



# NZPork Monthly Imports and Exports Report

IW Barugh and EJ Neumann  
Report run date: February 01, 2022

## 1 Data summary for December 2021

Data from January 2000 through December 2021 was downloaded from the Statistics NZ website <http://www.stats.govt.nz/>. To generate this report, the data was subsequently filtered to only include data from **January 2000 through December 2021**.

Table 5 in the Exports section of the report provides a detailed report of import and export activity for last 12m; the data for December 2021 is highlighted in red.

### 1.1 Volume

Monthly Pork Imports (NZPork Fiscal Year, 2018 to Current)

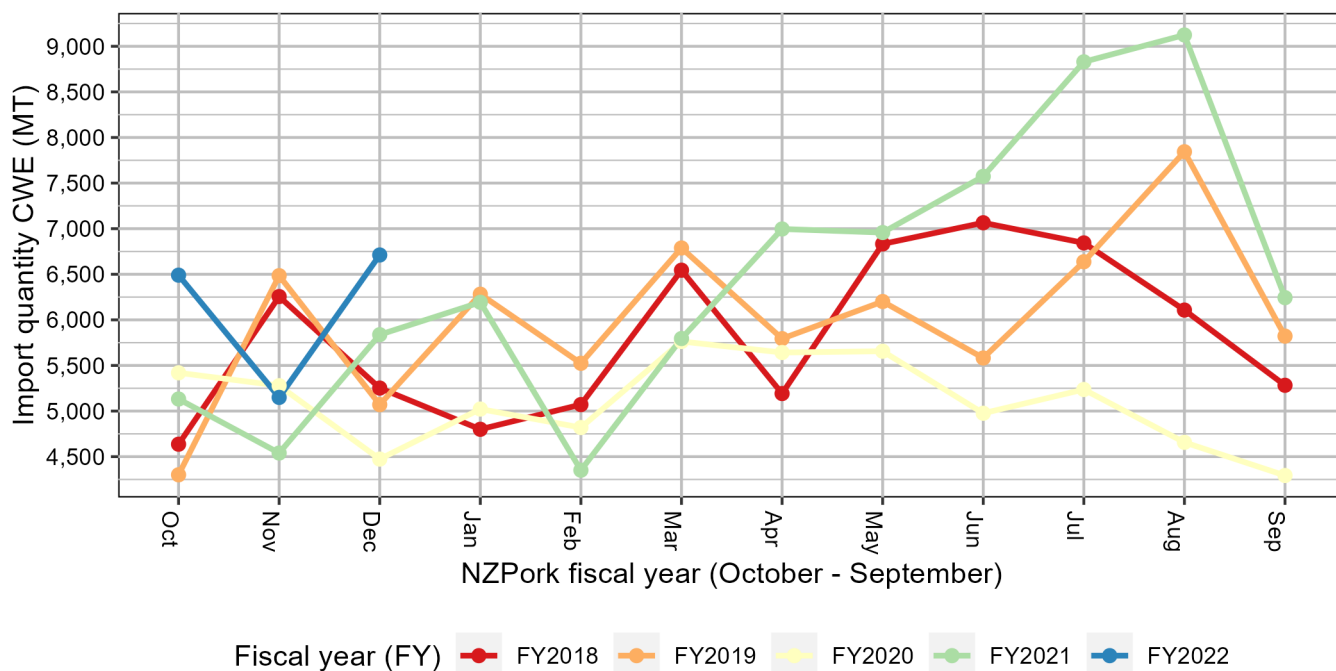


Figure 1: Monthly pork imports into New Zealand, stratified by NZPork fiscal year (FY2018 to current).

The total volume of pork imported to New Zealand in December 2021 was **4,828 tonne** (6,712 tonne CWE), **up 28.61%** from last month and **up by 14.66%** from the same month last year. For this month, **63.8%** of pork consumption was met by imported products (Figure 1).

## 1.2 Prices

The value of pork imported to New Zealand in December 2021 was \$23.8 million NZD CIF which equated to **\$4.93/kg**. The average value of imports this month on a per kg basis was **7.97% lower** than last month and **15.61% lower** than the same month last year.

Table 1: Relative supply and price of imported pork by pork form, December 2021

Pork form	CIF (NZD)	KGs imported	NZD per KG	Percent of total volume
FROZEN	21,334,770	4,593,279	\$4.64	95%
PROCESSED	1,550,053	110,463	\$14.03	2%
CURED	911,578	124,402	\$7.33	3%
TOTAL	23,796,401	4,828,144	\$4.93	100%

## 1.3 Form

In December 2021, FROZEN pork valued at \$4.64/kg accounted for 95.14% of the total volume of pork imports (Figure 2 and Table 1).

Form of Pig Meat Imports, 2016 to Present

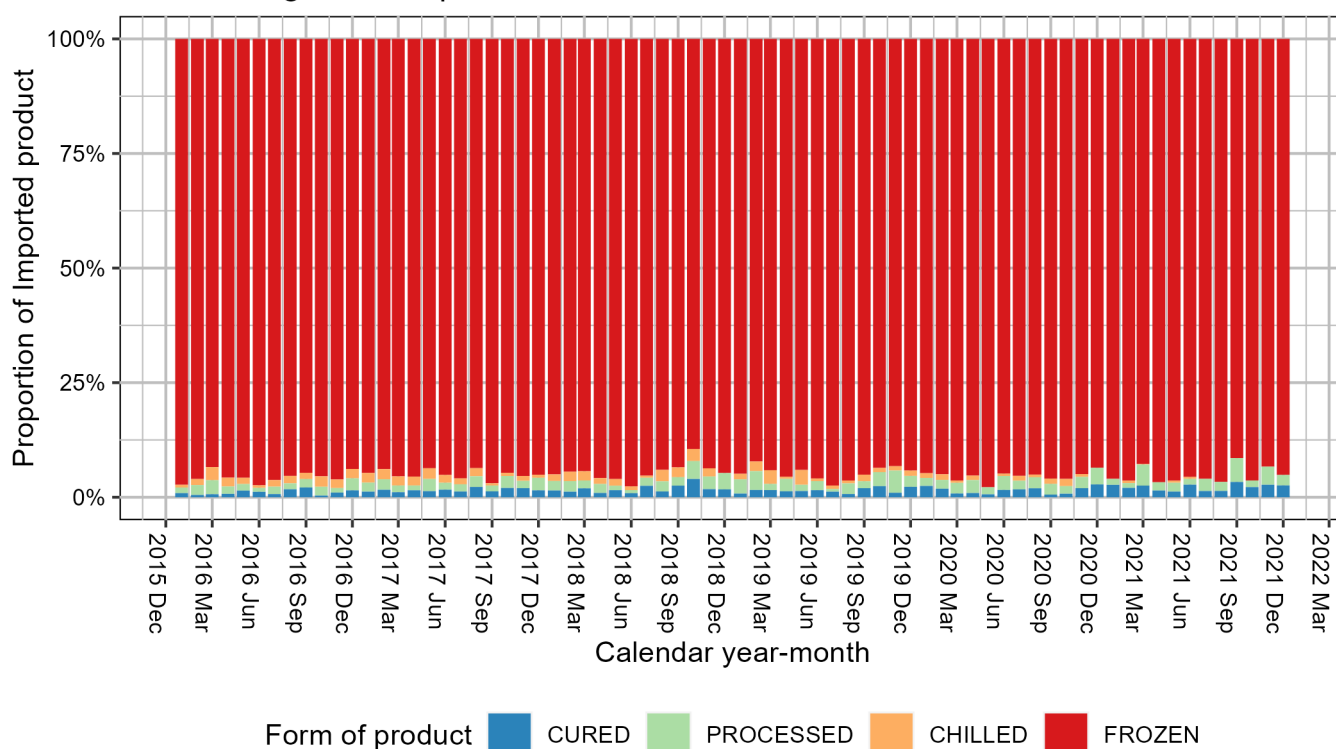


Figure 2: Form of pork imported into New Zealand, by month ( 2016 to current).

## 1.4 Countries

Table 2 shows the weight of pork (actual, not CWE) imported into New Zealand during December 2021. Product during this period was imported from 20 different countries. Figure 3 shows the import pattern of “key exporter” countries responsible for 95% of New Zealand’s pork imports during December 2021.

