CENTRAL BANK OF CYPRUS
EUROSYSTEM

FOREIGN DIRECT INVESTMENT

2013

1. INTRODUCTION

This report provides an overview of the main developments in foreign direct investment (FDI) statistics[1] for 2013, as published by the Statistics Department of the Central Bank of Cyprus.

In 2014, the Central Bank of Cyprus began publishing FDI statistics compiled in accordance with the IMF's new Balance of Payments and International Investment Position manual, sixth edition (BPM6)[2]. Henceforth, beginning with reference year 2013, all publications and data releases will be based on the new methodology with no parallel publication of the series compiled using the old version of the manual (BPM5).

In view of the above, and given that there are no comparable annual back data on which to base our analysis, this FDI review covers only 2013 data. In particular, the analysis concentrates on the main regions and economic activities related to direct investments made by non-residents in Cyprus and by residents abroad in 2013.

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[1] For more information concerning the definition and scope of foreign direct investment statistics please refer to the **Appendix**.

[2] The main presentational and methodological changes vis-a-vis the previous version of the manual (BPM5), can be found in the **Appendix**.

The main conclusions of the analysis are summarised below:

- In 2013, total FDI stocks abroad (assets) reached €35,45 billion, whereas FDI stocks in Cyprus (liabilities) totalled €49,92 billion.

- FDI stocks (both abroad and in Cyprus) were mainly associated with investment positions in Europe.

- With regards to economic activities, the great majority of investment positions were concentrated in "financial and insurance activities" .

- The main FDI destinations for resident investors abroad are: Russia, Netherlands, UK, Switzerland, Singapore, UAE and Ireland.

- The majority of non-resident investors undertaking positions in Cyprus come from: Russia, Germany, USA, UK, Greece, British Virgin Islands and the Netherlands.
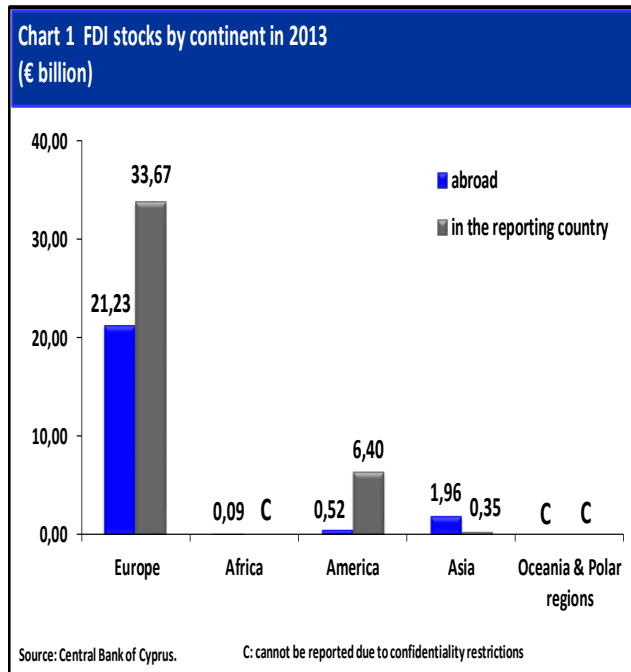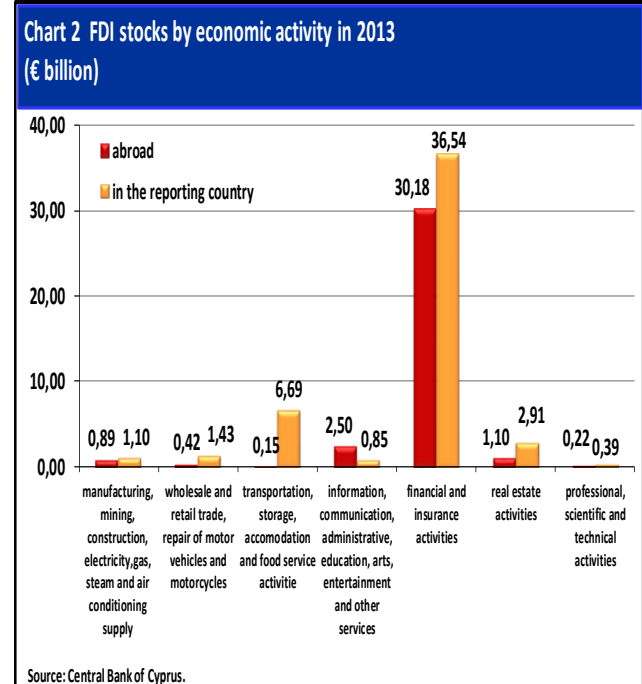
2. FOREIGN DIRECT INVESTMENT STOCKS

