

# Attempting global standards: national governments, international finance, and the IMF's data regime

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## ABSTRACT

This article explores the conditions under which international financial standards succeed. While rationalist accounts treat the successful creation of international standards as a relatively straightforward exercise, I suggest otherwise. The cooperation of private sector agents is a necessary condition for successful standards, and this cooperation hinges on certain elements of institutional design. Using an assessment of the IMF's Special Data Dissemination Standard (SDDS), I explore issues of institutional design and effectiveness. On the basis of surveys of mutual fund managers and government officials, I argue that because the private sector has yet to become involved fully in the promulgation of the SDDS, the SDDS effort has not yet achieved its goals.

## KEYWORDS

International finance; IMF; financial crises; institutions; global standards.

As international economic integration intensifies, there exists an increasing number of efforts to develop standards governing various realms of private sector activity, including international accounting, corporate governance, banking supervision and securities regulation. In the wake of recent financial crises in the developing world, a wide-ranging discussion of crisis prevention and resolution has ensued (e.g. Armijo, 2001; 2002; Council on Foreign Relations, 1999; Eichengreen, 1999; Goldstein, 1998). As part of this effort, the International Monetary Fund (IMF) has called for enhanced transparency – on the part of national authorities, the private sector and multilateral organizations (Woods, 2000); for greater financial sector regulation and supervision; and for the promulgation of international codes of good practice in a variety of issue-areas.<sup>2</sup> The

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Group of 22, an ad hoc group, including developed as well as emerging market economies,<sup>3</sup> and the G-7 have issued similar directives, reporting, for instance, that 'the availability of accurate and timely information is an essential ingredient for well-functioning financial markets and market economies'.<sup>4</sup>

Better information regarding sovereign and corporate borrowers may reduce international investors' uncertainty and render speculative manias – and crashes (Kindleberger, 1973) – less likely. When investors have high quality information regarding government economic policies, central bank activities, and the condition of the domestic financial sector, their investment decisions should more accurately reflect investment risk (Gilpin, 2000).<sup>5</sup> For instance, observers argue that Argentina's economic problems in late 2001 did not set off a broader financial crisis because investment firms had become more adept at gathering information about and distinguishing among developing nations (*Wall Street Journal*, 4 March 2002). Furthermore, when governments are required to provide information regarding their activities, they may be less likely to pursue questionable economic policies, such as maintaining overvalued currencies. One of the causes of recent financial crises, then, is a lack of transparency: had better information been available, investors would have withdrawn from certain developing nations much sooner – or at least greatly increased the interest rates they charged – and speculative bubbles never would have emerged (Eichengreen, 1999; IMF, 2000c).<sup>6</sup>

An implication of this argument is that financial crises can be averted by creating incentives for governments to provide certain kinds of information to investors. And, because investors prefer information that is comparable across nations and of high quality, the international community should undertake to create a common standard for the provision of data. The development of regulatory or informational standards is a public good, which operates via the decentralized enforcement of market mechanisms, and which helps prevent a market failure problem (Akerlof, 1970; Drezner, 2001; IMF, 1999a: 186; North and Weingast, 1989). This line of functional reasoning gave rise to recent IMF efforts to improve transparency in international financial markets; these efforts range from making public the results of Fund consultations with member countries to creating international standards for the dissemination of economic data (IMF, 1999b: 42–44).

For scholars of international political economy, the trend toward international standard setting raises important questions of institutional design and effectiveness. Analysts are beginning to investigate how these standards are developed and how they affect behaviour (Abbott and Snidal, 2000; Coleman and Porter, 1999; Finnemore, 1996; Goldstein *et al.*, 2000; Held, 2000; Higgott *et al.*, 2000; Vogel, 1999), but much more work remains to be done. Along these lines, this article examines the necessary

conditions for the success of international standards and norms. I address the role of the private sector in the governance of global finance and, more specifically, in the success of intergovernmental institutions' efforts to provide the collective good of financial stability.

This article argues that market actors' assent is essential to the success of international economic standards, and that assent requires certain types of standards, as well as an awareness of their existence. Decentralized enforcement via private market activity gives 'bite' to international regulatory efforts (e.g. Council on Foreign Relations, 1999). Market participants, however, have been slow to embrace the IMF-sponsored data dissemination regime. As a result, the SDDS lacks a credible enforcement mechanism, and – as rationalists might expect – governments have not rushed to accept the standard. Furthermore, the lessons regarding patterns of private–public sector involvement are instructive in a range of areas beyond financial regulation, such as intellectual property and trade, competition policy, labour rights and environmental standards. In all of these areas, regime effectiveness and consequences are dependent upon the involvement and influence of private economic agents.

## I. THE POLITICS OF GLOBAL STANDARDS

Recent efforts at global financial standards provide an opportunity to assess rationalist accounts of the development of international standards. In such accounts (e.g. Goldstein *et al.*, 2000; Koremenos *et al.*, 2001), governments develop standards as means of solving, *inter alia*, information problems and market failures. While these institutional solutions may have unintended consequences, their success generally is assumed. The SDDS, however, has yet to succeed, and the experience suggests some modifications to the state-centric rationalist view.

First, the private sector plays a role in the success of international standards. Only where markets provide governments with clear incentives to follow standards will governments adopt and comply with them. Markets, then, must be made aware of global standards, and come to employ them as part of their decision-making process. Moreover, the standards should provide a simple (often quantitative) summary of national performance, so that market participants can integrate them easily into risk-return calculations. Markets may desire better information, but they also prefer quantitative summaries, rather than qualitative complexity (Mosley, 2003).

In recent years, perhaps the most successful case of standard setting by an international institution was the EU's selection – and financial market participants' adoption – of the EMU convergence criteria. Until mid-1998, market participants used the Maastricht criteria, and particularly the government deficit criterion, as a central part of their asset allocation

processes. The '3 percent of GDP' criterion made financial markets' targets for government policy outcomes more explicit – violations were more obvious, and market actors responded to changes in government deficits in light of the Maastricht limit.

Market actors' use of these criteria represented a change, from the previous period, in the means of evaluation of macro-policy outcomes. Prior to the mid-1990s, market participants took a 'less is better' view of government budget deficits; they did not, however, expect governments to meet a specific deficit target, or to do so by a particular date (Mosley, 2000; 2003). The Maastricht recommendations provided a common language for market actors. In early 1997, for instance, government bond market participants watched the Italian government's actions very closely; every move was analysed according to 'will this get them below three percent or not?' The widespread use of the criteria strengthened financial market responses to government policy outcomes.

A central reason for market participants' use of the Maastricht criteria was that governments used the criteria. Bond market participants attempted to predict who would join the first round of EMU, so their attention to the criteria was not surprising. Additionally, investors interpreted adherence to the Maastricht criteria as a signal of governments' resolve: if a government were strongly committed to the single currency, it would find a way to meet the deficit criterion. If a government were unable to meet the 3 percent criterion, there was reason to doubt its future commitment to EMU. The EU-politics dimension, however, was not the only facet of the Maastricht criteria's use. The criteria also gained independent status, with market participants even evaluating non-EU states' debt and deficits according to the Maastricht criteria (Mosley, 2003).

The Maastricht criteria serve to illustrate the adoption by private actors of publicly set standards. By establishing the criteria by which they later were evaluated, EU governments were able to influence the operation of international financial markets. Although EU member governments do not appear to have been aware *ex ante* of the impact of the criteria on financial market behaviour, they realized *ex post* the importance of the criteria to financial market participants. Ultimately, the criteria enhanced governments' incentives to adopt certain behaviours, just as the IMF intends that investors' use of the SDDS will enhance governments' incentives to provide economic information.

