UniCredit

Economics Research

UniCredit Global Themes Series

Economics & FI/FX Research
Credit Research
Equity Research
Cross Asset Research

No. 33
8 June 2016

"Internationalization of companies by 2030"

Foreign direct investment of Germany, Italy and Austria

- Foreign direct investment (FDI) has been an integral part of the internationalization strategy of companies.
- With an outward FDI stock of USD 1,600bn, Germany is currently the third-biggest player worldwide after the US and the UK (Italy: USD 550bn; Austria: USD 220bn).
- We derive long-term FDI forecasts based on a proprietary model.
- German and Italian companies are expected to double their foreign investment activities by 2030. The eurozone and the US will remain major destinations. Austrian multinationals will more than triple their FDI outward stocks and expand strongly in the EMU and CEE.
- Further outsourcing will not automatically lead to job losses in home countries. In contrast, higher competitiveness and greater market shares of multinationals are beneficial for domestic employment.

Authors: Dr. Harm Bandholz (UniCredit Bank New York),
Dr. Andreas Rees (UniCredit Bank), Dr. Thomas Strobel (UniCredit Bank)

Editor: Erik F. Nielsen (UniCredit Bank London)

Contents

Research App
Scan for UniCredit
Research Website
or click for UniCredit

Executive Summary

Internationalization of companies

An increasing number of companies do business abroad through foreign direct investment (FDI). Growth in global FDI flows even outpaced the increase in worldwide trade volumes by far, both after the Lehman collapse in 2008 and before.

Germany, Italy and Austria

German and Italian multinational enterprises (MNEs) are among the top global players. With an outward FDI stock of nearly USD 1,600bn and more than 5mn employees, Germany ranks third after the US (6,300bn) and the UK (1,600bn). Italian firms invested USD 550bn abroad (Austria: USD 220bn).

Motives

There are two major reasons for establishing production facilities abroad. The first one is to serve foreign markets directly instead of exporting goods from the home country. Such so-called horizontal FDI helps avoid transportation costs, trade tariffs, fluctuations in exchange rates, etc. The second major reason is the envisaged decrease in overall production costs (vertical FDI).

Long-term FDI forecasts

We estimate a gravity model for Germany, Italy and Austria in order to derive future FDI trends by 2030. Our gravity model includes the following variables:

- GDP of the host country (foreign market size)
- GDP of the home country (domestic economic power)
- Difference between GDP per capita of the host country and the home country (as a proxy for wage costs)
- Distance between the two capitals of the host country and the home country (as rough approximation for cultural differences, similar legal systems, etc.).

Results for baseline

We use long-term GDP and population forecasts provided by the OECD as input variables for our gravity model (baseline). Accordingly, German, Italian and Austrian companies each will about double their outward FDI stock by 2030. In the case of Germany, an additional EUR 1,200bn will be invested abroad (Italy: EUR 500bn). For both German and Italian MNEs, the eurozone and the US will remain the most important destinations. FDI in China will grow briskly but still not play a leading role. Austrian companies will more than triple their foreign investment activities. Among the Top-10 destinations will exclusively be European countries with a strong focus on CEE.

Results for risk scenario

Since there could be backlashes to globalization in the next 15 years, we additionally develop a risk scenario to derive the lower bound. Accordingly, the sensitivity of FDI to GDP and population is assumed to be 50% lower than in the past. Even then, foreign investment activities will grow substantially by 2030 (Germany: EUR 500bn; Italy: EUR 200bn; Austria: EUR 170bn).

Positive home country effects

By exploiting lower wage costs in other countries and expanding foreign markets, MNEs become more competitive and increase their sales both at home and abroad. As a result, initial job losses at home might eventually be compensated for by new hiring.

I. Internationalization through FDI

FDI outpacing exports

An increasing number of companies do business abroad. Foreign direct investment (FDI) has become an integral part of this internationalization strategy. In the last three decades, growth in global FDI flows even outpaced the increase in worldwide trade volumes by far. Since the start of the 1980s, global FDI flows rose by 2,500% compared to 900% for international trade (see chart 1). Global GDP even increased "only" by 150% in the last 35 years. At the same time, global FDI activities were significantly more volatile. In 2014, FDI flows amounted to more than USD 1,300bn after peaking at USD 2,100bn in 2007. This compares to about USD 50bn at the start of the 1980s and USD 200bn at the beginning of the 1990s.

Germany, Italy and Austria

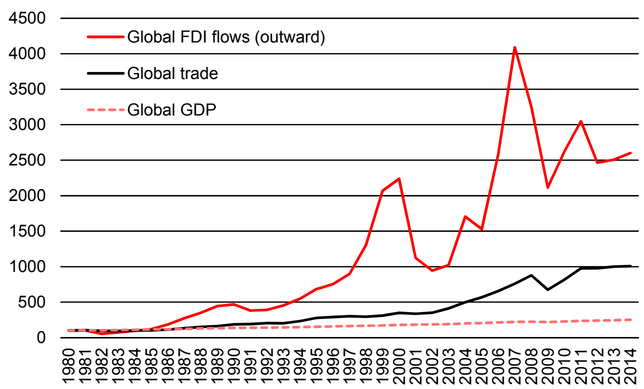
Multinational enterprises (MNEs) in Europe have been at the forefront of this development as illustrated by Germany, Italy and Austria. Since the start of the 1990s, the outward FDI stock of German companies increased 8% each year on average (Italy: 10%). Austrian MNEs even grew by 18% p.a. abroad. After the Lehman collapse in 2008, average growth has been less brisk but still respectable: Germany (+3% p.a.; Italy: +4% p.a.; Austria: +7% p.a.).

When looking at sheer volumes, both German and Italian MNEs are among the top global players (see chart 2). With an outward FDI stock of nearly USD 1,600bn, Germany ranks third after the US (6,300bn) and the UK (1,600bn). Italian firms invested USD 550bn abroad (Austria: USD 220bn).

Forecasting FDI by 2030

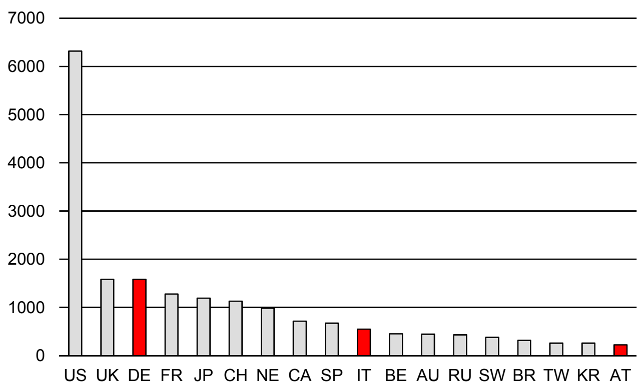
How strong will the internationalization process be in coming years? And, even more important, in which countries will European MNEs invest? In the following analysis, we derive long-term forecasts of outward FDI stocks by 2030 based on a proprietary model. Our focus is on German, Italian and Austrian companies. Beforehand, we elaborate on the reasons for going abroad both from a theoretical and empirical viewpoint (chapter 2 and 3).

CHART 1 – INDICES (YEAR 1980=100)



Source: UNCTAD, IMF, UniCredit Research

CHART 2 – OUTWARD FDI STOCK BY COUNTRIES, IN USD BN (2014)



Source: UNCTAD, UniCredit Research

II. Why companies invest abroad

Definition

Foreign direct investment (FDI) is defined as an investment by a domestic company in another country. In contrast to portfolio investment, it aims at establishing a long-term business and a significant degree of influence on management decisions. According to OECD definitions, such a relationship exists if there is a direct or indirect ownership by the resident company which involves at least 10% of the voting power. Such a threshold is regarded as arbitrary but is mechanically applied in order to derive a common and consistent measure across countries. FDI does not only include the equity transaction in the beginning but also all subsequent cross-border transactions in equity and debt instruments. Examples are common and include preferred shares, reserves, reinvestment of earnings, bonds, commercial paper, trade credits, etc.[1]

Two major forms of FDI

The two major FDI types are the so-called greenfield investments and mergers & acquisitions (M&A). A greenfield investment is the establishment of a new company abroad, including new operational facilities. M&A involves the purchase of an already existing firm. In the case of Germany and Italy, greenfield investments usually dominate, although there are sometimes outliers. In 2014, the announced greenfield investments (flows) of German companies amounted to more than USD 50bn compared to USD 30bn in M&A. In the case of Italy, greenfield investments were USD 18bn, while M&A were down by USD 10bn (Austria: USD 5bn greenfield; USD 0.4bn M&A).

CHART 3 – GERMAN OUTWARD FDI FLOWS BY TYPE, IN USD BN

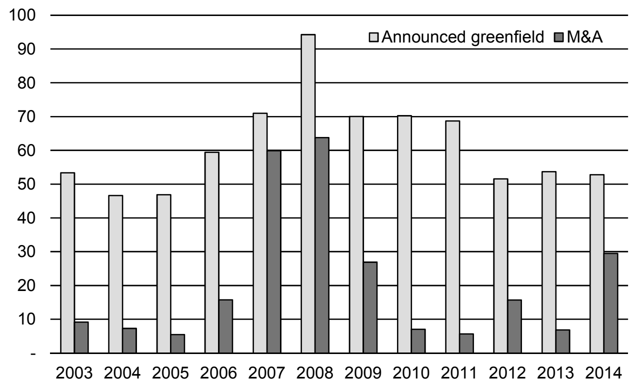
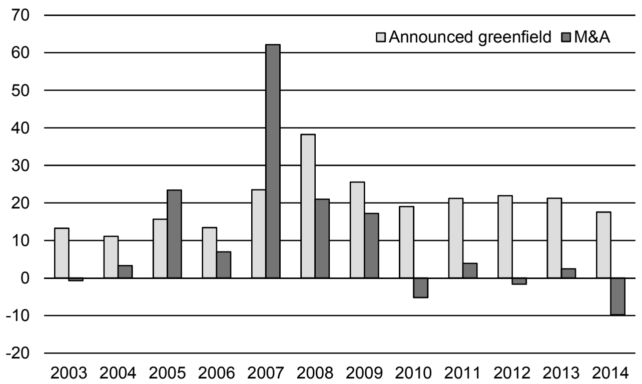


CHART 4 – ITALIAN OUTWARD FDI FLOWS BY TYPE, IN USD BN



Source: UNCTAD, UniCredit Research

Plenty of motives

It goes without saying that there are numerous reasons for companies to invest in a foreign country. In the following, we briefly explain the two most important ones in theory. Afterwards, surveys are presented for German and Italian companies in which the importance of motives in practice is shown.

