Volume Title: Measuring International Capital Movements

Volume Author/Editor: Walther P. Michael

Volume Publisher: NBER

Volume ISBN: 0-87014-229-1

Volume URL: http://www.nber.org/books/mich71-2

Publication Date: 1971

Chapter Title: Purpose and Scope of the Study

Chapter Author: Walther P. Michael

Chapter URL: http://www.nber.org/chapters/c3940

Chapter pages in book: (p. 3 - 13)

MEASURING
INTERNATIONAL CAPITAL
MOVEMENTS

1

PURPOSE AND SCOPE
OF THE STUDY

It is well known that the reported data on international capital move-
ments as given in balance-of-payments statistics are incomplete. When
international capital transactions reported by individual countries are
aggregated into area or global totals, large discrepancies are found
between changes in assets and the corresponding changes in liabilities,
or between net outflows and corresponding net inflows. This was found
to be the case during work on the National Bureau's study of world
trade and payments for the period 1950–54.[1] It is also true of the data
for the late fifties and the early sixties, as two recent International
Monetary Fund (IMF) studies show.[2] It is, therefore, difficult, if not
impossible, to ascertain from balance-of-payments statistics the ap-
proximate magnitudes of world capital movements and of the flows
between areas or to judge the relative shares of the various suppliers
and recipients and the relative importance of the various types of
capital.

Moreover, existing studies of postwar capital movements do not
contain global quantitative presentations of all flows between coun-
tries. The main compilations of capital flow figures are in the United
Nations studies of private capital and of grants and long-term capital,
and in the publications of the Organization for Economic Coopera-
tion and Development (OECD) on the flow of financial resources to
less developed areas.[3] The UN studies of private capital were mainly

[1] Herbert B. Woolley, *Measuring Transactions Between World Areas*, New York,
NBER, 1966.
[2] Marcus Diamond, "Trends in the Flow of International Private Capital, 1957–
65," *Staff Papers*, International Monetary Fund, March 1967; and John S. Smith,
"Asymmetries and Errors in Reported Balance of Payments Statistics," *Staff Papers*,
IMF, July 1967.
[3] United Nations, *The International Flow of Private Capital, 1946–1952*, New
York, 1954, and *1956–1958*, New York, 1959, and *International Flow of Long-Term
Capital and Official Donations, 1951–1959*, New York, 1961, *1959–1961*, New York,

designed to bring out the characteristics of, and some of the factors influencing, private capital flows. While they contain much valuable information, quantitative evidence is confined to the main suppliers and selected recipients. The OECD data cover the supply to the underdeveloped areas of both official and private capital from 1956 on, as reported by the OECD members. The distribution of official capital among recipient countries is also provided from 1960 on, but much less information is given about the distribution of private capital. The scope of the OECD publications is thus limited mainly to the flow of aid to underdeveloped countries. The UN publications on long-term capital and grants cover the same field (although they show only net figures), but they also include data on aid by communist countries. Diamond's IMF study of private capital supplies no breakdown for the recipient countries. Presentations of worldwide capital movements are, therefore, not available.

It is, then, the purpose of this paper to try to construct, out of balance-of-payments data and supplementary sources, a reasonably firm and integrated set of accounts of international capital flows. The method used is to disaggregate the data by type of capital as far as possible and to compare transactions between partners by type. Sufficient details are available in most records or subsidiary sources to make such comparisons between countries, or at least between areas, feasible. In this way the discrepancies between countries or areas are revealed by type of capital. The data can then be adjusted for omitted transactions on the basis of partner data or other sources. The method of comparing the disaggregated data from both sides for all types of transactions seems indispensable for a reasonably accurate estimation of capital transactions. This two-valued approach affords a test of the data that is lacking when only the data of the lenders are used for compilations. Even if the types of transaction between two partners (say, direct investment and portfolio investment) are separately shown in only one of the records, the total amount for "private long-term" in the other still provides a limited check of the data. Of course,

transactions that took place but are not reported by either side—for instance, Latin American capital flight to Switzerland—or transactions for which neither partner collects data cannot be brought to light. But at least discrepancies in the reported data can be ascertained by this method, and frequently the source of the discrepancy can be identified. Such discrepancies are likely to be quite substantial, and while there may be no way to estimate certain clandestine movements, it is considered useful to reconstruct the movements that can be known. Many transactions that escape exchange control data, where this is the basis for collection, can be caught in the record of the other partner. It is hoped that this aspect of the study, the identification of discrepancies in the data, will prove of value in itself, both for improvement of the reporting system and as a caveat for the use of the figures.

