

# IMF Governance and the Political Economy of a Consolidated European Seat

LORENZO BINI SMAGHI

During recent years, IMF governance has increasingly become a topic of public discussion.<sup>1</sup> Europe's position is considered to be the key to any reform. Even though the overall quota of the EU countries does not appear at present to exceed the European Union's economic weight in the global economy,<sup>2</sup> the European Union is considered by many as being represented in a way that does not fully match the needs and developments of the international financial system.

Several proposals have been made and discussed. They all center on the consolidation of European—European Union or euro area—representa-

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*Lorenzo Bini Smaghi is a member of the Executive Board at the European Central Bank. He thanks T. Bracke, J. Reynaud, and C. Thimann for their contributions in the preparation of this chapter. Comments by Ted Truman are gratefully acknowledged. The views expressed should be attributed only to the author.*

1. See, for example, the April 15, 2005, communiqué issued by the Inter-Governmental Group of Twenty-Four on International Monetary Affairs and Development, as well as the ASEAN + 3 statements at the May 6, 2005, Asian Development Bank conference in Istanbul. See also the recent contributions regrouped by Vines and Gilbert (2004) and the comprehensive chapter by Truman (chapter 2).

2. The aggregate voting share in the IMF of all EU-25 countries is currently at 31.9 percent. Their quota share on the basis of an update of existing quota formulas would be 37.7 percent, while their share in world GDP (2002 data) stood at 31.1 percent.

tion in the IMF. Aside from its political feasibility, this solution would have several implications, both for the governance of the IMF and for the European countries. These effects have not been discussed so far on the basis of a consistent framework.

This chapter adopts a more systematic approach based on effective voting power in the IMF. The first section describes the methodology used in the chapter, namely coalition-building analysis, to assess voting power. The next section describes the current situation in terms of voting power in the IMF. We then examine the possible implications of a single European seat on voting power of different constituencies in the IMF. The final section provides some tentative conclusions based on the considerations and findings of the chapter.

## Measuring Voting Power

The distribution of quotas and votes at the IMF is currently quite diluted. Apart from the United States, which has a voting share of 17 percent and veto power for decisions requiring an 85 percent majority, the other 23 constituencies have voting shares lower than 7 percent.<sup>3</sup> Decision making in the IMF therefore requires coalition building among constituencies to reach the necessary majority. Several groups of countries—such as the Group of Seven (G-7), the creditor countries, and the debtor countries—have created occasional or more systematic coalitions with a view to increasing their influence on the IMF’s decision-making process.<sup>4</sup>

Political economy theory offers interesting insights in the effort to understand the working and importance of coalition building. One insight is that the effective influence—the actual voting power in the terminology of coalition theory—of a country or a constituency is not necessarily equal to its notional voting share; influence can be larger or smaller, depending on a country’s or a constituency’s ability to influence other members and to form coalitions.

The typical example looks at a three-party system where a Rose Party and a Red Party each have 49 seats and a Green Party has 2 seats out of a total of 100 seats. If a 50 percent majority is required for a decision to be taken, each party needs to enter into a coalition with at least one other party to win the vote. All three parties are therefore equally critical in

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3. The Articles of Agreement limit the size of constituencies to a maximum of 9 percent of the votes participating in the Executive Board election (i.e., the votes of the five largest members, which do not elect but instead appoint a director, are excluded from the calculation of this ceiling). Majority thresholds at the Executive Board of the IMF are reviewed in appendix table 10A.1.

4. For a discussion of issues involved in internal European coalition building and coordination, see Bini Smaghi (2004).

terms of their capacity to build a majority coalition. Hence, the three parties have the same effective voting power of 33.3 percent.

A second insight from coalition theory is that voting power depends on the structure of the decision-making body. Again, suppose that the Rose and Green parties form a coalition, with 51 percent of the votes; their voting power rises to 100 percent as no additional party is needed to make a decision (the so-called dictatorship of the majority). Hence, a coalition's voting power exceeds that of its constituting members (33.3 percent + 33.3 percent). The voting power of the remaining party that does not enter the coalition, by contrast, drops to zero.

In the IMF Executive Board, if constituencies create a coalition, the latter's overall voting power could exceed the sum of its individual members' votes. The voting powers of constituencies that do not participate in coalitions will then be equally reduced.

To illustrate these findings in the context of the IMF, we draw on the methodology developed by J. Banzhaf (1965). We use the normalized Banzhaf index, one of the most widely used indices in coalition theory.

The index is computed in three steps:

1. Assume the existence of a set of individual voters  $N = \{1, 2, \dots, n\}$ , where all possible coalitions among voters are identified (e.g., each voter alone and each possible coalition of 2 to  $n$  members). Coalitions  $S$  are subsets of the set of voters,  $S \subseteq N$ . The number of possible coalitions rises exponentially with the number of voters, as the number of all possible subsets of  $N$  equals  $2^n$ . In the example of the IMF Executive Board, with 24 voters (constituencies), the total number of coalitions is  $2^{24}$ , or more than 16 million.
2. All winning coalitions—coalitions that meet the majority voting threshold—are selected. Formally, we introduce a so-called characteristic function  $V$  that assigns to any possible coalition  $S$  a value of 1,  $V(S) = 1$ , if the coalition is winning and a value of 0,  $V(S) = 0$ , if it is not winning.
3. For each winning coalition  $S$ , the critical voters are identified. If the coalition  $S$  is winning,  $V(S) = 1$ , but it loses its majority if the support of voter  $i$  is withdrawn,  $V(S \setminus \{i\}) = 0$ , then this voter  $i$  is said to be a critical voter in this particular coalition. Voter  $i$  is also said to have a negative swing in coalition  $S$ . For each voter  $i$ , we compute the number of negative swings on the number of coalitions in which it is a critical voter, as:

$$\sum_{S \subseteq N} [V(S) - V(S \setminus \{i\})].$$

The voting power index of a voter  $i$  calculated according to the above methodology is defined as the ratio of its number of negative swings to

the total number of negative swings of all voters. Formally the index is given by the following formula:

$$\beta_i = \frac{\sum_{S \subseteq N} [V(S) - V(S \setminus \{i\})]}{\sum_{j \in N} \sum_{S \subseteq N} [V(S) - V(S \setminus \{j\})]} \quad (10.1)$$

