CPB Memorandum

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Bilateral FDI Stocks by sector

This paper describes the procedure to obtain a consistent data set of Foreign Direct Investments Stocks in 2001 for nearly all EU countries and for 10 sectors of economic activity. Our point of departure are the reported inwards FDI stocks by partner country of the OECD. Then a data set of total outward- en inward stocks by country are constructed by using observations or estimations. Assumptions are made to determine to the total outward en inward stock per sector and country to and from the world, where after the rest of world by sector is determined as a residual. Given these targets an estimation procedure has been developed to calculate the bilateral stocks per sector between the countries / regions.

1 Introduction

Foreign Direct Investment (FDI) flows have mounted from 100 billion US$ in 1980 to about 600 billion US$ per year in the period 1998-2003. The increase of FDI flows outpaced that of trade flows: FDI flows have increased by about 25% per year in the eighties and nineties, while trade flows have increased annually by about 10%. Sales of foreign affiliates have increased by 10% to 15% each year while GDP increased at most by 5% per year.[1]

These numbers are stunning. Foreign commercial presence is becoming more and more important for serving foreign markets and to reduce the costs of production. The speed of these developments is one of the eye-catching characteristics of globalisation. Foreign commercial presence, whether it is established by new investment or by acquisitions, increases the ties between national markets. The financing and management of foreign establishments, the sources of the inputs, and destination of production are becoming more and more international.

Although FDI is becoming more and more important in the world economy, it is not widely examined.[2] Theories and empirics on trade are much further developed than on FDI. Researchers have developed large-scale models to analyse trade policies. These models are based on microeconomic theory, equilibrium mechanisms, and the forward and backward linkages between various inputs and output markets. In analysing trade liberalisation policies, the role of foreign direct investment becomes increasingly more important. Lejour and Rojas-Romagosa survey the attempts modelling FDI in CGE models and Lejour et al. (2006) describe the modelling of FDI in CPB's AGE model WorldScan.

For modelling FDI we need a consistent set of data for bilateral FDI stocks by sector of economic activity. This paper describes the procedure to obtain this consistent data set for 23 countries / regions and 10 sectors in 2001. We use 2001 as a base year because our model is calibrated on the GTAP data base, version 6, base year 2001. Our procedure to construct this data set is as follows: For the macro-economic bilateral FDI stocks we use the inwards stocks by partner from the OECD. This procedure is described in Section 2 together with the assumptions necessary to create a consistent data set. Second, Section 3 constructs the sectoral data of total outward- and inward stocks by country by either observations or by estimations. Assumptions are made to determine to the total outward en inward stock per sector and country to and from the world, after which the rest of world by region is determined as a residual. Given these targets Section 4 presents an estimation procedure to calculate the bilateral stocks per sector between the 23 countries / regions[3].

[1] Sources: Markusen (2002), and UNCTAD (2004).

[2] Recently, many empirical papers have been published on FDI flows and the productivity of FDI. See Blonigen (2005) for a review of the empirical literature on the determinants of FDI.

[3] We thank Arie ten Cate who assisted us with the estimation method described in section 4

2 Bilateral Macro FDI stocks by country

2.1 General

The Macro FDI stocks data for most OECD countries originate from the OECD (2003)[4]. The data set covers 29 OECD-countries and around 70 partner countries for 1980 until 2002. From this source two types of data have been used: outward and inward position or stocks. Moreover remaining EU25 countries are obtained from EUROSTAT (2004). From that source we have downloaded the corresponding total direct investments, positions abroad and in the reporting economy respectively.

From these sources we have managed to compile bilateral stocks for the 23 countries and regions needed for the research. For a full list of these countries and regions we refer to table B1.

2.2 Preparing the initial dataset

The first step is to collect the original data of the 29 OECD countries from the OECD source. As mentioned before the data are collected for one year, 2001. This enabled us to organise two types of matrices from the sources. First of all we have created a matrix in which one of the reporting countries are taken as reporters of outward stocks to one of the partner countries. The second table is also a matrix in which the outward stocks can be read from a partner country to a reporting country. This results in two matrices for this macro total, which can be found in table C1 and C2 respectively.

The two matrices ideally are identical, but in practice there are some notable differences per sector:

- In many cases we observe two observations for the same stock with different values reported by the reporting and partner country.
- Sometimes there is only one reported observation for a certain stock.
- In some cases there is no stock at all.
- In an exceptional case a stock is negative.

In all these cases we have to make a choice in order to finally obtain one macro matrix for the OECD countries we need in this study. This will be dealt with in the following sections.

[4] For concepts, definitions an classifications we refer to Appendix A and B.

2.3 The choice if there are two observations per stock

In general, the importing and exporting country do not report the same value for a bilateral FDI stock. This is also the case for bilateral trade of goods, but in FDI stocks the differences in reporting seem to be larger. One of the extreme examples is that United Kingdom reports outward stocks of 239.3 billion US $ to Netherlands, while Netherlands reports inward stocks of 45.8 billion US$ from United Kingdom in 2001. This incompatibility of reported values leads to the question whether certain countries do systematically under- or over report imports or exports. This question is not unique constructing a consistent set of FDI stocks data. It figures also prominently in merchandise trade data and services data.

Different from the method we have used for services data (2006), the data experts on FDI stocks agree that the inward FDI stocks are more reliable than the outward stocks. The registration for inwards stocks is more reliable. Governments and firms have a bigger incentive to register the inward flows more accurately than the outward flows for tax and subsidy reasons. An additional argument is that at the sectoral level the receiving country notices the sectors in which the investment takes place. The reporting sending country only notices from which sectors the finance originates, but this is not necessarily the sector in which it is invested (vertical FDI).

2.4 The remaining choices

For EU25 countries not belonging to the OECD, we use EUROSTAT (2004). More in particular we mention here Slovenia, the Baltic states, Malta and Cyprus. Contrary to the OECD source we have only obtained the data from these countries as reporters, which means that, if available, only one observation per stock is used. For our purpose the Baltic states, Malta and Cyprus are aggregated to one region: remaining new EU25 countries. For Malta only total outward and inward stocks to and from the world are available. Division over the countries is assumed to be equal to the total of the Baltic states. For Cyprus no data are available and is therefore set to zero.

For all distinguished countries and regions we assume that if there is only one stock, this stock is considered to be the correct stock. We don’t make a correction for the nature of the stock. It could either be an observed outward or inward stock. That number in that particular cell is considered to be correct. If a value of a cell is negative we set this value to zero.

In all other remaining cases, there is no observation for the resulted matrix. In this case we set these stocks to zero.

With these data we are able to finalize a 23 by 23 country / region matrix of macro FDI stocks for the year 2001. Remaining OECD is determined by simply adding up the specified countries. In order to calculate Rest World numbers we assume that total world FDI stock per country equals the sum of the determined total OECD stocks by the observed non-OECD stocks. If we would calculate the Rest of World stocks by subtracting observed total World and determined total OECD numbers, we would get for some countries odd or even negative stocks for this region. If there is no observation for an outward or inward non-OECD stock however, we will use the latter method to calculate Rest of World.

As a final step possibly created bilateral stocks within a country / region have been set to zero.

All this results in a 23 by 23 country / region matrix of macro FDI stocks. In table C3 the final table after all adjustments for the investigated countries can be found.

As has been mentioned before, It is difficult to measure the outward and inward FDI stocks because they are often not observable if they cross the border. The choices we have made to create a full matrix between countries are to some extent arbitrary, but are based on expert knowledge. In the next sections we have a look at some of the results of some sectoral bilateral outward and inward FDI stocks between the 23 countries and regions.

