

## Estimating the scale of foreign exchange transaction fees in the U.S.

<b>Fees (USD million, current prices)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
<b>1. Fees on portfolio investment earnings from abroad</b>	<b>1,598</b>	<b>1,683</b>	<b>1,749</b>	<b>1,825</b>	<b>1,952</b>	<b>2,137</b>	<b>2,170</b>
<i>Of which transaction fees</i>	426	449	467	487	521	570	579
<i>Of which exchange rate margins</i>	1,172	1,234	1,282	1,338	1,431	1,567	1,591
<b>2. Fees on remittance outflows from US</b>	<b>6,495</b>	<b>6,339</b>	<b>6,977</b>	<b>7,079</b>	<b>7,041</b>	<b>6,931</b>	<b>7,335</b>
<i>Of which transaction fees</i>	5,162	5,296	5,501	5,417	5,357	5,086	5,169
<i>Of which exchange rate margins</i>	1,332	1,043	1,476	1,662	1,684	1,845	2,166
<b>3. Fees on remittance outflows to US</b>	<b>296</b>	<b>297</b>	<b>311</b>	<b>297</b>	<b>286</b>	<b>308</b>	<b>314</b>
<i>Of which transaction fees</i>	236	242	249	234	240	239	239
<i>Of which exchange rate margins</i>	60	55	62	63	47	69	76
<b>4. Fees on SMEs trade</b>	<b>2,163</b>	<b>2,238</b>	<b>2,219</b>	<b>2,205</b>	<b>2,306</b>	<b>2,442</b>	<b>2,429</b>
<i>Of which transaction fees</i>	160	164	165	165	171	180	179
<i>Of which exchange rate margins</i>	2,003	2,074	2,053	2,041	2,135	2,262	2,250
<b>5. Fees on consumer spending abroad</b>	<b>2,218</b>	<b>2,372</b>	<b>2,543</b>	<b>2,754</b>	<b>3,005</b>	<b>3,249</b>	<b>3,517</b>
<b>Vacationers</b>	<b>2,023</b>	<b>2,164</b>	<b>2,329</b>	<b>2,525</b>	<b>2,761</b>	<b>2,989</b>	<b>3,237</b>
<i>Of which transaction fees</i>	685	733	789	855	935	1,012	1,096
<i>Of which exchange rate margins</i>	1,338	1,431	1,540	1,670	1,826	1,977	2,141
<b>Education</b>	<b>195</b>	<b>209</b>	<b>214</b>	<b>228</b>	<b>244</b>	<b>260</b>	<b>280</b>
<i>Of which transaction fees</i>	90	96	98	105	112	119	128
<i>Of which exchange rate margins</i>	106	113	116	123	132	141	151
<b>6. Fees on military spending abroad</b>	<b>560</b>	<b>540</b>	<b>548</b>	<b>506</b>	<b>406</b>	<b>445</b>	<b>455</b>
<i>Of which transaction fees</i>	190	183	185	171	137	151	154
<i>Of which exchange rate margins</i>	370	357	362	334	268	294	301
<b>7. Fees on SMEs international payrolls</b>	<b>77</b>	<b>82</b>	<b>80</b>	<b>83</b>	<b>81</b>	<b>82</b>	<b>91</b>
<i>Of which transaction fees</i>	21	22	21	22	22	22	24
<i>Of which exchange rate margins</i>	57	60	59	61	60	60	66
<b>Total</b>	<b>13,408</b>	<b>13,552</b>	<b>14,427</b>	<b>14,749</b>	<b>15,078</b>	<b>15,594</b>	<b>16,310</b>
<i>Of which transaction/upfront fees</i>	6,970	7,186	7,476	7,456	7,494	7,379	7,568
<i>Of which exchange rate margins and fees on using cards abroad</i>	6,438	6,366	6,951	7,293	7,584	8,215	8,742

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This note explains Capital Economics' methodology for estimating the scale of fees on foreign exchange transactions in the United States.