The time period chosen for this purpose is the five years from 1950 through 1954, inclusive.[4] The data reported to the IMF prior to this period were not detailed enough for this kind of study.

The distribution of the supply of capital by source and its allocation among recipient countries are of particular interest with regard to the level of development of the countries between which the flows occurred. Accordingly, a classification of countries by stage of development has been constructed in order to show capital flows between such groups of countries, and how the various types of private and official capital were distributed among them.

The results of the investigation are given in summary form in Table 1 and in a series of matrix tables, found in Appendix B, for major types of transactions cross-classified by source and destination of funds. These tables are for the five-year period as a whole. Though the procedure followed has involved a year-by-year inspection of the data, the preparation of annual matrixes would have increased both the burden of work and the uncertainties of the estimates without a commensurate gain in knowledge of the period studied or in experience relevant to the feasibility of developing systematic accounts of this nature in the future.

This study focuses on the exposition of the methodology and the problems that are encountered in constructing a matrix system of

[4] This study was undertaken in connection with the National Bureau project mentioned in footnote 1, which covers the same period.

TABLE 1

Total Capital Movements, Types of Capital, by Groups and Subgroups, Five-Year Totals, 1950–54

(millions of dollars)

Borrowers (recipients)	Lenders (donors)											
	Total	Group 1	U.S.	U.K.	Continent and Japan	Group 2	Canada	Other Group 2	Group 3	Group 4	International Institutions	Unallocated
TOTAL	40,280	35,015	21,057	3,340	10,618	1,750	1,097	653	209	2,094	1,057	155
1. Government grants and net loans	17,228	16,078	12,649	732	2,697	−16	−223	207	12	−91	1,243	2
II. Portfolio investment issues	3,044	2,981	1,610	713	658	63	43	20				
Portfolio redemptions and trading	−657	−516	−762	84	162	−241	−90	−151	34	24		42
III. Direct investment	11,492	10,601	6,865	2,459	1,277	803	623	180	−10	8		90
IV. Private loans, net	222	264	378	−60	−54	−49	4	−53	−7	−7		
V. Repatriations	−627	−563	−56	−399	−108	−2		−2	−5	−57		21
VI. Short-term credit[a]	2,365	2,219	214	−33	2,038	456	409	47	10		−320	
VII. Reserves,[b] correspondent accounts, and net quota payments to international institutions	7,213	3,591	159	−156	3,948	736	331	405	175	2,217	134	
GROUP 1	17,155	14,133	8,650	435	5,048	1,167	944	223	178	1,829	−233	81
1. Government grants and net loans	6,681	7,036	7,067	−140	109	−250	−242	−8	2	−79	−30	2
II. Portfolio investment issues	70	70			70							
Portfolio redemptions and trading	201	353	19	223	111	−265	−102	−163	34	29		50
III. Direct investment	2,792	2,189	1,128	428	633	581	548	33	−5	1		26
IV. Private loans, net	3	24	261	−63	−174	−11		−11	−6	−7		3
V. Repatriations	−84	−51		−11	−40				−1	−32		
VI. Short-term credit	816	758	40	121	597	409	409				−351	
VII. Reserves[b] and correspondent accounts	6,676	3,754	135	−123	3,742	703	331	372	154	1,917	148	