3 Sectoral FDI stocks by country

3.1 General

This section lists the steps which were taken to handle the available sectoral data from the OECD and EUROSTAT sources. Bilateral stocks per sector are not available[5]. This means that here we are exclusively dealing with maximal one observation per stock. In case a direct in- or outward stock is not available, we explain how missing outward stocks can be estimated using inward stocks from importing countries.

3.2 Preparing the initial dataset

The first step is to collect data from the OECD sources. As mentioned before the data are collected for one year, 2001. This results in two tables, one for outward stocks and one for inward stocks both per sector and country / region. At this stage we distinguish the sectors, which are available in the OECD source. A concordance between these sectors and the finally chosen sectors can be found in table B2.

To illustrate the availability of the data in the OECD source we show the original data from this source in table D1 en D2 of appendix D. Note that for some countries total stocks are not available from this source and if the data are available the, totals are not always consistent with the total inward and outwards stocks derived in Section 2. These latter totals are our benchmark.

3.3 The estimations for the missing stocks

As can be seen from tables D1 and D2 for a substantial number of countries we have no data by sector. We mention here Belgium / Luxembourg, Ireland, Spain, Sweden and some countries within the Remaining OECD region. Moreover in some other countries some sectoral information is missing, like Italy. Finally, in some countries the level of the stocks unallocated is too high to be neglected and has to be distributed over the sectors.

In all these cases estimations have been carried out, based on assumptions from other sources or other reporters. Most information can be obtained from EUROSTAT (2004), in which we have found bilateral direct investment positions, breakdown by country and economic activity. Given the determined total outward and inward stocks of a country in section 2, we have calculated the

[5] In Eurostat (2004) a limited number of bilateral stocks per sector can be found.

sectoral shares of missing data for this country by using important reporters to this country of their sectoral inward and outward respectively positions to this specific country. For Belgium / Luxembourg it means for instance that information from France and Germany has been used. We have both looked at data availability and importance of these countries for Belgium / Luxembourg in this example.

Table 3.1 gives an overview how countries with (partly) missing sectoral data were estimated using information from partner countries as indication of the corresponding stocks.

Table 3.1 Estimation of sectoral FDI stocks of some EU countries using sectoral shares of other countries as indicator

Country to be estimated	Countries as indicator
Belgium / Luxembourg	France and Germany
Ireland	United Kingdom, France and Netherlands
Spain	France and Portugal
Sweden	France and Germany
Italy	France
Finland	France
Portugal	France
Slovenia	Germany

The indicators are simply used as indicator and in most cases don't even cover 50% of the total stock of the country to be estimated. For Belgium / Luxembourg, Ireland, Spain and Sweden extra assumptions are needed for the still unavailable stocks. In this case the shares of only France will be used. For Italy estimations only have to be carried for missing sectors within manufacturing, whereas the sectors to be estimated for Finland are limited to some assumptions. In both cases bilateral information from and to France from Eurostat is used

For the countries within Remaining EU25, direct information for the Baltic states can be found in Eurostat (2004). For Malta the division over sectors is assumed to be identical then for the sum of the Baltic states. For Cyprus the data are set to zero.

For missing sectoral data of OECD countries who don't belong to EU25 countries we use the sectoral division of the United States as an indicator. This is done for the outward- and inward stocks for Japan, Mexico and New Zealand and for the outward stocks of Turkey. For the division of certain sub sectors for Australia we have used the same division of these sectors in the United States. Unallocated in Canada is partly already assigned to the sectors FOD, HTM, VOT, TRA and CMN. Remaining unallocated is assigned to the sectors TWA, PCR, MLM, EGW, TAR, HAR and REB according to the shares of those sectors in the United States. All other remaining stocks by sector are set to zero

For all countries we discovered that the sector Transports, Communication (TRC) is not equal to the sum of Total land, sea and air transport (TRA) and Telecommunications (CMN). For some EU countries we have been able to locate this difference in EUROSTAT under 6395 transport and storage. We have decided to book this difference in sector TRA.
The difference between the calculated total stocks per country from the previous section and those from this section is divided over the sectors using the present calculated shares of the sectors.

Aggregation of OECD countries not belonging to EU25 and USA (ROE) is a simple aggregation of these countries. For Rest of World the determination of these stocks per sector and country as a residual of total and the sum of the other countries / regions leads in some cases to negative stocks. We have therefore decided to calculate these stocks by assuming that the sectoral shares in Rest of World equals to sectoral shares of the aggregate of alll other countries.

In order to give the reader an impression of how all these estimations work out in the outward and inward FDI stocks, we have included table D3 and table D4 for an overview. Please note that the column total of table D3 equals the row total of table C3 and that the column total of D4 equals the column total of table C3. For those countries who have column totals in table D1 and D2, we notice some substantial differences with corresponding totals in respectively table D3 and table D4.

Finally, aggregation over sectors takes place according to the concordances in table A2. The results can be found in table D5 and D6. The world total of FDI stocks in 2001 equals to US$ 5,981 billion dollar, which can be found in tables C3, D3-D6. That means that consistency has been guaranteed at this stage. No consistency is not yet visible for the world totals per sector. Total outward- and total inward stocks in tables D5 and D6 are not yet identical. Moreover there are no stocks at all for bilateral stocks between the 23 countries / regions by 10 sector. Section 4 presents the procedure to estimate these stocks given the targets of Tables C3, D5 and D6.

4 Estimating FDI stocks by outward region, inward region, and sector

The 3-dimensional table of FDI stocks by outward region, inward region, and sector is estimated from the tables C3, D5 and D6 in two steps. First, the tables D5 and D6 are adjusted to make them consistent with each other, while the data remain consistent with the data table C3 on total FDI stocks by partner country. Second, from the three 2-dimensional tables the required 3-dimensional table is estimated. Both steps are formulated as an optimisation problem using GAMS as software.

The first step, the adjustment of the tables D5 and D6, is done under the following restrictions. The WLD column of the adjusted D5 and the WLD column of the adjusted D6 must be equal to each other. The bottom row of D5 must remain equal to the WLD column of table C3. The bottom row of D6 must remain equal to the WLD row of C3. All adjusted cells must be non-negative.

The adjusted tables D5 and D6 are computed such that these restrictions are satisfied while minimizing the sum of all relative squared adjustments. The relative squared adjustment of a cell is computed by dividing the squared adjustment of the cell by the sum of the original value and a small positive threshold number (1E-5). The adjustment is the difference between the original value and the new, adjusted value.

The use of the threshold prevents the squared adjustment of very small values to have an extremely large weight in the summation. It creates a smooth transition from using the squared adjustment with a fixed weight in the summation (for very small values), to using the squared adjustment with a declining weight (for ordinary values). For most values we have the latter case of course, where the threshold is dwarfed by the original cell value in the numerator. When the original value is below the threshold, the adjusted value is fixed to zero.

The second step, the estimation of the 3-dimensional table of FDI stocks, is done under the following three restrictions: the summation of this new table over any single one of its three dimensions is targeted to the relevant 2-dimensional table; either C3, D5, or D6. Also, for any zero cell in table C3, all corresponding cells in the new table are fixed zero.

The cells of this new table are computed such that these restrictions are satisfied while minimizing the sum of all relative squared deviations from the "proportional" 3-dimensional table. The relative squared deviation is defined with the same threshold as in the first step above.