Second, as is evident from the Maastricht experience, markets play a role as partner to, rather than replacement for, national governments. Some literature on financial regulation suggests that authority increasingly is vested in the private sector, rather than in nation-states. States are less able to exercise authority over international markets and, therefore, less able to regulate those markets (Helleiner, 1994; Krasner, 1999; Porter,

1993). According to this perspective, the technical nature of many international financial issues serves to exacerbate governments' lack of control and the resulting problem of democratic accountability. Because many financial issues are complex in nature, they are dealt with by a small, close-knit community of experts, rather than by a democratically accountable body (Porter, 1999; Underhill, 1997). At the heart of recent proposals to reform the international financial architecture, however, is the assumption that governments are able to 'intervene to reconstruct investment criteria among the orthodox investors themselves' (Harmes, 1998: 116). Although globalization might render national governments unable to fully control private capital markets, governments do retain some capacity to affect private market actors. Such an assumption clearly is plausible (e.g. Helleiner, 1995; Mosley, 2003), but contrary to those who argue that authority has shifted largely from the public to the private sphere (Cerny, 1999; Strange, 1996).

This article posits, then, that the effectiveness of global standards hinges both on their adoption and implementation by national governments *and* on their use by market participants. Only where a critical mass of governments signs on to a particular set of standards do those standards become an effective means of improving global financial stability. In turn, governments' willingness to subscribe to and comply with these regimes depends on the standards' perceived costs and benefits. Benefits of standards flow directly from private markets, as compliant governments receive better treatment than non-compliant ones. Hence, widespread government adoption of the standard requires that market actors respond to the standard, and that governments care about these market reactions. Hence, institutional effectiveness (e.g. Mitchell, 1994) is closely tied to the nature of the standard, and to the subsequent behaviour of private market actors (Germain, 2001).

Furthermore, any global standard or institution, even one of a technical nature, also has distributional implications. There are multiple solutions to functional problems of international regulation, and it is not always immediately obvious which solution is preferable (see Germain, 2001; Mosley, 1998; Oatley and Nabors, 1998). Put differently, a set of global standards for the provision of data moves the international community closer to the Pareto frontier (greater financial stability with greater transparency). But such a movement has distributional effects, at least in terms of short-term transition costs. Transparency could even have deleterious consequences, and these might affect some states more than others.

The extent to which global data standards, as opposed to other sorts of regulatory efforts, have distributional implications is a matter for debate. Some observers suggest that the data standards will reflect the 'dominant ideas' of neoliberalism, as promoted by the IMF and developed

nations (Harmes, 1998). Similarly, Drezner (2001) argues that 'states lacking expertise in regulatory issues will follow the lead of a great power concert, an international organization, or a global epistemic community' (p. 18), so that developing nations are likely to accept standards based on developed-country practice. This minimizes the costs of policy change for developed nations, although developing nations may face adjustment costs. Data standards also could be viewed as an example of the increased role of private investors in the development and dispersal of policy advice (Naim, 1995: 123). As a result, data standards can be seen as most appropriate for investors (and investors in developed nations) rather than for the governments of developing nations. Data standards, however, are likely to be less pronounced in their distributional implications than other sorts of financial reforms, such as changes in IMF practices or the development of sovereign bankruptcy procedures.<sup>7</sup> Moreover, as new mechanisms are developed to govern the international financial system, the voice of emerging market economies has increased slightly. Germain (2001), for instance, notes that the G-20 and the Financial Stability Forum include emerging market nations (albeit only a few), as well as developed nation officials and private market actors.

## II. THE SPECIAL DATA DISSEMINATION STANDARD

I address the theoretical issues identified in Section I by examining financial market participants' use of the IMF's Special Data Dissemination Standard (SDDS), as well as by making an initial evaluation of the costs to governments of complying with the SDDS. I argue that financial market participants' lack of attention to the standard thus far reduces governments' incentives to join or comply with the SDDS. This present lack of benefits makes a dramatic expansion of the SDDS's membership unlikely in the near future. I also find that many SDDS subscribers did face some short-term transition costs in adopting the standard, although complete overhauls of national statistical systems were rare.

The SDDS case represents international standard setting via a traditional intergovernmental organization, albeit with consultation from the private sector. The standard's success, however, is contingent on its subsequent use by the private sector (Jayasuriya, 1999; Pauly, 1999). Private agents supply governments with the incentives to adopt the standard. The IMF's Interim Committee acknowledged this inherent private/public balance at its April 1999 meeting: 'while the private sector has a major role to play in encouraging the adoption of standards, the official sector could help strengthen incentives to adopt standards and help focus efforts to improve transparency' (p. 42). At the same time, standard setting is a process during which tensions between developed

and developing nations, or between the US and other nations, are likely to manifest themselves. Designing and implementing the SDDS requires deciding which areas of data and means of collecting data are most valid, as well as deciding how to address the transition costs generated by such decisions.

In the mid- and late 1990s, as part of their efforts to prevent financial crises via increasing transparency, and motivated by the Mexican and Thai crises, the IMF developed a series of standards governing the provision of national data (G-22, 1998). To this end, in April 1995, the IMF's 24-member Interim Committee requested a set of standards to guide members in providing economic and financial statistics; the G-7 made a similar request at its June 1995 summit. In late 1995 and early 1996, relying on consultations with national statistical agencies and various users of economic and financial data, and under the aegis of the Interim Committee, IMF staff developed the SDDS.<sup>8</sup> The SDDS was launched in April 1996 and first became operational in September 1998. Its initial aim was to 'enhance the availability of timely and comprehensive statistics' and to 'contribute to the improved functioning of financial markets' (IMF, 1998c).

The SDDS is designed for nations that have or aim to have access to global capital markets. Subscription to the SDDS is voluntary, although compliance with the standards by subscribers is 'mandatory'. Subscribing governments commit to observing particular 'best practices' for the provision of 17 types of economic and financial data. Each data category includes data coverage, periodicity/frequency, and timelines. The Appendix lists these SDDS requirements. Subscribers also provide information regarding the statistical techniques used to generate the data. For some nations, the data provided are available electronically via the IMF's Dissemination Standards Bulletin Board; for others, citations to printed national sources are provided.

When the SDDS was launched, the IMF anticipated that many nations would need to make substantial changes to national practices in order to comply with the SDDS. The programme, therefore, included a transition period, lasting through 1998.<sup>9</sup> During this period, a nation could subscribe even if its data dissemination practices fell short of the SDDS. In the early stages of the SDDS' development, the Interim Committee also decided to create a second standard, the GDDS (General Data Dissemination Standard), established formally in December 1997. For nations that are not yet at the stage of seeking to access international capital markets, the GDDS promotes the development of national statistical frameworks (IMF, 2000c). The GDDS moved to its operational phase in 2000, and, as of October 2002, had 41 subscribers.

According to the IMF, a government's participation in the SDDS is intended to send a signal to investors regarding the availability and

quality of national information. Through a process of 'competitive transparency', the SDDS should motivate governments to offer higher-quality, higher-volume information. Put differently, because at least some of the indicators included in the SDDS are accurate predictors of vulnerability to financial crisis, investors should reward governments that supply such information (Goldstein, 1998). Along these lines, the IMF predicted a large increase in SDDS subscription soon after its launch, citing the 'embarrassment factor' that would motivate non-subscribers (*Financial Times*, 20 September 1996). This increase, in fact, has not occurred.

The top half of Table 1 lists the 50 subscribers (as of October 2002) to the SDDS. These nations are sorted by country category, using the World Bank/International Finance Corporation's classification of countries as developed, emerging, or frontier market.<sup>10</sup> Of current subscribers, 19 are developed economies, 20 are emerging market nations, 7 are frontier market economies, and the remaining 4 are not classified by the IFC. The lower half of Table 1 lists nations that might, by virtue of accessing international capital markets, be expected to subscribe to the SDDS, but that have not yet subscribed. This group includes one developed economy, as well as 26 emerging market and frontier nations. The number of SDDS subscribers has increased by only 2 – Brazil and Tunisia – since the standard became operational in September 1998. A few other nations are reported to be discussing possible accession to the SDDS with IMF staff.

