

# 1. Introduction

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The last couple of decades have wrought profound changes in financial and monetary relations between nations. Technological advances and the increasingly global scope of business activities have generated an interplay between financial innovation and economic-political liberalization, which has sent the total stocks of financial assets, as well as the volume of financial flows between countries, toward rapidly increasing levels.

It is generally assumed that these developments have increased the need for prudent monetary and fiscal policies, as such policies are increasingly subject to the markets' scrutiny. Markets are expected to 'punish' imprudence, uncertainties and inconsistencies among different macroeconomic policy objectives or between economic and social policy objectives. Rapid financial market developments in the 1980s and 1990s also put policy-makers, particularly monetary policy-makers, in a quandary by unavowing old 'truths' and axioms about the relationships between macroeconomic policy variables, thus inducing a reappraisal of the scope and methods of economic policy in general and of monetary policy in particular.<sup>1</sup>

The changing climate for policy-making has fostered a widespread belief that governments, particularly those of small economies, have essentially lost the power to pursue independent and sovereign economic policies. However, it is still widely held that the loss of the monetary policy instrument is the major cost for a country assuming a rigid fixed exchange rate regime – or, in the European context, for countries joining the EMU. The arguments thus seem a bit contradictory.

This book analyzes financial system transformation and international policy interdependence from a money market angle, and with a European focus. To this end, we study 11 small, open European economies over the period, approximately, of two decades. We focus entirely on short-term financial markets (money markets) because monetary policy operates primarily through the short end of the market, and short-term capital flows are typically assumed to be more sensitive to interest rate differentials and exchange rate expectations. Short-term capital flows, thereby, have a more direct capacity to undermine the anticipated benefits of monetary innovations and policy measures. Consequently, to answer questions about financial interdependence and its policy effects, an analysis of money markets becomes instrumental.

Our analysis of money market transformation entails an in-depth study of different institutional arrangements surrounding money markets and monetary policy implementation – both domestic market arrangements and international aspects of the institutional environment (such as the exchange rate regime, membership of the European Union, etc). Our empirical analysis of international interdependence boils down to an analysis of the relationship between the degree of financial integration, as measured by interest rate gaps between countries, and the degree of monetary policy independence, as measured by the extent to which the path of monetary policy is determined abroad. We pay specific attention to the interplay between corporate managers/investors on the one hand and policy-makers/regulators on the other. With focus on these major actors we analyze the development and characteristics of domestic money markets, as well as their cross-border linkages and their role in the policy-making process.

Although the major focus of this study is on financial and monetary interdependence between European states – or, perhaps, on the dependence of the policies of small European states upon those of larger ones – we argue that the results will lend themselves to a broader policy discussion. At the macro-finance level, these results entail important policy implications for prospective EU/EMU member countries and for other transition/emerging market economies. At the corporate finance level, the results lend themselves to conclusions for private sector market participants about the delicate interplay with regulators and policy-makers.

The next few sections further introduce the major themes and give a fuller picture of the layout of the rest of the book.

## 1.1 THE ROLE OF SHORT-TERM FINANCIAL MARKETS

Short-term financial markets, or money markets, are central to the workings of a country's financial system, and to the exertion of influence over it by the monetary authority of that country. For financial institutions, and to some extent for other firms, the money market is a vehicle for fund-raising, cash management, risk management, position financing ('speculation') and signaling. In addition, it gives firms and authorities access to price information. Traditionally (which in this context is taken to mean the first three, four decades of the post-Second World War era), governments have employed methods of direct regulation and control (directed primarily at the supply side) in order to exert influence on the financial sector and on the saving and investment behavior of individuals and firms. However, the possibilities of effectively carrying out policy objectives through such measures are now essentially effaced. In a policy climate characterized by fast technological

advances and by the internationalization and liberalization of financial markets, policies have to be conducted mainly indirectly through market-oriented measures (directed primarily at the demand side). The money market, being the main arena for such measures, is the principal interface between monetary policy-making and the national economy.

Apart from its role in monetary policy, the domestic money market also serves other public policy objectives (although these are largely non-specific for the short end of the market). One of the most important is financing public sector deficits and managing the accumulated government debt. Because the government debt typically forms a very significant part of the domestic debt markets, the government's policies in this area are important determinants of how the markets work, and vital parameters for other market players. This way, the scope of monetary policy also becomes dependent upon the government's budget and fiscal policies. As different policy objectives become inter-linked in the market, policy conflicts may arise – hence the need for 'consistency' (as mentioned in the introductory paragraphs). The transformation of entire national financial systems and the development of proper money market functions within the realms of those systems have therefore generally gone hand in hand with a shift in the goals of national public policy relating to the financial system, as well as in the tools used to attain these goals.

