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Questioni di Economia e Finanza

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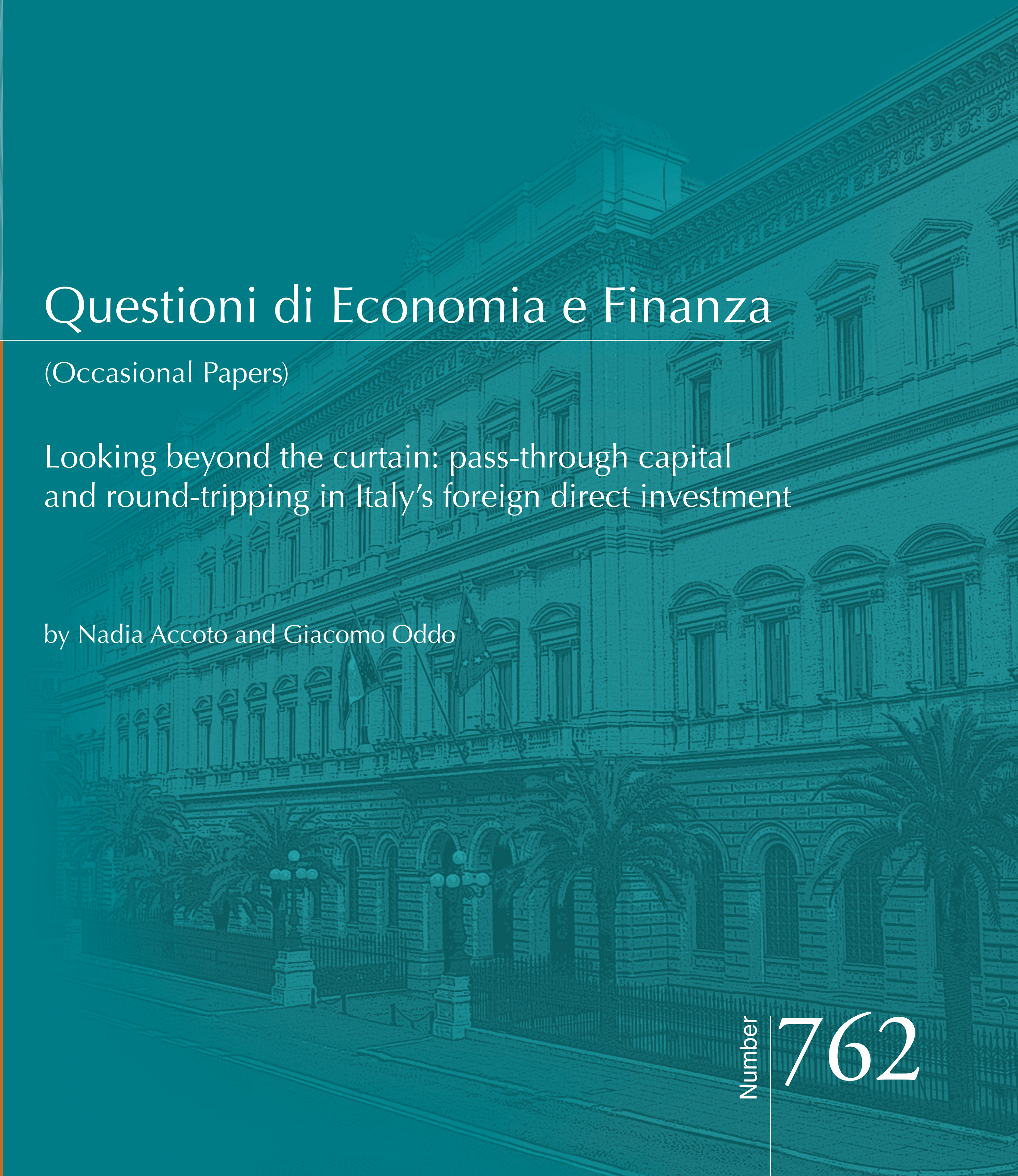
by Nadia Accoto and Giacomo Oddo



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LOOKING BEYOND THE CURTAIN: PASS-THROUGH CAPITAL AND ROUND-TRIPPING IN ITALY'S FOREIGN DIRECT INVESTMENT

by Nadia Accoto*, Giacomo Oddo*

Abstract

The growing complexity of the financing and ownership structures of multinational enterprises (MNEs) leads to control chains that extend across a number of countries and obscure the ultimate sources and destinations of foreign direct investment (FDI). This results in what is known in the literature as 'pass-through capital' (i.e. capital entering and exiting from a given country) and 'round-tripping' (i.e. capital leaving the investor's jurisdiction at the top of the investment chain and then returning to the same country). This study quantifies and analyses pass-through capital and round-tripping for Italy along their geographical and sectoral dimensions, applying a simple methodology based on information on the residency of the ultimate investor as reported in the surveys of firms conducted for the purpose of compiling the balance of payments in the years 2013-2020.

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1. Introduction[1]

Foreign direct investment (FDI) statistics are key indicators of countries' participation in the global economy. Their informative content, however, has gradually been eroded by the rising complexity of multinational enterprises (MNEs), by the increasing pervasiveness of global value chains, and by the prominent role of financial hubs (Lane and Milesi-Ferretti, 2017). One growing concern with FDI statistics in recent years arises from the fact that they are compiled by looking only at the two immediate counterparts that engage in the financial relation, whereas investment of MNEs is often channelled through several countries along a network of interrelated affiliates.[2] Consequently, FDI statistics may fail to provide an accurate representation of which countries and which sectors of economic activity are the ultimate beneficiaries of investment flows and stocks (Lipsey, 2007; Borga and Caliandro, 2018; Casella 2019).

Blanchard and Acalin (2016) indeed conclude that a large part of FDI flows consist of funds going into and out of countries on their way to their final destinations (so-called "pass-through" capital), and their path is driven by many factors, including changes in tax regimes, and even short-run movements in interest rates.[3] With a similar view, Damgaard et al. (2019) estimate that about 40 per cent of global FDI are in "corporate shells" with no real activities. Pass-through capital tends to be concentrated in financial hubs, i.e. countries that have both large outward and inward positions, reflecting massive outward direct investment that is controlled by resident foreign entities (Pastoris et al. 2022). A related phenomenon is the so-called "round-tripping" investment, which occurs when investment funds are channelled through foreign economies back to the domestic economy.[4]

As pass-through capital and round-tripping entail flows and positions in and out of a given country, they do not usually have an impact on its net flows and positions. However, gross flows and positions are often relevant for policy purposes (for instance in the case of measures of FDI attractiveness based on gross inward FDI) and might be significantly distorted by pass-through and round-tripping.

[1] While retaining full responsibility for all remaining errors and omissions, the authors wish to thank Stefano Federico for valuable comments and suggestions that helped improving this work. The authors wish to thank also Silvia Fabiani, Alberto Felettigh, and Claire Giordano for useful comments on previous versions of the paper.

[2] These concerns led international organizations and national compilers to consider the development of experimental statistics, such as inward FDI by Ultimate Investing Country (UIC). The fourth edition of the OECD's Benchmark Definition of Foreign Direct Investment (BD4) recommended that countries compile inward investment positions according to the UIC, having thereby an additional measure to complement the information provided by official International Investment Position data. As of today, only a subset of countries (Italy included) provide such additional information as experimental statistics.