1. Serving local markets

The first major reason for establishing production facilities abroad is to serve foreign markets directly instead of exporting goods from the home country. This type is called **horizontal FDI**, since the same goods are produced at home and/or abroad. FDI and exports are regarded as substitutes by the domestic company, thereby facing a decision trade-off. An export strategy involves transportation costs plus some additional obstacles such as trade tariffs, fluctuations in exchange rates, etc. Investing abroad means bearing fixed costs for setting up subsidiaries in a foreign country.

[1] OECD Benchmark Definition of Foreign Direct Investment, Fourth Edition, 2008

From exports to FDI

Companies may opt first for following an export strategy before thinking about FDI. In the beginning, the resident firm enters a foreign market by shipping goods abroad. The backdrop includes substantial uncertainties about future demand, regulations, etc. Over time, the resident company may gather additional knowledge about the foreign market. If exporting does not generate "enough" profits in the medium term, production facilities will gradually be built abroad. Hence, horizontal FDI implies an economic causality from exports to investing abroad.[2]

2. Reducing production costs

The second major reason for FDI is the envisaged decrease in overall production costs. In order to achieve this goal, the resident company segments the production process across countries. For instance, labor-cost intensive parts of a good are produced at foreign facilities and then shipped to the home country where the input is refined. Exports and FDI are not substitutes but seen as complimentary (**vertical FDI**). Besides the classic labor cost argument, there are additional reasons why companies find it attractive to invest abroad. A well-developed infrastructure and an open-door-policy by the government also lead (indirectly) to shrinking costs. Examples are a low tax burden, subsidies, low regulatory requirements, etc. In any case, there is an economic causality going from FDI to exports. Input and intermediate goods are shipped from abroad to the home country.[3]

Survey results

In reality, the reasons for FDI can differ substantially over time and by destination country. This can be shown by surveys for German and Italian MNEs.

Germany

Every year, the German Chambers of Commerce and Industry (DIHK) conducts a FDI survey to be released in spring. Accordingly, 47% of German industrial companies are planning investments abroad in 2016, which is the highest level since the start of the survey in the mid-1990s.[4] These plans are dominated by horizontal FDI motives. 31% of the companies that are going abroad state that market development is their focus. About 45% envisage the improvement of sales and customer service (see chart 5). In contrast, the importance of the cost-savings motive (vertical FDI) decreased substantially compared to the situation more than ten years ago. At that time, about 40% of German MNEs stated that foreign investment was primarily triggered by cost-reduction plans. In 2015, it was only 24%, although the share has moderately risen again in the last few years due to the pickup in German wages (2013: 20%). When looking at FDI destination countries (or regions), there are substantial differences. Horizontal FDI considerations clearly dominate in the case of China and North America (see chart 6). In contrast, in the case of the eurozone, the motives of market development and reducing costs played an equally important role as of late. One explanation is the regained competitiveness of some EMU countries after the crisis years.

[2] Conconi, P. et al. (2012), The Internationalization Process of Firms from Exports to FDI, Working Paper, October
[3] Of course, mixed strategies are also conceivable. Resident companies invest in low-cost countries in order to generate export platforms for other countries excluding the home country.
[4] Deutscher Industrie- und Handelskammertag (2016), Atempause in China – Europa füllt die Lücke, April

CHART 5 – FUNCTIONAL FOCUS OF FOREIGN INVESTMENT OF GERMAN INDUSTRIAL COMPANIES, IN %

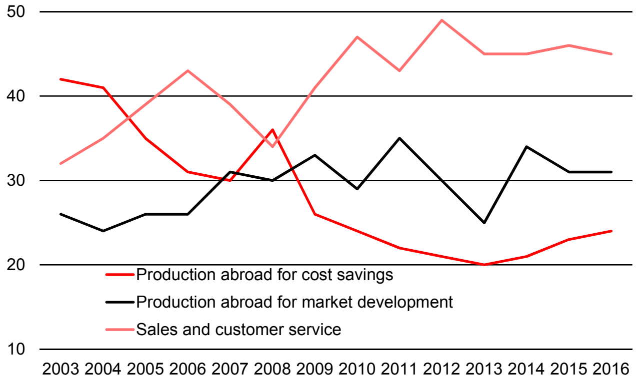
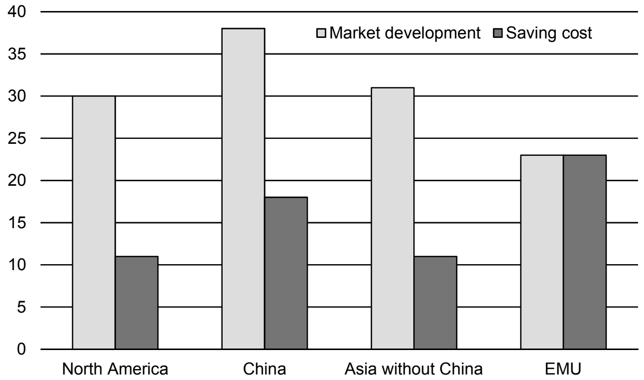


CHART 6 – “MARKET DEVELOPMENT” AND “SAVING COSTS” REASONS OF GERMAN INDUSTRIAL COMPANIES (2016), IN % (MULTIPLE ANSWERS)



Source: DIHK, UniCredit Research

Italy

A similar picture emerges for Italy on the basis of the INVIND survey. Demand considerations typically dominate when it comes to FDI in industrialized countries (see table 1). For instance, 61% of manufacturing companies say that they are attracted by high demand compared to only 3% for which lower labor costs are more important. 15% state that the proximity to customers or suppliers has been the decisive factor. When investing in emerging markets, the responses in the survey become more balanced. About 26% each say that high demand or lower labor costs are the major reasons for going abroad (proximity to customers or suppliers: 29%). In the non-financial services sector, demand aspects dominate independent of whether companies invest in mature markets or developing countries.

TABLE 1: ITALIAN MNES AND THEIR MOTIVES FOR GOING ABROAD (SHARES, IN %)

	Manufacturing		Non-financial services	
Motives	Advanced countries	Developing countries	Advanced countries	Developing countries
Lower labor costs	3.5	26.2	0.0	3.6
High demand in local or neighboring markets	61.1	26.0	60.6	56.0
Proximity to customers or suppliers	15.4	28.9	12.4	13.6
Acquisition of competitors/sharing of technologies or patents	4.8	1.7	0.0	0.0
Other motivations (less stringent environmental & fiscal rules, cheaper raw materials, etc.)	15.2	17.2	27.0	26.8

Source: INVIND survey (2011) quoted in Cristadoro, D’Auriizio (2014), UniCredit Research

III. The status quo

Cross-country comparisons

In the following, some key figures for German, Italian and Austrian MNEs are summarized and compared before deriving the forecast model in the next section.

Volume

- In terms of sheer volumes, German MNEs invested a total of nearly USD 1,600bn so far compared to about USD 550bn by Italy and USD 220bn by Austria (see chart 7).

Growth

- Austrian companies recorded the strongest growth abroad since the start of the 1990s. Its outward FDI stock rose by the factor 44 (Germany: 9; Italy: 8).

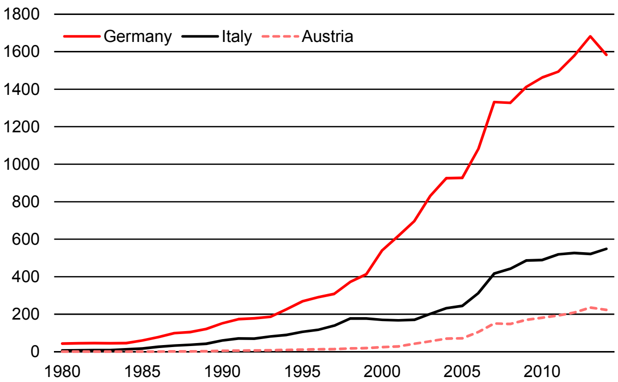
Destinations

- FDI activities in the EU dominate, albeit to different extents. With a share of 68%, Italian companies are somewhat more attached to Europe than their peers in Germany (63%) and Austria (66%).

Top countries

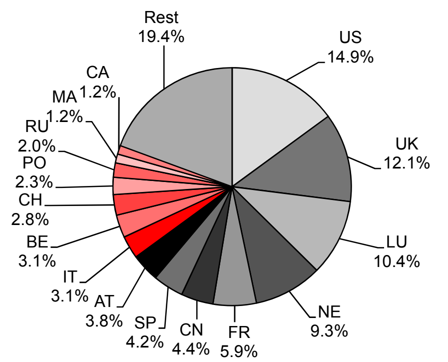
- With a share of 15%, the single most important FDI destination for Germany is the US, followed by the UK (12%; see chart 8). For Italian MNEs, the Netherlands is (seemingly) the top FDI destination. 16% of the Italian outward FDI stock is located in this country, followed by Spain and Germany with about 8% each. Top destination country for Austrian companies is Germany (13%).

CHART 7 – OUTWARD FDI STOCK, IN USD BN



Source: UNCTAD, UniCredit Research

CHART 8 – TOP15 FDI DESTINATIONS OF GERMAN COMPANIES (2013), COUNTRY SHARES IN % OF TOTAL OUTWARD FDI STOCK



Source: OECD, UniCredit Research

Special Purpose Entities

- However, these country data have to be interpreted with substantial caution in some cases. The figures for the Netherlands are a good example. So-called Special Purpose Entities (SPEs) inflate the data, since they have little or no physical presence in the host country. SPEs take the form of conduits, holding companies, etc., and help finance MNEs' group activities or take care of their assets and liabilities. Since huge amounts of capital are channeled through SPEs, foreign investment activities in some countries look greater than they actually are. In the Netherlands, about 80%-85% of the total FDI position is related to SPEs. Similar distortions can be observed in the case of Luxembourg.[5] Unfortunately, SPE investment data by country cannot always be obtained. Hence, it is difficult to say exactly how much smaller the Dutch FDI share is for Italian MNEs. We will deal with this problem in the next chapter when a model for forecasting FDI is presented.