Table 2: Relative supply of imported pork, by country, December 2021

Country	Total	Percent	Cumulative
Germany	1,260,447	26.1%	26.1%
Poland	564,448	11.7%	37.8%
Netherlands	512,438	10.6%	48.4%
Spain	491,865	10.2%	58.6%
Denmark	477,764	9.9%	68.5%
USA	454,945	9.4%	77.9%
Canada	261,451	5.4%	83.3%
Sweden	252,351	5.2%	88.6%
Australia	243,768	5.0%	93.6%
Finland	196,786	4.1%	97.7%
Ireland	98,026	2.0%	99.7%
China	3,849	0.1%	99.8%
Italy	2,740	0.1%	99.8%
S.Korea	2,690	0.1%	99.9%
Taiwan	1,794	0.0%	99.9%
United Kingdom	1,378	0.0%	100.0%
Lithuania	443	0.0%	100.0%
Hong Kong	442	0.0%	100.0%
Viet Nam	383	0.0%	100.0%
Thailand	136	0.0%	100.0%

## Origin of Pig Meat Imports, 2016 to Present

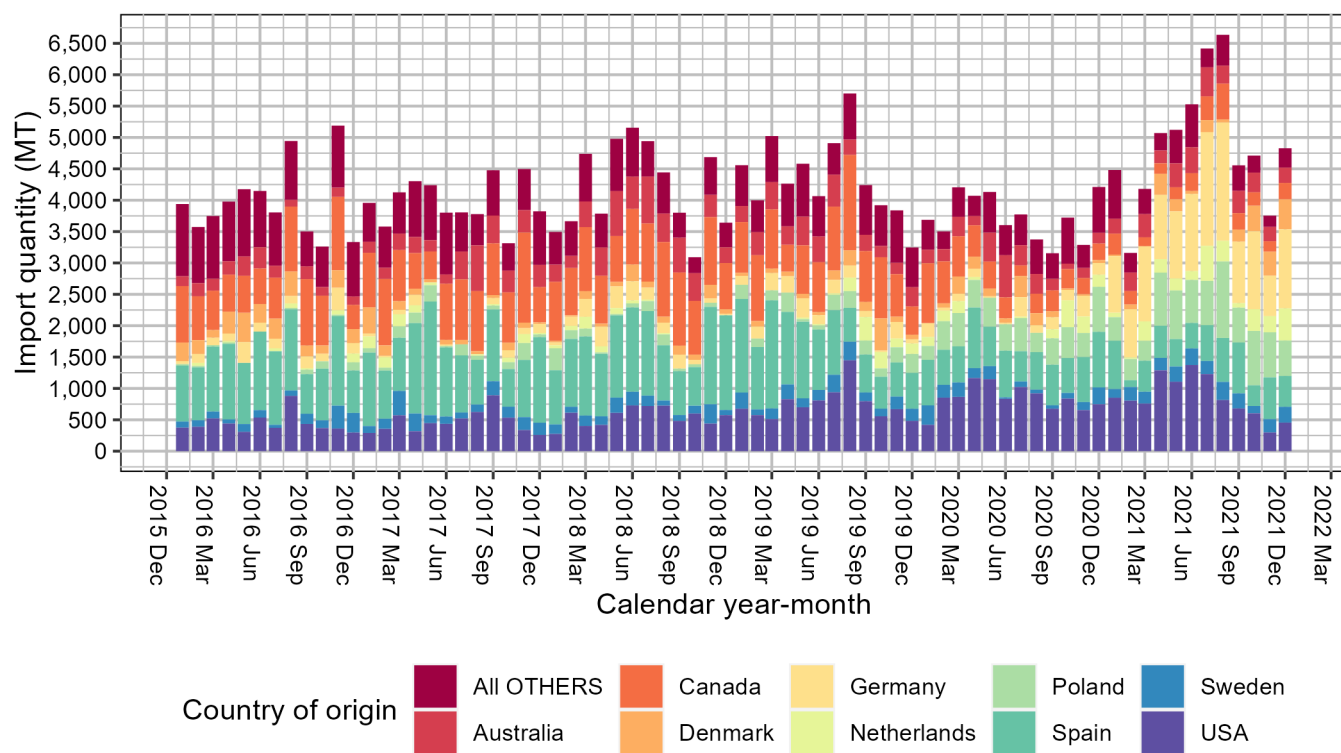


Figure 3: Origin of pork into New Zealand from key exporting countries, by month (2014 to current).

### 1.5 Chilled product

The amount of chilled product (weight in actual kgs) that entered New Zealand during December 2021 is shown in Figure 4 below. The black line on the graph represents the linear trend of chilled import volumes (95% confidence limit shown by the pale red shading). Figure 5 shows the same data stratified by country of origin.

## Chilled Pork Imported per Month, 2016 to Present

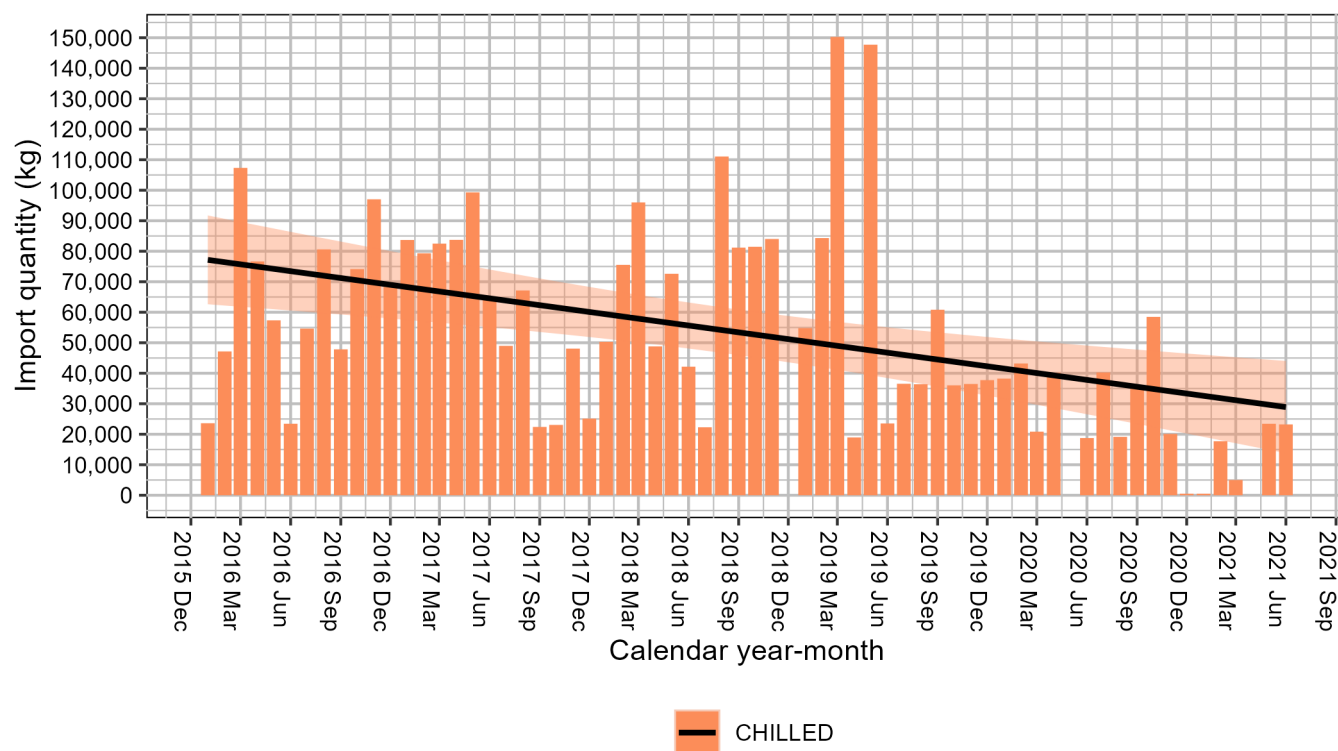


Figure 4: Chilled pork imported into New Zealand, by month.

## Chilled Pork Imported per Month, by Country of Origin, 2016 to Present

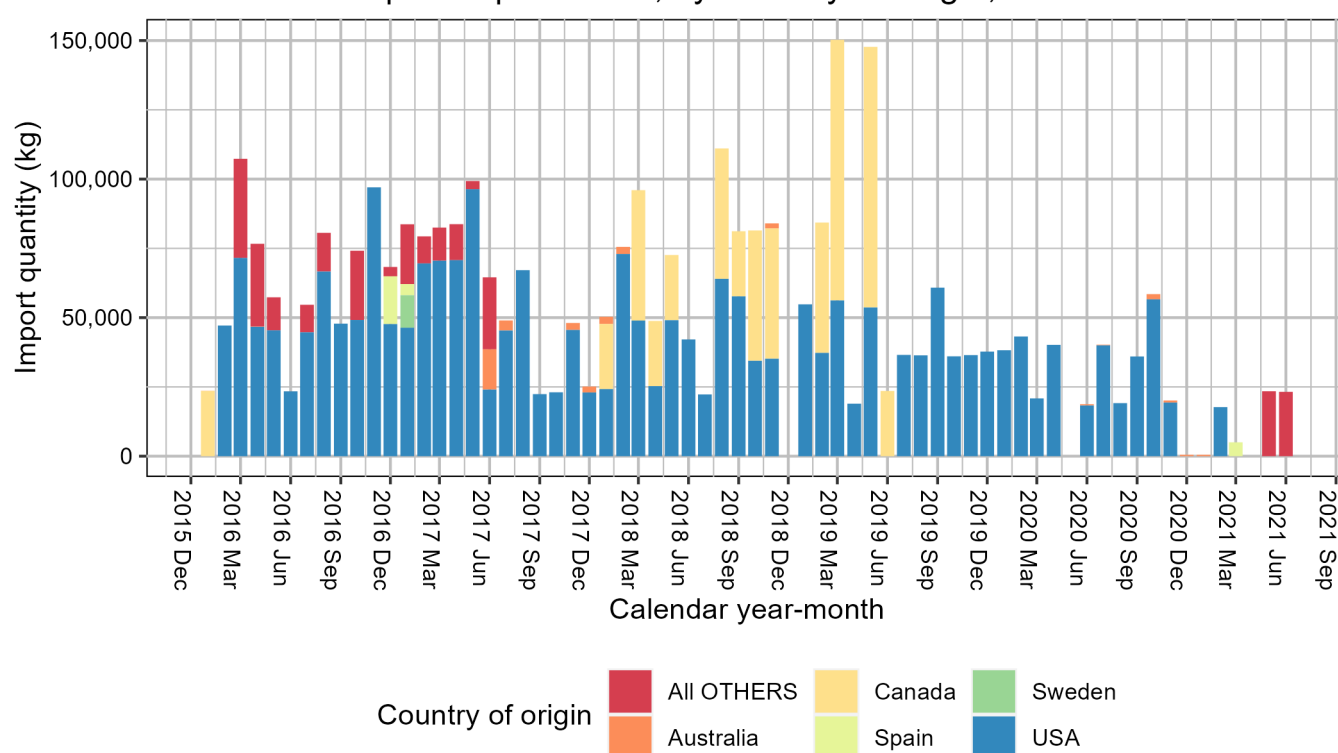


Figure 5: Chilled pork imported into New Zealand from key exporting countries, by month.

