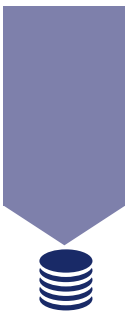
6

European Countries: U.S.-Related Jobs, Trade and Investment

California

Italy

Europe experienced **its sharpest recession since WWII**



-6.6% in 2020

-4.5% during the 2009 global financial crisis

In 2020, the European economy experienced its sharpest recession in the post-WWII era due to the global pandemic's effect on some of the region's most prominent industries. According to initial estimates from Eurostat, euro area GDP fell 6.6% on an annual basis, versus a 4.5% drop during the 2009 global financial crisis. The UK economy was especially hard hit by the coronavirus, contracting by 9.9% in 2020. A large portion of economic activity in European countries depends on the services sector and, particularly, areas such as accommodation, food and beverage, transport, travel, and culture and recreational activities. European economies highly exposed to these services industries saw the some of the greatest economic declines in 2020. For example, in Spain tourism represents 11.8% of GDP and 13.5% of total employment; its GDP contracted by 11%. Similarly, the economies of Portugal, France, and Italy all rely heavily on tourism, and as a result have been more severely impacted by border closings, government lockdowns and social distancing measures. Germany, which depends to a greater extent on manufacturing, saw a smaller GDP decline of 4.9%, also in part because it deployed massive government support to keep the economy on track as much as possible.

According to the latest figures from the UN, foreign direct investment (FDI) inflows to both the United States and Europe were severely impacted by the global recession. Global FDI flows to Europe entirely evaporated, down from $344 billion in 2019 to roughly $0 in 2020. These sharp swings in global FDI to Europe, however, were mainly driven by large divestments and negative intra-company loans in the Netherlands and Switzerland (-$150 billion and -$88 billion FDI flows respectively). Given their one-off nature, we expect the recent investment declines to be temporary. FDI inflows to Europe should bounce back to positive territory in 2021, however they could continue to be relatively weak until the pandemic uncertainty subsides.

Notwithstanding the recent cyclical slowdown and economic risks, Europe remains one of the most attractive regions of the world for U.S. foreign direct investment. The latest investment figures underscore corporate America's enduring commitment to its long-standing transatlantic partner. Measured on a historic cost basis, the total stock of U.S. FDI in Europe was $3.6 trillion in 2019, or 60% of the total U.S. global investment position. This is almost four times the amount of comparable U.S. investment in the Asia-Pacific region.

Global FDI flows to Europe evaporated:
from $344 billion in 2019 to roughly $0 in 2020
(expected to be temporary)

Total U.S. FDI stock in Europe
$3.6 trillion
(2019)

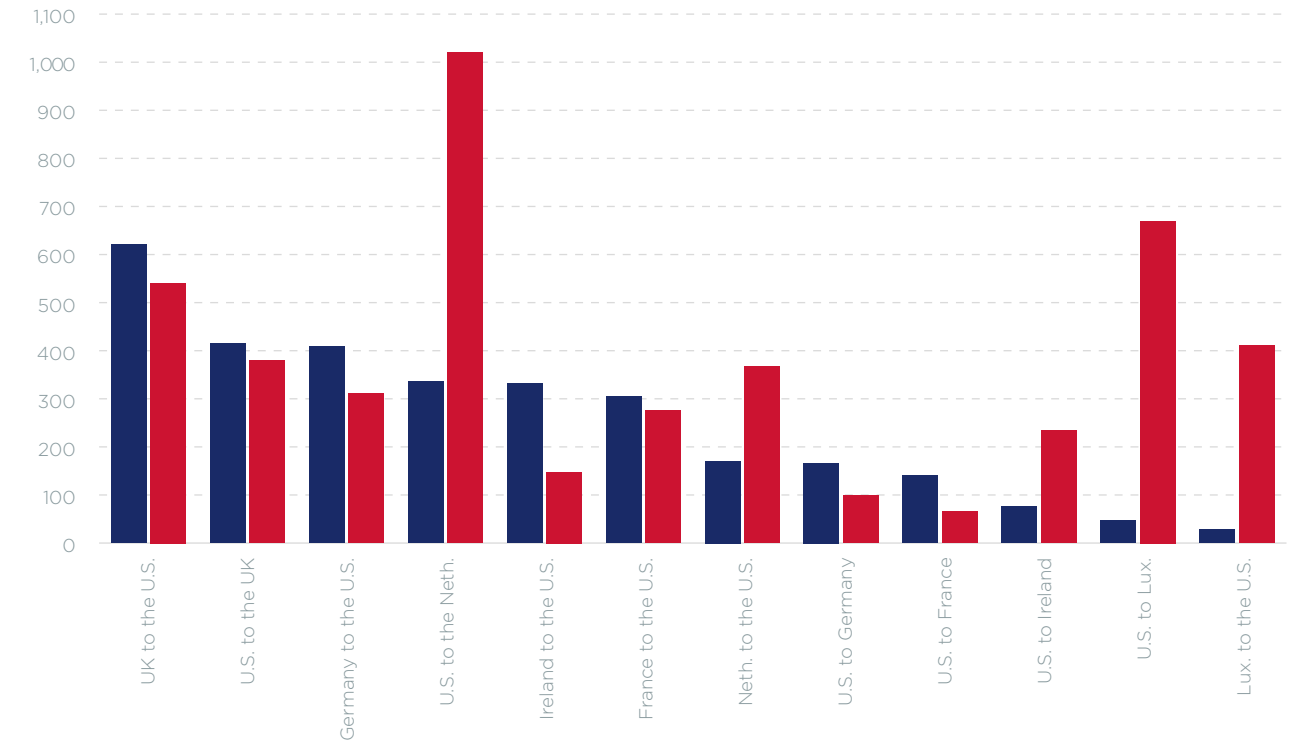
60%
of U.S. global investment

This overall number, while impressive, does not tell us much about the reasons for such investment or the countries where U.S. companies focus their investments. As we have stated in previous surveys, official statistics blur some important distinctions when it comes to the nature of transatlantic investment flows. Recent research, however, helps us understand better two important phenomena: "round-tripping" and "phantom FDI."