The regulation strategy used in the past is not a policy in itself, only an instrument to reach certain policy objectives. When changes occur in the environment in which the policy is implemented, the appropriateness of the instrument and, possibly, of the policy objective itself is affected. The changes in the conditions for conducting monetary policy illustrate this as well as anything. Because of changes in the environment in which monetary policy was implemented, the old methods and instruments for reaching monetary policy objectives became increasingly inappropriate. For example, the United States and many European countries adopted targets for monetary growth in the 1970s. During the 1980s, changes in financial behavior and financial structures in those countries resulted in continuing alterations and increased uncertainty of the statistical relationship between monetary aggregates and the measures of economic performance directly related to policy objectives, such as output and inflation. As a consequence, monetary policy, too, became erratic and unpredictable.<sup>2</sup> Thus, changes in policy were to some extent of a passive character and could be seen as a mere acknowledgement (*de jure*) by the authorities that existing regulations had eroded and become (*de facto*) inefficient. In the 1980s there was in some countries a change of philosophy reflecting a growing recognition that excessive controls are not compatible with efficient resource allocation and solid and balanced growth.

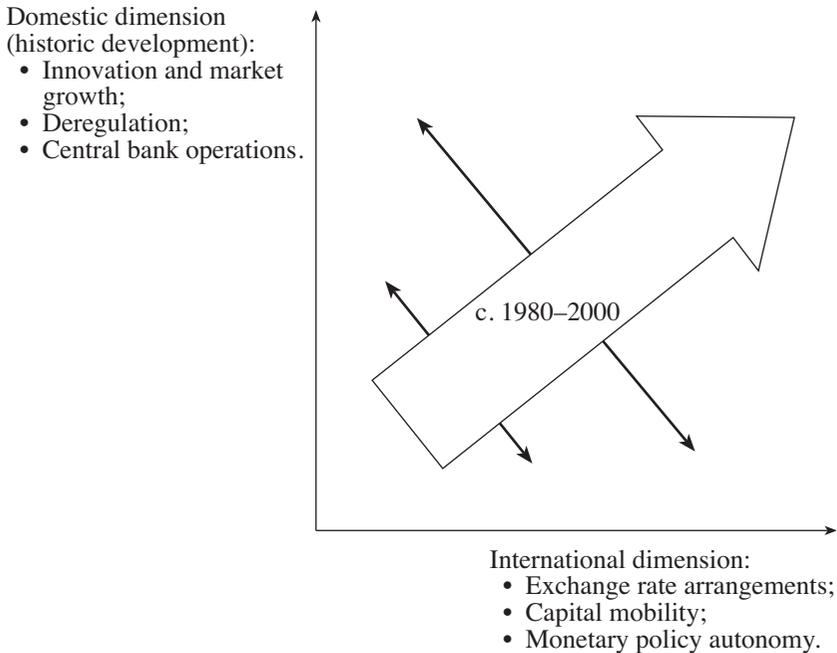
The financial deregulation wave during the 1980s was one aspect among others (and certainly not an insignificant one) of the policy alterations that had

to be carried out more or less as an adaptation to changes in market conditions. However, the changing market conditions, not least the development of domestic money markets, were also substantially influenced by policy decisions – as is shown by the difference in the structure and functioning of the money markets of different countries. To the ‘passive’ motives of adaptation, therefore, can be put more ‘active’ motives on the part of governments and monetary authorities to influence the course of events. Such motives include taking advantage of and influencing the market development in order to fulfill policy objectives, such as conducting open market operations and facilitating public borrowing.

Yet another set of motives for changing policies during the 1980s and 1990s was the countries’ varying degrees of involvement in, and active support of, the European integration process in general, the different exchange rate cooperation mechanisms and, subsequently, the economic and monetary union (EMU) – in short, the countries’ varying degrees of subjection to international agreements and, possibly just as important, international peer pressure. These are the main lines along which we will analyze the developments later in the book. To sum up, the domestic money markets of the countries we study have been at the heart of substantial changes – changes in the functioning of the financial sector and in the financial behavior of firms, as well as changes in public policy – over the 1980s and 1990s. These changes have been the product of an interplay between market forces and politics, both internal (domestic) and external (international). Money markets could be seen as a microcosm for a more general development – hence our interest in them.

The purpose and general structure of this book are summarized in Figure 1.1. The overall purpose is to explore the dynamic of money market development in 11 small, open European economies. A central idea is that domestic institutional arrangements interplay with external forces to create the market development dynamics and increased internationalization. The time period covered in the empirical analysis starts in the late 1970s or early 1980s and ends in about 2000.

