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Sequencing Capital Account Liberalizations and Financial Sector Reform[1]

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Abstract

Additional urgency should be attached to financial sector reform when a country begins to liberalize its capital account. The adoption of prudential regulations based on generally accepted best practices will normally not entail restrictions on capital flows and will support the move toward capital account convertibility. Monetary and exchange rate policy will be constrained by increased capital flows, and monetary instruments should be evolved toward more market-based arrangements. Discriminatory reserve requirements can introduce a wedge between domestic and foreign interest rates. The sequencing of liberalizations should reflect the more general objectives of improving efficiency and promoting financial and macroeconomic stability.

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I. INTRODUCTION

This paper addresses some of the questions that are of concern in designing a program of capital account liberalization. It focuses mainly on liberalizations that are relevant from a macroeconomic and balance of payments perspective (i.e., it does not deal with industrial or sectoral issues), and primarily on the financial institutional and regulatory considerations in the liberalization of the capital account, rather than on whether a country's macroeconomic or balance of payments position would support a liberalization. The paper is organized as follows: the remainder of this introductory section provides background on capital account liberalization; Section II discusses prudential regulation and capital account liberalization; Section III examines the design of monetary and exchange policy and monetary instruments; Section IV discusses the sequencing of liberalizations; and Section V concludes.

Benefits and risks of liberalization: Capital account liberalization is often an attractive option for many developing countries. First, there is much evidence that controls on capital outflows have not protected developing country's balance of payments from capital outflows, and therefore, there is little to be lost by a program of liberalization.[2] Second, eliminating controls on capital inflows (and outflows) has generally, at least initially, resulted in stronger capital inflows as international investors (and local residents with capital abroad) react to the improved investment environment.[3] Such inflows can help support the balance of

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[2]On the effectiveness of controls on capital outflows in protecting developing countries' balance of payments, see, for example, Johnston and Ryan (1994).

[3]The strength of such inflows, of course, will reflect a number of factors including the market's perception of the soundness of macroeconomic policies and the profitability of investment opportunities.

payments, smooth temporary shocks to income and consumption, reduce costs of borrowing, and therefore, support more rapid economic growth.[4] The major risk is that the capital inflows will not be used efficiently, which will inevitably bring into question the sustainability of the capital inflows, and the country's capacity to service its corresponding external debt liabilities. Reversals of capital inflows can result in balance of payments difficulties, and currency and banking crises.

Understanding the nature of capital controls: Capital account liberalization is not an all or nothing affair; rather there are many financial instruments and underlying transactions involved in the opening up of the capital account, and therefore, many possibilities for the ordering of liberalizations in light of domestic financial structures and economic objectives. Capital flows can, for example, be intermediated by the international capital markets (when local nonfinancial agents are permitted to borrow or place funds abroad); by the local capital markets (when nonresidents are permitted access to local financial markets and intermediaries); or a combination of both (when local financial intermediaries borrow or place funds abroad). Capital controls can also be in various forms, including outright prohibitions, licensing and approval procedures, and transaction taxes resulting in different consequences for capital flows. Table 1 illustrates the potential coverage of the regulatory framework for capital movements, and the types of transactions that may fall under a program of capital account liberalization.

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[4]Capital inflows in the form of foreign direct investment can also support growth through transfers of technology and management skills, while portfolio capital flows can help to diversify and deepen financial markets.

Table 1. Types of Capital Transactions Possibly Subject to Controls

INFLOWS	OUTFLOWS
Capital and Money Markets	
Shares or other securities of a participating nature	
Purchase locally by nonresidents	Sale or issue locally by nonresidents
Sale or issue abroad by residents	Purchase abroad by residents
Bonds or other debt securities	
Purchase locally by nonresidents	Sale or issue locally by nonresidents
Sale or issue abroad by residents	Purchase abroad by residents
Money market instruments	
Purchase locally by nonresidents	Sale or issue locally by nonresidents
Sale or issue abroad by residents	Purchase abroad by residents
Collective investment securities	
Purchase locally by nonresidents	Sale or issue locally by nonresidents
Sale or issue abroad by residents	Purchase abroad by residents
Derivatives and other instruments	
Purchase locally by nonresidents	Sale or issue locally by nonresidents
Sale or issue abroad by residents	Purchase abroad by residents
Credit operations	
Commercial credits	
To residents from nonresidents	By residents to nonresidents
Financial credits	
To residents from nonresidents	By residents to nonresidents
Guarantees, sureties, and financial backup facilities	
To residents from nonresidents	By residents to nonresidents
Direct investment	
Inward direct investment	Outward direct investment
	Controls on liquidation of direct investment
Real estate transactions	
Purchase locally by nonresidents	Purchase abroad by residents
	Sale locally by nonresidents
Provisions specific to commercial banks	
Nonresident deposits	Deposits overseas
Borrowing abroad	Foreign loans
Personal capital movements: deposits, loans, gifts, endowments, inheritances, and legacies	
To residents from nonresidents	By residents to nonresidents
Settlements of debts abroad by immigrants	
Transfer into the country by immigrants	Transfer abroad by emigrants
Provisions specific to institutional investors	
	Limits (max.) on securities issued by nonresidents and on portfolio invested abroad
	Limits (max.) on portfolio invested locally