Round-Tripping

Round-tripping investments go from an original investor, for instance in the United States, to an ultimate destination in a country such as Germany, but flow first from the United States to an intermediate country such as Luxembourg, and then from Luxembourg to Germany. Official statistics record this as a U.S.-Luxembourg flow or a Luxembourg-Germany flow. While Luxembourg may derive some economic benefit from that flow emanating originally from the United States, the ultimate beneficiary is in Germany. Applying this example to 2017, the year with the most recent data, official figures from the IMF indicate that FDI in Germany from the United States was around $90 billion, whereas recent research by economists at the IMF and University of Copenhagen that takes account of these "round tripping" flows concludes that the stock of "real FDI" from the United States in Germany was actually almost $170 billion.[1] Similarly, "real FDI" links from Germany to the United States are considerably higher than official statistics might indicate. All told, they estimate "real FDI" bilateral links from Germany to the United States to top $400 billion, whereas official statistics put that figure closer to $300 billion.[2] The same is true for other important bilateral investment links. Table 1 shows "real FDI" links both from the United States to Great Britain and from Great Britain to the United States, for instance, to be higher than standard measurements indicate.

Table 1 **Estimated Real U.S.-EU FDI Links** ($ Billions)



Data for 2017, latest available. Real FDI position: Captures links between ultimate investors and real investments.
Source: Jannick Damgaard, Thomas Elkjaer and Niels Johannesen, "What Is Real and What Is Not in the Global FDI Network?" IMF Working Paper WP/19/274, December 2, 2019, p. 40.

"Phantom" vs. "Real" FDI

The second important phenomenon is what economists call "phantom FDI," or investments that pass through special purpose entities that have no real business activities.[3] To understand the nature of transatlantic investment links it is important to be able to separate phantom FDI from FDI in the "real" economy. Damgaard, Elkjaer and Johannesen estimate that investment in countries such as Poland, Romania, Denmark, Austria and Spain, for instance, are mostly genuine FDI investments, while investment in countries such as Luxembourg and the Netherlands are largely comprised of investments in corporate shells used to minimize the global tax bills of multinational enterprises. They estimate that most of the world's "phantom FDI" in 2017 was in a small group of well-known offshore centers: Luxembourg ($3.8 trillion), the Netherlands ($3.3 trillion), Hong Kong ($1.1 trillion), British Virgin Islands ($0.8 trillion), Bermuda ($0.8 trillion), Singapore ($0.8 trillion) and the Cayman Islands ($0.7 trillion). These are global figures rather than investments from U.S. companies, but since U.S. companies are the preeminent foreign investors in Europe one may conclude that these distinctions roughly apply to U.S. FDI in Europe.

In the aggregate, about 54% of America's total FDI position in Europe was allocated to non-bank holding companies in 2019, meaning that less than half of the $3.6 trillion is invested in "real economy" industries such as mining, manufacturing, wholesale trade, finance, and professional and information services (See Box 6.1). Excluding holding companies, total U.S. FDI stock in Europe amounts to $1.6 trillion – a much smaller figure but still more than 2.5 times larger than total U.S. investment in the Asia-Pacific region (FDI stock of $635 billion excluding holding companies).

Box 6.1 U.S. FDI Outflows to Europe Adjusted for Flows of Holding Companies

U.S. holding companies have been playing an important role in the rise of U.S.-Europe FDI over the years. This has generated considerable political and media attention and is important to understand in order to get a full picture of transatlantic commercial linkages. As of 2019, the last year of available data, nonbank holding companies accounted for $2.8 trillion, or about 47% of the global U.S. outward FDI position of approximately $6 trillion, and 54% of total U.S. FDI stock in the European Union.

As the U.S. Bureau of Economic Analysis (BEA) notes, "The growth in holding company affiliates reflects a variety of factors. Some holding-company affiliates are established primarily to coordinate management and administration activities – such as marketing, distribution, or financing – worldwide or in a particular geographic region. In addition, the presence of holding company affiliates in countries where the effective income tax rate faced by affiliates is relatively low suggests tax considerations may have also played a role in their growth. One consequence of the increasing use of holding companies has been a reduction in the degree to which the U.S. Direct Investment Abroad position (and related flow) estimates reflect the industries and countries in which the production of goods and services by foreign affiliates actually occurs."

Against this backdrop, total U.S. FDI flows to Europe over the past few years have been in large part driven by flows to holding companies. The countries attracting the most investment in holding companies, not surprisingly, are those with some of the lowest corporate tax rates in Europe, such as the Netherlands, Luxembourg, the UK, and Ireland.

Tables 2a and 2b, drawing on BEA data, reflect the significance of holding companies in the composition of U.S. FDI outflows. European markets have accounted for roughly 58% of total U.S. FDI outflows since 2009. However, when flows to nonbank holding companies are excluded from the data, the share of outflows to markets such as Europe and Other Western Hemisphere declines. In 2019, U.S. FDI flows to holding companies in Europe were negative (-$47 billion), as U.S. companies repatriated a large amount of accumulated foreign earnings. This negative outflow from holding companies nearly offset the positive FDI flows of $56 billion to all other industries in Europe, whether it be manufacturing and wholesale trade or finance and information services. Due to these outflows, U.S. FDI to Europe in 2019 was just $8 billion, down significantly from average outflows prior to U.S. tax reform.

In the long run, when FDI related to holding companies is stripped from the numbers, the U.S. foreign direct investment position in Europe is not as large as typically reported by the BEA. Nonetheless, Europe remains the top destination of choice among U.S. firms even after the figures are adjusted. Between 2009 and 2019, Europe still accounted for over half of total U.S. FDI outflows when flows from holding companies are removed from the aggregate. Europe's share was still more than double the share to Asia, underscoring the deep and integrated linkages between the United States and Europe.