The motivation for the vertical axis in Figure 1.1 is the historical development during the last 20 years of the financial sectors in our 11 European focus countries. Observable economic outcomes are determined through institutional mechanisms. Economic models usually assume that the relevant mechanism is a free and competitive market. A five-year plan, on the other hand, is a political/administrative mechanism for determining economic outcomes. The main characteristic of the history of the national financial sectors in our 11 countries (not least the money markets) during the period of study is the development from highly regulated, highly politicized institutional frameworks to a situation where outcomes are essentially market-determined.



*Figure 1.1 Basic dimensions of the study*

The horizontal axis in Figure 1.1 represents the international dimension, where we use the three main conceptual components of the familiar inconsistent trinity hypothesis (see Section 1.2, below) as an analytic framework, or ‘skeleton’, for examining the international linkages of the domestic money markets in these countries. The idea, however, as already mentioned, is that the domestic/institutional dimension interrelates with the international dimension. The domestic as well as the international institutional settings in small, European economies have been influenced to different degrees from the supranational level through different histories in terms of participation in the formalized integration within the European Community (later, the European Union), and associated projects such as the European Monetary System. Put differently, it seems clear that institutional developments at home and the development toward increasing international integration of domestic markets are strongly interrelated processes and deserve being studied as such. Hence the diagonal two-way arrows linking the two axes in Figure 1.1, and hence our explicit consideration of the international institutional dimension in the chapters dealing with domestic market development and domestic financial policies.

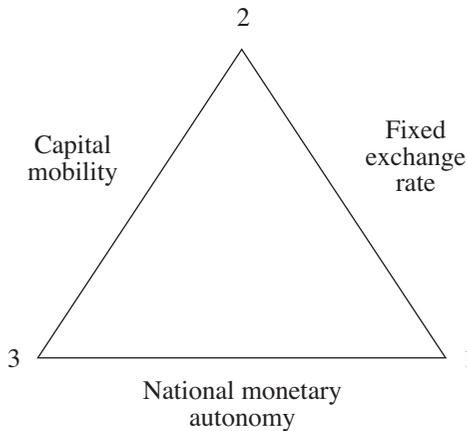
The international dimension is central to our analysis, and the framework used for this dimension deserves a separate discussion; this is contained in the next section.

## 1.2 THE INTERNATIONAL ASPECTS OF MONEY MARKET CHANGE: A FRAMEWORK FOR ANALYSIS

The transformation of the world's financial markets and the associated shifts in national governments' economic and monetary policies have given rise to a rich body of literature studying the interaction between policy-making and financial development, and – particularly – the issue of how cross-border mobility of financial capital constrains countries' sovereign pursuit of national economic policies. This literature has grown particularly since the late 1980s and early 1990s, by which point practically all industrial countries had abolished the remaining restrictions on capital movements, thus establishing a principle of full (formal) capital mobility in the developed world.

The issue, broadly construed, has been studied by economists, political scientists and international relations theorists from widely different angles.<sup>3</sup> The common point of departure, however, is almost always – irrespective of discipline – the traditional Mundell–Fleming paradigm. This is also the theoretical foundation for what has become a conventional wisdom in the policy debate and is sometimes referred to as the 'inconsistent trinity'.<sup>4</sup> The theory postulates that only two out of three key desiderata of national policy-makers – capital mobility, monetary autonomy and a fixed exchange rate – can be achieved simultaneously over any extended period of time. In Figure 1.2 this is illustrated by a triangle, where the corners represent the attainable policy combinations.

Consider what happens when a government decides to pursue a lax monetary policy, while maintaining a fixed exchange rate. This is the type of policy combination most industrial countries opted for in the decades immediately following the Second World War, during the Bretton-Woods era. If capital is immobile (corner 1), the reduced interest rate will boost aggregate demand. If capital is mobile, however, the reduction in interest rates will trigger a capital outflow. If the monetary authority is bent on maintaining a fixed exchange rate regime, it will be forced to use its foreign exchange reserves in order to defend the peg (or to devalue the currency) which will, in turn, drive interest rates back to world levels (corner 2 – autonomy is lost). Alternatively, the capital outflow will necessitate a complete abandonment of the fixed exchange rate regime (corner 3).<sup>5</sup> In the same way, a monetary policy shift in a country that keeps a flexible exchange rate will operate primarily on the exchange rate, not the interest rate. To achieve monetary autonomy in a world of mobile capital,



Source: Oxelheim (1990).

*Figure 1.2 The monetary policy option triangle*

then, a nation must either block capital flows by imposing capital controls *or* keep the value of its currency flexible relative to foreign currencies. Hence, if governments are politically committed to the principle of capital mobility, this would imply that the matter of national monetary independence hinges on a flexible exchange rate regime.

The original Mundell–Fleming paradigm has been substantially extended since the 1970s, and also more generally contested on several points.<sup>6</sup> However, given the widespread acceptance of its general predictions, the paradigm is still appropriate as a point of departure.

