Primary Dealers in Government Securities

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Preface

In the last 10 years there have been a growing number of countries that have established or are in the process of establishing a primary dealer system. This paper discusses theoretical and operational issues related to the establishment of a primary dealer system for countries that may be considering taking this step. Drawing on a survey of country practices conducted in 2001, the first part of the paper discusses the rationale, costs and benefits, and key prerequisites, while selection criteria, obligations, and privileges, among other issues, are discussed in the second part. The paper also tries to address whether a primary dealer system fits into the overall strategy for financial market development in the country. In this context, under appropriate circumstances, primary dealers can support the primary market for government securities by helping to provide a consistent, dependable source of demand. At the same time, they can foster development of the secondary market by providing two-way quotes for selected issues of government securities and by servicing the retail market. Under a primary dealer system, the debt manager and the group of primary dealers pursue a common strategy in support of the effective functioning and development of primary and secondary markets for government securities. Among the countries surveyed, there was broad agreement among authorities that a primary dealer system is to be highly recommended.

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CHAPTER

1 Introduction

In the last 10 years there have been a growing number of countries establishing primary dealer (PD) systems. This paper discusses the role of primary dealers, as well as operational and technical issues related to the establishment of a PD system, in the overall management of public debt for countries that may be considering establishing such a system. One of the goals of the paper is to provide guidance on how to design a primary dealer system in an appropriate way to meet market development needs.

The paper tries also to determine under what conditions a PD system would make a positive contribution to the functioning and development of the government securities market. Even though it is difficult to give a precise analytical answer to this latter question for all countries, the paper will try to address this issue by drawing from practical experiences for individual countries. To provide empirical support and detailed information for the project, a survey on primary dealer practices and views was sent in 2001 to 47 countries, varying widely in terms of size and stage of economic development, and responses were received from 39 of these countries.

It is important to note that industrial countries already have PD systems, although many that do have established them only in the last few years. In addition, a number of emerging market and developing countries have either adopted, or are in the process of adopting, PD systems, but many others have not done so.

CHAPTER

2 Definition and Findings

In simple terms, a primary dealer system is an agreement between two major stakeholders in the domestic government debt market—the debt manager and a group of dealers—to pursue a common strategy in support of the functioning and development of primary and secondary markets for government securities. Primary dealers are financial intermediaries selected to perform a specialized role in the market for government securities. Generally, in exchange for specific privileges, primary dealers agree to perform specific obligations or functions in the operation of markets for government securities.

Following from this definition, their role includes

(1) acting as a **channel between debt manager and investor** in the primary market (e.g., by participating in auctions);

(2) performing as **bookmakers and distributors** by having dealers that canvass investors' interest and distribute securities ahead of auctions through when-issued markets;

(3) acting as **providers of immediacy** of liquidity to primary and secondary markets;

(4) acting as **providers** of **asset transformation and market-making services** by being willing to hold inventories of government securities and allowing investors to swap among various outstanding issues of government securities on a continuous basis, helping to bring liquidity to the market;

(5) promoting **continuous markets and efficient price discovery** by organizing dealers in the setting of an appropriate market structure that can encourage efficient price discovery;

(6) acting as **agents and relationship managers** educating investors about the attractiveness of government securities as an investment; and

(7) being **advisors to the government** by forming and taking appropriate strategies for the development of products and markets.

Selection criteria for primary dealers typically include financial strength as indicated by adequate capitalization, an active role in government securities markets, and financial expertise such as skilled management and staff, together with access to appropriate technology.

Obligations generally include one or more of the following requirements:

(1) participation in the primary market in a substantial and consistent manner;

(2) serving as a market maker in the secondary market by providing two-way quotes for specified groups of securities, either indicative or firm; and

(3) providing market-related information to the debt manager.

Privileges, or supporting arrangements, which vary widely among countries, generally involve the granting of some aspect of exclusivity—for example, the exclusive right to participate in the auction for treasury bills, and/or the right to serve as a counterparty to the central bank when it conducts open market operations, and/or access to a line of credit or to borrow particular issues from the central bank.

Among the respondent countries in the survey, there was broad agreement that primary dealers are recommendable—that is, they make a positive contribution to the development and liquidity of government securities markets. Of those countries that did not have primary dealer systems (10 countries), several respondents indicated that their markets were not large enough to support a sufficient number of primary dealers to ensure competitive behavior, while some of the more advanced countries indicated that their markets were functioning well without primary dealer systems (e.g., Germany and New Zealand).

On the issue of whether the stage of development at which a primary dealer system should be introduced is relevant, more than half indicated that it was either always desirable or desirable to do so in the early stages of development. With respect to later introduction, however, some of the detailed comments pointed toward necessary conditions that should be present before development of a PD system, such as the existence of a legal and supervisory system, and an adequate payment system.

CHAPTER

3 Rationale for a Primary Dealer System

The main purposes of a primary dealer system include strengthening the primary market by (1) helping to build a stable, dependable source of demand for securities; (2) providing liquidity in the secondary market; (3) devoting capital resources to underwriting (as a proprietary buyer) to absorb an occasional shortfall of liquidity; (4) building distribution channels (to act as intermediaries); and (5) providing market information, including prices, volumes, and spreads between bids and offers. These objectives, in turn, serve the overall goals of (1) lowering the cost and associated risk of servicing the public debt; (2) developing financial markets; (3) enabling the central bank to use indirect instruments of monetary policy; and (4) encouraging saving by providing a relatively risk-free investment with attractive returns.

Development of financial markets involves a broader set of policies than just establishing a primary dealer system. In particular, some countries may have set up PD systems without necessary supporting policies, including a commitment to a market-clearing outcome. Based on empirical observation, establishment of a PD system can be an efficient way to develop and execute a coordinated approach to market development and thereby accelerate the development of market structure. Practical experience shows that primary dealer systems are in many cases a very helpful and efficient way to build up a market as well as maintain the functioning of the market in later stages. Other ways to set up markets, however, do exist,[1] and, in the choice of different setups, country specificity and historical (path-dependence) considerations might well play a role, along with consideration of theoretical approaches.

Also, setting up a system of primary dealers could be interpreted as a response to a market failure, if the government perceives that the existing market structure is not performing efficiently or if the market does not yet exist or is very thin. This

[1]See International Monetary Fund and World Bank (2001b), Chapters 5 and 7.

happens typically in many developing countries, where the rationale for primary dealers may rest not only on efficiency arguments but also on developmental reasons, as argued below. Additionally, the creation of a PD system can be seen as a commitment to sound debt management practices. By selecting a specialized set of institutions the authorities might be signaling to the financial community and the public at large their commitment to a liberalized market and a sustainable public debt strategy. Therefore, defining such a group of qualified dealers might increase investors' confidence in government securities as an investment.

CHAPTER

4 Implications of Establishing a Primary Dealer System

By selecting certain firms as primary dealers and not others, authorities concentrate market activity in a smaller number of firms, which has both positive and negative implications. On the positive side, especially in the early phases of market development, there can be important efficiencies associated with larger volumes of financial transactions, including automation and more advanced technology, and the use of specialized, highly skilled personnel. Acquiring these resources has substantial fixed costs, and spreading these costs over a larger volume makes them more economical. Competition and efficiency can also increase if foreign firms are allowed to become primary dealers, if as seems likely those firms are advanced and have an international clientele. In addition, there are advantages to the debt manager (if it is the central bank) in limiting the number of institutions with which it has to deal in conducting auctions of government securities and in its open market operations.

The most significant possible problem in setting up a primary dealer system is the risk of promoting a less than efficient market structure. A primary dealer system is a dealer market structure; developing one involves choosing (by the issuer) this particular market structure for the trading and issuance of debt. If alternative market structures are more efficient or appropriate, then a PD system is best avoided and a different and more appropriate country-specific strategy developed.[2]

A second drawback of a PD system is that it can potentially limit competition and contribute to oligopolistic behavior. Since selection is fundamental to a PD system, it can in some respects run counter to the principle of establishing a level playing field. To a considerable extent, however, these potential "negatives" can be avoided by careful design of the system—for example, by not unduly limiting the number of market participants.

[2]For a more detailed discussion of the choice of market structure and the role of primary dealers, see Dattels (1997), pp. 209–82.

In addition, by selecting a group of financial firms to serve as primary dealers, there is a risk that the public may view them as possessing an implicit guarantee by the government. There may also be moral hazard in that guarantee, in that once selected as a primary dealer, the primary dealer may engage in more risky behavior, believing that the government would not stand by and let it fail. In this regard, the primary dealer might be induced to take on more risks than it otherwise would. Authorities should try to reduce this moral hazard by supervision and by allowing contestability. For example, authorities may periodically reassess and reselect the group of primary dealers.

Since establishing a system of primary dealers has its pros and cons, an important question concerns whether, or under what conditions, it is helpful to have such a system. In general, the answer depends on the authorities' overall strategy for developing the government securities market and the appropriate size and microstructure for the market. In particular, if authorities envision a secondary market structure in which there are competing dealers and market makers, then a PD system may be an appropriate choice. However, authorities may opt for an auction system with direct buy and sell orders to a single location or an electronic matching system, in which case a PD system might not be appropriate. Or, alternatively, the secondary market may be too small to support an effective number of primary dealers, in which case the authorities may decide as a transitional measure to open a secondary window at the central bank.

The justification for establishing a system of primary dealers is that the system satisfies public goals that might otherwise not be met. One of the main goals in this regard is to maintain or enhance the liquidity of secondary markets. A liquid market may involve external benefits that accrue to other parties that are not directly involved in the government securities market.

CHAPTER

5 Market Structure and Development

In analyzing the issue of primary dealers, it is important to include considerations of securities market structure and development, and coordination of the various players involved. A decision whether to set up a primary dealer system, and the associated design, can be considered from both a developmental point of view and, in more advanced economies, a market structure point of view. In this context, design of the mix of obligations and privileges must be an integral part of the strategy for developing and improving a government securities market, and the design itself can target market development (create a market and accommodate public sector borrowing requirements) and/or market structure (competition, efficiency, and financial instruments).

A. Financial Development

From a developmental point of view, in the early stages of development the authorities might view the existence of a group of specialized institutions as instrumental in supporting their efforts to develop a market for government securities. These institutions would concentrate limited know-how and scarce resources in a limited number of players, thereby facilitating coordination among players and supporting a smooth market process. For instance, in the absence of liquid funding markets, a broad and well-informed investor base, available and well-developed trading platforms, and a supporting infrastructure, a PD system can be a very useful platform upon which to develop the government securities market. In this context, the developmental role that a coordinated set of players can have in supporting government borrowing strategy, while at the same time creating some of the conditions for the use of indirect instruments of monetary policy, is clear.

The design of the primary dealer system for a developmental objective should aim at a mix of obligations, privileges, and supporting arrangements that helps the authorities to achieve their objectives. Equally important, other supporting markets or infrastructures are likely to be missing in this context, so there must be a commitment from the authorities to implement policies to put in place necessary infrastructure (e.g., book-entry system, delivery versus payment (DVP), and bidding technology) and to develop other markets (interbank market and local capital market, for instance). Given this background, the performance of primary dealers can be expected to be less than optimal, but mechanisms should be put in place to limit possible noncompetitive behavior and moral hazard.

B. Market Structure

In more advanced economies, where developmental issues become less pressing, a market structure approach is also useful. When a country has already developed market intermediaries and infrastructures, the reasons for having a PD system are different than the ones highlighted above. Arguments for specialization and economies of scale tend to prevail, and country experience in advanced economies (France and Italy) indicates that a PD system accomplishes several objectives: (1) decreases market and refinancing risk; (2) improves knowledge of the market; (3) strengthens product and process innovations; (4) provides better access to end investors; (5) improves promotion of debt; and (6) provides skillful advisory support in building and following the debt management policy. One could also argue that some potential threats to an efficient market functioning must be taken into account—for instance, by selecting a preferential group of intermediaries, the authorities might reduce competitive neutrality (New Zealand) and limit contestability. In addition, when the authorities have introduced on-line trading systems and financial markets and intermediaries are extremely sophisticated, as in the United States, which has had a system of primary dealers for a long time, the case for a primary dealer system becomes less clear. When there are substantial fiscal deficits and financing needs, however, primary dealers may continue to play a positive role in the primary market even in developed markets.

The practice of selecting a specialized group of intermediaries for government securities can be seen as similar to the practice of private commercial borrowers that implement their financing strategy via placements through a specific group of investment banks for the same reasons highlighted above (advisory, access investors, lower market, financing risk, and so forth). However, there are additional risks in taking this approach by a government with a specific group of primary dealers. One risk is increased moral hazard, or the possibility that designated primary dealers will engage in more risky behavior because they have been selected by the authorities. In addition, compared with the private market solution, selection by the authorities may risk reduced contestability and possible anticompetitive behavior.

Therefore, it is essential that in deciding to adopt a primary dealer system, the authorities design mechanisms to reduce these risks, while preserving as much of the benefits as possible. Contestability can be supported by rotating primary dealers based on performance (Mexico), while the risk of anticompetitive behavior must be addressed by strengthening supervision. The argument for moral hazard/implicit guarantees must also be addressed in the context of liquidity/crisis management policies by designing an appropriate structure of incentives and controls.

In deciding on the adoption of a PD system, the authorities should simultaneously address these issues so as to achieve their debt objectives while maximizing market efficiency. Countries that have fairly advanced markets and intermediaries, but that for some reason would not be able to address the negative effects induced by the introduction of a PD system, should strengthen their capacity of intervention in these areas before putting the system in place, or phase in supervisory and regulatory reforms at the same time. While in developing economies the developmental aspects can outweigh downsides related to market structure, in more advanced economies the authorities should clearly evaluate whether the market would be able to perform the same functions without introducing a selected subgroup of specialized intermediaries.

Another aspect of a primary dealer's activity in the secondary market is to serve as an intermediary between the debt manager, often the central bank, and retail investors. In this regard, primary dealers are often expected to serve as partners with the debt manager and central bank in developing the institutional and retail markets. This function may include educating the public about investing in government securities.

In recent years, a number of debt managers in developed economies have been moving into direct sales of securities over the Internet. More generally, modernization of markets and automation are making some of the functions traditionally performed by primary dealers less important or redundant. For example, automation is a means to handle large numbers of participants in auctions, which was not previously possible. Electronic markets offer information on market conditions and prices that might have only been possible to have directly from dealers. Whether this recent trend in developed economies also applies to the needs of developing countries depends on country-specific situations, given the technological constraints that different countries face.

C. System Design in the Course of Financial Development

It may be useful to consider whether the trade-off between the advantages and the disadvantages of a primary dealer system changes during the course of economic development. In the early stages, for instance, not all of the key conditions may be present for an effective PD system. In particular, there may not be enough dealers that are active in the government securities market. Moreover, in those early stages, the commercial banks, which are some of the most likely candidates for primary dealership, may have a vested interest in not developing the government securities market, because they have competing products and may profit from the scarce opportunities of their depositors. In addition, the size of the financial system and of the government securities market, in particular, may play an important role, with smaller countries finding it more difficult to justify a PD system. In this context, the potential for specialization on the part of dealers in government securities is limited by the small size of the financial market. At the same time, the potential contributions of a primary dealer system—developing the primary and secondary markets and developing the retail base for government securities—are most relevant for developing and emerging market countries.

In the latter stages of financial development, especially in large diversified financial systems (Germany or Switzerland), the need for, or potential contributions from, a PD system may be less important. In many developed countries, there may be a relatively large number of active participants in the primary market; and there may be an active and highly competitive secondary market, while retail investors have a number of attractive alternatives. Thus, some industrial countries, such as Australia, Germany, Japan, New Zealand, and Switzerland, do not have PD systems, while the United States, with the largest and most diversified financial system in the world, does have such a system. The United States, however, has reduced the privileges of primary dealers over time, and opened the system to more competition. Now, aside from being recognized as a primary dealer, the main privilege is to be one of the counterparties to the Federal Reserve when it conducts its open market operations. More generally, the role and specific features of a primary dealer system may change during the course of economic development.

CHAPTER

6 Key Prerequisites for a Primary Dealer System

In paving the way for the establishment of a primary dealer system, the authorities might want to create an environment conducive to its most effective functioning. Important prerequisites for establishing a PD system include at least eight listed below. Ideally, they should be in place at the time of the establishment of a PD system. However, that may not always be feasible for all prerequisites; in this case, they should be phased in over a short time span to sustain the development of the system and the markets:

Interest rates should be liberalized. It is essential that interest rates on government securities reflect actual demand and supply, in both the primary and secondary markets, so as to guarantee efficient price discovery.

Arrangements between primary dealers and debt managers in support of the auction system should be carefully arranged. This is an important prerequisite because the auction is the central mechanism for securities allocation in the primary market. The auction design must allow an efficient price discovery. Problems in auction design are bound to have a strong negative effect on subsequent segments of the market because inefficient price discovery or inefficient allocation will affect the secondary market at both the wholesale and retail levels.

A government must have a strategy for issuing government securities. A government must accurately plan its debt issuance strategy so as to provide a medium-term horizon for the investment strategy of primary and secondary market agents.

A minimum set of attractively designed securities should be available. In deciding its debt strategy, the government should plan for a certain number of different types of securities, taking into account different maturities and trying to establish benchmarks. Also, other instruments could include index-linked securities and inflation-linked securities, to mention just some simple examples that can help investors diversify their portfolios of instruments and provide instruments for risk management.

An adequate number of end investors is necessary. This means that the government should try to estimate potential demand among individuals and the financial sector and be able to fine-tune its own supply, arising from its financing needs, to be able to meet potential demand. Preliminary discussions with banks will help the government gauge this potential absorption capacity.

The government must also be committed to market-determined outcomes. The authorities should make efforts to stimulate a setup of the primary and secondary market so as to allow competitive forces to play a dominant role. In this context, primary dealers should not be seen as a captive group whose portfolio can be burdened with government securities, but rather as the initiators of a market or a group providing additional liquidity and transparency to the market for the purpose of better price discovery and resource allocation.

Sufficient debt and a potential volume of secondary market trade should be available to support a profitable group of competing dealers without subsidies for the operations. With respect to the size of the market, it is important to have an adequate number of active participants in the market, and enough volume in government securities issued to justify a primary dealer system. In addition to authorities' commitment to market-determined prices and attainment of a minimum size of the market for government securities, there are other highly desirable conditions for establishing a PD system, including a legal framework for government securities, a regulatory/supervisory system for government securities dealers, and an adequate payment and settlement system. However, primary dealers can be used as a platform and an integral part of the building of such systems. In many developing and emerging market countries, for instance, primary dealers have been used as custody agents as part of the book entry system. They have been given accounts with central banks to clear and settle on a DVP basis. Also, in some countries, the setting up of primary dealers has been the cornerstone of developing efficient primary markets.

The government must be committed to secondary market development. This condition is important because it guarantees that the primary dealers and other market participants will not compete directly with the government in the placement of securities in the retail market. The authorities should refrain from intervening directly in the market—for instance, limiting or avoiding direct sale of securities.

In the early stages of development and also for many small developing countries, there may not be enough participants in the government securities auctions to reduce the number further by establishing a PD system. Having an adequate number of participants in the auction may be a particular problem if the authorities are trying to limit participants to commercial banks for clearing and settlement purposes. If the main objective is to be as inclusive as possible for bidding at the auctions, then limiting the numbers further to start a PD system may be inappropriate. Thus, one of the respondents to the questionnaire from countries without PD systems said the reason the country had not set up a PD system was the small size of the market (Latvia), and another (Chile) said there were too few participants for establishing a PD system.

What is the minimum number of primary dealers to ensure an acceptable degree of competition? While there are no absolutes on this issue, five to seven seemed to be among the minimum number of primary dealers cited by respondents in the IMF's Monetary and Financial Systems Department's survey (e.g., Mexico, Norway, Armenia, Morocco, and Sweden), although Iceland, which recently established a PD system, has only three primary dealers. Chile, in particular, indicated that four to seven primary dealers were not enough—a key reason why Chile did not adopt a PD system.