Table 2a Total U.S. FDI Outflows, 2009-2019
(% of Total)

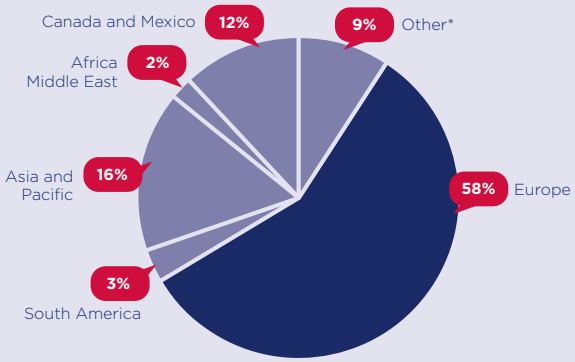
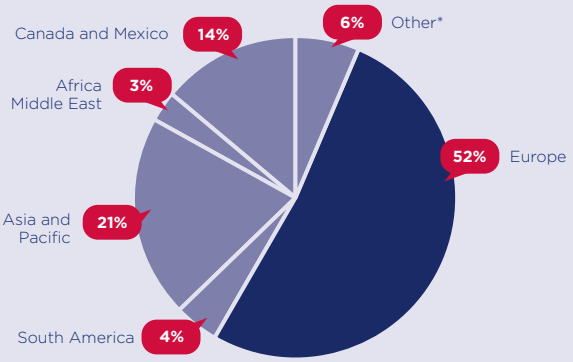


Table 2b U.S. FDI Outflows Excluding Flows to Nonbank Holding Companies, 2009-2019
(% of Total)



**Includes Central America (excluding Mexico) and Other Western Hemisphere.*
Source: Bureau of Economic Analysis.
Data as of January 2021.

In terms of annual flows of FDI from the United States, Europe has historically attracted more than half of U.S. investment each year. This trend reversed in 2018 and 2019 due to a major tax overhaul in the United States, which encouraged U.S. companies to bring home foreign capital at lower tax rates (See Box 5.2).

Due to these large-scale repatriations of accumulated foreign earnings by U.S. multinational companies, U.S. FDI outflows to Europe were negative or near zero over the two-year period from 2018-2019. In the first three quarters of 2020, however, U.S. FDI outflows to Europe increased to $55 billion, once again accounting for roughly half of U.S. global outflows.

By contrast, U.S. outflows to the Asia-Pacific region during the first three quarters of 2020 declined sharply to $8 billion, compared to $44 billion during the same period in 2019. Total U.S. global FDI outflows were $101 billion during the first three quarters of 2020, compared to $53 billion during the same period a year earlier. The recovery in U.S. FDI outflows in 2020 was largely due to Ireland, where strong negative outflows during the first three quarters of 2019 (-$82 billion) turned positive for the first three quarters of 2020 (+$29 billion).

Box 6.2 U.S. Corporate Tax Reform: Impact on FDI Outflows

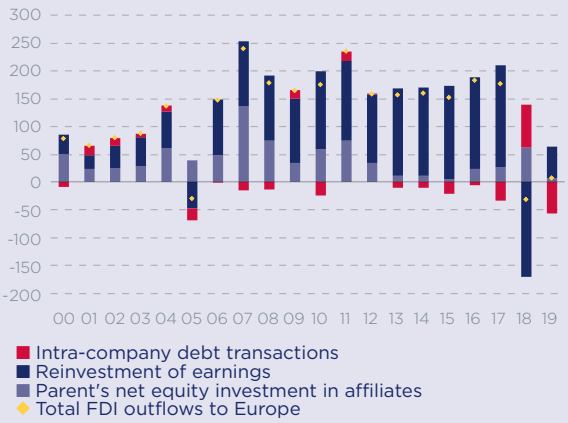
In December 2017, the United States passed the "Tax Cuts and Jobs Act," which included several changes to the U.S. taxation of international profits. An important provision of the tax reform bill, which had a material impact on U.S. international investment flows, was the reduced tax rate on U.S. firms' repatriated earnings. This repatriation tax break, which was expected, led to negative U.S. FDI outflows as companies brought home significant quantities of cash. The sweeping U.S. tax reform package also reduced the corporate tax rate from 35% to 21% and moved the United States towards a "territorial" system, under which profits earned by U.S. foreign affiliates will not be taxed.

Prior to the tax reform, U.S. multinational companies would reinvest their global earnings back into their operations abroad, deferring U.S. taxation of these foreign profits. This strategy, widely adopted by U.S. multinationals, caused reinvested earnings to become the primary source of U.S. FDI flows. Table 3a shows the breakout of U.S. FDI flows to Europe by component, with reinvested earnings making up the bulk of total U.S. investment prior to tax reform.

The cumulative effect of years of companies keeping profits overseas led to a large accumulation of U.S. corporate earnings abroad. When the U.S. government passed corporate tax reform, reducing the tax rate on these earnings, it incentivized companies to tap into the large pile of foreign profits by repatriating the foreign capital. When companies withdraw prior accumulated earnings, this results in negative retained earnings which has a negative overall impact on U.S. FDI outflows. A similar pattern occurred in 2005 after the U.S. Homeland Investment Act introduced a similar tax break for multinational companies.