Individual components of the capital account can be liberalized selectively. Indeed, in view of the underdeveloped nature of most developing countries' financial systems, and the extent to which such financial markets are segmented and incomplete, selective liberalizations are likely to be more appropriate as part of more general programs of financial sector reforms (see, however, the discussion in Section IV).[5] Even certain advanced economies have retained selective controls on capital movements that reflect the nature of their domestic financial instruments and financial market development, as well as sectoral and strategic considerations.[6]

Relationship between financial sector reform and capital account liberalization: The issues raised in capital account liberalization are to a large extent the same as those which confront a country liberalizing its domestic financial system—how to strengthen financial institutions so that they can operate in a market-based system, and how to achieve monetary objectives and maintain macroeconomic stability in such an environment. The liberalization of capital flows can thus be viewed as one aspect of broader programs of financial sector liberalization.

Capital account liberalization also introduces an additional external dimension and urgency to financial sector reforms. Capital inflows will either be channeled through domestic intermediaries or compete with them. In both cases, the intermediaries will need to be

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[5]In contrast, "big bang" approaches to capital account liberalizations would seem more appropriate where domestic financial markets are developed, and a number of industrial countries have followed such "big bang" approaches.

[6]For example, the majority of OECD member countries maintain some reservations under the OECD Capital Code, usually related to foreign direct investment but in a number of cases also related to financial transactions.

strengthened either to help ensure the efficient use of the capital inflows, or because the capital flows will increase the competitive pressure on domestic financial institutions, and the need to restructure them. Capital account liberalization can also open the way for domestic banks and corporations to take on greater foreign exchange risks than domestic financial liberalizations. Capital account liberalization will also bring more sharply into focus inconsistencies in monetary and exchange rate policies and the weaknesses of direct monetary instruments.

II. Prudential Regulation and Capital Account Liberalization

The role of the authorities in financial sector development is first and foremost in the establishment of an appropriate framework of financial regulation. This would include:

Appropriate legal systems: A comprehensive liberalization of capital transactions and transfers does not signify an abandonment of all rules and regulations connected to foreign exchange transactions. Countries that have opened their capital account have to strengthen their regulations in certain areas. This would include: (1) prudential regulations related to nonresident and foreign exchange transactions and transfers (see below); (2) measures designed to prevent tax evasion and money laundering; and (3) reporting by market participants ensuring the timely and accurate compilation of monetary, external debt and balance of payments data. High quality, transparent and comparable reporting and disclosure on the financial position of businesses and financial intermediaries provide the basis for informed market decision making. Since in countries with capital account restrictions, reporting obligations have often formed part of the foreign exchange regulations, as countries

liberalize their capital account, and dismantle their exchange controls, it may be necessary to introduce new laws and regulations, or update existing ones in order to maintain adequate statistical reporting and surveillance over international financial transactions.

Regulation and supervision: An effective prudential regulation and supervision framework and capital account liberalization are fundamentally complementary since both promote the efficient allocation of savings and investment and encourage portfolio diversification. Capital account liberalization yields these benefits primarily through promoting competition and increasing the scope for risk diversification. Prudential policy provides these benefits by seeking to strengthen and preserve the effective functioning of the financial and payments system.

Prudential measures are generally understood as encompassing official actions (laws, regulations, and officially sanctioned policies or procedures) that (1) promote the soundness of individual financial institutions through enforcing adequate management of risks, promoting effective internal governance, and fostering market discipline; and (2) protect investors against fraud and deceptive practices, and ensuring performance by financial agents of fiduciary responsibilities. This is generally achieved by controlling manipulative and deceptive practices, and by setting standards for transparency and the provision of fiduciary services.

Prudential measures normally regulate both the domestic and foreign activities of financial institutions. With respect to the protection of investments that are not intermediated through financial institutions, the applicability of prudential regulations will normally be limited to the admission and trading of investment instruments and the provision of related fiduciary (e.g., custodial) services in the domestic market. Officials do not generally adopt

measures for prudential purposes that protect investors purchasing instruments in a foreign market.