[3] For a summary of the economic rationales and determinants of pass-through investment, see Borga and Caliandro (2018).

[4] Pass-through capital and round-tripping are related in the sense that they might refer to the same phenomenon being viewed from a different perspective. Consider for instance an ownership chain from Italy to Luxembourg and then back to Italy: capital passes through Luxembourg and goes back to Italy, therefore the same ownership chain can be considered as pass-through from the point of view of Luxembourg and round-tripping from the point of view of Italy.

Moreover, pin-pointing the two phenomena might be of great interest by itself for a better understanding of the structure and motivation of MNEs' ownership chains.

While the international statistical standards describe pass-through investment as "funds that pass through an enterprise resident in an economy to an affiliate in another economy, *so that the funds do not stay in the economy of that enterprise*", this definition is hard to apply in practice.[5] Firms obtain financing from a variety of sources and use it in a number of ways, especially through operating affiliates, which can blur the relationship between inward and outward flows. Moreover, the timing of entry and exit of such funds may be staggered, and financial flows may enter and exit the economy through different "doors".

In recent years, several methods have been put forward to quantify pass-through capital in direct investment statistics. Two main approaches can be identified.[6] A first approach is based on the identification of specific entities that have pass-through capital as their only or main activity (Special Purpose Entities – SPEs). These firms typically have no real activity in the host country but a large amount of cross-border financial assets and liabilities.[7] However only a fraction of pass-through capital involves SPEs. For instance, in the case of Italy, no resident entity fulfils the conditions set out by the IMF for qualifying as SPE (Federico et al. 2022);[8] therefore, a SPE-based approach would suggest that there is no pass-through capital in Italy's direct investment.[9] Moreover, there are indications that a growing amount of pass-through capital involves companies that do not qualify as SPEs (so called "near-SPEs") because they have a small, but non-negligible, real activity (Borga and Caliandro, 2018).

A second approach exploits the information on whether the ultimate owner or controller of the investing firm is resident or non-resident, focusing on *positions* rather than *flows* (Damgaard and Elkjaer (2017), Borga and Caliandro (2018), Kothe et al. (2020), Pastoris et al. (2022)). This approach defines pass-through capital as *outward* FDI positions of resident firms *whose ultimate owner is a non-resident investor*. In a similar fashion, round-tripping investment is defined as *inward* FDI

[5] IMF's 6th Balance of Payments and International Investment Position Manual (BPM6), par. 6.33.
[6] Among alternative approaches, Kocerka and Makowski (2017) identify capital coming into and passing out of a direct investment enterprise in the same period; however, this method is highly sensitive to assumptions about the timing between inflows and outflows; Casella (2019) applies instead a probabilistic and inferential approach.
[7] According to international statistical standards, a legal entity qualifies as SPE if the following five conditions are satisfied: (I) the entity is a legally registered and/or incorporated entity. (II) The entity has a maximum of five employees, has no or little physical presence and has null or negligible production activity. (III) The entity is controlled (directly or indirectly) by non-resident investors. (IV) The entity carries out transactions almost entirely with non-resident counterparts. (V) The entity was established with the main purpose of obtaining specific advantages provided by the host jurisdiction.
[8] The IMF Task Force on Special Purposes Entities (TFSPE) developed an international definition of SPEs in the context of external sector statistics, which the BOPCOM endorsed in October 2019. Since then, various international data initiatives were launched, applying the definition.
[9] SPE play a relevant role only in a few countries. Among EU members, only in Luxembourg, Netherlands, and Hungary (see OECD International direct investment database).

positions *whose ultimate owner is a resident investor*. In both cases, the key information is the residency of the ultimate investor, which unveils the "true" direction of the chain of control, thereby integrating the information retrievable from standard FDI statistics (based on the immediate counterpart criterion).

In this work, we follow the second approach and quantify pass-through capital and round-tripping for Italian FDI over time, and along the geographical and industry breakdowns.[10] We apply the approach to firm-level data drawn from a representative sample of Italian firms. It is worth mentioning that it is the first time that Italy's outward FDI positions are analysed in terms of the ultimate owner, while inward FDI positions by ultimate investor have been published by the Bank of Italy since 2015 as supplementary statistics.

The note is structured as follows. In Section 2, we present the methodological approach and discuss its main limitations. Section 3 provides an overall quantification of the two phenomena. In Section 4, we explore their geographical and industry dimensions. Section 5 draws some concluding remarks.

2. Identification of pass-through capital and round-tripping

The IMF's 6th Balance of Payments and International Investment Position Manual (BPM6) describes pass-through funds as "funds that pass through an enterprise resident in an economy to an affiliate in another economy, *so that the funds do not stay in the economy of that enterprise*. These funds are often associated with direct investment. Such *flows* have little impact on the economy they pass through. Special purpose entities (SPE), holding companies, and financial institutions that serve other non-financial affiliates are particularly associated with funds in transit" (BPM6, par. 6.33). The BPM6 also includes a reference to round-tripping, which "involves funds from an entity in one economy being invested in an entity resident in a second economy that are then invested in another entity in the first economy. The entity in the second economy often has limited operations of its own" (BPM6, par. 6.46). While intuitive, these definitions do not easily lend to a practical implementation. As mentioned in the introduction, various methods have therefore been developed by the statistical community in order to capture pass-through capital and round-tripping.

In this note, we apply the approach based on the residency of the ultimate investor, that looks at FDI positions rather than flows. Specifically, we follow the conceptual scheme outlined in Table 1, anticipated in Borga and Caliandro (2018) and put forward in Kothe et al. (2020). The rows of the matrix break down positions according to the residency of the ultimate investor, while the columns

[10] As it is customary for bilateral FDI analysis, we consider data compiled according to the extended directional principle (see the OECD Benchmark Definition of Foreign Direct Investment, 4th edition (BMD4), par. 2.4.1.2.).

report FDI outward and inward positions. The aggregate in cell (a) identifies pass-through capital, i.e. outward foreign direct investment of resident firms whose ultimate owner is non-resident. Aggregate (b) measures instead the amount of outward direct investment made by Italian-controlled MNEs, i.e. resident firms whose ultimate controlling unit is also resident in Italy; this aggregate can be labelled as Italian outward investment net of pass-through capital. Likewise, when applying the breakdown by ultimate investor status to inward FDI position, we identify aggregates (c) and (d). The aggregate in cell (d) identifies the amount of round-tripping in the Italian economy, i.e. inward direct investment made by foreign companies whose ultimate owner is an Italian resident. The aggregate in cell (c) measures instead the amount of inward investment made by foreign-controlled MNEs, i.e. Italian inward investment net of round-tripping.