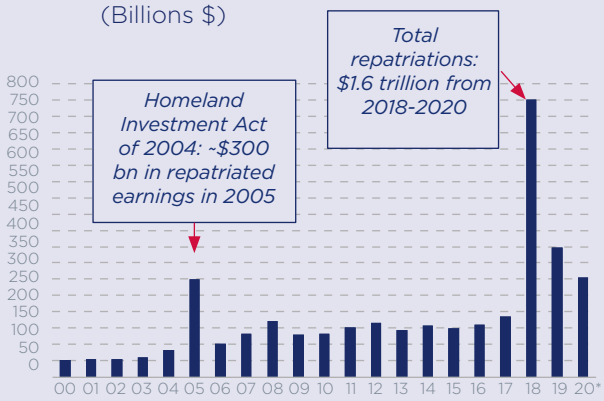
In the first three years after the change in the U.S. corporate tax code, U.S. repatriations of global earnings are estimated to have totaled approximately $1.6 trillion, or about half of the estimated $3 trillion in funds stockpiled overseas at the end of 2017 (Table 3b). While these repatriations suppressed FDI outflows from the United States to Europe in recent years, we expect the pace of repatriations to slow, and FDI to continue to recover in the years ahead. However, according to UNCTAD's January 2019 Investment Trends Monitor, in the long run the shift to a territorial tax system in the United States may lead to "structurally lower reinvested earnings by U.S. multinationals in the future."

Table 3a U.S. FDI Outflows to Europe by Component (Billions $)



Source: U.S. Bureau of Economic Analysis.
Data as of January 2021.

Table 3b U.S. Repatriations of Global Earnings (Billions $)



**2020 estimate based on three quarters of data.*
Source: U.S. Bureau of Economic Analysis.
Data as of January 2021.

These figures illustrate the extremely volatile nature of U.S. FDI annual outflows. Table 4 provides a more long-term view of U.S.-European investment ties. As shown in the chart, the share of U.S. FDI in both Germany and France declined sharply this past decade, with France accounting for just 1.4% of U.S. FDI flows to Europe from 2010 through the third quarter of 2020. Germany's share is slightly higher, 2.5%, but still off the levels of previous decades. However, as mentioned these figures need to be interpreted very carefully, since a good deal of original investment from the United States makes its way to France and Germany via other countries, and analyses that include "round-tripping" estimates conclude that U.S. FDI that eventually ends up in France and Germany remains robust.

Ireland has become a favored destination for FDI among U.S. companies looking to take advantage of the country's flexible and skilled English-speaking labor force, low corporate tax rates, strong economic growth, membership in the European Union, and pro-business policies. Even when adjusting U.S. FDI figures to take account of flows of U.S. holding companies, Ireland still ranks as one of the most attractive places in the world for U.S. businesses.

Just as U.S. firms leverage different states across America, with certain activities sprinkled around the Northeast, Midwest, the South and West, U.S. firms deploy the same strategies across Europe, leveraging the specific attributes of each country. Economic activity across the EU is just as distinct and differentiated by country. Different growth rates, differing levels of consumption, varying degrees of wealth, labor force participation rates, financial market development, innovation capabilities, corporate tax rates – all of these factors, and more, determine where and when U.S. firms invest in Europe.

Table 4 U.S. FDI Outflows to Europe: The Long View (Millions of $, (-) inflows)

	1990-1999		2000-2009		2010-3Q2020	
Country	$ Aggregate Total	% of Total Europe	$ Aggregate Total	% of Total Europe	$ Aggregate Total	% of Total Europe
Europe	465,337		1,149,810		1,433,510	
Austria	2,908	0.6%	501	0.0%	10,087	0.7%
Belgium	12,028	2.6%	40,120	3.5%	31,925	2.2%
Czech Republic	155	0.0%	1,941	0.2%	4,672	0.3%
Denmark	2,798	0.6%	5,782	0.5%	11,682	0.8%
Finland	1,485	0.3%	1,598	0.1%	289	0.0%
France	29,063	6.2%	42,963	3.7%	19,888	1.4%
Germany	31,817	6.8%	60,363	5.2%	35,949	2.5%
Greece	413	0.1%	943	0.1%	-79	0.0%
Hungary	2,929	0.6%	1,376	0.1%	1,584	0.1%
Ireland	21,369	4.6%	115,085	10.0%	241,994	16.9%
Italy	13,825	3.0%	26,462	2.3%	15,818	1.1%
Luxembourg	15,912	3.4%	126,989	11.0%	311,249	21.7%
Netherlands	70,770	15.2%	295,889	25.7%	315,063	22.0%
Norway	4,198	0.9%	4,997	0.4%	7,160	0.5%
Poland	2,681	0.6%	4,699	0.4%	3,302	0.2%
Portugal	1,993	0.4%	2,212	0.2%	861	0.1%
Russia	1,555	0.3%	11,289	1.0%	-503	0.0%
Spain	11,745	2.5%	28,371	2.5%	15,171	1.1%
Sweden	10,783	2.3%	16,974	1.5%	-767	-0.1%
Switzerland	32,485	7.0%	97,869	8.5%	126,292	8.8%
Turkey	1,741	0.4%	5,994	0.5%	7,079	0.5%
United Kingdom	175,219	37.7%	237,906	20.7%	281,011	19.6%
Other	17,465	2.6%	19,487	1.4%	-6,222	-0.4%

Source: Bureau of Economic Analysis.
Data as of January 2021.

A launchpad for U.S. companies
10 European countries among top 20 global export platforms

Table 5 underscores this point. The figures show U.S. affiliate sales from a given country to other destinations, or the exports of affiliates per country. Of the top twenty global export platforms for U.S. multinationals in the world, ten are located in Europe, a trend that reflects the intense cross-border trade and investment linkages of the European Union and the strategic way U.S. firms leverage their European supply chains. Ireland is the number one platform for U.S. affiliates in the world to reach foreign customers, with U.S. multinationals using the country's favorable tax policies and strategic location to access the larger European market. Switzerland, ranked second, remains a key export platform and pan-regional distribution hub for U.S. firms.

