

Fund Processing Standardisation

Annual Report

on

automation and standardisation of

cross-border funds orders in 2019

24 August 2020

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Background

Since May 2009, EFAMA & SWIFT publish on a regular basis reports on trends in standardisation and automation rates of fund orders received by transfer agents (TAs) in Luxembourg and Ireland.

This latest version of the Fund Processing Standardization publication is the full-year 2019 report. It combines the Luxembourg and Ireland data into one single cross-border fund processing report providing

- a. an aggregated view on both fund processing centres together;
- b. a detailed overview per fund processing centre (Luxembourg and Ireland separately); and
- c. a regional perspective of fund processing straight-through-processing (STP) rates per fund processing centre.

This report highlights the progress made in the increased automation of fund orders and the use of ISO standards, as recommended by EFAMA¹. The audience are institutions involved in fund processing, as well as the European Commission, the European Parliament and other interested stakeholders.

Besides the reporting of order volumes and automation rates, this report contains an analysis on the regional split of order volumes (by order giver location). The regional figures are provided in each market focus section as they are based on the underlying sub-set of survey respondents in these markets. In addition, the report provides statistics on the automated links newly implemented by the TAs in Luxembourg and Ireland in 2019.

EFAMA and SWIFT publish two Fund Processing Standardisation reports per year, which are available on both company websites.

¹ EFAMA's best practice recommendations are available on both SWIFT and EFAMA's websites. The first set of recommendations were published in February 2005. A new report was published on 24 March 2011, consolidating the recommendations published in 2005 and updated in 2008, and extending the recommendations in two key areas, i.e. Transfers and Corporate Actions.

Report Highlights

A. Automation and standardisation of fund orders in Luxembourg and Ireland

- Survey coverage: 29 transfer agents (TAs)** contribute to the survey
 - 20 Luxembourg-based TAs**
 - 9 Ireland-based TAs**
 With an estimated market coverage of 80% of the cross-border market volumes in Ireland and an estimated market coverage of 75% in Luxembourg.
- Total automation rate²** of orders during Q4 2019 reached **91.8%**; this represents an increase of 1.4 percentage points compared to Q4 2018 (**90.4%**).
- ISO automation rate³** reached **62.3%** in Q4 2019 compared to **58%** in Q4 2018, an increase of 4.3 percentage points.
- In terms of number of new automated links setup by TAs with new order givers, **ISO adoption is the first choice**. Indeed, survey contributors have reported 163 new ISO automated links implemented during 2019.
- The **ISO messaging standard adoption** rate, in line with the EFAMA recommendation in favour of a single ISO standard to be used in the funds industry, continues to strengthen to the detriment mainly of manual orders.
- The **order volumes** processed by the 29 survey contributors reached **42.2 million orders** in 2019.
- The **29 surveyed TAs manually processed 3.8 million orders in 2019**, compared to 4.1 million in 2018. Manual process rates decreased by 1.4 percentage points to 8.2% in Q4 2019 (against 9.6% in Q4 2018).

Fund orders automation and standardisation progress overview

GLOBAL OVERVIEW	Q4 2017	Q4 2018	Q4 2019	Change 18 - 19
Manual orders	12.0%	9.6%	8.2%	-1.4%
ISO automated orders	55.5%	58%	62.3%	4.3%
Proprietary FTP orders	32.5%	32.4%	29.5%	-2.9%
Total automated	88%	90.4%	91.8%	1.4%

Table 1 - Automation and standardisation rate evolution (Q4 data)

² The 'total automation rate' is the sum of the 'ISO automation rate' + the 'proprietary formatted ftp' rate. This is based on combined Luxembourg and Ireland figures.

³ The 'ISO automation rate' corresponds to the standardisation rate, i.e. the rate of automated orders using an ISO format (ISO 20022 or ISO 15022 'fund template').

B. Automation and standardisation of fund orders in Luxembourg

1. **Survey coverage: 20 TAs contributed to the survey in 2019** (8 in-house and 12 third-party TAs).
2. The **total automation rate of orders** processed by Luxembourg TAs reached **90.2%** during Q4 2019, compared to 89% in Q4 2018.
3. The **ISO automation rate** reached 76.6% in Q4 2019 compared to 72.2% in Q4 2018, an increase of 4.4 percentage points. The rate of proprietary FTP decreased to 13.6% in Q4 2019 against 16.8% in Q4 2018, and the manual orders decreased to 9.8% in Q4 2019 compared to 11% in Q4 2018.
4. The **order volumes** processed by Luxembourg TAs reached **27.4 million** in 2019 compared to 24.3 million in 2018. The number of orders processed manually reached 2.9 million in 2019 compared to 3 million in 2018.
5. The **ISO automation rate** increased in EMEA and APAC regions in Q4 2019 to 69.9% and 55.4%, respectively (compared to 65.8% and 51.2% in Q4 2018). In the Americas region, the ISO automation rate decreased to 43.3% in Q4 2019 (compared to 49.6% in Q4 2018).