At their June 1999 meeting, the G-7 Finance Ministers noted the lack of SDDS expansion, stating that wider membership and compliance with the SDDS was a high priority. Likewise, in its March 2000 review of international data standards, the IMF reported Directors' concerns that the number of subscribers had remained constant. Many Directors proposed that, in order to encourage an expansion of subscription, a period with no further changes in the SDDS requirements was desirable. Other Directors suggested that the IMF might consider allowing more flexibility in SDDS implementation, particularly for new subscribers (IMF Public Information Notice 00/31, 11 April 2000). While these suggestions might help to expand SDDS membership, the lack of expansion of the SDDS also raises a deeper question of the utility of the SDDS as an international standard. That is, governments' hesitancy to subscribe to the SDDS may well reflect their assessments that the SDDS does not provide sufficient benefits.

One easy explanation for the lack of membership growth is that only those countries most heavily engaged in international capital markets have joined. Along these lines, emerging market subscribers to the SDDS have, on average, a higher level of equity market capitalization (37.6 percent of GDP in subscribers, compared to 28.2 percent of GDP in non-subscribers). But, at the same time, emerging market subscribers are less

Table 1 SDDS subscribers and IFC countries, October 2002

	<i>Developed</i>	<i>Emerging</i>	<i>Frontier</i>	<i>Other</i>
SDDS subscribers	Australia	Argentina	Croatia	El Salvador
	Austria	Brazil	Ecuador	Hong Kong
	Belgium	Chile	Estonia	Iceland
	Canada	Colombia	Latvia	Singapore
	Denmark	Costa Rica	Lithuania	
	Finland	Czech Republic	Slovenia	
	France	Hungary	Tunisia	
	Germany	India		
	Ireland	Indonesia		
	Italy	Israel		
	Japan	Korea		
	Netherlands	Malaysia		
	Norway	Mexico		
	Portugal	Peru		
	Spain	Philippines		
	Sweden	Poland		
	Switzerland	Slovakia		
	United Kingdom	South Africa		
	United States	Thailand		
		Turkey		
SDDS non-subscribers (IFC nations not subscribing to SDDS)	New Zealand	China	Bangladesh*	
		Egypt	Botswana	
		Greece	Bulgaria*	
		Jordan*	Cote d'Ivoire*	
		Morocco	Ghana	
		Nigeria	Jamaica	
		Pakistan	Kenya	
		Russia	Mauritius*	
		Saudi Arabia	Romania*	
		Sri Lanka*	Trinidad and	
		Taiwan	Tobago	
		Venezuela*	Ukraine	
		Zimbabwe		

\*Indicates a subscriber to the GDDS. The GDDS presently has forty-one subscribers; the others are Albania, Antigua and Barbuda, Armenia, Azerbaijan, Barbados, Benin, Bolivia, Burkina Faso, Cambodia, Cameroon, Dominica, Fiji, the Gambia, Grenada, Guinea-Bissau, Kazakhstan, Kuwait, Kyrgyz Republic, Kuwait, Malta, Mongolia, Nepal, Nigeria, Panama, Paraguay, Senegal, St. Kitts and Nevis, St. Lucia, St. Vincent and Grenadines, Tanzania, Togo, Uganda and Yemen.

active than non-subscribers in government borrowing and in foreign direct investment. Subscribers' average level of central government debt is 40.3 percent of GDP, compared with 93.6 percent of GDP for non-subscribers. Similarly, the average level of FDI is 2.24 percent of GDP for subscribers, but 2.97 percent for non-subscribers. Finally, non-subscribers

also attract more total financing from abroad.<sup>11</sup> It is not, then, that some governments avoid the SDDS because they do not access global capital markets. This reality leads us to question the incentives governments have to subscribe to the standard: without appropriate incentives, subscription is less likely.

### III. FINANCIAL MARKET BEHAVIOR AND INCENTIVES TO JOIN THE SDDS

In order to understand why governments choose to join or not to join the SDDS, as well as other international efforts to alter the functioning of global markets, we must consider the anticipated costs and benefits to governments of joining. In this section, I focus on one benefit – better access to and treatment by global capital markets. In Section IV, I discuss briefly other costs and benefits. If, as its proponents claim, the SDDS improves the credibility of subscribers *vis-à-vis* international financial markets, subscribers should – all else equal – have easier and cheaper access to global finance (Council on Foreign Relations, 1999; IMF, 2000b). As Eichengreen (1999) notes, a major rationale for the SDDS is that:

subscription status provides an objective indicator of countries' creditworthiness, providing an alternative to the judgments of commercial credit agencies. Investors might become reluctant to lend to countries that fail to subscribe to the standard or might use interest rate spreads to ration credit to them.

(p. 27)

Governments' realization of these market-based benefits, however, depends on private market participants embracing the SDDS as a decision-making criterion; at the very least, they must be aware of which nations provide better quality and higher-frequency information. A more explicit manifestation of this benefit would be awareness on the part of market participants of the identity of subscribers and non-subscribers. Put differently, the SDDS relies on decentralized enforcement, via market-based benefits (Kahler, 2000; Simmons, 2000); this makes investors' use of the standard essential to its success. But recent work on the behavior of financial market participants – and specifically, on their lack of sophistication or consistent behaviour (Willett, 2000) – offers reason for scepticism regarding market participants' potential embrace of the SDDS.

The results presented in this section draw on a survey of mutual fund managers, conducted in three rounds, during May, July and November 2000. The survey evidence allows us to assess investors' use and knowledge of the SDDS. Subjects for the May survey are managers of the largest internationally oriented US mutual funds, ranked according to

assets under management.<sup>12</sup> After eliminating duplicated managers, the sample consists of 178 individuals. I draw the sample for the second round of surveys from a larger database of mutual funds, Morningstar's Principia database, selecting those funds with substantial activity outside the US.<sup>13</sup> This database, of 486 subjects, includes mutual funds of all sizes, making this set broader than that used for the May 2000 surveys. Finally, survey subjects for the third round are managers of UK funds; the sample (with 117 subjects) is limited to unit trusts and investment trusts with at least 5 percent of assets invested in emerging market regions.<sup>14</sup>

Each subject received a four-page questionnaire, along with a brief description of the purposes for which the data would be used. Part I of the survey requested basic descriptive information, such as the number of and size of funds managed, the type of assets held, and the geographic allocation of capital. Part III queried the respondents' views on the importance of various political and economic factors to asset allocation. Part II enquired about fund managers' views on information, their awareness of the SDDS, and their use of the SDDS.

A total of 61 surveys were returned, fifteen in May, 32 in July and 14 in November; after eliminating those surveys that did not reach the intended recipients (due to outdated information),<sup>15</sup> the resulting response rate was approximately 8.6 percent. This low response rate is not surprising, given the time pressures faced by fund managers. But to what extent is the low response rate problematic for interpreting survey results? Public opinion literature suggests that survey non-respondents *can* differ systematically from respondents (Groves and Couper, 1998). For instance, Brehm (1993) demonstrates that non-respondents to political surveys are less interested in public affairs than respondents, therefore biasing survey results in a particular direction. Non-response, though, does not always introduce systematic bias into survey results, and public opinion scholars have yet to identify the particular conditions under which non-response error is a serious problem (Keeter *et al.*, 2000). The key issue, then, is the amount and degree of difference between respondents and non-respondents. By comparing the characteristics of the respondents to those of the entire sample, we can increase our confidence that the sample is broadly representative of mutual fund managers with an international focus, or, more modestly, that the bias generated by non-response is acceptable.