Table 5 Global Export Platforms for U.S. Multinationals (U.S. Affiliate Sales From Abroad to Other Destinations*)

	1982		1990		2000		2018	
Rank	Country	Value	Country	Value	Country	Value	Country	Value
1	United Kingdom	33,500	United Kingdom	51,350	United Kingdom	94,712	**Ireland**	**351,842**
2	Switzerland	27,712	Canada	46,933	Canada	94,296	Switzerland	299,475
3	Canada	25,169	Germany	41,853	Germany	69,522	Singapore	286,866
4	Germany	19,117	Switzerland	38,937	Netherlands	67,852	United Kingdom	209,625
5	Netherlands	15,224	Netherlands	33,285	Singapore	56,961	Netherlands	181,382
6	Belgium	11,924	France	24,782	Switzerland	56,562	Canada	157,476
7	Singapore	11,579	Belgium	21,359	**Ireland**	**51,139**	Germany	128,911
8	France	11,255	Singapore	15,074	Mexico	37,407	Belgium	112,588
9	Indonesia	8,289	Hong Kong	9,951	France	35,797	Mexico	101,679
10	Hong Kong	4,474	Italy	9,562	Belgium	32,010	Hong Kong	89,906
11	Italy	3,993	**Ireland**	**9,469**	Hong Kong	22,470	China	73,353
12	Australia	3,710	Spain	7,179	Malaysia	16,013	France	60,089
13	**Ireland**	**2,842**	Japan	7,066	Sweden	15,736	Australia	38,233
14	United Arab Emirates	2,610	Australia	6,336	Italy	14,370	Luxembourg	35,042
15	Brazil	2,325	Mexico	5,869	Spain	12,928	Italy	33,131
16	Japan	2,248	Indonesia	5,431	Japan	11,845	Brazil	33,119
17	Malaysia	2,046	Brazil	3,803	Australia	9,370	India	32,554
18	Panama	1,662	Norway	3,565	Brazil	8,987	Spain	30,212
19	Spain	1,635	Malaysia	3,559	China	7,831	Japan	28,180
20	Mexico	1,158	Nigeria	2,641	Norway	6,238	Malaysia	24,946
	All Country Total	252,274	All Country Total	398,873	All Country Total	857,907	All Country Total	2,721,519

Source: Bureau of Economic Analysis.
Data as of January 2021.
**Destination = affiliate sales to third markets and sales to U.S. for majority-owned foreign affiliates.*

On a standalone basis, U.S. affiliates' exports from Ireland are greater than most countries' exports. Such is the export-intensity of U.S. affiliates in Ireland and the strategic importance of Ireland to the corporate success of U.S. firms operating in Europe and around the world. Moreover, the UK's exit from the EU may further solidify Ireland's spot as the number one location for U.S. affiliate exports. Increased barriers to trade, including regulatory checks and rules of origin requirements, could cause some companies to relocate operations to Ireland in search of easier access to the EU market.

The UK still plays an important role for U.S. companies as an export platform to the rest of Europe. However, the introduction of the euro, the Single Market, EU enlargement and now Brexit have enticed more U.S. firms to invest directly in continental member states of the EU. The extension of EU production networks and commercial infrastructure throughout a larger pan-continental Single Market has shifted the center of gravity in Europe eastward within the EU, with Brussels playing an important role in economic policies and decision-making.

Why Europe Matters

What started out as a loosely configured market of six nations (Belgium, France, West Germany, Italy, Luxembourg and the Netherlands) in the late 1950s is now an economic behemoth joined together in a Single Market. Indeed, the sum of Europe's parts is one of the largest economic entities in the world. In nominal U.S. dollar terms, the European Union (plus the UK, Norway, Switzerland, and Iceland) accounted for an estimated 22.3% of world output in 2020 – slightly lower than the U.S. share (24.8%) but greater than that of China (17.2%). Based on purchasing power parity figures, Europe's share was greater than that of the United States but less than that of China in 2020.

Given its size, Europe remains a key pillar of the global economy and critical component to the corporate success of U.S. firms. As Table 6 highlights, Europe attracts more than half of U.S. aggregate FDI outflows. The region's share of total U.S. FDI during the last decade was 57.3%, which is up from the first decade of this century as well as from the level of the 1990s.

Table 6 Cumulative U.S. FDI Outflows ($Millions)

Decade	All Countries	Europe	Europe as a % of World
1950-1959	20,363	3,997	19.6%
1960-1969	40,634	16,220	39.9%
1970-1979	122,721	57,937	47.2%
1980-1989	171,880	94,743	55.1%
1990-1999	869,489	465,337	53.5%
2000-2009	2,056,007	1,149,810	55.9%
2010-2019	2,404,739	1,378,601	57.3%
Q1-Q3 2020	101,259	54,909	54.2%

Source: Bureau of Economic Analysis.
Data as of January 2021.

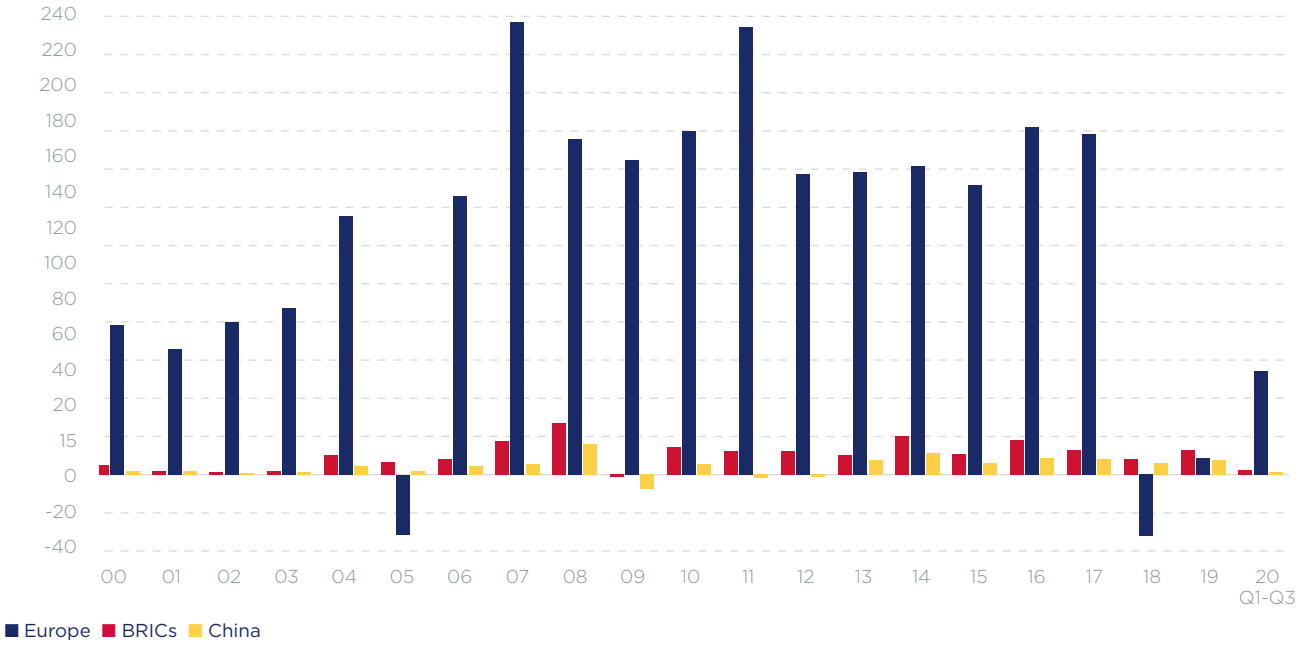
Even after adjusting for FDI flows related to holding companies, Europe remains the favored destination of U.S. firms. This runs counter to the fashionable narrative that Corporate America prefers low-cost nations in Asia, Latin America and Africa to developed markets like Europe.