### **Foreign currency transactions**

We have estimated the fees paid by consumers and businesses on foreign exchange transactions each year in the United States from 2013 to 2019 in seven areas:

1. Portfolio investment earnings abroad – United States' residents earn income in a foreign currency on foreign portfolio investments, for example dividends on equities or interest on debt securities.
2. Remittances from the United States – people pay fees when they send money to family or friends who live abroad.
3. Remittances to the United States – United States' citizens living overseas pay fees when they send money to family or friends who live in the United States.
4. SMEs trade in goods and services – small and medium sized enterprises import and export goods and services. They pay fees to convert those that are invoiced in a foreign currency into United States dollars.
5. Spending abroad by United States' vacationers and students abroad – covering holidays, education and visits to friends and relatives. They face fees on purchases and cash withdrawals they make abroad using debit and credit cards and on cash exchanged for foreign currency in the United States.
6. Spending by United States' overseas military – United States' military personnel overseas face fees on purchases and cash withdrawals they make abroad using debit and credit cards and on cash exchanged for foreign currency in the United States.
7. SMEs international payrolls – small and medium sized enterprises with operations in other countries pay fees when paying compensation to employees working abroad.

Most data inputs needed for the estimation of foreign exchange transaction fees are available through to 2019. In two areas data are incomplete. First, data for remittances to and from the United States are not available for 2018 and 2019. We have estimated remittances in those two years based on their average annual growth rate over the previous four years and assumed the same country shares in remittances as averaged in the years 2015 to 2017. Second, total merchandise trade data are available for 2019 but sectoral data are not. The sectoral data are used in estimating the value of small, medium and large transactions in trade. We have assumed the same shares for transaction sizes as in 2018 and applied these to total merchandise trade to estimate the values of small, medium and large trade transactions.

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## 1. Portfolio investment earnings abroad

United States' residents earn income on portfolio investment abroad, such as dividends from equities or interest payments on debt. The International Monetary Fund provides estimates for the values of equity and debt assets held abroad and the incomes earned on equities and debt assets.<sup>1</sup>

We have cautiously assumed that 25 per cent of these earnings take the form of cash that is brought back to the United States and converted into United States dollars. This assumption was used in previous TransferWise projects on foreign exchange transactions in the United Kingdom, Australia, Singapore, New Zealand and Hong Kong. We used data on money transfer fees from TransferWise's website to estimate the associated fee rates for United States residents.<sup>2</sup> Finally, we multiplied total portfolio investment volumes by the relevant transaction and exchange rate margin fee rates to determine total portfolio investment fees.

## 2. Remittances from United States

The World Bank provides estimates of migrant remittance outflows from the United States<sup>3</sup> and the cost data for outflows from the United States.<sup>4</sup> We used the fees for sending money from the United States to determine the average exchange rate margin and transaction fee charged on a remittance. From there, we multiplied total remittance outflows by the transaction and exchange rate margin fee rates to determine total remittance outflow fees.

The fee as a percentage of the transaction value for migrant remittance outflows is higher than for consumer spending abroad, trade in goods and services, international payrolls, overseas military spending abroad and portfolio investment earnings from abroad because the typical remittance transaction is smaller in value.

## 3. Remittances to United States

The World Bank also provides estimates of migrant remittance inflows to the United States, but not the cost of those inflows. Cost data are provided for remittance outflows from most of the top twenty countries to which by United States citizens emigrate.<sup>5</sup> We used the fees for sending money to the world from these countries to estimate the average exchange rate margin and transaction fee charged on a remittance to the United States. Finally, we multiplied United States total remittance inflows by the estimated transaction and exchange rate margin fee rates to determine total remittance inflow fees.

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<sup>1</sup> International Monetary Fund, *Balance of Payments and International Investment Position Statistics (BOP/IIP): United States* (International Monetary Fund, Washington D.C.), 2019.

<sup>2</sup> Data from TransferWise's website (<https://transferwise.com/>).

<sup>3</sup> World Bank, *Migration and Remittances Data*, (World Bank, Washington DC), 2018.

<sup>4</sup> World Bank, *Remittance prices worldwide* (World Bank, Washington DC), 2018.

<sup>5</sup> World Bank, *Remittance prices worldwide* (World Bank, Washington DC), 2018.

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#### 4. SMEs trade in goods and services

We estimated the foreign exchange fees on the value of United States' Small and Medium Enterprises (SMEs) trade that is invoiced in a foreign currency, for exporters and importers.

The value of imports to and exports from United States comes from data provided by the World Trade Organisation.<sup>6</sup> Furthermore, the Organisation for the Economic Cooperation and Development (OECD) provides data on the amount of imports and exports by enterprise size.<sup>7</sup> The Bank for International Settlements provides estimates for the share of trade that is invoiced in a foreign currency.<sup>8</sup> Combining these sources, we were able to estimate the value of payments to and from United States' SMEs that are converted into United States dollars.