The proportional 3-dimensional table is defined by distributing each cell of table C3 over the sectors using the tables D5 and D6, as follows:

$$prop(s,i,j) = C3(i,j)\frac{inw(s,i)+outw(s,j)}{\sum_t inw(t,i)+outw(t,j)} \quad (4.1)$$

prop is proportional, s is sector, inw is the value of the FDI stocks in inward region by sector (see Table D6) and outw is the value of the FDI stock in the outward region (see Table D5). C3 represents the bilateral total FDI stock owned by region i and allocated to region j. "prop" refers to the fact that this combines the proportional distribution of the outward stocks of D5 over inward regions, and the proportional distribution of the inward stocks of D6 over outward regions. Of course, we have:

$$\sum_s prop(s,i,j) = C3(i,j) \quad (4.2)$$

Any cell in the result matrix can be targeted ("fixed") to observed values in the computer program.

Appendix A: Concepts and definitions

- **Statistical concept**
- We use as a base for its work the OECD Benchmark Definition of Foreign Direct Investment Third Edition, a detailed operational definition fully consistent with the IMF Balance of Payments Manual, Fifth Edition, BPM5.
- **Foreign direct investment** (**FDI**) is the category of international investment made by an entity resident in one economy (*direct investor*) to acquire a lasting interest in an enterprise operating in another economy (*direct investment enterprise*). The lasting interest is deemed to exist if the direct investor acquires at least 10% of the equity capital of the direct investment enterprise.
- FDI statistics record separately:

  1. **Inward FDI** (or *FDI in the reporting economy*), namely investment by foreigners in enterprises resident in the reporting economy.

  2. **Outward FDI** *(*or *FDI abroad)*, namely investment by residents entities in affiliated enterprises abroad.
- FDI statistics record both the initial investment and all subsequent investment made by the direct investor, in the form of equity capital, or in the form of loans, or in the form of reinvesting earnings. Investment made through other affiliated enterprises of the same group of the direct investor should also be recorded according to the international methodology.

Definition of indicators

There are two indicators in this memorandum : FDI flows and stocks. FDI stocks refer to the end of the recording period, flows refer to the recording period.

1) FDI flows are the new investment made during the period.

FDI flows are recorded in the Balance of Payments financial account. Total FDI flows are broken down by kind of instrument used for making the investment:

- Equity capital

  comprises equity in branches, all shares in subsidiaries and associates (except non-participating, preferred shares that are treated as debt securities and are included under other FDI capital) and other contributions such as the provision of machinery.
- Reinvested earnings

  consist of the direct investor's share (in proportion to equity participation) of earnings not distributed by the direct investment enterprise. Reinvested earnings are an imputed transaction. Reinvested earnings are also recorded with opposite sign among FDI income (see below). This recording represents not distributed income as being earned by the direct investor and reinvested in the direct investment enterprise at the same time.

- Other FDI capital (loans)
  covers the borrowing and lending of funds, including debt securities and trade credits between direct investors and direct investment enterprises. Debt transactions between affiliated financial intermediaries recorded under direct investment flows are limited to permanent debt.
  2) FDI stocks (or positions) are the value of the investment existing at the end of the period. FDI stocks are recorded in the International Investment Position. Outward FDI stocks are recorded as assets of the reporting economy, inward FDI stocks as liabilities. Similarly than for flows, FDI stocks are broken do wn by kind of instrument. However, there are only two categories instead of three:
- Equity capital and reinvested earnings
  is the value of the own capital of the enterprise, including the value of own reserves that are accumulated from past reinvested earnings. Reserves corresponding to reinvested earnings are not shown separately from other equity capital as in the case of flows.
- Other FDI capital
  is the stock of debts (assets or liabilities) between the direct investors and the direct investment enterprise.

Appendix B: List of available countries and sectors

Table B1: List of countries and regions

AUT	Austria
BLU	Belgium and Luxembourg
DNK	Denmark
FIN	Finland
FRA	France
DEU	Germany
GBR	United Kingdom
GRC	Greece
IRL	Ireland
ITA	Italy
NLD	Netherlands
PRT	Portugal
ESP	Spain
SWE	Sweden
CZE	Czech Republic
HUN	Hungary
POL	Poland
SVK	Slovakia
SVN	Slovenia
REX	Remaining EU25
ROE	Remaining OECD
USA	United States
AAT	Rest of World

Table B2: Concordance between OECD sector names and 10 sector WorldScan names

OECD description	Names	WorldScan description	Names
PRIMARY SECTOR	PSC		
Agriculture and Fishing	AGO	Agriculture, Oil and Oth Min	AGO
Mining and Quarrying	MIN	Coal, Natural gas, Gas dtr., P_C + ELY	ENG
of which: Extraction of petroleum and gas	EPG		
MANUFACTURING	MAN		
of which: Food products	FOD	Low tech. manufacture	LTM
Total textile and wood activities	TWA	Low tech. manufacture	LTM
Total petroleum, chemical, rubber, plastic products	PCR	Medium high tech. manufacture	MHM
Total metal and mechanical products	MLM	Medium-low tech. manufacture	MLM
Total machinery, computers, RTV, communication	HTM	High tech. manufacture	HTM
Total vehicles and other transport equipments	MHM	Medium high tech. manufacture	MHM
SERVICE SECTOR	SER		
Electricity, Gas and Water	EGW	Coal, Natural gas, Gas dtr., P_C + ELY	ENG
Construction	CNS	Other commercial services	OCE
Trade and Repairs	TRR	Other commercial services	OCE
Hotels and Restaurants	HAR	Other commercial services	OCE
Transports, Communication	TRC		
of which: Total land, sea and air transport	TRA	Transport	TRA
Telecommunications	CMN	Other commercial services	OCE
Financial Intermediation	FNI	Financial Intermediation	FNI
of which: Monetary intermediation	MNI		
Other financial intermediation	OFI		
of which: Financial holding companies	FHC		
Insurance and activities auxiliary to insurance	IAA		
Total other financial intermediation and insurance activities	TFI		
Real Estate and Business Activities	REB	Other commercial services	OCE
of which: Real estate	DWE		
Other Services	OSR	Govt. serv, recr. ser water distr.	OSR
UNALLOCATED	UNA	Other commercial services	OCE
TOTAL	TOT	Total	TOT

Appendix C: macro FDI stocks

Table C1: Matrix of macro FDI outward stocks from reporting country / region to partner country / region, 2001, in mld US dollars, original data from source