We also measure the effect of blocking minorities by computing the Coleman (1971) preventive power index, which measures the capacity of a voter to block a vote. The index is defined as the number of winning coalitions in which voter  $i$  is a critical voter divided by the number of all winning coalitions. Formally, voter  $i$ 's Coleman preventive power index or blocking power index  $P_i$  is given by the following equation:

$$P_i = \frac{\sum_{S \subseteq N} [V(S) - V(S \setminus \{i\})]}{\sum_{S \subseteq N} V(S)} \quad (10.2)$$

The interpretation of the Coleman index is not as intuitive as the previous one and does not sum to 100 percent. It is possible for one (or several) constituencies to reach by themselves a 100 percent score if it has veto power.

The Banzhaf and Coleman indices are widely used in the literature on coalitions and are frequently applied to domestic politics. A number of caveats have to be borne in mind. Owing to the very high number of possible coalitions (in our case we compute  $2^{24}$  coalitions), the results are approximated on the basis of algorithms. We use methods that have recently been developed to calculate the indices in situations with many voters (see, for example, Leech 2003) and that reduce the differences between the real and the estimated values. Another common criticism of voting power indices is that they do not take into account the political proximity of voters. Indeed, the indices take voters as identical and independent, a rather unrealistic assumption given that in bodies like the Executive Board of the IMF groups of voters often display similar voting behaviors.

## Voting Power in the IMF

Using the Banzhaf and the Coleman indexes, we estimate the voting and blocking power of constituencies under the current IMF setup.<sup>5</sup> Appendix table 10A.2 shows how each constituency's voting power differs from for-

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5. To my knowledge, this analysis has not been conducted before. Leech and Leech (2005) performed a similar analysis, but they applied their method to individual IMF member countries. Because we are particularly interested in constituencies and their voting powers, as well as shifts arising from a single European chair in the constituency structure, we are

mal voting shares. In the present configuration and for decisions requiring a 50 percent majority, the United States is the only chair whose voting power (21 percent) exceeds its voting share (17 percent). For the remaining constituencies, the voting power is slightly lower than the respective voting share. For example, Japan has a voting share of 6.1 percent against a voting power of 5.8 percent, Germany a voting share of 5.9 percent against a voting power of 5.7 percent. This is explained by the fact that it is difficult to form a winning coalition without the support of the United States.

For decisions requiring a 70 percent majority, the voting power of the United States decreases below its voting share. For medium-sized constituencies (Japan, Germany, Belgium, France, and the United Kingdom) as well as for small constituencies, the voting power increases.

For decisions requiring an 85 percent majority, the decrease in US voting power is even larger, to the benefit of smaller constituencies. On the other hand, the possibility for the United States to block decisions, as measured by the Coleman index, increases its relative power to influence decisions.

The spreading of voting shares and voting power explains why some countries have created coalitions to increase their voting power. The G-7 is the most relevant coalition. Appendix table 10A.3 shows the voting power of the various constituencies when the G-7 is established as a pre-defined coalition. For the simple majority threshold of 50 percent, the G-7 has 99.6 percent of the voting powers because it can form a winning coalition with the addition of just one or two constituencies. The voting power of all other constituencies falls to nearly zero.

For votes requiring either a 70 percent or an 85 percent majority, the overall influence of the G-7 is smaller, but in both cases the G-7 has a de facto veto power, so that no decision can be taken without its approval.

These findings help explain the existence of the G-7. They also explain the apprehension of the non-G-7 industrial countries, whose influence in IMF decision making is substantially reduced because of G-7 common positions.

The analysis also helps explain the size and composition of the G-7. A more limited coalition composed, for example, of only the five countries with appointed executive directors (G-5) would have a voting share of only 39.1 percent and a voting power of 92.9 percent (appendix table 10A.4). Three or four more constituencies would be needed to secure a 50 percent majority.

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focusing on this structure. Because decision making at the IMF is conducted mainly at the Executive Board, which operates on the basis of constituencies rather than individual members, this analysis seems particularly relevant. However, decisions at the Executive Board are taken by consensus and thus make the use of voting power analysis more indirect in the sense that we do not measure direct votes. Indeed, the rationale behind the use of the Banzhaf and Coleman indices is to use voting power analysis to analyze the ability of countries to influence coalition building, in other words, the consensus.

A group larger than the G-7 would not find its voting power enlarged by much. For instance, the G-10,<sup>6</sup> which includes four European countries—the Netherlands, Belgium, Sweden, and Switzerland—in addition to the G-7 countries, would have a voting power of 100 percent for simple majority decisions (appendix table 10A.5), not significantly higher than the 99.6 percent of the G-7. The marginal cost of reaching an agreement in the G-10, with four additional countries and potentially also the constituency partners of these four countries, appears to be higher than the marginal votes that these countries provide in order to achieve the necessary majority.

On the other hand, for decisions requiring a 70 percent majority threshold, the voting power of the G-10 is insufficient. This may explain the decreasing role of the G-10 ministers and governors as a forum for coalition building on IMF issues.

The G-7 has created incentives for other constituencies to also build coalitions. In particular, emerging-market economies and developing countries are increasingly coordinating on IMF issues, building coalitions such as the G-11<sup>7</sup> and the G-24.<sup>8</sup> The G-11, in particular, has a voting share of 30.4 percent, which gives to this group a de facto veto power for decisions requiring a majority of 70 percent and 85 percent (appendix table 10A.6).

If the G-7 and G-11 coexist (appendix table 10A.7), the voting power of the G-7 remains extremely high (81 percent) while that of the G-11 falls considerably (3 percent) for 50 percent majority decisions. Non-G-7 and non-G-11 constituencies' voting power is reduced significantly.