Data from TransferWise's website provide estimates for the foreign exchange fees that apply to small trading transactions in the United States.<sup>9</sup> Literature suggests that exchange rate fees for commercial transactions (i.e. for firms that import or export) decrease as the value of the transaction increases and also provides estimates of the foreign exchange fees for medium and large trading transactions.<sup>10</sup> We assessed average transaction sizes for each sector of the economy that imports or exports in United States. Finally, we multiplied the total small, medium and large SMEs trade amounts by the relevant transaction and exchange rate margin fee rates to determine total fees on trade transactions.

#### 5. Spending by United States vacationers and education tourists abroad

The International Monetary Fund has data on the value of spending by United States residents on non-business visits abroad.<sup>11</sup> The United States' National Travel and Tourism Office has data on the value of spending by United States residents on education abroad.<sup>12</sup>

We split total expenditures in both categories (vacation and education) by payment method (card or non-cash equivalent versus cash or equivalent) based on data from the United States National Travel and Tourism Office.<sup>13</sup> From this, we estimate that card payments represent 67 per cent of United States residents' total spending abroad for vacation purpose. We assume that card

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<sup>6</sup> World Trade Organisation, Annual trade data (World Trade Organisation, Geneva, <https://data.wto.org/>), 2020. These data are available through Thomson Reuters Datastream.

<sup>7</sup> Organisation for the Economic Cooperation and Development, Dataset: I - TEC by sector and size class, (Organisation for the Economic Cooperation and Development, Paris, [https://stats.oecd.org/Index.aspx?DataSetCode=TEC1\\_REV4](https://stats.oecd.org/Index.aspx?DataSetCode=TEC1_REV4)), 2020.

<sup>8</sup> Bank for International Settlements, BIS Working Papers No 653 Dollar pricing redux (Bank for International Settlements, Basel, <https://www.bis.org/publ/work653.pdf>), 2017

<sup>9</sup> Data from TransferWise's website (<https://transferwise.com/>).

<sup>10</sup> Carol Osler, Alexander Mende and Lukas Menkhoff, *Price Discovery in Currency Markets* (Brandeis International Business School, Waltham), 2006.

<sup>11</sup> International Monetary Fund, *Balance of Payments Standard Presentation: United States Travel, debit* (International Monetary Fund, Washington D.C.) 2019.

<sup>12</sup> National Travel and Tourism Office, *U.S. Travel And Tourism Balance Of Trade* (National Travel and Tourism Office, Washington, DC) 2010-2019.

<sup>13</sup> National Travel and Tourism Office, 2017 Profile of U.S. Resident Travelers Visiting Overseas Destinations (Outbound) (National Travel and Tourism Office, Washington, DC, [https://travel.trade.gov/outreachpages/download\\_data\\_table/2017%20Profile%20of%20US%20Residents%20Visiting%20Overseas.xlsx](https://travel.trade.gov/outreachpages/download_data_table/2017%20Profile%20of%20US%20Residents%20Visiting%20Overseas.xlsx)) 2017.

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payments represent 100 per cent of United States residents' total spending abroad for education purposes. Applying these shares to the total value of expenditure by those residents on visits or studying abroad, we estimated the total cash and card amounts.

We use data from major banks in United States (J.P. Morgan Chase, Bank of America Corp., Wells Fargo, Citigroup and US Bank) to estimate the fees that apply to card and cash purchases made abroad<sup>14</sup> to derive both the average exchange rate margin and transaction fee charged.<sup>15</sup>

From there, we multiplied the cash and card expenditure amounts by the relevant transaction and exchange rate margin fee rates to determine total fees on vacation and education spending abroad.

## 6. Spending by overseas military

The Defense Manpower Data Center has data on the number of active United States military personnel at home and overseas.<sup>16</sup> The United States' Department of defence has data on the total military personnel pay.<sup>17</sup> From these data we compute the average pay per active member of the military and the total pay to active personnel overseas. We then estimate the share of pay saved and spent using the average annual saving rate in the United States between 2013 and 2018.<sup>18</sup>

We split total expenditure by payment method (card or non-cash equivalent versus cash or equivalent) based on data from the United States National Travel and Tourism Office.<sup>19</sup> From this, we estimate that card payments represent 67 per cent of United States overseas military personnel total spending abroad. Applying this share to the total value of expenditure by those personnel, we estimated the total cash and card amounts.

