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Asymmetries along the chain of round-tripping investment[1]

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[1] This presentation was prepared for the meeting. The views expressed are those of the author and do not necessarily reflect the views of the BIS, IFC, BoP, ECB or the central banks and other institutions represented at the meeting.

Asymmetries along the chain of round-tripping investment

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Abstract

Recent work on the ultimate investing country and ultimate host country presentation in the direct investment statistics, allowed to analyse the phenomenon of the round-tripping from the both perspectives of the investor and direct investment enterprise. By comparing data on round-tripping from those presentations some asymmetries were discovered which are a result of current recommendations laid down in the statistical manuals and the common practices stemming from local accounting practices and international financial reporting standards. The article presents the results of the analysis with most visible impact on the positions and potentially also on reinvested earnings. Statistical recommendations and the current compilation practice both in host/investor and intermediate countries are discussed. Finally, article proposes a way forward that would reduce round-tripping asymmetry and discusses implementation challenges.

Keywords: Asymmetries, Foreign Direct Investment, Round-tripping. Ultimate investing country

JEL classification: C82 (Methodology for Collecting, Estimating, and Organizing Macroeconomic Data; Data Access); F21 (International Investment; Long-Term Capital Movements)

Contents

Working on asymmetries in the measurements allowed for the number of years to make statistics better. Up to now there where number of initiatives on comparison of mirror data on foreign direct investments like Angula and Hierro (2017) analysis based on Coordinated Direct Investment Survey (CDIS) or as a part of quality work in European communities (see e.g. Eurostat (2019)). The developments stemming from the fourth edition of OECD Benchmark Definition of FDI (BMD4) – the ultimate investing country presentation and ultimate host country presentation allowed to analyse different measures of the round-tripping. On the following pages author presents the theoretical foundations of the mismatch in the valuation of the round-tripping. It is then illustrated on the data for Poland. Finally, a way forward is proposed.

1. Introduction

Asymmetries in the data on portfolio and direct investment prompted recently research, like the one of Zucman (2013) analysing globally negative net investment position, that is situation where liabilities are greater than assets. One of the reasons for this negative net investment position was underreporting of the investment from wealthy countries into offshore financial centres. The other reasons cited also reporting errors. One top of that it should be also noted that international statistical manuals also allow for differences in measurement.

As regards the investment into offshore financial centres, as Daamgard et al. (2019) noted the value of investment going there is growing on higher pace than for the genuine investment or other types of investment as described by Lane and Millesi-Ferreti (2018). At the time when the use special purpose entities localised in certain countries is growing, the impact of the valuation and measurements is also expanding.

Generally, in the system of National Accounts the equity, the most relevant part of the direct investment, should be valued at the market prices. While many of the biggest companies are listed, still most direct investment entities have unlisted equity. Some guidance is provided for how to value equity, when the market value is not available but generally compilers have to rely on the accounting books of the companies.

It is usually an only option for valuation for countries hosting small companies established by direct investors for purposes of holding investment abroad, i.e. special purpose entities. First thing one should note, is the fact that still many of those countries does not compile data on direct investment. The Coordinated Direct Investment Survey (IMF, 2019) lists all their reporters and many countries hosting SPEs are not there. The others are challenged with the problem of showing their investment position as neutral from the point of view of those entities passing-through capital. If they have no real economic presence at the country, then their net investment position should be equal to zero. One of the solutions for Netherlands was described by Jellema (2019) where the assumptions on the e.g. zero net international investment position of those entities are taken a priori. This approach in a necessity for countries defined as conduits (channels) in the Garcia-Bernardo (2017) typography of countries used as offshore financial centres.

Another issue to be considered for the countries hosting SPEs is their ability to track reinvested earnings along the chain of ownership. The international standards require to record in reinvested earnings undistributed profits from companies below in the chain of ownership, which might be difficult in the long chain of investments. Also, it would cause discrepancies if the value of equity remains at the book value.

On the following pages we will go into detail how those errors in measuring the round-tripping may arise.