International transactions may involve different types of risk from those affecting comparable domestic transactions. These different types of risks include, inter alia, transfer risk (the risk that a foreign debtor might not be able to obtain the foreign exchange necessary to service external debt in a timely fashion), sovereign risk (the risk that a government fails to meet the service on its external debt) and country risk (the risk that a substantial number of debtors in a particular country may be faced with difficulty servicing external debt for a variety of reasons, e.g., macroeconomic or political instability). Supervisors may also set different standards for licensing of foreign financial institutions to operate in their domestic markets or for authorizing the listing and trading of foreign securities in domestic markets from those that apply to domestic agents. Such differences could be justified because of different supervisory and accounting standards, or greater difficulties in enforcing investor protection through bankruptcy or other laws, in the context of different national jurisdictions.

The scope and content of prudential measures and procedures are undergoing a significant global evolution reflecting, inter alia, the updating of techniques for identifying, measuring, and managing financial risk, as well as the increased need for international harmonization of supervisory approaches.[7] This has led to a growing body of generally accepted principles, standards, guidelines and best practices, developed by various international groupings of supervisors which provide some guidance toward a proper treatment of capital flows. Because supervisory emphasis is also shifting from reliance on

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[7]See, for example, the Group of Thirty (1997).

quantitative limits for controlling risk toward greater oversight of the internal capacity of supervised institutions to manage risk and toward greater public disclosure of information, these generally accepted practices have evolved toward prudential measures with little, if any, restrictive impact on capital movements. Such generally accepted practices also highlight the importance of managing foreign exchange risk exposures, and foreign exchange liquidity which are of greater concern with the liberalization of the capital account.

In countries with weak or embryonic financial systems, both the pace of capital account liberalization and the design of prudential measures become more complex. In particular, such countries often lack the institutional capacity to engage in a range of financial transactions on a commercially sound basis. Local financial institutions may have limited capacity to assess and manage risk associated with large capital inflows. In addition, regulatory authorities may have limited capacity to provide effective supervision of the financial system. For prudential reasons, therefore, such countries may need time to develop financial institutions, and markets and instruments before being able to durably liberalize their capital account. Moreover, with deficiencies in the legal and institutional framework for financial activity, or weaknesses in supervisory capacity, such countries may have to adopt measures for legitimate prudential objectives, which are crudely designed and may have a restrictive impact on capital flows.

Particular attention may have to be paid to strengthening banking sectors as part of any program of capital account liberalization for the simple reason that the banks are the major financial intermediaries and channel for capital flows in many developing countries. This was, for example, the case in Korea and Thailand, prior to their currency and banking crises.

Even where the banks themselves do not channel the capital flows, their interest rate and credit policies can have major influences on the structure of domestic interest rates and financial markets, and thus the composition of capital flows. For example, wide bank deposit/lending spreads may promote foreign corporate borrowing; or the underpricing by banks of credit and maturity transformation risks may distort the yield curve, and thus the composition of capital flows.[8] There is ample evidence that allowing weak banks to expand their balance sheets whether from domestic or foreign sources will lead to banking crises.[9] Measures to address weak banks would focus on capital adequacy, loan loss provisioning, credit assessment, liquidity management, pricing of risks, improvements in bank management, and increasing foreign participation.

Where banking sector weaknesses are not well perceived by financial markets, or where banks are considered to be explicitly or implicitly guaranteed, so that the markets exercise only weak discipline on the borrower, there would be a case for more direct measures to limit bank balance sheet growth, including controls on the banks' capacity to borrow internationally. In such circumstances, it would also be risky to liberalize banks' access to foreign finance until such time as the banking weaknesses have been addressed, appropriate

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[8]As a result, banking systems may not only be faced with problems of insolvency and illiquidity, but the underpricing of credit and maturity risks can inhibit the development of the longer-term markets due to an underpricing of longer-term risks in the economy. Such markets generally account for a much smaller part of both total domestic financing and foreign capital flows in emerging market economies than industrial countries.

[9]See, for example, Sundararajan and Baliño (1991).

supervisory standards implemented, and concerns about moral hazard addressed.[10] Similar concerns may also arise when providing access by corporate borrowers to overseas finance, if the financial sector guarantees are perceived as extending to the corporate sector.