The number of funds managed by survey respondents ranged from 1 to 86, with the median number managed as 4. Respondents were drawn from a range of mutual funds, with an average of \$17.5 billion in assets under management in the May respondents (reflecting the selection of participants based on fund size); \$4.7 billion under management for the July respondents; and \$13.5 billion for the November respondents. The

mean assets under management for the entire sample were \$10 billion; the median was considerably smaller, at \$1.4 billion.

To compare the respondents with the overall pool of managers, the mean fund size for the July sample was \$332 million. The average fund size for respondents – calculated by dividing total assets under management by the number of funds managed – was \$958 million.<sup>16</sup> Median fund size displays a similar difference – \$34 million in the July sample and \$307 million among survey respondents. Likewise, for the November sample, the average fund size was \$270 million, while the mean fund size among respondents was \$667 million. The responses reported below, then, are biased toward larger mutual funds. This may reflect the fact that the managers of smaller funds are more concerned with improving their reputations and performance – in order to attract greater fund inflows – and therefore are less likely to devote time to responding to surveys. The bias toward larger funds should not negatively affect our conclusions about market participants' behaviour. Respondents are from larger funds, which likely are more important to financial market activity. If we assume that larger funds act as market leaders and are more able to induce volatility in local financial markets, it is these managers' views in which we are most interested.

With what sorts of financial sector instruments are those surveyed involved? Table 2 details the allocation of fund managers' holdings by asset category; it provides unweighted averages for the US and UK survey respondents, as well as for the entire sample. The data suggest, not surprisingly, that equities comprise the majority of assets. Government bonds comprised 8 percent of assets, on average, and were more important among fund managers surveyed in the US in May and in the UK. The geographic distribution of assets is very similar across the survey samples. Of fund managers' assets, 83.3 percent are invested in OECD, or advanced capitalist, nations, while the remaining 16.7 percent are invested in emerging market economies.<sup>17</sup> Thirty-seven percent of investment is in the euro-currency area, 26 percent in North America and 13 percent in Japan. US fund managers tend to invest heavily in North America (averaging 29 percent of assets), while investing approximately 34 percent of assets in

*Table 2* Fund manager allocation, by asset type

	<i>US respondents (May and July)</i>	<i>UK respondents (November)</i>	<i>Total respondents</i>
Equities	81.5	85.1	82.3
Government bonds	7.2	10.4	8.0
Corporate bonds	6.4	1.6	5.3
Cash and other	4.9	2.9	4.4

EU nations and 15 percent of assets in Japan. UK fund managers, on the other hand, invest more heavily in EU nations (51% of assets), but less heavily in Japan (6 percent) and North America (16 percent). Other investment locations include Latin America (five percent), emerging Europe (two percent) and the Middle East and Africa (two percent). Again, comparing the allocation of US respondents with that of the total July pool of subjects, the allocations are generally similar, albeit weighted less heavily toward emerging markets.<sup>18</sup>

In Part III of the survey, respondents were asked to report their concerns regarding the availability and quality of information.<sup>19</sup> The May survey requested this information only for emerging markets, while the July and November surveys asked respondents to provide this information for both developed nations and emerging markets. In all cases, respondents were asked to rate their concerns on a five-point scale, ranging from 'extremely concerned' (=1) to 'not at all concerned' (=5).

The overall results for this portion of the survey are reported in Table 3. As many policymakers suggest, information quality is a key issue for investors, particularly in emerging markets. Respondents to the May survey indicated a relatively high concern with the availability of information in emerging markets, with a mean score (2.38) indicating 'very' to 'somewhat' concerned about information availability. The July and November surveys provide similar results for emerging market nations (also see Mosley, 2003). In addition, the July and November surveys indicate that investors' informational concerns are decidedly more pronounced in emerging markets. The average level of concern for information availability in developed nations is 3.2, where 3 indicates 'somewhat concerned' and 4 indicates 'slightly concerned'. The difference between the average level of concern in the developed and emerging market groups is significant at a 95 percent level of confidence.

Fund managers also display substantial worries about information quality in emerging markets. The average level of concern (2.18) indicates

Table 3 Concerns about information

	<i>Emerging markets (May, July and November surveys)</i>	<i>Developed nations (July and November surveys)</i>
Availability of information	2.40 (st dev=1.06)	3.20 (st dev=1.14)
Quality of information	2.18 (st dev=0.97)	2.88 (st dev=1.10)

1=extremely concerned; 5=not at all concerned.

a sentiment approaching ‘very concerned’. And again, there is a difference between the level of concern in developed and emerging markets – for developed nations, the respective average is 2.88, closer to ‘somewhat concerned’, and different at a 95 percent level of confidence. These results indicate that, just as the IMF and a variety of policymakers have suggested, the availability and quality of information are important concerns to institutional investors, especially in emerging markets.

The last section of the survey evaluated the extent to which fund managers use the SDDS to ameliorate their information concerns. To what extent does the SDDS provide a functional solution to the information problem? Respondents were asked to indicate their awareness of the SDDS.<sup>20</sup> Responses, which ranged from ‘not at all aware’ to ‘fully aware’, are indicated in Figure 1. Fifty-five percent of total respondents characterized themselves as ‘not at all aware’ of the existence of the SDDS, and another 29 percent labeled themselves as ‘vaguely aware.’ Only 16 percent of those surveyed claimed to be ‘somewhat’ or ‘fully’ aware of the existence of the SDDS. The average level of awareness for the total sample was 3.38, placing the mean respondent between ‘vaguely aware’ and ‘not at all aware’ of the SDDS.

There is a slight positive correlation (0.26), however, between SDDS awareness and concern about data availability in emerging markets, implying that fund managers with informational concerns might be more apt to look to IMF-sponsored standards. Likewise, there also is a small positive correlation (0.24) between the percentage of assets invested in bonds and awareness. At the same time, though, there is only a quite

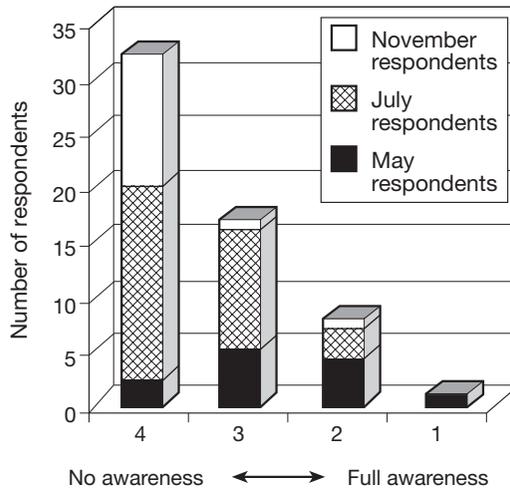


Figure 1 Awareness of the SDDS

modest bivariate association (0.13) between SDDS awareness and the level of investment in emerging markets. Similarly, the correlation between use of the SDDS (defined here dichotomously, between no use and any sort of use) and the percentage of assets invested in emerging markets is 0.03. More generally, then, the survey data offer a clear explanation for why many governments have been reluctant to subscribe to the SDDS – if most financial market participants are not aware that the SDDS exists, then the benefits of joining are quite modest (also see Krueger, 1996).<sup>21</sup>

Additionally, the survey asked fund managers to describe the ways in which they use the SDDS, as reported in Table 4. The behaviour of most fund managers is not directly affected by the SDDS; over 60 percent of fund managers report that the SDDS plays no role in their decisions. Only one manager reported using the SDDS directly for information, and two reported using the SDDS to verify data from other sources. Although it may be the case that fund managers are indirectly affected by the SDDS – that is, they might view information from subscribing nations as higher quality, without realizing that these nations are SDDS subscribers – there appears to be little direct reliance on the SDDS.