Cyprus's FDI stocks are primarily associated with positions in Europe **(Chart 1).** In 2013, total assets (investments by residents abroad) reached €21,23 billion, whereas total liabilities (investments by non-residents in Cyprus), reached €33,67 billion. Apart

from Europe, significant inward investment was recorded from the American continent, reaching €6,34 billion.

Chart 1 FDI stocks by continent in 2013 (€ billion)

Source: Central Bank of Cyprus.   C: cannot be reported due to confidentiality restrictions

The 2013 FDI stock[3] positions are classified by economic activity in **Chart 2**. The majority of investment positions were concentrated in "financial and insurance activities". Inward investment in this sector reached €36,54 billion and investments abroad by residents totalled €30,18 billion. Other notable inward investment activities include "transportation, storage, accommodation and food service activities" and "real estate activities" with €6,69 billion and €2,91 billion, respectively.

Chart 2 FDI stocks by economic activity in 2013 (€ billion)

Source: Central Bank of Cyprus.

3. FOREIGN DIRECT INVESTMENT FLOWS

In this section FDI flows[4] are examined using a geographic decomposition of the data into two distinct groups: "EU 28" and "All other countries" (**Chart 3**). This is warranted since Europe is the main investment destination for residents as well as the main source of foreign investment in Cyprus. Inward investment flows (in the reporting economy) from the "EU 28" in 2013 reached €1,04 billion and from "All other countries", €1,59 billion. With regard to investments abroad, residents invested €311 million in the "EU28" and €2,93 billion in "All other countries".
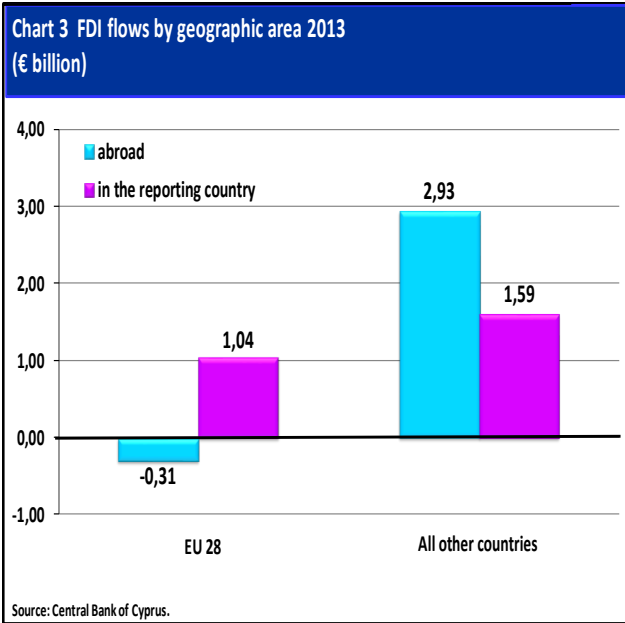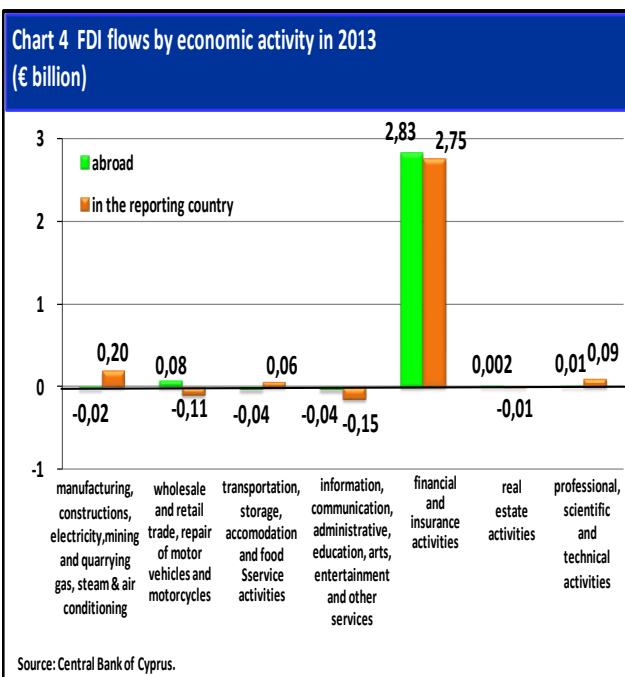
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[3] The analysis of FDI positions abroad is reported according to the economic activity of the non- resident enterprise while the analysis for FDI positions in the reporting economy is reported according to the economic activity of the resident enterprise. In the case of flows (**Section 3**) both investments abroad and in the reporting economy are classified according to the economic activity of the resident party.