By using the main concepts of the inconsistent trinity hypothesis as the frame of thought for the international dimension in this study, we are faced with some problems that are related to the impractical nature of these three concepts. First, the concept of the fixed exchange rate is an illusion: any exchange rate regime short of full-out monetary union (with or without a common currency) is always subject to potential change at the initiative of the monetary authority. Exchange rates then are really always just more or less flexible. Second, capital mobility is an abstract idea that cannot be observed. We can only get to it indirectly by theorizing about what it implies. The ‘law of one price’ hypothesis is an example of such theorizing – the most common and perhaps the most straightforward approach to tackling the issue of financial (and economic) integration empirically. Third, and finally, autonomy is not less of a problematic concept. It is used in a multi-dimensional way, sometimes referring to a formal right, sometimes to a

policy practice, sometimes to policy objectives, sometimes to outcomes, and sometimes to capacity.<sup>7</sup>

These conceptual problems make the analysis difficult in several ways. However, the problems and the somewhat simplistic nature of the general predictions of the framework are also one of the study's main incentives. While it is widely taken more or less for granted, for example, that a small country cannot pursue an autonomous policy under an exchange rate peg (if it is significantly integrated in the international economy), we hold this to be, in practice, a strong simplification. Similarly, an exchange rate float by no means guarantees autonomy. Several interrelated factors account for this. One of the most important is that, as we have already emphasized, exchange rates are never completely fixed.<sup>8</sup> For example, central banks can indeed exercise some autonomy (although limited and temporary) if the 'fixed' exchange rate comes in the form of a fluctuation band, as it most often does. Such a band may provide some room for maneuvering for the monetary authority of even a small, open economy by introducing a 'wedge' between the domestic and foreign interest rate, which translates to a non-zero expected exchange rate change.<sup>9</sup> Moreover, for as much as the mainstream theory emphasizes the role of exchange rates, the degree of autonomy that is actually exploitable by national monetary authorities in the medium-to-long term may be determined by more fundamental factors, such as relative price developments, rather than exchange rates that are often highly variable and unpredictable in the short run.<sup>10</sup>

Yet another related factor that somewhat undermines the predictions of the conventional wisdom has to do with expectations, credibility and something we might call a monetary authority's 'policy record'. A central bank's own credibility may leave room for discretionary action despite a formally rigid currency link. Conversely, lack of credibility may make a loose exchange rate peg more constraining even than the most rigid form of currency board.<sup>11</sup>

There are more factors than these, for instance the inability of governments to completely block capital flows unless they also block all kinds of trade, which means that economic policy interdependence does not start with capital mobility as such. All these factors, and others, indicate that the inconsistent trinity formula should be seen as only a rough guide to, rather than an unbending determinant of, policy options and outcomes. Although the purpose of this book is not to assess how well the formula fares in practice, the collected evidence of the empirical analyses will provide, as a by-product, some basis for such an assessment.

This section has summarized the analytic framework for the international dimension of the study. Next we make some clarifications with regard to two central conceptual components in this framework.

### 1.3 SOME CONCEPTUAL CLARIFICATIONS: CAPITAL MOBILITY AND MONETARY POLICY AUTONOMY

As observed above, one challenge of this study is the operationalization of the different basic concepts. To face up to it, we need to find tractable definitions. Below we take on, in turn, the concepts of capital mobility and monetary autonomy.

Let us start with a clarification regarding the concept of capital mobility. A key assumption in the inconsistent trinity framework is the existence of *perfect* capital mobility. In the real world, this is clearly a highly unrealistic assumption. It is not enough to contend that there are no longer any formal restrictions on capital movements; informal obstacles (such as, for example, cross-border information asymmetries) and indirect institutional barriers of different kinds may still restrict capital flows. It is thus necessary to investigate the degree of actual (de facto) capital mobility. The idea of capital mobility is closely related to that of financial integration. A few definitions should be in order, then.

In sorting out the concepts, we use the typology outlined in Figure 1.3.<sup>12</sup> First we differentiate between financial integration and more generally increased economic interaction between nations as regards trade, investment, etc. This difference is captured in the distinction between economic and financial integration. Conceptually, the two forms of integration overlap, as both include foreign direct investment (FDI).<sup>13</sup> Seen as a Venn diagram, the remaining part of the economic integration set contains trade in goods and services whereas the remaining part of the financial integration set contains flows of financial assets, shares, bonds, derivatives, credit, loans, purely financial operations and personal capital operations. In causal terms it can be claimed that financial integration was triggered and made inevitable by the increasing internationalization of firms, that is by increasing economic integration. Increased trade and FDI activity provided firms with the option of leading and lagging payments contributing to an erosion of the efficiency of measures to block capital movements.