REP\PART	AUT	BLU	DNK	FIN	FRA	DEU	GBR	GRC	IRL	ITA	NLD	PRT	ESP	SWE	CZE	HUN	POL	SVK	SVN	REX	ROE	USA	AAT	WLD
AUT		0.2	0.1	0.1	0.5	5	1.8	0	0	0.5	1.8	0.1	0.1	0.6	2.3	2.4	1.1	1.6				2.1		
BLU																								
DNK	0.3	13.4		1.4	3.1	2.8	4.9	0	0.3	0.5	3.9	0.5	0.6	3.8	0.5	0.1	1.2	0			13.7	11.6		
FIN	0.2	-0.5	2.7		1.7	5.7	1.8	0	0.5	1	9	-0	0.2	13.1	0	0.2	0.3	0				6.4		
FRA	0.9	82	2.1			26.9	64.6	0.6	4.1	16.3	38.2	1.8	14.5	4.3	1.3	1.2	7.9	0.1				139.2		
DEU	18.2	44.1	2.8	0.7	33.4		59.5	1.2	7	15.6	60	3.1	11.6	8.1	6.6	7.3	7.5	1.8			42.8	179.5		
GBR	3.5	101.8	3.8	0.9	35.8	19.5		1.7	33.4	6.2	239.3	1.3	10.3	15.6	1.2	1.7	2.5					208.5		
GRC	0	0.3	0	0	0.1	0.1	0.2		0	0	0.1	0	0	0	0	0	0	0				1		
IRL					0.3	0.2	8.2				2.5											11.1		
ITA	1.5	28.3	0.2	0.2	19.2	10.2	18.1	0.7	3.9		29.4	1.6	6.7	0.6	0.1	0.5	2	0.1			14.2	20.3		
NLD	0.6	54.8	2.5	1.1	22.6	19.6	26.9	0.9	12.2	6.1		2.1	10.4	3.3	2.4	1.6	4	0.5				88.9		
PRT	0.2	0.3	0	0	0.5	0.3	0.8	0.1	0.6	0.4	3.6		5.9	0	0	0	0.6					0.3		
ESP																								
SWE	0.9	2.7	7.8	15.6	3.8	9.3	12.6	0.1	2.1	1.6	9.4	0.5	2.4		0.5	0.6	1.6					25.4		
CZE	0	0	0	0	0	0	0		0	0	0		0	0		0	0.1	0.3				0		
HUN	0.1	0	0.1		0	0	0	0	0	0	0.3		0		0.1		0	0.2				0.1		
POL	0	0.1	-0	0	0	0	0	0	0	0	0.1		0	-0	0	0		0				0.1		
SVK	0	0			0	0	0.1			0	0				0.2	0	0					0		
SVN																								
REX																								
ROE																								
USA	4	73.4	5.2	1.7	40.1	63.4	228.2	0.8	39.5	22.9	147.7	2.7	28.2	26.4	1.2	2	4.6							
AAT																								
WLD																								

Table C2: Matrix of macro FDI inward stocks from partner country / region to reporting country / region, 2001, in mld US dollars, original data from source

REP\PART	AUT	BLU	DNK	FIN	FRA	DEU	GBR	GRC	IRL	ITA	NLD	PRT	ESP	SWE	CZE	HUN	POL	SVK	SVN	REX	ROE	USA	AAT	WLD
AUT			0	0.1	0.9	8.2	0.6	0		0.8	-0.1	0.1		-0	2.7	2.4	1.4	1.1				2.7		
BLU	0.5		8.4	0.3	51	104.2	6.6	3.4	8.3	12.8	49.5	3.1		5.2	1.5	0.8	1.3	0.2				110.9		
DNK	0.1			1.3	2.3	4.1	5.7	0		0.3	2	0.6		3.8	0.1	0.1	1.2	0				1.9		
FIN	0.1		0.7		1.8	6.2	1.6	0		0.3	2.6	-0		13.9	0.1	0.3	0.3	0				7.6		
FRA	1.5		1.6	0.2		33.4	51.1	1.3	0.7	15.1	12.9	2.6		2.8	1.8	1.2	6.3	0.2				155		
DEU	14.9		1.9	0.7	34.9		43.1	1.1	5.5	9.6	36.6	2.4		6.8	6.5	7.6	7.8	1.3				162.3		
GBR	2.1		5	1.5	44.6	32.6		0.5	24.1	13.4	45.8	5.5		11.3	1.7	0.2	1.3	0.4				197.7		
GRC	0		-0		0.1	0	0.1			0	0.1	0		-0	0	0	0							
IRL	0		0.2	0.1	3.1	1.6	6.1	0.1		0.3	7.5	0.9		0	0.1	0	0.4	0				25.6		
ITA	1.3		0.8	0	12.6	5.4	9.5	0.3	3.8		2.3	0.9		-0.1	0.2	0.5	1.7	0.5				6.8		
NLD	2.8		4.9	4.2	56.7	90	88.4	2.6	49.6	14.1		6.5		10.5	7.9	3.4	10	0.9				145.6		
PRT	0		0	-0	0.5	0.1	0.2	-0		0.5	1.4			0	0	0	0.3							
ESP	1		0.3	-0	5.1	7.1	0.9	0	-0.3	0.9	1.3	5.8		-0.1	0.1	0	0.5	0				4.7		
SWE	0.7		9.1	13.4	4	8.1	5.2	0		2.2	6.2	0.6			0.2	0.3	1.2	0				20.8		
CZE	0		-0	0	0.1	0.2	0			0	0	0		-0		0	0	0.4						
HUN	0		-0	0	0	0	0			0	0	0			0.1		0	0.2						
POL	0		-0	0	0.1	0.1	0			0	0.1			-0.1	0	-0		0						
SVK	-0		0		0	0									0.2	0	0							
SVN																								
REX																								
ROE					26.7																			
USA	2		20.9	0.7	41.3	80.2	198.7	0.9	27.6	13.9	70.6	1.1		20.4	1.7	2	3.9	0.4						
AAT																								
WLD																								

Table C3: Matrix of macro FDI stocks from partner country / region to reporting country / region, 2001, in mld US dollars, after all corrections

REP\PART	AUT	BLU	DNK	FIN	FRA	DEU	GBR	GRC	IRL	ITA	NLD	PRT	ESP	SWE	CZE	HUN	POL	SVK	SVN	REX	ROE	USA	AAT	WLD
AUT	0	0.2	0	0.1	0.9	8.2	0.6	0	0	0.8	0	0.1	0.1	0	2.7	2.4	1.4	1.1	0.9	0	1.1	2.7	5.5	29
BLU	0.5	0	8.4	0.3	51	104.2	6.6	3.4	8.3	12.8	49.5	3.1	0	5.2	1.5	0.8	1.3	0.2	0	0.1	14.6	110.9	48.4	431
DNK	0.1	13.4	0	1.3	2.3	4.1	5.7	0	0.3	0.3	2	0.6	0.6	3.8	0.1	0.1	1.2	0	0	1.1	11.4	1.9	6.5	57
FIN	0.1	0	0.7	0	1.8	6.2	1.6	0	0.5	0.3	2.6	0	0.2	13.9	0.1	0.3	0.3	0	0	1.4	6.9	7.6	1.1	45.8
FRA	1.5	82	1.6	0.2	0	33.4	51.1	1.3	0.7	15.1	12.9	2.6	14.5	2.8	1.8	1.2	6.3	0.2	0.4	0.1	43	155	38.8	466.4
DEU	14.9	44.1	1.9	0.7	34.9	0	43.1	1.1	5.5	9.6	36.6	2.4	11.6	6.8	6.5	7.6	7.8	1.3	0.4	0.7	31.7	162.3	44.4	475.8
GBR	2.1	101.8	5	1.5	44.6	32.6	0	0.5	24.1	13.4	45.8	5.5	10.3	11.3	1.7	0.2	1.3	0.4	0.1	0.4	57.1	197.7	111	668.5
GRC	0	0.3	0	0	0.1	0	0.1	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0.1	1	4.5	6.3
IRL	0	0	0.2	0.1	3.1	1.6	6.1	0.1	0	0.3	7.5	0.9	0	0	0.1	0	0.4	0	0	0	2	25.6	18.4	66.4
ITA	1.3	28.3	0.8	0	12.6	5.4	9.5	0.3	3.8	0	2.3	0.9	6.7	0	0.2	0.5	1.7	0.5	0.2	0.1	7.1	6.8	24.3	113.4
NLD	2.8	54.8	4.9	4.2	56.7	90	88.4	2.6	49.6	14.1	0	6.5	10.4	10.5	7.9	3.4	10	0.9	0.1	0.4	65.7	145.6	36.9	666.2
PRT	0	0.3	0	0	0.5	0.1	0.2	0	0.6	0.5	1.4	0	5.9	0	0	0	0.3	0	0	0	0.1	0.3	10	20.2
ESP	1	0	0.3	0	5.1	7.1	0.9	0	0	0.9	1.3	5.8	0	0	0.1	0	0.5	0	0	0	0.7	4.7	162.4	190.6
SWE	0.7	2.7	9.1	13.4	4	8.1	5.2	0	2.1	2.2	6.2	0.6	2.4	0	0.2	0.3	1.2	0	0	2.3	10.1	20.8	7.4	99.1
CZE	0	0	0	0	0.1	0.2	0	0	0	0	0	0	0	0	0	0	0	0.4	0.1	0	0	0	0.5	1.4
HUN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0.2	0	0	0	0.1	0.6	1.2
POL	0	0.1	0	0	0.1	0.1	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0.1	0.2	0.1	0.4	1.3
SVK	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0.2	0	0	0	0	0	0	0	0.1	0.4
SVN	0.1	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0	0.7	1
REX	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.8	0.8
ROE	3	30	7.2	1.3	26.7	35.7	59.7	1.2	13.1	17.5	25.7	0.9	5.2	8.9	1.5	1	1.4	0.2	0.1	0.6	0	404.1	346.9	991.6
USA	2	73.4	20.9	0.7	41.3	80.2	198.7	0.9	27.6	13.9	70.6	1.1	28.2	20.4	1.7	2	3.9	0.4	0.1	1	288.7	0	394.6	1272.3
AAT	4.1	41.2	6.5	0.4	9.4	6.9	29.1	3.1	8.2	4.8	24.6	3.6	67.8	5.2	0.6	8	2	0.1	0.2	2.5	47.9	98.5	0	374.8
WLD	34.3	472.7	67.4	24.1	295.3	424.3	506.5	14.6	144.7	106.6	289.2	34.6	164	88.9	27.1	27.9	41.3	5.7	2.6	10.7	588.4	1345.5	1264.2	5980.7