2. International standards and the measurement of round-tripping

Both Balance of Payments and International Investment Position Manual – 6th edition (BPM6, IMF (2009), see par. 3.84 and 7.15 to 7.19) and OECD Benchmark Definition of Foreign Direct Investment – 4th edition (BMD4, OECD (2008), see: par. 298-303 and in more detail in annex 5, i.e. par. 516-535) are clear that the value of equity should be compiled at the market value. Due to fact that most of the equity is unlisted some guidance is provided on how to proxy for the market valuation. Among other methods the own funds at the book value (OFBV), i.e. the equity value from books of the direct investment entity is chosen as a reasonable approximation. This method is also put forward for unlisted equity in the CDIS compilation guide (IMF, 2015, see par. 3.12 and 3.13-3.16). Having the valuation at the OFBV is also good at reducing asymmetries due to fact that both counterparts are using in compilation the same books of the company and valuation. On the other hand, not all investment flows, especially not the reinvested earnings along the chain are reflected in the proper manner in the books of the investing company. This may lead to potential discrepancies.

The BMD4 introduced the ultimate investing country presentation as a supplemental data series to be provided by the compilers. This presentation shows the value of foreign direct investment, valued in the same way as in the traditional presentation, but attributed to the countries controlling the immediate direct investors. Also, in the BMD4 in the research agenda was laid down the discussion on the ultimate host country presentation, i.e. attribution of the investment abroad to the countries of ultimate host destinations. In the supplemental data series, the question of looking through SPEs abroad was discussed.

The ultimate investing country presentation gained some traction in the recent years with several countries presenting this data. Every one of them presented also the phenomenon of the round-tripping, i.e. investment originating from the same country that is reporting the figures. The value of round-tripping as a percentage of inward investment ranged from almost zero to fifteen, with the average of 5.6% for the 16 reporting countries, as presented in the OECD (2018).

For the ultimate host country presentation some problems were discovered, with collection of the necessary information from the companies abroad. Those difficulties were alleviated by concentrating on the investors controlled by the residents, which have decision centres locally. Therefore, one could also analyse the investment abroad by the resident-controlled companies according to ultimate host destinations. One could also observe that a part of investment goes to the same reporting country, that is that the round-tripping is also visible in those figures. Having those two measures of round-tripping from ultimate investing country and one from the ultimate host country one could make the comparison.

While the recent changes into international financing reporting standards (IFRS) introduced in IFRS 9 are encouraging users to have more valuations at the market values still for the most traditional form of equity investment the valuation in assets is according to the historical cost of acquisition. In case the equity investment is the only item on the asset side of the balance sheet the equity calculated as a residual value for investors is then tied to the valuation of the equity investment in assets. In this situation, even if historical acquisition cost is ruled out as a potential valuation (see par. 303 of the BMD4), due to fact that it is a proper valuation under IFRS and many of the local GAAPs, it also becomes the de facto valuation as it is reflected in the value of equity and then reported as OFBV.

Let us allow to analyse two base scenarios. In the first scenario after establishing an SPE, in the following period, there are only reinvested earnings in the production company. In the second scenario the sharing of profits via dividends is introduced. Author will show how the difference in value of round-tripping is introduced in each of those scenarios. There is an assumption that the reinvested earnings are perfectly recorded along the chain of investment, which is not necessarily true in practice. It makes the analysis more trackable. Absence of this assumption would introduce another discrepancy in the flows, while currently we would like to concentrate only on the positions.

Period I

	Stock at the begining	Transactions (other than RE)	Reinvested earnings	Other changes	Stock at the end
Outward	0	100	0	0	100
SPE - inward	0	100	0	0	100
SPE - outward	0	100	0	0	100
Inward	0	100	0	0	100

Period II

	Stock at the begining	Transactions (other than RE)	Reinvested earnings	Other changes	Stock at the end
Outward	100	0	20	-20	100
SPE - inward	100	0	20	-20	100
SPE - outward	100	0	20	-20	100
Inward	100	0	20	0	120

In the first period the owner (resident) of the production facility valued at 100 establishes an SPE. At the end of the first period both the valuation of inward and outward investment is equal at 100. In the following period the production facility has earnings of 20 which are retained in the company. As the result for inward investment there are recorded reinvested earnings of 20 and stock at the end of 120. As for the SPE the value of their assets is unchanged (book value at historical acquisition cost) and as a result also the value of equity is unchanged at 100, which is also the value of investment abroad in the round-tripping.