U.S.	7,170	4,713	601	4,112	1,297	1,082	215	348	401	336	75
II. Portfolio investment issues	17	17		17							
Portfolio redemptions and trading	364	377	246	131	−104	−94	−10	31	10		50
III. Direct investment	1,402	864	391	473	521	512	9	−6	1		22
IV. Private loans, net	11	10	2	8	−2		−2				3
V. Repatriations	−2								−2		
VI. Short-term credit	414	48	48		366	366					
VII. Reserves[b] and correspondent accounts	4,964	3,397	−86	3,483	516	298	218	323	392	336	
U.K.	3,139	2,571	2,294	277	−161	−96	−65	−193	1,337	−415	
I. Government grants and net loans	1,189	1,481	1,472	−11	−191	−191		−4	−77		
II. Portfolio investment, redemptions, and trading	−183	−8	−8		−173	−10	−163		−2		
III. Direct investment	621	573	527	46	48	30	18				
IV. Private loans, net	143	152	168	−16	−9		−9				
V. Repatriations	−28								−28		
VI. Short-term credit	146	401		401	43	43				−298	
VII. Reserves[b] and correspondent accounts	1,251	−8	135	−143	121	32	89	−189	1,444	−117	
Continent	5,966	6,045	5,629	657	29	−44	73	23	91	−228	6
I. Government grants and net loans	4,975	5,069	5,089	120	−59	−51	−8	6	−2	−41	2
II. Portfolio investment issues	53	53	39	53							
Portfolio redemptions and trading	37	1	501	−20							
III. Direct investment	659	644	18	113	12	2	10	3	21		4
IV. Private loans, net	−227	−214		−167	10	4	6	1	−7		
V. Repatriations	−54	−51		−40				−6	−2		
VI. Short-term credit	62	178	−18	196	66	1	65	−1	81	−116	
VII. Reserves[b] and correspondent accounts	461	365		402				20		−71	

TABLE 1 (continued)

Borrowers (recipients)	Total	Lenders (donors)										
		Group 1	U.S.	U.K.	Continent and Japan	Group 2	Canada	Other Group 2	Group 3	Group 4	International Institutions	Unallocated
GROUP 1 (continued)												
Japan	880	804	727	75	2	2	2				74	
I. Government grants and net loans	517	506	506								11	
II. Portfolio investment, redemptions, and trading	-17	-17	-12	-5								
III. Direct investment	110	108	100	7	1	2	2					
IV. Private loans, net	76	76	75		1							
VI. Short-term credit	194	131	58	73							63	
GROUP 2	8,539	8,010	5,350	1,595	1,065	99	11	88	-1	4	375	52
I. Government grants and net loans	1,825	1,443	1,073	191	179	-30	-8	-22	-1	-4	417	
II. Portfolio investment issues	1,673	1,653	1,179	385	89	20		20				
Portfolio redemptions and trading	-498	-497	-535	-34	72	10	1	9		4		-15
III. Direct investment	5,126	4,973	3,616	1,088	269	101	14	87		4		48
IV. Private loans, net	59	82	51	-4	35	-42	4	-46				19
V. Repatriations	-13	-13		-13								
VI. Short-term credit	415	387	-58	23	422	47		47			-19	
VII. Reserves[b] and correspondent accounts	-48	-18	24	-41	-1	-7		-7			-23	
U.S.-oriented	4,846	4,855	4,268	174	413	-6	4	-10		-4	-8	9
I. Government grants and net loans	574	585	370	84	131	-18		-18		-4	11	
II. Portfolio investment issues	1,165	1,165	1,165									
Portfolio redemptions and trading	-376	-366	-407	-44	85	2		2				-12
III. Direct investment	3,388	3,386	3,070	186	130							2
IV. Private loans, net	88	59	53	-12	18	10	4	6				19
VI. Short-term credit	48	44	-7	1	50						4	
VII. Reserves[b] and correspondent accounts	-41	-18	24	-41	-1						-23	