Table 1 – Identification of pass-through and round-tripping capital in FDI positions

Ultimate investor status:	FDI outward position	FDI inward position
Non resident	(a) Pass-through capital	(c) Italian inward investment net of round-tripping
Resident	(b) Italian outward investment net of pass-through capital	(d) Round-tripping

While this approach is rapidly gaining consensus in the literature, it suffers from a few limitations that need to be highlighted. A first issue is that, by focusing on *positions* rather than *flows*, the approach deviates to some extent from the BPM6 definition, which emphasises the *temporary nature of the flow* that enters and exits the host economy as the qualifying feature of pass-through funds. However, the BPM6 definition is far from being an *operational* definition, and measuring pass-through capital on positions represents in our view a reasonably good attempt at capturing the phenomenon of interest. It should also be noted that the alternative approaches that have been put forward in the literature suffer from even more serious limitations, as briefly anticipated in the introduction.

A second issue arises from the fact that FDI positions can be negative, in particular when they are presented according to the directional principle (which is recommended for geographical and industry breakdowns). This might happen for debt instruments (when the loans from the direct investment enterprise to the parent exceed the loans given by the parent to the direct investment enterprise), as well as for equity instruments (when the direct investment enterprise suffers losses that wipe out its equity). Consider for instance the case of a foreign-owned affiliate in Italy, whose ultimate owner is non-resident, with outward (equity) investment (pass-through capital), which then borrows funds from its foreign affiliate (negative debt position). In line with earlier studies, we assume that a negative debt position *reduces* the overall amount of pass-through capital, in the same way as it reduces the overall amount of outward direct investment (in accordance with the directional principle). For transparency, we separately highlight the equity and debt positions and their contributions to pass-through capital and round-tripping.

A third issue is that our definitions of pass-through capital and round-tripping only consider one direction of the ownership chain. Consider for instance a standard round-tripping case, where a resident company (A1), whose ultimate owner is also resident, controls a non-resident company (B), which in turn controls another resident company (A2). The investment position of B in A2 is recorded as round-tripping in the *inward* position. However, it might be argued that also the investment position of A1 in B should be recorded as round-tripping in the *outward* position. Similarly, pass-through capital is defined only for outward positions but there are generally corresponding inward positions that could be labelled as pass-through capital. An implication is that aggregates (b) and (c) in the above-discussed matrix do not completely remove positions that are associated with, respectively, round-tripping and pass-through capital. While this is a reasonable argument, we prefer to follow the prevailing definitions of pass-through capital and round-tripping used in the literature in order to enhance the comparability of our findings with previous studies.[11] We nonetheless briefly discuss results according to this alternative broader definition in the next section.

We use individual data on FDI positions of resident banks and non-financial enterprises, for the years 2013–2020.[12] Information on foreign direct investment of resident banks is derived from the supervisory reporting and balance sheet statements. Data on non-financial enterprises are sourced from one of the direct reporting surveys administered by the Bank of Italy for Balance of payments compilation purposes, i.e. the annual survey “CAF” (*Consistenze annuali finanziarie* – Annual stock positions). In the questionnaire, respondents declare the amount and the category of their assets and liabilities vis-à-vis non-resident counterparts, whether they belong to a multinational group and, if so, the name and the country of the ultimate controller. The information on the country of the ultimate controller provided by the firm is then cross-checked using other information sources (e.g. Orbis) to detect inconsistencies and fill missing data. Notice that, in principle, the notion of “ultimate controller” differs from the concept of ultimate investor. As an explanatory example, consider an Italian firm whose capital shares are owned by investors in three different countries; the ultimate controlling country is the country which owns the largest part of the shares, while there would be three ultimate investors (one for each investor in the three countries). However, in line with the majority of compilers of direct investment statistics, we follow the “winner-takes-all” (WTA)

[11] For instance, round-tripping is usually presented as a component of inward positions but a few studies presents it as part of outward positions.

[12] The collection system is sample-based for non-financial and insurance companies and it is census-based for the banking industry, which has to fulfill mandatory prudential reporting for supervisory regulations. The figures reported throughout the note are weighted using the same sampling grossing-up coefficients used for the compilation of direct investment position statistics.

approach, which identifies the ultimate controller moving upward in the ownership ladder. The application of this approach makes the notions of ultimate investor and ultimate controller coincide.

A final clarification on our methodology is related to the inclusion of real estate investment in FDI statistics as established by BPM6 standards (par. 6.31). We include this component when we present estimates of pass-through capital and round-tripping for the overall economy (Table 2), in order to provide values that are fully consistent with the overall amount of FDI positions in official statistics and compliant to international standards. However, we exclude real estate in the analysis of the geographical and sectoral distribution of pass-through capital and round-tripping (Section 3). Indeed, real estate is by definition the "final step" of an investment; no further control or ownership claims can be exerted on other firms through the mere property of a building or the possession of a portion of land, and we are interested in investment chains of ownership and control.[13]

3. Relevance and dynamics of pass-through capital and round-tripping

By adding up individual data according to their ultimate investor status, we obtain a measure of pass-through capital and round-tripping in Italy; in order to gauge the full scale of the phenomenon, Table 2 reports data referred to 2020.

Table 2. Italy's FDI positions by ultimate investor status in 2020
(Percentage values unless otherwise stated)

Ultimate investor status:	**Outward FDI position**	**Inward FDI position**
Non resident	11.8	91.0
Resident	88.1	7.4
Unknown	0.1	1.5
Total FDI position (**EUR bln**)	476.9	385.2

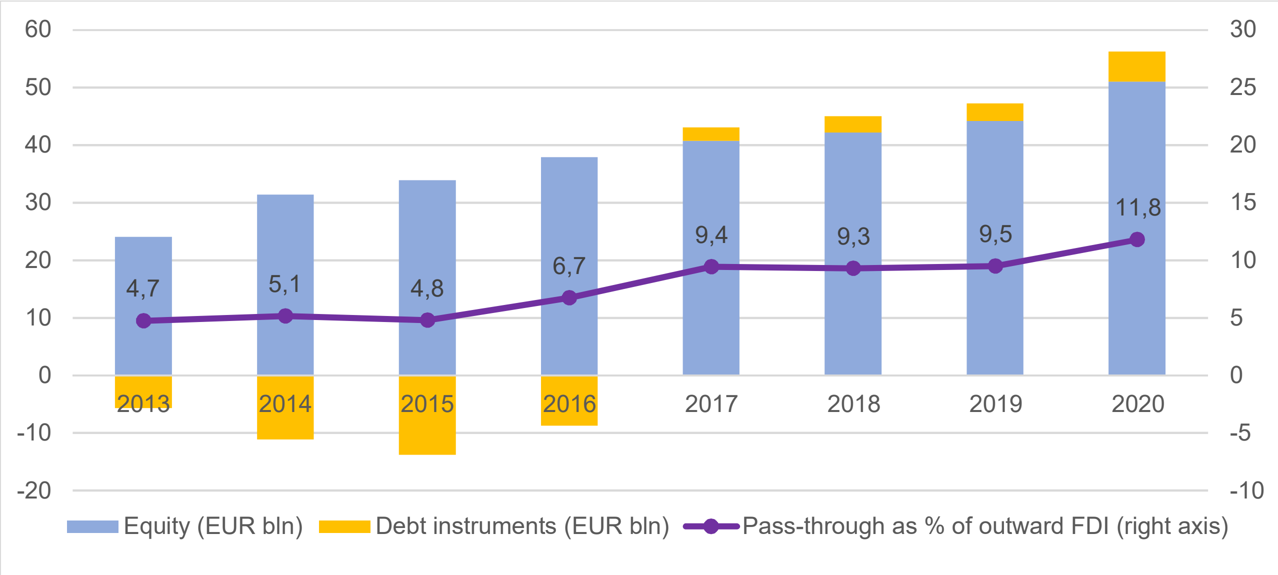
Pass-through capital has a small but non-negligible weight on the total outward direct investment position, equal to about 12 percent in 2020 (amounting to EUR 56 billion), while round-tripping is about 7 percent in the same year. Over the time span of our sample, pass-through capital in Italy significantly increased (Figure 1), both in relative and in absolute terms. While it was only 4.7 per