### 1.6 Volume and cost per kg of imported product (actual kgs, NZD)

The landed value (Figure 6) and kilograms (Figure 7) of pork imported into New Zealand during December 2021 are shown below.

CIF per kg imported (actual), December 2021

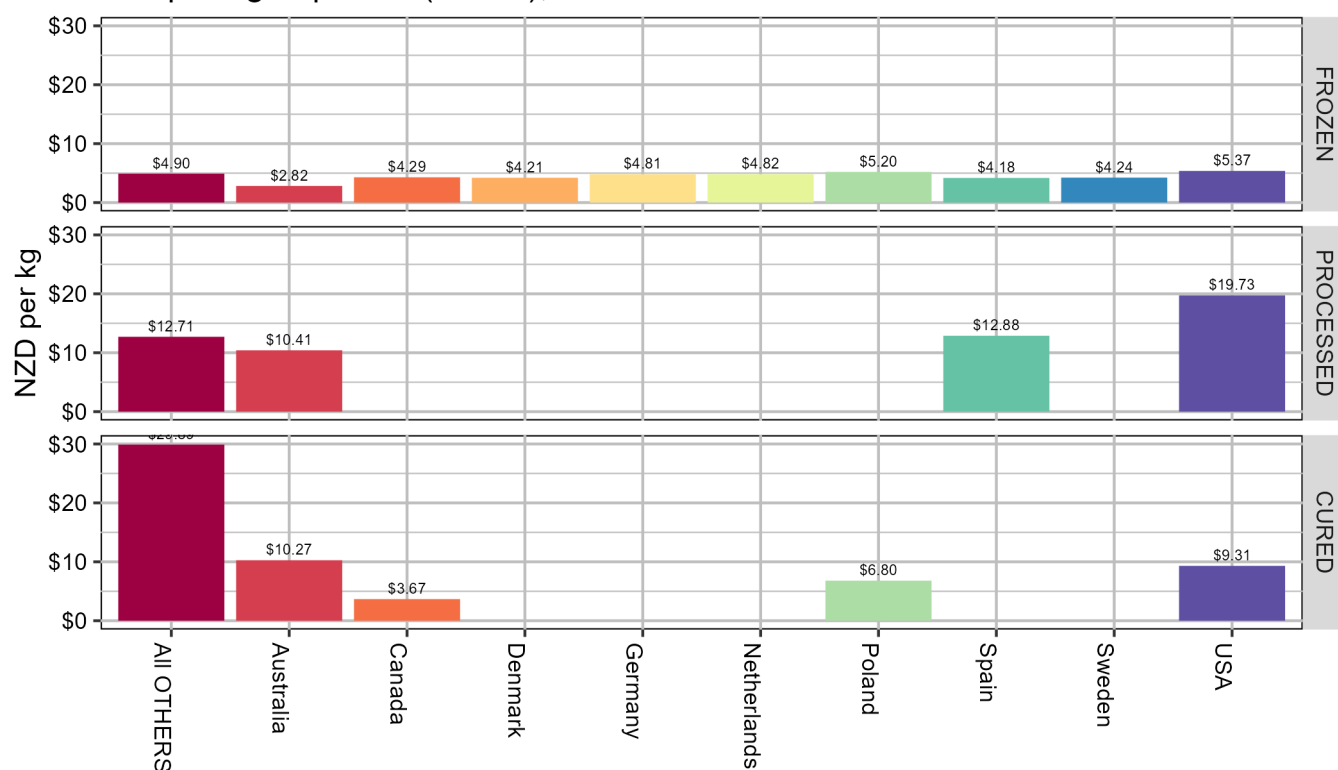


Figure 6: Value of pork imported in December 2021, on a Cost, Insurance and Freight (CIF) basis from key exporting countries.

Total volume imported (MT, actual), December 2021

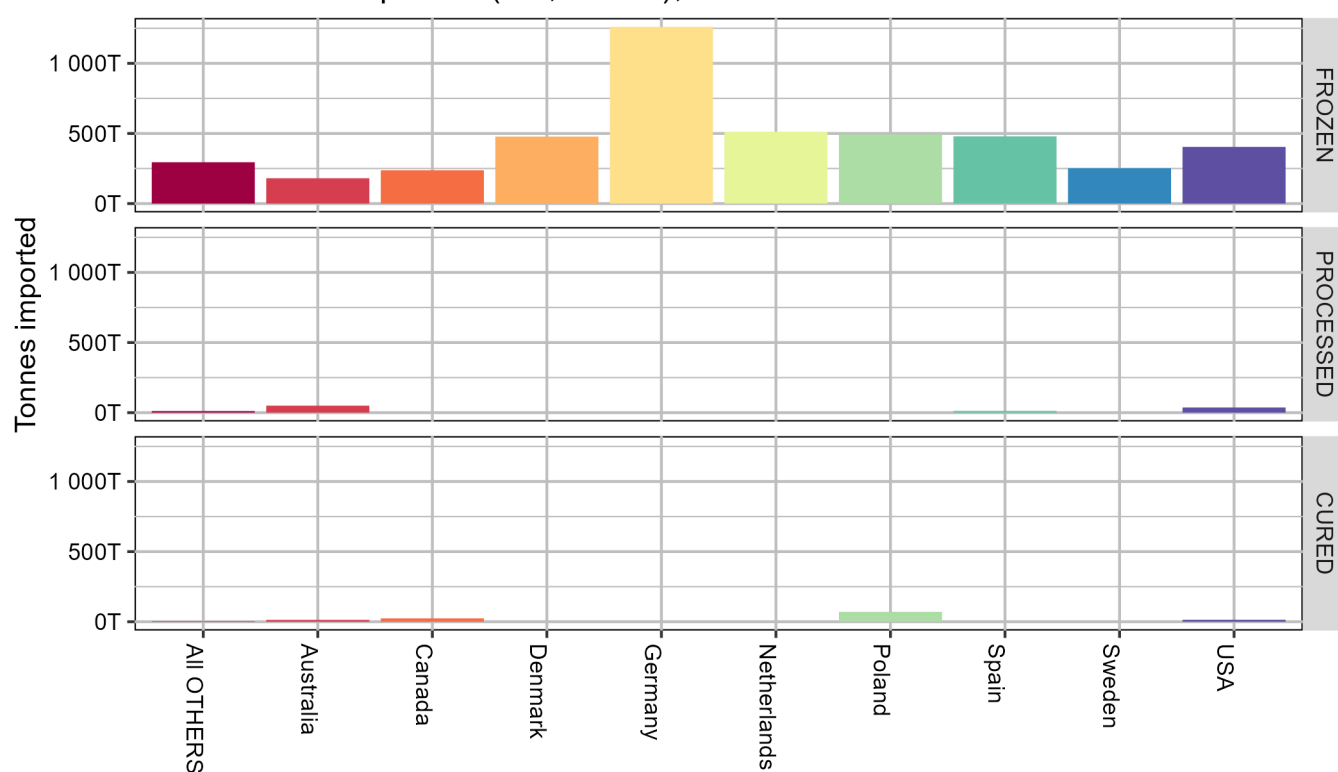


Figure 7: Volume (MT) of pork imported in December 2021, from key exporting countries.

Table 3 below shows the price per kg for imported CHILLED, CURED, FROZEN, and PROCESSED meat products in NZD for the key exporters to New Zealand during December 2021. The quantity of each is shown in kilograms. The last two columns represent the total total kilograms of imported pork for the period and the average price (total CIF in NZD/total kg imported).

Table 3: Import quantity and pricing by country.

