4. The Degree of Consolidation in Financial Supervision: the FAC Index

If, therefore, we wish to consider the financial supervision regime as an endogenous variable, the first problem is to construct this variable. The question is: How to "measure" the degree of concentration of financial powers[59]?

To this end we attempted to construct a Financial Authorities Concentration Index (FAC Index)[60]. The creation of the index is based on an analysis of which and how many authorities in 69 countries are empowered to supervise the three traditional sectors of financial activity: banking, securities markets, insurance[61].

In Table 2, the initials have the following meaning: B = authority specialized in the banking sector; I = authority specialized in the insurance sector; S = authority specialized in the securities markets; U = single authority for all sectors ; BS = authority specialized in the banking sector and securities markets; BI = authority specialized in the banking sector and insurance sector; CB = central bank SI = authority specialized in the insurance sector and securities markets;

TABLE 2: SUPERVISION AUTHORITIES IN 69 COUNTRIES (year 2003)

	Countries	Banking Sector (b)	Securities Sector (s)	Insurance Sector (i)	Rating	Weight	FAC INDEX
1	Albania	CB	S	I	1	0	1
2	Argentina	CB	S	S	1	0	1
3	Australia	BI	BI,S	BI	7	-1	6
4	Austria	U	U	U	7	0	7
5	Belarus	CB	S	I	1	0	1
6	Belgium	BS	BS	I	5	0	5
7	Bosnia	CB,B1,B2	S	I	1	-1	0

[59] The consolidation process of the financial supervision powers cannot be described using a discrete variable (Single Authority or not). De Luna Martinez and Rose (2001) correctly claim that also in the group of integrated supervisory agencies is not homogeneous as it seems.
[60] See Masciandaro (2003).
[61] Sources: see Masciandaro (2003). The information are updated to the 2003.

8	Brazil	CB	S	CB,I	1	1	2
9	Bulgaria	CB	S	I	1	0	1
10	Canada	BI	Ss(**)	BI	3	0	3
11	Chile	B	SI	SI	3	0	3
12	Colombia	BI	S	BI	3	0	3
13	Croatia	CB	S	I	1	0	1
14	Cyprus	CB	S	I	1	0	1
15	Czech Republic	CB	S	I	1	0	1
16	Denmark	U	U	U	7	0	7
17	Ecuador	BI	S	BI	3	0	3
18	Egypt	BC	S	I	1	0	1
19	Estonia	U	U	U	7	0	7
20	Finland	BS	BS	I	5	0	5
21	France	BC,B1,B2,B3	BC,S	I	1	-1+1	1
22	Georgia	CB	S	I	1	0	1
23	Germany	U	U	U	7	0	7
24	Greece	CB	S	I	1	0	1
25	Hong Kong	CB	S	I	1	0	1
26	Hungary	U	U	U	7	0	7
27	Iceland	U	U	U	7	0	7
28	India	CB,B	S	I	1	-1	0
29	Ireland	CB	CB	CB	7	0	7
30	Israel	CB	S,I	I	1	1	2
31	Italy	CB	CB,S	I	1	1	2
32	Jamaica	CB	SI	SI	3	0	3
33	Japan	U	U	U	7	0	7
34	Jordan	CB	S	I	1	0	1
35	Latvia	U	U	U	7	0	7
36	Lithuania	CB	S	I	1	0	1
37	Luxembourg	BS	BS	I	5	0	5
38	Macedonia	CB	S	-	1	0	1
39	Malaysia	CB	S	CB	3	0	3
40	Malta	U	U	U	7	0	7
41	Mauritius	CB	SI	SI	3	0	3
42	Mexico	BS	BS	I	5	0	5
43	Moldova	CB	S	-	1	0	1
44	Netherlands	CB	CB,S	I	1	1	2
45	New Zealand	CB	S	I	1	0	1
46	Norway	U	U	U	7	0	7
47	Pakistan	CB	CB,SI	SI	3	1	4
48	Peru	BI	S	BI	3	0	3
49	Philippines	CB	CB,S	I	1	1	2
50	Poland	B	B,S	I1,I2	1	1-1	1
51	Portugal	CB	CB,S	I	1	1	2
52	Romania	CB	S	I	1	0	1
53	Russia	CB	S	I	1	0	1
54	Singapore	CB	CB	CB	7	0	7
55	Slovak Republic	CB	SI	SI	3	-1	2
56	Slovenia	CB	S	I	1	0	1
57	South Africa	CB	SI	SI	3	0	3
58	South Korea	U	U	U	7	0	7
59	Spain	CB.Bs(**)	CB,S	I	1	1-1	1
60	Sri Lanka	CB	S	I	1	0	1
61	Sweden	U	U	U	7	0	7
62	Switzerland	BS	BS	I	5	0	5
63	Thailand	CB	S	I	1	0	1