Appendix D: sectoral FDI stocks

Table D1: Matrix of outward stocks per sector and country, in 2001, in mld US dollars, original data from source

Sector\Countries	AUT	BLU	DNK	FIN	FRA	DEU	GBR	GRC	IRL	ITA	NLD	PRT	ESP	SWE	CZE	HUN	POL	SVK	SVN	REX	ROE	USA	AAT	WLD
PMS	0.7		1.2		5.6	3.9	113.2	0.0		20.7	3.0	0.3			0.0	0.0	0.0	0.1				80.5		
AGO			0.0			0.5	0.2	0.0		0.4	0.3	0.0			0.0	0.0	0.0	0.0				1.1		
MNQ	0.7		1.1		5.6	3.4	113.0	0.0		20.3	2.7	0.3			0.0	0.0	0.0	0.1				79.4		
EPG	0.5		1.1		5.5	2.6	111.3				2.5	0.0				0.0	0.0	0.0				59.4		
MAN	6.9		11.9	35.3	89.7	108.3	260.4	1.1		50.9	134.4	2.4			0.1	0.2	0.1	0.2				328.0		
FOD	0.4		5.8	0.9	6.2	2.6	44.2	0.1		4.5	28.2	0.2			0.0	0.0	0.0	0.0				34.3		
TWA	0.9		0.6	13.1	3.5	4.1	55.5	0.0			14.0	0.9			0.0	0.0	0.0	0.0				57.5		
PCR	1.7		2.8	4.1	18.5	35.9	82.7	0.1			55.1	0.2			0.0	0.1	0.0	0.1				106.7		
MLM	1.7		1.1	5.8	10.0	13.1	22.5	0.2			7.0	0.1			0.0	0.0	0.0	0.0				49.0		
HTM	0.4		0.0	9.4	2.5	4.1	4.9	0.0			27.7	0.0			0.0	0.0		0.0				58.7		
VOT	0.2		0.1		23.0	23.7	12.8				1.2	0.0			0.0	0.0	0.0	0.0				40.5		
SER	21.0		55.3	14.0	413.5	443.9	496.1	5.4		108.1	184.2	20.5			1.0	1.2	1.1	0.2				1051.9		
EGW	0.2		0.1		27.3	7.4	23.7					0.3			0.0	0.0	0.0	0.0				25.5		
CNS	0.5		0.1		1.7	1.0	3.3	0.1			1.4	0.2			0.0	0.0	0.0	0.0				2.4		
TAR	3.6		4.0	0.2	27.8	49.4	42.1	0.2		6.7	38.7	3.8			0.4	0.2	0.1	0.0				140.5		
HAR	0.1		0.0		1.9	0.9	14.7	0.0				0.1			0.0	0.0	0.0					17.4		
TRC	0.2		5.9	6.2	10.8	51.6	223.0	1.2		6.9	11.9	0.7			0.0	0.0	0.3	0.0				28.1		
TRA	0.0		1.6	0.8	3.7	3.7	8.7	0.2			3.6	0.2			0.0	0.0	0.2	0.0				6.3		
CMN	0.1		4.0		5.1	46.0	207.9	1.0			6.4	0.5			0.0	0.0	0.0					14.5		
FNI	6.5		4.9	6.4	112.0	93.4	128.1	3.9		67.2	102.7	7.6			0.4	0.6	0.4	0.1				295.9		
MNI	3.6		1.3	6.1	34.9	47.1	37.1	0.9			19.2	3.8			0.1	0.4	0.1					55.6		
OFI	2.2		2.7		40.8	33.3	61.2	3.0			41.8	1.9			0.0	0.2	0.1					182.2		
FHC					35.1	28.6		3.0			41.8	1.9				0.2								
IAA	0.5		0.9		28.9	13.0	29.8	0.0			41.7	1.9			0.0	0.0	0.0	0.1				58.0		
TOF	2.8		3.6		69.7	46.4	91.0	3.0			83.5	3.8			0.1	0.2	0.1	0.1				295.9		
REB	9.9		39.8	1.3	220.3	236.8	52.5	0.1			28.2	8.8			0.1	0.4	0.2	0.1				528.8		
RES	1.8		0.4		6.9	6.9	5.1	0.0			19.1	0.1			0.0	0.0	0.0	0.0				5.0		
OSR	0.1		0.6		11.7	3.5	8.8	0.0		27.4	1.4	-0.9			0.1		0.1	0.0				13.2		
UNA			1.9	3.0	0.1		0.0			2.7	10.6	0.3		123.3		0.2	0.0	0.0				0.0		
TOT	28.5		70.3	52.2	508.8	556.1	869.7	6.5		182.4	332.2	23.5	190.6	123.3	1.1	1.6	1.2	0.5				1460.4		

Table D2: Matrix of inward stocks per sector and country, in 2001, in mld US dollars, original data from source