[5] De Nederlandsche Bank (2013), The Effects of Including SPEs on BOP and FDI Statistics, October and OECD (2014), International investment continues to struggle, FDI In Figures, December

China

- Although FDI has been growing briskly, China and other emerging markets still play a comparatively minor role. In the case of Germany, FDI stock shares in China are 4% compared to 2% for Italy and 1.5% for Austria.

Employment and turnover

- There are more than 27,000 German companies that invested abroad. They employ more than 5mn employees and generate a turnover of nearly EUR 1,900bn. This compares to 22,000 Italian companies with 1.8mn employees and a turnover of EUR 541mn. (Austria: 4,100 firms; 0.6mn employees; turnover: EUR 151mn).

TABLE 2: COMPARISON OF OUTWARD FDI ACTIVITY

Variable	Unit	Germany	Italy	Austria
Total outward FDI stock (2014)	EUR bn*	1,439	499	203
Total outward FDI stock (2014)	In % of GDP*	49	31	62
Share of FDI stock in EU-28 (2013)	In % of total FDI	63	68	66
Share of FDI stock in US (2013)	In % of total FDI	15	6	4
Share of FDI stock in China (2013)	In % of total FDI	4	2	1.5
Single most important destination country (2013)	In % of total FDI	US (15)	Netherlands (16)	Germany (13)
Number of companies (2013)	---	27,420	22,004	4,132
Number of employees (2013)	In mn	5.2	1.8	0.6
Average number of employees (2013)	---	190	82	145
Turnover (2013)	In EUR bn	1,865	541	151

*Using EUR-USD exchange rate of 1.10

Source: UNCTAD, OECD, Eurostat, UniCredit Research

IV. Forecasting outward FDI stocks by 2030

General approach

As noted previously, a multitude of factors influence companies and their decisions to invest abroad. Taking all of them into account is neither possible nor necessary.

Data restrictions

It is not possible, since some of the data on which individual company decisions are based are limited (or not available at all). One example is the FDI Regulatory Restrictiveness Index of the OECD which measures the difficulties of investing in specific countries. Accordingly, MNEs faced the biggest obstacles in China, Indonesia and India in 2014 (see chart 9). This stands in stark contrast to the framework conditions in industrialized countries, especially in the eurozone. Unfortunately, the Regulatory Restrictiveness Index is only available for a few years and cannot therefore be used for estimation purposes. Furthermore, one would need (reliable) estimates of policymakers' future regulation initiatives or, better, what companies expect them to be.

Identifying trends

It is also not necessary to have the complete set of information, although it would be, of course, very helpful. Our approach does not aim at deriving yearly point forecasts for FDI but at identifying longer-term fundamental macro trends.

CHART 9 – OECD FDI REGULATORY RESTRICTIVENESS INDEX (2014)

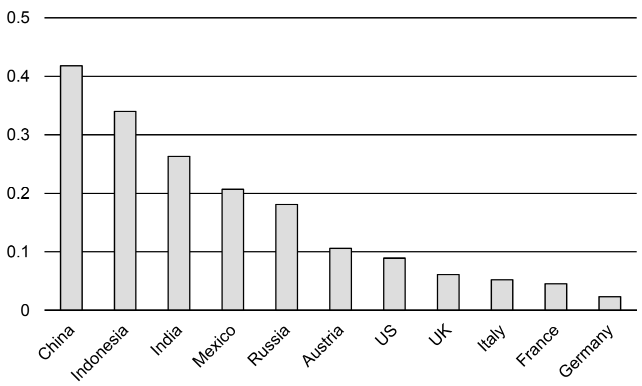
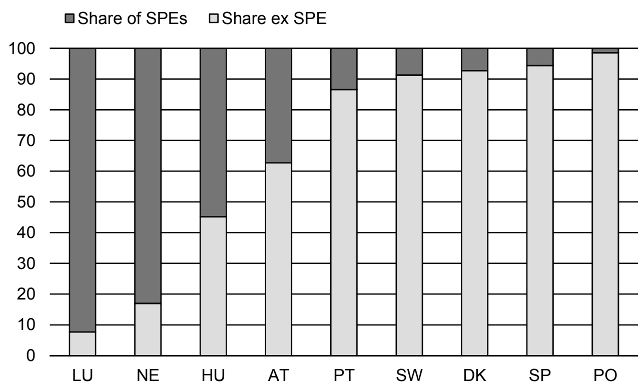


CHART 10 – SHARE OF INWARD FDI INTO SPES AND NON-SPES, IN % (2014)



Source: OECD, UniCredit Research

Gravity model as basis

For this purpose, we opted for a so-called gravity model. Gravity models are widely used in academic literature for estimating international trade and FDI. The underlying idea is straightforward. There are two major factors in determining FDI. The first one is economic size. The second one is geographic distance.

1. Market size

The larger one host country is in terms of real GDP and population, the more foreign capital it may attract. A high level of income suggests high potential demand for goods and services. Furthermore, there also might be economies of scale. If a good is produced in quantity in the host country, production costs shrink. Besides the economic power of the host country, the market size of the home economy from which the FDI flow comes may also matter. The larger the home country, the higher are capital funds that are invested abroad.

Similar versus different countries

However, it is a priori not clear whether economically similar countries engage in more or less foreign investment activities. To answer this question, one has to distinguish between horizontal and vertical FDI again. In the case of similar countries, the likelihood of horizontal FDI increases. MNEs are simply duplicating their successful business model at home abroad.

In contrast, vertical FDI motives only play a prominent role if countries differ in terms of labor costs and factor intensities. In other words, the stronger the differences in GDP per capita (as a proxy for wage costs), the higher vertical FDI. Of course, both motives can also overlap in practice.

2. Geographic distance

The second major variable included in a gravity model is geographic distance between the two countries. Geographic distance is supposed to be an obstacle to FDI and is therefore inversely related to investment activities abroad. At first sight, such a variable may sound counter-intuitive in a globalized world where communication means have been improving so tremendously. However, academic studies show that geographic distance can still act as a proxy for a variety of factors. Examples are cultural proximity, a common language, similar legal systems and organizational culture.[6] To take an example, it is still probably easier for a German company to establish a production site in France than in China.

Three country samples

We estimated three separate equations for a panel of destination countries for Germany, Italy and Austria, respectively. Our period of coverage is 1985 to 2013.

Including SPEs

Finally, we augmented our gravity model by taking the activities of SPEs into account. As described in the previous chapter, they can inflate the actual FDI volume substantially in some cases. Between 80% to 95% of the FDI stock in the Netherlands and Luxemburg are caused by SPEs (see chart 10). In these two cases, we added dummies to the equation for Germany and Italy. In the case of Austria, we included dummies for various Central and Eastern European economies to capture the country's role as a hub for investment in that area.

Equation

Our augmented gravity model looks as follows:

$$FDI_{ijt} = \alpha + \beta_{1j} GDP_{it} + \beta_{2j} GDP_{jt} + \beta_{3j} (GDP\_cap_{jt} - GDP\_cap_{it}) + \beta_{4j} dist + \beta_{5j} dum + \varepsilon_{ijt}$$

- FDI_{ij} as FDI inward stock of country *i* (host country) held by country *j* (home country)
- *GDP* of country *i* or *j*
- *GDP_cap* = GDP per capita of country *i* or *j*
- *dist* = distance between the two capitals of countries *i* and *j*
- *dum* = country dummies

All variables are in log form apart from the dummies. In the equations for Italy and Germany, they equal 1 in the case of the Netherlands and Luxembourg and zero for all other countries. In the equation for Austria, they equal 1 in the case of Bulgaria, Russia and Romania, and zero otherwise.[7] The subscript *t* denotes time measured as yearly observations.

Estimated elasticities in equation

The estimated elasticities (β) of the three equations uniformly show the anticipated signs and are significant. Both GDP in the host and home economy positively influence FDI activity. Physical distance between countries (as a proxy) reduces the willingness of MNEs to invest abroad. The sign of the difference in GDP per capita is negative. Accordingly, the lower the gap in wage costs between the host and the home country the higher FDI activity. Obviously, horizontal FDI motives in the form of expanding markets dominate on average in all three panels. Of course, vertical FDI can still play an important role on a bilateral basis.

[6] Levis, M. et al. (2015), Home bias persistence in foreign direct investments, The European Journal of Finance, March

[7] We started our estimate with a larger number of country dummies ("fixed effects"), but narrowed them down on the basis of statistical significance.

Two scenarios by 2030

In the next step, we used our estimates for deriving FDI activities of Germany, Italy and Austria in the Top-15 countries by 2030. These forecasts are conditional ones. In our equation, current FDI volumes are dependent on current levels of GDP and population. Hence, assumptions about the future development of these two variables for both the home and the host countries are needed.

1. Baseline (OECD) scenario

In our baseline scenario, we used long-term forecasts provided by the OECD.[8] For better orientation, charts 11 and 12 show some selected figures for average growth of potential GDP and population by 2030. Accordingly, the German economy is expected to grow by only about 1% per year on average. The population will even shrink. Somewhat better data are expected for Italy (growth: +1.5%), Austria (+1.9%) and some other major industrialized countries. China is projected to grow by 5% on average, while its population will increase less than half compared to the US.

2. Risk scenario: Backlash in globalization

Inevitably, and of course, such long-term forecasts are prone to substantial uncertainties. Furthermore, and maybe even more important, there could be structural breaks. For instance, a backlash in globalization may have already started after the financial crisis and could continue in the next few years. Since the willingness of companies to invest abroad diminishes, our gravity model overestimates FDI stocks. In the following chapter, we will discuss the pros and cons of such structural breaks in more detail.