[4] The sign preceding each amount is of particular importance in understanding the changes in each category and the reader is, therefore, advised to refer to the **Appendix** for more detailed explanations regarding the possible sign outcomes of FDI flows.
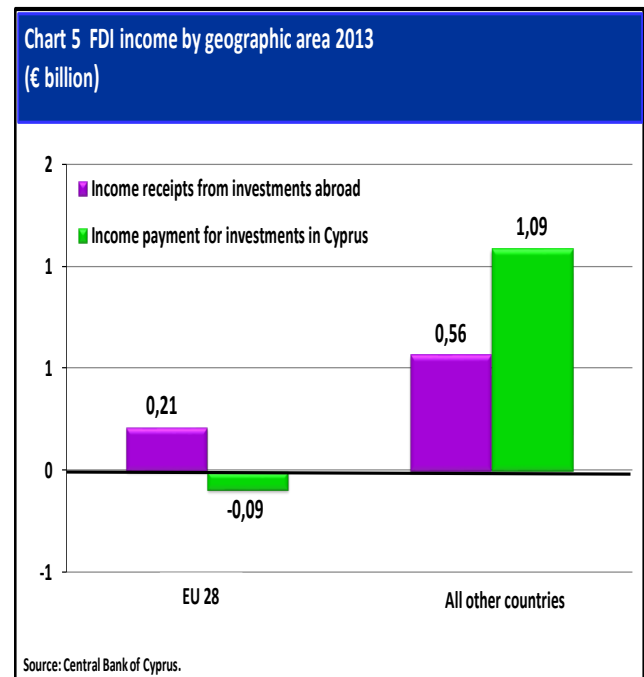
Chart 3 FDI flows by geographic area 2013
(€ billion)

Source: Central Bank of Cyprus.

Chart 4 FDI flows by economic activity in 2013
(€ billion)

Source: Central Bank of Cyprus.

In **Chart 4**, FDI flows are classified by main economic activity. FDI outward flows related to "financial and insurance activities" were recorded at €2,83 billion in 2013, whereas those related to "wholesale and retail trade, repair of motor vehicles and motorcycles" reached €78 million. As far as FDI flows in Cyprus are concerned, the sector with the

highest increase in 2013 was "financial and insurance activities", with flows reaching €2,75 billion.

In all the other sectors the relevant amounts were small. Investments by non-residents in Cyprus increased in "manufacturing, mining, construction, electricity, gas, steam and air conditioning supply", "transportation, storage, accommodation and food services" and "professional, scientific and technical activities". With regard to investments abroad by residents there were small increases in "transportation, storage, accommodation and food service activities" and "information, communication, administrative, education, arts, entertainment and other services".