Financial integration can be assessed on different levels and with different methods, as shown in Figure 1.3. Here, we will focus on geographical integration (cross-border linkages between national markets), as opposed to functional integration (the latter measuring the degree by which, for instance, insurance is integrated into banking). Among the alternative indicators of geographical integration, we will concentrate on capital-flow-based measures of financial integration ('capital mobility'), in order to align our empirical work as closely as possible to the analytic framework of Section 1.2.<sup>14</sup>

The fourth branch of the tree in Figure 1.3 focuses on financial integration as expressed by links between financial markets. As such, financial integration can be defined as total, direct, or indirect, and varies in strength along a scale

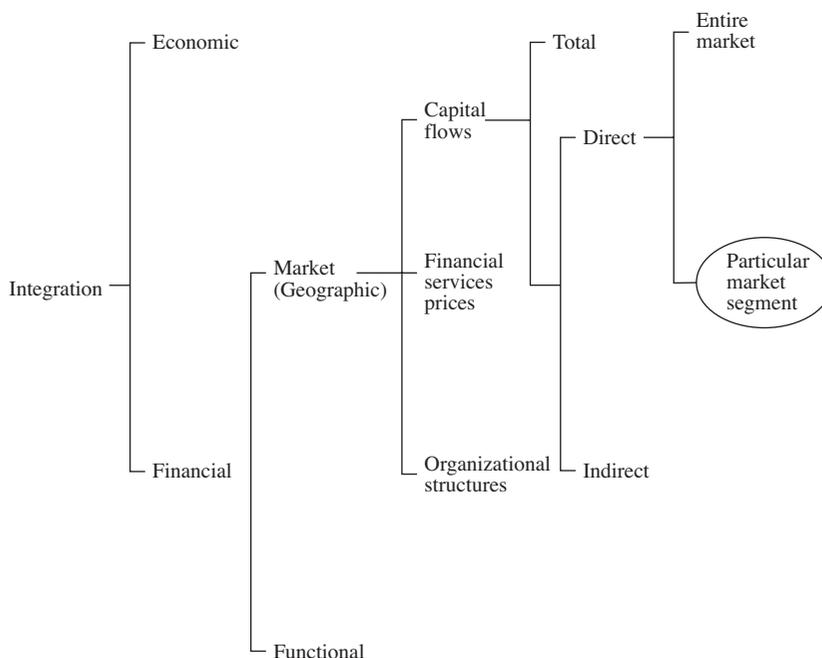


Figure 1.3 Economic and financial integration typology

from perfect integration to complete segmentation. The concept of interest for the purposes of this study is that of direct financial integration, which refers to the international integration of particular market segments. By market segment we refer to the markets for specific asset types. For example, the money market is made up of several different segments – that is, markets for different short-term assets (the market for treasury bills, the market for bank deposits, and so on). The ‘particular market segment’ in Figure 1.3, in other words, does not refer to the entire short-term market. Some segments may be integrated, others not. As we shall see, the market structures and range of products traded still vary substantially across our focus countries, meaning certain instruments are traded in some countries but not in others. The scope for integration of specific market segments varies accordingly – simply put: there is not *one* money market.

Limiting the scope of the analysis to examining the direct integration of a particular financial market segment, the literature sometimes makes the distinction between international asset substitutability and capital mobility. Perfect substitution would imply that at depreciation-adjusted yield differentials, agents are indifferent between the securities of different countries,

whereas capital mobility has to do with the ability and fact of actually achieving the preferred portfolio composition.<sup>15</sup> From an empirical point of view, however, it is hardly possible to conceive a model specification that allows testing for these two aspects separately, although different testing methodologies imply different emphases. For example, various alternative approaches to measuring actual capital flows (such as measuring the interest sensitivity of capital flows, or the reflow of capital and the offset coefficients) clearly emphasize the capital mobility aspect, whereas studying international portfolio composition (arguably) stresses the asset substitutability aspect.<sup>16</sup>

Using methods relying on the measurement of the size of capital flows per se, confronts us with the problem of accurately measuring these flows – a problem that grows in importance with increasing sophistication of financial markets and with improvements in information technology. Using a price approach is obviously a way to escape the problem. However, this approach is not trouble-free either. According to the ‘law of one price’ of financial assets, if markets are perfectly integrated, then identical assets will command identical prices in different markets (with relevant adjustments). The price, here, equals the interest rate. The pinch with this method is that there remain national idiosyncrasies to interest rates, so no complete equalization can be expected: a differential, or gap, between the interest rates of equivalent assets in different national markets will persist. The gap includes, to a greater or lesser degree, such components as transaction costs and other costs arising from various information barriers, exchange rate expectations, currency risk premiums, political risk premiums, and other premiums attributable to market- or policy-generated inefficiencies.