Country Group	CURED		FROZEN		PROCESSED		ALL	
	NZD/kg	kg	NZD/kg	kg	NZD/kg	kg	NZD/kg	kg
All OTHERS	\$29.89	2,588	\$4.90	294,812	\$12.71	11,267	\$5.40	308,667
Australia	\$10.27	13,223	\$2.82	180,676	\$10.41	49,869	\$4.78	243,768
Canada	\$3.67	24,020	\$4.29	237,431			\$4.23	261,451
Denmark			\$4.21	477,764			\$4.21	477,764
Germany			\$4.81	1,260,447			\$4.81	1,260,447
Netherlands			\$4.82	512,438			\$4.82	512,438
Poland	\$6.80	70,683	\$5.20	493,765			\$5.40	564,448
Spain			\$4.18	479,365	\$12.88	12,500	\$4.40	491,865
Sweden			\$4.24	252,351			\$4.24	252,351
USA	\$9.31	13,888	\$5.37	404,230	\$19.73	36,827	\$6.65	454,945

### 1.7 Pork imports by PRRS status of country

Porcine reproductive and respiratory syndrome (PRRS) is a viral disease of pigs that is common in much of the world but is absent in New Zealand. The virus that causes PRRS has been shown to be transmitted through untreated pork. Figure 8 shows the trend in pork imports to New Zealand since the import health standard (IHS) that manages the risk was relaxed in 2014.

Pork Imports per Month, by Country PRRS Status, 2012 to Present

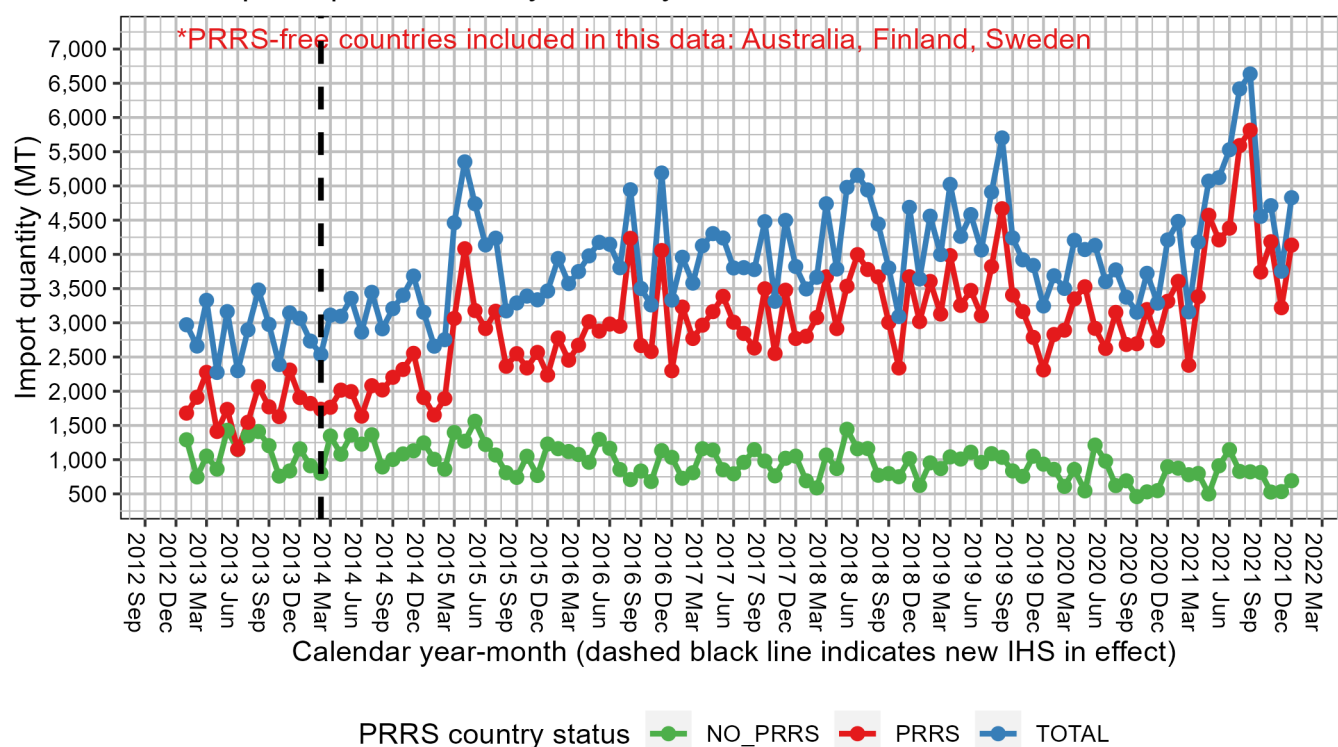


Figure 8: Pork imports per month stratified by PRRS status of exporting country, 2013 to present.

### 1.8 Consumption of imported and domestic pork

A substantial proportion of the pork supply in New Zealand is met from imported sources. Figure 9 shows the steadily increasing amount of imported product arriving into the country while domestic supplies have remained steady or decreased slightly over the same period. Figure 10 provides a

similar view of the data but based on 12-monthly totals, rather than monthly totals. To determine the potential influence of the increasing New Zealand population on pork supply, the same data from Figure 9 was related to monthly population estimates from Statistics NZ to determine the monthly per capita consumption of pork. Since 2000, the data suggests that per capita consumption of pork has increased, with imported sources supplying an increasing share of the consumption (Figure 11).

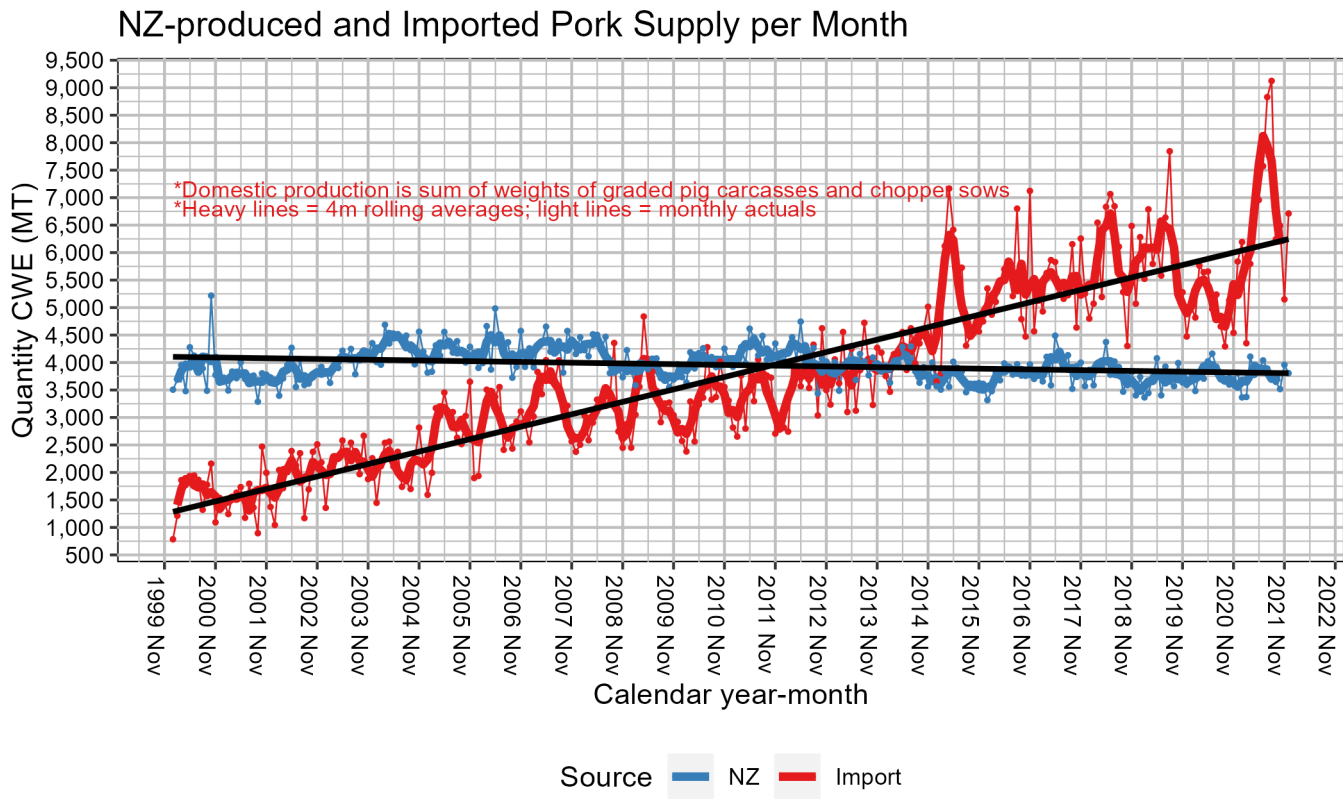


Figure 9: Monthly supply of pork in New Zealand based on domestic versus imported sources.