[13] Based on these considerations, it would be consequential to exclude real estate from outward and inward FDI also when referring to the overall economy. However, we prefer to calculate a ratio of pass-through to outward FDI consistent with figures published by international organizations (Eurostat, OECD, Unctad), i.e. a ratio whose denominator includes the real estate component. As explained in the next footnote, this inclusion leads to a very modest underestimation of pass-through and round tripping.

cent of total outward investment in 2013 (around 18 billion; Figure 1), it reached about 10 percent in the average of 2018-2020.[14]

Figure 1 - Pass-through capital

(EUR billions and percentage shares)



Note: Negative direct investment positions in debt instruments may arise when the debt positions from the direct investment enterprise to the parent exceed the value of the investment of the parent in the direct investment enterprise.

The rising trend was fostered by both equity and debt instruments. The equity component more than doubled, from slightly more than 20 to about 50 billion (Figure 1). The debt component recorded negative values in the initial years, as companies with a non-resident ultimate investor were acting as net borrowers from their foreign affiliates; since 2017 they have acted as net lenders, so that the corresponding net lending provides a positive contribution to our overall estimate of pass-through capital. As discussed in Section 2, for the purposes of measuring pass-through capital we treat negative debt or equity positions in the same way in which they are considered for the measurement of direct investment positions according to the directional principle, i.e. negative positions reduce pass-through capital as they also reduce the overall direct investment positions. This choice is also in line with the existing literature, thus enhancing the comparability of our findings.[15]

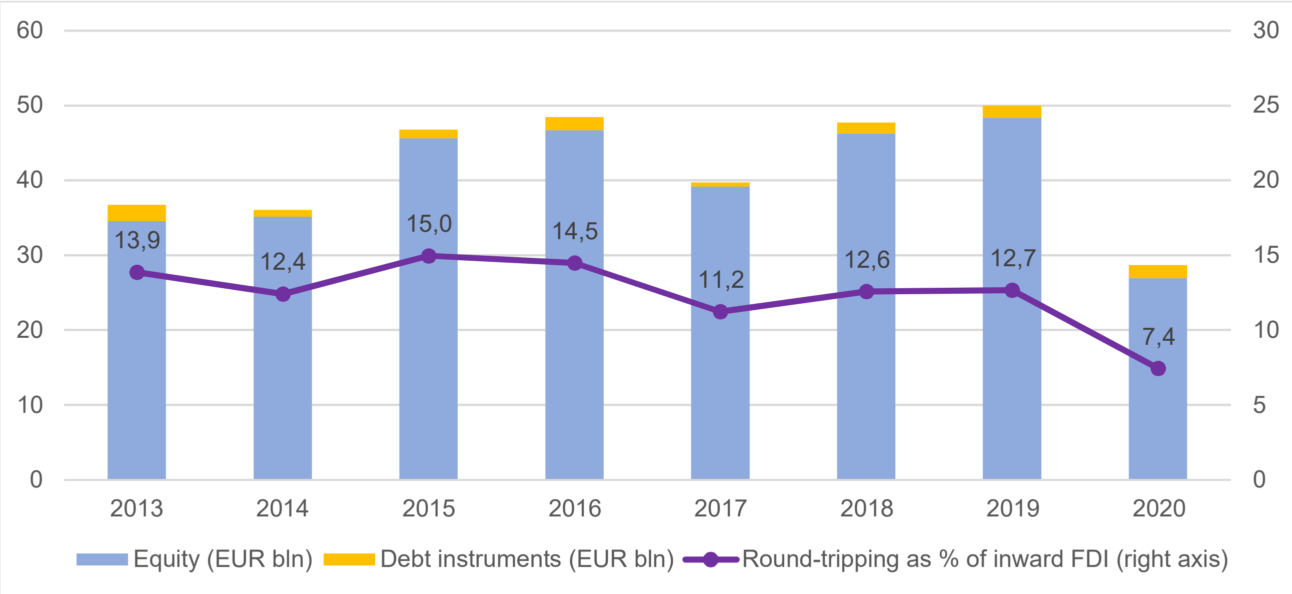
[14] In our case, the ultimate owners of the real estate component of outward FDI are overwhelmingly resident physical persons; hence, the removal of real estate when measuring pass-through capital reduces the denominator of the ratio, leaving the numerator unaffected. On 2018-2020 average, the removal of real estate increases only marginally the size of the ratio of pass-through capital on outward FDI, by 0.4 basis points. For similar reasons, removing real estate marginally increases also the measurement of round-tripping, as the removal only affects the denominator. Net of real estate, round-tripping share on total inward FDI would be 0.8 per cent larger, based on 2018-2020 data.

[15] Pastoris et al. (2022) estimate the share of pass-through capital for intra-EU FDI using Orbis firm-level data relative to 2018. As regards Italy, their estimate is broadly comparable to ours, although slightly on the higher side (between 15 and 20 percent). Among the other main euro area economies, pass-through capital would amount to a smaller share of outward direct investment for France and Germany, while marginally higher in Spain. The share of pass-through capital is instead

Turning to round-tripping – the term we use to refer to the size of inward direct investment made by foreign firms whose ultimate controller is an Italian firm/legal entity/natural person - the stocks involved in this phenomenon amounted to about 29 billion in 2020 (7.4 percent of total inward FDI; Table 2). In contrast to pass-through capital, round-tripping seems to have remained broadly stable from 2013 to 2019, hovering around an average share of 13 percent (Figure 2), and recording a marked drop in 2020, due to corporate restructurings by a few large MNEs[16].

Figure 2 - Round-tripping capital

(EUR billions and percentage shares)



Round-tripping positions differ from pass-through positions also with respect to their composition, because they are made almost entirely of equity (Figure 2). The prominent role of the equity component reflects indeed the scope of these investment relationships, whose primary aim is not to *transfer* capital to Italy from abroad (since the ultimate investor is also Italian) but rather to exert *control* over resident firms from financial hubs, from privileged jurisdictions, or from otherwise strategic platforms of the group's chain of control. Indeed, as shown in more detail in Section 3.2, a large part of round-tripping investment in Italy is intermediated via Luxembourg.

Two issues deserve further discussion. First, as mentioned in the previous section, it might be argued that our measures of pass-through and round-tripping capital only consider one direction of the ownership chain. While we followed the definitions used in the literature in order to enhance the

estimated to be very large for "financial hubs" like Ireland, Luxembourg, and Netherlands (around 85, 80, and 75 per cent, respectively).