Based on the MFD survey, the typical number of primary dealers for a country with a successful PD system seemed to be approximately 15, and 20 to 26 primary dealers was toward the high end of the range.[3] Several respondents indicated that the number of primary dealers had increased as the volume of dealing had grown over time (e.g., Brazil and India), while several others indicated that the number had fallen as the volume of securities issued had declined (e.g., Canada and Sweden). There were also other reasons for a trend toward declining numbers of primary dealers, including, in particular, consolidation of the financial services industry. In the case of the United States, the number of primary dealers peaked in 1988 at 46 and has since declined to 25, owing largely to consolidation within the industry.

[3]Among the countries with PD systems, the average number of primary dealers was 14.5, and the median number was 13. Countries in the lowest quartile (in terms of number of primary dealers) had 8 primary dealers. Austria, Czech Republic, Ghana, and the Republic of Korea had the largest number of primary dealers—each with 26, and the United States was next with 25.

CHAPTER

7 Operational Issues in Establishing a Primary Dealer System

This section will cover specific operational issues to be addressed in setting up a primary dealer system—namely, selection criteria, obligations, privileges, supervision, and the issue of foreign firms. Also, legal arrangements will be discussed in some detail.

In addressing issues related to obligations and privileges, the mix should be designed in the context of the development needs of the market and the participants. **The obligations that primary dealers establish are the commitments they make to perform certain activities; their "privileges" are those arrangements that should allow the primary dealers to perform those functions efficiently, often in the absence of other supporting market infrastructure.** Together they form an integral part of the overall development strategy in developing emerging market economies. More specifically, the mix of obligations and privileges of primary dealers, together with the commitments of the authorities to specific objectives and strategies, should be focused on the development needs of the market and the issuers' and participants' requirements.

There are also issues of design and coordination of the PD system: it is possible for the central bank and the debt manager to design the PD system to meet the needs of both the central bank and the issuer. From a functional viewpoint, one should distinguish primary dealers in the market for government securities from primary dealers for central bank operations. These two functions are theoretically separated, but operationally the same institutions might be awarded both roles, depending on the institutional arrangement.

Some countries establish separate tiers of dealers that focus on different functions. For instance, Canada has a separate category of "primary distributors" compared to "jobbers," which have a more market-making requirement. India has primary dealers and satellite dealers, with the latter group having a lower capital requirement than primary dealers. In Italy, primary dealers are required to take up stock in the auctions, while market makers are, in addition, required to provide two-way quotes. Thus, countries may decide to extend the general approach to responsibilities by establishing different tiers of dealers, with each tier having separate requirements and objectives. This approach could be particularly useful if there is a need to develop a potentially large retail sector when there are a relatively limited number of large, well-capitalized institutions.

A. Selection Criteria

The selection criteria for primary dealers should be related to the role that they are expected to play in the primary and secondary markets for government securities and should contribute to the overall stability of the financial system. These criteria will also influence the number of participants and the degree of competition in the markets for government securities and the ability of the selected institutions to sustain an active market. The following selection criteria represent an indicative, but by no means exhaustive, list, depending on a country's degree of economic development and market sophistication.

The first and most important criterion is **financial capacity,** usually expressed in terms of net capital or own funds. There can be minimum capital entry levels, with higher required amounts reflecting the actual or prospective market share. There are a number of reasons for the importance of financial capacity. First, it is a measurable criterion, so all applicants for the role of primary dealer can be assessed against it. Second, a minimum capital requirement should guarantee that the institutions have sufficient financial capacity to undertake an active role in both the primary and secondary markets, giving them depth and continuity. Third, financial strength helps to build confidence in the market. Fourth, it restricts the function of primary dealers only to the soundest institutions, limiting the risk of future financial problems of primary dealers. Also, it means that primary dealers can withstand setbacks and still meet their obligations.

Additional specifications related to the financial soundness requirement can also be required. For instance, they can include (1) setting aside a certain amount of capital to be used exclusively for dealing with government securities; (2) creating a legal entity with separate capitalization; and (3) a commitment of the parent financial institution to support the subsidiary in case of lack of capital or forthcoming failure.

In most industrial countries with PD systems, banks themselves can act as primary dealers, without establishing a separate legal entity. However, some countries, particularly developing countries, require a bank that is also a primary dealer to establish a separate subsidiary or legal entity for its PD activities. For example, in India, while banks can undertake securities dealing, they are required to set up separate subsidiaries to be registered as primary dealers. Also, Sri Lanka first required that primary dealers be separately capitalized subsidiaries, but that changed recently and now banks can act directly as primary dealers. However, capital is still to be dedicated to that business line. While strategies may differ among countries with primary dealers, the most important thing is that the risks are covered and the businesses are professionally managed. Whether, from a regulatory perspective, one needs to do this in a separate subsidiary may depend on country circumstances and stage of development. However, requiring separate subsidiaries does involve significant costs, which need to be weighed against regulatory and strategic benefits.

A second criterion is **market activity**. Financial institutions aspiring to the role of primary dealer with the public debt manager or the central bank must be active in the primary market at auction times, tap sales, and syndications and in the secondary market with placement of securities among the public and their own clients' base. Measures of market activity might include the average share of securities in the primary market, and the trade volume and average share of securities in the secondary market. The demonstrated activity need not be at the required level immediately after the appointment to PD status, but this requirement must be fulfilled at the time of the first review.

Management capacity and suitable technological infrastructure is a third criterion. The applicant must have the expertise to sustain an active and efficient market for government securities. Creating separately capitalized subsidiaries for this purpose can facilitate the creation of new incentive mechanisms and career streams outside the traditional roles of banks' personnel management, especially in emerging markets, channeling to the new firm professional expertise and good dealers. This means, for instance, having a minimum number of experienced traders. A minimum number can be established by the authorities depending on local conditions. In addition, a potential primary dealer must have the technological infrastructure to support government securities trading, with the central bank, with other banks, and with the public at large.[4] This can take several forms depending on local technological conditions and the requirements of the authorities, including at least standard technology for submitting bids at primary auctions, the secondary market trading technology in the wholesale and retail segments, and access to a primary dealer-wide depository system.

Relations with the authorities must be current practice at several levels.[5] A first and more immediate level is the supervisory responsibility. The supervision of the prospective primary dealer should be such as to leave no doubt that the institution is sound, well managed, and well equipped for its present and future role. A second and less immediate level concerns the exchange of information with the relevant agencies, especially the debt manager and the central bank,

[4]See International Monetary Fund and World Bank (2001b), p. 231.

[5]Relations with the authorities are considered sometimes a selection criterion and other times an obligation, or both. Both stages require exchange of information; thus the considerations in this section will also apply to the reporting obligations in the following section and will not be repeated.

regarding daily activity in volume and type of instruments in the interbank market and with the public at large. A third level concerns informal exchanges of information, practitioners' opinions on strategies and development, and providing the government with information about market conditions. This requires building a relationship of institutional trust and respect, beyond the simple exchange of information.

Other selection criteria can also be used depending on specific characteristics and development of the domestic financial market and of the country. The authorities might consider making the following efforts:

- impose a minimum threshold for credit rating, which would increase public confidence;
- require a track record in other developed bond markets, for institutions already active in other markets or other countries;
- require affiliation to a domestic association of dealers, for supervisory purposes; and
- require that core trading and sales operations for government securities of foreign banks be undertaken in the country.

A minimum threshold for capital and involvement in the government securities market are the most commonly reported selection criteria for primary dealers. These are minimal requirements, although often other criteria are specified. Good distribution and placement capacity is a specific requirement in Belgium, Ireland, and Italy. Other requirements tend to complement the previous ones and are generally country specific. For instance, Thailand requires primary dealers to have a risk management system in place and coordination with the authorities for the development of the secondary market, while Singapore requires a minimum credit rating, at least two experienced dealers, and a good track record in other developed bond markets. Britain and Ghana require primary dealers to be members of the stock exchange.

In general, the institutions that fulfill the requirements are appointed primary dealers, but an alternative has been developed that fixes the number of dealers, and rotates primary dealers. For example, in October 2000, Mexico introduced a PD system with an original selection and rotation procedure—allowing only five institutions as primary dealers to be appointed every six months. At the end of the period, existing dealers would be ranked according to performance, with the worst performer leaving the group and a new institution replacing it as a primary dealer. The performance criteria for commercial banks and brokerage houses (the only institutions allowed to become primary dealers) are based on volumes of activity in government securities. An index measures activity in the primary market, in the interbank market, and at retail level. Every six months, the institutions with the highest score become primary dealers; if they are the same as in the previous period, the last one is eliminated and the first among the nonprimary dealers becomes a primary dealer. These procedures reduce the incentive for dealers to collude, while also presenting barriers to entry.

The first two criteria are the most widely used and all countries in this study apply them. Table 1 provides a list of the existing selection criteria as reported by the 39 countries surveyed for this study, and Table 2 provides a number of country examples.

B. Obligations

The delicate role of primary dealer entails explicit or implicit obligations, with the general goal of developing, supporting, and stabilizing the primary and secondary market for government securities. In many cases, the authorities establish privileges for the primary dealers, not only as a reward for their function, but also to motivate primary dealers to perform their functions efficiently and in a cost-effective way.

Obligations Related to the Primary Market

The primary dealer's first obligation is that of **underwriter of government securities,** a clearly defined function, which takes place in an auction or in another selling arrangement (e.g., direct sale or syndication). The authorities may select various criteria for the primary dealer to fulfill this obligation, which include average amounts underwritten and the minimum bid size.

In this first case, the minimum commitments of the primary dealer can be specified in terms of average amounts underwritten at the auctions in a certain time span.[6] This number could be specified as total amounts of securities or as the average size of underwriting for different categories of securities. With this latter option the authorities might encourage specialization, but the chance for this to happen depends entirely on the degree of market development and sophistication. A second possible specification of this criterion would be to impose a minimum bid per auction as a proportion of the total amount tendered. In this case, the authorities must carefully evaluate the level of the minimum threshold:[7] setting it too low generates the risk of a shortfall in underwriting,

[6]The time span can also be reduced so as to include only one auction at each time, a situation that would be equivalent to specifying the percentage of securities to be bought at each auction.

[7]This criterion can be specified in the following way: if there are n PDs, a threshold of $1/n$ percent would ensure a 100 percent coverage of the auction, while a threshold higher (lower) than $1/n$ percent would ensure overbidding (underbidding).

Table 1. Selection Criteria for Primary Dealers

Active involvement in government securities market.
Minimum capital.
Placement capacity.
Conformity in fulfilling all requirements set by the central bank for the commercial banks.
Long-term commitment to market development.
Dealers on the Stock Exchange.
Efficient bond trading.
Participation in money market.
Affiliation to the association of dealers.
Core trading and sales operations for government securities resident in the country.
Minimum credit rating.
Established presence in the country.
Staffing requirements and professional skills.
Performance recording of other developed bond markets.
Guarantee for the physical and financial settlement of bonds.
Rotation of primary dealer based on performance among a larger group of banks.

Source: IMF staff survey of national authorities (2001).

Note: The ordering of the items indicates the frequency—from higher to lower—of each reported item. The list of items reported shows some countries' practices and should not be interpreted as recommended.

while setting it too high—for example, such that the total bids are always far above the maximum tendered amount—might strain the financial capacity of the primary dealer.

In case the design allows for a random shortfall in underwriting at auctions, rules should be set as to the maximum size of random shortfalls that primary dealers are required to cover. When planning to introduce a PD system, a careful analysis should be undertaken of the likelihood and size of possible shortfalls, trying to establish an expected value of the shortfall. From this value, it would be simple to derive the minimum amount of net-free capital necessary to undertake this function.

Whichever specification of the criterion is chosen, the authorities must always balance the need of securing a suitable time horizon for the supply of liquidity against the banks' liquidity management needs: too stringent requirements that might generate excessive average holding of government securities could, in turn, undermine primary dealers' abilities to support the government in the long term. Excessive average holding cannot be defined ex ante because it depends on many factors, including the secondary market liquidity conditions, the demand for specific bond issues and maturities, and the availability of alternative financial instruments.

Table 2. Selection Criteria for Primary Dealers—Selected Country Experiences

Advanced Countries	
Austria	Involvement in government securities market, placement power, and efficient bond trading.
Belgium	Involvement in government securities market and placement capacity.
Canada	Minimum capital and involvement in government securities market. Primary dealers must be Government Securities Dealers, who in turn must (1) be members, or affiliates of members, of the Investment Dealer Association of Canada; and (2) have their core trading and sales operations for government of Canada securities resident in Canada.
Finland	Minimum capital, involvement in government securities market, and long-term commitment.
France	Minimum capital and involvement in government securities market.
Greece	Minimum capital and involvement in government securities market.
Iceland	Minimum capital and involvement in government securities market.
Ireland	Minimum capital, involvement in government securities market, and ability to distribute Irish government bonds.
Italy	Minimum capital and involvement in government securities market. Primary dealers must have an organization suitable to obtain a widespread and efficient placement of securities.
Netherlands	Minimum capital, involvement in government securities market, and geographical distribution of their turnover and promotion activities, along with commitment to place securities.
Norway	Involvement in government securities market.
Portugal	Involvement in government securities market and Regulation No. 1/2001, Art. 6 and 16: - capacity for subscription and placement of bonds in the competitive phase of auctions; - regular and significant participation in the secondary bond market; - ability to offer guarantees for the physical and financial settlement of bonds; - production of a statement signed by the dealers' Board of Directors, in which they pledge to obey the rules of the Regulation.
Singapore	Involvement in government securities market, minimum credit rating, staffing requirements of at least two dealers with experience in fixed-income trading, along with a track record in other developed bond markets.
Spain	Involvement in government securities market.
Sweden	Minimum capital and involvement in government securities market.
United Kingdom	Involvement in government securities market. Dealers must be members of the London Stock Exchange and produce a business plan; also must be subject to Financial Services Authority approval.

Table 2 *(concluded)*

United States	Minimum capital and involvement in government securities market (although there is no specific requirement as to the extent of involvement). The institution cannot have been convicted of a felony crime.
Developing Countries	
Armenia	Minimum capital and involvement in government securities market. All institutions should meet all requirements established by the central bank for commercial banks, because all primary dealers are commercial banks.
Ghana	Involvement in government securities market. All dealers must be on the Ghana Stock Exchange in the case of brokerage firms, and must be Deposit Money Banks, with reserve requirements already met.
Morocco	Involvement in government securities market, minimum volume of subscription on the primary market, and minimum traded volume on the secondary market (10 percent).
Emerging Markets	
Argentina	Minimum capital and involvement in government securities markets.
Brazil	Minimum capital, along with compatibility with the minimum capital requirements of a commercial bank; involvement in government securities primary and secondary markets; capability to remain market makers; participation in open market operations; and relationship with the central bank trading desk.
Czech Republic	Minimum capital and involvement in government securities market, together with minimum obligations on government bonds and bills.
Hungary	Minimum capital, involvement in government securities market, and right to trade on the Budapest Stock Exchange.
India	Minimum capital and involvement in government securities market.
Kazakhstan	Minimum capital and involvement in government securities market.
Korea	Minimum capital and involvement in government securities market.

A different but related issue pertains to **participation in auctions:** evidence suggests that both open and closed auction formats exist in PD systems. While expanding participation beyond the primary dealer group might increase the chances of competition and underwriting, it may also dilute the incentive structure for primary dealers. Typically, the decision as to whether to have an open or closed auction is likely to rest on the issuer's requirements. For example, closed auction systems are most often associated with PD systems that call for the dealer to provide a good deal of underwriting support to the auction. The debt manager should be prepared to trade off more predictable coverage for possibly a higher average cost. It follows that, in deciding on the design of the system, primary auctions might be closed if primary dealers are required to provide underwriting support. On the other hand, if underwriting is not required, then auctions might be more open, and only a general commitment to bid by primary dealers might be required.

There are also instances in which expanded participation might generate problems in small and less-than-well-developed financial markets: for example, in multiple-price auctions, when large (compared to the average primary dealer size) institutional investors, like public pension funds or public health insurance companies, are allowed to participate, these institutions can be easily induced by the authorities—in an attempt to minimize government's borrowing cost—to bid at a low price, thereby acquiring a large proportion of the tendered amounts and blurring price discovery and competition. Therefore, at an early stage of the implementation of the PD system, the authorities might wish to assess the pros and cons of allowing large players in the primary auctions or of directing them to the secondary market. In the former case, the presence of large institutional investors at the primary auction should be specifically addressed in the primary auction design—for example, by limiting large institutional investors to noncompetitive bids, or adopting a uniform price auction. Also, the system should allow for indirect bidding (pretenders). The handling of orders through indirect bidding is generally done at very low or no cost.

Operationally, the issue of what group of institutions should be allowed to participate in the primary market will have to be determined in each country, taking into account, at least, some general principles: transparent selection rules and procedures, avoiding unfair advantages to the participants to the disadvantage of outsiders, coordinated supervision, ascertained financial and technical capabilities, and degree of sophistication of the domestic financial firms, in terms of financial instruments available and participation in various market segments.

In the agreement with primary dealers, the authorities might establish the right to **reopen the issue of a specific security** and sell at short notice, say one day, in auctions open to the primary dealer only, should the government find itself with an unexpected liquidity shortage. In these cases, the agreement should only require primary dealers to provide bids, but should not impose an underwriting obligation.[8]

[8]The government should make every possible effort to build its own reliable liquidity forecasts when planning the issuance of securities and drafting an agreement with primary dealers. Moreover, if the central bank is operating with indirect instruments, uncertainty about government liquidity inflows and outflows will make it much more difficult for the central bank to reduce interest rate volatility.

Finally, since one of the functions of primary auctions is to allow for price discovery so that the financing/liquidity/operational needs of the government can be met in the market, an auction allocation can take place only in a liberalized interest rate environment, with auction rules clearly supporting a competitive environment, while providing the primary dealers enough compensation for the underwriting obligation.

Obligations Related to Market Making and the Secondary Market

The secondary market can be distinguished in two segments: the wholesale market where financial institutions trade among themselves, and the retail market where financial institutions place government securities with retail investors. The liquidity and investment needs in the two segments can be quite different. Consequently, the authorities are in a position to negotiate different obligations for the same financial institution in the different segments. Also, the mix of obligations must be tailored to the overall market architecture; if secondary quote making is to be the centerpiece of the system, then firm quotes, holdings of inventories, and adequate turnover may be the key markers of the system.

A special type of function in the secondary market that primary dealers are sometimes called on to perform is to serve as counterparties to the monetary authority in its conduct of open market operations—buying and selling government securities, either outright or through repurchase agreements for the purpose of managing bank liquidity. In many countries, one of the incentives for being a primary dealer is to be included in the group of exclusive counterparties with the central bank in its open market operations. In a few countries, such as France and Sweden, two different groups of specialized intermediaries are selected: one to serve as exclusive counterparties for the central bank in conducting its open market operations, and the other group to support the primary market and operate as market makers in the secondary market. Poland, on the other hand, has a group of dealers selected to serve as counterparties for the central bank in its open market operations; but it has no primary dealer system for government securities.

In the wholesale market, another important general obligation is to **provide liquidity** in the market for government securities by ensuring a continuous trading presence. How stringent this condition is depends on circumstances related to government financing needs and the financial strength of primary dealers, from a minimal condition on presence in the market to specific conditions about quotes; this means that the provision of liquidity cannot be taken for granted.

Quotes on securities can be required to be two-way or not: they can be indicative or firm, and they can cover the entire range of benchmark issues, depending on the overall market architecture. A firm, two-way quote means that the primary dealer stands ready to buy and sell at the quoted prices a predetermined amount of securities. If the quote is indicative, it means that the financial firm has no obligation to buy or sell at that price. This can happen for several reasons—for example, in extremely thin markets or for nonbenchmark securities, the quoted price might be only notional and there might be no actual purchases or sales at that price; alternatively, the firm might want to retain price flexibility.[9] Quoting two-way prices and engaging in block trades in the secondary market can be key obligations for primary dealers related to market making, and imposing firm, two-way quotes may be a major requirement for primary dealers. In general the commitment of firm quotations is an integral part of the overall market architecture. In a number of countries—the Italian *Mercati Titoli di Stato* electronic system, for example—the commitment to bid is at the center of the electronic dealer system, where primary dealers are market makers. Hence, those countries that focus on a system of market makers would likely have a PD system with an obligation to quote firm prices.