Period I

	Stock at the begining	Transactions (other than RE)	RE	Other changes	Stock at the end	Dividends
Outward	0	100	0	0	100	0
SPE - inward	0	100	0	0	100	0
SPE - outward	0	100	0	0	100	0
Inward	0	100	0	0	100	0

Period II

	Stock at the begining	Transactions (other than RE)	RE	Other changes	Stock at the end	Dividends
Outward	100	0	20	-15	105	0
SPE - inward	100	0	20	-15	105	0
SPE - outward	100	0	15	-15	100	5
Inward	100	0	15	0	115	-5

As in the previous scenario, in the first period, the owner (resident) of the production facility valued at 100 establishes an SPE. At the end of the first period both the valuation of inward and outward investment is equal at 100. In the following period, the production facility has earnings of 20, of which 15 is retained in the company, the remainder distributed as dividend. We assume that dividend is not distributed to the ultimate owner, which is usually the case, due to tax reasons. As the result for inward investment there are recorded reinvested earnings of 15, dividends of 5 and stock at the end of 115. As for the SPE the value of their equity investment in assets is unchanged (historical cost) but they also have the money from the dividend (5). The value of equity is equal to the sum of assets at 105, which is also the value of investment abroad. The net income of the SPE is equal to zero, as the credits are reinvested earnings of 15 and 5 in dividends, which due to retention are all reinvested earnings in the debits equal to 20.

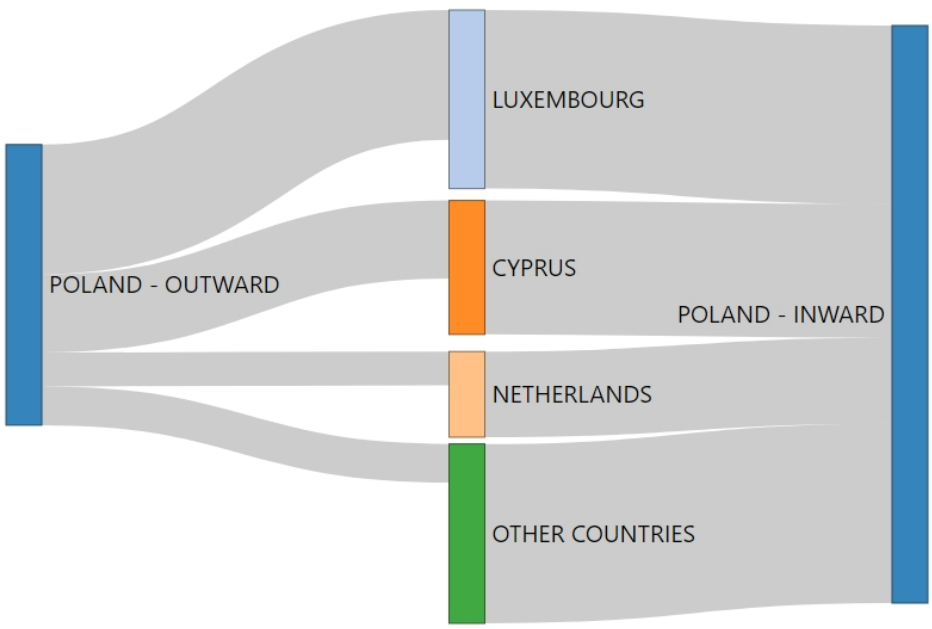
In both scenarios the inward measure of round-tripping is bigger than the outward measure.

While the abovementioned scenarios are quite common across the round-tripping schemes, there are also some exceptions. First, losses if sustained by the operating company may drive the inward equity value lower than the historical value of acquisition by SPE. Second, the lower value of the outward investment might be a result of the external financing coming into the SPE. In this case inward investment is mirrored by both outward investment in round-tripping bur also external financing (often in the form of portfolio investment) of the SPE. Third, one must also remember that on the outward side the investors are often the natural persons which not always are fully covered in the compilation systems.