[16] MNE corporate financial restructuring operations (i.e. cross-border mergers, re-domiciliation of a company, transfer of participation between group entities) may change the ownership chain and therefore the ultimate investor status of the company.

comparability of our findings with other studies, considering our measure of pass-through capital together with the "outward-leg" of round-tripping would yield an alternative measure of outward direct investment position, that is net of both pass-through and the outward-leg of round-tripping. This alternative net measure would amount to almost 80 percent of outward direct investment positions in 2018-2020 or, equivalently, pass-through and the outward-leg of round-tripping would jointly account for almost 20 percent of outward FDI.

Second, our adoption of the "winner-takes-all" approach allocates minority investments to the ultimate controlling country, even when they come from other countries. This approach is known to lead to an over-estimate of round-tripping. Take the example of a French company, which has a minority investment in an Italian company that is controlled, via Luxembourg, by an Italian ultimate controller. The minority investment from France is attributed to Italy (the country of the ultimate controller) and therefore considered as part of round-tripping. Minority investments typically represent a very small share of Italy's direct investment position, but they may be more relevant for selected industries and countries.

4. A glance at the geographical and sectoral structure of pass-through capital and round-tripping

In this section, we decompose pass-through capital and round-tripping along their geographical and sectoral dimensions[17]. For the reasons anticipated in the previous section, real estate investment is not included in these decompositions.[18]

4.1 Pass-through capital

Pass-through investments in Italy originate from a relatively small number of countries: in 2020 about 60 percent of outward FDI by foreign-controlled resident firms was ultimately attributable France, the United States and the Netherlands (Table 3). While the weight of these three countries increased between 2018 and 2020, other relevant countries such as the United Kingdom and China saw their shares significantly decrease. Changes in country weights often reflect corporate inversions and other changes in the ownership structure of large multinational groups.

[17] No information is available on the institutional sector and the sector of economic activity of the ultimate controlling parent.
[18] See footnote 14 for a quantification of the size of the real estate component in outward and inward FDI.

Table 3 - Pass-through capital by foreign ultimate investor's country (top-ten).
(countries are ordered in terms of decreasing shares in 2020)

	Values in EUR billion			*Percentage shares*		
Country Name	2018	2019	2020	2018	2019	2020
France	6.1	8.1	14.5	13.5	17.1	25.7
United States	8.6	9.5	11.5	19.1	20.1	20.5
The Netherlands	3.6	3.3	7.8	8.0	7.1	13.8
Luxembourg	2.7	3.0	5.1	6.0	6.4	9.1
Germany	2.9	2.4	4.3	6.4	5.0	7.7
United Kingdom	8.2	8.0	3.4	18.3	16.8	6.0
Japan	2.2	1.6	2.3	4.9	3.3	4.1
Switzerland	2.2	2.5	3.2	4.9	5.4	5.6
Cayman Islands	0.3	0.4	1.5	0.8	0.9	2.6
China	3.0	3.2	0.6	6.7	6.8	1.0
All other countries	5.1	5.3	2.2	11.4	11.2	3.8
Total pass-through	45.0	47.2	56.2	100.0	100.0	100.0

Table 4 instead documents where the outward investment positions of the Italian firms that are ultimately controlled by France, the United States and the Netherlands (the top three holders of pass-through in Italy) are *located*. The Netherlands and/or Ireland always appear in the top ranking of the destinations for all the three investor countries under consideration. The degree of geographical concentration is similar for the three investing countries, as in all cases the top-three destinations absorb about 45 per cent of pass-through investment. Interestingly, no clear patterns can be drawn on the basis of geographical distance: when the ultimate investor is close to Italy (in France or in the Netherlands, for instance), remote countries (such as Canada and Brazil) can be found among the main destinations; vice-versa, the Netherlands and Ireland are the top destinations for US ultimate investors in Italy. There is also little support for the thesis that pass-through reflects group structures in which foreign-owned Italian companies act as the main holding companies of the group's affiliates in Southern Europe or in the Mediterranean area ("Italian hub" hypothesis).[19] It is also worth noticing that both France and the Netherlands are channelling through Italian-resident firms also a fair amount of their round-tripping investment: about 10 per cent of French pass-through investment in Italy is

[19] For example, looking at Austrian FDI and foreign affiliates data, Cernohous (2017) found that while Austria is the final destination for about a half of inward EU direct investment, the majority of non-EU multinational groups use Austrian subsidiaries for managing and financing via Austria other enterprises located in Central and Eastern Europe ("Austrian hub").

directed toward France, and about 4 per cent of Dutch pass-through investment in Italy goes back to the Netherlands.[20]

Table 4 - Destination of outward FDI of firms resident in Italy, ultimately controlled by France, the United States, and the Netherlands.

(Average percentage shares over the period 2018 – 2020. Values in EUR billion are averaged over the same period)

France		United States		The Netherlands	
The Netherlands	20.4	The Netherlands	27.1	Ireland	16.4
Canada	13.2	Ireland	8.5	Germany	14.3
Belgium	12.8	France	7.9	Brazil	14.3
France	*9.3*	United Kingdom	7.2	Poland	10.0
Switzerland	7.2	Germany	6.6	China	8.7
Australia	6.6	Spain	5.6	Switzerland	4.6
United States	3.8	Israel	4.1	France	4.1
Germany	2.8	Luxembourg	3.9	United States	3.8
Ireland	2.4	Belgium	3.3	*The Netherlands*	*3.5*
Spain	2.4	Turkey	3.0	Spain	3.3
Rest of the world	19.0	Rest of the world	22.8	Rest of the world	17.0
Pass-through	100.0	Pass-through	100.0	Pass-through	100.0
in EUR bln	*9.7*	*in EUR bln*	*9.9*	*in EUR bln*	*5.5*

The geographical composition of pass-through capital does not show large differences compared to that of Italian outward direct investment net of pass-through capital (i.e. direct investment by companies whose ultimate investor is resident; aggregate (b) in Table 1). The weight of EU destinations is similar, while the shares of other destinations show some modest differences, with the largest of them being found for Central and Southern America. A small gap is also observed with respect to tax havens, whose share is slightly larger for pass-through capital (the difference is about 2 percentage points; Table 5, bottom line).[21]

[20] We are not able to quantify the share of round-tripping investment via Italy into France and the Netherlands on the overall round-tripping investment into France and the Netherlands, as this would require firm-level data for French and Dutch multinational companies.

[21] We considered as tax havens the same countries included in the list used in Tørsløv et al. (2018). The list includes: Andorra, Anguilla, Antigua and Barbuda, Aruba, Bahamas, Bahrain, Barbados, Belgium, Belize, Bermuda, Bonaire , British Virgin Islands, Cayman Islands, Curaçao, Cyprus, Gibraltar, Grenada, Guernsey, Hong-Kong, Ireland, Isle of Man, Jersey, Lebanon, Liechtenstein, Luxembourg, Macao, Malta, Marshall Islands, Mauritius, Monaco, Netherlands, Panama, Puerto Rico, Seychelles, Singapore, Sint Maarten, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Switzerland. See Desai, Foley, and Hines (2003) for a discussion on how chains of control and indirect ownership can be used to avoid and defer taxes.