The size of the spread between bid and asked prices reflects risks, operational costs, and possibly some dealer rents. The spread should be market determined and sufficient to induce participation, but at the same time it should not be so large as to indicate monopoly profits.

The authorities should also agree with the primary dealers on whether they **require quotes** on the whole range of securities or only on benchmarks. In this latter case, the authorities will define the benchmarks and the selection process for new benchmarks when issued. The authorities might induce specialization of the primary dealer by requiring quotation on certain issues or maturities. However, while requiring quotation of benchmarks is a standard requirement, requiring selected quotations should be handled carefully: in emerging markets certain segments of the government securities market can be very thin, so the primary dealers might face large demand swings or find themselves with a rather illiquid portfolio of securities. At first, the authorities should aim at overall support for government securities; only much later, a higher degree of sophistication could be required from primary dealers and investors, by moving toward specialized market segments.

The authorities might also require that primary dealers develop a **significant presence in the retail market**, if there is a perception that government securities might be in demand. The requirement that primary dealers operate also in the retail market (made up of smaller customers, generally individuals) is probably taken for granted in industrial countries and some emerging market countries, but in several developing countries this is an issue the authorities need

[9]When contacted, primary dealers should be willing to quote a firm price for a potential buyer or seller.

to analyze thoroughly before imposing primary dealers' obligations in this segment of the market. Operating in the retail market significantly increases costs for the primary dealers because the physical infrastructure for the provision of this service to the retail investor must generally be provided by the primary dealers. Consequently, the spread is usually larger in the retail market and the authorities might impose a limit on the divergence of the retail market spread from the wholesale market one. Again, the size of the spread must balance this increased cost with the need to avoid an unfair advantage for primary dealers. **Reporting obligations**[10] to the supervisory authority (ministry of finance, central bank, other agencies responsible for public debt management, securities and exchange board, stock exchange) are typically part of the primary dealer's agreement. Such an agreement usually includes reporting on market conditions, as well as on the primary dealer's operations (see Section E, "Supervision," below), and helps to evaluate developments in the market and in individual institutions. Given the large number of authorities interested, a division of reporting obligations should be clearly agreed upon, to avoid duplication. **Other obligations** that some countries have imposed include participation of primary dealers in calculating the local currency interbank rate and in providing government securities closing prices, as in the case of Singapore.

In enforcing these obligations in both the primary and the secondary market, there are some **practical issues** to be considered: in the case of developing countries, the authorities should also take into account the structural and operational difficulties that primary dealers might encounter in supporting the government or the central bank. Particular care should be taken to ensure that the secondary market actually develops, meaning that the authorities should not be too strict in requiring, for instance, narrow spreads or large transaction size. At the initial stages of implementation, the market tends to be highly volatile, increasing the risk of making losses, so primary dealers might need to be flexible on spreads and transaction size. Moreover, in the primary market, auctions might go undersubscribed, depending on the auction design: in this case the authorities should carefully evaluate whether to oblige primary dealers on subscribing to the residual part and they should certainly try to avoid selling at a lower price after the auction, because this would result in both an immediate loss for those who have bought at the auction and a loss of credibility for the institutional arrangement of the auction. Moreover, if the authorities are trying to develop the retail market, they should try to support primary dealers' efforts and limit their involvement in retail activity.

[10]On this specific point, see also the discussion on relations with the authorities in the previous section.

All countries surveyed reported that primary dealers must be active in the primary auctions, but while some, such as France, Portugal, and India, have a specific obligation to subscribe to a certain minimum percentage of auctioned securities, the majority of countries did not report specific underwriting obligations.[11]

Among the advanced economies in the survey, Belgium, Canada, Finland, France, Iceland, Ireland, Netherlands, Portugal, Singapore, Spain, and the United Kingdom require their primary dealers to have firm two-way quotes; Greece and Italy require only two-way quotes. Among emerging market economies in the survey, India and Mexico require firm two-way quotes; Hungary and Thailand impose two-way (but not necessarily firm) quotes; Argentina, Czech Republic, and Kazakhstan impose firm (but not necessarily two-way) quotes. Among developing countries surveyed, only Morocco imposes firm two-way quotes, while Armenia has two-way only and Ghana imposes firm quotes.

In several advanced economies, the requirement of being active in the secondary market, both wholesale and retail, is included in the selection criteria, but in other countries, where the government is developing the market for government securities, supporting market development can be a specific obligation, like it is in Argentina, Czech Republic, and Korea.

Table 3 provides a list of the existing obligations of primary dealers as reported by the 39 countries surveyed for this study, and Table 4 provides selected country experiences.

C. Privileges

Primary dealers may enjoy privileges or supporting arrangements arising as a counterpart to the obligations they assume; and they may benefit from other privileges related to the role itself. As a counterpart to the obligations that financial institutions assume in their role as primary dealers, they might enjoy some privileges in the primary and in the secondary market for government securities, as well as in their relationship with the authorities. The overall mix of privileges and supporting arrangements depends on the overall market architecture. The extent and design of these privileges should vary depending on

[11] We do not rule out the possibility that specific underwriting obligations might be in place in some countries, but this was not specified in the answers.

Table 3. Survey of Obligations of Primary Dealers

Bid in the auctions.
Quotation firm/two ways.
Reporting to the supervisory agency (central bank, ministry of finance, and/or other).
Providing the authority with market information and analysis.
Promotion of the debt among retail investors.
Specified percentage of the deposits in government securities held to meet secondary reserve requirement.
Minimum underwriting obligation, per unit of time or in terms of turnover.
Assisting in the development of the government securities market.
Participating in the fixing of interbank rates.
Providing government securities closing prices.
Participation in money market operations.
Compliance with prudential regulation.
Participation in research.

Source: IMF staff survey of national authorities (2001).

Note: The ordering of the items in Table 3 indicates the frequency—from higher to lower—of each reported item. The list of items reported shows some countries' practices and should not be interpreted as recommended.

Table 4. Obligations of Primary Dealers—Selected Country Experiences

Advanced Countries	
Austria	To bid in the auctions and to make firm quotes.
Belgium	To bid in the auctions; to make firm, two-way quotes; to report to the central bank; and to promote the debt.
Canada	To bid in the auctions; to make firm, two-way quotes; to report to the central bank; and to adhere to the obligations indicated in the Terms of Participation in Auctions for Government of Canada Securities Distributors. Also, all Government Securities Dealers (and by design, primary dealers) must agree to comply with Investment Dealer Association Policy No. 5, the Code of Conduct.
Finland	To bid in the auctions; to make firm, two-way quotes; to report to the central bank; and to sponsor the Finnish debt.
France	To bid in the auctions; to make firm, two-way quotes; to report to the Treasury; to perform an advisory role; and to promote the debt.
Greece	To bid in the auctions and to make two-way quotes.
Iceland	To bid in the auctions and to make two-way quotes.
Ireland	To bid in the auctions; to make firm, two-way quotes; and to report to the National Treasury Management Agency.

Table 4 *(continued)*

Italy	To bid in the auctions and to make two-way quotes. On the secondary market, only proposals for a minimum of five hours a working day will be taken into consideration. Consideration is also given to the bid-ask spread, number of securities treated and quoted, total amount exchanged, and comparison with other applications.
Netherlands	To bid in the auctions; to make firm, two-way quotes and to report secondary market turnover to the Dutch State Treasury Agency (DSTA); to act in the interest of the DSTA; and to participate in research.
Norway	To make firm, two-way quotes and to report to the central bank.
Portugal	To make firm, two-way quotes. Regulation No. 1/2001, Art. 18, also requires dealers to - bid regularly under normal market conditions and subscribe to a share not lower than 2 percent of the amount placed at the competitive phase of the auctions; - participate actively on the secondary market, ensuring liquidity; - participate as market maker, with no less than 2 percent of the market's turnover share; - keep a permanently updated page showing quotations for liquid treasury bonds in a specialized remote information system of widespread dissemination; - supply the information required for the monitoring of their activity in the secondary market and to check compliance with the provisions of this regulation; - respect all rules adopted by the Institute for Public Debt Management (IGCP) regarding the scope and object of the Regulation; - operate as privileged consultants to the IGCP in the monitoring of financial markets; - recommend improvements to the IGCP regarding any difficulty in performing some of the duties, namely in case of anomalous or extraordinary market conditions, and await the IGCP's consent of the change in the form of compliance, or of noncompliance, with any of the duties.
Singapore	To bid in the auctions, to report to the central bank, to provide liquidity in Singapore Government Securities (SGS) outright and to repo markets by making two-way quotes, to participate in SGS auctions and underwrite issued securities, to give feedback to the Monetary Authority of Singapore, to assist market development, to help fix interbank rates, and to provide closing prices.
Spain	To bid in the auctions; to make firm, two-way quotes; and to provide any information required by the Spanish Treasury concerning the public debt market and the primary dealer's trading activity in the market. Market makers are requested to send a monthly report about their activity in the primary and secondary markets.
Sweden	To bid in the auctions, to report to the central bank, and to contribute with good liquidity in the market.
United Kingdom	To make firm, two-way quotes with no obligation to quote to other primary dealers; to report to the central bank; and to report trades to the London Stock Exchange.
United States	To bid in the auctions, although the obligation to bid in the auctions is not contractual and the primary dealers are not necessarily expected to participate in every auction; to report to the central bank; to participate in the Federal Reserve's open market operations and other business activities, and to provide the Federal Reserve with market information and analysis.

Table 4 *(concluded)*

Developing Countries	
Armenia	To bid in the auctions with noncompetitive bids of less than 1 percent of the total issue; if dealers' noncompetitive bids exceed 1 percent, their competitive bids should be five times higher than the noncompetitive bids. Primary dealers are also responsible for making two-way quotes and reporting to the central bank.
Ghana	To bid in the auctions, to make firm quotes, and to report to the central bank. The banks must also hold a specified percentage of their deposits in government securities to meet the secondary reserve requirement.
Morocco	To bid in the auctions and to make firm, two-way quotes.
Emerging Markets	
Argentina	To bid in the auctions, to report to the central bank, to make firm quotes, and to maintain a minimum market share in the secondary market.
Brazil	To bid in the auctions and to report to the central bank.
Czech Republic	To bid in the auctions, to report to the central bank, to make firm quotes, to underwrite quarterly a certain amount of government bonds, and to order a certain amount of treasury bills each quarter.
Hungary	To bid in the auctions; to make firm, two-way quotes; and to report to the government debt agency.
India	To bid in the auctions; to make firm, two-way quotes; and to report to the central bank.
Kazakhstan	To make firm, two-way quotes; to report to the central bank; and to maintain a "normal" position according to Kazakhstan's prudential norms.
Korea	To bid in the auctions, to make two-way quotes, and to trade a minimum of 2 percent of total secondary market volume.
Mexico	To bid in the auctions, to make two-way quotes, and to report to the central bank.
Thailand	To make two-way quotes.

Source: IMF staff survey of national authorities (2001).

the weight of the obligations and their definition, and on the authorities' objectives. In particular, the privileges may be more like supporting arrangements that allow the primary dealers to perform their functions efficiently and to meet specific objectives of the authorities for market development. The extent and limitations of the privileges should also form part of the agreement with the authorities. The privileges that primary dealers are granted in the agreement can be seen as obligations for the authorities.

Other privileges and advantages are instead related to the role of primary dealers itself. This occurs because a formal (or informal) agreement with the authorities in support of liquidity needs of primary dealers by developing a securities market certainly confers a certain status on these financial institutions and enhances their credibility as sound agents with strong financial expertise. Moreover, primary dealers might derive an informational advantage by meeting regularly with the central bank or the ministry of finance. However, authorities should be especially careful not to provide market-sensitive information to primary dealers and not the general market, or otherwise violate competitive neutrality, especially with regard to information that could affect interest rates and market price, budget forecasts, and buyback plans. The most important type of information that primary dealers should be able to build on is the order flow in the market.

The authorities might decide to pay a commission for the services rendered by the primary dealers, but in doing so the authorities should not be providing a subsidy for the activity of the primary dealers. Commissions could be fixed or negotiated, but if they are put in place, they should be negotiated as part of the system. For instance, India has a pre-auction, which sets the size of the underwriting commitment and the commission for that commitment.

In the primary market, the most important privilege is related to the degree of exclusivity of access. Different forms are possible and not necessarily mutually exclusive:

- The strongest privilege is exclusive rights to bid at auctions. While such a format helps to ensure that participants are financially and technically strong, it can lead to collusive behavior when the number of primary dealers is small. This requires a careful choice in granting such exclusivity and careful supervision. The following countries have granted primary dealers an exclusive right to bid at primary auctions: Austria, Belgium, Czech Republic, Finland, Ghana, Greece, Iceland, Ireland, Hungary, Kazakhstan, Republic of Korea, Netherlands, Singapore, Sweden, and the United Kingdom.

- A weaker form of privilege is the exclusive right to bid at "second round" sales. Two cases can be distinguished; first, in situations in which there is underbidding or a shortfall at the auction, primary dealers can intervene to buy the remaining part; second, a specific amount can be set up in advance[12] for the primary dealers so that they have exclusive rights only on part of the auctioned securities, but are in competition with other institutions for the remainder. In general, the noncompetitive allocation is based on the average

[12]Termed "green shoe" in Mexico, "noncompetitive phase" in Portugal.

auction price of the competitive round. This privilege is granted in Argentina, France, Mexico, Portugal, and Spain.

- Primary dealers can be given exclusive rights to participate at tap sales, that is, for specific issues of government securities, as is done in Italy.

Other advantages in the primary market might include the following:

- Exemption from the requirement to submit payment at the time of bidding.

- The right to submit bids closer to the cutoff time, for example, by telephone or by any automatic remote link. This right can confer a substantial commercial advantage over competitors.

- Exclusive access (for dealing only or for dealing and viewing) to the screens of inter-dealer brokers. This might help primary dealers assess the price at which to bid at auctions.

Additional advantages are related to the secondary market:

- Access, sometimes exclusive, to the trading system of inter-dealer brokers. Because only dealers trade on this system, primary dealers can take on or unwind positions without disclosure knowing the approximate credit rating, that the counterparty in any trade will be another primary dealer, and that the trade will be honored. This allows primary dealers to actively manage their positions.

- Accessibility to a broader set of operations than for other traders. Particularly relevant is the option to borrow stock and to take short positions, to facilitate their market-making function.

- The privilege of becoming the exclusive counterparty for operations with the public debt manager, an opportunity granted in Argentina and Belgium.

In their relationship with the central bank, primary dealers may also enjoy additional privileges or supporting arrangements that permit them to carry out their functions more effectively:

- The central bank might grant primary dealers in the market for government securities exclusive counterparty status in its monetary policy operations. In this case, the primary dealers secure a privileged position in both government securities and money markets. The following countries grant such a privilege: Armenia, Brazil, Canada, Ghana, India, Singapore, Thailand, and the United States.

- Primary dealers might have access to a short-term facility from the central bank on a secured basis, if market financing is not readily available, subject to maximum amounts related to the borrower's capital. The following countries grant such a privilege: Canada, India, and Mexico.

- Primary dealers might be supported by having the privilege to obtain stock (possibly, through repos) from the authorities, if their own portfolios lack relevant stock, or market-making obligations have left the primary dealers short of specific stock. From a market architecture point of view, countries that have poorly developed or segmented funding markets would have substantial lines available to help facilitate the dealer's market-making function. This facility is available to primary dealers, for instance, in Ireland, Mexico, Singapore, and the United States.

Indeed, a privileged relationship with the debt manager can give the primary dealers status in the financial community. In addition, these institutions can expect to be consulted from time to time on issues related to market development, market structure, market infrastructure, regulatory procedures, and code of conduct, or operational issues like market desire for specific issues or maturity structure.

Another important privilege or supporting arrangement that should be carefully designed is the provision of liquidity facilities to primary dealers: provision of liquidity, in addition to the market and the usual standing facilities available to all banks, should be at market rates or slightly above that level, and departures from this principle should only be motivated by exceptional reasons. This would show that the central bank is supporting the primary dealers' market-making role without distorting price signals from the market. A delicate aspect of the relationship concerns the support primary dealers can receive from the debt manager for the central bank or the ministry of finance with respect to making available stock from its own portfolio, usually through repos, at a cost that should not amount to a subsidy to the primary dealer and should not undermine the interbank market.

In applying these conditions to developing countries, a careful assessment of the privileges and supporting arrangements should be made. For example, granting exclusive bidding rights at auction can be of little relevance in an infant financial market with only a handful of banks. However, as the financial market grows, excluding some agents from auctions can give enough incentive to primary dealers to continue in their role, while at the same time helping build a secondary and retail market. Therefore, the potential disadvantage of having a more limited number of players should be weighed against the advantage of stimulating more effective players on the secondary and retail markets. If, however, the authorities decide to extend participation to institutions other than banks, settlement and supervisory problems may arise that have to be addressed before the system becomes operational.

Table 5. Survey of Privileges of Primary Dealers

Exclusive or privileged access to primary auctions.
Exclusive or privileged counterparty for central bank's open market operations.
Exclusive or privileged access to noncompetitive bids.
Information from and consultation with the government debt management agency.
Borrowing privileges with central bank, including repurchase agreements.
Exclusive or privileged counterparty for operations with public debt manager.
Participation in a second round of primary auctions.
Underwriting commissions.
Usage of the title "primary dealer."
Extra time to submit bids at bond auctions.
Privileged counterparties of the government debt issuer in other instruments (such as swaps and foreign currency issues).
Tax exemption on securities trading income.
Authorization to bid for the entire issue, while other dealers can bid only for part of the issue.
Exclusive access to stripping and reconstitution of bonds.
Preference in the formation of syndicates and in other forms of placement of government debt.

Source: IMF staff survey of national authorities (2001).

Note: The ordering of the items in Table 5 indicates the frequency—from higher to lower—of each reported item. The list of items reported shows some countries' practices and should not be interpreted as recommended.

Table 5 provides an indicative list of the existing privileges granted to primary dealers, as reported by the 39 countries surveyed for this study; and Table 6 provides selected country experiences.

D. Foreign Institutions as Primary Dealers

The main arguments in favor of letting foreign institutions operate as primary dealers in a country are increased financial intermediation, greater availability of capital for credit, greater expertise, and increased competition. These are quite powerful arguments that must be weighed, mainly in developing countries, against regulatory capacity concerns and infant industry arguments. Specifically, if the regulatory framework and the authorities' supervisory capacity are somewhat limited, extreme care should be taken when letting foreign institutions operate in the market for government securities. Also, if the authorities want to attract foreign banks, it is important to conform to international standards as much as possible. However, foreign banks might act more opportunistically than local

Table 6. Privileges of Primary Dealers—Selected Country Experiences

Advanced Countries	
Austria	Exclusive access to primary auctions with noncompetitive bid option.
Belgium	Exclusive access to primary auctions and counterparty for operations with the Treasury.
Canada	Exclusive counterparty rights for central bank's open market operations and borrowing privileges with central bank.
Finland	Exclusive access to primary auctions and to the Treasury's repo facility.
France	Regular meetings with the Treasury; most frequent but not exclusive counterparty of the Treasury.
Greece	Exclusive access to primary auctions and to liability management.
Iceland	Exclusive access to primary auctions.
Ireland	Exclusive access to primary auctions and exclusive counterparty rights to repurchase and reverse repurchase operations of the National Treasury Management Agency, and bond-switching facilities.
Italy	Exclusive access to noncompetitive taps within 10 percent of the total amount offered by the Treasury in the auction. Option to participate, in an exclusive way, in buy-back operations drawn on the "ad hoc" Government Sinking Fund.
Netherlands	Exclusive access to primary auctions. The obligation of making available two-way quotes (market making) applies to primary dealers only. Primary dealers may use the title "primary dealer" for Dutch State Loans. It is increasingly considered a privilege by both primary dealers and nonprimary dealers.
Norway	Borrowing privileges with the central bank.
Portugal	According to Regulation No. 1/2001, Art. 17, specialized primary dealers have a right to - exclusive access to the noncompetitive phase of bond auctions; - preference in syndicates and in other forms of placement of government debt; - access to Institute for Public Debt Management facilities to support the market, namely the repo window; - preference in carrying out transactions related to management of public debt; and - privileged hearing in matters of common interest.
Singapore	Exclusive access to primary auctions and counterparty rights for central bank's open market operations, tax exemption on Singapore Government Securities (SGS) trading income. Only primary dealers can bid for SGS at auctions. The Monetary Authority of Singapore (MAS) holds regular meetings with the primary dealers to discuss market issues and conducts money market operations through these dealers only. Access to the MAS repurchase facility, which enables primary dealers with short positions to bid for specific SGS issues offered by the MAS in exchange for other SGS issues they have. This facilitates primary dealers' market-making activities.

