turn next from the effects on disbursements to the effects on *Net* ODA. Altering the definition of an ODA loan affects Net ODA in two ways, with opposite sign. It changes total disbursements of new ODA loans, the focus just above. And it changes total repayments on old ODA loans. The sign of the net effect can vary over time and space. Figure 8 illustrates with the two countries most affected by the switch to DDRs, France and Japan. For France, there is little effect until the financial crisis. After, a gap opens up, as one would expect in light of Figure 6. The tighter aid definition similarly hurts Japan during its big-lending years in the 1990s; but now that grace periods on those old loans are expiring and the country's lending has shrunk, the DDR sword cuts the other way. With a higher hurdle for inclusion in ODA, fewer loan repayments are counted against Japan.

Donor ODA totals for 2012, computed 12 ways, are in Table 7. The first column has the standard values according to DAC: discounting at 10%, loans are filtered by whether they have at least a 25% grant element. In the second column, DDRs replace the 10%, as in Figure 6 and Figure 8. The third column uses DDRs and also factors in default risk via MPRs, as in Figure 7. The next triplet of columns weights instead of filters: still

counting disbursements and repayments as they happen, but multiplying them by the grant element. Recall that loans with a DAC grant element below 25% are missing from these sums, so the numbers are probably slightly low. The third triplet switches to just counting the grant element of loans as they are disbursed and never subtracting repayments; it comes with the same caveat. The final triplet does the same while also excluding debt relief on old non-ODA loans.

**Figure 8. Net ODA/GNI, conventional (DAC-filtered) and DDR-filtered, France and Japan, 1995–2012**



The methodological variation hardly affects the majority of bilaterals that do little aid lending. (Their grants to multilateral lenders are not affected either since those are indeed treated as grants.) The countries most affected are France, Germany, Portugal, and Japan.

One result surprised me. Moving from counting the full face value of loans at disbursement (first triplet) to just counting their grant equivalents (third triplet) increases most donors' totals. Again, the story is one of offsetting effects. On the one hand, interest is now subtracted from ODA, because it reduces grant equivalents. On the other, principal payments are *only subtracted after being discounted to the present*, often quite heavily.

For reasons mostly stated already, I favor the variant in the penultimate column of Table 7—counting just the grant equivalents of loans, discounting using market-like DDRs, not factoring in default risk for standard loans, excluding debt relief. The last choice needs elaboration. As noted earlier, the current DAC system does not count cancellation of ODA loans as ODA, since those loans counted in full at disbursement. However, a regime that valued loans on a grant equivalent basis logically should count relief even on ODA loans—in particular it should count the net present value of foregone debt service. And ideally, as argued before, it should amortize this cost over the period between when default begins and formal write-off occurs. However, available data do not permit me to simulate this kind of accounting. And the majority of debt relief may not actually be forgiveness of debt service due under the original loan terms, but on compounded fees and interest on arrears. Section 1 argued against including that debt relief. So the simulations that exclude debt relief probably best approximate the ideal (last triplet of Table 7).<sup>20</sup>

Table 8 shows the combined impact of switching to that preferred treatment of loans and adopting the exclusions advocated in section 1, of development awareness and first-year in-donor refugee costs.

An interesting upshot is that some sensible proposals for reforming DAC accounting could split erstwhile opposition. Japan, a major aid lender, would benefit today from a switch to DDRs, in the sense of increasing its official Net ODA. Using 2012 figures, its ODA/GNI would climb from 0.17% to 0.27%, for an increase of 57% relative to baseline. Nearly all donors would benefit from a switch to just counting grant elements. For once, the logics of policy and politics may go hand in hand.

It may be argued that revising ODA in ways that lift totals will backfire by making it too easy for donors to reach 0.7% of GNI.<sup>21</sup> I don't see this as a compelling argument against getting measurement right. Only the Netherlands and the UK appear to anchor their aid budgets to that number now. The rest of the DAC members are either well below it or comfortably above it. For them, peers are the most politically salient benchmark. And in comparing donors to each other, what matters most is that the same measuring stick is applied to all, and that it be straight—i.e., conceptually coherent.

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<sup>20</sup> The first version of this paper erroneously argued that debt relief on ODA loans should not count as ODA even if loans are valued on a grant equivalent basis, and extended that argument to traditionally OOF loans that are included in ODA on the same basis.