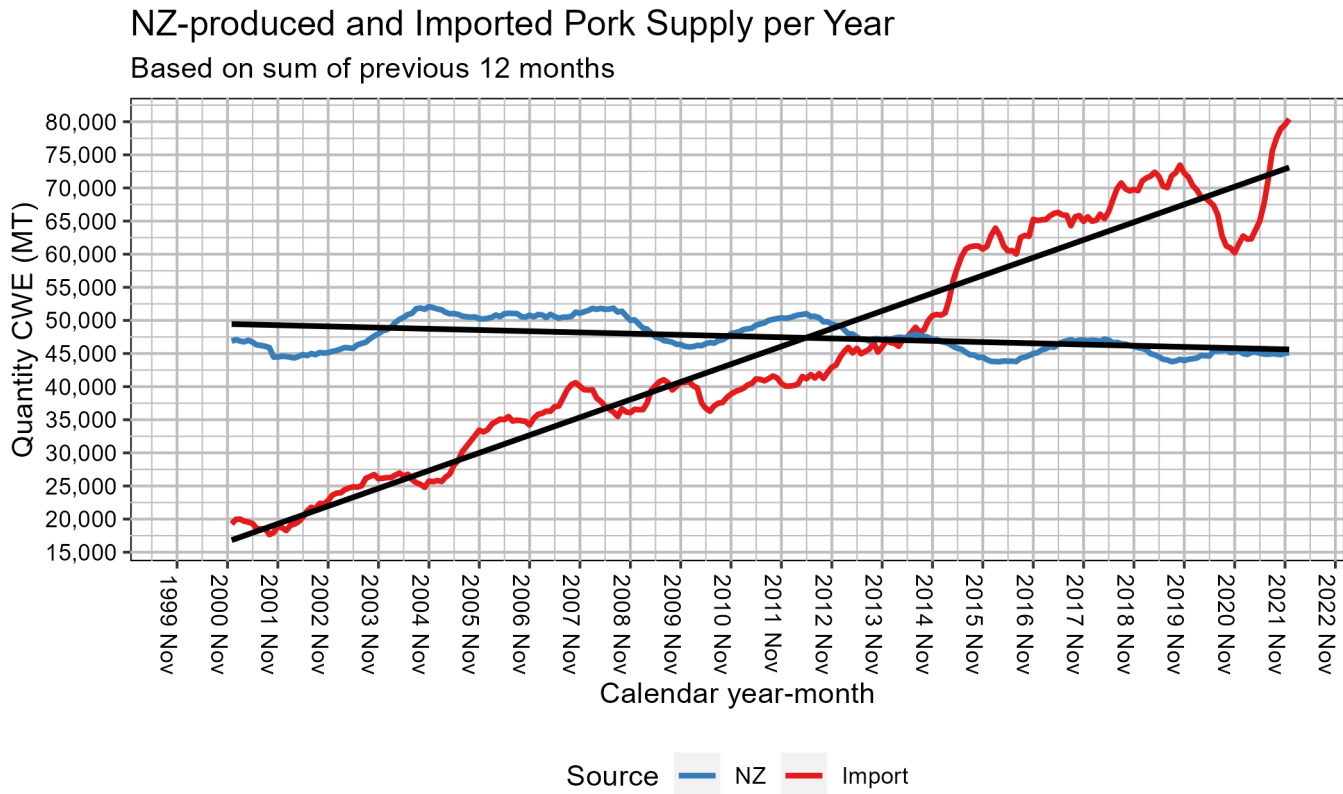


Figure 10: Annual pork supply in New Zealand (based on previous 12 month volume), comparing domestic versus imported sources.



## NZ-produced and Imported Pork Consumption per person, by Month

'Imports' = import volume minus re-export volume; 'NZ' = domestic production minus export volume

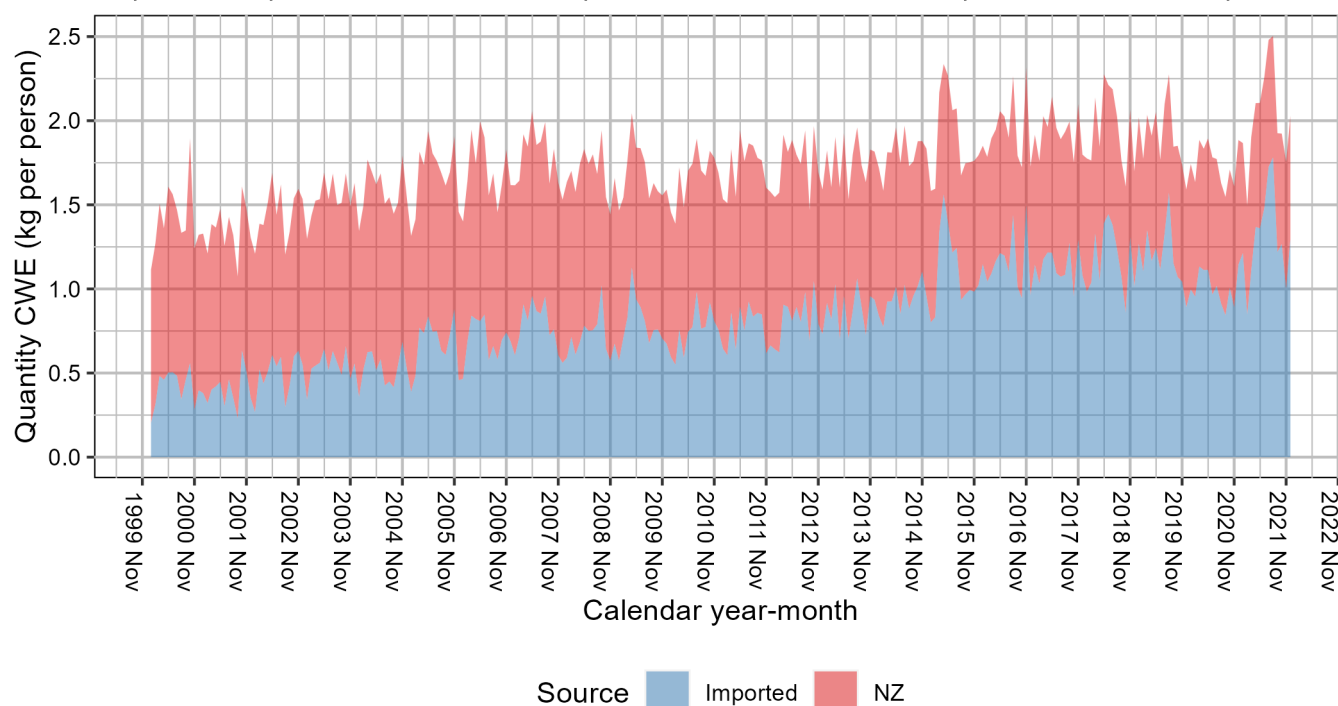


Figure 11: Monthly consumption of pork per capita in New Zealand based on domestic versus imported sources.

Total import volumes from all countries that have exported pork to New Zealand since 2008 are shown in Table 4. Total volume as well as the number of countries that export to New Zealand have increased steadily through the period. The import volumes shown below have been rounded up to the nearest MT; zeroes represent nil import volume.

Table 4: Historical pattern of pork import activity into New Zealand. Numbers represent the metric tonnes (MT) of pork that was imported from each country each year. Current year is 'year-to-date'. Values are rounded up to the nearest one MT.

Country	2013	2014	2015	2016	2017	2018	2019	2020	2021
Australia	4,369	4,164	3,337	2,336	3,874	5,363	3,903	3,245	3,795
Belgium	0	291	1,137	1,553	1,254	1,350	1,318	646	563
Brazil	0	3	2	0	4	0	0	7	0
Bulgaria	0	0	1	0	0	0	1	1	0
Canada	8,554	7,619	10,667	9,069	10,202	11,053	10,257	5,171	3,187
China	58	47	85	80	130	143	131	163	182
Croatia	1	1	1	1	1	1	1	1	1
Denmark	4,384	7,285	6,638	3,271	1,339	1,263	1,604	1,453	2,377
Estonia	0	0	0	24	635	280	165	0	0
Finland	6,060	6,153	7,501	7,975	5,333	3,715	5,444	3,739	2,863
France	25	1	2	267	3	3	2	1	2
Germany	428	768	1,726	2,009	791	2,189	2,182	1,878	14,019
Greece	0	0	0	0	0	0	1	0	2
Hong Kong	1	1	1	1	1	2	1	5	1
Iran	0	0	0	0	0	0	0	24	0

Country	2013	2014	2015	2016	2017	2018	2019	2020	2021
Ireland	0	171	297	613	849	915	788	1,148	996
Italy	71	69	97	99	153	148	183	152	221
Japan	0	1	1	0	0	0	0	1	1
Lithuania	0	0	0	0	0	0	0	0	2
Malaysia	0	0	0	0	0	0	0	0	1
Mexico	0	0	0	0	0	0	0	0	43
Netherlands	1	98	350	422	991	590	1,227	1,596	3,029
New Zealand	0	0	1	0	0	0	24	0	0
Peru	0	0	23	23	0	0	0	0	0
Philippines	0	0	1	2	6	10	7	7	7
Poland	0	0	178	457	1,472	1,206	2,342	5,372	7,965
Romania	0	0	0	0	0	1	0	1	1
Russia	0	0	0	0	0	1	0	1	0
S.Korea	6	9	6	27	11	24	16	26	22
Serbia	0	0	0	0	0	1	0	0	0
Singapore	0	2	1	0	2	3	2	3	3
Spain	17	1,277	6,109	12,223	12,782	13,462	11,345	8,088	6,300
Sweden	2,825	3,131	2,145	1,718	2,201	1,865	2,298	1,825	2,571
Taiwan	6	5	8	8	11	8	11	17	20
Thailand	3	3	2	2	3	3	4	7	5
Ukraine	0	0	0	24	0	0	0	0	0
United Kingdom	4	4	5	121	84	251	112	16	21
USA	7,850	6,410	4,689	5,284	5,583	6,590	8,991	10,145	10,264
Vanuatu	0	0	0	0	1	0	0	0	1
Viet Nam	1	0	0	1	1	1	0	1	1

## 2 Exports

We have now commenced routine reporting on Export and Re-exporting activity. Any feedback from users about the reports, or request for changes/additions, can be sent to Ian Barugh ([i.w.barugh@massey.ac.nz](mailto:i.w.barugh@massey.ac.nz)) or Eric Neumann ([e.neumann@epi-insight.com](mailto:e.neumann@epi-insight.com)) by email or phone.