Reduction in estimated coefficients

In order to take these effects into account, we reduced the estimated coefficients by half. In less technical terms, it is assumed that the sensitivity of foreign investment activity to GDP and population is 50% lower in the next 15 years than before. Of course, reducing the estimated coefficients by half is arbitrary (and a drastic move). However, such a procedure should provide the lower bound of FDI activity by 2030 in case of a severe backlash to globalization.[9]

CHART 11 – POTENTIAL GDP GROWTH, IN % P.A. (2014-2030)

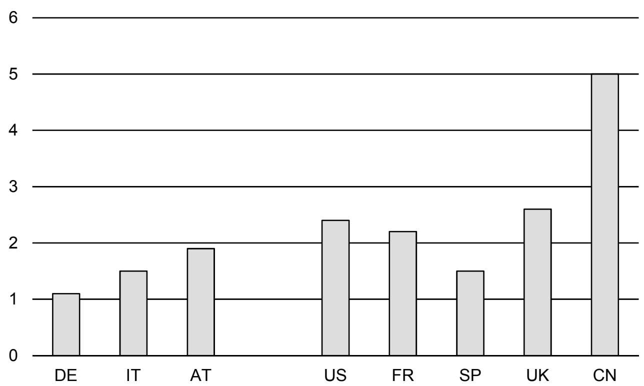
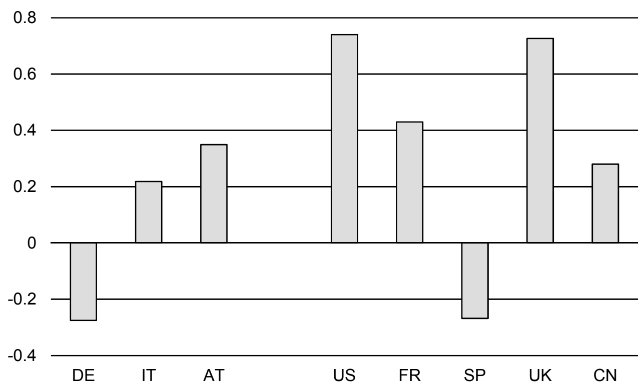


CHART 12 – POPULATION GROWTH, IN % P.A. (2014-2030)



Source: OECD, UniCredit Research

Results

In the following, major results are presented for Germany, Italy and Austria.

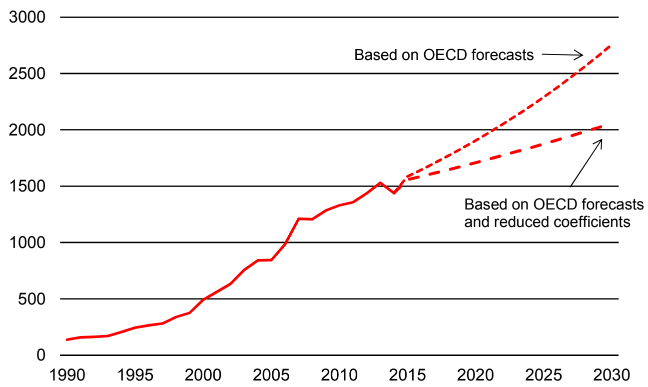
[8] OECD Economic Outlook (2014), Growth Prospects And Fiscal Requirements Over the Long Term, Chapter 4

[9] Alternatively, or in addition, one could also reduce the OECD long-term forecasts which in turn would dampen foreign investment activities.

1. Germany

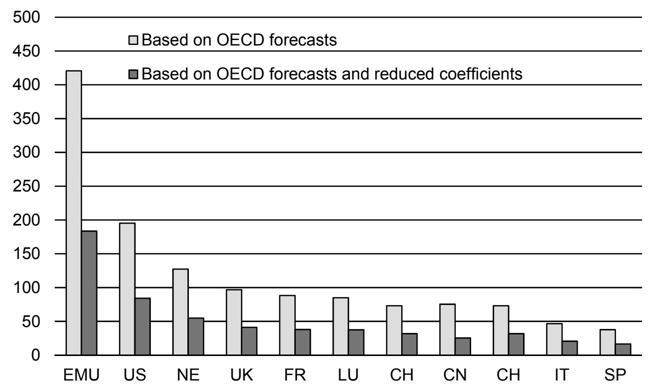
In our baseline scenario, German companies will invest abroad an additional EUR 1,200bn from 2016 to 2030 (see chart 13).[10] Hence, outward FDI stocks will nearly double in the next 15 years. Major host countries will remain the eurozone with EUR 420bn, followed by the US with about EUR 200bn. Accordingly, industrialized countries will still be more important destinations in absolute terms (given the higher base as of today) than China which will receive an additional EUR 75bn (see chart 14).[11] Assuming a backlash in globalization and reduced coefficients, German companies will still invest EUR 500bn abroad.

CHART 13 – GERMAN OUTWARD FDI STOCK, IN EUR BN (BASED ON CURRENT EXCHANGE RATE)



Source: UNCTAD, UniCredit Research

CHART 14 – CHANGE IN GERMAN OUTWARD FDI STOCKS BY COUNTRIES (2016-2030), IN EUR BN

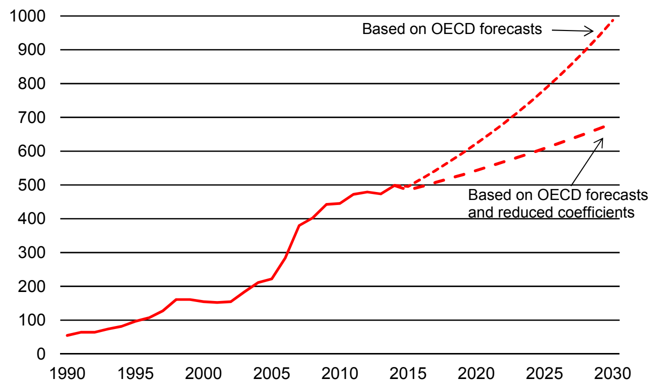


Source: UniCredit Research

2. Italy

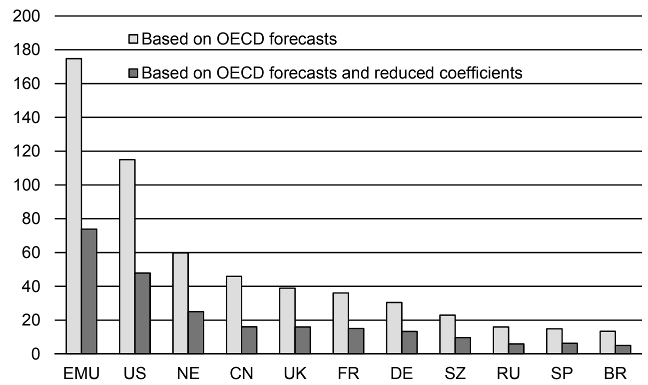
In our baseline scenario, Italian companies will double their outward FDI stock from about EUR 500bn (based on current exchange rates) to EUR 1,000bn by 2030 (see chart 15). As is the case for Germany, the most attractive host region will remain the eurozone with an additional EUR 180bn, followed by the US (EUR 120bn) and China (nearly EUR 50bn). In the risk scenario of “de-globalization”, foreign investment activities would still grow by EUR 200bn.

CHART 15 – ITALIAN OUTWARD FDI STOCK, IN EUR BN (BASED ON CURRENT EXCHANGE RATE)



Source: UNCTAD, UniCredit Research

CHART 16 – CHANGE IN ITALIAN OUTWARD FDI STOCKS BY COUNTRIES (2016-2030), IN EUR BN



Source: UniCredit Research

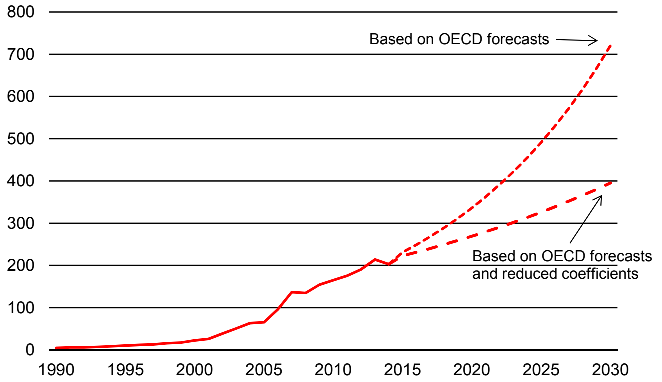
[10] As we are interested in real investment decisions, we are stating the results in constant 2015 prices. The nominal investment flows will most likely be perceptibly higher, depending on actual inflation rates.

[11] It goes without saying that, in relative terms, foreign investment activities will rise more strongly in China than in many developed countries. Despite the assumed slowdown by the OECD, growth in China will still outpace EMU growth in the next two decades.

3. Austria

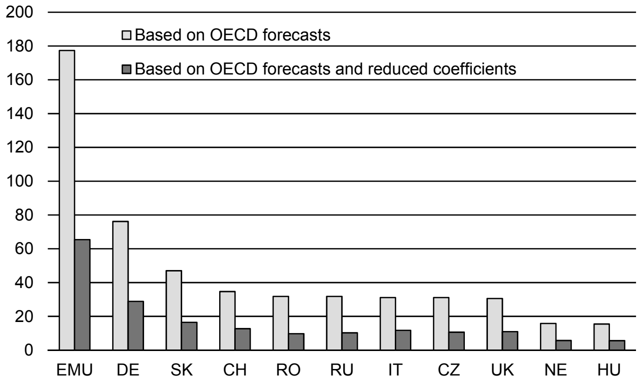
In our baseline scenario, Austrian multinationals will invest an additional EUR 500bn abroad by 2030 (see chart 17). Hence, outward FDI stocks will more than triple and even outpace the developments in Germany and Italy (in growth terms). Among the Top-10 destinations will exclusively be European countries (see chart 18). In total, Austrian companies will invest EUR 180bn in the eurozone, nearly half of which goes to Germany. Other important host countries are in CEE: Slovakia, Romania, Czech Republic and Hungary. In our risk scenario, Austrian MNEs would still expand their foreign business by EUR 170bn.

CHART 17 – AUSTRIAN OUTWARD FDI STOCK, IN EUR BN (BASED ON CURRENT EXCHANGE RATE)



Source: UNCTAD, UniCredit Research

CHART 18 – CHANGE IN AUSTRIAN OUTWARD FDI STOCKS BY COUNTRIES (2016-2030), IN EUR BN



Source: UniCredit Research

V. The pros and cons of “de-globalization” in FDI

In the following, we briefly discuss how likely a setback in globalization is. After all, this question will decide whether foreign investment activities will be at least close to the estimates in our baseline scenario or substantially lower as flagged by our risk-scenario exercise.[12]

Pro de-globalization

In favor of the “de-globalization” hypothesis, the following arguments may be made.

Peak in global value chains

- After the fall of the Iron Curtain and the liberalization of trade and investment policies in the 1990s, companies located their production sites at various stages across different countries. As a result, global value chains emerged. However, the process of international production fragmentation has to peak eventually by nature. The major reason is the fact that global value chains will become increasingly mature. In other words, surging FDI flows in the last two or three decades were just a transitional phenomenon.