For 70 percent majority decisions, the voting powers of the G-7 and G-11 are approximately 50 percent each, while other constituencies are basically left with no power. As a result, the decision making in the IMF is polarized. Constituencies that do not participate in the G-7 or G-11 are then left with very little or no effective voting power at all in the IMF.

Within the G-7 coalition, the United States holds 54 percent of the relative votes and a blocking power of 84 percent.<sup>9</sup> Without the United States there is no G-7. No other member of the G-7 currently has this power.

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6. The G-10 was set up in 1963, further to the creation of the General Arrangements to Borrow. The G-7 was established in 1975 (even though, at the level of finance ministers and central bank governors, participation was initially limited to the G-5).

7. The G-11 comprises Argentina, Brazil, China, Egypt, Gabon, India, Indonesia, Iran, Saudi Arabia, South Africa, and Venezuela.

8. The G-24 comprises Algeria, Argentina, Brazil, Colombia, Côte d'Ivoire, Democratic Republic of Congo, Egypt, Ethiopia, Gabon, Ghana, Guatemala, India, Iran, Lebanon, Mexico, Nigeria, Pakistan, Peru, Philippines, South Africa, Sri Lanka, Syria, Trinidad and Tobago, and Venezuela.

9. This is true if we make the assumption that IMF's quotas define G-7 countries' voting shares and that decisions in the G-7 are taken with a majority of 50 percent of the votes.

Moreover, in case of disagreement within the G-7, the United States can turn to the G-11 to form an alternative coalition (appendix table 10A.8). In such a scenario, the aggregate voting share of this coalition (47.4 percent) is very close to a 50 percent majority, and its voting power reaches 98 percent, close to the voting power of the G-7. This increases enormously the US influence as it is the only chair that can easily alternate between two coalitions with voting power close to 100 percent.

## **Toward a Single EU–Euro Area Seat**

In the current situation, EU countries coordinate their views and positions within an informal ad hoc framework agreed at the Copenhagen meeting of the Council of EU Finance Ministers in 2002. No structured form of coordination exists, and there is no commitment to reach joint views. To some extent, EU coordination is much less committal than that of the G-7. Only for euro area issues (for example, monetary policy of the euro area and exchange rate of the euro) is there a formal statutory obligation to reach common positions. Many issues are not considered to require joint euro area views among the Board (for example, discussions on global economic developments in the context of the preparation of the IMF's *World Economic Outlook* and on macroeconomic developments in individual IMF countries).

If the EU countries had a mechanism of coordination similar to that of the G-7 (appendix table 10A.9), the voting power of the European Union (48 percent) would exceed by far its voting share (32 percent). The voting power of the United States, in contrast, would fall to 7 percent, and the United States would be much less critical to the formation of a winning coalition than it is today. Moreover, an EU coalition could provide de facto veto power to Europeans for both 70 percent and 85 percent majority thresholds. An EU coalition would also imply a reduction in all other constituencies' voting powers.

These findings explain the current paradoxical situation: If EU countries do not coalesce, their relative weight in IMF decisions will remain smaller than the sum of their overall voting shares, especially for non-G-7 countries. If instead they created a coalition, their voting power would increase enormously, to the point that other countries would complain about the disproportionate role of Europeans in the IMF.

If the coalition is restricted to euro area countries, coalition members' overall voting power (25 percent) would still be higher than their voting share (23 percent) but would no longer provide a veto power for decisions requiring a 70 percent majority (appendix table 10A.10). The important feature of this scenario is that the voting power of all constituencies except the United States increases above their respective voting shares. This holds also for non-euro area EU countries such as the United Kingdom whose

voting power would be at 5.1 percent against its voting share of 4.9 percent. Hence, for this group of countries, a single euro area seat could also be advantageous relative to the present situation.

The high anxiety that an EU coalition creates makes it highly unlikely that a hypothetical single EU seat would receive an overall voting share similar to the sum of the current votes. A reduction in the European Union's voting share could thus be a counterpart of such a reform, leaving the question: How much reduction in the EU voting share would be acceptable to Europeans and still maintain a relevant influence on IMF issues?<sup>10</sup>

I try to answer the above question by assuming that a unified European representation is coupled with a redistribution of voting rights from Europe to other constituencies. Just for illustrative purposes, I assume that EU and euro area entitlements are parameterized to the United States on the basis of relative GDP.<sup>11</sup> For analytical simplicity, the voting rights that are freed during this operation are redistributed to all other constituencies, in proportion to their existing shares. Under this assumption the European Union would have 22 percent of the votes, the United States 19.6 percent, and Japan 7 percent (appendix table 10A.11). Other IMF members would benefit from a considerable increase in their voting shares. A euro area seat would also have lower voting power than its effective voting share (appendix table 10A.12).

The above results show that a single EU–euro area seat would have voting power much lower than it has in the current situation. Nevertheless, the comparison is not accurate because at present the European Union does not act as a coalition comparable with the G-7 or the G-11 and thus cannot exploit in full the multiplier effect. In addition, in both the current and hypothetical single seat, the EU–euro area does not have a majority and still has to form coalitions with other constituencies.

The main issue is whether a single EU–euro area seat would have more power to form coalitions than it has under the current situation. Together with the United States, a unified European seat would be a significant player, despite the considerable decrease—by one-third—in European voting rights. If the European Union and the United States were to form a coalition, their voting share would be approximately 49 percent, and their voting power close to 100 percent, as it is in the case of the G-7 at pre-

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10. In chapter 9 of this volume, Edwin M. Truman rearranges the EU and US seats to set parity at an 18 percent voting share. Leech and Leech (2005) also set a scenario with parity at 18 percent for the euro area and 20 percent for the European Union.

11. To take into account the current income differential between the United States and the European Union, *ceteris paribus*, we keep unchanged the current aggregated quota for both the European Union and the United States. We then multiply this amount by the shares of both the European Union and the United States, respectively, in 2002 world GDP. This gives us another voting allocation that captures the greater dynamism of the US economy that is expected under current long-run growth projections.

sent (appendix tables 10A.13 and 10A.14). The euro area and the United States combined would have a lower voting share, in the vicinity of 40 percent, but their voting power would still reach almost 95 percent. With the United Kingdom and/or Japan, the euro area–US voting power would reach 100 percent.