Above scenarios assumed that SPE countries are targeting the zero net international investment position of SPEs and the zero net income. In this case the foreign assets of SPEs are not recorded following the books of the direct investment entities as it would introduce the non-zero position and income, which would make macroeconomic figures for such a country rather difficult to interpret as those SPEs does not have (by definition) a significant economic presence in the country. Also, the high numbers of SPEs in some small countries, and their nature of being a “mail box” or a “brass plate” makes a collection of data from abroad on their direct investment entities and their income very burdensome.

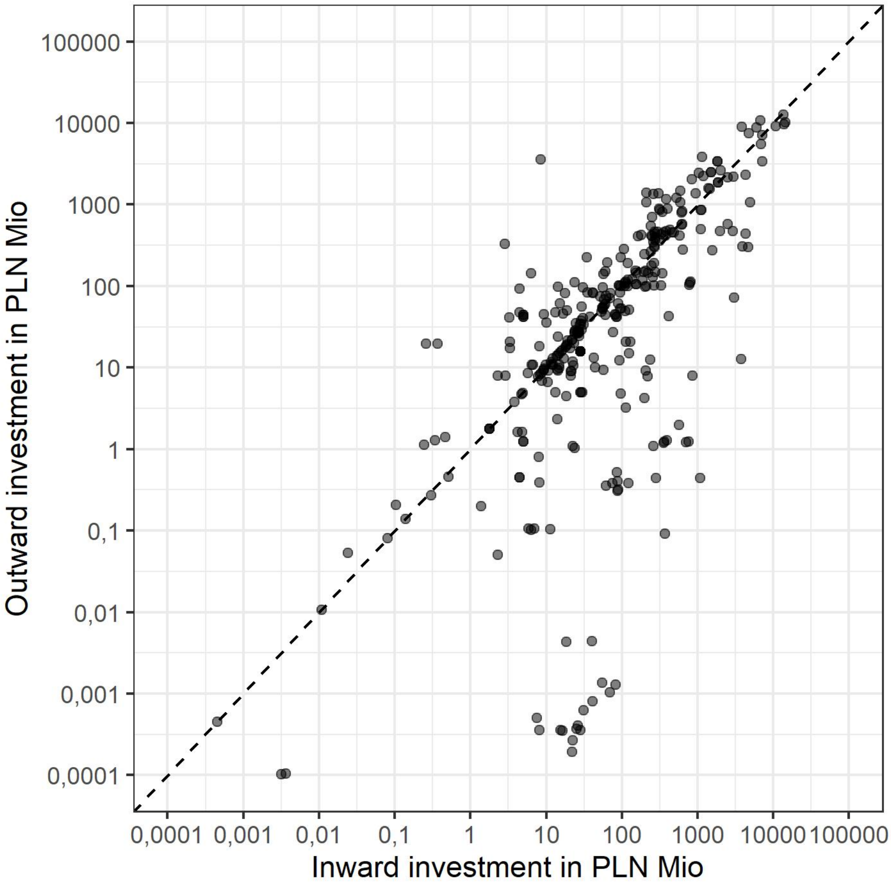
3. Round-tripping in Poland

Prior to the first publication of UIC data information on the round-tripping was only known from some case studies without knowledge of the scope of this investment form. From the first data (see NBP (2014)) on ultimate ownership a picture of relatively minor impact on inward investment with about 4-5% share in the stocks and from year to year in the neighbourhood of 6-8 position in the top investors. Applying the same value to the total outward position already signalled that Poland might be at the top of "outward" destinations. It was then confirmed with the first publication (see NBP (2019)) on UHC for the data at the end of 2017 for resident controlled entities investing abroad. Poland was indeed the number one destination for the investors in terms of value. Even when other resident companies would be included Poland as an ultimate destination would retain the top spot. One observation that was made is that the value of the outward round-tripping was smaller than for inward round-tripping. This observation was one of the motives for the current paper.



For the last few years the changes in the picture of round-tripping for Poland involved only some changes in the residence of natural persons, which reduced slightly the number of companies that are ultimately controlled from Poland. The general picture is almost unchanged.