The “China factor”

- After the financial crisis, the relative importance of investment activity and private consumer expenditures changed. Global investment activity exhibited a significant decline and has only barely recovered to pre-crisis levels. Conversely, private consumption played a more prominent role worldwide. The probably most illustrative example is the structural rebalancing of the Chinese economy away from an export-driven and investment-dependent model. After decades of strong exported-oriented FDI flows, China’s trade regime (dubbed the “workbench of the world”) has deliberately been shifted by policy makers. In particular, rising labor costs drive foreign manufacturing companies to move to other low-wage destinations or return to their home countries.

Rising protectionism

- Since the Lehman collapse, a regime shift in policies worldwide may have occurred. Governments have turned back the clock by increasing barriers to free trade and investment. Domestic companies have been assisted through subsidies and favorable tax treatment. In particular, while there has been a continued improvement in the FDI restrictiveness index of OECD countries before 2008, this improvement came to halt afterwards.

CHART 19 – GROWTH IN OUTWARD FDI STOCK P.A., IN %

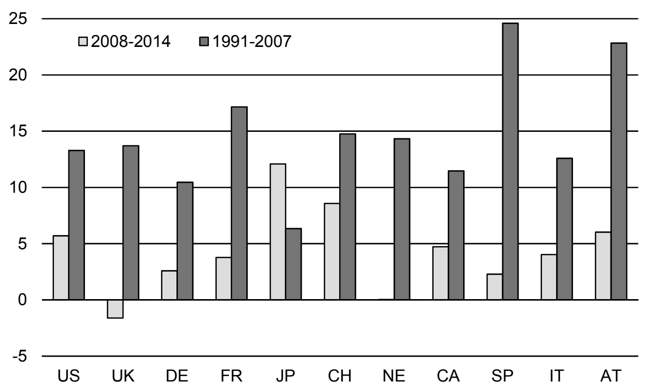
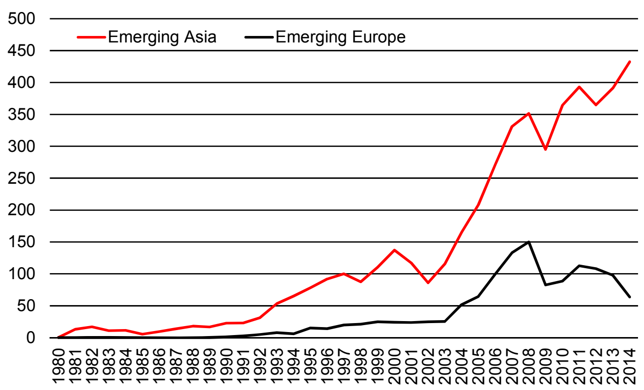


CHART 20 – GLOBAL INWARD FDI FLOWS, IN USD BN



Source: UNCTAD, UniCredit Research

[12] Many more studies have focused on the slowing of global trade since the financial crisis so far. A variety of different approaches and perspectives can be found in “The Global Trade Slowdown: A New Normal?”, edited by Bernard Hoekman (2015).

Regional production

- Besides increasing protectionism, new technologies could replace global value chains by regional production networks. One example is 3D printing ("additive manufacturing") which may make the international relocation of production sites less attractive.

Empirical evidence

- In the last few years, FDI of major countries already rose (nearly) unanimously less briskly than before. For example, in the case of Germany, growth in the outward FDI stock was a rather meager 2½% p.a. since 2008 (see chart 19). This compares to more than 10% each year between 1991 to 2007 (Italy: 4% versus 12½%). Global FDI flows to Emerging Asia continued to increase but at a less rapid pace. In the case of Emerging Europe, inward FDI flows even declined in absolute USD terms (see chart 20).

Contra de-globalization

From an empirical viewpoint, it is undoubtedly true that FDI has been increasingly less brisk since the Lehman collapse in 2008. However, it is not clear whether this is just a temporary issue or a long-lasting structural break. In other words, the jury may still be out. More concretely, the following arguments contra de-globalization can be made.

Just cyclical weakness

- The aftermath of the 2008-09 recession is still being felt in the global economy. Both companies and consumers are in the process of reducing their debt overhangs and rebuilding their balance sheets. As a result, capex spending in general has remained rather subdued in the last few years. As soon as these cyclical headwinds vanish, FDI activity will resume momentum again. By historical standards, such temporary periods of weakness are not unusual. Examples are the episodes at the beginning of the 1980s after the second oil price shock, and the 2000s after the bursting of the equity bubble (see chart 21).

Rising importance of services

- In the last few years, a structural shift in the global economy towards services has started. Since China shifted towards greater reliance on private consumer expenditures, demand for services including FDI will rise and at least compensate for weaker investment activity in manufacturing. In 2003, only 30% of the globally announced greenfield FDI projects occurred in the services sector (see chart 22). In 2014, the share was about 50% and hence higher than in manufacturing.

CHART 21 – GROWTH IN GLOBAL OUTWARD FDI STOCK P.A., IN %

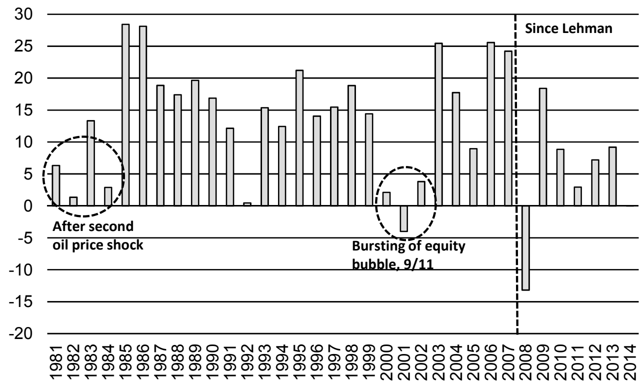
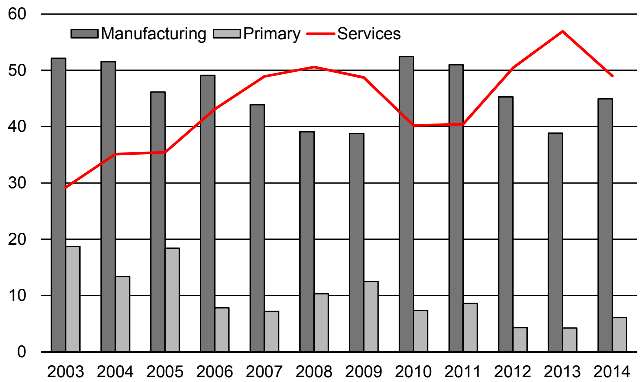


CHART 22 – SHARE OF GLOBALLY ANNOUNCED GREENFIELD FDI PROJECTS BY SECTOR, IN %



Source: UNCTAD, UniCredit Research

Internationalization of SMEs

- Traditionally, large companies are expected to do more business abroad than smaller and medium-sized ones (SMEs). However, the implementation of new technologies may lower fixed and variable costs of international transactions and allow SMEs more international transactions. Examples are the Internet, digitization and e-payment systems. So-called micro-multinationals leverage these new technologies to access customers worldwide and invest abroad. The relevance of micro-multinationals is illustrated by recent research. Lendle et al. (2013) looked at small US business sellers on eBay in 2010 and showed that Internet technologies, such as the eBay platform, significantly helped small businesses to connect to a global customer base.[13] In particular, a remarkably high share of 85% of business sellers on eBay was engaged in cross-border sales.

Ongoing stimulus from liberalization of FDI policies

- Further support for global FDI activities may come from investment policy measures. In contrast to often heard arguments, policy continued to be directed towards investment liberalization and promotion. According to the latest UNCTAD investment report, more than 80% of investment policy measures aimed to improve entry conditions and reduce restrictions for foreign investors in 2014. Thereby, the focus was on investment facilitation and sector-specific liberalization (e.g. in manufacturing, infrastructure and services).[14] Countries also continued to reform the international investment agreements (IIAs) regime. In 2014, 31 new IIAs were concluded, most with provisions related to sustainable development. At the same time, countries considered new approaches to investment policymaking. Reacting to the growing discomfort with the current functioning of the global IIA regime, together with today's sustainable development imperative, more than 50 countries and regions were engaged in revising their IIA models.

TTIP

- On a broader interregional level, the Transatlantic Trade and Investment Partnership (TTIP) between Europe and the US, which aims at removing trade barriers (both tariff and non-tariff barriers), should facilitate FDI activity in both regions. Its impact might be substantial, as the US is the most important destination for EU outward FDI.

[13] Lendle, A. et al. (2013), eBay's anatomy, Economics Letters, Volume 121, Issue 1, October 2013.
[14] UNCTAD (2015), World Investment Report 2015, Reforming International Investment Governance, United Nations, Geneva.

VI. Home country effects of outward FDI

Effects on domestic employment

Assuming a continuation of brisk foreign investment activities by 2030, one important question arises. Is it good or bad for the home country? In public, especially the impact on the domestic labor market is controversially discussed. Further outsourcing could dampen employment opportunities for less skilled workers, depress wages and lead to rising inequality in industrialized countries.

Ambiguous effects of vertical FDI

It is true that, by purpose, vertical FDI replaces production facilities which were previously located in the home country. Labor-intensive activities are outsourced abroad with lower wages, while more advanced operations such as R&D are kept at home. However, such effects do not automatically lead to negative net effects on domestic employment. By exploiting lower wage costs in other countries, MNEs become more competitive and increase their sales both at home and abroad. As a result, initial job losses might eventually be compensated for by new hiring.

Negligible substitution effects in services sector

As discussed above, FDI activities in the services sector started playing a more important role in recent years. Given the importance of being present locally in most services (close to customers), negative effects on domestic employment should be pretty small. In other words, dismissing employees at home would cost domestic business and backfire on the company.

Without any alternative

Even if there are job losses in manufacturing, one has to ask whether there was any viable alternative to outward FDI. What would happen if a company did not invest abroad? Given disadvantages to foreign competitors, employment could even shrink stronger than compared to a scenario in which the internationalization took place.

Job-friendly horizontal FDI

In some countries or specific sectors, foreign investment activities may even be a must. Growth opportunities in the domestic market are exhausted. As a result, some companies have to go abroad. Such horizontal FDI explicitly aims at expanding market shares in foreign countries. If successful, domestic employment will not shrink but rise.

Appendix

In the following, the latest available outward FDI stock shares for Germany, Italy and Austria are presented. We focused on the Top-15 countries.