In order to measure integration, these distinctly national quirks must be conceptualized and compensated for. Only if that can be pulled off will we have a reasonable measure of integration. By making varying adjustments and by analyzing nominal and real interest rate differentials, respectively, weaker or stricter tests of financial integration (direct or indirect) can be performed.

The literature on financial integration using the interest differential approach is extremely extensive.<sup>17</sup> Later in this study, we will add to it by measuring the varying degrees of international integration over time of the domestic money markets of the 11 European countries included in the study. To make the picture as complete as possible, we will employ alternative parity rules, and measure the integration of our focus countries to several different benchmarks. We will use these tests as general indicators of financial integration; and in what follows, we will use the terms ‘financial integration’ and ‘capital mobility’ more or less synonymously, much as is being done in the rest of the literature.

In addition to the concept of capital mobility we also have to clarify the concept of monetary autonomy. Perhaps the most important methodological

question, given our approach, is whether we can separate the measures of financial integration and monetary autonomy. Expressed differently, the question boils down to whether we can specify a model that allows us to investigate the degree of capital mobility while still leaving the issue of monetary autonomy open. The answer, as will be shown below, largely depends on exactly what we mean by 'autonomy'. There is no clear division between financial integration studies and studies of monetary policy autonomy. Scholars investigating the degree of financial integration like to draw conclusions regarding the degree of autonomy, usually without properly defining the nature of the relationship between the two concepts; alternatively, autonomy is given a 'residual' definition. It is appropriate here, then, to make some clarifications with regard to the definition of this concept.

Monetary autonomy, as the concept is used in what follows, differs from monetary sovereignty or monetary independence.<sup>18</sup> Monetary autonomy is the ability of a national authority to set and maintain a monetary policy that is not driven by international markets or exchange rate regimes. Sovereignty refers to a nation's legal and political supremacy in monetary matters. Independence, finally, is primarily a description of the degree of freedom enjoyed by the central bank in relation to its government. To further operationalize the autonomy concept empirically, we note that in the inconsistent trinity context, autonomy means that a nation pursues its preferred monetary policy. Lack of autonomy means that the monetary authorities must focus their efforts entirely on keeping the exchange rate fixed. Recall, however, that the model contains the element of perfect capital mobility; with this definition of autonomy, capital mobility per se does not constrain monetary policy – only capital mobility *in combination* with a fixed exchange rate. Thus, even with perfect capital mobility it is possible for a small country to pursue an autonomous monetary policy, provided it is prepared to let adjustment take place through the exchange rate. 'Autonomous' becomes almost synonymous with 'divergent', except that it may very well be a country's preference to pursue a policy that happens not to diverge significantly from that of comparable countries. Such a country would still be autonomous. In practice, an empirical study cannot well distinguish between preferences and economic necessity (unless preferences are known a priori), since only actual outcomes are observable.

The above distinction is too seldom made in the literature, and autonomy is often equated with one measure or another of capital mobility. A possible reason for this is that autonomy, defined in terms of the scope for a *divergent* monetary policy, may be considered meaningless. The original Mundell–Fleming model assumes fixed prices (with the exception of exchange rates), thus essentially ignoring the feedback effects between exchange rates and domestic prices. A different assumption regarding the flexibility of goods prices mainly affects the assessment of the (long-run) potency, or effective-

ness, of monetary policy: the value of autonomy might be considered debatable, at best, if the projected benefits of its exertion are quickly nullified by domestic price adjustments working through the exchange rate. Nonetheless, this is the proper definition of autonomy from the point of view of the inconsistent trinity framework.<sup>19</sup>

It follows from the above discussion that the issue of monetary autonomy, as defined here, boils down to a matter of control over domestic inflation: under flexible exchange rates, a country can choose its own inflation rate. (Of course, this is only true in a very theoretical sense, since investors will demand a premium for instability of any kind, which implies a 'fixed cost' of divergent policies.) The question whether this is to be considered a meaningful form of 'autonomy' – if this form of autonomy is anything to be had (or lost) – essentially coincides with the question of the effectiveness of monetary policy (for instance in countering asymmetric shocks).

In this study, we apply several different tests designed to detect possible asymmetries in the relationships between principal monetary policy indicators (short-term interest rate changes and narrow money supply growth rates) of the small focus countries and those of the larger benchmark countries. The logic is that if the small countries pursue autonomous policies, then we should not be able to show statistically that their monetary policies are 'determined abroad'. If, on the other hand, we are able to show such a relationship, then we have an indication not only that the smaller countries do not pursue divergent policies but that they are 'policy-takers' – thus that the small country is effectively non-autonomous.