Sector\Countries	AUT	BLU	DNK	FIN	FRA	DEU	GBR	GRC	IRL	ITA	NLD	PRT	ESP	SWE	CZE	HUN	POL	SVK	SVN	REX	ROE	USA	AAT	WLD
PMS	0.3		1.6		0.5	0.7	61.8	0.4		3.1	3.6	0.1			0.5	0.3	0.3	0.1				28.4		
AGO			0		0.2	0.1	0.2	0		0.4	0.2				0	0.2	0.2	0				2.5		
MNQ	0.3		1.6		0.3	0.5	61.6	0.4		2.7	3.5	0.1			0.5	0.1	0.1	0				25.9		
EPG	0.2		1.5		0.1	0.2	61.3				3				0	0	0	0				3.8		
MAN	8.7		5.1	8.3	55.5	48.5	135.7	5.3		42.1	92.3	4.5			10.2	9.9	14.6	1.9				476.5		
FOD	0.6		1.9	0.5	5.4	1.4	10.2	2.3		5.4	13.6				1.2	1.5	3	0.4				28.3		
TWA	1.1		0.5	0.9	4.5	1.5	23.2	0.2			7.2				1.2	0.6	1.9	0.2				47.8		
PCR	2.1		1	1.5	17.2	14.1	23.2	1.5			50.2				1.5	1.7	2.6	0.4				185		
MLM	1.3		1.1	1.8	6	6.1	15.5	0.9			5.4				1.4	0.9	1.1	0.4				116.9		
HTM	2		0.1	0.9	4.4	7.1	11.4	0.1			11				0.5	0.8	0.7	0				54.7		
VOT	0.4		0		5.9	7.4	24.9	0			2.2				1.9	2.5	2.1	0.1				62.4		
SER	25.4		59.5	14.1	239.4	375.1	309.1	6.3		60.5	178.1	20.5			16.4	12	26.2	3.7				839.1		
EGW	0		0.2		2.5	1	15.2	0							1.7	1.2	0.7	0				23.7		
CNS	0		0.4		0.5	0.5	4.1	0.2			1.4	0			0.4	0.3	1	0				7.3		
TAR	5.6		4.4	2.9	20.4	27.4	58.2	1.2		6.3	38.4				4.1	2.6	7.4	1.1				207.4		
HAR	0.2		0		0.7	0.8	6	0.5				0			0.2	0.3	0.2	0				24		
TRC	1.6		5.3	0.5	8.5	4.5	50.1	2.6		5.5	14.8	1			2.8	2.6	4.9	0.7				110.9		
TRA	0.1		0.8		1.2	0.7	7.1	0.3			3.5				0.1	0.1	1.6	0				13.7		
CMN	1.4		4.4		5.3	3.3	38.2	2.4			10	0.9			2.4	2.5	3.2	0.7				65.8		
FNI	5.7		8	8.3	44.4	26.4	113.9	1.4		32.9	90.9	6.8			4	2.4	9	1.3				241		
MNI	4.1		2.8	7.7	21.6	7.9	39.4	0.3			2.5				2.7	1.8	6.4					67.2		
OFI	0.6		4.6		14.1	15.9	55.6	0.5			75.9	0			0.4	0.1	1.6					68.6		
FHC					12.3	15.9		0.5			75.9					0.1								
IAA	1		0.5		2.7	2.7	18.9	0.6			12.6				0.8	0.4	0.9	0.1				105.2		
TOF	1.6		5.1		16.8	18.6	74.5	1.1			88.5	0			1.2	0.5	2.5	0.1				173.8		
REB	12.1		40.6	2.4	151.9	314	50.3	0.2			30	12.6			3.1	2.5	2.6	0.4				204.9		
RES	0.2		0.7		29.4	2.4	3.3	0.2			20.6	0			1.4	0.9	1.3	0.2				35.3		
OSR	0.1		0.7		10.5	0.5	11.2	0.2		15.8	2.6				0.2	0.2	0.2	0				20		
UNA			1.2	1.7		-0		1.4		2.3	8.9	9.5		91.6		5.7	0.2	0				-0		
TOT	34.3		67.4	24.1	295.3	424.3	506.7	13.5		108	282.9	34.6	164	91.6	27.1	27.9	41.2	5.7				1344		

Table D3: Matrix of outward stocks per sector and country, in 2001, in mld US dollars, after all estimations

Sector\Countries	AUT	BLU	DNK	FIN	FRA	DEU	GBR	GRC	IRL	ITA	NLD	PRT	ESP	SWE	CZE	HUN	POL	SVK	SVN	REX	ROE	USA	AAT	WLD
PMS	0.7	0.7	1	0	5.4	3.5	91	0	0	12.9	6	0.2	0	0	0	0	0	0	0	0	82	69.2	18.2	290.9
AGO	0	0.1	0	0	0	0.5	0.2	0	0	0.3	0.6	0	0	0	0	0	0	0	0	0	0.9	0.9	0.2	3.7
MNQ	0.7	0.5	0.9	0	5.4	3	90.8	0	0	12.6	5.4	0.2	0	0	0	0	0	0	0	0	81.1	68.3	18	287.3
EPG	0.5	0	1.1	0	5.5	2.6	111.2	0	0		2.5	0	0	0		0	0	0	0	0	26.6	59.3		
MAN	5.7	29.6	8.6	31	61.5	74.8	178.9	0.5	18.7	31.6	268.2	1.2	45.3	22.3	0.1	0.1	0.1	0.2	0	0.1	268.1	298.2	89.9	1434.6
FOD	0.4	2.6	4.8	0.8	6	2.3	35.5	0.1	10.6	2.8	56.7	0.1	25.2	0.4	0	0	0	0	0	0.1	21.2	29.5	13.3	212.6
TWA	1	1.8	0.5	11.5	3.4	3.6	44.6	0	1.7	2.2	28.2	0.7	4.7	5.2	0	0	0	0	0	0	36.4	49.4	13	208.2
PCR	1.8	17.8	2.3	3.6	17.9	32.2	66.5	0.1	1	9.3	111	0.2	6	2.3	0	0	0	0.1	0	0	85.7	91.8	30.1	479.8
MLM	1.8	3.4	0.9	5.1	9.7	11.7	18.1	0.2	2.1	13.4	14	0	5	2.5	0	0	0	0	0	0	43.3	42.2	11.6	185.1
HTM	0.4	2.3	0	8.3	2.4	3.7	4	0	1.8	0.3	55.8	0	0.5	0.2	0	0	0	0	0	0	46.7	50.5	11.8	188.5
VOT	0.2	1.7	0.1	1.7	22.2	21.2	10.3	0	1.5	3.7	2.5	0	3.9	11.7	0	0	0	0	0	0	34.9	34.8	10.1	160.6
SER	22.6	400.8	47.4	14.9	399.5	397.5	398.7	5.8	47.7	68.8	392.1	18.8	145.3	76.8	1.3	1.1	1.2	0.2	1	0.7	641.5	904.9	266.6	4255.1
EGW	0.2	3.8	0.1	0	26.4	6.6	19	0	1.2	0	0	0.2	1.9	0.5	0	0	0	0	0	0	8.5	22	6	96.4
CNS	0.6	0.7	0.1	0	1.6	0.9	2.6	0.1	0.3	0	2.8	0.1	2.6	0.1	0	0	0	0	0	0	6.7	2.1	1.4	22.6
TAR	3.8	11.3	3.3	0.2	26.8	44.2	33.9	0.2	9.5	4.2	77.8	3.3	28.2	3.7	0.5	0.2	0.1	0	0.6	0.1	54.1	120.9	28.5	455.4
HAR	0.1	0.5	0	0	1.8	0.8	11.8	0	0.2	0	0	0	0.2	0.1	0	0	0	0	0	0	5.5	15	2.4	38.6
TRC	0.2	7.2	4.9	5.4	10.5	46.2	179.2	1.3	2.3	4.3	23.9	0.6	7.9	9	0	0	0.3	0	0	0.1	45.7	24.2	24.9	397.9
TRA	0.1	1.4	1.5	0	5.5	5	12.1	0.2	1.1	0	11	0.2	1.9	8	0	0	0.3	0	0	0.1	22.9	11.7	5.6	88.7
CMN	0.1	5.8	3.3	5.4	4.9	41.2	167.1	1	1.2	4.3	12.9	0.4	5.9	1	0	0	0	0	0	0	22.8	12.4	19.4	309.3
FNI	7	30.7	4	5.6	108.2	83.7	102.9	4.2	9.2	41.7	206.7	6.6	52	27.8	0.5	0.5	0.5	0.1	0	0.3	335.2	254.6	85.7	1367.8
MNI	3.6		1.3	6.1	34.9	47.1	37.1	0.9			19.2	3.8			0.1	0.4	0.1	0	0	0	47.3	55.6		
OFI	2.2	17.8	2.7	0	40.7	33.3	61.2	3	0		41.8	1.9	32	0	0	0.2	0.1	0	0	0	107.8	182.2		
FHC		6.2		0	35.1	28.6		3	18.5		41.8	1.9	11.5	2.8		0.2	0	0	0	0				
IAA	0.5	2.7	0.9	0	28.9	13	29.8	0	0.3		41.7	1.9	0.7	0.2	0	0	0	0.1	0	0	77.4	58		
TOF	2.8	8.8	3.6	0	69.7	46.3	91	3	5.1		83.5	3.8	12.2	3	0	0.2	0.1	0.1	0	0	198.9	295.9		
REB	10.6	340	33	1.1	212.9	212	42.2	0	18.9	0	56.7	7.7	48.4	34.7	0.2	0.3	0.2	0.1	0	0.2	145.6	454.9	108.3	1727.8
RES	1.8	9.1	0.4	0	6.9	6.9	5.1	0	1.2		19.1	0.1	5.5	12.8	0	0	0	0	0	0.1	6.9	5		
OSR	0.1	6.6	0.5	0	11.3	3.1	7.1	0	6.1	17	2.8	0	4.1	0.9	0.1	0	0.1	0	0	0	33.7	11.4	7	111.9
UNA	0	0	1.6	2.6	0.1	0	0	0	0	1.6	21.3	0.3	0	0.1	0	0.1	0	0	0.4	0	6.5	0	2.3	36.8
TOT	29	431	57	45.8	466.4	475.8	668.5	6.3	66.4	113.4	666.2	20.2	190.6	99.1	1.4	1.2	1.3	0.4	1	0.8	991.6	1272.3	374.8	5980.7