III. Monetary and Exchange Rate Policy Arrangements

A simple but powerful way of seeing the impact of freedom of capital movements on monetary and exchange rate policy is through the covered interest rate parity condition, which is the consequence of arbitrage between short-term domestic and foreign interest rates, and the discount on the currency in the forward exchange market. The covered interest rate parity condition can be written as follows:

$$i_d = i_f + F_d \qquad (1)$$

where $F_d = \frac{e^f - e^s}{e^s} \times 100$ i_d is the domestic interest, i_f the foreign interest rate of the same maturity and F_d, the forward discount for that maturity, e^s is the rate of exchange (units of domestic currency in terms of a foreign currency) in the spot exchange market, and e^f the forward exchange rate on the date of maturity of the interest rate contracts. Thus, where the

[10]Regulation and supervision must be adequate and effective, yet it should also be designed in ways that will let private markets function. Over regulation stifles the efficient functioning of markets and can lead to moral hazard problems since private financial institutions do not take adequate responsibility for their actions.

foreign interest rate and forward exchange rate are predetermined, a country could determine the domestic interest rate or the spot exchange rate, but not both.[11]

With greater freedom of capital movements, short-term interest rates will increasingly be determined by the covered interest rate parity condition. An attempt to set both interest rates and exchange rates which are inconsistent with this condition could give rise to incentives for significant short-term capital flows. Thus, the capacity to assign monetary and exchange policies to achieve different macroeconomic targets will be increasingly constrained with the opening of the capital account. If monetary policy targets inflation, the exchange rate would not be free, for example, to be used as an expenditure switching instrument to achieve objectives for the current account. Fiscal policy could be used to influence the savings/investment balance to achieve such objectives but not monetary and exchange rate policy. Conversely, if the exchange rate is targeted to achieve objectives for the current account, or if the exchange rate is fixed, monetary policy would be left with little autonomy to achieve domestic stabilization objectives or to manage the consequences of short-term capital inflows.

As regards the implications for the sequencing of reforms, the initial policy response to strong capital inflows with a pegged exchange rate has usually been to conduct sterilized intervention. However, such intervention involves quasi fiscal costs, and is generally of limited effectiveness since it serves to keep domestic interest rates high, attracting further capital inflows. Pegged exchange rates have also led in some cases to an underestimation of the risks

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[11]Similar constraints on interest rates and exchange rates would apply in the absence of a formal forward exchange market.

involved in foreign currency borrowing. Thus, as capital account liberalization has progressed, a number of countries have responded to the increase in capital flows by adopting greater exchange rate flexibility, as a way of reducing shorter-term capital inflows that reflect interest rate differentials. In some cases, exchange rate arrangements have evolved in a progressive manner with the degree of flexibility depending on the size of the capital inflow problem (such as exchange rate bands, crawling bands, managed floats, and free floating arrangements).

Some countries have followed strong nominal exchange rate anchors, which has required subordinating monetary policy to the maintenance of these anchors, and an acceptance that interest rates be allowed to adjust in response to the capital movements. Such anchors have helped to reduce reversals in capital flows due to uncertainty about the exchange rate. Since the exchange rate instrument is not available to reduce short-term capital inflows, greater attention has been given to the adequacy of prudential standards, including to manage the risks associated with potential currency and maturity mismatches in such circumstances.

Some countries have targeted the exchange rate (and hence monetary) policy to maintain competitiveness, and relied on fiscal consolidation to achieve domestic stabilization and to offset the effects of large capital inflows. However, because of the limited short-run flexibility of fiscal policy, the authorities have had to rely on other measures to deal with more volatile capital flows, particularly capital controls. Generally, such controls are effective primarily as temporary measures.

Monetary targets and instruments: Increased capital mobility will also have a number of operational implications for the design of monetary policy frameworks and the use of different monetary instruments. In the case of fixed or managed floating exchange rate

regimes, the external counterpart of money supply may become more volatile, and the demand for domestically defined monetary aggregates may become more sensitive to international interest rate differentials, and may shift as a result of the external liberalization. As a result, it may be more difficult to identify a monetary aggregate with a sufficiently stable behavior that is capable of anticipating the evolution of other nominal variables in the economy. Capital account liberalization, therefore, reinforces the trend toward the adoption of more eclectic monetary frameworks that is frequently a feature of domestic financial sector reforms, and to giving more weight to exchange rates in monetary assessments.[12]

High capital mobility alters the effectiveness of different monetary instruments in achieving the objectives of monetary policy. On the one hand, instruments that impose a high cost or administrative constraint on the banks—as is the case with credit or interest rates ceilings or high nonremunerated reserve requirements—may be circumvented more easily by disintermediation through the capital account, and therefore, become less effective. On the other hand, monetary instruments which operate on the overall cost of money or credit in financial markets may be transmitted more rapidly to credit and exchange markets and allow the central bank to influence the decisions of financial institutions and markets which operate in its domestic currency, both locally and internationally. The characteristics of the major monetary instruments, and the effects of capital mobility are reviewed in Appendix I.