Table 5 - Outward FDI by counterpart area

(Average percentage shares over the period 2018-2020)

Counterpart Area	Outward FDI net of pass-through	Pass-through	Total outward FDI
European Union	53.7	52.5	53.6
of which: tax havens	*20.8*	*20.4*	*20.8*
Non-EU Europe	11.5	10.8	11.4
of which: tax havens	*1.5*	*3.6*	*1.7*
Sub-Saharan Africa	1.1	0.3	1.0
of which: tax havens	*0.0*	-	*0.0*
Central and South America	6.2	9.6	6.6
of which: tax havens	*0.1*	*0.5*	*0.2*
Asia (excluding Middle East)	12.0	10.6	11.8
of which: tax havens	*1.0*	*0.9*	*1.0*
North Africa and Middle East	6.6	4.5	6.4
of which: tax havens	*0.0*	-	*0.0*
Rest of the World	9.0	11.7	9.2
of which: tax havens	*0.0*	-	*0.0*
Total	100.0	100.0	100.0
of which: tax havens	*23.5*	*25.5*	*23.7*

Note: See footnote 21 for the definition of tax havens.

We now move on to consider the cross-sector heterogeneity in pass-through investment (we group economic activity according to the NACE classification). We carry out the sectoral analysis from two different perspectives: (i) considering the economic activity of the investing resident firms, and (ii) considering the economic activity of the non-resident affiliate firms. From the first point of view, we first compare how outward investment of resident firms (both local and foreign-controlled) is distributed across sectors (Table 6). Second, we assess how relevant pass-through capital is in each economic sector of resident firms and, from a different perspective, considering the economic activity of the foreign affiliates.

As Table 6 shows, manufacturing firms are channelling two thirds of pass-through capital, particularly those in the sectors of (i) transportation equipment and motor vehicles, (ii) refined petroleum, chemicals and pharmaceuticals, (iii) metal products and machinery. For outward FDI net of pass-through capital the share of manufacturing is sensibly lower (41 percent). Financial and insurance firms do not appear to play a major role in pass-through investment. This reflects largely two features: (i) foreign controlled banks in Italy do not hold significant direct investment abroad (hence no pass-through); (ii) other resident foreign-controlled financial and insurance companies are consistently net borrowers from their foreign affiliates; hence, their intra-group debt reduces the net value of outward investment. Finally, it is worth noticing that about 15 percent of resident firms intermediating pass-through investment are classified as "holdings and head offices" (which include both financial and operational holdings).

Table 6 - Breakdown of outward FDI by economic activity of resident investor and by ultimate controller status

(Average percentage shares over the period 2018 – 2020)

Economic activity of resident direct investor	UC is resident (local control)	UC is non-resident (pass-through)[22]
Agriculture and fishing	0.0	-0.1
Mining and quarrying	0.6	0.5
Manufacturing	41.5	66.9
Food and beverages	*1.9*	*9.5*
Textile, wearing apparel, and leather	*1.6*	*-0.7*
Refined petroleum, chemicals & pharma.	*14.9*	*14.2*
Metal products, electrical eq. and machinery	*16.9*	*13.8*
Transport equipment & motor vehicles	*2.5*	*16.0*
Other manufactured products	*3.6*	*14.1*
Gas, electricity, and water supply	1.3	0.6
Construction	9.1	1.9
Wholesale Trade	1.6	8.7
Transporting	1.2	0.4
Accommodation and food service activities	0.2	0.0
Information and Communication	1.3	0.6
Financial and insurance activities	5.7	-1.6
Real estate activities, administr. serv., R&D	1.3	1.5
Holdings and head offices	29.1	14.8
Other activities and unallocated	7.2	6.0
Total economy	100.0	100.0

Figure 3 offers an assessment of how relevant is pass-through investment in each sector of economic activity of resident firms. A few sectors stand out as being characterised by significant pass-through capital intensity: namely, "transport equipment and motor vehicles", "wholesale trade", and "food and beverages". These sectors have a share of pass-through capital over total outward investment that is respectively equal to 43, 39 and 36 per cent, i.e. more than three times larger than the total economy average (10 per cent). Conversely, pass-through capital is of little relevance for the financial and insurance sector, for construction, for the fashion industry, for tourism services (accommodation and catering), and for the primary sectors (agriculture and fishing).

[22] Negative numbers reflect negative investment. Negative investment is a non-rare occurrence when the directional principle is applied, as assets and liabilities vis-à-vis the foreign counterpart are reported on a net basis.

Figure 3 - Share of pass-through in outward FDI, by economic activity of resident investing firms

(Average percentage shares over the period 2018 – 2020. Manufacturing sectors are in lowercase letters.)