Table D4: Matrix of inward stocks per sector and country, in 2001, in mld US dollars, after all estimations

Sector\Countries	AUT	BLU	DNK	FIN	FRA	DEU	GBR	GRC	IRL	ITA	NLD	PRT	ESP	SWE	CZE	HUN	POL	SVK	SVN	REX	ROE	USA	AAT	WLD
PMS	0.3	0.2	1.6	0	0.5	0.7	65.3	0.5	0	3.1	3.7	0.1	9	0	0.6	0.3	0.3	0.1	0	0.2	71.1	28	49.7	235.2
AGO	0	0	0	0	0.2	0.1	0.2	0	0	0.4	0.2	0	0.2	0	0.1	0.3	0.2	0	0	0.1	1	2.5	1.4	6.8
MNQ	0.3	0.2	1.6	0	0.3	0.6	65.1	0.5	0	2.7	3.6	0.1	8.7	0	0.5	0.1	0.2	0	0	0.1	70.1	25.6	48.3	228.4
EPG	0.2	0	1.5	0	0.1	0.2	61.3	0	0		3	0	8.4	0	0	0	0	0	0	0.1	9.4	3.8		
MAN	7.8	36.2	4.7	8.3	45.2	38.6	114.5	5.6	50.9	41.5	92.5	4.5	55.1	23.8	8.5	8.7	12.4	1.7	2	2	198.5	488.9	335.5	1587.3
FOD	0.6	2.8	1.9	0.5	5.6	1.5	10.8	2.5	29	5.4	14.1	1.1	2.2	0.8	1.3	1.6	3.3	0.4	0	0.8	30.9	27.9	38.8	183.7
TWA	1.1	1.9	0.5	0.9	4.7	1.5	24.5	0.2	1.2	1.5	7.4	0.1	3.7	0.3	1.4	0.7	2	0.2	0	0.7	11.5	47.2	30.3	143.6
PCR	2.2	14.9	1	1.5	18	14.5	24.5	1.7	7.6	14.9	51.8	0.9	19.6	7.1	1.6	1.8	2.8	0.4	0.4	0.2	51.3	182.7	112.9	534.4
MLM	1.4	6.7	1.1	1.8	6.3	6.3	16.4	1	3.5	10	5.6	0.6	4.5	0.8	1.5	1	1.2	0.5	0.5	0.2	34.1	115.4	59.1	279.4
HTM	2.1	0.4	0.1	0.9	4.6	7.3	12	0.1	0.4	1.8	11.3	0	0.8	0.1	0.5	0.9	0.7	0.1	0.5	0.1	29.4	54	34.4	162.5
VOT	0.5	9.6	0	2.7	6.1	7.6	26.3	0	9.1	7.9	2.3	1.7	24.3	14.7	2.1	2.7	2.3	0.1	0.6	0.1	41.3	61.6	60	283.7
SER	26.2	436.4	61.1	15.8	249.5	385	326.7	8.6	93.9	62	193	30	100	65.1	18.1	18.9	28.5	4	0.6	8.5	318.9	828.6	878.9	4158.2
EGW	0	84.2	0.2	0	2.6	1.1	16.1	0	4	0	0	0	3.5	2.1	1.8	1.3	0.8	0	0	0.5	9	23.4	40.3	190.8
CNS	0	1	0.4	0	0.6	0.5	4.4	0.2	0.3	0	1.5	0	0.3	0.1	0.4	0.3	1.1	0	0	0.1	9.1	7.2	7.4	34.8
TAR	5.8	23	4.5	2.9	21.3	28.1	61.5	1.3	10.5	6.2	39.6	0	31.7	6.6	4.5	2.7	8	1.2	0.4	2	59.5	204.8	141	667
HAR	0.3	5	0	0	0.7	0.8	6.3	0.6	0	0	0	0	0.6	0.7	0.2	0.3	0.2	0	0	0.2	6.5	23.7	12.4	58.5
TRC	1.6	2.8	5.3	0.5	8.8	4.6	53	2.9	0	5.4	15.3	1	3.8	3.7	3.1	2.8	5.3	0.8	0	2.2	23.7	109.5	68.6	324.7
TRA	0.2	1.4	0.9	0	3.3	1.2	12.6	0.3	0	0	5	0.2	1.8	3	0.5	0.2	1.9	0	0	0.6	11.1	44.5	23.8	112.4
CMN	1.4	1.3	4.4	0.5	5.6	3.4	40.4	2.6	0	5.4	10.3	0.9	2	0.6	2.6	2.7	3.4	0.7	0	1.5	12.6	65	44.9	212.3
FNI	5.9	94.2	8	8.3	46.3	27.1	120.4	1.6	48.8	32.5	93.9	6.8	27.1	2.1	4.4	2.5	9.8	1.4	0	2.3	139.8	238	247	1168.3
MNI	4.1		2.8	7.7	21.6	7.9	39.4	0.3			2.5	0			2.7	1.8	6.4	0	0		23.3	67.2		
OFI	0.6	42.2	4.6	0	14.1	15.9	55.6	0.5	12.9		75.9	0	5.4	0.4	0.4	0.1	1.6	0	0	1.7	49.5	68.6		
FHC		36.5		0	12.3	15.9		0.5	6.1		75.9	0	8.6	1		0.1	0	0	0	0.3				
IAA	1	16.2	0.5	0	2.7	2.7	18.9	0.6	5.5		12.6	0	3.5	0.4	0.8	0.4	0.9	0.1	0	0.1	14.3	105.2		
TOF	1.6	52.6	5.1	0	16.8	18.6	74.5	1.1	24.5		88.5	0	6	1.4	1.2	0.5	2.5	0.1	0	0.4	65	173.8		
REB	12.5	222.2	40.8	2.4	158.3	322.3	53.2	0.2	29.1	0	30.9	12.6	31.4	46.9	3.4	2.6	2.9	0.4	0.2	1.2	38.2	202.3	325.4	1539.3
RES	0.2	8.3	0.7	0	29.4	2.4	3.3	0.2	0.8		20.6	0	10.9	0.5	1.4	0.9	1.3	0.2	0	0.8	4.3	35.3		
OSR	0.1	4.1	0.7	0	11	0.5	11.8	0.2	1.2	15.5	2.7	0	1.4	2.9	0.2	0.2	0.2	0	0	0.1	17	19.8	24	113.7
UNA	0	0	1.2	1.7	0	0	0	1.6	0	2.3	9.2	9.6	0.1	0	0	6.1	0.2	0	0	0	16.2	0	12.9	61.1
TOT	34.3	472.7	67.4	24.1	295.3	424.3	506.5	14.6	144.7	106.6	289.2	34.6	164	88.9	27.1	27.9	41.3	5.7	2.6	10.7	588.4	1345.5	1264.2	5980.7