We use data from major banks in United States (J.P. Morgan Chase, Bank of America Corp., Wells Fargo, Citigroup and US Bank) to estimate the fees that apply to card and cash purchases made abroad<sup>20</sup> to derive both the average exchange rate margin and transaction fee charged.<sup>21</sup>

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<sup>14</sup> Major United States Banks information for card transactions: JP Morgan Chase (<https://www.chase.com/content/dam/chase-ux/documents/personal/checking/ABSF-en.pdf>), Bank of America Corp. (<https://www.bankofamerica.com/deposits/resources/personal-schedule-fees.go>), Wells Fargo (<https://transferwise.com/us/blog/wells-fargo-foreign-transaction-fee>), Citigroup (<https://transferwise.com/us/blog/citibank-foreign-transaction-fee>) US Bank (<https://www.mybanktracker.com/news/foreign-atm-fee-comparison-top-10-us-banks>).

<sup>15</sup> Foreign exchange margins charged by banks when buying GBP, EUR and AUD notes: Market rate (<https://www.xe.com/>), JP Morgan Chase (<https://www.jpmorgan.com/jpmpdf/1320748869966.pdf>), Citigroup (<https://www1.citibank.com.au/banking/convert-currency>), Wells Fargo (<https://www.wellsfargo.com/foreign-exchange/currency-rates/>).

<sup>16</sup> Defense Manpower Data Center, *Number of Military and DoD Appropriated Fund (APF) Civilian Personnel Permanently Assigned* (Defense Manpower Data Center, United States, [https://www.dmdc.osd.mil/appj/dwp/dwp\\_reports.jsp](https://www.dmdc.osd.mil/appj/dwp/dwp_reports.jsp)) 2013-2019.

<sup>17</sup> United States' Department of defence, *Overview – FY 2019 Defense Budget* (United States' Department of defence, United States, <https://dod.defense.gov/Portals/1/Documents/pubs/FY2019-Budget-Request-Overview-Book.pdf>) 2019.

<sup>18</sup> Federal Reserve Economic Data, Personal saving rate (Federal Reserve Economic Data, Federal Reserve Bank of St. Louis, <https://fred.stlouisfed.org/series/PSAVERT>), 2013-2018

<sup>19</sup> National Travel and Tourism Office, 2017 Profile of U.S. Resident Travelers Visiting Overseas Destinations (Outbound) (National Travel and Tourism Office, Washington, DC, [https://travel.trade.gov/outreachpages/download\\_data\\_table/2017%20Profile%20of%20US%20Residents%20Visiting%20Overseas.xlsx](https://travel.trade.gov/outreachpages/download_data_table/2017%20Profile%20of%20US%20Residents%20Visiting%20Overseas.xlsx)) 2017.

<sup>20</sup> Major United States Banks information for card transactions: JP Morgan Chase (<https://www.chase.com/content/dam/chase-ux/documents/personal/checking/ABSF-en.pdf>), Bank of America Corp. (<https://www.bankofamerica.com/deposits/resources/personal-schedule-fees.go>), Wells Fargo

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From there, we multiplied the cash and card expenditure amounts by the relevant transaction and exchange rate margin fee rates to determine total fees on overseas military personnel spending abroad.

## 7. SMEs international payrolls

The Bureau of Economic Analysis has data on the compensation of employees paid from the United States to the rest of the world.<sup>22</sup> We multiplied this data by the SMEs average share of imports and exports to estimate the share of international payrolls paid by SMEs.

We used data on money transfer fees from TransferWise's website to estimate the associated fee rates for United States residents.<sup>23</sup> Finally, we multiplied total SMEs compensation of employees paid to the rest of the world by the relevant transaction and exchange rate margin fee rates to determine the total SMEs international payrolls fees.

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(<https://transferwise.com/us/blog/wells-fargo-foreign-transaction-fee>), Citigroup  
(<https://transferwise.com/us/blog/citibank-foreign-transaction-fee>) US Bank  
(<https://www.mybanktracker.com/news/foreign-atm-fee-comparison-top-10-us-banks>).

<sup>21</sup> Foreign exchange margins charged by banks when buying GBP, EUR and AUD notes: Market rate (<https://www.xe.com/>), JP Morgan Chase (<https://www.jpmorgan.com/ipmpdf/1320748869966.pdf>), Citigroup (<https://www1.citibank.com.au/banking/convert-currency>), Wells Fargo (<https://www.wellsfargo.com/foreign-exchange/currency-rates/>).