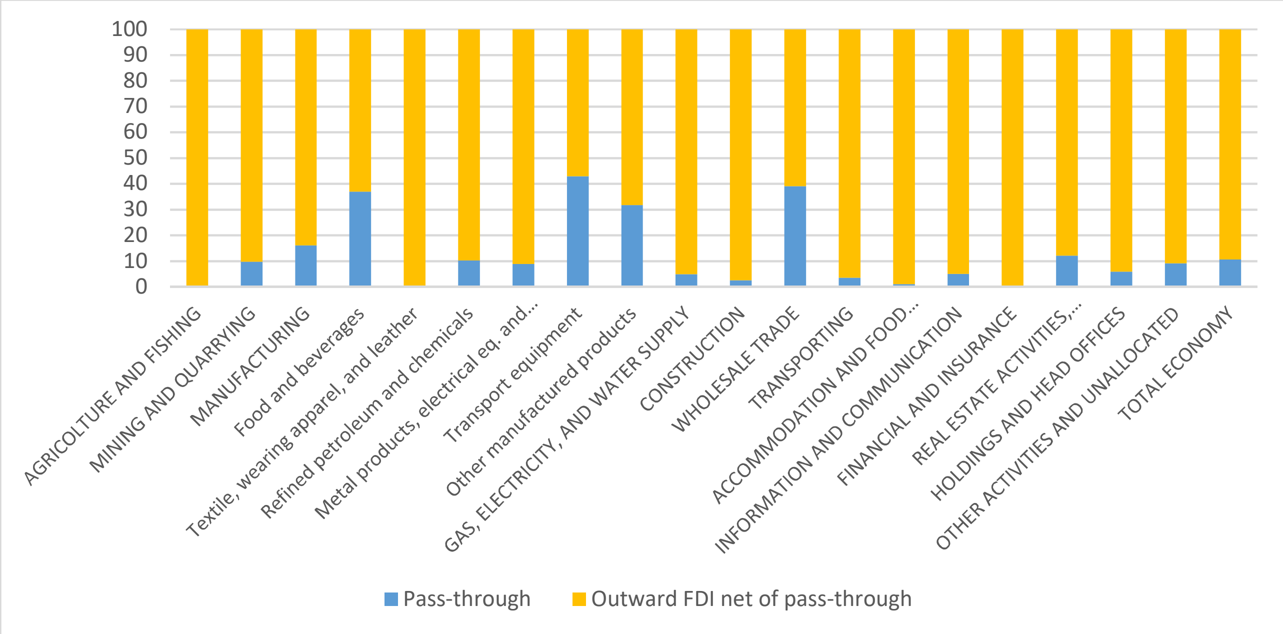
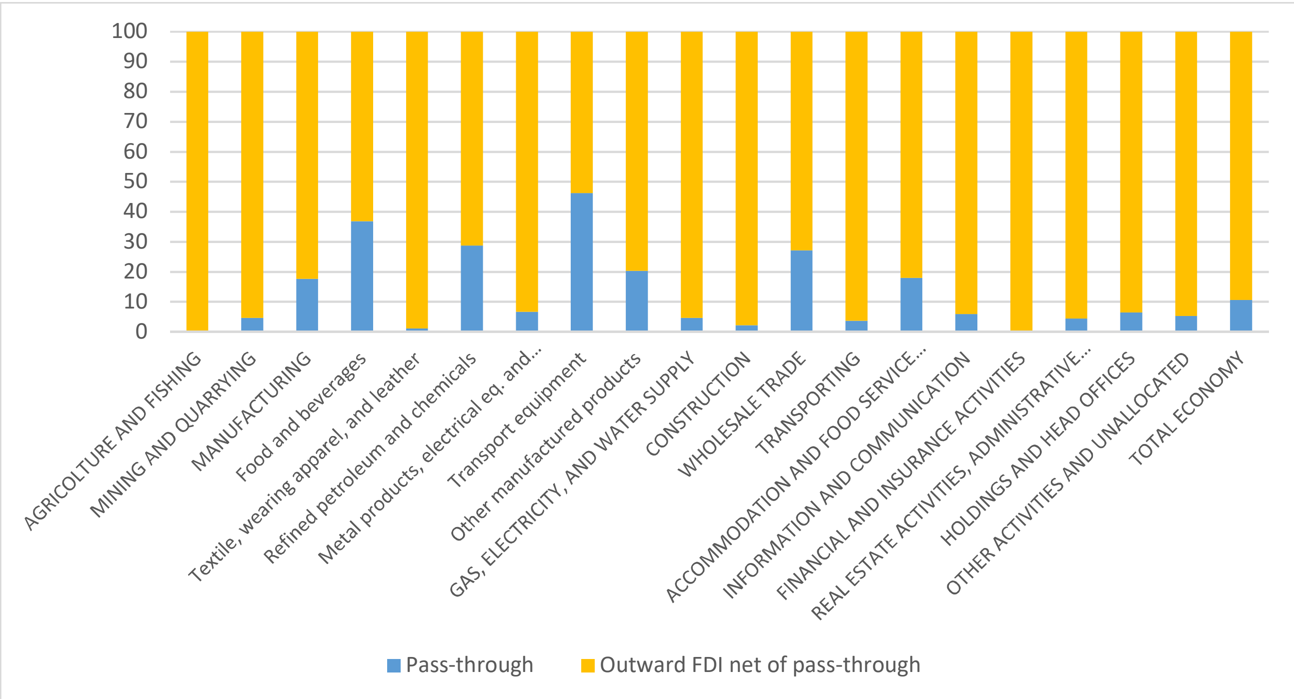


Figure 4 - Share of pass-through in outward FDI, by economic activity of foreign affiliates

(Average percentage shares over the period 2018 – 2020. Manufacturing sectors are in lowercase letters.)



From a different perspective, i.e. considering the economic activity of the foreign (target) firm, Figure 4 shows that differences with respect to the composition of FDI shown in Figure 3 are generally smaller than 10 per cent. This is unsurprising, as firms tend to invest within the boundaries of their sector of activity. Yet, there are a few notable exceptions: in "refined petroleum, chemicals and pharmaceuticals", "accommodation and food service activities", and "wholesale trade" a mismatch between the sector of the investing firm and the sector of the target firm occurs more frequently and/or more relevantly.[23]

4.2 Round-tripping

As we explained in Section 2, with the term "round-tripping investment" we mean foreign inward direct investment in resident firms whose ultimate owner/controller is an Italian resident legal entity or physical person. According to this definition, on average in 2018-20 about 50 per cent of all round-tripping "arrived" in Italy via Luxembourg and the United Kingdom. While the latter country remained relatively stable in the three years, the former recorded a remarkable increase (from 16 to almost 50 per cent, Table 7). France also played a relevant role, but its weight decreased from 42 to 12 percent. A closer investigation reveals that such swift changes reflect corporate restructuring or reorganization of a few large groups. Geographical concentration is relatively high, as the three above-mentioned countries account for about 70 – 80 per cent of total round-tripping in Italy.

Table 7 - Round-tripping capital by immediate counterpart's country (top-ten).

Counterpart country	*Values in EUR billion*			*Percentage shares*		
	2018	2019	2020	2018	2019	2020
Luxembourg	7.7	14.0	13.9	16.1	28.0	48.4
United Kingdom	7.3	11.2	5.3	15.3	22.4	18.6
France	20.1	8.9	3.5	42.2	17.7	12.2
The Netherlands	4.5	5.0	1.5	9.4	10.0	5.1
Spain	2.5	2.7	0.8	5.3	5.3	2.9
Germany	2.0	3.0	0.6	4.2	6.0	2.2
Czech Republic	0.0	0.1	0.5	0.1	0.3	1.8
Switzerland	0.9	0.8	0.4	2.0	1.5	1.2
Australia	0.1	0.2	0.3	0.3	0.4	1.0
Canada	0.2	0.2	0.3	0.5	0.5	1.0
All other countries	2.2	3.9	1.6	4.6	7.8	5.7
Total	47.7	50.0	28.6	100.0	100.0	100.0

The distribution of round-tripping capital across resident sectors of economic activity is quite sparse, but manufacturing stands out accounting for one fourth of the total (Table 8). Overall, the sectoral composition of round-tripping capital is similar to that of "ultimately foreign" inward FDI to Italy, with some non-negligible differences in a few sectors, such as food and beverages, transport equipment, and "refined petroleum, chemicals and pharmaceuticals". A more relevant difference

[23] The simplest reason for this "sectoral mismatch" to occur is because the investor is a holding and the affiliate is not. Ceteris paribus, in sectors characterized by larger and more complex multinational groups, the holdings usually play a more prominent role; hence, a mismatch between the sector of the investing firm and the sector of the target firm is more likely to occur.

concerns the share of resident firms classified as "holdings and head offices": almost half of the target (Italian) firms of round-tripping inward investment are holdings or head offices of resident groups (in the case of firms targeted by inward FDI net of round-tripping, the share is less than a third). However, none of these firms can be recollected into the formal definition of SPE (Federico et al. 2022). This suggests that round-tripping occurs when there is a need for exercising control from strategic locations.