A summary of the Figures and tables follows:

- Figure 12 is a time series plot of pork exports, re-exports, and total exports per month since 2000.
- Table 5 provides a detailed report of import and export activity for last 12m.
- Table 6 provides shows the relative volumes of export versus re-export activities for the current month.
- Table 7 shows the relative volumes and values of exported pork product, by type of export activity, for the current month.
- Table 8 identifies the top destination countries for pork exports ranked by total FOB value, for the current month.
- Table 9 shows the relative volumes and values of exported pork product type, exported to each destination country, for the current month (a more detailed view than presented in Table 5).

## Pork Exports, Re-exports, and Total per Month

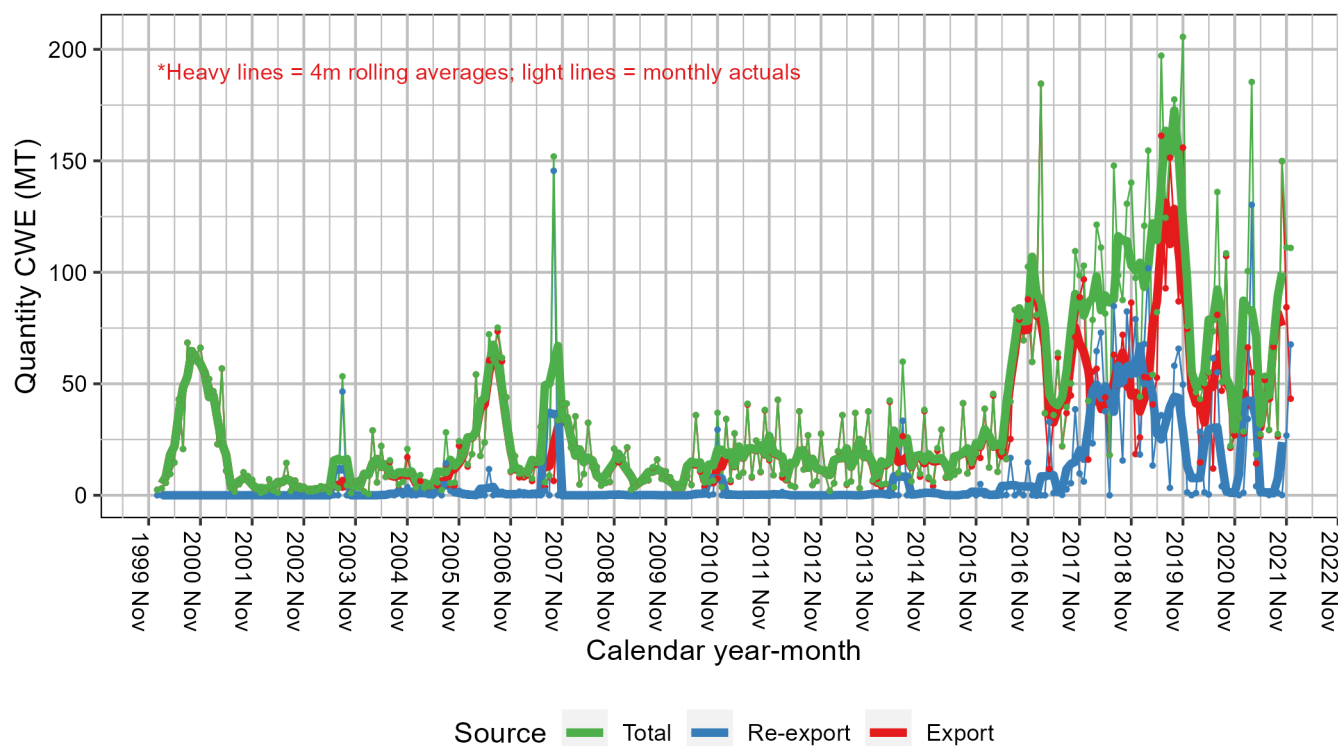


Figure 12: Pork Exports, Re-exports, and Total per Month.

Table 5: Detailed import and export activity for last 12m. Data is in MT, on a CWE basis.

Month	Imported	Re-exported	Domestic	Exported	Total NZ consumption	Population (est)	Per capita consumption (kg)
2020 Dec	5,837.4	0.0	3,813.4	34.6	9,616.2	5,102,000	1.9
2021 Jan	6,192.9	1.1	3,365.9	27.5	9,530.1	5,104,412	1.9
2021 Feb	4,351.2	34.2	3,373.7	66.3	7,624.4	5,106,636	1.5
2021 Mar	5,795.3	130.3	4,107.2	55.1	9,717.2	5,108,600	1.9
2021 Apr	6,996.5	4.0	3,776.2	14.3	10,754.4	5,110,828	2.1
2021 May	6,957.5	0.8	3,837.8	26.6	10,767.9	5,113,048	2.1
2021 Jun	7,573.7	1.8	4,038.5	51.7	11,558.6	5,115,400	2.3
2021 Jul	8,829.6	0.1	3,891.3	29.2	12,691.6	5,117,722	2.5
2021 Aug	9,124.1	2.3	3,763.9	66.6	12,819.1	5,120,153	2.5
2021 Sep	6,243.5	1.0	3,647.3	26.4	9,863.4	5,122,600	1.9
2021 Oct	6,490.2	0.1	3,517.2	149.8	9,857.4	5,124,971	1.9
2021 Nov	5,149.7	26.8	3,956.9	84.3	8,995.5	5,127,421	1.8
2021 Dec	6,711.6	67.6	3,806.4	43.3	10,407.0	5,129,792	2.0

Table 6: Summary of export v. re-export volume, December 2021 .

Measure	Volume (MT)	Proportion
Exported	43.3	39.0%
Re-exported	67.6	61.0%
Total exported	110.9	100.0%

Table 7: Relative volume and value of exported pork product types, December 2021 .

Pork form	Exported (MT)	Total (NZD/kg)	Re-exported (MT)	Re-exported (NZD/kg)	Total (MT)	Exported (NZD/kg)
CHILLED	1.1	\$9.91	0.0		1.1	\$9.91
CURED	6.4	\$3.52	0.8	\$7.29	7.2	\$3.03
FROZEN	30.0	\$3.07	66.8	\$3.40	96.8	\$2.32
PROCESSED	5.8	\$4.53	0.0		5.8	\$4.53

Table 8: Top destination countries for pork exports ranked by total FOB value, December 2021 .

Country	Total (MT)	Total (NZD)	Total (NZD/kg)
Spain	62.8	\$200 197	\$3.19
Tonga	13.0	\$62 321	\$4.79
Cook Islands	6.1	\$39 720	\$6.47
Niue	2.7	\$15 285	\$5.74
Vanuatu	4.9	\$15 120	\$3.11
Papua New Guinea	20.3	\$15 081	\$0.74
Samoa	1.1	\$10 776	\$9.44
Antarctica	0.0	\$870	\$17.47

Table 9: Relative volume and value of pork product types exported to each destination country, December 2021 .

Pork form	Country	Exported (MT)	Total (NZD/kg)	Re-exported (MT)	Re-exported (NZD/kg)	Total (MT)	Exported (NZD/kg)
CHILLED	Cook Islands	0.2	\$12.88	0.0		0.2	\$12.88
CHILLED	Niue	0.1	\$3.03	0.0		0.1	\$3.03
CHILLED	Samoa	0.8	\$10.55	0.0		0.8	\$10.55
CURED	Cook Islands	0.8	\$9.72	0.1	\$15.00	1.0	\$8.80
CURED	Niue	0.7	\$5.84	0.0		0.7	\$5.84
CURED	Tonga	2.6	\$1.36	0.7	\$5.70	3.3	\$0.21
CURED	Vanuatu	2.3	\$3.34	0.0		2.3	\$3.34
FROZEN	Cook Islands	2.6	\$6.45	0.0		2.6	\$6.45

Pork form	Country	Exported (MT)	Total (NZD/kg)	Re-exported (MT)	Re-exported (NZD/kg)	Total (MT)	Exported (NZD/kg)
FROZEN	Niue	0.6	\$5.77	1.0	\$5.81	1.6	\$5.70
FROZEN	Papua New Guinea	20.3	\$0.74	0.0		20.3	\$0.74
FROZEN	Samoa	0.4	\$7.00	0.0		0.4	\$7.00
FROZEN	Spain	0.0	\$3.19	62.8	\$3.19	62.8	
FROZEN	Tonga	5.4	\$5.88	2.9	\$7.15	8.4	\$5.19
FROZEN	Vanuatu	0.8	\$4.64	0.0		0.8	\$4.64
PROCESSED	Antarctica	0.0	\$17.47	0.0		0.0	\$17.47
PROCESSED	Cook Islands	2.4	\$4.72	0.0		2.4	\$4.72
PROCESSED	Niue	0.2	\$6.93	0.0		0.2	\$6.93
PROCESSED	Tonga	1.3	\$6.50	0.0		1.3	\$6.50
PROCESSED	Vanuatu	1.8	\$2.09	0.0		1.8	\$2.09

### 3 Report generation and metrics

This report is generated in real-time from data that is (or has been) downloaded from official Statistics New Zealand. The report is built using 'R Foundation for Statistical Reporting' software in the RStudio environment. RMarkdown with the "bookdown" extension (with Latex) is used to create the PDF version of the report.