The surveys also asked an open-ended question regarding fund managers' sources of information. All but eight respondents listed at least one source, and many offered several, with a total of 148 sources

*Table 4* Use of the Special Data Dissemination Standard

<i>Use</i>	<i>Number of total respondents</i>	<i>Percentage of respondents</i>
I use the IMF's SDDS database as a key source of country-specific information.	1	1.6
I use the IMF's SDDS database as a means of checking the accuracy of country-specific information from other sources.	2	3.3
I do not use the IMF's SDDS database directly, but I am aware of which nations are subscribers to the SDDS, and I assume that data from SDDS subscriber-countries is of a higher quality than data from non-subscribers.	6	9.8
All else equal, I would attach smaller risk premia to nations that are subscribers to the SDDS.	4	6.6
The SDDS plays no role in my decisions.	39	63.9
Not applicable/no response.	9	14.8

provided. The most popular sources were brokerage houses, such as Merrill Lynch, Chase and Morgan Stanley (n=28); the financial press, including the *Financial Times* and *The Economist* (n=20); news wire services like Bloomberg and Reuters (n=19); national governments and central banks (n=16); and research by third parties (n=14). The IMF and the World Bank together were mentioned seven times, so that at least a few fund managers look to the international financial institutions for information. By and large, however, fund managers look to other private agents for information.

In sum, these results offer reason for scepticism regarding the SDDS's effectiveness. Because private economic agents have little awareness of the standard, the SDDS does not offer concrete capital market-based benefits to governments. The Standard does not provide a simple assessment (beyond membership) by country, nor has it been widely marketed to investors. As a result, governments have only meager incentives to join (also see Financial Stability Forum, 2000; 2001).<sup>22</sup> The relative benefits of the SDDS may be quite small compared to the costs to governments of acceding to and complying with the SDDS.

This conclusion could be strengthened with a larger survey sample and a higher rate of response. Future research might also ask market participants to rate certain countries – SDDS members and non-members alike – according to information quality and availability, without revealing their SDDS status. Such a technique would allow us to get at the indirect effects of the SDDS on fund managers' actions. In addition, as time goes on, the SDDS may grow in salience; a recent IMF report, for instance, notes that activity on the SDDS website has accelerated markedly during the last two years.<sup>23</sup> To this end, the IMF as well as other groups (such as the FSF)<sup>24</sup> recently have expanded their efforts to market data standards to financial market participants (Interview, IMF staff member, November 2000). Moreover, a general study of data dissemination found recently that nations with greater trade and financial openness are more likely to provide timely and frequent data to the IMF (Allum and Agça, 2001). Perhaps, then, as the SDDS gains in prominence, so will the incentives to accede to and comply with it. Challenges stemming from institutional design, though, are likely to remain.

Another avenue is to investigate the impact of the SDDS on other financial market actors, as this could provide indirect incentives for governments to adopt the standard. For instance, if fund managers rely on brokerage houses or credit ratings agencies as information sources (Council on Foreign Relations, 1999; IMF, 1998; 1999a), then an indirect channel of SDDS impact may exist. To make an initial assessment of this last possibility, during March 2001, I conducted surveys of credit ratings agency staff and investment analysts. Preliminary evidence suggests that awareness of the SDDS is not much higher among investment

analysts/bankers than among fund managers, but that awareness is considerably higher among credit ratings agencies. These surveys include staff at major credit ratings agencies (e.g. Standard and Poor's, Moody's, Fitch IBCA), identified through a search of company web sites; and investment analysts, selected from the 2001 *Financial Yellow Book's* listing of US brokerage firms and investment banks. They received surveys similar to those described above; 10 of 49 ratings agency staff (20.4 percent) and 22 of 192 investment analysts (11.5 percent) responded.

Both sets of respondents are more active in emerging markets than the fund managers described above, with approximately 73 percent of ratings agency and 65 percent of investment analysts' work in emerging markets. Like the fund managers, their informational concerns are more pronounced in emerging markets. Investment analysts average a score of 1.36 on information availability in emerging markets, while credit ratings staff average a score of 1.4; these compare with a fund manager mean of 2.4.<sup>25</sup> The credit ratings and investment analyst samples display similar results for information quality.

Perhaps not surprisingly, then, these groups also are more aware of the existence of the SDDS. Their level of SDDS awareness correlates with levels of activity in emerging markets.<sup>26</sup> For investment analysts, their awareness is only marginally higher than that of fund managers: they average an awareness score of 3.0 (again, where 1 is greatest awareness, 4 is least), compared with a fund managers' average of 3.38. Ten of 22 investment analysts report that the SDDS plays no role in their decisions. But, for credit ratings agencies, awareness is 1.6, substantially higher than that of the fund managers or the investment analysts (also see FSF, 2000). Only two of ten respondents report that the SDDS plays no role in their assessments.

It would be premature to conclude, from the relatively scant credit ratings agency evidence, that the SDDS has succeeded among financial market participants. Credit ratings agencies often have been criticized for their failure to anticipate financial crises (Aronovich, 1999; Institute of International Finance, 1999: 29–30) and they warn that their ratings are intended to guide only long-term, rather than short- and medium-term, asset allocation (IMF, 1999a: 192). Credit ratings' agencies use of the SDDS therefore may be a necessary, but not a sufficient, condition for the standard's success. This evidence, though, does serve to remind us of the diversity among financial market participants, and of the potential indirect impact of the data standards on institutional investors.

#### IV. DIFFERENT INCENTIVES? THE SDDS' OTHER BENEFITS AND COSTS

Does the lack of financial market-based incentives for SDDS membership automatically doom the standard? Do other sorts of incentives exist for governments to adopt the SDDS, as they sometimes do for other standards? For instance, policymakers might find that following SDDS recommendations provides them with better data, which are useful in making domestic economic policy. To make a preliminary assessment of the perceived costs and benefits to governments of joining the SDDS, in June 2000, I surveyed the national agencies responsible for implementation of the SDDS in each of the 47 then-current subscribers.<sup>27</sup> The survey inquired about the extent to which the SDDS required changes in national statistical practices, as well as about the benefits that result from joining the SDDS. Fourteen governments responded to the questionnaire; I use evidence from their responses to illustrate some of the issues facing governments.<sup>28</sup>

##### Potential benefits of SDDS membership

Some emerging market governments noted that subscription to the SDDS had improved their access to international capital markets. For instance, one emerging market nation noted that – although the SDDS required major changes to national statistical practices – subscription had a ‘perceptual impact’ on international investors. Other emerging market nations noted that they could not, at this stage, evaluate the extent to which SDDS membership had produced tangible benefits. Preliminary studies of the association between the adoption of international standards and borrowing costs suggest that SDDS subscribers, in fact, do pay lower rates of interest than other borrowers (FSF, 2001: 5). Representatives of developed nations, which already had good access to international capital markets, did not cite improved market treatment as a benefit of SDDS membership. Rather, they highlighted the role of the SDDS either in helping them to improve coordination among government agencies, or as a means of setting an example for less developed nations.

A second incentive to subscribe to the SDDS is the fact that subscription could be a requirement for access to other IMF programmes, particularly to its new Contingent Credit Line (CCL). The CCL, established in 1999, is intended as a precautionary line of defence against financial contagion; it serves members with strong economic policies already in place, but facing global economic circumstances beyond their control. Nations apply for a CCL preemptively, so that the IMF would make funds available – between 300 and 500 percent of a member’s quota, available for up to one year – in the event of a balance of payments crisis.