<sup>21</sup> E.g., Brzoska (2008, pp. 145–48), opposes substantial expansion of security-related coverage in ODA for this reason.



Table 7. Variants of Net ODA/GNI, 2012 (%)

Donor	Filtered			Weighted			Grant equivalent			Grant element, no debt relief		
	10%	DDR	DDRR	10%	DDR	DDRR	10%	DDR	DDRR	10%	DDR	DDRR
Australia	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.37	0.37	0.37
Austria	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.26	0.26	0.26
Belgium	0.47	0.47	0.47	0.48	0.48	0.48	0.48	0.48	0.48	0.43	0.43	0.43
Canada	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.31	0.31	0.31
Denmark	0.83	0.83	0.83	0.83	0.83	0.83	0.86	0.86	0.86	0.87	0.87	0.87
Finland	0.53	0.53	0.53	0.53	0.53	0.53	0.54	0.54	0.54	0.54	0.54	0.54
<b>France</b>	<b>0.45</b>	<b>0.38</b>	<b>0.39</b>	<b>0.41</b>	<b>0.38</b>	<b>0.39</b>	<b>0.44</b>	<b>0.39</b>	<b>0.41</b>	<b>0.38</b>	<b>0.34</b>	<b>0.36</b>
<b>Germany</b>	<b>0.37</b>	<b>0.37</b>	<b>0.37</b>	<b>0.37</b>	<b>0.37</b>	<b>0.37</b>	<b>0.39</b>	<b>0.37</b>	<b>0.38</b>	<b>0.37</b>	<b>0.36</b>	<b>0.36</b>
Greece	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Ireland	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47
Italy	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
<b>Japan</b>	<b>0.17</b>	<b>0.21</b>	<b>0.21</b>	<b>0.19</b>	<b>0.20</b>	<b>0.19</b>	<b>0.27</b>	<b>0.21</b>	<b>0.24</b>	<b>0.27</b>	<b>0.21</b>	<b>0.24</b>
Luxembourg	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.01	1.01	1.01
Netherlands	0.71	0.71	0.71	0.71	0.71	0.71	0.72	0.72	0.72	0.71	0.71	0.71
Norway	0.93	0.93	0.93	0.93	0.93	0.93	0.95	0.95	0.95	0.95	0.95	0.95
<b>Portugal</b>	<b>0.28</b>	<b>0.25</b>	<b>0.28</b>	<b>0.23</b>	<b>0.19</b>	<b>0.21</b>	<b>0.24</b>	<b>0.19</b>	<b>0.22</b>	<b>0.24</b>	<b>0.19</b>	<b>0.22</b>
South Korea	0.14	0.14	0.14	0.13	0.13	0.13	0.14	0.13	0.14	0.14	0.13	0.14
Spain	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.15	0.15	0.15
Sweden	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.98	0.98	0.98
Switzerland	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47
United Kingdom	0.56	0.56	0.56	0.56	0.56	0.56	0.57	0.57	0.57	0.58	0.58	0.58
United States	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19

DDR = Differentiated Discount Rate. DDRR = DDR + default risk adjustment.