With a single seat, Europeans might find it possible to create a coalition with the G-11 also, something only the United States can do now. As a result, the power of Europeans in the G-7 and in coalition with the United States and the other G-7 partners would increase. This would be particularly relevant for smaller EU countries that currently have very little influence because they are outside the G-7. It is interesting that the existence of a euro area seat would not necessarily reduce the voting power of the United Kingdom.

The results also show that the single EU or euro area seats would not produce a polarization of decision making compared with the current situation, as feared by some. Single seats would actually create the possibility for more coalitions, in particular among the United States, European Union, and the G-11, with a relevant role for Japan (appendix table 10A.15).

## Conclusions

This chapter examines some of the issues relating to IMF governance reform and the implications of a single EU–euro area chair under the perspective of voting power. The problems related to IMF governance are complex and the solutions necessarily multifaceted. Also, the role of the European Union in a potential reform is not straightforward—from neither a global nor an internal European perspective—and requires far-reaching progress in political and economic integration.

This chapter shows quite neatly how, on one hand, under the current system, EU countries, in particular the smaller ones that are not members of the G-7, have a disproportionately low influence. Indeed, in the present configuration and for decisions requiring a 50 percent majority, the United States is the only chair whose voting power exceeds its voting share. As a consequence of US dominance, all other constituencies' voting powers are lower than their respective voting shares. Moreover, under the hypothesis of a systematic G-7 coalition, the voting powers of all other non-G-7 constituencies fall to nearly zero.

This chapter also explains why, on the other hand, non-EU countries consider the European Union overrepresented. Indeed, this can be illustrated by the following paradox: The more EU countries try to coordinate, the more they are seen by non-EU countries as being overrepresented because the voting power of a consolidated EU seat leaves other constituencies with little power. Thus, non-EU countries are calling for a reduction in the European Union's overall weight.

In view of the longer-term relative trends in GDP growth, the weight of individual votes of EU countries is bound to fall over time. Other countries and areas, which are already well organized in the IMF, will gain more weight. Unless EU–euro area countries improve their coordination, with more structured decision-making mechanisms and a probable move to a unified seat, they will progressively lose power.

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# Appendix 10A

**Table 10A.1 Majority thresholds at the IMF**

<b>Threshold</b>	<b>Application</b>
85 percent majority	<p>Applies mainly to changes in the general governance of the IMF, including</p> <ul style="list-style-type: none"><li>▪ amendments to the Articles of Agreement;</li><li>▪ allocations of special drawing rights (SDR);</li><li>▪ decisions on the number of executive directors;</li><li>▪ quota changes;</li><li>▪ creation of and changes to the International Monetary and Financial Committee;</li><li>▪ withdrawal of member countries from the Fund;</li><li>▪ gold transactions; and</li><li>▪ exchange rate decisions, for example, par value decisions (relevant under Bretton Woods system).</li></ul>
70 percent majority	<p>Applies mainly to financial matters, including</p> <ul style="list-style-type: none"><li>▪ design of IMF facilities;</li><li>▪ decisions on rate of charge and rate of remuneration;</li><li>▪ repurchase policies;</li><li>▪ valuation of the SDR; and</li><li>▪ budget of the Fund.</li></ul>
50 percent majority	<p>Applies to all decisions not explicitly covered by the 70 percent and 85 percent thresholds; covers issues that arise during the daily functioning of the IMF, including decisions on programs, Article IV consultations, publication policies, and standards and codes, among others.</p>

**Table 10A.2 IMF Executive Board current voting shares and voting powers**  
(percent)

Constituency <sup>a</sup>	Voting share	50 percent majority threshold		70 percent majority threshold		85 percent majority threshold	
		Voting power	Blocking power	Voting power	Blocking power	Voting power	Blocking power
United States	17.08	21.48	65.46	11.12	98.85	6.65	100.00
Japan	6.13	5.81	17.71	6.46	57.38	5.84	87.87
Germany	5.99	5.68	17.31	6.32	56.17	5.79	87.02
Belgium	5.14	4.87	14.84	5.47	48.64	5.36	80.67
France	4.95	4.69	14.29	5.28	46.92	5.25	78.97
United Kingdom	4.95	4.69	14.29	5.28	46.92	5.25	78.97
Netherlands	4.84	4.59	13.97	5.17	45.92	5.18	77.93
Mexico	4.27	4.04	12.32	4.58	40.68	4.78	71.92
Italy	4.18	3.96	12.06	4.49	39.88	4.65	69.93
Canada	3.73	3.53	10.76	4.01	35.67	4.30	64.60
Norway	3.51	3.32	10.12	3.78	33.60	4.10	61.72
Korea	3.32	3.14	9.57	3.58	31.81	3.93	59.10
Egypt	3.26	3.08	9.40	3.51	31.24	3.87	58.24
Saudi Arabia	3.22	3.05	9.28	3.47	30.86	3.83	57.67
Malaysia	3.17	3.00	9.14	3.42	30.39	3.79	56.94
Tanzania	2.99	2.83	8.62	3.23	28.69	3.61	54.27
China	2.94	2.78	8.47	3.17	28.21	3.56	53.50
Switzerland	2.85	2.70	8.21	3.08	27.36	3.47	52.12
Russia	2.74	2.59	7.89	2.96	26.31	3.35	50.39
Iran	2.47	2.34	7.12	2.67	23.74	3.06	46.01
Brazil	2.47	2.34	7.12	2.67	23.74	3.06	46.01
India	2.39	2.26	6.88	2.58	22.98	2.97	44.68
Argentina	1.98	1.87	5.70	2.14	19.06	2.50	37.61
Equatorial Guinea	1.44	1.36	4.15	1.56	13.88	1.85	27.81

a. Current executive director.