The major countries for round-tripping are Luxembourg, Cyprus and Netherlands. One should note already mentioned lower values on the outward side. The inward investment that is smaller than the inward for a certain country should be understood as a longer chain of SPEs which results in mismatch between inward and outward immediate counterpart.



One could also analyse the round-tripping from the perspective of individual investments. Each of the dots on the above graph represents single SPE chain used for round-tripping. On the vertical axis one finds the value of outward equity investment in SPE and on the horizontal value of the inward investment from the same SPE, both presented with logarithmic scales. Points that are below the 45-degree line are those for which inward valuation is higher than for outward. One should note the dots at the bottom of the graph which represent outward investments at the level of the minimum capital required the establish a SPE in some countries. Presented are both the cases of single SPEs structures and also chains involving multiple SPEs for largest companies. All the data are pooled from observations for years 2011-2018. At the end of 2018 there were 68 such cases with the value of investment measured at outward at 17,5 Bn, at inward at 31,1 Bn. For comparison in the outward round-tripping (i.e. ultimate host country presentation) 192 entities were involved with the investment of PLN 18,7 Bn and in inward round-tripping (i.e. ultimate investing country presentation) 680 SPEs investing and the valuation of PLN 38,5 Bn.

As a last remark this data comes from the data collected on the basis of regulations for balance of payments data collection. Data comes from the natural persons and residents whose foreign assets and liabilities are above the threshold of PLN 7 Mio for natural persons and PLN 10 Mio for companies. The companies (especially those involved internationally) are much more likely to be covered in the data collection. Also, a special purpose entity established a long time ago might not reflect the current valuation and be below the reporting threshold. As a result, we are aware that some of the reporters on the outward investment might be missing. On the other side the coverage of the wealthiest investors, which are the most significant in terms of value is relatively good.

From the data and studying in more detail most important cases there is a clear need to correct the value of the outward investment.

4. Way forward

One clearly sees that following the standards and common sense does not allow to have correct symmetrical measurement of the round-tripping from the perspective of the investor and host country.

The idea is to have a symmetrical measurement on both the outward and the inward side of the investment but also to maintain the current approach of some countries hosting SPEs that the SPE should have a zero net operational surplus and zero net investment position.

As a way forward we propose to adjust the outward investment to the values from the inward investment, which might not be a good idea when the SPE is both a holding company and the financial conduit for raising capital. Currently those roles are in different companies. The proposed approach would introduce deviation from the OFBV valuation from books of the direct investment enterprise of the immediate counterpart.

The other issue is regarding the bilateral asymmetry, while the current asymmetric treatment of round-tripping might not reflect bilateral asymmetries. First the exchange of data on round-tripping might be established so the countries hosting SPEs might adjust their data accordingly, even maintaining their zero net constraints.

On the other hand, ultimate investor and host presentation need not to be compared with the immediate counterparts but those ultimate investor and host countries. Therefore, comparing those presentations is a different exercise in bilateral asymmetries than one currently analysed for immediate counterparts. This approach also follows the recommendations from OECD Benchmark Definition to exclude resident SPEs from both the standard directional and ultimate presentations.

The data according to accounting standards are and will be in the future, the basis of data collection for external statistics. With some of the founding assumptions different in those systems there will be always a room for asymmetries unless those measures will start to converge.

References

- Angulo, E., Hierro, A. (2017), “Asymmetries in the Coordinated Direct Investment Survey: What Lies Behind?”, IMF Working Paper, WP/17/261
- Eurostat (2019), “Quality report on balance of payments (BOP), international trade in services (ITS) and foreign direct investment statistics (FDI) 2018 DATA”
- Damgaard, J., Elkjaer, T., Johannesen, N., (2019), “The Rise of Phantom Investments”, Finance & Development, 56 (3)