Table D5: Matrix of outward stocks per sector and country, in 2001, in mld US dollars, after all estimations, aggregation to 10 sectors

Sector\Countries	AUT	BLU	DNK	FIN	FRA	DEU	GBR	GRC	IRL	ITA	NLD	PRT	ESP	SWE	CZE	HUN	POL	SVK	SVN	REX	ROE	USA	AAT	WLD
AGO	0	0.1	0	0	0	0.5	0.2	0	0	0.3	0.6	0	0	0	0	0	0	0	0	0	0.9	0.9	0.2	3.7
ENG	0.9	4.3	1	0	31.8	9.6	109.8	0	1.2	12.6	5.4	0.4	2	0.5	0	0	0	0.1	0	0	89.6	90.3	24	383.6
LTM	1.4	4.4	5.3	12.3	9.3	6	80.1	0.1	12.3	5	84.9	0.9	29.9	5.7	0.1	0	0	0	0	0.1	57.6	78.9	26.4	420.7
MHM	2	19.5	2.4	5.3	40.1	53.4	76.7	0.1	2.5	13	113.5	0.2	10	14	0	0.1	0	0.1	0	0	120.5	126.6	40.1	640.3
MLM	1.8	3.4	0.9	5.1	9.7	11.7	18.1	0.2	2.1	13.4	14	0	5	2.5	0	0	0	0	0	0	43.3	42.2	11.6	185.1
HTM	0.4	2.3	0	8.3	2.4	3.7	4	0	1.8	0.3	55.8	0	0.5	0.2	0	0	0	0	0	0	46.7	50.5	11.8	188.5
OCE	15.2	358.4	41.3	9.3	248.1	299.1	257.6	1.3	30.1	10.1	171.6	11.9	85.3	39.7	0.6	0.6	0.3	0.1	1	0.2	241.2	605.3	162.3	2590.5
TRA	0.1	1.4	1.5	0	5.5	5	12.1	0.2	1.1	0	11	0.2	1.9	8	0	0	0.3	0	0	0.1	22.9	11.7	5.6	88.7
FNI	7	30.7	4	5.6	108.2	83.7	102.9	4.2	9.2	41.7	206.7	6.6	52	27.8	0.5	0.5	0.5	0.1	0	0.3	335.2	254.6	85.7	1367.8
OSR	0.1	6.6	0.5	0	11.3	3.1	7.1	0	6.1	17	2.8	0	4.1	0.9	0.1	0	0.1	0	0	0	33.7	11.4	7	111.9
TOT	29	431	57	45.8	466.4	475.8	668.5	6.3	66.4	113.4	666.2	20.2	190.6	99.1	1.4	1.2	1.3	0.4	1	0.8	991.6	1272.3	374.8	5980.7

Table D6: Matrix of inward stocks per sector and country, in 2001, in mld US dollars, after all estimations, aggregation to 10 sectors

Sector\Countries	AUT	BLU	DNK	FIN	FRA	DEU	GBR	GRC	IRL	ITA	NLD	PRT	ESP	SWE	CZE	HUN	POL	SVK	SVN	REX	ROE	USA	AAT	WLD
AGO	0	0	0	0	0.2	0.1	0.2	0	0	0.4	0.2	0	0.2	0	0.1	0.3	0.2	0	0	0.1	1	2.5	1.4	6.8
ENG	0.3	84.3	1.8	0	2.9	1.6	81.2	0.5	4	2.7	3.6	0.1	12.2	2.1	2.3	1.3	1	0.1	0	0.5	79.1	48.9	88.6	419.2
LTM	1.7	4.7	2.5	1.4	10.3	3	35.3	2.8	30.2	6.9	21.5	1.2	5.9	1	2.7	2.3	5.3	0.6	0	1.4	42.4	75.2	69.2	327.3
MHM	2.6	24.5	1.1	4.2	24.1	22.1	50.8	1.7	16.7	22.8	54	2.6	43.9	21.9	3.8	4.5	5.1	0.6	1	0.3	92.5	244.3	172.9	818.1
MLM	1.4	6.7	1.1	1.8	6.3	6.3	16.4	1	3.5	10	5.6	0.6	4.5	0.8	1.5	1	1.2	0.5	0.5	0.2	34.1	115.4	59.1	279.4
HTM	2.1	0.4	0.1	0.9	4.6	7.3	12	0.1	0.4	1.8	11.3	0	0.8	0.1	0.5	0.9	0.7	0.1	0.5	0.1	29.4	54	34.4	162.5
OCE	19.9	252.4	51.3	7.5	186.4	355.1	165.8	6.5	39.9	13.9	91.5	23.1	66.1	55	11.2	14.7	15.8	2.5	0.6	5	142	503	543.9	2573
TRA	0.2	1.4	0.9	0	3.3	1.2	12.6	0.3	0	0	5	0.2	1.8	3	0.5	0.2	1.9	0	0	0.6	11.1	44.5	23.8	112.4
FNI	5.9	94.2	8	8.3	46.3	27.1	120.4	1.6	48.8	32.5	93.9	6.8	27.1	2.1	4.4	2.5	9.8	1.4	0	2.3	139.8	238	247	1168.3
OSR	0.1	4.1	0.7	0	11	0.5	11.8	0.2	1.2	15.5	2.7	0	1.4	2.9	0.2	0.2	0.2	0	0	0.1	17	19.8	24	113.7
TOT	34.3	472.7	67.4	24.1	295.3	424.3	506.5	14.6	144.7	106.6	289.2	34.6	164	88.9	27.1	27.9	41.3	5.7	2.6	10.7	588.4	1345.5	1264.2	5980.7

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