**Table 10A.3 G-7 coalition: Voting shares and voting powers of constituencies (percent)**

Constituency	Voting share	50 percent majority threshold		70 percent majority threshold		85 percent majority threshold	
		Voting power	Blocking power	Voting power	Blocking power	Voting power	Blocking power
G-7	47.01	99.63	99.99	33.07	100.00	10.78	100.00
Belgium	5.14	0.03	0.01	6.64	20.07	8.07	74.82
Netherlands	4.84	0.03	0.01	6.22	18.80	7.72	71.63
Mexico	4.27	0.02	0.01	5.44	16.45	7.00	64.92
Norway	3.51	0.02	0.01	4.43	13.39	5.93	55.02
Korea	3.32	0.02	0.01	4.18	12.64	5.64	52.31
Egypt	3.26	0.02	0.01	4.10	12.41	5.54	51.44
Saudi Arabia	3.22	0.02	0.01	4.05	12.25	5.48	50.86
Malaysia	3.17	0.02	0.01	3.99	12.06	5.40	50.13
Tanzania	2.99	0.02	0.01	3.75	11.36	5.12	47.48
China	2.94	0.02	0.01	3.69	11.16	5.04	46.74
Switzerland	2.85	0.02	0.01	3.58	10.81	4.89	45.40
Russia	2.74	0.02	0.01	3.43	10.39	4.72	43.75
Iran	2.47	0.02	0.01	3.09	9.34	4.27	39.64
Brazil	2.47	0.02	0.01	3.09	9.34	4.27	39.64
India	2.39	0.02	0.01	2.99	9.04	4.14	38.42
Argentina	1.98	0.02	0.01	2.47	7.47	3.45	32.03
Equatorial Guinea	1.44	0.01	0.01	1.79	5.42	2.53	23.45

**Table 10A.4 G-5 coalition: Voting shares and voting powers of constituencies (percent)**

Constituency	Voting share	50 percent majority threshold		70 percent majority threshold		85 percent majority threshold	
		Voting power	Blocking power	Voting power	Blocking power	Voting power	Blocking power
G-5	39.10	92.98	99.38	21.81	100.00	9.04	100.00
Belgium	5.14	0.52	0.55	6.77	31.04	6.99	77.39
Netherlands	4.84	0.50	0.53	6.34	29.05	6.72	74.41
Mexico	4.27	0.46	0.49	5.53	25.38	6.15	68.03
Italy	4.18	0.45	0.48	5.40	24.76	6.06	67.08
Canada	3.73	0.42	0.45	4.79	21.97	5.54	61.27
Norway	3.51	0.40	0.43	4.50	20.62	5.26	58.24
Korea	3.32	0.39	0.42	4.25	19.47	5.02	55.54
Egypt	3.26	0.38	0.41	4.17	19.10	4.94	54.68
Saudi Arabia	3.22	0.38	0.41	4.11	18.86	4.89	54.09
Malaysia	3.17	0.38	0.40	4.05	18.56	4.82	53.36
Tanzania	2.99	0.36	0.38	3.81	17.48	4.58	50.68
China	2.94	0.35	0.38	3.75	17.18	4.51	49.92
Switzerland	2.85	0.35	0.37	3.63	16.64	4.39	48.55
Russia	2.74	0.33	0.36	3.48	15.98	4.23	46.85
Iran	2.47	0.31	0.33	3.13	14.37	3.85	42.60
Brazil	2.47	0.31	0.33	3.13	14.37	3.85	42.60
India	2.39	0.30	0.32	3.03	13.90	3.73	41.32
Argentina	1.98	0.25	0.27	2.50	11.48	3.13	34.60
Equatorial Guinea	1.44	0.19	0.20	1.82	8.33	2.30	25.44

**Table 10A.5 G-10 coalition: Voting shares and voting powers of constituencies (percent)**

Constituency	Voting share	50 percent majority threshold		70 percent majority threshold		85 percent majority threshold	
		Voting power	Blocking power	Voting power	Blocking power	Voting power	Blocking power
G-10	60.50	100.00	100.00	58.55	100.00	13.65	100.00
Mexico	4.27	0.00	0.00	4.37	7.46	9.17	67.21
Korea	3.32	0.00	0.00	3.92	6.70	8.21	60.13
Egypt	3.26	0.00	0.00	3.10	5.30	6.47	47.39
Saudi Arabia	3.22	0.00	0.00	3.06	5.22	6.37	46.64
Malaysia	3.17	0.00	0.00	3.02	5.16	6.29	46.08
Tanzania	2.99	0.00	0.00	2.98	5.08	6.19	45.38
China	2.94	0.00	0.00	2.81	4.80	5.85	42.86
Switzerland	2.85	0.00	0.00	2.77	4.72	5.75	42.15
Russia	2.74	0.00	0.00	2.68	4.58	5.58	40.88
Iran	2.47	0.00	0.00	2.58	4.41	5.37	39.33
Brazil	2.47	0.00	0.00	2.33	3.98	4.85	35.51
India	2.39	0.00	0.00	2.33	3.98	4.85	35.51
Argentina	1.98	0.00	0.00	2.26	3.86	4.69	34.37
Equatorial Guinea	1.44	0.00	0.00	1.88	3.20	3.89	28.52

**Table 10A.6 G-11 coalition: Voting shares and voting powers of constituencies (percent)**

Constituency	Voting share	50 percent majority threshold		70 percent majority threshold		85 percent majority threshold	
		Voting power	Blocking power	Voting power	Blocking power	Voting power	Blocking power
G-11	30.36	41.40	80.44	25.18	100.00	12.17	100.00
United States	17.08	10.12	19.79	22.18	87.96	12.16	100.00
Japan	6.13	5.70	11.05	6.20	24.79	8.65	69.78
Germany	5.99	5.57	10.71	6.05	24.18	8.49	69.13
Belgium	5.14	4.77	9.24	5.18	21.07	7.44	62.06
France	4.95	4.59	8.95	4.99	19.85	7.20	58.84
United Kingdom	4.95	4.59	8.95	4.99	19.85	7.20	58.84
Netherlands	4.84	4.49	8.73	4.87	19.11	7.00	58.20
Italy	4.18	3.87	7.24	4.19	16.67	6.08	54.34
Canada	3.73	3.45	6.75	3.74	15.05	5.44	44.70
Norway	3.51	3.24	6.38	3.52	13.97	5.13	42.77
Korea	3.32	3.07	6.11	3.32	12.82	4.85	39.55
Switzerland	2.85	2.63	5.11	2.85	11.46	4.18	36.98
Russia	2.74	2.53	5.01	2.74	10.79	4.02	35.69