The criteria for accessing CCLs include not only a strong set of macro-economic policies, but also 'adhering to relevant internationally accepted standards'. The IMF defines this requirement in precise terms, noting that applicants should be subscribers to the SDDS and should be making satisfactory progress toward meeting the SDDS's requirements (IMF, 1999C: 51). The IMF also suggests that adherence to other international standards, such as the Basel Core Principles of Banking Supervision and the IMF's Code of Transparency for fiscal policy, be considered when allocating CCL funds.<sup>29</sup> In addition, the Basel Committee on Banking Supervision has proposed using the SDDS in its assignment of risk weightings. A recent discussion paper by the Basel Committee, designed to revise the 1988 Capital Adequacy Accord, proposed that subscription to the SDDS be required for a sovereign borrower to be eligible for a risk weighting below 100 percent, and that no bank could have a risk weighting less than that of its sovereign. This proposal was dropped from active consideration (FSF, 2000), but briefly served to raise the profile of the SDDS.

The use of the SDDS as a benchmark in other issue-areas and for other entities creates an additional incentive for governments to subscribe. At the same time, however, it generates another problem for the IMF: what is the best way to monitor compliance with the SDDS? (Fisher, 1999; FSF, 2001; G-22, 1998; Simmons, 2000) The IMF has been reticent to see the SDDS used as a basis for capital adequacy requirements (IMF, 2000c), or to provide simplified pass/fail ratings of subscribers.<sup>30</sup>

Efforts to monitor compliance also serve to influence governments' incentives to subscribe to the SDDS. On the one hand, if oversight is weak and the costs of subscribing are low, some governments might decide to subscribe (Downs *et al.*, 1996). On the other hand, nations that – perhaps for domestic or other international reasons – altered their practices to comply with the SDDS might demand stronger efforts to monitor compliance, so that the SDDS represents a sort of 'seal of approval'. The survey of government officials requested their views on the monitoring of compliance; respondents generally expressed support for such measures, although some noted that judgments of compliance should not be merely dichotomous. The head of the central bank of India, in a 1999 speech before the IMF, made a similar argument, citing a wariness of assessments that might categorize members as 'performers' and 'non-performers'.<sup>31</sup>

A more appropriate solution might invest the IMF with the task of monitoring SDDS compliance. At present, the penalties for non-compliance with the SDDS are somewhat unclear: the Directors suggest that, at the extreme, a non-compliant member could be removed from the SDDS, but this seems unlikely. At its March 2000 review of the SDDS, the IMF discussed the possibility of reporting on SDDS compliance in Article IV reports and public information notices. The Executive Board agreed that

the Fund should start releasing a new quarterly report on the SDDS, including judgments of subscribers' compliance with the externally monitorable portions of the standard.<sup>32</sup> Along these lines, the September 2001 report on the SDDS includes these data for 2000 and 2001, indicating that between 88 and 97 percent of subscribers disseminate data on time, depending on the data category. These results, for the third quarter of 2001, are a marked improvement over the third quarter of 2000, when compliance ranged from 60 to 77 percent.

This monitoring, however, deals only with data timeliness, and not with its quality. Other important elements of the SDDS, such as data quality and integrity, remain on a self-disclosure basis. At the same time, as part of its experimental programme to produce national Reports on Observance of Standards and Codes (ROSCs), the IMF has completed case studies of a few SDDS subscribers – Argentina, the Czech Republic, Hong Kong and the UK. Having these reports prepared, however, remains voluntary, generating a large problem of selection bias.<sup>33</sup> Again, this issue is one that will affect the future viability of the SDDS and, therefore, of some efforts to govern global capital markets.

### **Transition costs and resource requirements**

Like any international set of standards, the SDDS requires changes in many national practices. Its implementation is costly, at least in the short term (see Germain, 2001: 421) and costs vary according to the level of economic development and to current practices. Particularly for developing nations, moving from a regime of providing less information to a regime of providing more information entails an expansion of resources dedicated to statistical agencies. These costs reportedly slowed Brazil's subscription to the SDDS, as her statistical agency faced a chronic shortage of funding.<sup>34</sup> Moreover, in the area of private capital markets, governments may have great difficulty collecting accurate information (Eichengreen, 1999). Particularly where costs are high, governments might either avoid subscription, or subscribe, but fail to implement fully the SDDS's provisions.

In order to assess the transition costs associated with the SDDS, the survey of subscribers asked them to rate the extent of changes required, in terms of sector (real, fiscal, financial, and external) and type of SDDS requirement (data coverage, frequency, and timeliness).<sup>35</sup> For each of the 12 categories, respondents provided a ranking of no change, minor changes, moderate changes or major changes. I coded each category of potential changes on a 0 to 3 scale (ranging from no changes=0 to major changes=3), so that total possible scores ranged from 0 to 36.

Actual scores ranged from 0 – indicating no changes necessitated by the SDDS – to 23, with an average of 11. Interestingly, the level of changes

required, as reported by survey respondents, was not strongly correlated with income; in some cases, developed nations were required to make many changes, while in other cases, developing nations were required to make few changes. Most SDDS subscribers faced *some* transition costs, but none – with one possible exception – were required to completely overhaul their national systems. Most likely, nations for which the SDDS would require even more expansive changes would be inclined to avoid subscription. Furthermore, in response to a query about changes in government funds devoted to statistical operations, seven governments reported significant expansions, six reported no change, and one reported a decrease. Those reporting significant increases were, with one exception, also those reporting that the SDDS required major changes in national statistical processes.

The existence of transition costs for many subscribers also highlights the political nature of the process of selecting international standards (Gagne, 2000; Oatley and Nabors, 1998). During the SDDS development process, some IMF members expressed dismay at the fact that the SDDS seemed to reflect not an internationally agreed-upon set of best statistical practices, but a US-determined set of best practices (Gagne, 2000; see Germain, 2001 for a dissenting view). For instance, although Germany backed the SDDS initiative within the G-7, it failed to make a firm commitment to the SDDS at its launch. This reluctance reportedly was rooted in the differences between German national practices and SDDS requirements (*Financial Times*, 20 September 1996). Although not as distributionally charged as other sorts of international regulatory efforts, even standard setting is a politicized process.

### **Transparency and government policy autonomy**

Another cost of the SDDS relates to the potential drawbacks associated with transparency. For a variety of reasons, ranging from legitimate economic policy-making concerns to pure political opportunism, governments may prefer not to be completely transparent in their dissemination of economic information: 'Confidentiality may be warranted in some circumstances: for example, to encourage frank internal policy deliberations. In determining the appropriate degree of transparency, the benefits must be balanced against the costs' (G-22, 1998: v.).

The impact of information dissemination on authorities' ability to manage exchange rates effectively, for instance, was an important consideration in the discussion of including foreign exchange reserves in the SDDS. Many IMF members were concerned that the release of such data would limit the effectiveness of exchange market interventions, and could lead to self-fulfilling speculative attacks.<sup>36</sup> The IMF's final decision regarding the inclusion of reserves in the SDDS reflected this concern, in

that governments were not obligated to provide data immediately, but with a one-month lag.<sup>37</sup> Moreover, governments that are experiencing financial difficulties may have incentives to disguise the true state of their economies, in the hope that conditions will soon improve (Eichengreen, 1999). If financial market participants are willing to accept their lack of full transparency, governments can pursue such a course without great costs. Subscription to and compliance with the SDDS, however, constrains this course of action.

The release of data that are not fully trustworthy is possible in developed as well as in developing nations. For instance, in May 2000, the Japanese government was criticized for omitting an important piece of information on quarterly growth from its statistics releases. The data, had they been released, would have painted a bleaker picture of the Japanese economy for the final quarter of 1999, revealing a significantly lower GDP. Although the national statistical agency vehemently denied the suggestion that this omission was politically motivated, financial market participants cited it as an example of the government's use of economic information for electoral purposes (*New York Times*, 24 May 2000).