**Table 8. Combined impact of proposed changes on ODA/GNI, 2012**

Donor	Current standard	Remove development awareness	Remove refugee costs	Remove interest received and debt relief	Switch to Diff. Rates (DDR)	Count just grant equivalents of loans	Change, first to last	
							Absolute	Relative
Australia	0.36%	0.36%	0.36%	0.37%	0.37%	0.37%	+0.01%	+1.9%
Austria	0.28%	0.28%	0.28%	0.26%	0.26%	0.26%	-0.02%	-8.3%
Belgium	0.47%	0.47%	0.47%	0.42%	0.42%	0.43%	-0.05%	-10.0%
Canada	0.32%	0.32%	0.32%	0.31%	0.31%	0.31%	-0.01%	-2.6%
Czech Republic	0.12%	0.12%	0.12%	0.12%	0.12%	0.12%	-0.01%	-4.4%
Denmark	0.83%	0.83%	0.83%	0.84%	0.84%	0.87%	+0.04%	+4.7%
Finland	0.53%	0.53%	0.53%	0.53%	0.53%	0.54%	+0.00%	+0.3%
France	0.45%	0.45%	0.43%	0.37%	0.30%	0.36%	-0.09%	-20.1%
Germany	0.37%	0.37%	0.37%	0.35%	0.35%	0.37%	-0.00%	-0.4%
Greece	0.13%	0.13%	0.13%	0.13%	0.13%	0.13%	0.00%	0.0%
Iceland	0.22%	0.22%	0.22%	0.22%	0.22%	0.22%	0.00%	0.0%
Ireland	0.47%	0.47%	0.47%	0.47%	0.47%	0.47%	-0.00%	-0.004%
Italy	0.14%	0.14%	0.14%	0.14%	0.14%	0.14%	+0.00%	+3.2%
Japan	0.17%	0.17%	0.17%	0.13%	0.20%	0.27%	+0.10%	+57.0%
Luxembourg	1.00%	1.00%	1.00%	1.01%	1.01%	1.01%	+0.01%	+0.7%
Netherlands	0.71%	0.71%	0.71%	0.70%	0.70%	0.71%	-0.00%	-0.3%
New Zealand	0.28%	0.28%	0.28%	0.28%	0.28%	0.28%	0.00%	0.0%
Norway	0.93%	0.93%	0.93%	0.93%	0.93%	0.95%	+0.02%	+1.9%
Poland	0.09%	0.09%	0.09%	0.09%	0.09%	0.09%	+0.00%	+3.5%
Portugal	0.28%	0.28%	0.28%	0.27%	0.24%	0.24%	-0.04%	-12.9%
Slovak Republic	0.09%	0.09%	0.09%	0.09%	0.09%	0.09%	0.00%	0.0%
Slovenia	0.13%	0.13%	0.13%	0.13%	0.13%	0.13%	0.00%	0.0%
South Korea	0.14%	0.14%	0.14%	0.14%	0.14%	0.14%	-0.00%	-3.2%
Spain	0.16%	0.16%	0.16%	0.15%	0.15%	0.15%	-0.00%	-1.9%
Sweden	0.97%	0.97%	0.97%	0.97%	0.97%	0.98%	+0.00%	+0.1%
Switzerland	0.47%	0.47%	0.47%	0.47%	0.47%	0.47%	+0.00%	+0.4%
United Kingdom	0.56%	0.56%	0.56%	0.57%	0.57%	0.58%	+0.02%	+2.7%
United States	0.19%	0.19%	0.19%	0.18%	0.18%	0.19%	+0.00%	+1.7%

Source: Author's "what if" spreadsheet tool.

## Recommendations

This review of the debate over ODA definition produces these 14 proposals:

- *Retain technical assistance.* However, problematic, there is no defensible, objective way to distinguish it from other aid forms, which also deliver foreign goods and services and vary in effectiveness.
- *Retain administrative costs,* which are as much a part of effective aid delivery as more direct costs.
- *Drop in-donor refugee costs.* The slippery slope from foreign and to domestic aid makes any decision on this category debatable. The most conceptually coherent place to draw a line is at the border of the donor nation.
- *Drop "development awareness" spending,* which is not aid.

- *End the opacity of bilateral Other Official Flows (OOF).* Data coverage should be as detailed and public as it is for bilateral ODA and multilateral OOF.
- *Include guarantees and payments for performance on the basis of donor provisioning transactions.* Do not estimate and include sums leveraged, since leverage can be claimed for many aid forms, yet is not counted.
- *Add private overseas charity that is creditable to donor tax incentives.* The Commitment to Development Index demonstrates the feasibility.
- *Include 100% of contributions to the U.N. peacekeeping budget rather than today's 6%.* Peacekeeping can promote development and takes place largely in developing countries. If 6% merits inclusion, 100% does.
- *Develop and promote an aggregate of spending on global public goods. Allow it to overlap with ODA.*
- *Compute grant elements using the OECD-consensus Differentiated Discount Rates (DDRs).* These reflect the interest rate environment much better than the fixed 10%.
- *Count only the grant equivalents of loans, at disbursement,* drawing on standard ideas in economics and accounting.
- *Include development loans currently classed as non-ODA on a grant equivalent basis if terms and transaction-level data are shared as with ODA loans.*
- *Exclude most debt relief and amortize counted debt relief over the period since the default began.* Debt relief on (compounded) interest and fees on arrears should be dropped to avoid rewarding donors for first maintaining that loans should be repaid, then maintaining that they should not be, even as no money moves.<sup>22</sup> Forgiveness on obligations under the original terms should be counted on a net present value basis, and amortized over the period between default and formal write-off to prevent unrealistic spikes in the data.
- *Adjust grant elements for default risk only for loans that eschew stiff penalties for default and contain automatic risk sharing mechanisms.* Such loans may hardly exist today. Special treatment by the DAC could spur their development and reduce the threat of debt crises in poor countries.