**Table 10A.7 G-7 and G-11 coalitions: Voting shares and voting powers of constituencies (percent)**

Constituency	Voting share	50 percent majority threshold		70 percent majority threshold		85 percent majority threshold	
		Voting power	Blocking power	Voting power	Blocking power	Voting power	Blocking power
G-7	47.01	81.41	96.83	50.29	100.00	34.34	100.00
G-11	30.36	3.45	4.76	49.71	100.00	34.34	100.00
Belgium	5.14	3.11	4.76	0.00	0.00	7.28	21.43
Netherlands	4.84	3.04	4.76	0.00	0.00	6.83	20.10
Norway	3.51	2.48	4.76	0.00	0.00	4.88	14.37
Korea	3.32	2.38	4.76	0.00	0.00	4.61	13.56
Switzerland	2.85	2.10	1.59	0.00	0.00	3.94	11.60
Russia	2.74	2.03	1.45	0.00	0.00	3.78	11.14

**Table 10A.8 Coalitions of the United States and G-11: Voting shares and voting powers of constituencies (percent)**

Constituency	Voting share	50 percent majority threshold		70 percent majority threshold		85 percent majority threshold	
		Voting power	Blocking power	Voting power	Blocking power	Voting power	Blocking power
G-11 and United States	47.44	98.05	99.83	35.16	100.00	13.91	100.00
Japan	6.13	0.18	0.19	7.73	21.99	9.79	70.78
Germany	5.99	0.18	0.19	7.53	21.44	9.60	69.41
Belgium	5.14	0.18	0.18	6.40	18.20	8.40	60.72
France	4.95	0.18	0.18	6.15	17.49	8.12	58.69
United Kingdom	4.95	0.18	0.18	6.15	17.49	8.12	58.69
Netherlands	4.84	0.18	0.18	6.00	17.08	7.95	57.51
Italy	4.18	0.17	0.17	5.15	14.65	6.95	50.22
Canada	3.73	0.15	0.16	4.58	13.02	6.24	45.11
Norway	3.51	0.15	0.15	4.30	12.23	5.89	42.57
Korea	3.32	0.14	0.15	4.06	11.55	5.58	40.35
Switzerland	2.85	0.13	0.13	3.47	9.89	4.82	34.82
Russia	2.74	0.12	0.13	3.34	9.50	4.63	33.51

**Table 10A.9 EU coalition: Voting shares and voting powers of constituencies**  
(percent)

Constituency	Voting share	50 percent majority threshold		70 percent majority threshold		85 percent majority threshold	
		Voting power	Blocking power	Voting power	Blocking power	Voting power	Blocking power
EU-25	31.89	47.98	87.76	25.89	100.00	9.70	100.00
United States	17.08	6.81	12.55	24.42	94.33	9.70	100.00
Japan	6.13	5.18	9.59	5.95	23.00	8.33	85.91
Ex-Canada	3.33	2.96	5.45	3.24	12.53	5.28	54.48
Korea	3.32	2.95	5.43	3.23	12.49	5.27	54.34
Egypt	3.26	2.90	5.33	3.18	12.27	5.18	53.45
Saudi Arabia	3.22	2.87	5.27	3.14	12.12	5.14	52.98
Malaysia	3.16	2.81	5.18	3.08	11.89	5.05	52.07
Tanzania	2.99	2.66	4.90	2.91	11.25	4.80	49.46
China	2.94	2.62	4.81	2.86	11.06	4.72	48.69
Ex-Mexico	2.86	2.55	4.69	2.79	10.76	4.60	47.45
Russia	2.74	2.44	4.49	2.67	10.31	4.42	45.57
Iran	2.47	2.20	4.06	2.41	9.29	4.00	41.29
Brazil	2.47	2.20	4.06	2.41	9.29	4.00	41.29
India	2.39	2.13	3.93	2.33	8.99	3.88	40.01
Ex-Netherlands	2.38	2.12	3.91	2.32	8.95	3.86	39.85
Ex-Switzerland	2.21	1.97	3.64	2.15	8.31	3.60	37.10
Argentina	1.98	1.77	3.26	1.93	7.45	3.23	33.36
New-Norway	1.74	1.55	2.88	1.69	6.55	2.85	29.41
Equatorial Guinea	1.44	1.29	2.26	1.40	5.42	2.37	24.42

Note: Precise results depend somewhat on the organization of non-EU countries that currently form part of a constituency with EU members. It is assumed for the sake of simplicity that these non-EU countries maintain their constituencies. These new constituencies are indicated in the tables as ex-Canada, ex-Mexico, and so forth. Exceptions are the non-EU countries—Albania, San Marino, and Timor-Leste—in the current Italian constituency and the Nordic constituency—Norway and Iceland—which is regrouped as New-Norway.