In order to understand the success or failure of efforts to develop international standards, then, we can look to the domestic political as well as the international motivations of potential members.<sup>38</sup> Future work in this area might seek from non-subscribing governments, information regarding their choices. From the above discussion, however, we could expect future SDDS subscriptions from nations that face few short-term transition costs, or from those that want to offer regional or global economic leadership. We also might expect nations with politically independent fiscal and monetary institutions – where policy transparency is already part of the institutional framework – to subscribe.

## V. CONCLUSION

What does the above evidence suggest about the prospects for inter-governmental efforts at financial market governance? In Part I, I hypothesized that international standards succeed only when private market actors embrace them. In turn, private market actors adopt only standards that are well known and that provide simple summary assessments of country performance. The SDDS case demonstrates the accuracy of these propositions. Its prospects remain dim, based largely on the fact that private market actors have not embraced the standard. Given the incentives generated by current financial market behaviour, there remains a 'major challenge for the international community in raising the level of knowledge and understanding of standards and their potential value to market participants' (FSF, 2000: 5). Governments may remain important to the regulation and functioning of financial markets (e.g. Helleiner, 1995) but, particularly as the

objects of regulation before more technical in nature, the success of public initiatives hinges on the behaviour of private actors (e.g. Eichengreen, 1999). Therefore, as we consider how to design institutions, we must explore how best to generate enforcement via financial market actors.

The Maastricht convergence criteria experience, reviewed above, suggests that successful rule-setting by intergovernmental bodies requires cooperation among a set of credit-worthy, economically significant nations; a clear goal, so that market actors can easily evaluate if governments have achieved it; and a clear connection between the goals (government budget deficits) and the ultimate objective (a stable and strong euro). Placing the rules in an explicit treaty form might also serve to convince financial market participants of their viability and desirability.

In the case of the SDDS, there exists some agreement among the dominant members of the IMF on the importance of best practices for data provision, but this agreement is more shallow than that surrounding EMU. With time, agreement may intensify, prompting the addition of new indicators to the standard.<sup>39</sup> The goal of transparency or comparability of data appears related to financial stability, although better information alone does not appear to prevent financial crises. For instance, if problems of moral hazard or the structure of fund managers' compensation packages provide incentives to ignore information, financial crises will continue to be a regular part of the international economic landscape.<sup>40</sup> Moreover, the SDDS contains a wide set of measures (17 categories, evaluated on three dimensions), making it more difficult for market actors to evaluate compliance in a dichotomous, 'yes/no' fashion.

Finally, both the Maastricht Treaty and the SDDS were created by intergovernmental organizations, rather than entities involving both public and private authorities. But given the centrality of financial market participants' behaviour for the success of international data standards, a more appropriate model might involve the creation of the standard by the latter sort of entity. Other recent international regulatory efforts have employed a public-private sector model, for instance, in accounting standards for securities markets (IOSCO) and in banking supervision (the Basel Accords) (Slaughter, 2000; also Institute of International Finance, 1999: 32–35). While the success of these standards, particularly the revised Basel Accords, remains to be seen, private sector involvement makes their future effectiveness more likely. And, from the evidence presented in this article, it is not clear that this has happened with the SDDS. When attempting to create standards, governments must decide whether to prioritize sophistication and accuracy in international standards, or to aim for simplicity and 'information shortcuts' for investors. The latter has its drawbacks, but the former has thus far been ineffective.

## Appendix The components of the SDDS

<i>Prescribed indicators</i>	<i>Components of prescribed indicators</i>	<i>Encouraged indicators</i>	<i>Periodicity</i>	<i>Timeliness</i>
<b>Real sector:</b> National accounts	GDP by major expenditure category and/or by sector	Saving, gross national income	Quarterly	(With a lapse of no more than) one quarter
Production indices	Industrial, primary, commodity or sector, as relevant	Forward looking indicators, e.g. business confidence surveys. Monthly or quarterly	Monthly, or as relevant	Six weeks; one month encouraged
Labour market	Unemployment, employment, wages/earnings		Quarterly	One quarter
Price indices	CPI and PPI		Monthly	One month
<b>Fiscal sector:</b> General government/Public sector	Revenue, expenditure, balance, and domestic and foreign financing	Interest payments	Annual	Two quarters
Central government operations	Budgetary accounts: revenue, expenditure, balance, domestic and foreign financing	Interest payments	Monthly	Monthly
Central government debt	Domestic and foreign, as relevant, with breakdown by currency and maturity (revised)	Debt service projections (interest and amortization on medium and long-term debt)	Quarterly	One quarter

## Appendix continued

<i>Prescribed indicators</i>	<i>Components of prescribed indicators</i>	<i>Encouraged indicators</i>	<i>Periodicity</i>	<i>Timeliness</i>
<b>Financial sector:</b> Analytical accounts of the banking sector	Money aggregates, domestic credit by public and private sector, external position		Monthly	One month
Analytical accounts of the Central Bank	Reserve money, domestic claims on public and private sector, external position		Monthly; weekly encouraged	Two weeks (one week encouraged)
Interest rates	Short-term and long-term government security rates, policy variable rate	Range of representative deposit and lending rates	Daily	May be released as part of other data products, as these are widely available from private sources
Stock market	Share price index		Daily	See interest rates
<b>External sector:</b> Balance of payments	Goods and services, net income flows, net current transfers, select capital account items	Foreign direct investment and portfolio investment	Quarterly	One quarter
International reserves	Gross official reserves, denominated in US dollars	Reserve-related liabilities, as relevant	Monthly; weekly encouraged	One week
Merchandise trade	Exports and imports	Major commodity breakdowns	Monthly	Eight weeks (four to six weeks encouraged)
International investment position			Annual (quarterly encouraged)	Two quarters (one quarter encouraged)
Exchange rates	Spot rates and 3 and 6 month forward rates		Daily	See interest rates
Addendum item: population		Key distributions by age and gender	Annual	

## NOTES

- 1 Layna Mosley is Assistant Professor in the Department of Political Science at the University of Notre Dame. I thank Martin Edwards, Louis Pauly, Andrew Reynolds, James Vreeland, Thomas Willett, participants in the University of Notre Dame Kellogg Institute's Work in Progress seminar, and two anonymous reviewers for comments on earlier versions. Ericka Benavides and Michelle Petersen provided research assistance; the Kellogg Institute provided research funding. All errors remain the author's responsibility.
- 2 For a summary of the IMF's efforts on each of these fronts, see IMF Interim Committee, 'A Guide to Progress in Strengthening the Architecture of the International Financial System', 22 December 1999; Camdessus, 1995. Roubini's Asia Crisis page also provides links to a variety of policy and academic documents on this subject; see <http://www.stern.nyu.edu/~nroubini/asia/AsiaHomepage.html>.
- 3 The G-22 is now defunct; in 1999, the G-20 replaced it.
- 4 'Strengthening the International Financial Architecture', Report of the G-7 Finance Ministers to the Cologne Economic Summit, June 1999. Also see Council on Foreign Relations, 1999; Financial Stability Forum, 2000; 2001.
- 5 Also see *The Economist*, 3 October 1998: 27; Council on Foreign Relations, 1999: 35. On market participants' incentives to collect and employ information, see Mosley, 2000; Willett, 2000.
- 6 On herding in financial markets, see Bikchandari and Sharma, 2000; Calvo and Mendoza, 2000a and 2000b, Eichengreen *et al.*, 1995, and Scharfstein and Stein, 1990. Also see the IMF's assessments of the Mexican peso and Asian financial crises IMF, 1998.
- 7 Armijo (2001). Along these lines, Armijo points out that 'only Japan and sometimes Canada have expressed reservations regarding transparency-oriented reform recommendations' (p. 384).
- 8 The Interim Committee is now known as the International Monetary and Financial Committee. Members of the Executive Board appoint the 24 members of the Committee, and, therefore, membership reflects voting power in the IMF.
- 9 At its second review of the SDDS in December 1998, however, the IMF noted that some nations were having administrative difficulties completing their transition plan commitments on time. Therefore, it provided a one-time extension of the transition period to 31 December 1999 (interview, IMF Staff, November 2000).
- 10 The International Finance Corporation (IFC), an arm of the World Bank, defines an emerging market nation as a country that meets one of two criteria: (i) it is located in a low- or middle-income economy as defined by the World Bank and (ii) its investable market capitalization is low relative to its most recent GDP figures. The 'frontier' category, introduced by the IFC in 1996, includes nations which have equity exchanges, but on which trading activity is very thin.
- 11 All comparisons are based on 1998 data, the most recent year for which data are available, from the World Bank's *World Development Indicators*. Also see Allum and Ağca, 2001.
- 12 Ratings are based on data from CBS MarketWatch; several categories of mutual funds – including International, Global, and Emerging Market – were used to compile the database. For results of a survey of market participants' awareness of and attitudes regarding 12 international economic and financial