Implementing these proposals would lift Net ODA for some donors and lower it for others—but for most, not by much either way. That looks like a recipe for political viability. Beneath the surface, the rupture over the definition of concessionality would be healed. And incentives would shift, as reward to the donor—in having activities counted as ODA—better aligned with value to the recipient. The integrity of the ODA construct would be restored and burnished.

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<sup>22</sup> The first version of this paper argued for excluding all debt relief. See footnote 20.

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## Appendix. Formulas

### Identities

$$\sum_1^N r^i = r \frac{1-r^N}{1-r}$$

$$\begin{aligned} \sum_1^N ir^i &= \sum_{j=1}^N \sum_{i=j}^N r^i = \sum_{j=1}^N r^j \sum_{i=0}^{N-j} r^i = \sum_{j=1}^N r^j \frac{1-r^{N-j+1}}{1-r} = \frac{1}{1-r} \left( \sum_{j=1}^N r^j - \sum_{j=1}^N r^{N+1} \right) = \frac{1}{1-r} \left( r \frac{1-r^N}{1-r} - Nr^{N+1} \right) \\ &= \frac{r}{1-r} \left( \frac{1-r^N}{1-r} - Nr^N \right). \end{aligned}$$

*Average number of periods a unit of capital is lent on an annuity loan with interest-only grace period  $G$ , discount rate  $d$ , loan amount = 1, grace-period interest rate  $r_g$ , repayment-period rate  $r_r$ , and immediate, full, disbursement*

In general, an annuity loan with  $N$  periodic payments  $P$  and periodic interest rate  $r$  has a present value when discounting by  $r$  (that is, an opening balance) of

$$PV = \sum_{i=1}^N \frac{P}{(1+r)^i} = P \frac{1}{1+r} \frac{1 - \left(\frac{1}{1+r}\right)^N}{1 - \frac{1}{1+r}} = P \frac{1 - (1+r)^{-N}}{r}.$$

Solving for  $P$ ,

$$P = PV \frac{r}{1 - (1+r)^{-N}}.$$

After  $i$  payments, it is still an annuity with the same payment  $P$  but  $N_i \equiv N - i$  periods remaining. So the balance (present value) after  $i$  payments is

$$PV_i = P \frac{1 - (1+r)^{-N_i}}{r} = PV \frac{r}{1 - (1+r)^{-N}} \frac{1 - (1+r)^{-N_i}}{r} = PV \frac{1 - (1+r)^{-(N-i)}}{1 - (1+r)^{-N}}$$

So payment  $i$  includes a principal repayment of

$$\begin{aligned} PV_{i-1} - PV_i &= P - rPV_{i-1} = PV \frac{r}{1 - (1+r)^{-N}} - r \cdot PV \frac{1 - (1+r)^{-(N-(i-1))}}{1 - (1+r)^{-N}} \\ &= PV \frac{r}{1 - (1+r)^{-N}} [1 - (1 - (1+r)^{-(N-i+1)})] = PV \frac{r}{1 - (1+r)^{-N}} \frac{(1+r)^i}{(1+r)^{N+1}} \\ &= PV \frac{r}{1+r} \frac{(1+r)^i}{(1+r)^N - 1} \end{aligned}$$