U.K.-oriented	2,572	2,131	582	1,387	162	125	13	112		8	308	
I. Government grants and net loans	584	255	229	24	2	5		5		4	324	
II. Portfolio investment issues	449	449	14	371	64	28	2	26		4		-4
Portfolio redemptions and trading	51	23	-52	49	26	98	11	87		4		4
III. Direct investment	1,379	1,273	372	846	55	1		1				
IV. Private loans, net	71	70	19	43	8							
VI. Short-term credit	45	61		54	7						-16	
VII. Reserves[b] and correspondent accounts	-7					-7		-7				
Continent-oriented	1,121	1,024	500	34	490	-20	-6	-14	-1	7	75	43
I. Government grants and net loans	667	603	474	83	46	-17	-8	-9	-1	3	82	
II. Portfolio investment issues	59	39		14	25	20		20				42
Portfolio redemptions and trading	-173	-154	-76	-39	-39	-20	-1	-19				1
III. Direct investment	359	314	174	56	84	3	3					
IV. Private loans, net	-100	-47	-21	-35	9	-53		-53				
V. Repatriations	-13	-13		-13								
VI. Short-term credit	322	282	-51	-32	365	47		47			-7	
GROUP 3	4,930	4,266	3,247	-157	1,176	283	50	233	3	7	369	2
I. Government grants and net loans	2,716	2,233	1,805	131	297	185	-18	203	-2	3	297	2
II. Portfolio investment issues	10	10	10		-1	9	9			4		1
Portfolio redemptions and trading	-202	-213	-92	-120	79	87	59	28	-5	4		-1
III. Direct investment	1,444	1,357	1,238	40	72	4		4				
IV. Private loans, net	127	124	45	7	-31	-2		-2				
V. Repatriations	-165	-163	-55	-77					10			
VI. Short-term credit	1,000	918	296	-138	760						72	
U.S.-oriented	2,335	1,973	1,768	-276	481	99	66	33	-5	4	262	2
I. Government grants and net loans	683	476	453	23		-2	-2				209	
II. Portfolio investment issues	10	10	10									2
Portfolio redemptions and trading	-173	-184	-80	-110	6	9	9	28		4		1
III. Direct investment	1,373	1,286	1,185	40	61	87	59	5				
IV. Private loans, net	150	146	65	7	74	5						
V. Repatriations	-122	-122	-55	-67								
VI. Short-term credit	414	361	190	169	340						53	-1

(continued)

TABLE 1 (*concluded*)

Borrowers (recipients)	Total	Group 1	U.S.	U.K.	Continent and Japan	Group 2	Canada	Other Group 2	Group 3	Group 4	International Institutions	Unallocated
GROUP 3 (continued)												
Continent-oriented	2,595	2,293	1,479	119	695	184	-16	200	8	3	107	
I. Government grants and net loans	2,033	1,757	1,352	108	297	187	-16	203	-2	3	88	
II. Portfolio investment, redemptions, and trading	-29	-29	-12	-10	-7							
III. Direct investment	71	71	53		18							
IV. Private loans, net	-23	-22	-20		-2	-1		-1				
V. Repatriations	-43	-41		-10	-31	-2		-2				
VI. Short-term credit	586	557	106	31	420				10		19	
GROUP 4	7,982	7,422	3,109	1,324	2,989	82	33	49	8	171	279	20
I. Government grants and net loans	5,231	4,884	2,334	437	2,113	47	32	15	13	-14	301	
II. Portfolio investment issues	647	647	-47	342	352	1	-1	2		-1		
Portfolio redemptions and trading	-39	-36	-47	18	-7					-9		5
III. Direct investment	2,130	2,082	883	903	296	34	2	32	-1			15
IV. Private loans, net	33	34	8	13	13							
V. Repatriations	-365	-336	-1	-298	-37				-4	-25		
VI. Short-term credit	117	139	-21	-99	259						-22	
VII. Reserves [b] and correspondent accounts	228	8		8						220		
U.S.-oriented	2,088	1,973	1,908	-18	83	-8		-8	-1	4	99	21
I. Government grants and net loans	1,516	1,424	1,416		8	-8		-8		4	96	
II. Portfolio investment issues	2	2			2							
Portfolio redemptions and trading	-19	-19	-16	-3								
III. Direct investment	619	598	581	1	16							21
IV. Private loans, net	30	31	19		12				-1			
V. Repatriations	-17	-17	-1	-16								
VI. Short-term credit	-43	-46	-91		45						3	