Table 6 *(continued)*

Spain	Advantage of an extra half hour for the submission of bids at bond auctions, exclusive access to the second round in auctions, exclusive access to stripping and reconstitution of bonds, privileged counterparty of the issuer in its overall debt-management activity (swaps, foreign currency issues, and similar securities), and access to regular meetings with the Treasury.
Sweden	Exclusive access to primary auctions and counterparty to central bank's open market operations.
United Kingdom	Exclusive access to primary auctions and participation in consultation meetings, secondary market dealing with the central bank.
United States	Because primary dealers are exclusive counterparties to central bank's open market operations, dealers' customers can participate through a primary dealer. Also, while dealers do not have borrowing privileges (for funds) with the central bank, they do have the ability to borrow securities from the central bank's portfolio during its daily securities lending operation.
Developing Countries	
Armenia	Exclusive counterparty for central bank's open market operations. Primary dealers are allowed to bid for the entire issue, while other dealers can bid only for part of the issue. Only primary dealers are allowed to have noncompetitive bids.
Ghana	Exclusive access to primary auctions, and exclusive counterparty rights to central bank's open market operations.
Morocco	Access to the possibility to submit noncompetitive bids up to 20 percent of the amounts sold at weighted-average interest rate.
Emerging Markets	
Argentina	Exclusive counterparty to the Secretariat of the Treasury's open market operations, participation in a second round of primary auctions, and possibility to bid for noncompetitive tranches.
Brazil	Exclusive counterparty to the central bank's open market operations.
Czech Republic	Exclusive access to primary auctions.
Hungary	Exclusive access to primary auctions and information and consultation with the government debt management agency.
India	Exclusive counterparty for the central bank's open market operations, borrowing privileges with the central bank, and underwriting commissions.
Kazakhstan	Exclusive access to primary auctions.
Korea	Exclusive access to primary auctions and noncompetitive bidding.

Table 6 *(concluded)*

Mexico	Borrowing privileges with the central bank. Primary dealers also have access to a "green shoe" facility where as a group they can acquire up to an additional 20 percent of the fixed-rate securities offered in the primary auction at the average price that resulted in the auction. However, a prerequisite to access to the facility is to have won part of the primary auction.
Thailand	Exclusive counterparty to the central bank's open market operations.

Source: IMF staff survey of national authorities (2001).

banks, having less of a sense of loyalty to the local financial community. Branches of foreign banks, and especially those banks operating in countries with weak supervisory authorities and incomplete or inadequate legal and corporate governance framework, might—but by no means must—be allowed into the PD system after the following has taken place:

- The local authorities have established contacts with their counterparts in the foreign country.

- A careful review of the foreign country's supervisory standards and compliance has been undertaken by the local authorities, if there is uncertainty about the quality of supervision in the foreign country.

- The foreign legal and corporate governance framework has been assessed.

- The foreign bank's accounts have been certified by an international accounting firm, with no conflicts of interest in the foreign bank's country of origin.

In view of these regulatory concerns, the authorities might want to require foreign banks to establish a fully incorporated local subsidiary company, with the parent company committed to support its activities.

E. Supervision

The supervision of primary dealers is an essential part in the development of a market for government securities, because primary dealers constitute a core group of financial institutions available for the liquidity needs of the government and, in some cases, for the conduct of monetary policy. From a broader perspective, the regulation and supervision of primary dealers are normally based on the 30 principles established by the International Organization of

Securities Commissions (IOSCO), which are implemented under the relevant legal framework. The principles are based on three objectives of securities regulation:

- the protection of investors;
- ensuring that markets are fair, efficient, and transparent; and
- the reduction of systemic risk.[13]

In establishing a system of primary dealers, the authorities must define what types of business, besides market making in government securities, primary dealers are allowed to undertake and what other supervisory authorities are involved besides the one with specific competencies and responsibilities for the primary dealers' functions. From this first step, the authorities should be able to determine what other institutions and markets might have negative spillover effects from the failure of a primary dealer. The supervisory authority should therefore also prepare regulations to achieve the above objectives or invite the competent body to legislate on the issues as soon as possible. A proper legal framework is a necessary, although not a sufficient, condition for good supervision.[14]

Supervisory authority. It is important to establish at the onset of the system which institution has supervisory authority for the specific primary dealers' functions. The main candidates are the central bank, the ministry of finance, or the regulatory authority in charge of capital markets (which could be part of the ministry of finance). The agency selected to supervise primary dealers may in turn rely on other supervisory agencies for some aspects of supervision. For example, if supervision of primary dealers is entrusted to the ministry of finance, it may rely in part on the central bank in its capacity as regulator of banks, particularly for prudential requirements. Similarly if a central bank is entrusted with supervision of primary dealers, it may rely on other regulators in its supervision of certain aspects of nonbank primary dealers.

If supervision is entrusted to the central bank and it conducts monetary policy using government securities, it is important that the primary dealers' supervision department is clearly distinguished from the monetary policy department, that clear rules and procedures are established, and that lines of communication with management are kept separated between the two departments. Primary dealers should not feel that the information they are providing could be used to their

[13] See IOSCO (1998).

[14] For a more extensive discussion of the legal and regulatory framework, see IMF and World Bank (2001b), Chapter 9.

disadvantage or, conversely, that the central bank is giving an unfair advantage to primary dealers over other financial institutions. However, if supervisory authority is vested in a regulatory body different from the central bank or the ministry of finance, that body should be well acquainted with the general aims and procedures of monetary policy and the objective of the government in establishing a network of primary dealers.

One particular issue deserves attention: if access to the auction is not restricted exclusively to primary dealers, special care should be taken that the other institutions having access to the primary market for government securities are not treated differently than primary dealers, and that different supervisory authorities coordinate their requests to and requirements of the different financial institutions.

Supervision. The supervisory body should set and enforce prudential standards, risk management and internal control standards, and standards governing business and market conduct. Prudential oversight should allow the authority to monitor the primary dealer's capital position and ensure that dealer failures do not unduly disrupt the market. Moreover, clear rules should be established for position risk and credit risk assessment, based on international standards to ensure comparability. The supervisory regime also includes a detailed list of variables to be provided at established intervals (reporting frequency), as well as the data transmission and supporting infrastructure. If institutions other than banks are allowed to undertake business using government securities, and if these institutions are supervised by different bodies, the principles and the techniques for the measurement of capital and risk should be broadly the same to ensure a level playing field for different institutions and proper assessment of risk. The primary dealer should be subject to appropriate segregation rules so that customer assets are not used to support the primary dealer's proprietary trading (or other) operations.

Table 7 provides an indicative list of the institutions responsible for supervision of primary dealers and enforcement of their obligations, as reported by the 39 countries surveyed for this study. Historical circumstance and stage of development are likely to have played a role regarding which institution is given primary responsibility for supervision of the primary dealers. In situations where most or all of the primary dealers are banks, there may be a tendency to assign responsibility to the central bank. Or, where the secondary market is relatively well developed, the regulatory agency responsible for regulating the securities market may also be assigned oversight of the PD system.

Table 7. Institutions Responsible for Supervision and Enforcement

Ministry of Finance/Treasury	Central Bank	Other Institutions
Argentina	Armenia	Austria: Federal Financing Agency
Armenia	Brazil	Canada: Investment Dealer Association
Belgium	Canada	Ghana: Securities Regulatory Commission
Canada	Czech Republic	Greece: Public Debt Management Agency
Finland	Ghana	Hungary: Government Debt Management Agency
France	Greece	Iceland: National Debt Management Agency
Greece	India	India: Securities and Exchange Board of India
Iceland	Mexico	Ireland: National Treasury Management Agency
Italy	Morocco	Kazakhstan: National Security Commission
Kazakhstan	Norway	Korea: Stock Exchange
Korea	Singapore	Portugal: Institute for Public Debt Management
Mexico	Sweden	Sweden: Finance Supervisory Institution
Morocco	Thailand	United Kingdom: Financial Services Authority
Netherlands	United States	
Portugal		
Spain		
United Kingdom		
United States		

Source: IMF staff survey of national authorities (2001).

Code of Conduct. In setting up a PD system, another important document is a Code of Conduct that defines the principles and procedures for financial institutions operating in the secondary market for government securities.[15] As such, all government securities dealers must comply with this Code. The document should not be specifically drafted for the PD system, but should be part of the framework regulating the market. It should describe the standards for trading in the wholesale domestic debt market by the dealers and their affiliates, and by the customers and counterparties with whom they deal. The purpose of this document is to promote public confidence in the integrity of the government securities market and to encourage the maintenance of active trading in such market. The Code should address the following issues:

[15]See International Monetary Fund and World Bank (2001a).

- ***Firm standards and procedures.*** Policies and procedures of financial institutions acting as dealers should be written and approved by the institutions' Board of Directors and implemented by management. They should also indicate responsibility and control mechanisms, while ensuring the confidentiality of all dealings in the market.

- ***Disclosure and reporting.*** This regards the "know-your-client" requirement and being able to give appropriate advice to clients. Also, conflict-of-interest policies and implementation procedures must be defined.

- ***Market conduct.*** This issue requires members to behave according to ethical standards and public interest. It also calls for members to reject manipulative practices, bribes, and criminal and regulatory offenses. Dissemination of false information or inactively witnessing its spread is clearly forbidden. The issue of market conduct also requires members to familiarize themselves with market conventions and terminology, and ensure that proper understanding is reached when dealing with other institutions or customers.

- ***Surveillance and enforcement.*** This issue specifically points to what compliance procedures and surveillance procedures apply. This latter should also include the reporting of important operations, large exposures, unusual differentials in the traded yield, and all that could upset the smooth functioning of the market. Lastly, sanctions should be defined (and applied) for all those who do not uphold these matters.

F. Other Operational Considerations and Legal Aspects

Agreements Between Authorities and Primary Dealers

From a legal viewpoint, setting up a system of primary dealers can take different forms: either informal (verbal); a written understanding in the form of, say, a Memorandum of Understanding (MOU); or a legal document. Countries have a variety of arrangements, ranging from very informal agreements (between the authorities and the primary dealers) to drafting legally binding documents. In general, in view of the nature of the arrangement (one that outlines mutually agreed-upon understandings and performance objectives) and as markets evolve rapidly and priorities would naturally change over time, it is advisable that such arrangements be embodied in an MOU, as opposed to a legal agreement. An MOU would be superior to an informal arrangement because it would promote greater transparency as to the arrangements and expected functioning, and set forth the criteria for entry and exit, while keeping the arrangement adjustable to change because MOUs can easily be revised.

It is always preferable, for both transparency and clarity of roles, to draft an MOU that clearly states the **objectives and the strategy** of the government in setting up the market (liquidity management, financial deepening, and monetary policy operations), the **selection criteria** to become a primary dealer, the **obligations** of the financial institution and of the authorities, the **privileges** of the primary dealer, and if necessary a summary set of rules applicable to auctions of government bonds. Moreover, the document should also clarify the **supervisory framework**, leaving aside the details that must be prepared separately and approved in the implementation stage of the system. Drafting an MOU would also help to assess consistency between the stated objectives and strategy, in addition to the overall design of the PD system, with specific obligations for the authorities. For example, it is important to avoid the problem of selecting a primary dealer strategy if the government is not committed to market-based mechanisms and transparent debt management practices. Also, the government may be committed to consult with the primary dealer group before making significant changes to the debt strategy. Elements of these commitments can be included in the MOU. Other areas that the MOU could usefully elaborate on include a trial period, the evaluation process, and monitoring.

The authorities might want to establish a **trial period** before a financial institution is awarded the status of primary dealer, and determine under what conditions the trial period could end, with final status being granted or not after the end of this period (that is, the document could specify that the trial period is a "phase-in" period where transitional rules apply, for example, regarding the amount of traded securities, participation at auctions, and so forth). The **evaluation process** for the primary dealer's status should also be included, with a set of performance criteria and evaluation timing being specified.

These performance criteria could easily be the same as the ones necessary for continuous **monitoring**. This idea is important and complementary to the normal supervisory role; through monitoring, the authorities need to ensure that the requirements for the primary dealer status are actually met. The authorities might monitor on a daily basis and rank the primary dealers at review time. At this point, there are at least two options: the authorities might define a minimum threshold for each performance criterion, with primary dealers not meeting one or more of them having primary dealer status suspended and other institutions meeting these criteria being allowed in, without fixing a constant total number of primary dealers. Alternatively, the authority might want a fixed number of primary dealers, with the last in the ranking being eliminated while a new institution becomes a primary dealer. This system would allow a rotation in the role of counterparty to the public debt manager and stimulate competition. This procedure has recently been established in Mexico.

To strengthen contacts and communication between the debt manager and primary dealers, the authorities might require potential primary dealers to submit a "business plan" detailing how they are going to operate to promote and sell government securities. This could also be helpful in the selection process and in the monitoring of performance. In addition, it may be helpful to set up an advisory board made up of representatives from the primary dealer group, major investors, and the relevant public agencies. The board would meet on a regular basis, and also on an occasional basis as needed.

Organization of Responsibilities

Organization of responsibilities for government debt varies among countries and markets.[16] If there is a unified debt manager, it is usually in charge of the arrangements in the primary and the secondary market (see, for example, Sweden). Under other arrangements, the ministry of finance is in charge of the primary market, while the central bank might assume the leading role in the secondary market. Whichever the arrangement, it should be transparent and responsibilities clearly defined, and coordination must be ensured among these institutions. As far as the PD system is concerned, it matters less who establishes it, but it should be clear which is the responsible institution. A continuous flow of communications among the ministry of finance, the central bank, and primary dealers is essential. To better perform these functions and also to provide increased coordination, an association of dealers might be put in place, which would then adopt a Code of Conduct (see above), or at least an association of primary dealers, as long as this is not detrimental to competition.

Transparency

Transparency refers to the availability of full, accurate, and prompt information to the public. In the current context two aspects of transparency are especially relevant: (1) those concerning institutional objectives, responsibilities, arrangements and operating procedures; and (2) those about market prices, transactions volumes, and market position. With respect to the former, the *Guidelines for Public Debt Management*, recently established jointly by the IMF and the World Bank, call for transparency and accountability on the part of institutions involved with debt management policies and operations. In particular, Section 2.2 states, "Materially important aspects of debt management operations should be publicly disclosed."[17] This would include arrangements and agreements with primary dealers governing their primary and secondary market operations. The authorities should also develop a clear timetable for bond issues detailing amounts and maturities. This will force the authorities to take seriously the budget exercise and to forecast as accurately as possible their own financing needs.

[16] See also International Monetary Fund and World Bank (2001a).

[17] See International Monetary Fund and World Bank (2001a).

In addition, the *Code of Good Practices on Transparency in Monetary and Financial Policies*, adopted by the IMF, calls for public disclosure of the central bank's relationships and transactions with counterparties in its monetary operations and in the markets where it operates.[18]

With respect to market transparency, information about prices at which market participants are willing to transact is central to efficient price discovery. In addition, relevant information may include post-trade price and volume and identity of the market intermediary or client. Moreover, there is an inherent risk in setting up an inner ring of institutions with an oligopolistic access to auctions and information. The authorities should balance this aspect with the need to keep the market as transparent as possible for the ordinary investor.

Transparency in the context of markets is not without its costs. For example, if it becomes known that a primary dealer with a substantial position in a particular issue wants or needs to unwind it, this information can move the price against the dealer. Therefore, issues of transparency must be carefully weighed against all other considerations and then strike a sensible balance. In particular the following considerations usually apply. The primary dealer usually has reporting obligations—for example, to the stock exchange, the central bank, or the debt management agency. However, the primary dealer may be given exclusive access to the screen of the inter-dealer brokers and use these brokers to trade among themselves without disclosing their identity or their positions. Other special arrangements might include delays in disclosing larger transactions.

[18]See International Monetary Fund (1999).

CHAPTER

8 Evidence from the Survey

In April 2001, a survey questionnaire on primary dealers was sent to 47 countries. Of the 39 respondents, yielding a turnout rate of about 83 percent, 20 are advanced economies, 13 are emerging markets, and 6 are developing countries.

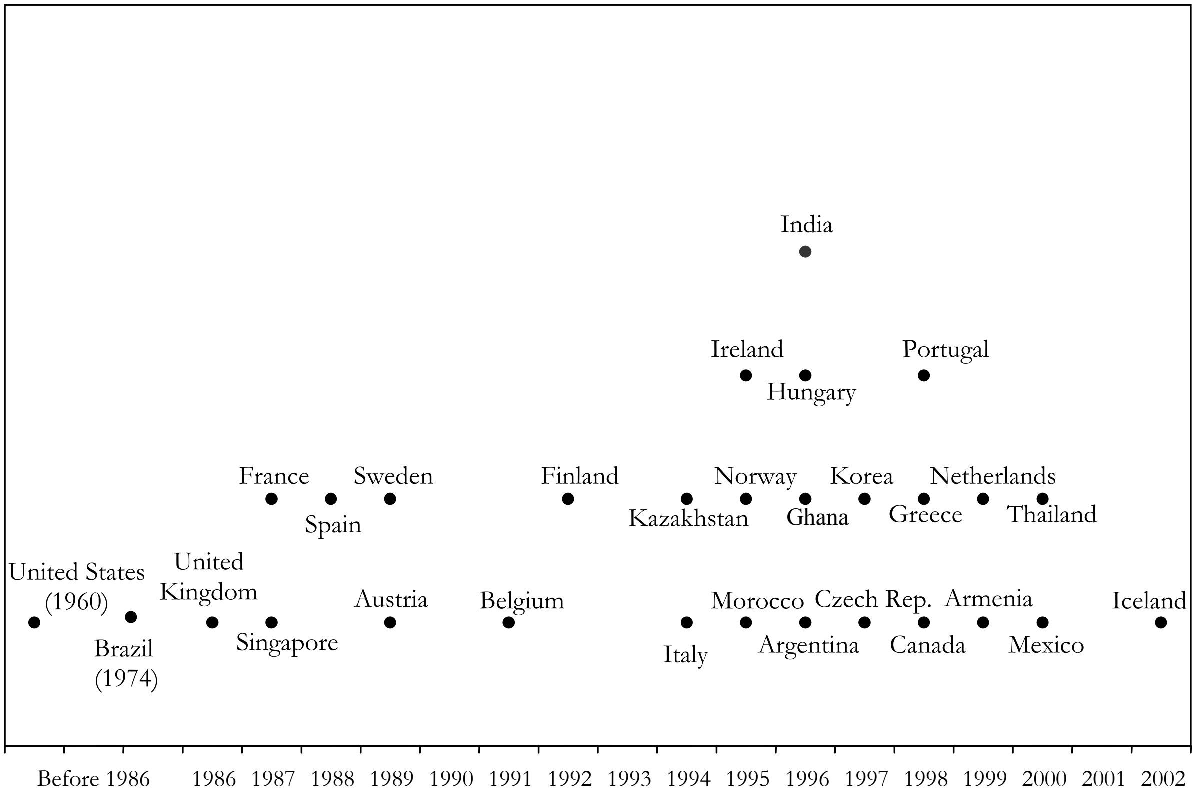
Among the respondents, 29 have primary dealers and 10 do not. Fourteen introduced primary dealers after 1995 (Figure 1), indicating a relatively recent trend in establishing primary dealers, but also indicating a relative degree of satisfaction with primary dealerships. Among the countries included in the survey that have not established a PD system, three are advanced economies (Australia, Germany, and New Zealand), four are emerging markets (Chile, Indonesia, Latvia, and Poland), and three are developing countries (Kenya, Mauritius, and Saudi Arabia).[19]

Countries with a system of primary dealership have a wide range of public debt/GDP ratios, but most of the countries without a PD system are at the lower level of the ratio. Figure 2 relates the presence of a PD system with the size of debt relative to GDP in the initial year of primary dealership.