- Garcia-Bernardo, J., Fichtner, J., Takes, F.W. et al. (2017), "Uncovering Offshore Financial Centers: Conduits and Sinks in the Global Corporate Ownership Network". Sci Rep 7, 6246
- IMF (2009), "Balance of Payments and International Investment Position Manual – 6th edition"
- IMF (2019), "Coordinated Direct Investment Survey (CDIS)", https://data.imf.org/CDIS
- IMF (2015), "Coordinated Direct Investment Survey Guide"
- Jellema, T., (2019), Preliminary Feedback on the IMF Task Force on Special Purpose Entities (TF-SPE) Definition, Discussion Paper, BOPCOM—19/21
- Lane, P. R., Milesi-Ferretti, G.M., (2018), "The External Wealth of Nations Revisited: International Financial Integration in the Aftermath of the Global Financial Crisis." IMF Economic Review 66 (1), pp. 189–222
- NBP (2014), "Polskie i zagraniczne inwestycje bezpośrednie w 2012 r."
- NBP (2019), „Zagraniczne inwestycje bezpośrednie w Polsce i polskie inwestycje bezpośrednie za granicą w 2017 roku"
- OECD (2008), "OECD Benchmark Definition of Foreign Direct Investment – 4th edition"
- OECD (2018), "FDI in Figures", April 2018
- Zucman, G. (2013), "The Missing Wealth of Nations: Are Europe and the US net Debtors or net Creditors?", Quarterly Journal of Economics, 128(3), pp. 1321-1364

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Asymmetries along the chain of round-tripping investment

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Contents

Introduction

- Asymmetries in data on portfolio and direct investment
- Rising investment into offshore financial centres
- Accounting guidelines for valuation of equity
- International statistical standards
- Net zero investment position and income in SPE countries?

International standards and the measurement of round-tripping (1)

- Valuation of unlisted equity
  - BPM6 – par. 3.84, 7.15-7.19 – OFBV as proxy for market value
  - BMD4 – par. 298-303, 516-535 – OFBV as proxy for market value
  - CDIS compilation guide – par. 3.12-3.16 – OFBV to be used
  - OFBV good for analysis of asymmetries.
- IFRS and local accounting practices on valuing equity participations
  - A fair value of investment is recommended
  - Usually original cost is used as there is no active markets

International standards and the measurement of round-tripping (2)

- Ultimate investing country and ultimate host country presentations may have different valuations if accounting and statistical standards are followed
  - UIC – valuation at OFBV of the operating company
  - UHC – valuation at OFBV reflecting historical cost in assets of the holding company