U.K.-oriented	2,780	2,409	929	1,376	104	89	34	55		156	125	1
I. Government grants and net loans	1,354	1,173	728	437	8	55	32	23		−22	148	
II. Portfolio investment issues	295	295		295	5	1	−1	2		−9		5
Portfolio redemptions and trading		3	−28	26	35	33	3	30		−1		−4
III. Direct investment	1,188	1,160	235	890	1					−21	−23	
IV. Private loans, net	2	2	1									
V. Repatriations	−303	−282		−259	−23							
VI. Short-term credit	27	50	−7	−21	78							
VII. Reserves[b] and correspondent accounts	217	8		8						209		
Continent-oriented	3,114	3,040	272	−34	2,802	1	−1	2	9	11	55	−2
I. Government grants and net loans	2,361	2,287	190		2,097				13	4	57	
II. Portfolio investment issues	350	350			350							
Portfolio redemptions and trading	−20	−20	−3	−5	−12							
III. Direct investment	323	324	67	12	245	1	−1	2				−2
IV. Private loans, net	1	1	1									
V. Repatriations	−45	−37		−23	−14				−4	−4		
VI. Short-term credit	133	135	17	−18	136						−2	
VII. Reserves[b] and correspondent accounts	11									11		
INTERNATIONAL INSTITUTIONS	1,342	1,131	677	108	346	104	59	45	21	86		
I. Government grants and net loans	446	426	348	78	147	18	13	5		2		
II. Portfolio investment issues	644	601	421	33	−8	43	43					
Portfolio redemptions and trading	−100	−103	−92	−3	10	3	3					
VII. Reserves (IBRD bonds)	81	10	24	35	197	7		7	22	42		
Net quotas	271	197	22	35		33		33	−1	42		
UNALLOCATED	332	53	24	35	−6	15		15		−3	267	
I. Government grants and net loans	329	56	22	35	−1	14		14		1	258	
II. Portfolio investment, redemptions, and trading	−19	−20	−15		−5	1		1				
VI. Short-term credit	17	17	17									
VII. Reserves[b] and correspondent accounts	5									−4	9	

a Partly net, see (4), below.

b Excluding gold.

NOTE: A minus sign indicates a decrease in assets (liabilities).

SOURCE: Derived from matrix tables for Types I to V, and VII. The magnitudes of I, II, and VII differ from those of the corresponding matrix tables because of changes explained in (1), (2), (3), and (5) below. The flows of Type VI (for which there is no matrix) were calculated from the data in Appendix Table B-VI and from reported (or adjusted) country data, as explained in (1) and (4) below.

(1) In order to simplify the exposition in this summary table, the European Institutions were eliminated as intermediaries for grants and EPU balances. The grants extended *to* EPU and IEPA (EPU and IEPA rows in Appendix Table B-I) were distributed among the groups in proportion to the grants made *by* these institutions (EPU and IEPA column in Appendix Table B-I), which reduces the total of Type I by $700 million. The EPU balances (Appendix Table B-VI, column 3) were treated as having been extended directly by the countries with credit balances to those with debit balances, viz., by Group 1 Continent to itself, the United Kingdom, Group 2 (net of Swedish credit balance), and Group 3 (net of Portuguese credit balance). The credit balances of Sweden and Portugal were treated as having been extended to their own groups. The EPU net receipt was included in Group 1. The eliminated balances extended by EPU amount to $920 million (the sum of the debit balances). For their loan transactions (Appendix Table B-I), the European Institutions were included as lenders in the Continent-Japan column, and as borrowers in the Continent row. The total magnitude is not affected in this case.