Fourteen (or 36 percent) of the respondents perceive a link between the size of public debt and the desirability of having a PD system. Specifically, among advanced economies nine of the respondents think that there is a relationship between the size of public debt and the desirability of primary dealers, namely Belgium, Canada, Finland, Greece, Italy, Norway, Singapore, and Spain, with Australia agreeing only for small market size. Two share this view among emerging markets (India and Poland) and three among developing economies (Kenya, Mauritius, and Saudi Arabia).

[19]Informal primary dealerships might have been in place for some countries before formalizing the arrangement. Year of establishment of a PD system, indicated in Figure 1 as reported in the survey of national authorities, might therefore differ, depending on whether a formal, as opposed to factual, interpretation is adopted and on country-specific factors.

Figure 1. Year of Establishment of a Primary Dealer System

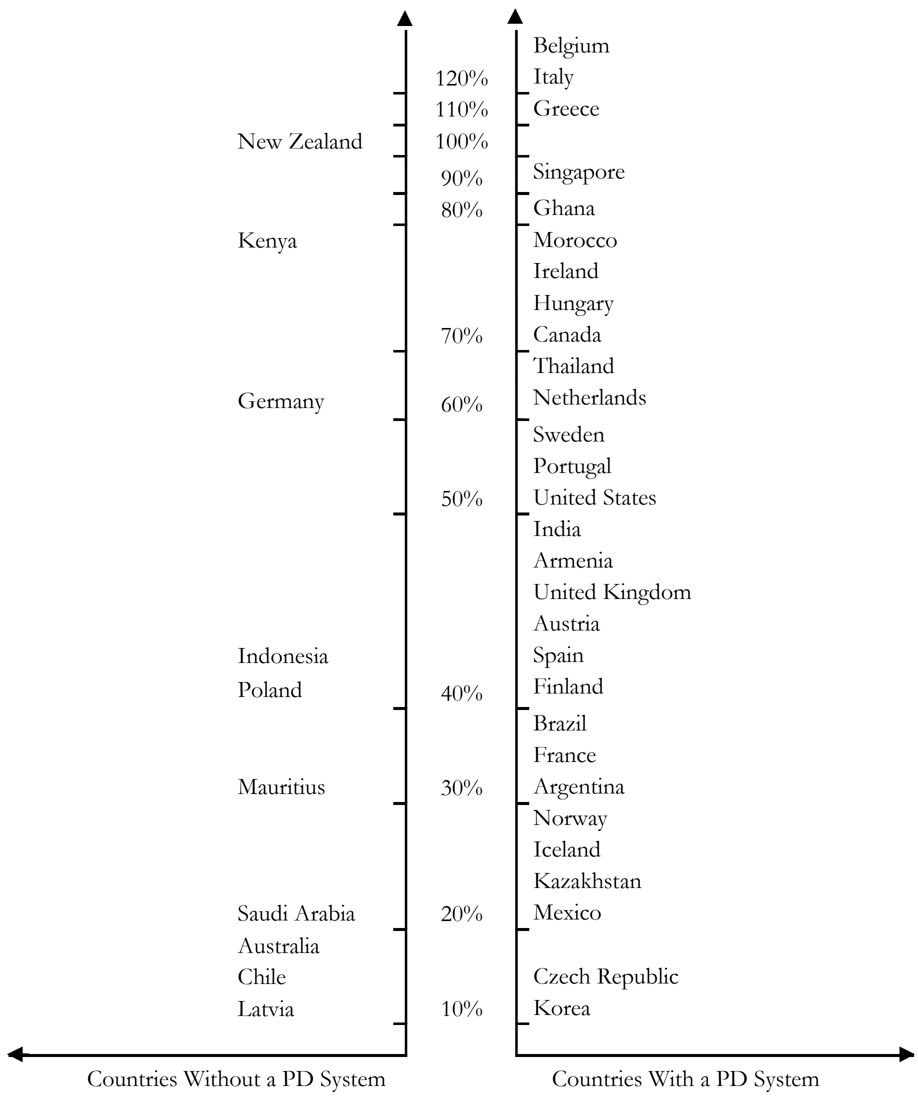


Source: IMF staff survey of national authorities (2001).

A. Reported Advantages and Disadvantages

In reporting the most important advantages mentioned in the survey responses, we can distinguish between the primary and secondary market. In the primary market, several countries (Armenia, Australia, Canada, Ghana, India, Italy, Kenya, Spain, and Thailand) mentioned that a PD system improves the coverage or underwriting of the auction, and some pointed out the support that the debt manager can gather with professional market information and market-tailored securities (Hungary, Italy, Morocco, Netherlands, and Poland). In regard to the secondary market, most countries mentioned improved market liquidity; and Canada, Iceland, India, Ireland, Korea, Norway, Singapore, and Thailand mentioned the creation of market-making activities. At a more general level an important contribution is the development and proper functioning of the secondary market that primary dealers can help ensure, a point made by Australia, Canada, Chile, Hungary, Indonesia, Mauritius, Saudi Arabia, Singapore, and Spain.

Figure 2. Debt-to-GDP Ratio of Countries With and Without a Primary Dealer System, 1999



With respect to monetary operations, Brazil, India, Kenya, Thailand, and the United States mentioned that the presence of a stable set of counterparties of the central bank facilitates the implementation of monetary policy (for those countries where primary dealers in government securities coincide with central bank counterparties for monetary operations) (see Table 8).

Table 8. Survey of Advantages of a Primary Dealer System

Advanced Countries	
Australia	Can boost liquidity and development of the market. Primary issuance can be underwritten (to some extent).
Austria	Provides permanent services.
Belgium	Reaches additional investors; can focus on placing and trading of debt, compensated by special rights.
Canada	Ensures a minimum level and quality of coverage at auction regardless of market conditions. Maximum auction limit and net position reporting act to prevent most squeezes. Market-making responsibilities enhance the liquidity and proper functioning of the Government of Canada securities market.
Finland	Committed sales force, research, distribution of government debt.
France	Decreasing market and refinancing risk; knowledge of the market; capacity for innovation; access to a wider sales force; and better promotion of the debt.
Germany	No comment.
Greece	No comment.
Iceland	Four market makers are now, together with a primary dealer, obligated to take part in auctions and to give two-way quotes within a determined range. This leads to a better market price and increased price formation in the secondary market, and enhances the treasury's access to the market. Turnover in the secondary market has increased.
Ireland	Reduces the cost of borrowing by providing a continuous two-way liquid market in government bonds; creates certainty in secondary market; eliminates illiquidity premium costs; allows debt to be restructured; acts as sounding board for changing debt strategy; facilitates closer organized contact with the investors.
Italy	Full and constant coverage of auctions. Better knowledge of market conditions in order to improve the issuance strategy in terms of cost of funding reduction and financial risk control. Higher liquidity of bonds on the secondary market. Availability of a skillful advisory support in building and following the debt management policy. Possibility of being put in contact with a much higher number of investors in order to capture at any moment convenient issuance opportunities. Availability of competent support in designing market-tailored securities.
Netherlands	Establishes a core group of banks that compete to buy the issuer's bonds, provides information on market movements and trends.
New Zealand	No comment.
Norway	With two-way quotes the market always has price information, and better liquidity.

Table 8 ***(continued)***

Portugal	The issuer gains access to a permanent distribution channel of debt, both domestically and internationally; a permanent secondary market; more visibility with final investors (especially foreign ones).
Singapore	Plays a critical role in facilitating the growth and development of a young bond market with a small and limited investor base, for the following reasons: - having a group of PDs committed to making two-way prices helps provide a minimum level of liquidity that is a precondition for attracting investors into the market; - foreign PDs that are key participants in developed bond markets bring with them knowledge and expertise, which can help speed the growth and development of the bond market; and - foreign PDs with a global client base would be committed to attracting their investor clients to the developing bond market.
Spain	Allows for a broad and efficient secondary market for government securities. With respect to the primary market, PDs ease the allocation of new issues.
Sweden	In order to have some guarantee of providing good liquidity, PDs are the best alternative. For the moment, the Swedish National Debt Office is paying fees on bonds, but not on t-bills. Some countries have systems include fees to the PD.
United Kingdom	More liquid market; easier to be transparent; easier auctions and settlement; reduced credit risk monitoring; easier distribution of securities.
United States	Facilitates the implementation of monetary policy by having a stable set of counterparties that are obliged to participate in open market operations and other central bank business.
Emerging Markets	
Argentina	Ensures the allocation of an important portion of public debt. It also specializes financial institutions dedicated to local market.
Brazil	Helps the central bank in its function of keeping the market informed about the implementation of the monetary policy. Assists in the execution of open market operations (outright operations and repurchase agreements) aimed to adjust the day-to-day needs to add or drain reserves.
Chile	Better information and development of secondary markets; more liquid and deeper market for our debt instruments.
Czech Republic	Stable structure of counterparts; easier administration and communication with market; transparent and reliable channel for cash and securities distribution; higher probability to sell securities.
Hungary	Secured base for sale of government securities; supports the secondary market of government securities; direct connection to and information exchange with market actors.
India	Underwriting and market-making abilities exclusively in government securities market will be developed. Improved liquidity for government securities. Open market operations could be effective and operationally simpler once PDs become exclusive counterparties for central bank's open market operations.
Indonesia	Can develop secondary market for government bonds and create market liquidity.

Table 8 ***(concluded)***

Kazakhstan	It is easy to control and systemize primary market.
Korea	Reduces the cost of government bond issue because a government does not have to pay underwriting fees; strengthens the demand base of the government bond; strengthens the stability of bond market by establishing leading market makers.
Latvia	Generates increase in liquidity and reduction in margins.
Mexico	Offers increase in liquidity to the market.
Poland	There are several advantages, including - reliability of financing state budget needs, even in single currency environment; - liquidity and transparency of the government securities market; - cost-effective financing; and - the exchange of information about market and issuer policy.
Thailand	Effective channel for conducting open market operations; has active market makers to enhance the liquidity in the secondary market; ensures successful outcome in the primary market auction.
Developing Countries	
Armenia	Better participation in the auctions; higher liquidity of government securities market.
Ghana	Ensures maximum participation in the auction. Allows relatively more market competition. Allows for a relatively vibrant secondary market.
Kenya	Provides a smooth transition from a direct to a fully market-based system; produces increased efficiency in the auction process and open market operations; provides secure maximum participation in auction of government securities; improves functioning of primary markets and terms of government borrowing; enhances liquidity in the secondary market; brings about greater competition and leads to cheaper dealing costs in the secondary market.
Mauritius	Activates secondary market for treasury bills. Enables buyers and sellers to transact efficiently at prices reflecting fair values.
Morocco	Offers organization of the bond market, promotion of treasury bills, and exchange of information on available bids as well as the price levels at which the investors are willing to subscribe.
Saudi Arabia	Enhances market efficiency and liquidity along with creating active secondary market.

Source: IMF staff survey of national authorities (2001).

The strongest disadvantage of having a PD system that most countries noticed is the potential distortion of competition and the creation of uneven playing fields, giving an unfair advantage to some market participants (lack of competitive neutrality, constrained contestability, and likelihood of conservatism). Canada therefore stressed the need for regular monitoring and Saudi Arabia for regulatory guidelines, while Mexico underlined the importance of a careful balance between obligations and privileges. Brazil mentioned potential informational asymmetries, while Italy noticed the risk for the debt manager to be influenced by views that tend to represent the interest of the primary dealers. Indonesia pointed out that if competitive behavior is not assured, price formation might not lead to a competitive market price. The United States noted that the official designation of "primary dealers" could be (erroneously) viewed as granting a special status or guaranteeing creditworthiness.

On the other side, France, Iceland, Kazakhstan, Korea, Netherlands, and Spain indicated no disadvantages of a PD system (see Table 9).

Table 9. Survey of Disadvantages of a Primary Dealer System

Advanced Countries	
Australia	May discourage participation by some potential intermediaries not designated as PDs. Investors cannot directly purchase securities at time of primary issue.
Austria	No comment.
Belgium	A concentration of PDs is developing in the banking community all over the world, with the same PDs evident globally. The result is a certain degree of oligopoly power.
Canada	Requires regular measuring and monitoring to ensure compliance with 1998 rules.
Finland	No comment.
France	None.
Germany	No comment.
Greece	No comment.
Iceland	None so far.
Ireland	Recognition of commercial pressures that the PDs face.
Italy	Risk that the debt management policy may be sometimes influenced by views that are more biased toward PDs' own interests than those of the sovereign issuer.
Netherlands	So far, none.
New Zealand	No comment.
Norway	The central bank must give some privileges to the PDs.
Portugal	No comment.

Table 9 ***(continued)***

Singapore	In a system where PDs receive privileges in return for fulfilling their obligations, this could create an uneven playing field vis-à-vis non-PD market participants.
Spain	We cannot see any disadvantages of having PDs.
Sweden	No comment.
United Kingdom	Administrative burden, acquisitions of cartels, requires supervision.
United States	The designation of "primary dealer" is often viewed as giving the institutions a special status or guaranteeing their creditworthiness.
Emerging Markets	
Argentina	Differences among participants (PDs) might limit competition.
Brazil	Possibility of establishing unwilling links between the trading desk and a PD because of their daily contacts. Creation of some market inefficiencies and information asymmetry.
Chile	Leaves out pension funds and insurance companies out of the debt auctions. Might be risky to depend on a small number of institutions that can fulfill the demands of a PD.
Czech Republic	Under certain conditions other investors might be penalized for not being PDs by possible higher prices they may pay using the PD as intermediary. But it depends on the level of development of the market and the level of competition.
Hungary	Free competition is limited in a way. Part of the debt financing depends on the performance of a limited number of market actors.
India	Highly dependent on short-term funding, making the money market volatile.
Indonesia	This might be minor disadvantage: by having PDs, the price might not reflect the market price, so few participants can do securities transactions. The price seems determined only by PDs.
Kazakhstan	There are no serious disadvantages of having PDs.
Korea	Nothing particular.
Latvia	PDs should hold a broad range of government securities constantly and are forced to participate in every primary market auction.
Mexico	If obligations and benefits are not set right, the ranking index could give a competitive advantage to some intermediaries over others.
Poland	The danger of collusion when there are mainly - fusion of banks in globalization environment; - lack of competitiveness.
Thailand	If the PDs are inefficient, the liquidity injection and absorption of the central bank will not be successful.

Table 9 *(concluded)*

Developing Countries	
Armenia	No comment.
Ghana	PDs can consolidate and influence the market. The banks, as PDs, have products that are in competition with government securities and their commitment cannot be guaranteed.
Kenya	Collusion may occur where only a few firms are accepted as PDs, leading to lower auction prices and high intermediation costs passed on to the end investors.
Mauritius	PDs may buy securities with attractive yields and hold them instead of trading them.
Morocco	No comment.
Saudi Arabia	Possible manipulation of prices, if the size of the capital market is small and/or if regulatory guidelines are insufficient to ensure fair play.

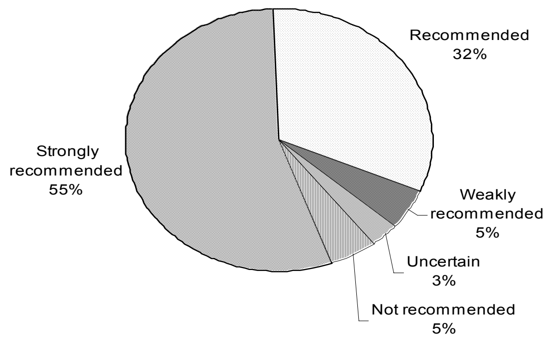
Source: IMF staff survey of national authorities (2001).

B. Primary Dealers and Stages of Development

There is broad agreement among the respondents (87 percent overall approval) that primary dealers are recommendable, with 55 percent "strongly recommending" their presence and 32 percent just "recommending" their presence in the market for government securities (see Figure 3). Five percent "weakly recommend" the adoption of primary dealerships and 5 percent of the respondents think it is "not recommendable" to have primary dealers. The remaining 3 percent are uncertain.

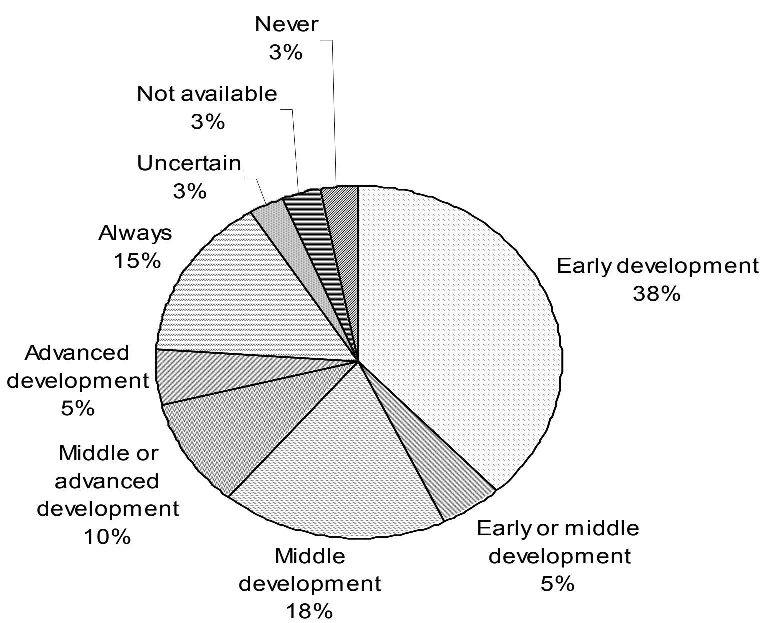
Among advanced economies, 16 out of 19 "recommend" or "strongly recommend" the adoption of a PD system, while the remaining 3 are "uncertain" or give no answer (Australia and New Zealand) or give a negative answer (Germany). Among the latter group, the view was expressed that at advanced stages of development primary dealers are not necessary, or are possibly harmful. Among emerging market economies, 11 countries out of 13 "recommend" or "strongly recommend" primary dealers, while Chile does not answer and Latvia thinks primary dealers are not recommendable. Among developing economies, all 6 countries "recommend" or "strongly recommend" the adoption of a PD system.

Figure 3. Recommendation of a Primary Dealer System



Source: IMF staff survey of national authorities (2001).

Figure 4. Phases of Economic Development and the Establishment of a Primary Dealer System



Source: IMF staff survey of national authorities (2001).

On the issue of primary dealership across stages of development, there seems to be a degree of consensus related to the presence of primary dealers in various phases of a country's economic development: 38 percent of the answers indicated that it is recommendable to have primary dealers already in the early stage of economic development, and 15 percent indicated that it is always wise to have primary dealers (see Figure 4).