## 1.4 THE CASE OF SMALL, OPEN EUROPEAN ECONOMIES

As has been made clear previously, this study focuses on the development and international interdependence of the short-term financial markets, or money markets, of a number of small European economies. Excluding first the countries that did not have their own currencies in the period studied, there are 11 West European countries that fit the size criterion (GDP), starting with Ireland (the smallest) and ranging up to the Netherlands (the largest). After that, there is a big jump up to the medium-sized countries such as Spain. The 11 small countries are the ones we will focus on here. Except Ireland and the Netherlands, the focus countries are: Austria, Belgium, Denmark, Finland, Greece, Norway, Portugal, Sweden and Switzerland.

Apart from the fact that small countries are underrepresented in empirical studies of interdependence, three things, in particular, motivate the choice of these countries: 1. the very fact that they are small, which means that they can

reasonably be expected to have a role of price-takers, or 'policy-takers', in international markets; 2. the money markets for these countries' currencies were virtually non-existent 25 years ago, but have since gone through phases of emergence, growth and gradually increased international integration; and 3. during this time they have, collectively and at various intervals, employed well-nigh every exchange rate regime imaginable, from free float to full monetary union, with or without restrictions on capital movements or other foreign exchange transactions. The countries also represent the full spectrum with regard to the level of ambition of exchange rate policy, and 'reputation' in monetary matters: from hard currency, low interest rate currencies like those of Switzerland, the Netherlands and Austria, through the frequently devalued currencies of the Nordic region, to countries that, during the greater part of the period investigated here, have had a near-emerging market status (Greece and Portugal). This diversity in terms of exchange rate regimes also parallels the fact that the 11 countries constitute an excellent laboratory as regards the link between money market development and the conduct of monetary policy on the one hand, and European integration on the other, as shown in Table 1.1.

For two of the countries studied, the issue of monetary autonomy is also particularly relevant in the context of an impending decision whether or not to join the EMU. But the relevance of the issue extends far beyond this rather limited question; odds are that if these countries eventually do join the EMU, it will be for reasons other than such as can be easily captured in economic models.<sup>20</sup> However, as the EU prepares for eastward expansion, the need to understand the possibilities and the mechanics of 'flexible integration' is ever increasing. Furthermore, in many other emerging market economies, monetary arrangements are unsatisfactory or uncertain. Insofar as the experiences in Western Europe in this respect has occurred in advance of such changes elsewhere (while full monetary integration is

*Table 1.1 Monetary policy, money markets and European integration*

EMU members	EU countries outside the EMU <sup>21</sup>	European non-EU countries
Austria	Denmark	Norway
Belgium	Sweden	Switzerland
Finland		
Greece		
Ireland		
The Netherlands		
Portugal		

perhaps not an immediate issue elsewhere in the world, increased integration on a regional basis is forging ahead, and the debate on the relative merits of alternative exchange rate regimes is as lively as ever), the European small economies case may hold important lessons for other economies struggling to achieve some sort of equilibrium between policy aims and financial system realities.

## 1.5 THE SCOPE AND PLAN OF THE BOOK

A few words about the scope (and limitations) of this book might be useful at this stage. First of all, the book is an empirical, historical and topical study, which uses a standard/mainstream theoretic framework. The contribution in this regard is to give food for thought about policy problems as well as empirical issues such as measurability and reliability. Basic macroeconomic disputes such as regarding the effectiveness of monetary policy as such, or the relative merits of different exchange rate arrangements are beyond the scope of the study. Moreover, we study primarily the development and openness of money markets specifically (for reasons already presented), although surrounding financial market segments as well as the relative size of the traded vs. the non-traded sectors in the economies, and various characteristics of the transmission mechanism, influence monetary policy options.

The study consists of two main parts (corresponding to the two axes in Figure 1.1). Chapters 2 through 4 constitute the first major part of the study, which focuses on *domestic* developments and market conditions. Chapter 2 provides some stylized background facts relevant for understanding the development in the 11 countries analyzed. The chapter focuses on various indicators of size, openness and overall financial development. In Chapter 3 we then analyze domestic money market developments: the emergence of new markets and instruments, the deregulation of domestic financial systems (particularly money markets), and the effects of these changes. Chapter 4 covers operational and market aspects of monetary policy.

Chapter 5 opens the second major part of the book, which takes on the *international* perspective. The chapter examines external policy developments, with special focus on exchange rate policy and the liberalization of cross-border capital movements. Chapter 6 applies a number of different methods to measure over time the degree to which the domestic money markets of the case countries have been internationally integrated. Chapter 7 provides an empirical assessment of monetary autonomy under various degrees of capital mobility and different policy regimes. Chapter 8, finally, summarizes the results.