Assuming full disbursal at time 0, the average number of periods a unit of capital is lent is

$$\begin{aligned}
\frac{1}{PV} \sum_1^N i(PV_{i-1} - PV_i) &= \frac{1}{PV} \sum_1^N i \cdot PV \frac{r}{1+r} \frac{(1+r)^i}{(1+r)^N - 1} = \frac{r}{1+r} \frac{1}{(1+r)^N - 1} \sum_1^N i(1+r)^i \\
&= \frac{r}{1+r} \frac{1}{(1+r)^N - 1} \frac{1+r}{1-(1+r)} \left( \frac{1-(1+r)^N}{1-(1+r)} - N(1+r)^N \right) \\
&= \frac{1}{(1+r)^N - 1} \left( N(1+r)^N + \frac{1-(1+r)^N}{r} \right) = \frac{1}{1-(1+r)^{-N}} \left( N + \frac{(1+r)^{-N} - 1}{r} \right) \\
&= \frac{N}{1-(1+r)^{-N}} - \frac{1}{r}.
\end{aligned}$$

## Grant element formulas

These are provided for completeness, but merely ratify the formulas in DAC (2013c, Annex 14) reporting directives.

*Present value of an annuity with interest-only grace period G, repayment period N, discount rate d, loan amount = 1, grace-period interest rate r<sub>g</sub>, repayment-period rate r<sub>r</sub>*

$$\begin{aligned}
PV &= \sum_1^G \frac{r_g}{(1+d)^i} + (1+d)^{-G} \sum_1^N \frac{P}{(1+d)^i} = \frac{r_g}{d} (1 - (1+d)^{-G}) + (1+d)^{-G} \frac{r_r}{1 - (1+r_r)^{-N}} \frac{1}{d} (1 - (1+d)^{-N}) \\
&= \frac{1}{d} \left[ r_g - r_g(1+d)^{-G} + r_r(1+d)^{-G} \frac{1 - (1+d)^{-N}}{1 - (1+r_r)^{-N}} \right] = \frac{1}{d} \left[ r_g - (1+d)^{-G} \left( r_g - r_r \frac{1 - (1+d)^{-N}}{1 - (1+r_r)^{-N}} \right) \right]
\end{aligned}$$

*Present value of an equal principal payments (EPP) loan with the same parameters*

$$\begin{aligned}
PV &= \sum_1^G \frac{r_g}{(1+d)^i} + (1+d)^{-G} \sum_1^N \frac{\frac{1}{N} + r_r \frac{N - (i-1)}{N}}{(1+d)^i} = \sum_1^G \frac{r_g}{(1+d)^i} + (1+d)^{-G} \sum_1^N \frac{r_r + \frac{1}{N} - r \frac{i-1}{N}}{(1+d)^i} \\
&= \frac{r_g}{d} (1 - (1+d)^{-G}) + (1+d)^{-G} \left( \left( r_r + \frac{1}{N} \right) \sum_1^N \frac{1}{(1+d)^i} - \frac{r_r}{N} \sum_1^N \frac{i-1}{(1+d)^i} \right) \\
&= \frac{1}{d} \left( r_g - (1+d)^{-G} \left( r_g - \left( r_r + \frac{1}{N} \right) (1 - (1+d)^{-N}) + \frac{r_r}{Nd} (1 - (1+Nd)(1+d)^{-N}) \right) \right) \\
&= \frac{1}{d} \left( r_g - (1+d)^{-G} \left( r_g + \frac{r_r}{Nd} - \left( r_r + \frac{1}{N} \right) + \left( \left( r_r + \frac{1}{N} \right) - \frac{r_r}{Nd} (1+Nd) \right) (1+d)^{-N} \right) \right) \\
&= \frac{1}{d} \left( r_g - (1+d)^{-G} \left( r_g - r_r + \frac{r_r}{Nd} - \frac{1}{N} + \left( \frac{1}{N} - \frac{r_r}{Nd} \right) (1+d)^{-N} \right) \right) \\
&= \frac{1}{d} \left( r_g - (1+d)^{-G} \left( r_g - r_r + \frac{r_r}{Nd} - \frac{1}{N} - \frac{1}{N} \left( \frac{r_r}{d} - 1 \right) (1+d)^{-N} \right) \right) \\
&= \frac{1}{d} \left( r_g - (1+d)^{-G} \left( r_g - r_r - \frac{1}{N} \left( 1 - \frac{r_r}{d} \right) (1 - (1+d)^{-N}) \right) \right)
\end{aligned}$$