8. Appendix

8.1 Defining the Degree of Unification in Financial Supervision and the Central Bank Involvement

The creation of the FAC Index is based on an analysis of which and how many authorities in 48 countries are empowered to supervise the three traditional sectors of financial activity: banking, securities markets, insurance. To transform the qualitative information into quantitative indicators, we assigned a numerical value to each type of authority, in order to highlight the number of the agencies involved. The rationale with which we assigned the values considers simply the concept of unification of supervisory powers: the greater the unification, the higher the index value. The index is built on the following scale: 7 = Single authority for all three sectors (total number of supervisors=1); 5 = Single authority for the banking sector and securities markets (total number of supervisors=2); 3 = Single authority for the insurance sector and the securities markets, or for the insurance sector and the banking sector (total number of supervisors=2) 1 = Independent specialized authority for each sector (total number of supervisors=3).

We assign a value of 3 to the single supervisor for the banking sector and securities markets because of the predominant importance of banking intermediation and securities markets over insurance in every national financial industry. It also interesting to note that, in the group of integrated supervisory agencies countries, it seems to be a higher degree of integration between banking and securities supervision than between banking and insurance supervision; therefore, the degree of concentration of powers is, ceteris paribus, greater.

These observations do not, however, weigh another qualitative characteristic: there are countries in which one sector is supervised by more than one authority. It is likely that the degree of concentration rises when two authorities exist in a given sector, and one of

which has other powers in a second sector. On the other hand, the degree of concentration falls when there are two authorities in a given sector, neither of which has other powers in a second sector. It would therefore seem advisable to include these aspects in evaluating the various national supervisory structures by modifying the index as follows: adding 1 if in the country there is at least one sector with two authorities, and one of these authorities is also responsible for at least one other sector; subtracting 1 if in the country there is at least one sector with two authorities assigned to supervision, but none of these authorities has responsibility for another sector; 0 elsewhere.

Furthermore, we should consider the nature of the institutions involved in supervisory responsibilities. We propose the index of the central bank's involvement in financial supervision: the Central Bank as Financial Authority Index (CBFA). For each country, and given the three traditional financial sectors (banking, securities and insurance) the CBFA index is equal to: 1 = the central bank has not the main responsibility in banking supervision; 2 = the central bank has the responsibility in banking supervision; 3 = the central bank has responsibility in two sectors; 4 = the central bank has responsibility in all three sectors.

8.2 Defining the Degree Monetary Commitment and Central Bank Independence

To define the monetary commitment and the central bank independence, one should be as comprehensive as possible. In the following, we describe 9 criteria (consisting of 12 components) proposed in Freytag (2001) that theoretically determine the institutional position of the central bank. The first 6 criteria (8 components, indicated with a asterisk in Table 1A) are used to build up the index of independence, while the overall set of components are utilized for the monetary commitment index.

1) *Stated objectives of monetary policy.* A clear definition of the objective of monetary

policy in the legal foundation of monetary regime, namely price stability, makes it easier for the central bank to refuse demands to combat unemployment or to finance public spendings via money growth. Thus, commitment varies with the kind and number of legally prescribed objectives (component *obj)*..

2) *Locus of legal commitment.* The commitment to stability has to be put into a legal framework. This legal framework can be fixed on different constitutional levels. The more difficult a change of the regime is for the government, the higher is the commitment (component *const).*

3) *Discretionary power belonging to the government.* The more the government keeps control over instruments such as exchange rates, interest rates, open market policy and so on, the less it commits to stability (component *gov).*

4) *Conditions of appointment and dismissal of monetary policymakers.* First, the question is who is able to become chief executive officer (CEO), especially whether only a reputed expert or any other person can be appointed (component *ceo).* Second, how is a potential dismissal organised (component *diss)?*

5) *Conditions of lending to the government.* An important factor determining the level of legal commitments is a provision on lending fresh money to the government (component *limcred).* Even central bank holding of government bonds purchased on the secondary market (component *limsec)* has fiscal effects as long as the seigniorage is added to public revenues. Thus, the level of commitment is the lower, the easier it is for the government to borrow money from the monetary institution.

6) *Accountability* of *the central bank.* The level of commitment is higher, the better the public is informed about monetary policy (component *acc).*

7) *Public pledges of the government.* External obligations raise the level of commitment (component *extern)* compared with a situation without these obligations.

8) *Convertibility restrictions.* The level of commitment is positively correlated with the degree of convertibility (component *conv).* We distinguish full convertibility of all transactions, restricted convertibility for either capital or current account transactions or no convertibility at all. A second component *(mult)* shows whether or not the market for foreign exchange is unified. If it is, commitment in this respect is high.

9) *Interactions with other currencies.* Monetary competition exerts competitive pressure on the domestic monetary authorities to issue a sound currency. The permission of monetary competition raises the level of commitment to stability (component *comp).*

8.3 Sources

For all the countries we use the official documents and web sites of the central banks and the other financial authorities. The information is updated until 2004. See also Cukiermann 1992, Cukierman, Miller and Neyapti 2002, Freytag 2001.