(2) International Bank for Reconstruction and Development (IBRD) bonds bought by central banks as reserves are included in both Appendix Tables B-II and B-VII because from the borrower's point of view they represent funds raised through security issues, while from the lenders' point of view they represent an increase in their reserves. Either matrix would thus be incomplete without these transactions. But to avoid double counting in this summary table, the amount was excluded from Type II ($81 million).

(3) IBRD sales of borrowers' obligations included in Appendix Table B-II (portfolio trading) were transferred here to Type I, since they constitute a reduction in the supply of the International Institutions (−$67 million).

(4) Short-term credit (Type VI) was calculated for this table as explained below. For Groups 2, 3, and 4, the net receipts (or net repayments) were shown as having been received from (or repaid to) Group 1 in the following way: Their net receipts from (or repayments to) the U.S. and the U.K., according to the U.S. and U.K. data, were entered in the respective columns, and their residual transactions were entered in the Continent-Japan column, with the following exceptions:

(a) The Canadian transactions with the U.S. and the U.K. were shown gross since they largely consist of Canadian credit extended rather than received. The Canadian asset figures were used for this purpose.

(b) The EPU balances were treated as described above.

(c) The currency transactions with the International Monetary Fund (IMF) were shown as liabilities to the International Institutions.

(d) For Group 3, U.S.-oriented (Group 3 Latin America), the British figure of the Latin American repayments to the United Kingdom was used, the residual receipts from the Continent and Japan becoming, therefore, correspondingly larger (see Walther P. Michael, "International Capital Movements, The Experience of the Early Fifties (1950–1954)," Ph.D. dissertation, Columbia University, 1965. Appendix B, Matrix IX, 1).

NOTES TO TABLE I *(continued)*

The net credit extended by the Group 1 lenders to each other was shown in the following way:

(a) U.S. column—The net credit received from the United States by the Group 1 Continent and Japan according to the data of these countries was entered.

(b) U.K. column—The net credit received by the United States ($48 million) and Japan ($73 million reported by Japan) was entered.

(c) Continent and Japan column—Since the OEEC countries in Groups 2 and 3 reported net inflows from the Continental OEEC area totaling approximately $350 million, an offsetting net repayment was entered under Group 1 in this column because we estimated (see Michael, *ibid.*) that the net increase in short-term indebtedness in the whole Continental OEEC area was approximately zero. This negative entry was reduced by $65 million for the net credit extended to the United Kingdom according to the data of these Group 1 countries. The Continental-Japanese transactions, which were relatively small and unidentifiable by group, were ignored.

The sums of these various estimates yielded then the total for Group 1 of $2,219 million, and for all Short-Term Credit, of $2,365 million (this total is smaller by $920 million than the final estimate of $3,285 million shown in Table 2 because of the eliminated EPU balances). By this procedure we have assigned the missing outflows, evidenced by the discrepancy in Appendix Table B-VI, to Group 1 Continent (see the notes to Appendix Table B-VI). We have also included any transactions between the other groups in the Continent-Japan column, but such transactions were generally small and net out to insignificant amounts. The (partial) gross figures in this table for Group 1 cannot be reconciled with the net figures in Appendix Table B-VI because of the treatment described above, but those for Groups 2, 3, and 4 are consistent with the net figures in Appendix Table B-VI. This procedure seems to yield the best possible approximation to the short-term credit flows which appear to have taken place.

(5) Net quotas (the net increases in the liabilities of the International Institutions on subscription account), for which no matrix is included (see Chapter 2, footnote 4), were added to Type VII ($271 million).

---

world capital movements.[5] However, in Chapter 4 the pattern of capital movements during 1950–54 is discussed and some conclusions regarding the flow of funds to the underdeveloped areas are drawn.

[5] The methodology is explained here in general terms. For the procedure used in particular estimates and for the adjustments made to the reported country data, see Walther P. Michael, "International Capital Movements, The Experience of the Early Fifties (1950–1954)," Ph.D. dissertation, Columbia University, 1965 (microfilmed).