Investing in emerging markets such as China, India and Brazil remains difficult, with indigenous barriers to growth (poor infrastructure, dearth of human capital, corruption, etc.) as well as policy headwinds (foreign exchange controls, tax preferences favoring local firms) reducing the overall attractiveness of these markets to multinationals. As shown in Table 7, there has been a wide divergence between U.S. FDI to the BRICs (Brazil, Russia, India, China) and U.S. FDI to Europe. After a drop in flows to Europe during 2018 and 2019 due to tax reform, investment in Europe in the first three quarters of 2020 started to pick up. FDI outflows to Europe were $54 billion for the first three quarters of the year, compared with just $1.2 billion in flows to China and $2.1 billion in flows to the BRICs.

57.3%

Europe's share of U.S. FDI during the last decade

Table 7 U.S. Foreign Direct Investment Outflows to the BRICs vs. Europe* ($ Billions)



**Europe does not include flows to Russia. BRICs = Brazil, Russia, India and China.*
Source: Bureau of Economic Analysis.
Data as of January 2021.

In addition to being one of the largest economic blocs in the world, Europe is also wealthy, and wealth matters. Wealth is correlated with highly skilled labor, rising per capita incomes, innovation, and a world class R&D infrastructure, among other things. In the aggregate, 15 of the 25 wealthiest nations in the world are European. Per capita income levels in Europe are significantly greater than those in India and China, and all of Africa. China's per capita income of just $10,262 in 2019 is well below the per capita income levels of Switzerland ($81,994), the Netherlands ($52,331), Finland ($48,783), Germany ($46,445), and the European Union average of around $35,000. Meanwhile, India's per capita GDP was just $2,100 in 2019, according to figures from the World Bank.

Wealth, in turn, drives consumption. The EU (including the UK) accounted for about 20% of total global personal consumption expenditures in 2019, a slightly lower share than that of the United States but well above that of China (11%) and India (4%). Gaining access to wealthy consumers is among the primary reasons why U.S. firms invest overseas, and hence the continued attractiveness of wealthy Europe to American companies.

Just as the macroeconomic backdrop influences investment decisions, so too do micro factors. Country and industry regulations can help or hamper the foreign activities of U.S. companies, and greatly influence where U.S. firms invest overseas. Think property rights, the ability to obtain credit, regulations governing employment, the time it takes to start a business, contract enforcements, and rules and regulations concerning cross border trade. These and other metrics influence and dictate the ease of doing business, and on this basis many European countries rank as the most attractive in the world.

According to the latest rankings of global competitiveness from the World Economic Forum, six European countries were ranked among the top ten most competitive economies in the world. As shown in Table 8, over half of the top 30 most competitive economies are European countries. That said, Europe's competitiveness is hardly homogenous. Some nations did not even score in the top fifty – Romania ranked 51st, Greece ranked 59th, and Croatia ranked 63rd in the 2019 survey. Updated rankings for 2020 were not available this year due to COVID-19 uncertainties.

Table 8 European Economies are Among the Most Competitive in the World

Global Competitiveness Index 2019 Rankings	
Rank	**Country**
1	Singapore
2	United States
3	Hong Kong
4	**Netherlands**
5	**Switzerland**
6	Japan
7	**Germany**
8	**Sweden**
9	**United Kingdom**
10	**Denmark**
11	**Finland**
12	Taiwan
13	South Korea
14	Canada
15	**France**
16	Australia
17	**Norway**
18	**Luxembourg**
19	New Zealand
20	Israel
21	**Austria**
22	**Belgium**
23	**Spain**
24	**Ireland**
25	United Arab Emirates
26	**Iceland**
27	Malaysia
28	China
29	Qatar
30	**Italy**

Source: World Economic Forum, Global Competitiveness Report 2019.

The spread between the Netherlands, in fourth place, and Croatia underscores the divergent competitiveness of the EU and highlights the fact that member states exhibit various competitive strengths and weaknesses. Greece received low marks for its property rights and financial stability, which stand in contrast to Finland's strong protection of property rights, macroeconomic stability and transparent institutions or Germany's strong innovation capability and healthy debt dynamics. Belgium was rated positively for macroeconomic stability and utility infrastructure; France was highlighted for its research and development capabilities as well as its high life expectancy. Switzerland ranked first across several variables, including workforce skills, broadband internet subscriptions and government policy stability. In other words, the various countries of Europe offer specific micro capabilities and competencies that are relatively lacking in the United States and critical to the global success of U.S. firms.