#### 3.1 Date ranges included in this report

Data from January 2000 through December 2021 was downloaded from the Statistics New Zealand website (<http://www.stats.govt.nz/>).

To generate this report, the downloaded data has been filtered to only include data from **January 2000 through December 2021**.

#### 3.2 Data on imported pork

##### 3.2.1 Historic annual pork import data

Annual summary files of historical New Zealand import data (2000-2020) can be found on the Statistics New Zealand website and are downloadable as CSV files. These historical archived data files have already been downloaded and are stored locally to improve the speed in generating this report. However, in case they are required the specific online location of the historic data files is shown below:

[http://archive.stats.govt.nz/browse\\_for\\_stats/industry\\_sectors/imports\\_and\\_exports/overseas-merchandise-trade/HS10-by-country.aspx](http://archive.stats.govt.nz/browse_for_stats/industry_sectors/imports_and_exports/overseas-merchandise-trade/HS10-by-country.aspx)

##### 3.2.2 Current year pork import data (monthly summaries)

In addition to the historic annual data, Statistics New Zealand also archives current monthly summary files for the current year (2021) as CSV files. This report downloads these files directly rather than using InfoShare (Statistics New Zealand online query tool) to query the monthly information as the full monthly import data sets exceed the size limit for InfoShare.

At the end of each year (January through December), the current year's data should be download as an 'annual historic summary' as described above and stored locally, then added to the R script as a new local download file. The R report script that generates this report will also need to be modified to include the new historic annual file and to change the 'web scraping grep command' to reflect the monthly summary files from the 'new' year. The links currently being used in this report to download the current year, monthly summaries are listed below; approximately the most recent three months are classed by Statistics New Zealand as Provisional:

[http://archive.stats.govt.nz/browse\\_for\\_stats/industry\\_sectors/imports\\_and\\_exports/overseas-merchandise-trade/HS10-by-country.aspx](http://archive.stats.govt.nz/browse_for_stats/industry_sectors/imports_and_exports/overseas-merchandise-trade/HS10-by-country.aspx)

### 3.2.3 Harmonized System Codes associated with import data

The data that describe the specific Harmonized System Codes (HS codes) that relate to imported pork and NZPork's method for converting the imported volumes (kg) into Carcass Weight Equivalents (CWE) are not available for download and must be directly maintained in a local CSV file. Because the NZ pig slaughter volume (kgs) is reported based on a head-on carcass weight and imported pork data is reported based on actual kgs (the proportion of which is bone versus lean varies by HS Code), the import volumes need to be converted to a 'CWE equivalent' basis so they can be more accurately compared to the NZ domestic production/consumption. This file only needs updated if the HS code list or the CWE conversion method changes. The CSV file can be found at:

D:/Dropbox/Documents/NZPIB/PRRS meat sampling/imports/cwe.csv

Harmonized System Codes used to filter the data downloaded from Statistics New Zealand are shown in Table 10 below (not all HS codes may be used every month).

Table 10: List of Harmonized System Codes used to query Statistics NZ database; CWE multiplier factor and pork form mapping are shown.

Harmonised System Code	Harmonised System Description	CWE multiplier	Form
203120009	Meat; of swine (other than wild pork), hams, shoulders and cuts thereof, with bone in, fresh or chilled	1.22	CHILLED
203210008	Meat; of swine, carcasses and half-carcasses, (other than wild pork), frozen	1.00	FROZEN
203220009	Meat; of swine (other than wild pork), hams, shoulders and cuts thereof, with bone in, frozen	1.22	FROZEN
203290011	Meat; of swine n.e.c. in item no. 0203.2, frozen, meat bones and hocks	1.00	FROZEN
203290019	Meat; of swine n.e.c. in item no. 0203.2, frozen, other than meat bones and hocks	1.40	FROZEN
210110009	Meat; of swine, hams, shoulders and cuts thereof, with bone in, salted, in brine or dried	1.66	CURED
210120000	Meat; of swine, bellies (streaky) and cuts thereof, salted, in brine, dried or smoked	1.66	CURED
210190001	Meat; of swine, bacon, salted, in brine, dried or smoked	1.66	CURED
210190011	Meat; of swine, pork n.e.c. in heading 0210, salted or pickled	1.66	CURED
210190029	Meat; of swine, n.e.c. in heading 0210, dried	1.66	CURED
1602411900	Meat preparations; of swine, hams and cuts thereof, prepared or preserved, packed other than in airtight cans or jars (excluding homogenised preparations)	1.66	PROCESSED
1602490900	Meat preparations; of swine, meat or meat offal (including mixtures), prepared without other food substances, preserved in airtight cans or jars, n.e.c. in heading no. 1602	1.66	PROCESSED
1602491900	Meat preparations; of swine, meat or meat offal (including mixtures), prepared or preserved, packed other than in airtight cans or jars, n.e.c. in heading no. 1602	1.66	PROCESSED
203190009	Meat; of swine (other than wild pork), fresh or chilled, (excluding carcasses, half-carcasses, and hams, shoulders and cuts thereof, with bone in)	1.40	CHILLED
1602410900	Meat preparations; of swine, hams and cuts thereof, prepared without other food substances, preserved in airtight cans or jars (excluding homogenised preparations)	1.66	PROCESSED
1602421900	Meat preparations; of swine, shoulders and cuts thereof, prepared or preserved, packed other than in airtight cans or jars (excluding homogenised preparations)	1.66	PROCESSED
210110001	Meat; of swine, hams, shoulders and cuts thereof, with bone in, smoked	1.66	CURED
210190019	Meat, preserved; of swine, n.e.c. in heading no. 0210, smoked	1.66	CURED
1602420900	Meat preparations; of swine, shoulders and cuts thereof, prepared without other food substances, preserved in airtight cans or jars (excluding homogenised preparations)	1.66	PROCESSED
210120000	Meat, preserved; of swine, bellies (streaky) and cuts thereof, salted, in brine, dried or smoked	1.66	CURED
210190029	Meat, preserved; of swine, n.e.c. in heading no. 0210, dried	1.66	CURED

Harmonised System Code	Harmonised System Description	CWE multiplier	Form
210190001	Meat, preserved; of swine, bacon, salted, in brine, dried or smoked	1.66	CURED
210190011	Meat, preserved; of swine, pork n.e.c. in heading no. 0210, salted or pickled	1.66	CURED
210110009	Meat, preserved; of swine, hams, shoulders and cuts thereof, with bone in, salted, in brine or dried	1.66	CURED
203110008	Meat; of swine, carcasses and half-carcasses, (other than wild pork), fresh or chilled	1.00	CHILLED
210190019	Meat; of swine, n.e.c. in heading 0210, smoked	1.66	CURED

### 3.3 Domestic pork slaughter data

Data is collected by Statistics New Zealand that describes the volume of pork (number of pigs and weight, by pig class) processed by commercial abattoirs as 'Graded pigs'. This report includes data from pigs of all weights, including chopper sows. This data is not made available by Statistics New Zealand as an archived CSV file, making it necessary to be retrieved from their website using InfoShare. To ensure the same data is retrieved each month, each time the report is run 'R' sends a pre-formed ".txq query file" to the InfoShare website which sends the data back to the local computer as a CSV file which can then be used in the report. The .txq and CSV files can be found at:

D:/Dropbox/Documents/NZPIB/PRRS meat sampling/imports/infoshare/nz\_kill.txq

D:/Dropbox/Documents/NZPIB/PRRS meat sampling/imports/infoshare/nz\_kill.csv

### 3.4 NZ human population estimates

Similar to the NZ domestic pork slaughter data, Statistics New Zealand also holds data describing the size of the New Zealand human population. The data is only reported on a quarterly basis but is automatically downloaded each month from InfoShare using a .txq query file (as described for the pork slaughter data above) which is then sent back to the local computer as a CSV file which can then be used in the report. The R script uses linear regression to impute values for the missing months, allowing the human population data to be merged with the monthly data on pork that is imported or domestically produced. The .txq and CSV files can be found at:

D:/Dropbox/Documents/NZPIB/PRRS meat sampling/imports/infoshare/nz\_population.txq

D:/Dropbox/Documents/NZPIB/PRRS meat sampling/imports/infoshare/nz\_population.csv

### 3.5 Output of main CSV files

Much of the R work for this report involves collection and manipulation of large datasets that can then be used for development of summary tables and plots. However, there are occasional needs for subsequent **ad hoc** analyses so the three main data sets (data frames in 'R' speak) have been saved as CSV files so the entire report doesn't need to be regenerated just to get a specific data point for further analysis. The three CSV files can be found at:

### 3.6 Data quality from Statistics New Zealand

Most data collected and held by Statistics New Zealand are released monthly on a 'Provisional' basis. After approximately 3 months, the data are re-released with 'Final' status. Table 11 below shows the status of any data retrieved from Statistics New Zealand that does not have a 'Final' status.