1. Germany

- For Germany (see chart A.1), the host countries are the US, the UK, Luxembourg, the Netherlands, France, China, Spain, Austria, Italy, Belgium, Switzerland, Poland, Russia, Malta and Canada. These countries covered about 80% of the total outward FDI stock of German companies as of late

2. Italy

- In the case of Italy (see chart A.2), the Top-15 host countries are the Netherlands, Spain, Germany, Austria, the US, the UK, France, Luxembourg, Belgium, Poland, Ireland, Russia, China, Switzerland and Brazil. The Top-15 represented 76% of the total outward FDI stock of Italy as of late.

CHART A.1 – TOP-15 FDI DESTINATIONS OF GERMAN COMPANIES (2013), COUNTRY SHARES IN % OF TOTAL OUTWARD FDI STOCK

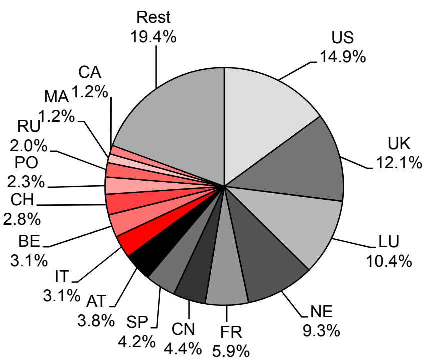
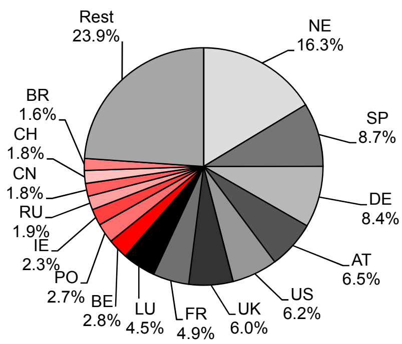


CHART A.2 – TOP-15 FDI DESTINATIONS OF ITALIAN COMPANIES (2013), COUNTRY SHARES IN % OF TOTAL OUTWARD FDI STOCK

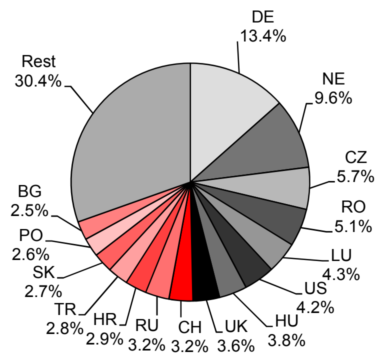


Source: OECD, UniCredit Research

3. Austria

- For Austria, the Top-15 countries are Germany, the Netherlands, Czech Republic, Romania, Luxembourg, the US, Hungary, the UK, Switzerland, Russia, Croatia, Turkey, Slovakia, Poland and Bulgaria. These countries covered about 70% of the total Austrian outward FDI stock as of late.

CHART A.3 – TOP-15 FDI DESTINATIONS OF AUSTRIAN COMPANIES (2013), COUNTRY SHARES IN % OF TOTAL OUTWARD FDI STOCK



Source: OECD, UniCredit Research

References

- Conconi, P. et al. (2012), The Internationalization Process of Firms from Exports to FDI, Working Paper, October
- Cristadoro, R. and L. D'Aurizio (2014), The Italian Firms' International Activity, Procedia Economics and Finance, 14, pp. 154-163
- De Nederlandsche Bank (2013), The Effects of Including SPEs on BOP and FDI Statistics, October and OECD (2014), International investment continues to struggle, FDI In Figures, December
- Deutscher Industrie- und Handelskammertag (2016), Atempause in China – Europa füllt die Lücke, April
- Hoekman, B. (2015), The Global Trade Slowdown: A New Normal?"
- Levis, M. et al. (2015), Home bias persistence in foreign direct investments, The European Journal of Finance, March
- OECD Economic Outlook (2014), Growth Prospects And Fiscal Requirements Over the Long Term, Chapter 4

Global Themes Series List

No	Date	Author(s)	Title
32	7Jun 2016	Tobias Rühl	**European Football Championship 2016 in France**
31	23 Mar 2016	Vasileios Gkionakis, Kathrin Goretzki	**How much ECB QE is in the price of EUR-USD?**
30	19 Jan 2016	Dr. Fadi Hassan	**Global Challenges and Prospects for Emerging Markets: Commodity, China, and Capitals**
29	4 Nov 2015	Tobias Rühl	**Introducing The EMU Financial Conditions Index by UniCredit**
28	24 Jun 2015	Roberto Mialich	**The lingering menace of FX wars**
27	21 May 2015	Marco Valli, Edoardo Campanella	**Growth uncertainties in China – What it means for the eurozone**
26	19 Nov 2014	Erik F. Nielsen, Dr. Harm Bandholz Dr. Andreas Rees	**Public investment: If not now, when? – Kick-starting the economy and taking care of future generations**
25	1 Jul 2014	Roberto Mialich	**The EUR-USD resilience**
24	28 May 2014	Dr. Andreas Rees	**Football World Cup 2014 in Brazil – Forecasting national football success**
23	19 May 2014	Dr. Harm Bandholz	**Deleveraging in Europe and the US: Not a brake on growth**
22	13 May 2014	Gillian Edgeworth, Carlos Ortiz, Dan Bucsa, Marcin Mrowiec, Pavel Sobisek, Kristofor Pavlov, Hrvoje Dolenec, Lubomir Korsnak, Mihai Patrulescu.	**The newer EU states: Maximizing integration**
21	26 Mar 2014	Daniel Vernazza, Erik F. Nielsen, Vasileios Gkionakis	**The damaging bias of sovereign ratings**
20	24 Oct 2013	Dr. Andreas Rees	**Introducing the Global Leading Indicator by UniCredit**
19	12 Sep 2013	Michael Rottmann	**The return of the macro-yield correlation & its implication for active duration management**
18	3 Sep 2013	Vasileios Gkionakis, Daniel Vernazza	**Introducing BEER by UniCredit; Our new framework for modeling equilibrium exchange rates**
17	5 Jul 2013	Gillian Edgeworth, Dan Bucşa, Carlos Ortiz	**CEE: Stress testing external financing shortfalls**
16	19 Jun 2013	Roberto Mialich	**Too big to fall soon! Why the USD still remains the world's reserve currency**
15	6 Jun 2013	Gillian Edgeworth	**CEE: The 'normalisation' challenge**
14	21 May 2013	Marco Valli	**Inflating away the debt overhang? Not an option**
13	7 May 2013	Harm Bandholz, Tullia Bucco, Loredana Federico, Alexander Koch	**The quest for competitiveness in the eurozone**
12	4 Jan 2013	Luca Cazzulani, Elia Lattuga	**Short and long-term impact of the introduction of CACs in the EMU**
11	2 Oct 2012	Harm Bandholz	**US Fiscal Policies at a Crossroad: consolidation through the fiscal cliff?**

Global Themes Series List (Cont'd)

No	Date	Author(s)	Title
10	18 Sep 2012	Marco Valli	**The eurozone five years into the crisis: lessons from the past and the way forward**
9	30 Jul 2012	Erik F. Nielsen	**Europe in the second half of 2012: Moving closer together or further apart?**
8	18 Jul 2012	Harm Bandholz, Andreas Rees	**Reach out for the medal(s)**
7	16 Jul 2012	Luca Cazzulani, Chiara Cremonesi	**EMU bond correlation & portfolio decisions**
6	4 Jun 2012	Andreas Rees	**Money scoring goals. Forecasting the European Football Championship 2012**
5	23 Apr 2012	Harm Bandholz	**How the Great Recession changed the Fed**
4	16 Apr 2012	Erik F. Nielsen	**Safeguarding the common eurozone capital market**
3	10 Apr 2012	Andreas Rees	**The hidden issue of long-term fiscal sustainability in the eurozone**
2	23 Mar 2012	Alexander Koch	**European housing: fundamentals and policy implications**
1	12 Mar 2012	Gillian Edgeworth, Vladimir Zlacký, Dmitry Veselov	**The EU: Managing capital flows in reverse**

Legal Notices

Glossary

A comprehensive glossary for many of the terms used in the report is available on our website: Link

Disclaimer

Our recommendations are based on information obtained from, or are based upon public information sources that we consider to be reliable but for the completeness and accuracy of which we assume no liability. All estimates and opinions included in the report represent the independent judgment of the analysts as of the date of the issue. This report may contain links to websites of third parties, the content of which is not controlled by UniCredit Bank. No liability is assumed for the content of these third-party websites. We reserve the right to modify the views expressed herein at any time without notice. Moreover, we reserve the right not to update this information or to discontinue it altogether without notice. This analysis is for information purposes only and (i) does not constitute or form part of any offer for sale or subscription of or solicitation of any offer to buy or subscribe for any financial, money market or investment instrument or any security, (ii) is neither intended as such an offer for sale or subscription of or solicitation of an offer to buy or subscribe for any financial, money market or investment instrument or any security nor (iii) as an advertisement thereof. The investment possibilities discussed in this report may not be suitable for certain investors depending on their specific investment objectives and time horizon or in the context of their overall financial situation. The investments discussed may fluctuate in price or value. Investors may get back less than they invested. Changes in rates of exchange may have an adverse effect on the value of investments. Furthermore, past performance is not necessarily indicative of future results. In particular, the risks associated with an investment in the financial, money market or investment instrument or security under discussion are not explained in their entirety.
This information is given without any warranty on an "as is" basis and should not be regarded as a substitute for obtaining individual advice. Investors must make their own determination of the appropriateness of an investment in any instruments referred to herein based on the merits and risks involved, their own investment strategy and their legal, fiscal and financial position. As this document does not qualify as an investment recommendation or as a direct investment recommendation, neither this document nor any part of it shall form the basis of, or be relied on in connection with or act as an inducement to enter into, any contract or commitment whatsoever. Investors are urged to contact their bank's investment advisor for individual explanations and advice.

Neither UniCredit Bank, UniCredit Bank London, UniCredit Bank Milan, UniCredit Bulbank, Zagrebačka banka, UniCredit Bank Czech Republic and Slovakia, Bank Pekao, UniCredit Russia, UniCredit Bank Romania nor any of their respective directors, officers or employees nor any other person accepts any liability whatsoever (in negligence or otherwise) for any loss howsoever arising from any use of this document or its contents or otherwise arising in connection therewith.