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[12]Such frameworks include interest rate targeting in the short-term combined with annual or medium-term frameworks based on inflation targeting; reliance on a wider range of indicators rather than a single monetary aggregate; greater attention to movements in the exchange rate in assessing monetary conditions including in the context of monetary conditions indicators; and revisions in the targeted definition of money.

While many countries have reduced, and some have phased out the use of reserve requirements in the context of high capital mobility, some still rely on them to influence the conditions that equilibrate supply and demand in the market for bank reserves (bank deposits with the central bank).[13] Nonremunerated reserve requirements, however, impose a tax on the banks subject to the reserve requirements and thus encourage disintermediation to financial institutions and markets which are not subject to the reserve requirements. A number of countries have responded to this potential problem either by remunerating the reserve requirements at a rate fairly close to market rates, or reducing or eliminating the reserve requirement ratio.[14] However, some countries have retained selected capital controls, for example, on the issue of certificates of deposits locally by nonresident banks to safeguard the effectiveness of their reserve requirements. The expectation is that by limiting foreign banks' access to a particular instrument, the extent of disintermediation would also be limited.[15]

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[13]When the central bank adopts a reserves operating framework, it may nevertheless seek to exploit the direct multiplier link between bank reserves and money supply. For a given level of reserve money, reserve requirements can impose an upper limit on the money supply where there is a non-interest sensitive demand for excess reserves. Reserve requirements may also be used to help ensure that the demand for central bank money is sufficiently stable in the context where the central bank seeks to achieve its monetary objectives by controlling short-term interest rates.

[14]The trend toward a reduction of the ratio of required reserves can be observed in all the industrial countries. Where the level of the ratio is comparatively high, as in Italy, remuneration partly offsets the tax element. In the United Kingdom, reserve requirements are no longer used as a monetary instrument. No reserve requirements are in placed in Belgium and Sweden. In Canada, arrangements in place amount to a zero percent ratio.

[15]For example, Germany restricts the sale or issue locally by nonresident banks of deutsche mark denominated certificates of deposit with a maturity of less than two years. The measure is to preserve the effectiveness of reserve requirements by achieving uniform treatment of resident banks subject to reserve requirements and nonresident banks which are not.

Open market operations play a core role for the purpose of steering interest rates, managing the liquidity situation in the market, and signaling the stance of monetary policy with an open capital account. In a context of free capital movements, the central bank is able to affect the conditions of both the domestic and external markets in its local currency through open market operations. Standing facilities, rediscount quotas and public sector deposits are frequently used to support open market operations, particularly to guide interest rate movements, and transmit rapidly and clearly the central bank's message to market participants. Movements toward capital account convertibility, therefore, have been supported with the adoption of indirect monetary controls.

Discriminatory reserve requirements: A frequently used measure for reducing capital inflows, or changing the composition of these inflows, is to impose differential reserve requirements on short-term borrowing from nonresidents. Such measures are sometimes referred to as "Chile-type" measures because of their adoption by the Chilean authorities in 1991, although they have a long history of use in other countries, such as in Germany during the 1970s.

Non-interest-bearing (nib) reserve requirements raise the cost of borrowing through the instruments subject to the requirements. If r is the nonremunerated reserve requirement, and i_f the nominal foreign interest rate, then the effective cost of foreign borrowing to a resident after the imposition of the reserve requirement, i^e_f, becomes:[16]

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[16]The impact of the imposition of the reserve requirement can also be examined from the point of view of the foreign investor, where the impact of the reserve requirement will reduce the return to the investor after account is taken of the cost of holding the reserve requirement. If i_d is the nominal domestic interest rate, then the return to the foreign investor after the

(continued...)

$$i_f^e = \frac{i_f}{(1-r)} \tag{2}$$

The implementation of the reserve requirements will thus increase the cost of foreign borrowing to residents (or conversely reduce the return on local investments to foreign investors), and therefore, reduce borrowing from abroad.