Fund orders automation and standardisation progress overview- Luxembourg

GLOBAL OVERVIEW	Q4 2017	Q4 2018	Q4 2019	Change 18 - 19
Manual orders	14.6%	11%	9.8%	-1.2%
ISO automated orders	69.8%	72.2%	76.6%	4.4%
Proprietary FTP orders	15.6%	16.8%	13.6%	-3.2%
Total automated	85.4%	89%	90.2%	1.2%

Table 2 - Luxembourg automation and standardisation rate evolution (Q4 data)

C. Automation and standardisation of fund orders in Ireland

1. **Survey coverage: 9 TAs surveyed** (9 third-parties TAs).
2. The **total automation rate** of orders processed by Irish TAs reached 94.6% in Q4 2019 compared to 92.8% in Q4 2018, an increase of 1.8 percentage points.
3. The percentage of automated orders based on **ISO messaging standards** increased to **36.6%**, in Q4 2019, from 34.7% in Q4 2018. The **rate of proprietary FTP orders remains stable at 58%** in Q4 2019. The manual orders decreased from 7.2% in Q4 2018 to 5.4% in Q4 2019.
4. The **order volumes** processed by Irish TAs reached **14.8 million** in 2019, compared to 14.7 million in 2018.
5. The **ISO automation rate increased** in the APAC and Americas regions to 26.3% and 16.2% in Q4 2019 respectively (compared to 4.6% and 14% in Q4 2018). In the EMEA region, the ISO automation rate decreased in Q4 2019 to 13.6% (compared to 14.9% in Q4 2018).

Fund orders automation and standardisation progress overview – Ireland

GLOBAL OVERVIEW	Q4 2017	Q4 2018	Q4 2019	Change 18 - 19
Manual orders	7.9%	7.2%	5.4%	-1.8%
ISO automated orders	32.5%	34.7%	36.6%	1.9%
Proprietary FTP orders	59.6%	58.1%	58.0%	-0.1%
Total automated	92.1%	92.8%	94.6%	1.8%

Table 3 - Ireland automation and standardisation rate evolution (Q4 data)

A. Automation and standardisation of fund orders in Ireland and Luxembourg

A.1. Total order volume evolution

In 2019, 42.2 million orders have been processed by the 29 survey contributors across Ireland and Luxembourg. This represents an average volume of 3.52 million orders per month.

(in millions)	2017	2018	2019
Total number of orders	38.8	39	42.2
Monthly average	3.23	3.25	3.52