A decline in investment by non-residents in Cyprus was recorded in only two sectors: "wholesale, retail trade, repair of motor vehicles and motorcycles" (decrease of €106 million) and "information, communication, administrative, education, arts, entertainment and other services" (decrease of €149 million).

Chart 5 FDI income by geographic area 2013
(€ billion)

Source: Central Bank of Cyprus.

FDI income payments and receipts by residents from abroad constitute another important category of FDI flows and an important component of the current account in the balance of payments. These statistics provide useful information to investors regarding the profitability of their investments in foreign countries and can be used as a basis for comparing the returns from alternative investment channels, such as portfolio investment (e.g. bonds) and other investment (e.g. long-term interest bearing deposits).

There were significant income payments and receipts from abroad in 2013. As demonstrated in **Chart 5** (p.3), €208 million were received (credits) from investments in the "EU 28" and €563 million from investments in "All other countries". In the case of income payments to non-resident investors, €1,09 billion were paid to investors from "All other countries". In contrast, €94 million concerned losses from investments placed by "EU 28" investors in Cyprus.

4. COUNTRY SIMILARITIES IN STOCK POSITIONS

In this section a cluster analysis (based on the k-means algorithm[5]) is applied to the FDI stock data, in order to identify homogeneous groups of countries which have similar stock positions towards Cyprus. Such an analysis is useful for the development of marketing strategies and programmes in order to promote FDI.[6]

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[5] This algorithm aims to partition a sample of observations into k clusters in which each observation belongs to the cluster with the nearest mean.

[6] This clustering approach is economically efficient since only a limited number of marketing programmes may be developed, one for each group of countries. In other cases, much more resources may be required to develop individual marketing programmes for all countries.

The quantitative cluster analysis implemented on the FDI stock positions abroad identified three main clusters of countries. They are depicted in **Chart 6.** The number of countries in each group (bubble) is measured on the horizontal axis and the vertical axis measures the average FDI stock value in each group (estimated as a simple unweighted average of the stock positions of the countries participating in each group).

Chart 6 Clustering of FDI stocks abroad by country (2013) (€ billion)

Source: Central Bank of Cyprus.
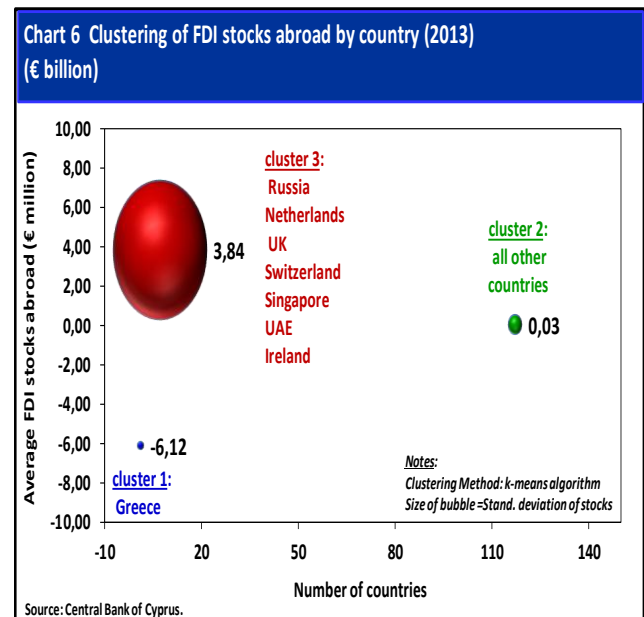
The size of each bubble is proportional to the standard deviation (variability) of the stock values in the associated group[7]. Cluster 3, consisting of eight countries (Russia, Netherlands, UK, Switzerland, Singapore, UAE, Ireland), exhibits the lowest degree of homogeneity. These are the most important FDI destination countries for resident investors. The average stock position in this group is €3,84 billion.

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[7] The standard deviation (variability) provides an indication of the degree of homogeneity within each group. However, when the number of countries in a group is small, the standard deviation should be expected to be high due to the small sample size. Large values (bigger bubbles) indicate less homogeneous groups, characterised by less similar countries.