Overtime, it would be expected that the interest rate parity condition would be reestablished. Following the imposition of the differential reserve requirement, the domestic interest rate would be determined by the following revised condition:

$$i_d^* = i_f^e + F_d^* \tag{3}$$

Since $i_f^e > i_f$, the imposition of the differential reserve requirement would require either that the short-term domestic interest rate rise $(i_d^* > i_d)$ or there is a fall in the forward discount on the currency $(F_d^* < F_d)$. The latter could come about through a depreciation of the spot exchange rate.[17]

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[16](...continued)
imposition of the reserve requirements falls to i_d (1 - r). The subsequent discussion would follow whether the analysis is from the point of view of domestic borrower or the foreign investor.

[17] $F_d = (\frac{e^f}{e^s} - 1)x100$: Therefore, for $F_d^* < F_d$, with a given forward rate, the spot exchange rate e^s would have to rise, i.e., depreciate. If the spot rate is fixed, then the whole adjustment would have to fall on the domestic interest rate.

After the adjustments in the domestic interest rate (or the exchange rate), interest rates would again be constrained by the covered interest rate parity condition (equation (3)). The nib reserve requirement on foreign borrowing would introduce a wedge between the domestic and offshore interest rates, and ceteris paribus, allow the country to have a higher domestic short-term interest rate with a given exchange rate than otherwise. By allowing for higher domestic short-term interest rates the nib reserve requirement might also encourage a shift to longer-term borrowing by residents, and, in turn, could influence the composition of inflows. The latter effect would depend, however, on the resulting evolution of interest rates along the yield curve.[18]

If the differential reserve requirement is not applied comprehensively to all short-term sources of foreign capital inflows, it may encourage larger short-term inflows through those instruments that are not subject to the requirement. This could result if the general level of short-term domestic interest rates increases with the tightening of monetary policy that accompanies the introduction of the differential reserve requirement, therefore, providing greater incentives for short-term flows through foreign instruments not subject to the discriminatory requirement.

Various empirical studies have sought to examine the impact of such instruments on capital flows and have generally concluded that they have a temporary effect, but one that can be eroded quite quickly depending on the scope of the controls, and the stage of development

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[18]The implementation of the reserve requirement on shorter flows would have the initial effect of tilting the yield curve to foreign investors by reducing returns on short-term instruments relative to longer-term investments. However, to the extent that covered interest rate parity is reestablished, the effective returns to foreign investors would return to their previous level, and the tilting of the yield curve of returns to foreign investors would only be temporary.

of financial markets and instruments. Financial derivatives which restructure one type of financial transaction into another have now become an important means of circumventing such regulations, in addition to the more traditional channels for circumvention through instruments not covered by the regulations. Over time, Chile found it necessary to extend progressively the instruments covered by its reserve requirement to all short-term capital inflows in an attempt to avoid circumvention; and the effectiveness of the measures in Germany in the 1970s appeared to depend on whether they extended to corporate borrowing.[19]

IV. Sequencing Liberalizations

Designing the pace and sequencing of capital account liberalizations is intended to maximize the benefits of the liberalizations while minimizing the risks of such liberalizations. The conventional academic view of sequencing emphasizes the preconditions for the liberalization of the capital account—achieving macroeconomic stability and developing domestic financial institutions, markets and instruments before liberalizing the capital account. On this view, capital account liberalization should occur late in the overall program of

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[19]On the effectiveness of the measure in Germany in the 1970s, see Johnston (1983). A recent study on the effectiveness of controls in Chile by Soto (1997), finds that the reserve requirement had an effect on the domestic interest rate and nominal exchange rate which lasts for between a year and a year and a half. The reserve requirement significantly alters capital flow composition, leading to a relative decline in short-term capital flows. This latter effect is prolonged over time, although no quantitative assessment is provided. Soto concludes that "... the impact of the measure is in the expected direction, i.e., it reduces capital inflows, keeps domestic interest rates higher, depreciates the real exchange rate, and changes the composition of capital inflows. However, the economic importance of these effects are minimal." Soto's estimate are generally at the longer end of the range of estimates of effectiveness, see Cardoso and Laurens, forthcoming.

economic reform.[20] An alternative view, based largely on political economy considerations, emphasizes the constraints to reforms and the limited capacity of countries to reform themselves without pressures from outside. Early capital account liberalization can have an important catalytic role in broader economic reforms, and can help overcome entrenched vested interests that otherwise postpone necessary reforms. A middle view is that capital account liberalization should be part of a concurrent, integrated and comprehensive approach to overall macroeconomic and structural reform. Thus, the coordination of specific reforms in the domestic and external sectors becomes the critical concern. The latter approach would be consistent with a slower or faster pace for reforms; in the case of faster capital account liberalizations, the concurrent financial sector reforms would also have to be implemented rapidly.