64	Trinidad and Tobago	CB	S	I	1	0	1
65	Tunisia	CB	S	I	1	0	1
66	Turkey	B	G	I	1	0	1
67	UK	U	U	U	7	0	7
69	Ukraine	CB	S	-	1	0	1
69	USA	CB,B	S,Ss**	I,Is(**)	1	-1	0

(*) (b)= banking or central banking law; (s)= security markets law; (i)= insurance law
(**) = state or regional agencies

Then, to transform the qualitative information into quantitative indications, to gauge the degree of consolidation of each specific model of national supervision, we assigned a numerical value to each type of authority, according to 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)

The rationale with which we assigned the values considers the concept of concentration of supervisory powers: the greater the concentration, the higher the index value.

We elected to assign a value of 5 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[62]; therefore, the degree of concentration of powers is, ceteris paribus, greater[63].

These observations do not, however, weigh another qualitative characteristic that emerges from Table 1: there are countries in which one sector is supervised by more than one authority.

It is likely that, other conditions being equal, when two control authorities exist in a given sector, and one of which has other powers in a second sector, the degree of concentration of power is greater. When, on the other hand, there are two control authorities in a given sector, neither of which has other powers in a second sector, the degree of concentration is diminished, because the total number of supervisors increases.

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 assigned to supervision, and one of these authorities is also responsible for at least one other sector;

[62] De Luna Martinez and Rose (2001).
[63] Alternatively, we propose an index (FAC Two) according to the following scale: 5 = Single authority for all three sectors (total number of supervisors=1); 3 = Single authority for two sectors (total number of supervisors=2); 1 = Independent specialized authority for each sector (total number of supervisors=3). As we will shown in Section 7, the econometric performances of the two indices (FAC and FAC Two) are quite similar.

- 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

Lastly, there are three qualitative characteristics of supervision models that we decided not to consider in constructing this index.

Firstly, we do not consider the nature of the authorities involved in the financial supervision setting. In particular, in several countries it is the central bank - i.e. the authority responsible for monetary policy - that is responsible for at least one of the three sectors considered, typically the supervision and control of the banking industry. The attribution of supervisory power to the central bank has been at the centre of an intense theoretical and institutional debate over the past decade[64], which in analogy with the problem discussed here has come to no general conclusions, perhaps for the same methodological reasons illustrated earlier.

Furthermore, we do not consider the legal nature – public or private – of the supervisory agencies, nor their relationships with the political system (degree of independence, level of accountability, and so on).

We therefore decided to construct an index that captures the degree of concentration of financial supervisory power regardless of the nature of the institutions involved in this process, i.e. stressing the importance of the pure number of supervisors involved. We will consider the role of the nature of the authorities later on, when we shall deal with the role of the central bank in the overall architecture of financial controls[65].

Secondly, at least in each industrial country, there is an authority to protect competition and the market, with duties that impinge on the financial sectors. But, since it is a factor common to all the structures, we decided not to take the antitrust powers into account in constructing the index[66].

Finally, the financial authorities can perform different functions in the regulatory as well as in the supervisory area[67]. However, at this first stage of the institutional analysis, we prefer to consider just the number of the agencies involved in the supervisory activities. The FAC Index for the 69 countries is shown in Table 2.

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[64] See Goodhart and Schoenmaker (1992), Masciandaro (1993) and (1995), Tuya and Zamalloa (1994), Di Giorgio and Di Noia (1999), Bruni (2001). More recently, Garcia Herrero and del Rio (2003) analyzed the relationship between financial stability and monetary policy design, finding that focusing the central bank objectives on price stability reduce the likelihood of instability, and that the same is true locating regulatory and supervisory responsibilities at the central bank.

[65] Barth, Nolle, Phumiwasana and Yago (2002) claim that the key issues for banking supervision are 1) whether there should be one or multiple supervisory authorities and 2) whether the central bank should be involved in bank supervision. Here we use the same intuition to build up the two indices of financial authorities consolidation.

[66] The relationship between competition policies and stability are examined in Carletti and Hartmann (2002).

[67] Llewellyn (2001) noted that the basic functions performed by regulatory and supervisory agencies cover ten main areas. For our purposes , in order to separate supervision – i.e. monitoring rules compliance – from regulation – i.e. rules setting with managerial discretion - it is possible to distinguish five supervision functions (prudential supervision of financial institutions; conduct of business supervision; administration of deposit insurance; market integrity; financial institutions crisis procedures) from four regulation functions: management of the payment system; prudential regulation, conduct of business regulation, liquidity management. Obviously, however, in different cases it's non easy to do a clear cut between supervision and regulation; on this point of view it is paradigmatic the overlapping between liquidity management and crisis procedures.