Finally, Europe continues to be a world leader when it comes to innovation and knowledge-based activities. According to the Global Innovation Index for 2020, nine European economies rank among the top 15 most innovative countries in the world. The index takes into account a wide range of factors such as institutions, education quality, research & development, information & communication technologies (ICT) infrastructure, and more; on these measures, Europe is the most attractive region in the world for innovation. Another important measure of knowledge-based capabilities, also highlighted in the report, is science & technology (S&T) intensity – or the sum of the patent and scientific publication shares divided by the population. By this measure, many European and U.S. regions have more scientific output per capita than their Asian counterparts. In fact, 16 of the top 30 science & technology clusters, ranked by S&T intensity, are located Europe, 11 in North America, and only 3 are in Asia.

Table 9 Global Innovation Index 2020

Overall Global Innovation Index	
Rank	**Country**
1	Switzerland
2	Sweden
3	United States
4	United Kingdom
5	Netherlands
6	Denmark
7	Finland
8	Singapore
9	Germany
10	South Korea
11	Hong Kong, China
12	France
13	Israel
14	China
15	Ireland

Science and Technology (S&T) Intensity		
Rank	**Cluster Name**	**Economy**
1	Cambridge. UK	UK
2	Oxford	UK
3	Eindhoven	Belgium/Neth.
4	San Jose-San Fran., CA	U.S.
5	Ann Arbor, MI	U.S.
6	Boston-Cambridge, MA	U.S.
7	Daejeon	Korea
8	Seattle, WA	U.S.
9	San Diego, CA	U.S.
10	Lund-Malmö	Sweden
11	Raleigh, NC	U.S.
12	Grenoble	France
13	Lausanne	Switz./France
14	Stockholm	Sweden
15	Munich	Germany

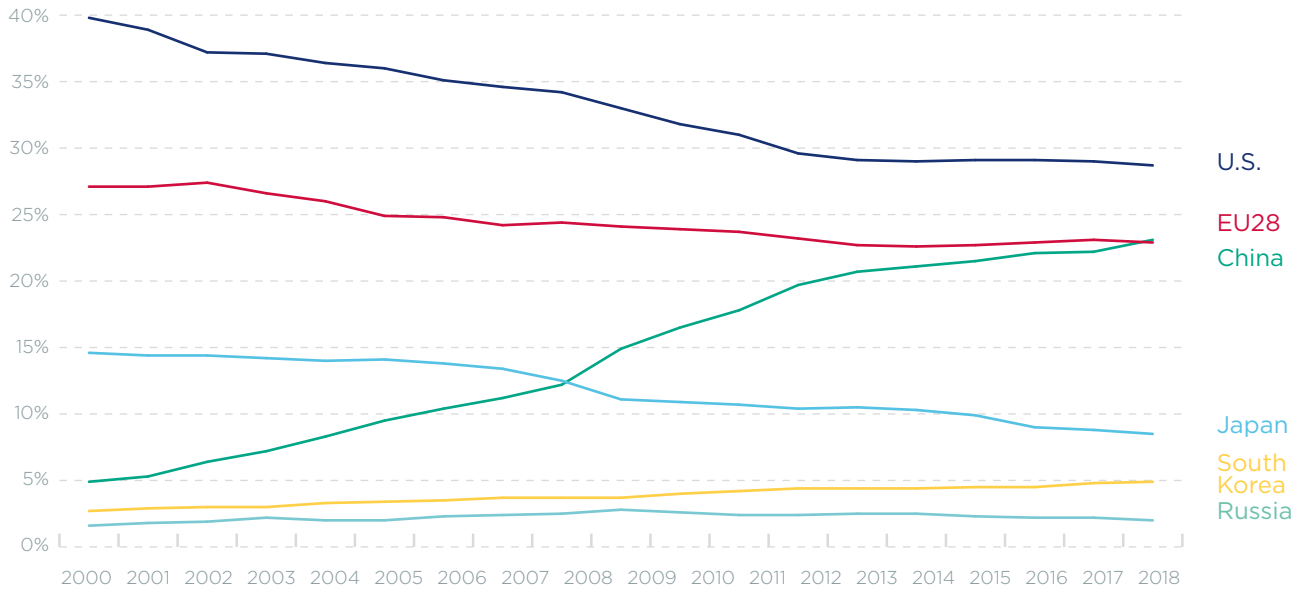
Source: Cornell University, INSEAD, and the World Intellectual Property Organization, Global Innovation Index 2020. Data as of 2020.

U.S. business contributes to Europe's R&D expenditures
$33 billion

Since R&D expenditures are a key driver of value-added growth, it is interesting to note that EU-based organizations accounted for about one-fifth of total global R&D in 2018 in purchasing-power parity terms. That lagged the share of the United States and China but exceeded the share of Japan and South Korea. Over the past two decades, China has steadily advanced its R&D capabilities, and is projected to overtake the U.S. as the top R&D spender in the world (Table 10). According to R&D Magazine's updated 2020 Global R&D Funding forecast, R&D expenditures should fall 4% globally and 7% in Europe, mainly due to a drop in corporate revenues caused by the global pandemic.

Sweden, Switzerland, Austria, Denmark and Germany rank among the top countries in terms of R&D spending as a percentage of GDP. All had R&D-to-GDP ratios above 3% in 2018, larger than that of the United States (2.8%) and China (2.1%). As shown in Table 11, a large part of the R&D funding in these countries comes from businesses.

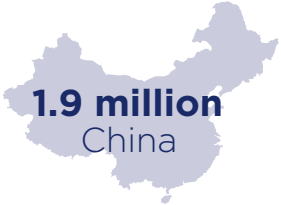
Table 10 **Global R&D Expenditures and the Rise of China** (% of Total)



R&D share calculated in terms of current purchasing-power parity dollars. Global R&D is a sum of the OECD countries plus Argentina, China, Russia, Singapore, South Africa, Chinese Taipei and other non-OECD EU countries.
Source: OECD.
Data as of January 2021.