<sup>22</sup> Bureau of Economic Analysis, *Table 6.3D. Wages and Salaries by Industry* (Bureau of Economic Analysis, United States, [https://apps.bea.gov/iTable/iTable.cfm?reqid=19&step=3&isuri=1&nipa\\_table\\_list=189&categories=survey](https://apps.bea.gov/iTable/iTable.cfm?reqid=19&step=3&isuri=1&nipa_table_list=189&categories=survey)) 2013-2019.

<sup>23</sup> Data from TransferWise's website (<https://transferwise.com/>).



## **BACKGROUND**

Methodology: This survey has been conducted using an online interview administered to members of the YouGov Plc UK panel of 800,000+ individuals who have agreed to take part in surveys. Emails are sent to panellists selected at random from the base sample. The e-mail invites them to take part in a survey and provides a generic survey link. Once a panel member clicks on the link they are sent to the survey that they are most required for, according to the sample definition and quotas. (The sample definition could be "GB adult population" or a subset such as "GB adult females"). Invitations to surveys don't expire and respondents can be sent to any available survey. The responding sample is weighted to the profile of the sample definition to provide a representative reporting sample. The profile is normally derived from census data or, if not available from the census, from industry accepted data.

YouGov plc make every effort to provide representative information. All results are based on a sample and are therefore subject to statistical errors normally associated with sample-based information.

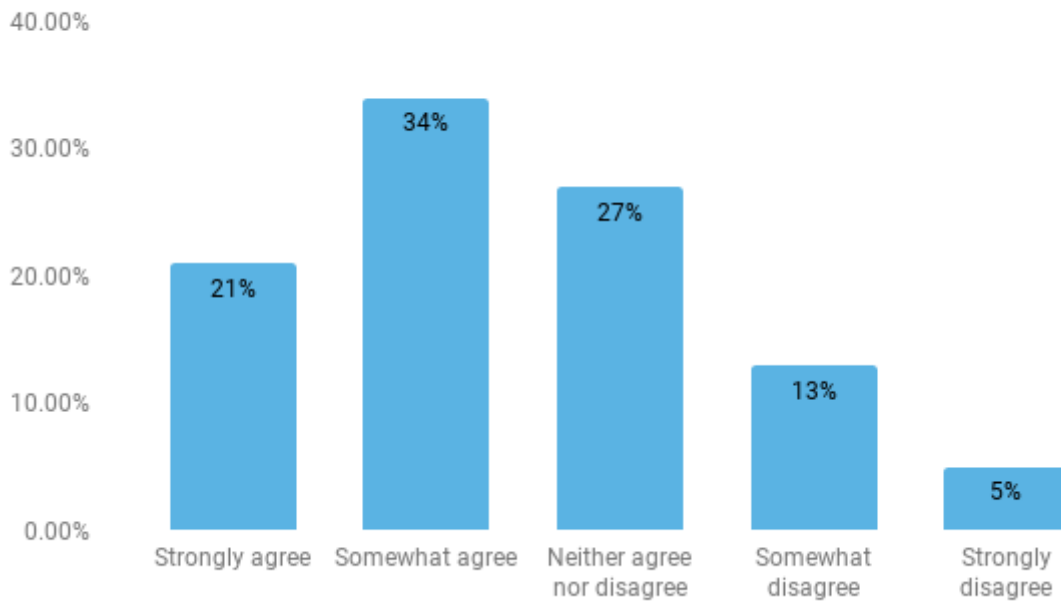
All figures, unless otherwise stated, are from YouGov Plc. Total sample size was 1396 adults. Fieldwork was undertaken between 2nd - 4th September 2020. The survey was carried out online. The figures have been weighted and are representative of all US adults (aged 18+).

## **EXACT QUESTIONS CITED BELOW**

Q1: For the following question, please imagine that you were looking to transfer money abroad/ buy foreign currency for a trip abroad... Which ONE of the following BEST describes how, if at all, you would expect to be charged from a provider?

Q2: To what extent do you agree or disagree with the following statement? Banks and other payment providers make it easy to understand the cost of sending money abroad/ buying foreign currency

## I understand how much I pay when sending money abroad



## Cost for money transfers via a bank