The balance of benefits, costs, and risks of following one strategy rather than another will vary across countries depending on their starting conditions and economic objectives. Moreover, in view of the fact that financial reforms generally have effects on wealth and income distribution, the sequencing of reforms generally has a political economy dimension that further complicates the sequencing of the reform.

One approach that could be used to evaluate different sequencing strategies would be to focus on their contribution to the broad objectives of financial sector reform, namely, those of improving efficiency in resource mobilization and allocation, and promoting financial and macroeconomic stability. Thus to the extent that a specific reform improves resource

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[20]See, for example, McKinnon (1991).

allocation efficiency and helps to achieve, or at least does not undermine, financial and macroeconomic stability, it would be desirable to undertake the reform.

Capital account liberalizations that could help to improve efficiency would include those that diversify financial systems by introducing new technologies and instruments, introduce new skills and risk management capabilities, strengthen the capital structures of financial institutions, and promote competition for financial products. Such liberalizations could include increased direct foreign participation in the domestic financial systems. The liberalizations of access to international capital markets could also improve financial discipline, where such liberalizations provide a catalyst to introducing new accounting and disclosure requirements, and incentives to revise out of date regulatory structures and weak or ineffective supervisory arrangements. Financial systems would also be strengthened by reforms that introduce new instruments for hedging and managing risks, and increase the potential for greater diversification of funding sources and asset distribution. The development of such markets may require a recognition of price uncertainty to begin with, and therefore, depend on initial reforms to the procedures for determining interest rates and exchange rates. Liberalizations that would favor the channels where regulatory systems are more developed, governance is stronger, and concerns about moral hazard lesser, would be preferred on grounds of efficiency and stability over the alternative channels.

Regulatory changes that might not have such positive effects in terms of the objective of efficiency would include those that primarily support the existing monopoly and inefficient financial structures by providing access by the dominant domestic financial institutions to foreign sources of funds to the exclusion of their customers. Similarly, liberalizations could

weaken financial systems where they encourage greater concentrations in holdings of assets and funding sources or concentrations of risks rather than portfolio or risk diversification.

Although certain simple rules about sequencing capital account liberalization, e.g., liberalize longer-term flows before short-term, and direct investments before portfolio capital flows, are appealing, the practical application of such rules is frequently a major issue once a country begins to open its capital account in view of the fungibility of capital. As with other controls, the maintenance of restrictions on certain types of capital transactions may serve primarily to buy time to allow for the more fundamental restructuring of financial markets.

One of the compelling arguments for eliminating capital controls is that once a country has begun to open its economy, capital controls are not very effective at achieving their objectives, and primarily create costly distortions. Such distortions include those associated with the channeling of the capital flows through financial intermediaries that are less regulated and more risky to avoid the controls, and which can have broader detrimental effects on the stability, development, and governance of the financial system.

V. Conclusions

Additional urgency should be attached to financial sector reforms when a country begins to liberalize its capital account, because of the pressures this will place on the domestic financial system, and the increased exposures to foreign exchange risks. One element of such reforms will be to strengthen the environment in which markets can function through appropriate regulation and supervision, restructuring weak financial institutions, and dissemination of information. The other element, is the need to develop and implement policy

instruments consistent with increased capital flows. The latter includes: prudential instruments that rely more on the oversight of the capacity of institutions to manage risks, and less on easily circumvented quantitative or discriminatory controls; indirect or market based instruments for monetary control; and attention to the constraints on interest rate and exchange rate policy imposed by increased capital flows.

Capital account liberalization is not an "all or nothing" affair, and individual components of the capital account can be, and usually are, liberalized selectively. The sequencing of liberalizations of individual components of the capital account should be undertaken in support of the broader objectives of the financial sector reforms, i.e., to improve efficiency in the mobilization and the allocation of financial resources, and to promote durable financial and macroeconomic stability, and thus in ways that can help establish the preconditions for further liberalizations.

Table 2. Compatibility and Effectiveness of Monetary Instruments with High Capital Mobility