Example

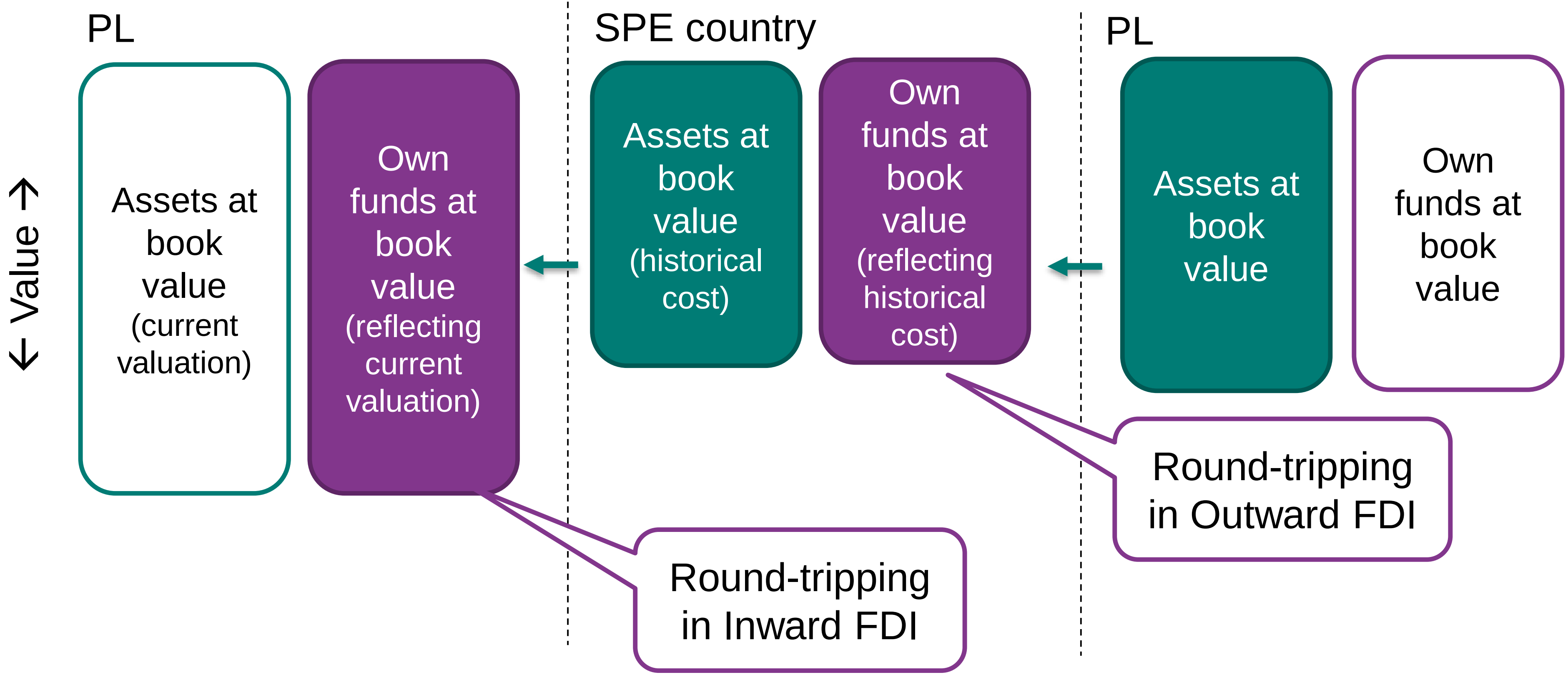
Period I

	Stock at the begining	Transactions (other than RE)	RE	Other changes	Stock at the end	Dividends
Outward	0	100	0	0	100	0
SPE - inward	0	100	0	0	100	0
SPE - outward	0	100	0	0	100	0
Inward	0	100	0	0	100	0