Table 11: Status of monthly import data from Statistics NZ.

Status	Date released
Provisional	2021 Dec
Provisional	2021 Nov
Provisional	2021 Oct

## 4 ASF special reports

Table 12 shows total import volume (MT; metric tonnes) of pork of all forms (chilled, frozen, processed, and cured) based on the ASF status of the origin country. Not all forms have the same risk of carrying infectious ASF virus. A few notes about the table:

- Around 95% of imports are frozen; chilled and frozen product have the highest risk of carrying virus as compared to processed or cured.
- ASF status changes for countries over time, though only one country (Czech Republic) involved in the current Eurasian outbreak has managed to eradicate the disease from their country. Data in Table 12 shown in red represents pork exports from countries during a month in which that country was known to have ASF present within its borders. The country ASF status is based on the date of that country's official report of the disease to the World Organisation for Animal Health (OIE) - the actual first clinical signs may have occurred several days to several months earlier.
- The data in Table 12 represents the month in which an export landed in NZ, and this may be a different month from which the pork left the exporting country.
- NZ does not permit import of untreated pork (chilled or frozen) from countries known to have ASF. Typically, when a country becomes infected with a trade-limiting disease such as ASF, the country responds by establishing 'disease-positive regions' which allows the official country-status to return to an 'ASF free, but with infected regions' status. NZ government assesses the effectiveness of the regionalization scheme and then usually resumes trade in the risk commodity (pork in this case), but sourced only from the disease-free regions of that country.

Table 12: Volume (MT) of pork imported into New Zealand over the previous 24 months, by ASF status in country of origin. Data in red indicates months when ASF was known to have occurred in that country.

Country	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021	Sep 2021	Oct 2021	Nov 2021	Dec 2021
Australia	214.8	195.6	310.2	148.0	462.3	671.3	322.7	315.7	185.3	87.1	160.1	171.7	238.3	295.7	370.3	204.6	381.3	413.1	463.0	286.8	354.6	313.6	229.0	243.8
Belgium	51.3	24.2	74.6	51.6	50.6	0.0	96.4	26.6	4.0	124.2	0.0	142.4	118.0	31.7	78.4	47.2	70.6	72.1	0.0	48.6	24.2	71.5	0.0	0.0
Brazil	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bulgaria	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Canada	955.7	688.2	641.8	499.5	430.2	334.8	168.1	309.7	332.2	308.2	258.8	262.9	335.0	213.8	142.5	167.1	191.5	284.3	378.0	571.0	262.6	213.6	165.6	261.5
China	0.0	0.0	4.9	15.2	34.5	75.5	0.0	0.5	0.1	0.0	0.0	31.7	13.3	0.0	24.5	0.0	18.0	11.8	19.8	21.8	25.4	2.2	40.6	3.8
Croatia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Denmark	0.0	71.1	274.6	192.2	122.0	71.4	337.3	193.0	96.2	23.5	23.6	47.7	24.6	75.1	0.0	336.3	192.5	47.7	192.5	48.1	192.3	407.3	382.7	477.8
Finland	333.1	210.1	316.7	238.3	542.9	283.2	209.8	315.7	220.3	352.4	259.1	456.8	498.8	267.0	239.2	95.4	286.1	468.4	156.6	246.8	218.8	96.9	91.4	196.8
France	0.1	0.0	0.1	0.0	0.0	0.1	0.3	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.0	0.0	1.0	0.0	0.0
Germany	222.1	47.0	118.9	132.6	24.0	23.7	311.0	120.1	191.9	165.8	332.1	188.4	901.2	768.6	1,197.7	1,025.0	1,069.9	1,228.9	1,812.3	1,886.3	980.9	1,242.1	644.9	1,260.4
Greece	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.8	0.0	0.0
Hong Kong	0.0	0.0	0.2	3.3	0.0	0.4	0.0	0.0	0.5	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.0	0.0	0.4
Iran	0.0	0.0	0.0	0.0	0.0	23.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ireland	71.4	24.0	47.1	0.0	0.0	71.5	170.7	193.4	167.4	237.0	94.9	70.4	119.6	0.0	22.5	117.0	142.7	117.1	71.1	117.3	118.1	71.8	0.0	98.0



Country	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021	Sep 2021	Oct 2021	Nov 2021	Dec 2021
Italy	16.3	20.3	19.8	9.8	12.2	19.8	4.0	2.5	4.5	15.8	4.2	22.6	20.2	11.1	29.0	12.9	11.0	13.6	23.2	25.0	11.3	20.9	39.4	2.7
Japan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lithuania	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.7	0.0	0.0	0.1	0.0	0.0	0.4
Malaysia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Mexico	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	17.7	24.0	0.0	0.1	0.0	0.0
Netherlands	142.1	167.5	188.6	46.8	0.0	0.9	23.4	0.0	144.4	428.1	262.4	191.6	71.3	24.9	310.3	213.8	191.0	141.1	558.3	329.5	71.6	346.4	257.5	512.4
Philippines	1.1	0.0	0.0	1.2	0.0	0.0	0.4	0.3	0.0	1.0	2.8	0.0	0.0	0.0	0.0	0.0	0.8	0.0	1.2	0.1	1.8	0.9	1.6	0.0
Poland	220.2	454.7	530.6	439.1	461.3	420.1	527.3	307.5	419.6	491.0	382.7	717.4	374.5	337.6	316.6	846.8	774.7	685.4	705.6	1,218.9	554.6	866.1	719.2	564.4
Romania	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Russia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S.Korea	0.0	0.5	1.5	0.5	3.3	3.4	4.7	1.2	6.7	1.9	1.4	0.9	1.1	0.5	1.8	0.6	1.6	0.1	1.9	4.0	4.2	1.4	1.2	2.7
Singapore	0.0	0.0	0.0	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.1	0.1	0.0
Spain	725.8	559.2	576.1	966.0	628.7	743.7	482.6	597.6	646.8	556.6	718.4	886.1	770.5	109.3	494.5	512.2	437.1	406.4	571.1	700.0	811.3	330.5	665.0	491.9
Sweden	310.4	204.2	230.0	157.9	208.0	23.5	89.0	60.1	55.0	90.1	128.0	268.7	138.3	217.4	189.1	198.9	243.0	263.7	208.7	289.3	240.2	116.3	213.0	252.4
Taiwan	0.4	0.9	4.6	0.5	1.5	0.9	2.3	1.5	0.9	0.9	1.2	0.5	2.5	2.6	1.6	2.9	1.4	0.6	1.8	0.9	1.4	0.9	1.7	1.8
Thailand	0.1	0.2	0.4	0.2	0.0	0.6	0.5	0.4	0.7	0.2	0.5	2.3	0.1	0.0	0.0	0.2	0.7	0.0	0.1	1.2	0.0	1.4	0.3	0.1
United Kingdom	2.6	1.5	0.0	1.1	1.2	0.1	1.0	1.2	1.9	0.5	2.8	1.8	0.0	0.0	3.8	1.0	1.4	0.0	5.8	0.3	1.4	2.1	3.3	1.4
USA	419.8	853.2	865.0	1,165.5	1,147.6	834.3	1,021.7	921.1	676.5	838.5	654.5	747.2	851.8	804.7	758.1	1,288.0	1,106.7	1,373.5	1,228.8	815.0	680.9	603.3	297.7	454.9
Vanuatu	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Viet Nam	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.4
NEGATIVE	3,398.4	3,002.8	3,574.0	3,549.9	3,569.7	3,083.9	3,140.4	3,036.1	2,527.7	2,923.2	2,564.4	3,107.7	3,170.3	2,042.3	2,610.3	3,185.2	3,246.0	3,588.1	3,853.4	3,480.3	2,977.4	2,576.8	2,307.2	2,992.7
POSITIVE	289.0	499.9	631.6	520.8	561.9	519.2	632.9	338.7	627.2	799.7	723.3	1,103.3	1,310.8	1,117.9	1,569.9	1,885.2	1,876.0	1,940.6	2,564.7	3,156.1	1,578.5	2,134.5	1,446.9	1,835.4
TOTAL	3,687.4	3,502.6	4,205.6	4,070.7	4,131.5	3,603.1	3,773.3	3,374.7	3,154.9	3,722.9	3,287.7	4,211.0	4,481.1	3,160.2	4,180.2	5,070.4	5,122.0	5,528.6	6,418.1	6,636.4	4,555.9	4,711.4	3,754.1	4,828.1