This analysis is being distributed by electronic and ordinary mail to investors, who are expected to make their own investment decisions without undue reliance on this publication, and may not be redistributed, reproduced or published in whole or in part for any purpose.

Responsibility for the content of this publication lies with:
UniCredit Group and its subsidiaries are subject to regulation by the European Central Bank

a) UniCredit Bank AG (UniCredit Bank), Am Tucherpark 16, 80538 Munich, Germany, (also responsible for the distribution pursuant to §34b WpHG). The company belongs to UniCredit Group. Regulatory authority: "BaFin" – Bundesanstalt für Finanzdienstleistungsaufsicht, Lurgiallee 12, 60439 Frankfurt, Germany.
b) UniCredit Bank AG London Branch (UniCredit Bank London), Moor House, 120 London Wall, London EC2Y 5ET, United Kingdom.
Regulatory authority: "BaFin" – Bundesanstalt für Finanzdienstleistungsaufsicht, Lurgiallee 12, 60439 Frankfurt, Germany and subject to limited regulation by the Financial Conduct Authority, 25 The North Colonnade, Canary Wharf, London E14 5HS, United Kingdom and Prudential Regulation Authority 20 Moorgate, London, EC2R 6DA, United Kingdom. Further details regarding our regulatory status are available on request.
c) UniCredit Bank AG Milan Branch (UniCredit Bank Milan), Piazza Gae Aulenti, 4 - Torre C, 20154 Milan, Italy, duly authorized by the Bank of Italy to provide investment services.
Regulatory authority: "Bank of Italy", Via Nazionale 91, 00184 Roma, Italy and Bundesanstalt für Finanzdienstleistungsaufsicht, Lurgiallee 12, 60439 Frankfurt, Germany.
d) UniCredit Bulbank, Sveta Nedelya Sq. 7, BG-1000 Sofia, Bulgaria
Regulatory authority: Financial Supervision Commission (FSC), 33 Shar Planina str.,1303 Sofia, Bulgaria
e) Zagrebačka banka d.d., Trg bana Jelačića 10, HR-10000 Zagreb, Croatia
Regulatory authority: Croatian Agency for Supervision of Financial Services, Miramarska 24B, 10000 Zagreb, Croatia
f) UniCredit Bank Czech Republic and Slovakia, Na Príkope 858/20, CZ-11121 Prague, Czech Republic
Regulatory authority: CNB Czech National Bank, Na Příkopě 28, 115 03 Praha 1, Czech Republic
g) Bank Pekao, ul. Grzybowska 53/57, PL-00-950 Warsaw, Poland
Regulatory authority: Polish Financial Supervision Authority, Plac Powstańców Warszawy 1, 00-950 Warsaw, Poland
h) ZAO UniCredit Bank Russia (UniCredit Russia), Prechistenskaya emb. 9, RF-19034 Moscow, Russia
Regulatory authority: Federal Service on Financial Markets, 9 Leninsky prospekt, Moscow 119991, Russia
i) UniCredit Bank Czech Republic and Slovakia, Slovakia Branch, Šancova 1/A, SK-813 33 Bratislava, Slovakia
Regulatory authority: CNB Czech National Bank, Na Příkopě 28, 115 03 Praha 1, Czech Republic and subject to limited regulation by the National Bank of Slovakia, Imricha Karvaša 1, 813 25 Bratislava, Slovakia. Regulatory authority: National Bank of Slovakia, Imricha Karvaša 1, 813 25 Bratislava, Slovakia
j) UniCredit Bank Romania, Bucharest 1F Expozitiei Boulevard, RO-012101 Bucharest 1, Romania
Regulatory authority: National Bank of Romania, 25 Lipscani Street, RO-030031, 3rd District, Bucharest, Romania
k) UniCredit Bank AG Hong Kong Branch (UniCredit Bank Hong Kong), 25/F Man Yee Building, 68 Des Voeux Road Central, Hong Kong.
Regulatory authority: Hong Kong Monetary Authority, 55th Floor, Two International Financial Centre, 8 Finance Street, Central, Hong Kong
l) UniCredit Bank AG Singapore Branch (UniCredit Bank Singapore), Prudential Tower, 30 Cecil Street, #25-01, Singapore 049712
Regulatory authority: Monetary Authority of Singapore, 10 Shenton Way MAS Building, Singapore 079117
m) UniCredit Bank AG Tokyo Branch (UniCredit Tokyo), Otemachi 1st Square East Tower 18/F, 1-5-1 Otemachi, Chiyoda-ku, 100-0004 Tokyo, Japan
Regulatory authority: Financial Services Agency, The Japanese Government, 3-2-1 Kasumigaseki Chiyoda-ku Tokyo, 100-8967 Japan, The Central Common Government Offices No. 7.
n) UniCredit Bank New York (UniCredit Bank NY), 150 East 42nd Street, New York, NY 10017
Regulatory authority: "BaFin" – Bundesanstalt für Finanzdienstleistungsaufsicht, Lurgiallee 12, 60439 Frankfurt, Germany and New York State Department of Financial Services, One State Street, New York, NY 10004-1511

POTENTIAL CONFLICTS OF INTEREST

UniCredit Bank AG acts as a Specialist or Primary Dealer in government bonds issued by the Italian, Portuguese and Greek Treasury. Main tasks of the Specialist are to participate with continuity and efficiency to the governments' securities auctions, to contribute to the efficiency of the secondary market through market making activity and quoting requirements and to contribute to the management of public debt and to the debt issuance policy choices, also through advisory and research activities.

ANALYST DECLARATION

The author's remuneration has not been, and will not be, geared to the recommendations or views expressed in this study, neither directly nor indirectly.

ORGANIZATIONAL AND ADMINISTRATIVE ARRANGEMENTS TO AVOID AND PREVENT CONFLICTS OF INTEREST

To prevent or remedy conflicts of interest, UniCredit Bank, UniCredit Bank London, UniCredit Bank Milan, UniCredit Bulbank, Zagrebačka banka, UniCredit Bank Czech Republic and Slovakia, Bank Pekao, UniCredit Russia, and UniCredit Bank Romania have established the organizational arrangements required from a legal and supervisory aspect, adherence to which is monitored by its compliance department. Conflicts of interest arising are managed by legal and physical and non-physical barriers (collectively referred to as "Chinese Walls") designed to restrict the flow of information between one area/department of UniCredit Bank, UniCredit Bank London, UniCredit Bank Milan, UniCredit Bulbank, Zagrebačka banka, UniCredit Bank Czech Republic and Slovakia, Bank Pekao, UniCredit Russia, UniCredit Bank Romania, and another. In particular, Investment Banking units, including corporate finance, capital market activities, financial advisory and other capital raising activities, are segregated by physical and non-physical boundaries from Markets Units, as well as the research department. In the case of equities execution by UniCredit Bank AG Milan Branch, other than as a matter of client facilitation or delta hedging of OTC and listed derivative positions, there is no proprietary trading. Disclosure of publicly available conflicts of interest and other material interests is made in the research. Analysts are supervised and managed on a day-to-day basis by line managers who do not have responsibility for Investment Banking activities, including corporate finance activities, or other activities other than the sale of securities to clients.

ADDITIONAL REQUIRED DISCLOSURES UNDER THE LAWS AND REGULATIONS OF JURISDICTIONS INDICATED

You will find a list of further additional required disclosures under the laws and regulations of the jurisdictions indicated on our website www.cib-unicredit.com/research-disclaimer.

Notice to Austrian investors: This analysis is only for distribution to professional clients (Professionelle Kunden) as defined in article 58 of the Securities Supervision Act.

Notice to investors in Bosnia and Herzegovina: This report is intended only for clients of UniCredit in Bosnia and Herzegovina who are institutional investors (Institucionalni investitori) in accordance with Article 2 of the Law on Securities Market of the Federation of Bosnia and Herzegovina and Article 2 of the Law on Securities Markets of the Republic of Srpska, respectively, and may not be used by or distributed to any other person. This document does not constitute or form part of any offer for sale or subscription for or solicitation of any offer to buy or subscribe for any securities and neither this document nor any part of it shall form the basis of, or be relied on in connection with or act as an inducement to enter into, any contract or commitment whatsoever.

Notice to Brazilian investors: The individual analyst(s) responsible for issuing this report represent(s) that: (a) the recommendations herein reflect exclusively the personal views of the analysts and have been prepared in an independent manner, including in relation to UniCredit Group; and (b) except for the potential conflicts of interest listed under the heading “Potential Conflicts of Interest” above, the analysts are not in a position that may impact on the impartiality of this report or that may constitute a conflict of interest, including but not limited to the following: (i) the analysts do not have a relationship of any nature with any person who works for any of the companies that are the object of this report; (ii) the analysts and their respective spouses or partners do not hold, either directly or indirectly, on their behalf or for the account of third parties, securities issued by any of the companies that are the object of this report; (iii) the analysts and their respective spouses or partners are not involved, directly or indirectly, in the acquisition, sale and/or trading in the market of the securities issued by any of the companies that are the object of this report; (iv) the analysts and their respective spouses or partners do not have any financial interest in the companies that are the object of this report; and (v) the compensation of the analysts is not, directly or indirectly, affected by UniCredit’s revenues arising out of its businesses and financial transactions. UniCredit represents that: except for the potential conflicts of interest listed under the heading “Potential Conflicts of Interest” above, UniCredit, its controlled companies, controlling companies or companies under common control (the “UniCredit Group”) are not in a condition that may impact on the impartiality of this report or that may constitute a conflict of interest, including but not limited to the following: (i) the UniCredit Group does not hold material equity interests in the companies that are the object of this report; (ii) the companies that are the object of this report do not hold material equity interests in the UniCredit Group; (iii) the UniCredit Group does not have material financial or commercial interests in the companies or the securities that are the object of this report; (iv) the UniCredit Group is not involved in the acquisition, sale and/or trading of the securities that are the object of this report; and (v) the UniCredit Group does not receive compensation for services rendered to the companies that are the object of this report or to any related parties of such companies.

Notice to Canadian investors: This communication has been prepared by UniCredit Bank AG, which does not have a registered business presence in Canada. This communication is a general discussion of the merits and risks of a security or securities only, and is not in any way meant to be tailored to the needs and circumstances of any recipient. The contents of this communication are for information purposes only, therefore should not be construed as advice and do not constitute an offer to sell, nor a solicitation to buy any securities.