Number of researchers hosted
(2018)

2.1 million
EU



1.9 million
China

1.5 million
U.S.

U.S. corporate affiliates in Europe also play an important role in the R&D and innovation climate of the region. These affiliates contributed $33 billion to Europe's total expenditures on R&D.

Led by European industry leaders like Roche, Novartis, Daimler, Sanofi, and GlaxoSmithKline, Europe remains a leader in a number of cutting-edge industries including life sciences, agriculture and food production, automotives, nanotechnology, energy, and information and communications. Innovation requires talent, and on this basis, Europe is holding its own relative to other parts of the world. Europe is the world leader in terms of full-time equivalent research staff. Of the world's total pool of research personnel, the EU housed 2.1 million researchers in 2018 versus 1.5 million in the United States and 1.9 million in China, according to OECD estimates.

Finally, Europe is home to one of the most educated workforces in the world. The share of the working age population with a bachelor's degree or higher in Ireland is the highest in the OECD, at 51%. The comparable figures for Luxembourg, Switzerland, Lithuania, Iceland, Belgium, and the Netherlands are all higher than that of the United States (currently 38%).

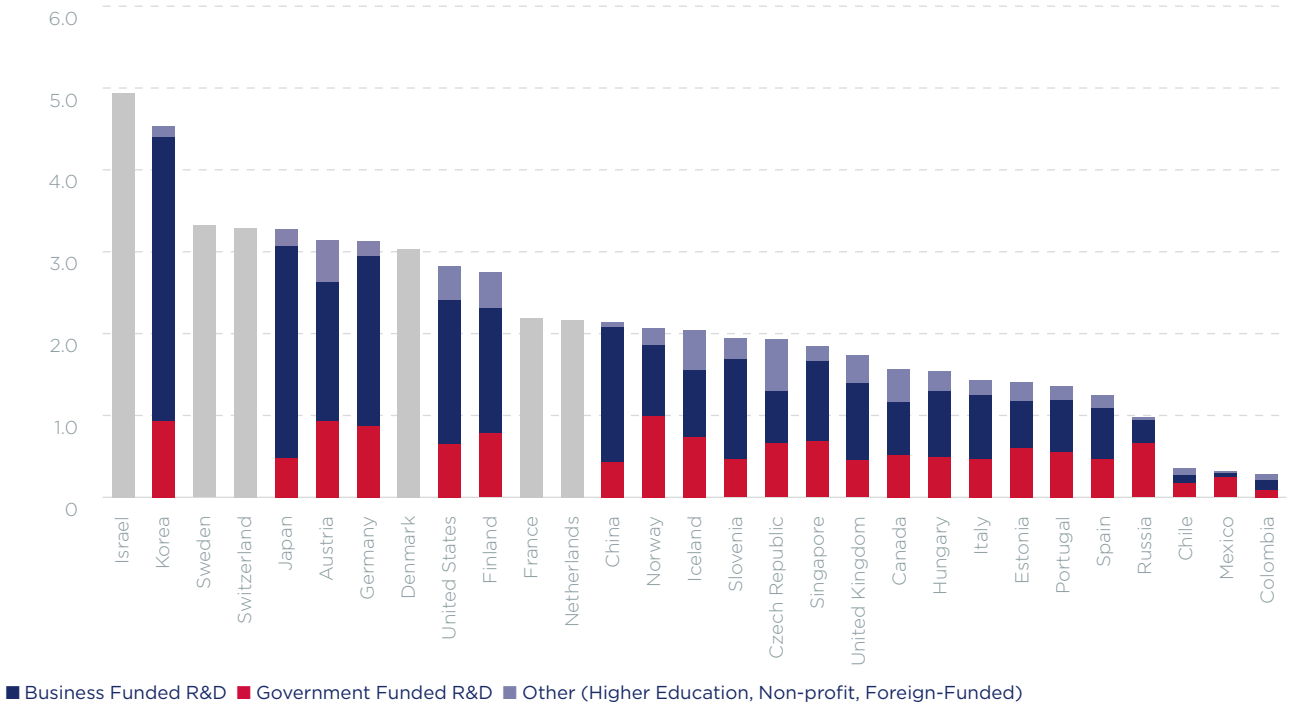
While U.S. universities remain a top destination for foreign students, the UK, Germany and France are also notable attractions. In the end, Europe remains among the most competitive regions in the world in terms of science and technology capabilities. The U.S. National Science Board has explicitly recognized EU research performance as strong and marked by pronounced intra-EU collaboration.

Adding It All Up

Given all the above, Europe remains a key destination for U.S. companies looking to expand their global footprint. The region remains large, wealthy, richly endowed, open for business, and an innovation leader in many key global industries.

Despite the latest trade frictions between the two regions, Europe is expected to remain a critical and indispensable geographic node in the global operations of U.S. companies. U.S. companies view the world through a tripolar lens – a world encompassing the Americas, Europe and Asia, along with attendant offshoots. In this tripolar world, U.S. companies are not about to give up on or decamp from one of the main pillars of the global economy.

Table 11 Annual R&D Spending (% of GDP)



Gray bars indicate that R&D breakdown is not available at the sector level.
Source: OECD. Data for 2018.

Endnotes

1 See Jannick Damgaard, Thomas Elkjaer, and Niels Johannesen, "The Rise of Phantom Investments," IMF Finance & Development, September 2019, https://www.imf.org/external/pubs/ft/fandd/2019/09/the-rise-of-phantom-FDI-in-tax-havens-damgaard.htm; and Jannick Damgaard, Thomas Elkjaer and Niels Johannesen, "What Is Real and What Is Not in the Global FDI Network?" IMF Working Paper WP/19/274, December 2, 2019.
2 Note the dataset used by the authors for their analysis is the IMF Coordinated Direct Investment Survey, which due to differences in measurement, can vary from the figures reported by the U.S. Bureau of Economic Analysis used in the Appendix pages of this study.
3 Ibid.