Cluster 1 consists of only one country, Greece, which has a negative stock value of -€6,12 billion. This is the only country in the dataset with a negative stock position. This negative value is due to the accumulated losses incurred by the investments in the Greek banking sector. The respective stock values for Greece were €5,05 billion in 2012 and €1,25 billion in 2011. All the remaining countries (not included in clusters 1 and 3) have been grouped into Cluster 2, since no further homogeneous groups have been identified in the data. The average stock position in this group is €31 million.

Chart 7 Clustering of FDI stocks in Cyprus by country (2013) (€ billion)
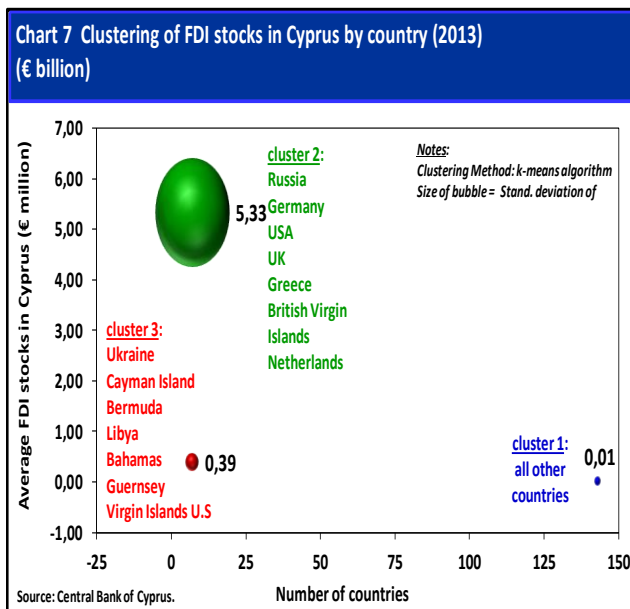
The results of the cluster analysis, when applied to the foreign stock positions in Cyprus, are depicted in **Chart 7**. As with the stock positions abroad, three distinct groups have been identified. Cluster 2 consists of eight countries – Russia, Germany, USA, UK, Greece, British Virgin Islands, Netherlands - and generated the highest average stock value (€5,33 billion). Cluster 3 follows with an average stock value of €391 million (it consists of Ukraine, Cayman Islands, Bermuda, Libya, Bahamas, Guernsey, US Virgin Islands). The small size of the bubble indicates greater similarity between these

countries than in the case of Cluster 2. All other countries have been grouped into Cluster 1 since investors from these countries have relatively small FDI stock positions in Cyprus. The average stock value in Cluster 1 is €11 million.

5. COUNTRY-ECONOMIC ACTIVITY ASSOCIATIONS

The analysis that follows concentrates on identifying associations between countries and economic activities[8]. In **Chart 8** (p.6), a two dimensional spatial representation map is presented, that exhibits the associations between selected countries or groups (e.g. offshore financial centres) and economic activities for FDI stock positions abroad. The exact description of each economic activity group is provided in **Table 1**.

The results were derived by applying the correspondence analysis statistical method on the stock positions of the different countries and economic activities. The distance between the countries in the two dimensional space is a measure of their similarity in receiving FDI from resident investors. For example, in **Chart 8,** Russia and Canada are far from each other, suggesting that their profiles for FDI abroad are different. In contrast, Canada and the group of "EU 28" countries, have more similar profiles. Distances between points representing economic activities are interpreted in the same way. The two dimensions of the chart represent measurement scales derived

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[8] The identification of associations between countries and economic activities is a key insight in order to identify FDI preferences by country. If there is knowledge regarding the preferences of investors coming from specific countries, marketing and investment opportunity programmes can be designed accordingly and become more targeted and relevant. This should maximise the return on investment, by emphasising aspects and opportunities in economic sectors that interest investors the most.

after transformation of the original data. It is also possible to compare the positions of countries and economic activities jointly. In this case, each country will lie in the neighbourhood of the economic activity in which the country's FDI activity is more prominent.