APPENDIX

1 Summary of Primary Dealer System Characteristics

	Primary Dealer System	Starting Date	Number of Dealers	Number of Primary Dealers	Open Market Operations	Availability of Liquidity or Stock Facilities with the Central Bank	Supervision	Status Review
Argentina	Yes	1996	12	12	Yes		Ministry of Finance	Annually
Armenia	Yes	1999	13	7	Yes		Central Bank, Ministry of Finance	Semi annually
Australia	No							
Austria	Yes	1989	NA	26			Federal Financing Agency	Annually
Belgium	Yes	1991	22	17			Ministry of Finance	Annually
Brazil	Yes	1974	338	22	Yes		Central Bank	Semiannually
Canada	Yes	1998	44	12	Yes	Yes	Central Bank, Ministry of Finance, Investment Dealer Assn.	Biannually
Chile	No							
Czech Rep.	Yes	1997	107	25			Central Bank	Quarterly
Finland	Yes	1992	10–20	10		Yes	State Treasury	As necessary
France	Yes	1987	over 40	18			Ministry of Finance	Every 2 years
Germany	No							
Ghana	Yes	1996	26	26	Yes		Central Bank, Securities Regulatory Comm.	Annually
Greece	Yes	1998	38	15			Central Bank, Ministry of Finance, Public Debt Mgt. Agency	Annually
Hungary	Yes	1996	13	13			Government Debt Management Agency	Semiannually
Iceland	Yes	2002	around 10	5			Central Bank, National Debt Management Agency	Annually
India	Yes	1996	18 + banks	18	Yes	Yes	Central Bank, Securities and Exchange Board of India	Annually
Indonesia	No							
Ireland	Yes	1995	7	7		Yes	National Treasury Management Association	NA
Italy	Yes	1994	120	16			Ministry of Finance	Every 2 years
Kazakhstan	Yes	1994	118	16			Ministry of Finance, National Security Comm.	Annually
Kenya	No							
Korea	Yes	1997	102	26			Ministry of Finance	Annually

Appendix 1 *(concluded)*

	Primary Dealer System	Starting Date	Number of Dealers	Number of Primary Dealers	Open Market Operations	Availability of Liquidity or Stock Facilities with the Central Bank	Supervision	Status Review
Latvia	No							
Mauritius	No							
Mexico	Yes	2000	20–25	5		Yes	Central Bank, Ministry of Finance	Semiannually
Morocco	Yes	1995	123	7			Central Bank, Ministry of Finance	NA
Netherlands	Yes	1999	dozens	13			Ministry of Finance	Annually
New Zealand	No							
Norway	Yes	1995	7+	6	Yes		Central Bank	Annually
Poland	No							
Portugal	Yes	1998	25	13	Yes		Institute for Public Debt Management	Annually
Saudi Arabia	No							
Singapore	Yes	1987	31	11	Yes	Yes	Central Bank	Semiannually
Spain	Yes	1988	167	21			Ministry of Finance	Annually
Sweden	Yes	1989	7	7	Yes		Central Bank, Finance Supervisory Inst.	Annually
Thailand	Yes	2000	50	9	Yes		Central Bank	Annually
United Kingdom	Yes	1986	NA	17			Ministry of Finance, Financial Services Authority	Semiannually
United States	Yes	1960	NA	25	Yes	Yes	Central Bank, Ministry of Finance	Semiannually

Source: IMF staff survey of national authorities (2001).

APPENDIX

2 Complete Survey Results by Country

Argentina

Dealers in government securities	12.
System established	April 1, 1996.
PD institutions	12 commercial and investment banks.
Selection criteria	Minimum capital and involvement in government securities markets.
PD obligations	Obligations to bid in the auctions; to report to the central bank; to quote firm; and to achieve a certain market share in the secondary market.
Privileges	Exclusive counterparty for Secretariat of the Treasury's open market operations; participation in a second round of primary auctions; and bidding in noncompetitive tranche in a maximum amount.
Supervision and enforcement	Ministry of Finance, as agreed in a Decree and a Resolution of the Secretariat of the Treasury.
Formal agreement	No, the legal support is a Decree and a Resolution of the Secretariat of the Treasury.
Revision of status	Annually.
System evolution over time	Favorable evolution since 1996; currently working on improving the distribution to new investors and the secondary market liquidity.
Relation between the size of public debt and the desirability of PD	No, the access to Argentina primary dealer mechanism is not restricted for any financial institution in the country.
Recommendation of PD system	Strongly recommended. The PD system is an important ingredient for economic and financial development. We believe that it is worthwhile to apply it in any stage of development.
Advantages	The PD commitment ensures the allocation of an important portion of public debt. It also specializes financial institutions dedicated to the local market.
Disadvantages	Differences among participants (PDs) might limit competition.

Armenia

Dealers in government securities	13.
System established	October 1999.
PD institutions	Seven commercial banks.
Selection criteria	Minimum capital, involvement in government securities market, and because all PDs are commercial banks, they should meet all requirements set by the central bank for the commercial banks.
PD obligations	To bid in the auctions, to quote two ways, to report to the central bank, and noncompetitive bids of the PDs should be less than 1 percent of the total issue. If their noncompetitive bids exceed 1 percent, their competitive bids should be five times greater than noncompetitive bids.
Privileges	Exclusive counterparty for central bank's open market operations. PDs are allowed to bid for the whole issue, while other dealers can bid only for part of the issue. Only PDs are allowed to have noncompetitive bids.
Supervision and enforcement	Central bank and Ministry of Finance.
Formal agreement	Yes, there are regulations, setting rules for issuance, circulation, and repayment of government securities; and rights and obligations of the government, central bank, and dealers. Also there are separate agreements between the central bank and each of the dealers.
Revision of status	Semiannually.
System evolution over time	The PD system in Armenia was established in October 1999. Since then some amendments were made to the regulations ruling the government securities market. The structure of the PD system is periodically reviewed and some primary dealers were replaced by others. A book-entry government securities electronic trade system for the primary market has been in operation since November 2000, and the pilot project of a book-entry system for the secondary market is now undergoing testing.
Relation between the size of public debt and the desirability of PD	No.
Recommendation of PD system	Strongly recommended at the early development stage. Introduction of a PD system in the early stage of economic and financial development can help to create a more liquid primary and secondary market of government securities and bring interest rates down.
Advantages	Better participation in the auctions, higher liquidity of government securities market.
Disadvantages	NA.

Australia

Dealers in government securities	12.
PD institutions	No primary dealers.
System evolution over time	Establishing a PD system has not been considered.
Relation between the size of public debt and the desirability of PD	Yes, in relatively small undeveloped bond markets, PDs may be advantageous while in large developed markets, PDs are likely to be less advantageous.
Recommendation of PD system	In certain circumstances, there may be advantages in having PDs, while in other circumstances PDs may be unnecessary and/or may interfere with the efficient operation of the market. The answer depends on market environment or development. For some markets, PDs may be strongly recommended, while for other markets they may be unnecessary or inappropriate. For bond markets at an early stage of development, PDs can often assist with the development of the market. This can occur through a variety of channels. For example, for those dealers that are required to quote two-way prices in the secondary market, this could encourage greater secondary market liquidity and possibly lead to more investors participating in the market than would otherwise be the case.
Advantages	- Can boost liquidity and development of the market. - Primary issuance can be underwritten (to some extent).
Disadvantages	- May discourage participation by some potential intermediaries not designated as PDs. - Investors cannot directly purchase securities at time of primary issue.

Austria

System established	1989.
PD institutions	26 investment banks and foreign institutions.
Selection criteria	Involvement in government securities market, placement power, efficient bond trading.
PD obligations	To bid in the auctions and to quote firm.
Privileges	Exclusive access to primary auctions, noncompetitive bid option, good performance presents chance to lead a syndicated (or arbitrage) transaction or swaps.
Supervision and enforcement	Austrian Federal Financing Agency.
Formal agreement	Auction agreement, debt issuance program.
Revision of status	Annually.
System evolution over time	The PD system in Austria was established in 1989.

Austria *(concluded)*

Relation between the size of public debt and the desirability of PD	No.
Recommendation of PD system	Recommended.
Advantages	Providing permanent services.
Disadvantages	NA.

Belgium

Dealers in government securities	22.
System established	1991.
PD institutions	17 commercial and investment banks.
Selection criteria	Involvement in government securities market and placement capacity.
PD obligations	To bid in the auctions, to quote firm and two ways, to report to the central bank, and to promote the debt.
Privileges	Exclusive access to primary auctions and counterparty for operations with Treasury.
Supervision and enforcement	Ministry of Finance.
Formal agreement	Code of duties.
Revision of status	Annually.
System evolution over time	Internationalization of the primary dealers. Transactions with the Treasury are exclusively with the PDs, contrary to previous practice.
Relation between the size of public debt and the desirability of PD	Yes, the greater the size of the debt, the more important the placement capacity becomes. This is where PDs help.
Recommendation of PD system	Strongly recommended at the early development stage. A modern capital market with a smooth functioning primary and secondary market is necessary, so reasonable obligations can be imposed.
Advantages	- Reaches additional investors.
	- Provides a focus on placing and trading of debt, compensated by special privileges.
Disadvantages	A concentration of PDs is developing in the banking community the world over, with the same PDs evident globally. The result is a certain degree of oligopoly power.

Brazil

Dealers in government securities	338 financial institutions authorized to take part in public offerings of government securities. Thus, all of them are able to negotiate with government securities.
System established	PD system established in 1974.
PD institutions	22 PDs composed of commercial and investment banks, brokers, and foreign institutions.
Selection criteria	Minimum capital, compatible with the minimum capital requirements of a commercial bank; involvement in government securities primary and secondary markets; capability to remain market makers; participation in open market operations; and relationship with the trading desk.
PD obligations	The PDs should be actively present when the central bank trading desk operates; keep the central bank constantly informed of facts that directly or indirectly affect the stability and liquidity of the market; provide daily information to the central bank about its activities; give priority to trading and to the routine or special contacts with the central bank.
Privileges	Exclusive counterparty for central bank's open market operations; participation in regular meetings with the Treasury and the central bank.
Supervision and enforcement	Central bank.
Formal agreement	No, there is no formal agreement. But the selection criteria and their obligations are listed in a formal regulation (Circular 2.993 of August 9, 2001 and Carta-Circular 2.924). The selection process is fully transparent and the partial rankings are updated monthly on the central bank's web page.
Revision of status	Semiannually.
System evolution over time	Up to 1973, the central bank operated with approximately 53 financial institutions (period before the establishment of the PD system). From 1974 to August 1992, the number of PDs was 25 and there was no formal regulation although the bank already used ranking procedures to select the PDs. From August 1992 to present, the selection criteria and the PD obligations were released in a formal rule, and therefore the system became more transparent.
Relation between the size of public debt and the desirability of PD	The number of PDs has been established in accordance with the number of dealers in government securities and considering the central bank's needs in terms of its relationship with the market.
Recommendation of PD system	Recommended at all development stages.
Advantages	Primary dealers help the central bank in its function of keeping the market informed about the implementation of the monetary policy; and their assistance in the execution of open market operations (outright operations and repurchase agreements) is aimed at adjusting the day-to-day needs to add or drain reserves of the system.
Disadvantages	Creation of some information asymmetry.

Canada

Dealers in government securities	22 in marketable bonds and 22 in treasury bills.
System established	1998.
PD institutions	12 PDs, of which 11 are in marketable bonds and 9 in treasury bills. PDs are composed of commercial and investment banks, and brokers.
Selection criteria	Minimum capital, involvement in government securities market, and PDs must be official Government Securities Dealers (GSDs). GSDs must (1) be members, or affiliates of members, of the Investment Dealer Association (IDA) of Canada, and (2) have their core trading and sales operations for the Government of Canada securities resident in Canada.
PD obligations	Obligations to bid in the auctions, to quote firm and two ways, to report to the central bank, and obligations as indicated in the Terms of Participation in Auctions for Government of Canada Securities Distributors. Also, all GSDs (and by design, PDs) must agree to comply with IDA Policy No. 5, the Code of Conduct.
Privileges	Exclusive counterparty for the central bank's open market operations, along with borrowing privileges with the central bank.
Supervision and enforcement	Central bank, ministry of finance, and IDA—secondary markets.
Formal agreement	Terms of Participation in Auctions for Government of Canada Securities Distributors and IDA Policy No. 5, the Code of Conduct.
Revision of status	Biannually.
System evolution over time	- New rules in effect in 1998. - Main goal: to ensure that the auction process is free of, and is seen to be free of, manipulation. - Primary dealers are required to maintain a certain level of activity on primary and secondary markets and to bid at a certain level at auction (in terms of both bidding limit and reasonableness of that bid), as well as to fulfill net position reporting requirements.
Relation between the size of public debt and the desirability of PD	As government marketable debt declines, it becomes more important to maintain a system of primary dealers to ensure a well-functioning market for the Government of Canada securities.
Recommendation of PD system	Strongly recommended. A system of PDs is advisable in all stages of development.
Advantages	- Ensures a minimum level and quality of coverage at auction regardless of market conditions. - Maximum auction limit and net position reporting act to prevent most squeezes. - Market-making responsibilities enhance the liquidity and proper functioning of the Government of Canada securities market.
Disadvantages	Requires regular measuring and monitoring to ensure compliance with 1998 rules (see above).

Chile

Dealers in government securities	67 (30 banks, 8 pension funds, 27 insurance companies, and 2 mutual funds).
PD institutions	No PD system.
System evolution over time	The decision for not having established a PD system was basically for the following reasons: (1) Pension funds (AFP) and insurance companies can participate in the primary market of debt instruments auctions, but their own rules do not allow them to actively participate in the development of the secondary market. Establishing a PD system would imply leaving these institutions out of the primary market or of our debt instruments. (2) Due to the characteristics of the banks, a PD system and its demands would allow that only four or seven banks would be able to fulfill them, and therefore we would depend only on a limited number of institutions with similar objectives and collusion risk.
Relation between the size of public debt and the desirability of PD	No, due to the number of institutions that participate in debt instrument auctions and to the different nature of their functions (banks, AFPs, insurance companies, and mutual funds).
Recommendation of PD system	Should the conditions be favorable for the functioning of a PD system, it might be convenient to apply it at the beginning of economic and financial development, to encourage the participation of the institutions that can carry out such work, fostering the development of secondary markets and obtaining standard information on prices, volume, participation, etc.
Advantages	Better information and development of secondary markets, more net and deeper for our debt instruments.
Disadvantages	Leaving AFP and insurance companies out of the debt auctions; dependence on a small number of institutions that can fulfill PD demands.

Czech Republic

Dealers in government securities	Total number of licensed securities dealers is 107.
System established	1997.
PD institutions	12 PDs for government bonds and 13 PDs for treasury bills. These PDs are commercial and investment banks, and brokers.
Selection criteria	Minimum capital; involvement in government securities market; and minimum obligations on government bonds and treasury bills.
PD obligations	Obligation to bid in the auctions, to report to the central bank, to quote firm; to quarterly underwrite a certain amount of government bonds; and to order a certain amount of treasury bills per quarter.
Privileges	Exclusive access to primary auctions.

Czech Republic *(concluded)*

Supervision and enforcement	Central bank.
Formal agreement	Yes, "The Rules for a Primary Sale of Government Bonds" and "The Rules for a Primary Sale of Treasury Bills."
Revision of status	Quarterly.
System evolution over time	The number and names of PDs have stabilized; the trading amount has increased; the fees for taking orders from non-PDs have evaporated. Due to liquidity and suitable underlying policies, the other segments of the government securities market have developed and have become more liquid.
Relation between the size of public debt and the desirability of PD	No.
Recommendation of PD system	Strongly recommended at the early development stage. At first, the system provides development of a stable demand for government securities and establishment of a market allowing them to be traded and later a choice of market makers who would be suitable candidates to become PDs.
Advantages	Stable structure of counterparties; easier administration and communication with market; transparent and reliable channel for cash and securities distribution; higher probability to sell securities.
Disadvantages	Under certain conditions, other investors might be penalized for not being PDs by possibly incurring higher prices for using the PD as an intermediary. But it depends on the level of development of the market and the level of competition.

Finland

Dealers in government securities	10–20.
System established	1992.
PD institutions	10 primary dealers composed of commercial and investment banks, and foreign institutions.
Selection criteria	Minimum capital, involvement in government securities market, and long-term commitment to dealing in this market.
PD obligations	To bid in the auctions, to quote firm and two ways, to report to the central bank, and to sponsor the Finnish debt.
Privileges	Exclusive access to primary auctions, repo facility from State Treasury.
Supervision and enforcement	State Treasury.
Formal agreement	A binding agreement, similar to a memorandum of understanding.

Finland *(concluded)*

Revision of status	When necessary.
System evolution over time	From domestic market, change to euro market and more offshore international PDs.
Relation between the size of public debt and the desirability of PD	Yes, decreasing debt, but does not change business for many dealers.
Recommendation of PD system	Strongly recommended at the early development stage. In Finland's case, helped to build and develop the debt market.
Advantages	Committed sales force, research, distribution of government debt.
Disadvantages	NA.

France

Dealers in government securities	More than 40.
System established	1987.
PD institutions	18 investment banks.
Selection criteria	Minimum capital and involvement in government securities market.
PD obligations	Obligations to bid in the auctions, to quote firm and two ways, to report to Treasury in an advisory role, and to promote sales of debt securities.
Privileges	Regular meeting with the Treasury; most frequent but not exclusive dealer with Treasury.
Supervision and enforcement	Ministry of Finance.
Formal agreement	General framework of their activities.
Revision of status	Every two years.
System evolution over time	The composition, quality, and number of PDs have changed with the market. The group is now more international and includes larger banks.
Relation between the size of public debt and the desirability of PD	No, the desirability of primary dealers depends less on the size of the public debt and more on its permanence.
Recommendation of PD system	Strongly recommended at the early or middle development stage. The existence and interest of a PD group depends on the stability, size, and constancy of a tradable debt. It is clear that even at an early development stage, to get advice and liquidity brought by several market makers on a foreign or local debt is useful. Still, it is not always easy to find banks ready to become PDs, particularly if the debt is too volatile.
Advantages	Decreasing market and refinancing risk, knowledge of the market, capacity of innovation, access to a wider sales force, and better promotion of the debt.
Disadvantages	None.

Germany

PD institutions	No primary dealer system.
Relation between the size of public debt and the desirability of PD	No.
Recommendation of PD system	Not recommended. The German authorities consider the present auction system as very effective. Due to the active trading of government securities at the stock exchange and on the electronic systems, there is no need for a PD system.
Advantages	NA.
Disadvantages	NA.

Ghana

Dealers in government securities	26.
System established	1996.
PD institutions	26 primary dealers composed of commercial and investment banks, and brokers.
Selection criteria	Involvement in government securities market; must be dealers on the Ghana Stock Exchange in the case of brokerage firms; and must be a deposit money bank (DMB) having a reserve requirement to meet.
PD obligations	To bid in the auctions, to quote firm, and to report to the central bank. For banks acting as PDs, they must hold a specified percentage of their deposits in government securities to meet the secondary reserve requirement.
Privileges	Exclusive access to primary auctions, and exclusive counterparty for central bank's open market operations.
Supervision and enforcement	Central bank and Securities Regulatory Commission.
Formal agreement	Yes. First, brokerage firms have to be interviewed and licensed to operate as a PD. Second, DMBs are granted automatic dealership to meet their secondary reserve requirement. Third, new banks and discount houses have to apply for and be granted PD status.
Revision of status	Annually and when a PD is absent from the auction on three consecutive occasions.
System evolution over time	The number of PDs and their stock of holdings have increased since being established in 1996. The government securities market is now better organized under a book-entry system ensuring delivery versus payment and allowing for secondary market activities; for example, transfers, pledging as collaterals, repos, outright sales, and similar actions.
Relation between the size of public debt and the desirability of PD	No.
Recommendation of PD system	Recommended at the middle development stage. The basic infrastructure, regulations, code of conduct, and sound practices must be in place for the effective operation of the PD system.

Ghana *(concluded)*

Advantages	- Maximum participation in the auction is ensured. - The market is relatively more competitive. - The PD system makes possible a relatively vibrant secondary market.
Disadvantages	- PDs can consolidate and influence the market. - The banks, as PDs, have products that are in competition with government securities and their commitment cannot be guaranteed.

Greece

Dealers in government securities	38.
System established	1998.
PD institutions	15 PDs composed of commercial and investment banks, and foreign institutions.
Selection criteria	Minimum capital and involvement in government securities market.
PD obligations	To bid in the auctions and to quote two ways.
Privileges	Exclusive access to primary auctions and on liability management.
Supervision and enforcement	Central bank, Ministry of Finance, and Public Debt Management Agency.
Formal agreement	A committee formulated the Operating Rules of the Primary Dealer System and by law they are to be approved by the Ministry of Finance and the Governor of the Bank of Greece.
Revision of status	Annually.
System evolution over time	Started in 1998 with 12 PDs; increased to 15 in 2001 (5 locals, 10 foreigners).
Relation between the size of public debt and the desirability of PD	Yes, we wish to have a very strong and small group of PDs.
Recommendation of PD system	Strongly recommended at the early development stage. At that point, there is an organized market. Also, PDs add liquidity and transparency to the market, and they have far greater control over the issue of the banks.
Advantages	NA.
Disadvantages	NA.