## NOTES

1. By monetary policy we mean the management of nominal variables, such as price developments, interest rates and (sometimes) the exchange rate, performed by a central bank or similar monetary authority by means of the various instruments at its disposal – primarily the manipulation of the volume and composition of high-powered (central bank) money. An accessible text discussing the definition, scope and methods of monetary policy is Goodfriend and King (1988).
2. See Kole and Meade (1995) for an accessible recount of monetary targeting in G7 countries, with a focus on Germany, and Rich (1987) for a comparison of Swiss and US experiences over the 1980s.
3. Most of the relevant economic literature studies subsets of the issue; references will be made throughout the text. Some recent political science/international relations contributions with different approaches are, to name but a few, Frieden (1991), who examines the implications of capital mobility for the policy preferences of different socioeconomic interest groups; Goodman (1992), which is a comparative study of the institutional politics of central banking; Goodman and Pauly (1993), which is a four-case study of the politics of ‘capital decontrol’ (that is, external financial deregulation); Andrews (1994), where it is argued that capital market integration systematically constrains state behavior and therefore is to be considered a ‘structural feature of international politics’ according to the structural realist branch of international relations theory; Garrett (1995), who investigates the connection between the internationalization of goods and capital markets and the domestic political power balance in Western economies – particularly if and how internationalization has affected the scope for pursuing (and the propensities to pursue) leftist/interventionist policies. Andrews and Willett (1997) make a comprehensive summary of the many different channels through which international economic and political factors may influence national economic policies; Cohen (1998) provides a broad-based analysis of how the authority of governments in monetary matters is being increasingly constrained by competitive forces, and argues that the ‘traditional myth of One Nation/One Money inaccurately privileges the interests of governments in relation to other societal actors, perpetuating a misleading image of the structure of power in global currency relations’ and that ‘competition across borders transforms the role of the state in monetary governance’ in a way hitherto ignored or understated by social scientists; and Oatley (1999), who disputes the notion that financial integration undermines the possibilities to pursue ‘distinct partisan macroeconomic strategies’.
4. Other labels given to the same phenomenon are ‘the Mundell–Fleming conditions’, ‘the Mundell–Fleming approach’, ‘the impossible triangle’ (Oxelheim, 1990), ‘the Unholy Trinity’ (Cohen, 1993), ‘the Impossible Trilogy’ (Wyplosz, 1997), ‘the macroeconomic policy trilemma’ (Obstfeld and Taylor, 2002), and ‘the Inconsistent Quartet’ (Padoa-Schioppa, 1987; the fourth component in this latter label referring to the pursuit of a free trade policy).
5. In practice, it is conceivable, or even likely, that foreign exchange market pressures will result in a *combination* of market intervention and currency correction.
6. For a survey of recent developments in general equilibrium open economy macro modeling, see Lane (2001).
7. See Andrews (1994).
8. See, for instance, Obstfeld and Rogoff (1995).
9. Bordo and MacDonald (2001): 14. See Svensson (1994) for a model of, and empirics on, monetary policy autonomy in an exchange rate band.
10. That is, it may be more appropriate to analyze ‘autonomy’ directly in relation to fundamentals, rather than to make the detour over the assumption that exchange rates are determined by fundamental factors.
11. As observed, for example, by Cohen (1998).
12. Cf. Figure 5.1, Oxelheim (1996): 115 or Figure 2.8, Oxelheim (1990): 86.
13. FDI means an investment aiming for a lasting voice in the target company. The common level for having such an influence is in most countries set to 10 percent of the capital/votes.

14. An example of a different approach is the evaluation of microeconomic gains from a single European financial market, which was focused on the convergence of the prices of financial services, see Commission of the European Communities (CEC) (1988).
15. Dornbusch and Giovannini (1990): 1258.
16. See, for example, Stulz (1981); Tesar and Werner (1995); Rowland (1999). Yet other measures include the Feldstein–Horioka approach, which focuses on the links between domestic savings and investments.
17. Among recent contributions studying money markets as well as other market segments are Marston (1995) and Centeno and Mello (1999).
18. These distinctions are due to Goodman (1992).
19. This links the issue of monetary policy autonomy to the traditional macroeconomics debate about the feasibility or desirability of using monetary policy for anything beyond ‘nominal money management’ – an issue clearly beyond the scope of this study; see, for example, Friedman (1983) for some classic empirics on the US, or Kim (1999) for recent evidence on the G7 group of countries.
20. See, for instance, De Grauwe (1992); Obstfeld (1997); or, from the press, *The Economist* (1998), Brown-Humes and Dawkins (1999), Feldstein (1999).
21. Formally, Denmark and Sweden are not in the same position with respect to the EMU: Denmark is not a member; Sweden is a member, but has not adopted the single currency (see Chapter 5). Henceforth, however, we shall refer to both as ‘non-EMU’ countries in order to emphasize that both countries retain their national currencies and a national monetary policy.