**Table 10A.10 Euro area coalition: Voting shares and voting powers of constituencies (percent)**

Constituency	Voting share	50 percent majority threshold		70 percent majority threshold		85 percent majority threshold	
		Voting power	Blocking power	Voting power	Blocking power	Voting power	Blocking power
Euro area (12)	22.91	25.36	88.06	18.06	99.86	8.04	100.00
United States	17.08	13.17	45.73	17.60	97.35	8.04	100.00
Japan	6.13	6.52	22.64	6.85	37.86	7.07	88.01
United Kingdom	4.95	5.15	17.88	5.39	29.79	6.32	78.61
Ex-Canada	3.33	3.40	11.81	3.56	19.68	4.70	58.49
Korea	3.32	3.39	11.78	3.55	19.62	4.69	58.34
Egypt	3.26	3.33	11.56	3.48	19.26	4.62	57.45
Saudi Arabia	3.22	3.29	11.41	3.44	19.00	4.57	56.91
Malaysia	3.16	3.22	11.19	3.37	18.64	4.50	55.99
Tanzania	2.99	3.05	10.58	3.19	17.62	4.29	53.35
China	2.94	2.99	10.40	3.13	17.32	4.22	52.57
Ex-Denmark	2.92	2.97	10.32	3.11	17.20	4.20	52.25
Ex-Mexico	2.86	2.91	10.11	3.05	16.84	4.12	51.29
Switzerland	2.85	2.90	10.07	3.03	16.78	4.11	51.13
Russia	2.74	2.79	9.68	2.92	16.13	3.97	49.36
Iran	2.47	2.51	8.71	2.62	14.52	3.61	44.91
Brazil	2.47	2.51	8.71	2.62	14.52	3.61	44.91
Ex-Netherlands	2.46	2.50	8.67	2.61	14.46	3.60	44.74
India	2.39	2.43	8.42	2.54	14.04	3.50	43.57
Ex-Belgium and Italy	2.13	2.16	7.50	2.26	12.50	3.14	39.12
Argentina	1.98	2.01	6.97	2.10	11.61	2.93	36.51
Equatorial Guinea	1.44	1.46	5.06	1.52	8.43	2.16	26.87

Note: Precise results depend somewhat on the organization of non-EU countries that currently form part of a constituency with EU members. It is assumed for the sake of simplicity that these non-EU countries maintain their constituencies. These new constituencies are indicated in the tables as ex-Canada, ex-Mexico, and so forth. Exceptions are the non-EU countries—Albania, San Marino, and Timor-Leste—in the current Italian constituency.

**Table 10A.11 Single EU seat (with new voting rights): Voting shares and voting powers of constituencies (percent)**

Constituency	Voting share	50 percent majority threshold		70 percent majority threshold		85 percent majority threshold	
		Voting power	Blocking power	Voting power	Blocking power	Voting power	Blocking power
EU-25	22.00	21.41	71.87	14.38	99.90	9.30	100.00
United States	19.56	16.36	28.56	14.34	99.64	9.30	100.00
Japan	7.02	7.86	17.15	8.85	61.48	8.03	86.44
Ex-Canada	3.81	4.05	8.95	4.64	32.26	5.32	57.34
Korea	3.80	4.04	8.92	4.63	32.17	5.31	57.22
Egypt	3.73	3.96	8.74	4.54	31.56	5.23	56.31
Saudi Arabia	3.69	3.92	8.64	4.49	31.21	5.18	55.79
Malaysia	3.62	3.84	8.45	4.41	30.61	5.10	54.87
Tanzania	3.42	3.62	8.01	4.16	28.88	4.85	52.20
China	3.37	3.57	7.85	4.09	28.45	4.78	51.52
Ex-Mexico	3.28	3.47	7.65	3.98	27.67	4.67	50.30
Russia	3.14	3.32	7.32	3.81	26.47	4.49	48.36
Iran	2.83	2.98	6.58	3.43	23.82	4.08	43.98
Brazil	2.83	2.98	6.58	3.43	23.82	4.08	43.98
India	2.74	2.89	6.35	3.32	23.05	3.96	42.68
Ex-Netherlands	2.73	2.88	6.33	3.31	22.96	3.95	42.53
Ex-Switzerland	2.53	2.66	5.86	3.06	21.26	3.68	39.62
Argentina	2.27	2.38	5.25	2.74	19.05	3.32	35.75
New-Norway	1.99	2.09	4.58	2.40	16.69	2.93	31.52
Equatorial Guinea	1.65	1.73	3.75	1.99	13.82	2.44	26.28

Note: See note below table 10A.9. The author also assumes that EU and euro area entitlements are parameterized to the United States on the basis of relative GDP. For analytical simplicity, the voting rights that are freed during this operation are redistributed to all other constituencies, in proportion to their existing shares.

**Table 10A.12 Single euro area seat (with new voting rights): Voting shares and voting powers of constituencies (percent)**

Constituency	Voting share	50 percent majority threshold		70 percent majority threshold		85 percent majority threshold	
		Voting power	Blocking power	Voting power	Blocking power	Voting power	Blocking power
Euro area	16.00	14.99	42.27	14.49	96.04	8.16	100.00
United States	18.61	19.79	55.81	14.87	98.53	8.17	100.00
Japan	6.68	6.85	19.33	7.37	48.85	6.84	83.79
United Kingdom	5.39	5.45	15.36	5.88	38.96	6.24	76.41
Ex-Canada	3.63	3.61	10.19	3.92	25.96	4.70	57.53
Korea	3.62	3.60	10.17	3.91	25.88	4.68	57.39
Egypt	3.55	3.53	9.97	3.83	25.37	4.61	56.47
Saudi Arabia	3.51	3.49	9.85	3.78	25.08	4.57	55.94
Malaysia	3.44	3.42	9.65	3.71	24.58	4.49	55.00
Tanzania	3.26	3.24	9.14	3.51	23.27	4.29	52.54
China	3.20	3.18	8.96	3.45	22.84	4.22	51.70
Ex-Denmark	3.18	3.16	8.91	3.42	22.69	4.20	51.42
Ex-Mexico	3.12	3.10	8.74	3.36	22.26	4.13	50.58
Switzerland	3.11	3.09	8.71	3.35	22.19	4.12	50.43
Russia	2.99	2.97	8.37	3.22	21.32	3.98	48.72
Iran	2.69	2.66	7.52	2.89	19.16	3.62	44.31
Brazil	2.69	2.66	7.52	2.89	19.16	3.62	44.31
Ex-Netherlands	2.68	2.65	7.49	2.88	19.09	3.60	44.16
India	2.60	2.57	7.26	2.79	18.52	3.51	42.96
Ex-Belgium and Italy	2.32	2.29	6.47	2.49	16.51	3.16	38.67
Argentina	2.16	2.13	6.02	2.32	15.36	2.95	36.17
Equatorial Guinea	1.57	1.55	4.37	1.68	11.15	2.18	26.65

Note: See note below table 10A.10. The author also assumes that EU and euro area entitlements are parameterized to the United States on the basis of relative GDP. For analytical simplicity, the voting rights that are freed during this operation are redistributed to all other constituencies, in proportion to their existing shares.