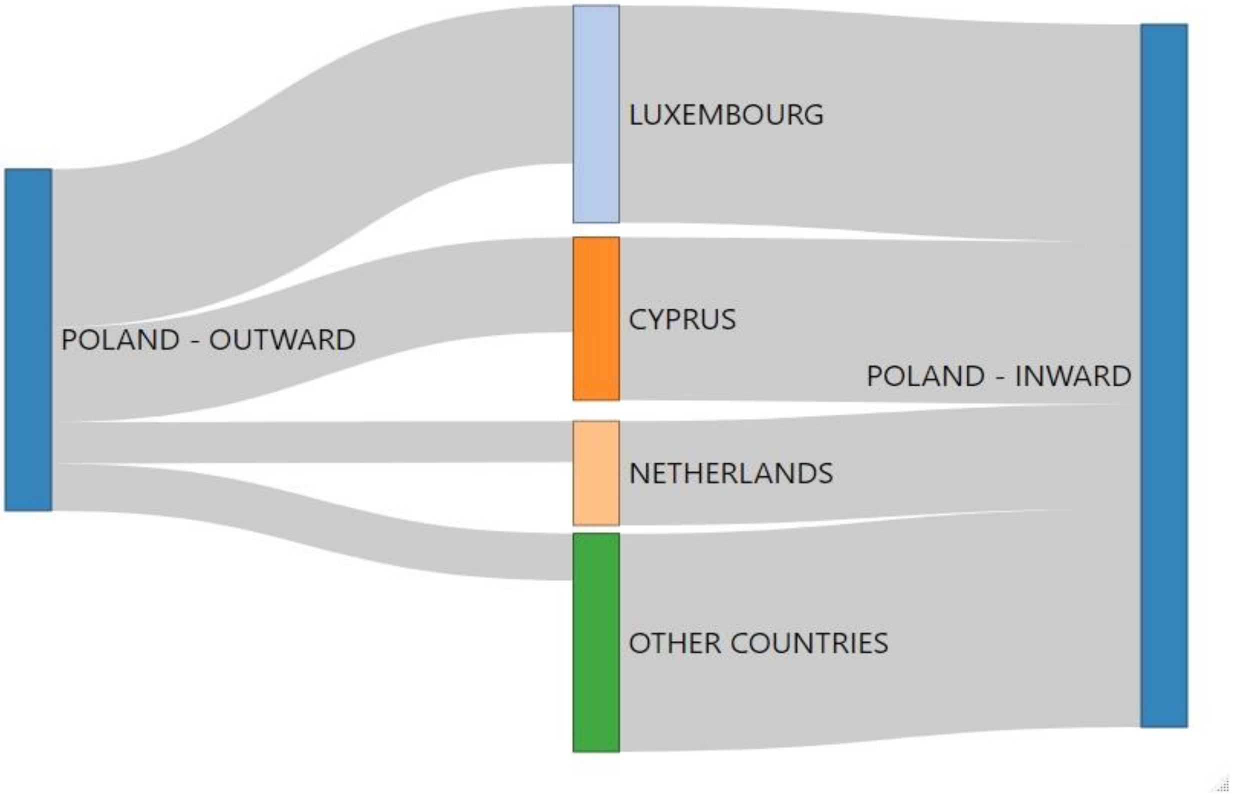
Period II

	Stock at the begining	Transactions (other than RE)	RE	Other changes	Stock at the end	Dividends
Outward	100	0	20	-15	105	0
SPE - inward	100	0	20	-15	105	0
SPE - outward	100	0	15	-15	100	5
Inward	100	0	15	0	115	-5

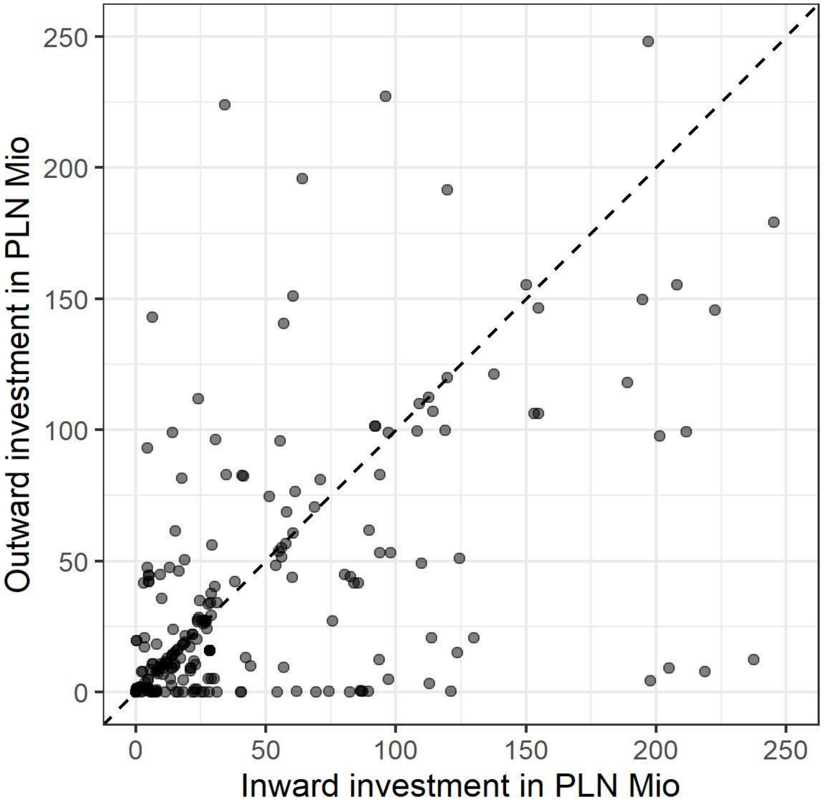
Example - illustration



Major routes for round-tripping in Polish FDI



Inward and outward investment via SPEs abroad



Way forward

- Assumptions
  - a symmetrical measurement for both the outward and the inward side of the investment
  - SPEs should have a zero net operational surplus and zero net investment position
- Adjust the outward investment via SPEs to the values from the inward investment
  - deviation from the OFBV valuation from books of the direct investment enterprise of the immediate counterpart.
- Bilateral asymmetries
  - Exchange of data on round-tripping with pass-through countries
  - Ultimate investor and host presentations need not to be compared with the immediate counterparts
  - OECD Benchmark Definition recommendation to exclude resident SPEs from both the standard directional and ultimate presentations
- Unless statistical standards and accounting standards start to converge there will be a room for asymmetries

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