Table 8 - Breakdown of inward FDI by economic activity of the resident enterprise and by ultimate investor status

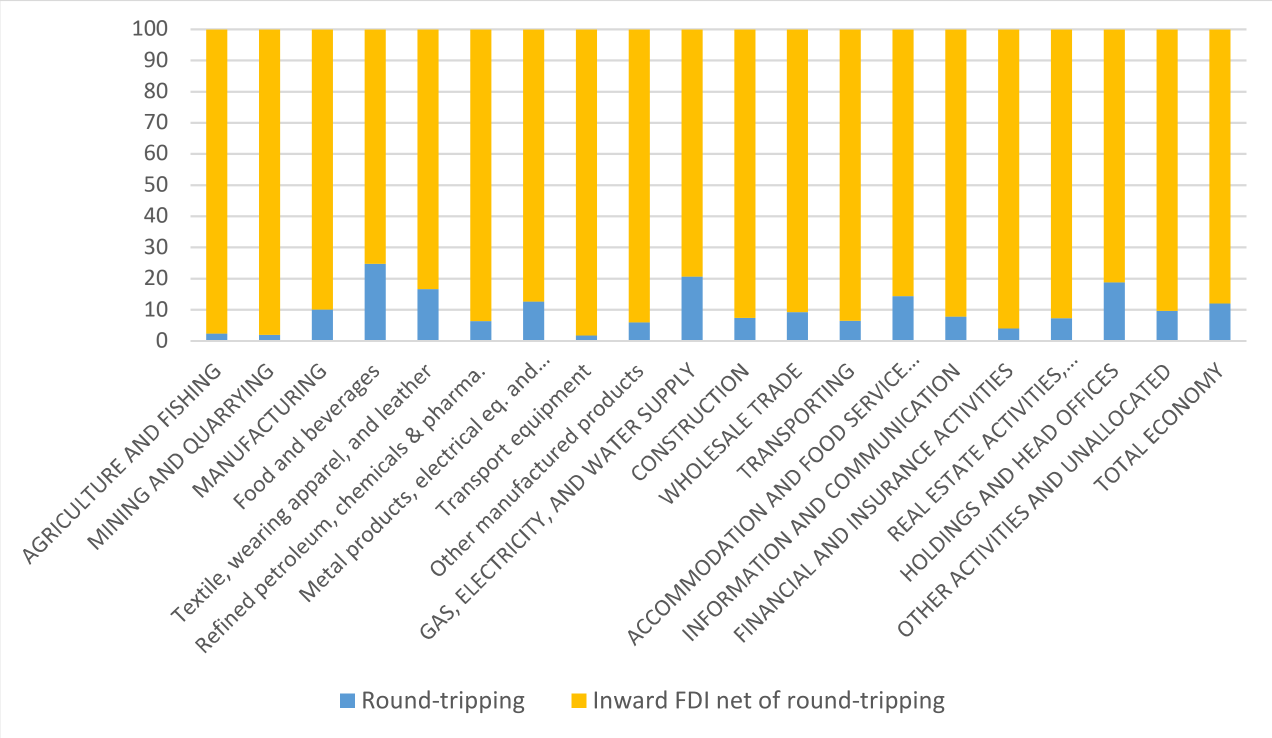
(Average percentage shares over the period 2018 – 2020)

Economic sector of resident direct investment enterprise	UI is resident (round-tripping)	UI is non-resident (foreign control)
Agriculture and fishing	0.1	0.5
Mining and quarrying	0.1	0.9
Manufacturing	24.2	29.7
Food and beverages	*8.5*	*3.5*
Textile, wearing apparel, and leather	*1.1*	*0.8*
Refined petroleum, chemicals & pharma.	*3.4*	*6.8*
Metal products, electrical eq. and machinery	*8.1*	*7.7*
Transport equipment	*0.8*	*5.9*
Other manufactured products	*2.2*	*4.9*
Gas, electricity, and water supply	2.0	1.0
Construction	0.5	0.9
Wholesale Trade	9.0	12.1
Transporting	2.0	3.9
Accommodation and food service activities	1.1	0.9
Information and Communication	5.7	9.3
Financial and insurance activities	0.4	1.5
Real estate activities, administrative serv., R&D	3.3	5.8
Holdings and head offices	47.2	27.9
Other activities and unallocated	4.3	5.6
Total economy	100.0	100.0

While for overall Italian inward FDI the intensity of round-tripping is rather limited (about 12 per cent on average in 2018-20), the phenomenon is more relevant in some selected sectors, like food and beverages (25 per cent; Figure 4), "water, electricity and gas utilities" (21 per cent) and the fashion industry (textile, wearing and leather, 17 per cent). Round-tripping is almost negligible in the transport equipment sector, in the mining industry, and in the financial and insurance sector (less than 2, about 2, and 4 percent respectively).

Figure 5 - Share of round-tripping in inward FDI by economic activity of resident affiliates

(Average percentage shares over the period 2018 – 2020. Manufacturing sectors are in lowercase letters.)



Finally, another difference worth noticing between pass-through and round-tripping capital is in their concentration across firms. In fact, according to the direct reporting survey of the Bank of Italy, about 370 resident firms intermediate pass-through capital (i.e. firms that are ultimately controlled by a foreign investor and own direct investment abroad).[24] Among them, the top 10 firms account for 44 percent of total pass-through capital. Round-tripping capital is instead more concentrated: 130 resident firms in the sample are targeted by round-tripping inward investment, and the first 10 receive about 54 per cent of all round-tripping capital.

5. Concluding remarks

The definitions of pass-through and round-tripping investment given in the IMF's Balance of payments and international investment position manual (6th edition) are intuitive, but hard to apply in practice. Following recent methodological works, in this paper we adopted an operational definition that exploits information on the residency of the ultimate investor as the key to unveil the "true" direction of the chain of control. Using firm-level data, we quantify pass-through capital and round-tripping for Italy, and we analyse their sectoral and geographical breakdown. While there are

[24] For the sake of comparison, the overall number of resident firms in the survey that own direct investment abroad (with an either resident or non-resident ultimate controller) amounts to about 1500. The number of firms is unweighted.

significant caveats associated with the approach, we argue that it offers a straightforward way to obtain complementary information to standard FDI statistics, even more so by analysing the results by financial instrument, counterpart country, and sector of economic activity, which helps getting insights on the investment motivations and on the ownership chains structure of multinational groups.

Overall, the extent of pass-through capital and round-tripping in Italy is relatively modest, albeit non-negligible: on average 10 and 11 percent of outward and inward total FDI respectively, in 2018-20. In particular, the share of pass-through is far below what is typically found for “investment hubs” such as Ireland, Luxembourg, and the Netherlands.

There are significant differences between pass-through capital and round-tripping in terms of the geographical and industry breakdown, suggesting that the two types of investment pursue different strategic objectives. Pass-through capital in Italy originates especially from EU countries (prominently France and the Netherlands) and from the United States, and is directed towards a well-diversified number of destinations, with no apparent relation with distance. This evidence does not support the hypothesis that foreign-owned Italian companies may play the role of regional sub-holdings for Southern Europe or the Mediterranean area on behalf of the entire group (in a similar way as Austria acts as a gateway for direct investment in Central and Eastern Europe). While modest in aggregate terms, pass-through is however relevant in some manufacturing sectors, particularly in motor vehicles, food and beverages, chemicals, pharmaceuticals and refined oil, where it is three times more intense than the average. It is instead virtually nil in the financial sector.

Round-tripping is geographically more concentrated: Luxembourg and the United Kingdom (together with France until 2019) are the principal intermediate countries of the ownership chains that originate and end in Italy, often targeting firms in the “holdings and head offices” sector. This is consistent with the hypothesis that round-tripping occurs when there is a need for exercising control from strategic locations.

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