Table 1 Description of economic activities

Economic Activity	Description
1	Mining and quarrying
2	Manufacturing
3	Electricity, gas, steam and air conditioning supply
4	Construction
5	Wholesale and retail trade; repair of motor vehicles
6	Transportation and storage
7	Accomodation and food service activities
8	Information and communication
9	Financial and insurance activities
10	Real estate activities
11	Professional, scientific and technical activities
12	Administrative and support service activities
13	Education
14	Arts, entertainment and recreation
15	Other service activities

Chart 8 FDI stocks abroad 2013: Two dimensional spatial representation of associations between countries and economic activities

Source: Central Bank of Cyprus.
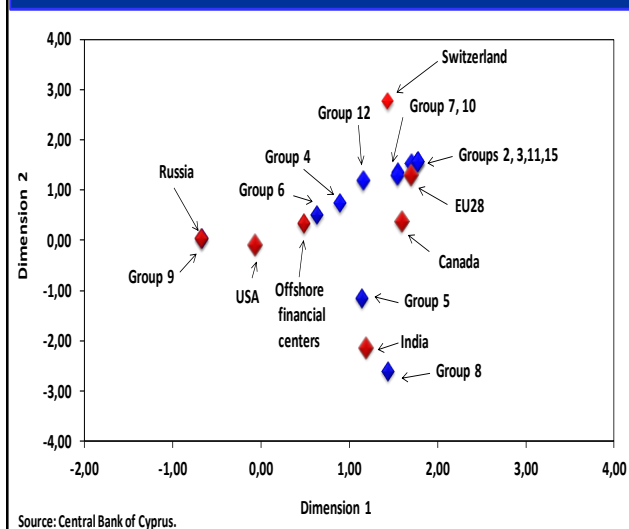
A two-dimensional mapping of FDI stock positions abroad is presented in **Chart 8**. Canada,

the group of "EU 28" countries and, to a smaller extent, Switzerland, exhibit similarities as far as FDI destinations abroad are concerned. These countries are mainly associated with economic activity groups 2, 3, 11 and 15 in Table 1. To a lesser extent, they are also associated with activities 7, 10 and 12. Other notable associations identified from visual inspection of the map include: Russia - economic activity 9, India - economic activity 8 and offshore financial centres - economic activities 6 and 4.

Chart 9 FDI stocks in the reporting country 2013: Two dimensional spatial representation of associations between countries and economic activities

Source: Central Bank of Cyprus.
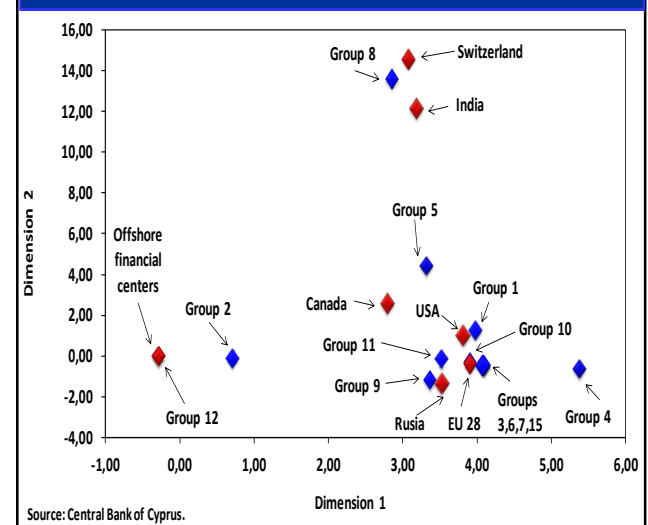
The two-dimensional mapping in **Chart 9** demonstrates the country–economic activity associations for the FDI stock positions undertaken by non-resident investors in Cyprus. Switzerland, India and the offshore financial centres have distinct FDI profiles when compared with the other countries. Switzerland and India are associated with economic activity group 8 and the offshore financial centres with economic activity groups 12 and 2. Other notable associations in Chart 9 include: Russia - economic activities 9 and 11, USA - economic activity 1 and "EU 28" – economic activities 3, 6, 7 and 15.