Notice to Cyprus investors: This document is directed only at clients of UniCredit Bank who are persons falling within the Second Appendix (Section 2, Professional Clients) of the law for the Provision of Investment Services, the Exercise of Investment Activities, the Operation of Regulated Markets and other Related Matters, Law 144(I)/2007 and persons to whom it may otherwise lawfully be communicated who possess the experience, knowledge and expertise to make their own investment decisions and properly assess the risks that they incur (all such persons together being referred to as “relevant persons”). This document must not be acted on or relied on by persons who are not relevant persons or relevant persons who have requested to be treated as retail clients. Any investment or investment activity to which this communication related is available only to relevant persons and will be engaged in only with relevant persons. This document does not constitute an offer or solicitation to any person to whom it is unlawful to make such an offer or solicitation.

Notice to Hong Kong investors: This report is for distribution only to “professional investors” within the meaning of Schedule 1 to the Securities and Futures Ordinance (Chapter 571, Laws of Hong Kong) and any rules made thereunder, and may not be reproduced, or used by or further distributed to any other person, in whole or in part, for any purpose. This report does not constitute or form part of an offer or solicitation of any offer to buy or sell any securities, nor should it or any part of it form the basis of, or be relied upon in connection with, any contract or commitment whatsoever. By accepting this report, the recipient represents and warrants that it is entitled to receive such report in accordance with, and on the basis of, the restrictions set out in this “Disclaimer” section, and agrees to be bound by those restrictions.

Notice to investors in Ivory Coast: The information contained in the present report have been obtained by Unicredit Bank AG from sources believed to be reliable, however, no express or implied representation or warranty is made by Unicredit Bank AG or any other person as to the completeness or accuracy of such information. All opinions and estimates contained in the present report constitute a judgement of Unicredit Bank AG as of the date of the present report and are subject to change without notice. They are provided in good faith but without assuming legal responsibility. This report is not an offer to sell or solicitation of an offer to buy or invest in securities. Past performance is not an indicator of future performance and future returns cannot be guaranteed, and there is a risk of loss of the initial capital invested. No matter contained in this document may be reproduced or copied by any means without the prior consent of Unicredit Bank AG.

Notice to New Zealand investors: This report is intended for distribution only to persons who are “wholesale clients” within the meaning of the Financial Advisers Act 2008 (“FAA”) and by receiving this report you represent and agree that (i) you are a “wholesale client” under the FAA (ii) you will not distribute this report to any other person, including (in particular) any person who is not a “wholesale client” under the FAA. This report does not constitute or form part of, in relation to any of the securities or products covered by this report, either (i) an offer of securities for subscription or sale under the Securities Act 1978 or (ii) an offer of financial products for issue or sale under the Financial Markets Conduct Act 2013.

Notice to Omani investors: This communication has been prepared by UniCredit Bank AG. UniCredit Bank AG does not have a registered business presence in Oman and does not undertake banking business or provide financial services in Oman and no advice in relation to, or subscription for, any securities, products or financial services may or will be consummated within Oman. The contents of this communication are for the information purposes of sophisticated clients, who are aware of the risks associated with investments in foreign securities and neither constitutes an offer of securities in Oman as contemplated by the Commercial Companies Law of Oman (Royal Decree 4/74) or the Capital Market Law of Oman (Royal Decree 80/98), nor does it constitute an offer to sell, or the solicitation of any offer to buy non-Omani securities in Oman as contemplated by Article 139 of the Executive Regulations to the Capital Market Law (issued vide CMA Decision 1/2009). This communication has not been approved by and UniCredit Bank AG is not regulated by either the Central Bank of Oman or Oman’s Capital Market Authority.

Notice to Pakistani investors: Investment information, comments and recommendations stated herein are not within the scope of investment advisory activities as defined in sub-section I, Section 2 of the Securities and Exchange Ordinance, 1969 of Pakistan. Investment advisory services are provided in accordance with a contract of engagement on investment advisory services concluded with brokerage houses, portfolio management companies, non-deposit banks and the clients. The distribution of this report is intended only for informational purposes for the use of professional investors and the information and opinions contained herein, or any part of it shall not form the basis of, or be relied on in connection with or act as an inducement to enter into, any contract or commitment whatsoever.

Notice to Polish Investors: This document is intended solely for professional clients as defined in Art. 3.39b of the Trading in Financial Instruments Act of 29 July 2005 (as amended). The publisher and distributor of the document certifies that it has acted with due care and diligence in preparing it, however, assumes no liability for its completeness and accuracy. This document is not an advertisement. It should not be used in substitution for the exercise of independent judgment.

Notice to Serbian investors: This analysis is only for distribution to professional clients (profesionalni klijenti) as defined in article 172 of the Law on Capital Markets.

Notice to UK investors: This communication is directed only at clients of UniCredit Bank who (i) have professional experience in matters relating to investments or (ii) are persons falling within Article 49(2)(a) to (d) (“high net worth companies, unincorporated associations, etc.”) of the United Kingdom Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 or (iii) to whom it may otherwise lawfully be communicated (all such persons together being referred to as “relevant persons”). This communication must not be acted on or relied on by persons who are not relevant persons. Any investment or investment activity to which this communication relates is available only to relevant persons and will be engaged in only with relevant persons.

ENP e 11

UniCredit Research*

Erik F. Nielsen
Group Chief Economist
Global Head of CIB Research
+44 207 826-1765
erik.nielsen@unicredit.eu

Dr. Ingo Heimig
Head of Research Operations
+49 89 378-13952
ingo.heimig@unicredit.de

Economics & FI/FX Research

Economics Research

European Economics

Marco Valli, Chief Eurozone Economist
+39 02 8862-0537
marco.valli@unicredit.eu

Dr. Andreas Rees, Chief German Economist
+49 69 2717-2074
andreas.rees@unicredit.de

Stefan Bruckbauer, Chief Austrian Economist
+43 50505-41951
stefan.bruckbauer@unicreditgroup.at

Tullia Bucco, Economist
+39 02 8862-0532
tullia.bucco@unicredit.eu

Edoardo Campanella, Economist
+39 02 8862-0522
edoardo.campanella@unicredit.eu

Dr. Loredana Federico, Lead Italy Economist
+39 02 8862-0534
loredanamaria.federico@unicredit.eu

Dr. Tobias Rühl, Economist
+49 89 378-12560
tobias.ruehl@unicredit.de

Chiara Silvestre, Economist
chiara.silvestre@unicredit.eu

Dr. Thomas Strobel, Economist
+49 89 378-13013
thomas.strobel@unicredit.de

Daniel Vernazza, Ph.D., Lead UK Economist
+44 207 826-7805
daniel.vernazza@unicredit.eu

US Economics

Dr. Harm Bandholz, CFA, Chief US Economist
+1 212 672-5957
harm.bandholz@unicredit.eu

EEMEA Economics & FI/FX Strategy

Lubomir Mitov, Chief CEE Economist
+44 207 826-1772
lubomir.mitov@unicredit.eu

Artem Arkhipov, Head, Macroeconomic Analysis and Research, Russia
+7 495 258-7258
artem.arkhipov@unicredit.ru

Anca Maria Aron, Senior Economist, Romania
+40 21 200-1377
anca.aron@unicredit.ro

Anna Bogdyukevich, CFA, Russia
+7 495 258-7258 ext. 11-7562
anna.bogdyukevich@unicredit.ru

Dan Bucşa, Lead CEE Economist
+44 207 826-7954
dan.bucsa@unicredit.eu

Hrvoje Dolenec, Chief Economist, Croatia
+385 1 6006 678
hrvoje.dolenec@unicreditgroup.zaba.hr

Ľubomír Koršňák, Chief Economist, Slovakia
+421 2 4950 2427
lubomir.korsnak@unicreditgroup.sk

Marcin Mrowiec, Chief Economist, Poland
+48 22 524-5914
marcin.mrowiec@pekao.com.pl

Kristofor Pavlov, Chief Economist, Bulgaria
+359 2 9269-390
kristofor.pavlov@unicreditgroup.bg

Pavel Sobisek, Chief Economist, Czech Republic
+420 955 960-716
pavel.sobisek@unicreditgroup.cz

Dumitru Vicol, Economist
+44 207 826-6081
dumitru.vicol@unicredit.eu

Global FI Strategy

Michael Rottmann, Head, FI Strategy
+49 89 378-15121
michael.rottmann1@unicredit.de

Dr. Luca Cazzulani, Deputy Head, FI Strategy
+39 02 8862-0640
luca.cazzulani@unicredit.eu

Chiara Cremonesi, FI Strategy
+44 207 826-1771
chiara.cremonesi@unicredit.eu

Alessandro Giongo, FI Strategy
+39 02 8862-0538
alessandro.giongo@unicredit.eu

Elia Lattuga, FI Strategy
+44 207 826-1642
elia.lattuga@unicredit.eu

Kornelius Purps, FI Strategy
+49 89 378-12753
kornelius.purps@unicredit.de

Herbert Stocker, Technical Analysis
+49 89 378-14305
herbert.stocker@unicredit.de

Global FX Strategy

Dr. Vasileios Gkionakis, Global Head, FX Strategy
+44 207 826-7951
vasileios.gkionakis@unicredit.eu

Kathrin Goretzki, CFA, FX Strategy
+44 207 826-6076
kathrin.goretzki@unicredit.eu

Kiran Kowshik, EM FX Strategy
+44 207 826-6080
kiran.kowshik@unicredit.eu

Roberto Mialich, FX Strategy
+39 02 8862-0658
roberto.mialich@unicredit.eu

Publication Address

UniCredit Research
Corporate & Investment Banking
UniCredit Bank AG
Arabellastrasse 12
D-81925 Munich
globalresearch@unicredit.de

Bloomberg
UCCR

Internet
www.research.unicredit.eu

*UniCredit Research is the joint research department of UniCredit Bank AG (UniCredit Bank), UniCredit Bank AG London Branch (UniCredit Bank London), UniCredit Bank AG Milan Branch (UniCredit Bank Milan), UniCredit Bank New York (UniCredit Bank NY), UniCredit Bulbank, Zagrebačka banka d.d., UniCredit Bank Czech Republic and Slovakia, Bank Pekao, ZAO UniCredit Bank Russia (UniCredit Russia), UniCredit Bank Romania.

EFI 34