Hungary

Dealers in government securities	13.
System established	January 1996.
PD institutions	13 primary dealers composed of commercial and investment banks, and brokers.
Selection criteria	Minimum capital; involvement in government securities market; and right to trade at Budapest stock exchange.
PD obligations	Obligation to bid in the auctions; to quote firm and two ways; to report to the Government Debt Management Agency.
Privileges	Exclusive access to primary auctions; information and consultation with the Government Debt Management Agency.
Supervision and enforcement	Government Debt Management Agency.
Formal agreement	Yes, standardized.
Revision of status	Semiannually.
System evolution over time	The number of participants has decreased from 21 to 13; requirements have become stricter and higher; dealers are typically stronger market performers; the compulsory minimum level of the market activity has become higher; there are more and more banks involved.
Relation between the size of public debt and the desirability of PD	No.
Recommendation of system	Recommended at the early development stage.
Advantages	Secured base for sale of government securities, supporting the secondary market of government securities, and direct connection to and information exchange with market performers.
Disadvantages	The free competition is limited in a way, and part of the debt financing depends on the performance of a limited number of market traders.

Iceland

Dealers in government securities	About 10.
System established	May 2002.
PD institutions	5 commercial banks.
Selection criteria	Minimum capital and involvement in government securities market.
PD obligations	To bid in the auctions and to quote term in and two ways on the ICEX.
Privileges	Exclusive access to primary auctions.

Iceland *(concluded)*

Supervision and enforcement	Central bank and National Debt Management Agency (NDMA).
Formal agreement	Yes, the NDMA takes full care of the system.
Revision of status	Annually.
System evolution over time	The system has operated well.
Relation between the size of public debt and the desirability of PD	No.
Recommendation of PD system	Strongly recommended at the early development stage. Middle development in small economy with few players.
Advantages	Four market makers are now, together with PDs, obligated to take part in auctions and to give two-way quotes within a determined range. This leads to a better market price, increased price formation in the secondary market, and enhances the treasury's access to the market. Turnover in the secondary market has increased.
Disadvantages	None so far.

India

Dealers in government securities	18 primary dealers apart from banks.
System established	1996.
PD institutions	18 PDs set up as subsidiaries of scheduled commercial banks (both domestic and foreign) and financial institutions or as companies incorporated under the Indian Companies Act. They are registered as nonbanking finance companies within the supervisory and regulatory purview of the central bank.
Selection criteria	Minimum capital and involvement in government securities, track record, management, and technical expertise.
PD obligations	Obligation to bid in the auctions, fulfill minimum bidding commitment, achieve a minimum success ratio for dated securities and treasury bills, offer firm two-way quotes; achieve a minimum turnover in government securities.
Privileges	Access to banking facilities with the central bank, exclusive borrowing privileges with the central bank; access to the call money/repo market, receipt of underwriting commission.
Supervision and enforcement	The operations of the PDs are monitored by the central bank under the overall supervision of the Board for Financial Supervision. PDs are also governed by the laws/rules and regulations of the Securities and Exchange Board of India (SEBI) when the government securities are traded on the exchanges and Department of Company Affairs, Government of India. PD registered as investment banks/stockbrokers are also supervised/regulated by SEBI for these activities.

India *(concluded)*

Formal agreement	Yes, the agreement outlines the bidding commitments, minimum success ratio in the auctions, and other terms and conditions such as obligation to offer firm two-way quotes for select stocks.
System evolution over time	The number of PDs has gone up from 6 to 18. The benefits of the PD system are evident in the growing market turnover for government securities, increasing market absorption of government securities.
Relation between the size of public debt and the desirability of PD	Yes, as the size of government debt has been growing, an increase in the number of PDs would enhance the absorption of government securities.
Recommendation of PD system	In the early stage, PDs should be allowed in the primary market along with the central bank, with certain privileges including borrowing facilities from the central bank. This is in order to develop and nurture the institutional framework. In the second stage, PDs could be allowed exclusive participation in the primary market, by removing all other privileges. Finally, in the third stage, PDs could be made exclusive conduits for the central bank's open market operations.
Advantages	Underwriting and market-making abilities exclusively in the government securities market will be developed; improved liquidity for government securities; open market operations could be effective and operationally simpler once PDs become exclusive counterparties for the central bank's open market operations.
Disadvantages	PDs depend highly on short-term funding and call money market. However, the central bank is developing the repo market, which could serve as the main source of funds for PDs.

Indonesia

Dealers in government securities	So far, there are no dealers for government securities, just 14 brokers (7 brokers for capital markets and 7 brokers for money markets). However, these brokers are only for the central bank securities transactions called Sertifikat Bank Indonesia (SBI).
PD institutions	No PD system.
System evolution over time	In 1993, primary dealers were needed to help develop the SBI secondary market. As the SBI secondary market developed, the PD system was seen as unnecessary and therefore discontinued in 1998. Access to SBI was then opened to all market participants, i.e., banks, brokers, and individuals. The new regulation on SBI auction, which became effective in October 2002, states that only banks and brokers have access to the SBI primary market.
Relation between the size of public debt and the desirability of PD	The need for primary dealers may become imminent should the government issue treasury bills and government bonds under the new Government Securities Law passed by the Parliament in September 2002. Currently, the only existing government bonds are recapitalization bonds issued to finance the cost of the government's financial participation in commercial banks as part of the national program to restructure and revitalize the banking sector. Recapitalization bonds were issued through private placements.

Indonesia *(concluded)*

Recommendation of PD system	Strongly recommended at Indonesia's current development stage, i.e., the middle stage. The growth of Indonesia's equity and debt market and the passage of the Government Securities Law will make the need for a PD system imminent. Market-supporting infrastructure has also been developed. Indonesia already owns two stock exchanges, i.e., the Jakarta Stock Exchange and the Surabaya Stock Exchange, a fund transfer system called the Real-Time Gross Settlement (BI-RTGS), and a Government Bond Settlement System called BI-SKRIP. Both the BI-RTGS and the BI-SKRIP are operated by the central bank, Bank of Indonesia. Based on this infrastructure and a Scripless Securities Settlement System currently being developed by Bank Indonesia, the Ministry of Finance and Bank Indonesia are developing a secondary market for government securities.
Advantages	PDs can develop a secondary market for government bonds and create market liquidity.
Disadvantages	A minor disadvantage might be that with primary dealers, the price of a trade might not reflect the market price, so not many participants would do securities transactions. The price seems determined only by primary dealers.

Ireland

Dealers in government securities	7 in addition to the primary dealers, which account for 95 percent of market turnover; no agency, only brokers are authorized to deal in Irish government bonds in the Irish stock exchange. A number of foreign banks also quote.
System established	1995.
PD institutions	7 commercial and investment banks, brokers, and foreign institutions.
Selection criteria	Minimum capital, involvement in government securities market, and ability to distribute Irish government bonds.
PD obligations	To bid in the auctions, to quote firm and two ways, and to report to the National Treasury Management Agency (NTMA).
Privileges	Exclusive access to primary auctions, exclusive counterparty for NTMA repos and reverse repos, bond-switching facilities, and bid of last resort to PD.
Supervision and enforcement	NTMA, which is the debt manager of the Ministry of Finance and the Irish Stock Exchange.
Formal agreement	Memorandum of understanding.
Revision of status	Newly recognized PD after one year, thereafter at variable periods of two or three years.
System evolution over time	Since the introduction of the euro on January 1, 1999, the PD system has become more important for the successful marketing of Irish government bonds to nonresidents within the euro area.

Ireland *(concluded)*

Relation between the size of public debt and the desirability of PD	No close relationship, but a number of benchmark bonds of seasonable size (EUR 3 to 5 million) are required to provide sufficient liquidity for a viable market.
Recommendation of PD system	Strongly recommended at the advanced development stage. A viable PD system requires a fully developed liquid capital market with a government yield curve out to at least 10 years.
Advantages	PDs reduce the cost of borrowing by providing a continuous two-way liquid market in government bonds; create certainty in the secondary market; eliminate illiquidity premium cost; allow debt to be restructured; act as sounding board for changing debt strategy; and facilitate closer organized contact with the investors.
Disadvantages	Recognition of commercial pressures that the PDs face.

Italy

Dealers in government securities	120.
System established	1994.
PD institutions	16 primary dealers or "specialists" including commercial and investment banks, and foreign institutions.
Selection criteria	Minimum capital, involvement in government securities market, and suitable organization to obtain a widespread and efficient placement of securities.
PD obligations	Obligation to bid in the auctions, to quote two ways, and on the secondary market consideration given only to proposals for a minimum of five hours per working day. Besides the bid-ask spread, the performance is also evaluated in terms of number of securities traded and quoted, total amount exchanged, and applications received.
Privileges	Exclusive access to noncompetitive taps, within 10 percent of the total amount offered by the Treasury in the auction. Faculty to participate, in an exclusive way, in buyback operations drawn on the "ad hoc" Government Sinking Fund.
Supervision and enforcement	Ministry of Finance.
Formal agreement	Yes. A document published by the Treasury specifying the obligations and privileges of the specialists.
Revision of status	Every two years.
System evolution over time	Established in 1994, the number of specialists has developed over time. During the same period, the evaluation criteria have been modified to better monitor their performance, stimulate their activity on strip and repo markets, and give rise to a stronger virtual competition among them. Imposing requirements that are perceived to be too stringent by market participants can create an incentive to formally comply with the requirements but without any positive impact on the efficiency of the market. For instance, requiring a secondary market share of 2 percent could lead to "whipped cream," or a transaction between two PDs to reach the requested quota.
Relation between the size of public debt and the desirability of PD	Yes, the PD system is a guarantee for the Treasury that numerous and frequent auctions of significant sizes are always fully covered and that the potential liquidity of bonds becomes fully realized.

Italy *(concluded)*

Recommendation of PD system	Strongly recommended. At the early stages of development, a country needs to issue public debt in order to set up all the basic infrastructures to start any economic development process. A PD system may help to raise those financial resources that the market would be reluctant to grant otherwise. At the middle development stage, PDs can support the sovereign issuer to find domestic and foreign final investors interested in holding the country paper even at some additional cost. Moreover, PDs are able to support the public debt manager in drafting the entire debt management policy and designing suitable debt instruments. At an advanced development stage, PDs become essential to developing a liquid and active secondary market that can help lower the cost of funding, stabilizing the investors' demand and widening the base of investors. At the same time, PDs continue to address the role of financial consultant, especially as far as the issuance policy is concerned.
Advantages	- Full and constant coverage of auctions; - Better knowledge of market conditions to improve the issuance strategy by reducing the cost of funding and controlling financial risk; - Higher liquidity of bonds on the secondary market; - Availability of a skillful advisory support in building and following the debt management policy; - Possibility of being put in contact with a much higher number of investors in order to capture at any moment convenient issuance opportunities; and - Availability of a competent support in designing market-tailored securities.
Disadvantages	Risk for the debt management policy of being sometimes influenced by views that are more biased toward PDs' own interests than toward those of the sovereign issuer.

Kazakhstan

Dealers in government securities	118.
System established	1994.
PD institutions	16 primary dealers composed of commercial and investment banks, and foreign institutions.
Selection criteria	Minimum capital and involvement in government securities market.
PD obligations	Obligations to quote firm; to report to the central bank; and to be in "normal" position (for Kazakhstan) regarding prudential norms.
Privileges	Exclusive access to primary auctions.
Supervision and enforcement	Ministry of Finance and National Security Commission.
Formal agreement	Yes, including limitation of firm quotes.
Revision of status	Annually.

Kazakhstan *(concluded)*

System evolution over time	System is changing according to primary and secondary market; if inflation process is stable, primary dealers prefer to trade securities in national currency; if unstable they prefer securities that are denominated in U.S. dollars or eurobonds.
Relation between the size of public debt and the desirability of PD	None.
Recommendation of PD system	System recommended at the early development stage. Without a PD system it will be hard to have stability in primary market.
Advantages	It is easy to control and systemize primary market.
Disadvantages	No serious disadvantages of having a PD system.

Kenya

PD institutions	No PD system.
System evolution over time	The preparation of a policy paper on the regulation of the wholesale market for government securities as a way of deepening the market is currently under way.
Relation between the size of public debt and the desirability of PD	Yes, when there is need to promote a market-oriented economy with a view to reducing the cost of government borrowing.
Recommendation of PD system	Strongly recommended at all development stages. PDs play a useful role in the transition from a planned economy to a market-oriented one, owing to their expertise and financial capabilities. At an advanced stage of development, when selecting trading counterparties in execution of monetary policy, PDs are also useful. However, highly reliable and efficient automated operating and communication systems are absolutely necessary.
Advantages	Provides a smooth transition from a direct to a fully market-based system; produces increased efficiency in the auction process and open market operations; provides secure maximum participation in auction of government securities; improves functioning of primary markets and terms of government borrowing; enhances liquidity in the secondary market; brings about greater competition and leads to cheaper dealing costs in the secondary market.
Disadvantages	Collusion may occur where only few firms are accepted as PDs, leading to lower auction prices and high intermediation costs passed on to the end investors.

Korea

Dealers in government securities	102.
System established	July 1997.
PD institutions	26 primary dealers composed of commercial banks, brokers, foreign institutions, and merchant banks.
Selection criteria	Minimum capital and involvement in government securities market.
PD obligations	Obligation to bid in the auctions; to quote two ways; and to trade a minimum of 2 percent of total secondary market volume.
Privileges	Exclusive access to primary auctions and noncompetitive bidding.
Supervision and enforcement	Ministry of Finance and Korea Stock Exchange (maintaining inter-dealer market).
Formal agreement	Yes, a memorandum of understanding between the Ministry of Finance and PDs.
Revision of status	Annually.
System evolution over time	The PD system has contributed to the development of a domestic bond market in both primary and secondary markets.
Relation between the size of public debt and the desirability of PD	No.
Recommendation of PD system	Strongly recommended at the early development stage. The role of government in developing a bond market reaches its highest point when the development stage is the middle stage. When the financial market deepens, the power of the market itself can take the role efficiently.
Advantages	Reduces the cost of government bond issues because a government does not have to pay; lowers underwriting fees; strengthens the demand base of the government bond and the stability of the bond market by establishing leading market makers.
Disadvantages	Nothing particular.

Latvia

Dealers in government securities	15 banks and 7 brokerage companies are licensed for intermediation in the securities markets. In the primary market of government securities all domestic banks (22 banks) and foreign financial institutions that have accounts (in lats) with the central bank (2 foreign banks) can participate.
PD institutions	No PD system.
System evolution over time	It has been discussed. The Latvian market is too small for a PD system, and banks prefer no obligations in the government securities market.
Relation between the size of public debt and the desirability of PD	No, the driving force for primary dealers could be competition in the market, not the size of public debt in Latvia.

Latvia *(concluded)*

Recommendation of PD system	Not recommended. A PD system demands adequate market structure, including some sizable players and many smaller ones; then a PD system helps to organize the financial system. In early development, this banking structure may not exist. Therefore, a PD system might be appropriate only at an advanced stage of financial development.
Advantages	Provides increase in liquidity and reduction in margins.
Disadvantages	Primary dealers should hold a broad range of government securities constantly and are forced to participate in every auction of the primary market.

Mauritius

Dealers in government securities	Approximately 40.
PD institutions	No PD system.
System evolution over time	The authorities have been discussing the possible establishment of a PD system in order to develop secondary market trading, which will be instrumental in implementing monetary policy decisions. The next priority of the Bank of Mauritius is to establish a PD system in government securities as early as possible.
Relation between the size of public debt and the desirability of PD	The volume of transactions and efficiency of the secondary market would influence the appointment of primary dealers.
Recommendation of PD system	Recommended at the middle development stage. Objectives of debt management would have been established. Information on the demand for securities and market structure would be available. Information on the macroeconomic environment would be available.
Advantages	A PD system activates the secondary market for treasury bills; it also enables buyers and sellers to transact efficiently at prices reflecting fair values.
Disadvantages	PDs may buy securities with attractive yields and hold them instead of trading them.

Mexico

Dealers in government securities	Commercial banks, development banks, and brokerage houses can deal with government securities, although not all of them are active in the market. Currently, there are between 20 and 25 institutions that are active in this market.
System established	October 2000.
PD institutions	5 PDs composed of commercial banks and brokerage houses (*casas de bolsa*) that trade with securities; investment banks are not involved.
Selection criteria	Involvement in government securities market. Only five institutions can be primary dealers, and they are named for a period of six months. At the conclusion of that period, the institutions are selected again. A new institution has to become one of the primary dealers, replacing an existing one. Institutions compete to be market makers based on their activity in the nominal fixed-rate government securities market. The activity is measured based on a publicly known index, which takes into account their activity in the primary market, in the interbank market, and with their clients. The five institutions that show the highest index are selected as primary dealers. As mentioned above, if these institutions are the same as the ones in the previous period, the lowest-scoring one has to be replaced by the one finishing in the sixth place that was not a primary dealer.
PD obligations	Obligation to bid in the auctions; to quote two ways; and to report to the central bank.
Privileges	Borrowing privileges with the central bank. Also access to a "green shoe" facility where as a group, PDs can acquire up to an additional 20 percent of the fixed-rate securities offered in the primary auction at the average price that resulted in the auction. However, a prerequisite to access to the facility is to have won part of the primary auction.
Supervision and enforcement	Ministry of Finance and the central bank.
Formal agreement	Yes, rules to become and to compete to be a primary dealer were set by the Ministry of Finance and published by the central bank. To compete to be a primary dealer, institutions have to send a letter to the Ministry of Finance specifying their intentions to do so. In that letter, they agree to send all information required for the measurement of the index and to comply with the rules that apply for calculating it.
Revision of status	Semiannually.
System evolution over time	Although it was adopted very recently, the experience has been very positive. Particularly, liquidity in the interbank market for nominal fixed-rate securities has increased substantially.
Relation between the size of public debt and the desirability of PD	No, currently the primary dealer figure works only for nominal fixed-rate debt (treasury bills and bonds). These securities represent only around 35 percent of total government debt. To date, there has been a great deal of interest in becoming a primary dealer.
Recommendation of PD system	Strongly recommended at the middle development stage. It is a good way to give impetus to the market, which should have as a prerequisite a good infrastructure and certain liquidity.
Advantages	The increase in liquidity that PDs offer to the market.
Disadvantages	If obligations and benefits are not set correctly, the ranking index could give a competitive advantage to some intermediaries over others.

Morocco

Dealers in government securities	The central bank, 18 credit institutions, one broker-dealer (CDG), 103 mutual funds.
System established	August 1995.
PD institutions	7 commercial banks, a CDG, an intermediation bank (MEDIAFINANCE).
Selection criteria	Involvement in government securities market, subscription volume on primary market, and volume traded on secondary market (10 percent).
PD obligations	Obligations to bid in the auctions and to quote firm and two ways.
Privileges	Possibility to have noncompetitive bids up to 20 percent of the weighted average withholding volume.
Supervision and enforcement	Central bank and Ministry of Finance.
Formal agreement	Convention between the Treasury and primary dealers (I.V.T.), which describes the obligations of the parties.
Revision of status	NA.
System evolution over time	NA.
Relation between the size of public debt and the desirability of PD	No.
Recommendation of PD system	Recommended at the early development stage.
Advantages	Organization of the bond market, promotion of treasury bills, exchange of information on available bids as well as the price levels at which the investors are willing to subscribe.
Disadvantages	NA.

Netherlands

Dealers in government securities	Dozens.
System established	January 1, 1999.
PD institutions	13 institutions, including commercial and investment banks, and foreign institutions.
Selection criteria	Minimum capital, involvement in government securities market, and geographical distribution of their turnover, promotion activities, commitment.
PD obligations	Obligation to bid in the auctions, to quote firm and two ways, and to report secondary market turnover to the Dutch State Treasury Agency (DSTA), to act in the interest of the DSTA, and to participate in research.