APPENDIX: DEFINITIONS

According to the IMF definition, foreign direct investment (FDI) reflects a lasting interest of an entity resident in one economy in an enterprise resident in another economy. FDIs consist primarily of equity participation giving a controlling stake in excess of 10 % in the foreign enterprise, greenfield investments and several other special cases.

In general, FDI covers the investment activities of resident entities:

1. whose equity share capital is directly owned by non-residents with participation of at least 10 %and/or

2. whose equity share capital is directly owned by related non-resident entities with participation of less than 10% and/or

3. who are non-autonomous branches of non-resident entities and/or

4. who own directly at least ten percent of the equity share capital issued by non-resident enterprises and/or

5. who own directly less than 10% of the equity share capital issued by related non- resident enterprises and/or

6. who have legal non-autonomous foreign based branches or branch offices.

7. who have borrowed funds (e.g. loans or trade credits) from related non-resident entities, or lent funds (e.g. loans or trade credits) to related non-resident entities, or issued debt securities (short term or long term) which are held by related non-resident enterprises, or hold debt securities (short term or long term) issued by related non-resident enterprises and/or

8. who directly own real estate abroad.

Similarly, FDI cover the acquisition of real estate by non-residents in the reporting economy.

When equity participation is below the 10% threshold, it is classified as portfolio investment. Based on the definitions described above, FDI can be separated into: (a) investment abroad (residents investing in foreign countries) and (b) investment in the reporting country (non-residents investing in the local economy). There are two common exceptions to this FDI definition: (i) reverse investment (i.e. when a subsidiary company invests capital in the "mother" company and the two are located in different countries) and (ii) when lending takes place with the same group (i.e. the subsidiary lends money back to the "mother" company which is located in another country).

In line with the definitions and scope of the balance of payments and the international investment position of a country, two forms of time series variables are generated from FDI activities: stocks and flows.

Stocks refer to the level of assets or liabilities of FDI at a point in time. This information is included in the International Investment Position statement and provides: (a) the total amount of FDI assets (abroad) owned by residents and (b) the total amount of FDI liabilities (in the reporting country) that residents have towards non-residents.

FDI flows refer to transactions carried out within a specific period, the time accumulation of which (over several periods) forms the observed FDI stock positions after taking into consideration changes due to price and exchange rate fluctuations as well as other changes (e.g. reclassifications, write downs).

FDI flows also include FDI income payments. Income credits include receipts of dividends and interest from abroad by resident investors plus reinvested earnings accrued to residents from abroad. In contrast income debits concern payments of dividends and interest by resident entities to foreign (non-resident) investors and reinvested earnings accrued to non residents from their investments in the reporting country.

Flows are recorded in the balance of payments which records the inflows (in the reporting country) and outflows (abroad) of funds related to the financial transactions of the residents of a country, plus the capital and current accounts. The sign preceding each flow amount is of particular importance in understanding the changes in each category. In principle, the following interpretations apply:

FDI flows abroad:
- A negative sign indicates an increase in FDI abroad undertaken by residents (outflow).

- A positive sign indicates a reduction (withdrawal) in FDI abroad undertaken by residents (inflow).

FDI flows in the reporting country:
- A positive sign indicates an increase in FDI in Cyprus undertaken by non-residents (inflow).

- A negative sign indicates a reduction (withdrawal) in FDI in Cyprus undertaken by non-residents (outflow).

FDI income receipts from abroad (credits):
- A positive sign indicates an increase in FDI income receipts by residents from their investments placed abroad.

- A negative sign indicates the realisation of net losses by the FDI placed by residents abroad.

FDI income payments abroad (debits):
- A positive sign indicates an increase in FDI income payments by the FDI investments placed by non-residents in the reporting country.

- A negative sign indicates the realisation of net losses by the FDI placed by non-residents in the reporting country.