**Table 10A.13 Coalition of the United States and single EU seat: Voting shares and voting powers of constituencies (percent)**

Constituency	Voting share	50 percent majority threshold		70 percent majority threshold		85 percent majority threshold	
		Voting power	Blocking power	Voting power	Blocking power	Voting power	Blocking power
EU-25 and							
United States	48.97	99.95	99.99	37.02	100.00	10.74	100.00
Japan	6.13	0.00	0.06	7.79	21.03	9.23	85.91
Ex-Canada	3.33	0.00	0.06	4.11	11.10	5.85	54.48
Korea	3.32	0.00	0.06	4.10	11.07	5.84	54.33
Egypt	3.26	0.00	0.06	4.02	10.86	5.74	53.45
Saudi Arabia	3.22	0.00	0.05	3.97	10.72	5.69	52.99
Malaysia	3.16	0.00	0.05	3.89	10.52	5.59	52.07
Tanzania	2.99	0.00	0.05	3.68	9.94	5.31	49.47
China	2.94	0.00	0.05	3.62	9.77	5.23	48.69
Ex-Mexico	2.86	0.00	0.05	3.52	9.50	5.10	47.45
Russia	2.74	0.00	0.05	3.37	9.09	4.89	45.57
Iran	2.47	0.00	0.05	3.03	8.18	4.43	41.29
Brazil	2.47	0.00	0.05	3.03	8.18	4.43	41.29
India	2.39	0.00	0.05	2.93	7.92	4.30	40.01
Ex-Netherlands	2.38	0.00	0.05	2.92	7.88	4.28	39.85
Ex-Switzerland	2.21	0.00	0.04	2.71	7.31	3.98	37.11
Argentina	1.98	0.00	0.04	2.42	6.54	3.58	33.36
New-Norway	1.74	0.00	0.04	2.13	5.74	3.16	29.41
Equatorial Guinea	1.44	0.00	0.03	1.76	4.75	2.62	24.42

Note: See note below table 10A.9.

**Table 10A.14 Coalition of the United States and single euro area seat:  
Voting shares and voting powers of constituencies (percent)**

Constituency	Voting share	50 percent majority threshold		70 percent majority threshold		85 percent majority threshold	
		Voting power	Blocking power	Voting power	Blocking power	Voting power	Blocking power
Euro area and							
United States	39.99	94.93	99.56	22.20	100.00	9.26	100.00
Japan	6.13	0.36	0.38	8.31	37.43	7.72	83.49
United Kingdom	4.95	0.35	0.37	6.55	29.51	6.89	74.51
Ex-Canada	3.33	0.29	0.30	4.31	19.39	5.08	54.95
Korea	3.32	0.28	0.30	4.29	19.33	5.07	54.81
Egypt	3.26	0.28	0.29	4.21	18.97	4.99	53.96
Saudi Arabia	3.22	0.28	0.29	4.16	18.73	4.94	53.39
Malaysia	3.16	0.27	0.29	4.08	18.37	4.86	52.52
Tanzania	2.99	0.26	0.28	3.85	17.35	4.63	50.03
China	2.94	0.26	0.27	3.79	17.05	4.56	49.29
Ex-Denmark	2.92	0.26	0.27	3.76	16.93	4.53	48.99
Ex-Mexico	2.86	0.25	0.27	3.68	16.57	4.45	48.09
Switzerland	2.85	0.25	0.27	3.67	16.51	4.43	47.94
Russia	2.74	0.25	0.26	3.52	15.86	4.28	46.27
Iran	2.47	0.23	0.24	3.17	14.26	3.89	42.08
Brazil	2.47	0.23	0.24	3.17	14.26	3.89	42.08
Ex-Netherlands	2.46	0.22	0.24	3.15	14.20	3.88	41.92
India	2.39	0.22	0.23	3.06	13.79	3.77	40.81
Ex-Belgium							
and Italy	2.13	0.20	0.21	2.72	12.27	3.39	36.64
Argentina	1.98	0.19	0.19	2.53	11.39	3.16	34.19
Equatorial Guinea	1.44	0.14	0.14	1.83	8.26	2.33	25.15

Note: See note below table 10A.10.

**Table 10A.15 Coalition of single euro area seat and G-11: Voting shares and voting powers of constituencies (percent)**

Constituency	Voting share	50 percent majority threshold		70 percent majority threshold		85 percent majority threshold	
		Voting power	Blocking power	Voting power	Blocking power	Voting power	Blocking power
G-11	30.36	32.58	58.10	29.39	100.00	19.76	100.00
Euro area	22.91	22.27	40.32	25.68	87.97	19.76	100.00
United States	17.08	21.75	39.26	13.66	46.14	19.73	100.00
Japan	6.13	4.57	8.12	6.38	22.48	8.80	44.60
United Kingdom	4.95	3.79	6.39	5.05	14.90	6.61	33.51
Ex-Canada	3.33	2.53	4.57	3.38	12.42	4.33	21.97
Korea	3.32	2.53	4.57	3.34	12.42	4.28	21.72
Ex-Denmark	2.92	2.23	4.18	2.93	9.80	3.74	18.98
Switzerland	2.85	2.17	3.99	2.86	9.54	3.65	18.51
Russia	2.74	2.09	3.70	2.74	8.24	3.50	17.77
Ex-Netherlands	2.46	1.88	3.41	2.46	7.71	3.14	15.90
Ex-Belgium and Italy	2.13	1.63	2.84	2.12	6.14	2.70	13.72

Note: See note below table 10A.10.