- standards, see FSF, 2000; 2001. The FSF survey, however, represents more of a consultative endeavour rather than a social scientific survey.
- 13 Data are from the April 2000 release of the Principia CD-ROM. Funds were in the categories of International Hybrid, Diversified Emerging Markets, Asia/Pacific Stock, Foreign Stock, World Stock, Latin America Stock, and Europe Stock.
  - 14 This information is drawn mostly from Trustnet, <http://www.trustnet.co.uk/>.
  - 15 This reduced the May sample size to 161 and the July sample size to 432.
  - 16 There is very little difference in fund size between the May and July survey groups; the average size for May respondents is \$1.09 billion and the average for July respondents is \$1.05 billion. The November funds are slightly smaller, averaging \$624 million.
  - 17 These are unweighted averages. When asset allocation is weighted by assets under management, a slightly different distribution of assets emerges: North America (28 percent), Asia excluding Japan (6 percent), Middle East and North Africa (1 percent), Japan (11 percent), Latin America (3 percent), Emerging Europe (2 percent), and EU-15 (48 percent). These differences are driven primarily by the investment allocations of the four largest respondents, which manage 51 percent of total assets.
  - 18 The Principia (July sample) geographic breakdown is US and Canada (10 percent), Europe (40 percent), Japan (15 percent), Asia-Pacific (16 percent), Latin America (6 percent) and others (3 percent). The breakdown between developed and emerging in Principia is 73 percent and 25 percent, with two percent of assets as 'N/A.'
  - 19 The questions read, 'When making asset allocation decisions, how concerned are you about the availability (or quality) of information, including macroeconomic data, central bank data, and fiscal policy data?'
  - 20 The question reads, 'In 1998, the International Monetary Fund (IMF) launched a Special Data Dissemination Standard (SDDS), to which its members could subscribe voluntarily. Please rate your awareness of the SDDS, its parameters, and its requirements.'
  - 21 Krueger 1996 examines US financial market responses to changes in the reliability of labour market data. He finds that, despite an improvement in data collection methods, there was no change in the market response function.
  - 22 The 2001 FSF report finds increasing, albeit still low, familiarity with international standards.
  - 23 IMF, 'Statistical Metadata and the IMF: Leveraging Ongoing Investment,' presented at the Statistical Commission and Economic Commission for Europe, Conference of European Statisticians, UN/ECE Work Session on Statistical Metadata, Washington, DC, 28–30 November 2000.
  - 24 See FSF 2000 and 2001, or <http://www.fsforum.org>, for a description of the FSF's outreach exercises. The FSF, formed by the G-7 in 1999 and involving government officials, international regulators, and international financial institutions, is attempting to raise private sector awareness regarding a range of international standards, including the SDDS. On the political implications of the FSF's creation, see Germain 2001.
  - 25 As in Table 3, a score of 1 indicates 'extreme' concern with the issue, while a score of 5 indicates 'not at all concerned.'
  - 26 Among credit ratings staff, the correlation is 0.24; among investment analysts, it is 0.12. Among investment analysts, there is a bivariate correlation of 0.61 between concerns about information quality in emerging markets and SDDS awareness, and a bivariate correlation of 0.35 between concerns about

- information availability in emerging markets and SDDS awareness. Also see IIF, 'Robust Private Sector-Public Sector Partnership Needed,' 17 April, 2001, <http://www.iif.com/press/>.
- 27 Appropriate contact persons were identified using information provided by the IMF's SDDS system.
  - 28 Respondents include Austria, Belgium, Croatia, the Czech Republic, Estonia, Hong Kong, Lithuania, Malaysia, Mexico, Netherlands, Slovakia, Slovenia, Switzerland, and Turkey. In order to preserve guarantees of confidentiality, specific responses are not identified by country.
  - 29 Summing up by the Chairman, Contingent Credit Lines, Executive Board Meeting 99/48, 23 April 1999. Eichengreen (1999) makes a similar argument.
  - 30 In its 1999 report, however, the Council on Foreign Relations task force recommends just that the Fund provide public 'standards reports', rating countries as fully compliant, moving toward full compliance, or non-compliant (p. 54).
  - 31 Dr Bimal Jalan, Governor of Reserve Bank of India, speaking at Interim Committee of IMF; Reported FT Asia Intelligence Wire, 28 April 1999.
  - 32 For an assessment of the frequency and timeliness of the provision of data to the IMF, covering 180 nations, see Allum and Agça, 2001.
  - 33 Some staff at the IMF claim, however, that once ROSCs become more common, governments will gladly submit to evaluation, as a means of further certifying their economic health. The FSF points out (2001) that refusal to take part in a ROSC would damage a government's credibility. On the other hand, the IMF does not have sufficient resources to undertake ROSCs for all members.
  - 34 Also see IMF, Public Information Notice No. 00/59, 'IMF Executive Board Reviews Data Provision for Surveillance', 7 August 2000.
  - 35 Another means of gauging these costs would be to consider the extent to which SDDS subscribers have requested exemptions under the SDDS flexibility option. For some areas of the SDDS, subscribing governments are permitted to 'exercise certain flexibility options while being considered in full observance of the SDDS'. The IMF permits the usage of a maximum of two permanent flexibility options, and others 'as relevant'. Many governments have chosen to exercise the flexibility option for one or a few particular indicators. Where governments request large numbers of exemptions, we might conclude that they face large transition costs.
  - 36 Goldstein *et al.* (2000) argue that such attacks would be relatively rare.
  - 37 'IMF Strengthens Standards for Public Dissemination of Data on International Reserves', IMF Public Information Notice (PIN) No. 99/25, 26 March (1999).
  - 38 Likewise, the FSF (2001) recommends convincing local financial and economic actors to pressure their governments to adopt international standards, thereby pushing for compliance domestically.
  - 39 Periodic reviews of the SDDS are a means of achieving this goal. For instance, after the Asian financial crisis, the IMF focused on the need for better data on international reserves and debt maturity. Such additions can increase the SDDS' relevance, but also can generate new conflict among subscribers. France's central bank opposed the suggested requirement for international reserves data; the Japanese government also was lukewarm on the issue (Armijo, 2001; *Financial Times*, 14 April 1998; 17 April 1998; Institute of International Finance, 1999). In 2000, the IMF introduced a separate SDDS category for external debt (IMF, 2000a).
  - 40 The prevention of financial crises, however, entails not only improving market participants' access to information, but also improving their incentives to employ this information (G-22, 1998). Where good information has been

available, market participants have not always used the information – a prime example is BIS data on the exposure of Asian banks, which was largely ignored by investors in the mid-1990s (Goldstein, 1998; also see IMF, 1999).

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