Monetary Instrument	Main Characteristics	Compatibility and Effectiveness with High Capital Mobility
Reserve requirements with no differentiation between residents/nonresidents, domestic/foreign currency	Imposed with the aim of achieving a combination of different objectives: (i) influence the commercial bank's demand for reserves, and therefore, enhance predictability of reserve money demand and influence the growth of domestic credit; (ii) contribute to the stabilization of short-term interest rates through the effect of averaging provisions; (iii) sterilize excess liquidity; (iv) increase the seigniorage when reserves are not remunerated.	In the case of nonremunerated required reserves, high capital mobility and the lack of harmonization between regulations may prompt operators to relocate their transactions aborad. In response, some countries reduced or eliminated the ratio. To preserve the effectiveness of the instrument some countries maintain restrictions on the issue of domestic securities abroad by residents and on the issue of securities locally by nonresidents.
Reserve requirements with differentiation between domestic and foreign currency	Instrument is used to influence liquidity in domestic and foreign currency and to encourage or discourage deposit taking in local and foreign currency. The impact depends on the level and rate of remuneration of the required reserves. Low or zero reserve requirements in foreign currency deposits are a feature of offshore banking centers.	Applying different ratios on deposits in domestic and foreign currency could serve to influence capital movements. May substitute for reserve requirements differentiated by residency were residents' holdings of foreign currency deposits are restricted.
Reserve requirements with differentiation between residents and nonresidents	In the case of nonremunerated required reserves, which imposes a tax on bank intermediation, higher ratio on nonresident deposits compared to resident deposits discourages capital inflows through bank deposits by lowering remuneration for the depositor.	Instrument has been used by a number of countries to influence capital movements. To be effective in limiting short-term inflows, this instrument would need to be applied comprehensively to all short-term capital inflows.
Deposit requirements on certain capital flows	Through its cost effect, a nonremunerated deposit requirement serves to reduce or increase the interest differential between domestic and international rates. In some cases it may be replaced by the payment of a flat fee.	Similar to reserve requirements which differentiate between residents and nonresidents.
Net open position/position limits	Used predominately as a prudential control when defined as a net foreign currency position.	In some countries open position limits are defined asymmetrically on resident and nonresident transactions and have been changed frequently with the intention of influencing capital flows.
Statutory liquidity ratios	Intended principally as a prudential measure or to influence the allocation of bank assets by imposing the requirement to hold minimum amounts of specified liquid assets as a percentage of specified liabilities. When used as monetary control instrument it affects the allocation of financial assets.	As in prudential measure helps to manage the risks of short-term capital inflows and potential reversals in such flows.
Minimum (maximum) portfolio requirements	Intended mainly to affect the allocation of credit rather than overall credit availability. Typically imposes on commercial banks the requirement to hold a minimum or maximum of certain assets (e.g., government securities or loans to priority sectors).	In the case of qualifying assets restricted to domestic assets, it can influence capital flows.

Table 2. Compatibility and Effectiveness of Monetary Instruments with High Capital Mobility

Monetary Instrument	Main Characteristics	Compatibility and Effectiveness with High Capital Mobility
Interest rate controls	Limitation on the ability of commercial banks to determine their lending and for deposit rates. Typically abandoned with the move to indirect monetary controls.	Becomes ineffective with capital account openings as will be circumvented through capital flows.
Bank-by-bank credit ceilings	Method for directly limiting the domestic counterpart of money supply through a rationing of the total credit provided by commercial banks. Typically abandoned with the move to indirect monetary controls.	Becomes ineffective with capital account openings, as will be circumvented through capital flows.
Directed credit	Method for allocating central bank credit to commercial banks mostly to finance priority sectors. Abandoned with move to indirect monetary control.	In the case of qualifying assets restricted to domestic assets, it may influence capital flows.
Bank-by-bank rediscount quotas	Method for allocating central bank refinance credit among commercial banks, which allows banks to borrow on demand at the central bank. Rediscount quotas usually only available for resident banks.	Increased volatility of money supply due to external factors requires flexibility in central bank's refinancing operations. The importance of rediscount quotas tends to diminish as the main tool for liquidity management.
Standing facilities	Deposit and lending central bank facilities used at the initiative of commercial banks. Standing facilities usually only available for resident banks.	High capital mobility increases volatility of money supply and requires flexibility in the central bank's liquidity management. Role of standing facilities tends to diminish as instrument of liquidity management.
Public sector deposits	Given magnitude of daily government flows in and out of banking system, reallocation of government deposits between the central bank and the commercial banks can be used to offset impact of such flows on short-term liquidity. Public sector deposits usually only available for resident banks.	Given the need for flexibility in interest rates management, allocation mechanism needs to ensure equitable distribution among the competing commercial banks based on a market mechanism.
Open market operations	Monetary operation at the initiative of the central bank involving one of the following transactions: (I) buying or selling assets outright; (ii) buying or selling assets (including foreign exchange) under a repurchase agreement; (iii) lending or borrowing against underlying assets as collateral through an auction mechanism. The central bank typically deals only in its local market and with resident banks.	Becomes the preferred monetary instrument as it allows flexibility for timing and amount of the central bank operations, and for managing interest rates.

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