Netherlands *(concluded)*

Privileges	Exclusive access to primary auctions. PDs may use the title primary dealer for Dutch State Loans. The obligation of two-way quoting (market making) applies to PDs only. It is increasingly considered a privilege by both PDs and nonprimary dealers.
Supervision and enforcement	Ministry of Finance.
Formal agreement	Yes. In October of each year, a selection process is begun by which 13 PDs are selected for the 12-month period beginning January 1. Existing PDs, as well as banks that want to become PDs, submit a business plan regarding Dutch State Loans. Based on these business plans, the DSTA selects 13 dealers with whom a 12-month contract is signed.
Revision of status	Annually.
System evolution over time	Our system was established relatively recently. Our experience has been that the system has helped in attaining our objectives of supporting liquidity and promoting broad geographical coverage.
Relation between the size of public debt and the desirability of PD	A PD system seems desirable and feasible only if a state has a sufficient volume of issues, at least a few billion euros per year.
Recommendation of PD system	Strongly recommended at the middle or advanced development stage. The question is difficult to answer. One of the elements that triggered the establishment of the PD system in the Netherlands was the introduction of the euro. Instead of being the largest issuer in the guilder market, the Dutch State became one of the four AAA-rated issuers in the euro area. Given this more competitive environment, a privileged relationship with a core group of local, regional, and global banks was deemed desirable. Drawing general conclusions from this experience and applying them to countries differentiated by their level of development is fraught with difficulties. For one, the development of the capital market seems equally as important as the level of economic development. It seems fair to assume that a PD system can perform several functions for a sovereign issuer. As long as the sovereign's debt management agency is competent and knows what it wants from the PD, it seems right to assume that a PD system can be used at all stages of development. A positive aspect of PD systems may be that they help develop local capital markets in emerging economies, in the sense of obliging local banks to actively develop their sales to final investors.
Advantages	Produces a core group of banks that compete to buy the issuer's bonds; provides information on market movements and trends.
Disadvantages	So far none.

New Zealand

Dealers in government securities	There are six to eight market makers in government securities. There are no primary dealers.
Recommendation of PD system	Primary dealers are not a feature of the New Zealand government securities market. New Zealand has not found it necessary to introduce primary dealers or officially appointed market makers to assist with the distribution of securities. Instead, the New Zealand Debt Management Office (NZDMO) considers that a better outcome is market making in government securities based on commercial decisions by market participants themselves. All market participants, including end investors, may bid in auctions, subject to criteria related to creditworthiness, as assessed by the Reserve Bank of New Zealand (RBNZ). In addition, membership in Austraclear, the real-time securities and high-value payments settlement system, is effectively an acceptance criterion, as auction bidding is conducted via Austraclear's electronic tendering facility. The current arrangement has worked well, with a core group of six to eight market makers at any one time.

Norway

Dealers in government securities	7+.
System established	1995.
PD institutions	6 commercial banks and brokers.
Selection criteria	Involvement in government securities market.
PD obligations	Obligation to quote firm and two ways, and to report to the central bank.
Privileges	Borrowing privileges with central bank.
Supervision and enforcement	Central bank.
Formal agreement	Yes, agreement in writing.
Revision of status	Annually.
System evolution over time	NA.
Relation between the size of public debt and the desirability of PD	Yes.
Recommendation of PD system	Recommended at the middle development stage.
Advantages	With two-way quotes, the market always has price information and better liquidity.
Disadvantages	The central bank must provide some privileges to the PD.

Poland

Dealers in government securities	It depends on type of instrument: treasury bills—38; treasury bonds—about 12 on average.
PD institutions	No PD system.
System evolution over time	There has never been a PD system in Poland. The problem had been under discussion for more than five years when the Polish Central Bank decided to establish the Money Market Dealer System for money policy purposes. For the last two years, the Polish investor base has developed significantly: creation of a pension funds system and privatization of certain banks. Foreign banks are also providing sizable activity. From the point of view of public debt management, many changes took place in the structure of debt: an increase in marketable bonds, particularly fixed-rate bonds and a decrease in treasury bills and nonmarketable instruments. Thanks to these changes, the market of treasury bonds has become deeper and more liquid but still nontransparent. These have been the most important elements in supporting the decision to not establish a PD system.
Relation between the size of public debt and the desirability of PD	Yes. It is much easier to build a liquid debt market in the environment of large size of public debt, because only a sufficient amount of debt stock enables constant trading in securities. Consequently, it is easier to establish a PD system. PDs have obligations to develop and maintain liquidity. They have also to ensure the transparency of the market, an important consideration for investors.
Recommendation of PD system	Strongly recommended at the middle and/or advanced development stage. Only in these cases do the advantages of PDs outweigh the disadvantages. In the case of establishing a system in the early stages of development, there are different obstacles to having a profitable system: - the depth of the market is insufficient; - investor base is weak; - there is generally an inadequate structure (excess of nonmarketable instruments) of debt and the value of debt; - level of competitiveness among participants in the market is undeveloped; - settlement system should be developed and liquid (a suitable Real-Time Gross Settlement should be in place); That is why it is difficult to recommend a PD system, particularly in the first two cases.
Advantages	There are several advantages, including - reliability of financing state budget needs, even in a single-currency environment; - liquidity and transparency of the government securities market; - cost-effective financing; and - the exchange of information about market and issuer policy.
Disadvantages	The danger of collusion when there are mainly: - fusion of banks in globalized environment; and - lack of competitiveness.

Portugal

Dealers in government securities	25.
System established	1998.
PD institutions	13 commercial and investment banks, and foreign institutions.
Selection criteria	Involvement in government securities market and Regulation No. 1/2001, Art. 6 and 16: - capacity for subscription and placement of bonds in the competitive phase of auctions; - participate, in a regular and significant way, in the bond secondary market; - offer guarantees for the physical and financial settlement of bonds; and - produce a statement signed by the dealer's Board of Directors, in which the dealer pledges to obey the rules of the Regulation.
PD obligations	Obligation to quote firm and two ways. Regulation No. 1/2001, Art. 18, also requires dealers to - bid regularly under normal market conditions and subscribe to a share not lower than 2 percent of the amount placed at the competitive phase of the auctions; - participate actively in the secondary market, ensuring liquidity; - participate in the secondary market (MEDIP) as market maker, with no less than 2 percent market's turnover share; - keep a permanently updated page showing quotations for liquid treasury bonds in a specialized remote information system of widespread dissemination; - supply the information required for the monitoring of their activity in the secondary market and check compliance with the provisions of this regulation; - respect all rules adopted by the Institute for Public Debt Management (IGCP) regarding the scope and object of the regulation; - operate as privileged consultants to the IGCP in the monitoring of financial markets; and - duly inform IGCP as to their difficulty in performing some of the duties, namely in case of anomalous or extraordinary market conditions, and await the IGCP's consent of the change in the form of compliance, or of noncompliance, with any of the duties.
Privileges	Regulation No. 1/2001, Art. 17: specialized primary dealers have a right to - exclusive access to the noncompetitive phase of bond auctions; - preference in syndicates and in other forms of placing government debt; - access to IGCP facilities to support the market, namely the repo window; - preference in carrying out transactions related to management of public debt; and - privileged hearing in matters of common interest.
Supervision and enforcement	IGCP.
Formal agreement	Regulation No. 1/2001 made by the IGCP.
Revision of status	Annually.

Portugal *(concluded)*

System evolution over time	The PD system started in 1998 with six domestic and six foreign PDs. Beginning in 1999, the number of foreign institutions gradually increased to nine, while the number of domestic PDs fell to four mostly as a result of mergers among banks. The increase in the number of foreign PDs was accompanied by a sharp rise in the percentage of debt placed with foreign investors (83 percent of debt issued in 2000 was placed with foreign investors).
Relation between the size of public debt and the desirability of PD	No. It is difficult to define the optimal number of PDs for each market, although in theory, the larger the market the larger the number of PDs.
Recommendation of PD system	Strongly recommended at the middle and/or advanced development stage. The PD system is a very important tool in developing an efficient, fixed interest rate domestic secondary market, which implies a sound macroeconomic situation and a developed financial system.
Advantages	Provides access to a permanent distribution channel of both domestic and international debt; opens up a permanent secondary market; and gives more visibility with final investors (especially foreign ones).
Disadvantages	NA.

Saudi Arabia

PD institutions	No PD system.
System evolution over time	The idea is being considered by the authorities but it needs further assessment.
Relation between the size of public debt and the desirability of PD	Yes, for efficiency and liquidity reasons, the need for a PD increases as the size of the debt becomes larger.
Recommendation of PD system	Recommended at the middle and/or advanced development stage. As the size of the economy and the capital market become larger, the need for PD and the benefit from such a system increase.
Advantages	To enhance market efficiency and liquidity along with creating an active secondary market.
Disadvantages	Possible manipulation of prices if the size of the capital market is small and/or if regulatory guidelines are not sufficient to ensure fair play.

Singapore

Dealers in government securities	31.
System established	1987.
PD institutions	11 commercial banks.
Selection criteria	Involvement in government securities market, minimum credit rating of B/C by KBW/IBCA, staffing requirements of at least two dealers with experience in fixed-income trading, and track record in other developed bond markets.
PD obligations	Obligation to bid in the auctions, to report to the central bank, to provide liquidity in the Singapore government securities (SGS) outright and repo markets by quoting two ways, to participate in SGS auctions and underwrite issuance, to give feedback to the Monetary Authority of Singapore (MAS), to assist market development, to help fix interbank rates, and to provide closing prices.
Privileges	Exclusive access to primary auctions and counterparty for central bank's open market operations, tax exemption on SGS trading income. Only PDs can bid for SGS at auctions. MAS holds regular meetings with the PDs to discuss market issues. MAS conducts money market operations through PDs only. Access to the MAS repo facility, which enables PDs with short positions to bid for specific SGS issues offered by MAS in exchange for other SGS issues they have. This facilitates PD market-making activities.
Supervision and enforcement	Central bank.
Formal agreement	Yes, candidates need to apply to the MAS to become a PD. Upon receiving MAS's approval, applicant is required to submit a formal letter accepting responsibilities and requirements of a PD.
Revision of status	MAS conducts a semiannual PD evaluation and ranking exercise.
System evolution over time	MAS started its PD system with seven PDs in 1987 with an outstanding amount of SGS of $4.46 billion. Since then, the amount of SGS outstanding has increased more than ninefold to $43.2 billion as of end-2001. This has been accompanied by an increase to 11 PDs at end-February 2001. Since 1997, MAS has been undertaking a series of market measures in consultation with PDs to improve market efficiency and liquidity. These include conducting SGS purchase operations to rechannel liquidity from illiquid off-the-run issues into the benchmark issues and building larger benchmark issues. At the same time, MAS also strengthened incentives that are given to PDs. Money market operations are conducted only with PDs, and the repo facility was implemented to facilitate their activities.
Relation between the size of public debt and the desirability of PD	Yes, see reply on advantages.
Recommendation of PD system	Recommended at the early or middle development stage. Should the bond market investor base eventually become well diversified and achieve critical mass, the need for a PD system becomes less severe.

Singapore *(concluded)*

Advantages	PDs play a critical role in facilitating the growth and development of a young bond market with a small and limited investor base, for the following reasons: - having a group of PDs committed to making two-way prices helps provide a minimum level of liquidity that attracts investors into the market; - foreign PDs, key participants in developed bond markets, bring knowledge and expertise, which help speed the development of the bond market; and - foreign PDs with a global client base would be committed to attracting their investor clients to the developing bond market.
Disadvantages	In a system where PDs receive privileges to fulfill their obligations, this could create an uneven playing field vis-à-vis non-PD market participants.

Spain

Dealers in government securities	146 and 21 primary dealers.
System established	January 1988.
PD institutions	21 PDs, composed of domestic and foreign commercial and investment banks.
Selection criteria	Technical criteria as well as membership of the Spanish debt market, with a strong commitment to its development.
PD obligations	Auction bidding obligations, firm two-way quoting commitment subject to oversight, and must provide any information required by the Spanish Treasury concerning the public debt market and the primary dealer's trading activity in the market. Market makers are requested to send a monthly report about their activity in the primary and secondary markets.
Privileges	Advantage of an extra half hour for the submission of bids at bond auctions; exclusive access to the second round in auctions; exclusive access to stripping and reconstitution of bonds; privileged counterparties of the issuer in its overall debt management activity (swaps, foreign currency issues, and the like); access to regular meetings with the Treasury as well as input to determine debt issuance target goals at each auction.
Supervision and enforcement	Ministry of Finance.
Formal agreement	Yes. Once an institution has been granted the status of "Public Debt Dealer" and has developed one month of trading activity (during which it must have behaved almost as a PD), an application form must be sent to the General Director of the Treasury with a memorandum attached, revealing the technical and human resources to develop market-making activity in the Public Debt market of the Kingdom of Spain and accepting all commitments set forth in the "Order of the Ministry of Economy of 02/10/99" (developed by Resolution of the Spanish Treasury, 20/02/02). Once those requirements are fulfilled, the General Directorate of the Treasury and Financial Policy, after receiving a positive report from the Bank of Spain, will grant that institution the status of PD by publishing it in the official bulletin.
Revision of status	Monthly oversight with an intended annual revision horizon.

Spain *(concluded)*

System evolution over time	First, the status of PD was granted only to institutions resident in Spain. In March 1999, it was extended to nonresident institutions. Commitments and advantages have also increased.
Relation between the size of public debt and the desirability of PD	The larger the size of debt, the greater the need for PDs.
Recommendation of PD system	Strongly recommended at the early and middle development stage. Also recommended at the advanced development stage. We think that PDs are always good for debt markets. However, in very mature and large debt markets they may not be as necessary.
Advantages	They allow for a broad and efficient secondary market for government securities. With respect to the primary market, they ease the allocation of new issues.
Disadvantages	We cannot see any disadvantages to having PDs.

Sweden[1]

Dealers in government securities	7.
System established	1989.
PD institutions	7 PDs composed of commercial banks and brokers.
Selection criteria	Minimum capital and involvement in government securities market.
PD obligations	Obligation to bid in the auctions, to report to the central bank, and to contribute with good liquidity in the market.
Privileges	Exclusive access to primary auctions and counterparty for central bank's open market operations.
Supervision and enforcement	Central bank and Finance Supervisory Institution.
Formal agreement	Yes.
Revision of status	Annually.
System evolution over time	Owing to a declining borrowing requirement over the last few years, the number of PDs has decreased from 15 to 7 during the last four years.

[1]Changes in the authorized dealer system (the name "primary dealer" is now used for the central bank's dealers) have taken place since the survey was made, and were communicated to the authors. The major changes include (1) the SNDO and the central bank appoint their own dealers, i.e., SNDO's authorized dealers are not automatically counterparties in the central bank's open market operations; (2) authorized dealers shall quote binding two-way prices with maximum bid-offer spreads in nominal government bonds in the electronic trading system; and (3) the Debt Office pays fixed and performance-related (based on market share in the primary and the electronic interbank dealer market) commissions to authorized dealers in nominal and inflation-indexed-linked bonds.

Sweden *(concluded)*

Relation between the size of public debt and the desirability of PD	No.
Recommendation of PD system	Strongly recommended at the early development stage. When a country is in a buildup phase regarding development of its financial markets, a PD system gives some insurance and stability to the market's functionality.
Advantages	In order to have some guarantee of providing good liquidity, PDs are the best alternative. For the moment, the Swedish National Debt Office (SNDO) is not paying any fees or provisions in the nominal bond market. Some countries have systems that include fees to the PD.
Disadvantages	NA.

Thailand

Dealers in government securities	50.
System established	June 5, 2000 (first established as central bank counterparties in August 1999).
PD institutions	9 commercial banks.
Selection criteria	Minimum capital, involvement in government securities market, risk management system, and coordination with authorities in developing the market.
PD obligations	Obligations to quote two ways.
Privileges	Exclusive counterparty for central bank's open market operations.
Supervision and enforcement	Central bank.
Formal agreement	Memorandum of understanding.
Revision of status	Annually.
System evolution over time	After conducting transactions with primary dealers, the turnover in the secondary market has increased dramatically.
Relation between the size of public debt and the desirability of PD	No, the number of primary dealers is based on the proportion of them in the secondary market.
Recommendation of PD system	Strongly recommended at the early development stage. PDs provide information about the desired direction of market development and cooperate with central bank and Debt Management Office in the development process, enhance the liquidity in the secondary market, and have a commitment to participate in the auction.
Advantages	The system provides an effective channel for conducting open market operations and for active market makers who will enhance the liquidity in the secondary market and ensure successful outcomes in the primary market auction.
Disadvantages	If the primary dealers are not efficient, the liquidity injection and absorption of the central bank will not be successful.

United Kingdom

Dealers in government securities	NA.
System established	1986.
PD institutions	17 primary dealers composed of commercial and investment banks, and security houses.
Selection criteria	Involvement in government securities market; membership in a Recognised Investment Exchange; produce viable business plan to be approved by the Debt Management Office (DMO); Financial Services Authority (FSA) to confirm that they are satisfied with the business plan.
PD obligations	To quote firm and two ways; to report to the DMO; no obligation to quote to other PDs; obligation to report trades to London Stock Exchange.
Privileges	Exclusive access to primary auctions and participation in consultation meetings, secondary market dealing with DMO, access to inter-dealer broker screens (for dealing with closed user group of PDs).
Supervision and enforcement	Ministry of Finance/DMO and FSA.
Formal agreement	Yes, it is a "contractual letter."
Revision of status	Semiannually.
System evolution over time	There are now fewer PDs, mostly due to bank mergers. The deal size has increased. Additional moves have been made toward e-trading. There is a closer relationship between the PD and the authorities.
Relation between the size of public debt and the desirability of PD	No.
Recommendation of PD system	Recommended at the early development stage. During early stages of economic development, most government borrowing will be from foreign institutions with only a small presence in one developing country. As more borrowing is carried out from domestic intermediaries, this will be more conducive to a PD system.
Advantages	More liquid market; easier to be transparent; easier auctions and settlement; reduced credit risk monitoring; distribution of securities.
Disadvantages	Administrative burden; acquisitions of cartels; requires supervision.

United States

System established	1960.
PD institutions	25 primary dealers composed of commercial and investment banks, and foreign institutions.
Selection criteria	Minimum capital, involvement in government securities market, the institution cannot have been convicted of a felony crime. There is no specific requirement as far as the extent of involvement in the government securities market.
PD obligations	To bid in the auctions, to report to the central bank. The obligation to bid in the auctions is not contractual, and the PDs are not necessarily expected to participate in every auction. PDs are also expected to participate in the Federal Reserve's open market operations and other business activities. PDs are also expected to provide the Federal Reserve with market information and analysis.
Privileges	While an exclusive counterparty for the central bank's open market operations, customers of dealers can participate through a primary dealer. Also, while dealers do not have borrowing privileges (for funds) with the central bank, they do have the ability to borrow securities from the central bank's portfolio during its daily securities lending operation.
Supervision and enforcement	Central bank, Ministry of Finance, and the Federal Reserve are primary in evaluating the performance of the PDs vis-à-vis their activities and obligations with the central bank, but they do not regulate or supervise the PD as a "regulator."
Formal agreement	There is no formal agreement between the Federal Reserve and the PD regarding its status as a primary dealer. There are some transaction-specific legal agreements.
Revision of status	Performance evaluations are held with the PD semiannually, or more frequently if necessary.
System evolution over time	The number of PDs peaked in 1988 at 46. The number has since declined to 25, largely due to consolidation in the financial services industry. In 1992, the Federal Reserve made changes to its relationships with PDs, primarily due to the misconception that the Federal Reserve regulated the PDs and that the PDs' designation gave them a special status. Specific actions taken were to eliminate the 1 percent market share requirement and to discontinue dealer surveillance activities.
Relation between the size of public debt and the desirability of PD	No, the two are not necessarily related.
Recommendation of PD system	Recommended. This depends on a great number of factors.
Advantages	Having a PD system facilitates the implementation of monetary policy by having a stable set of counterparties that are obliged to participate in open market operations and other central bank business.
Disadvantages	The designation of "primary dealer" is often viewed as giving the institutions a special status or guaranteeing their creditworthiness.

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