Table 4 - Total order volume evolution 2017 - 2019

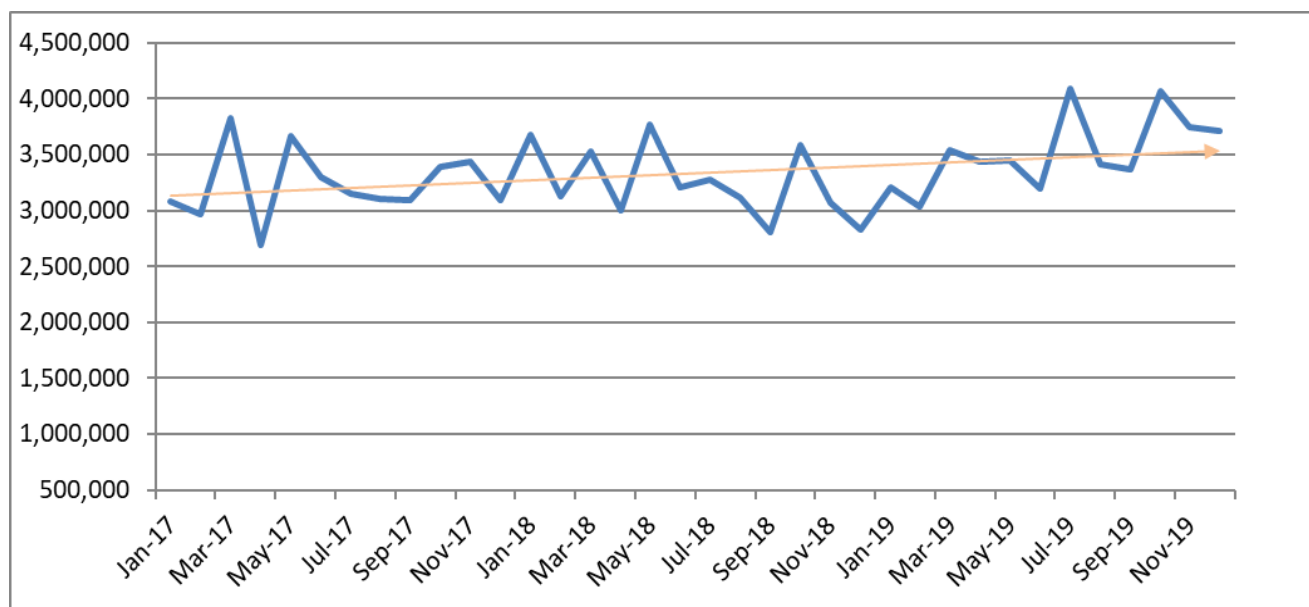


Figure 1 - Total order volume evolution 2017 - 2019

A.2. Total automation and standardisation rates

Total automation rate

The total automation rate reached 91.8% in Q4 2019, compared to 90.4% in Q4 2018. This increase was accompanied with a decrease in the manual processing rate (from 9.6% in Q4 2018 to 8.2% in Q4 2019), mainly to the benefit of ISO automation.

Total automation rate	Q1	Q2	Q3	Q4
2017	87.2%	86.6%	87.3%	88.0%
2018	88.4%	89.4%	89.5%	90.4%
2019	90.2%	90.6%	91.0%	91.8%

Table 5 - Total automation rate evolution 2017 - 2019 (by quarter)

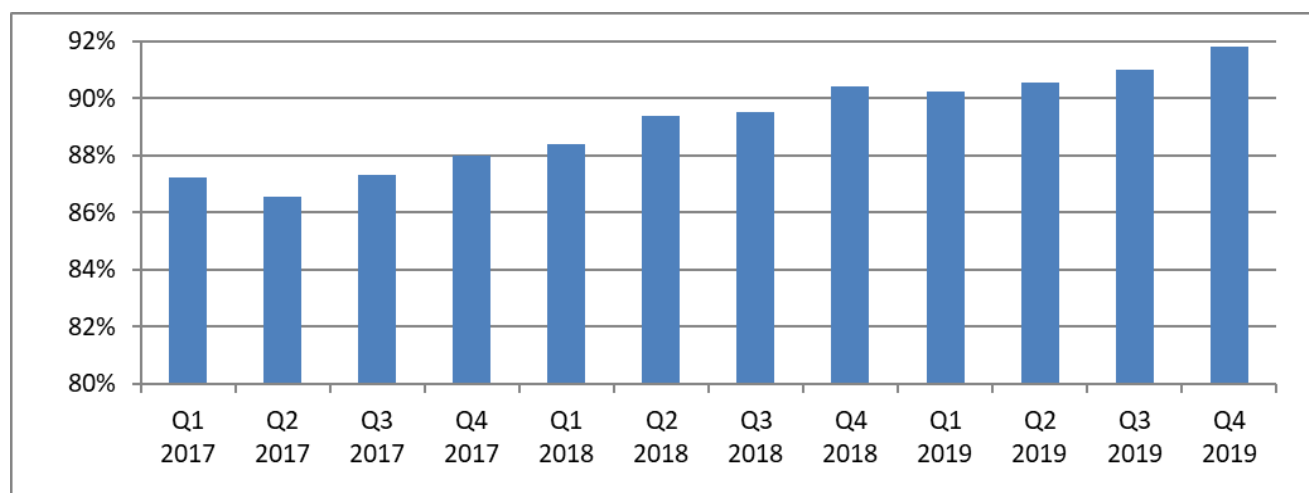


Figure 2 - Total automation level evolution 2017 - 2019 (by quarter)

Total standardisation rate

The use of the ISO messaging standard increased by 4.3 percentage points in the course of 2019 to reach 62.3% in Q4 2019 (against 58% in Q4 2018).

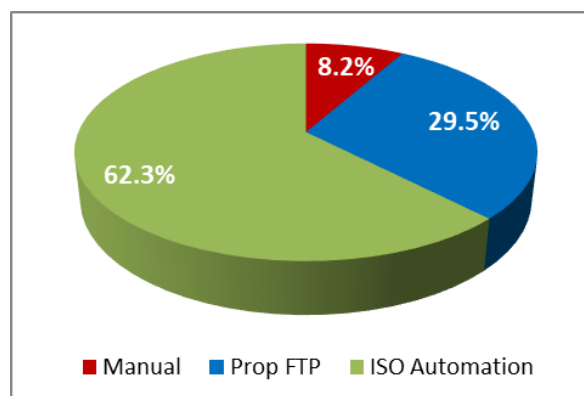


Figure 3 - Total fund order processing rates (Q4 2019)

The graph below shows the various rates evolution since the beginning of 2017.

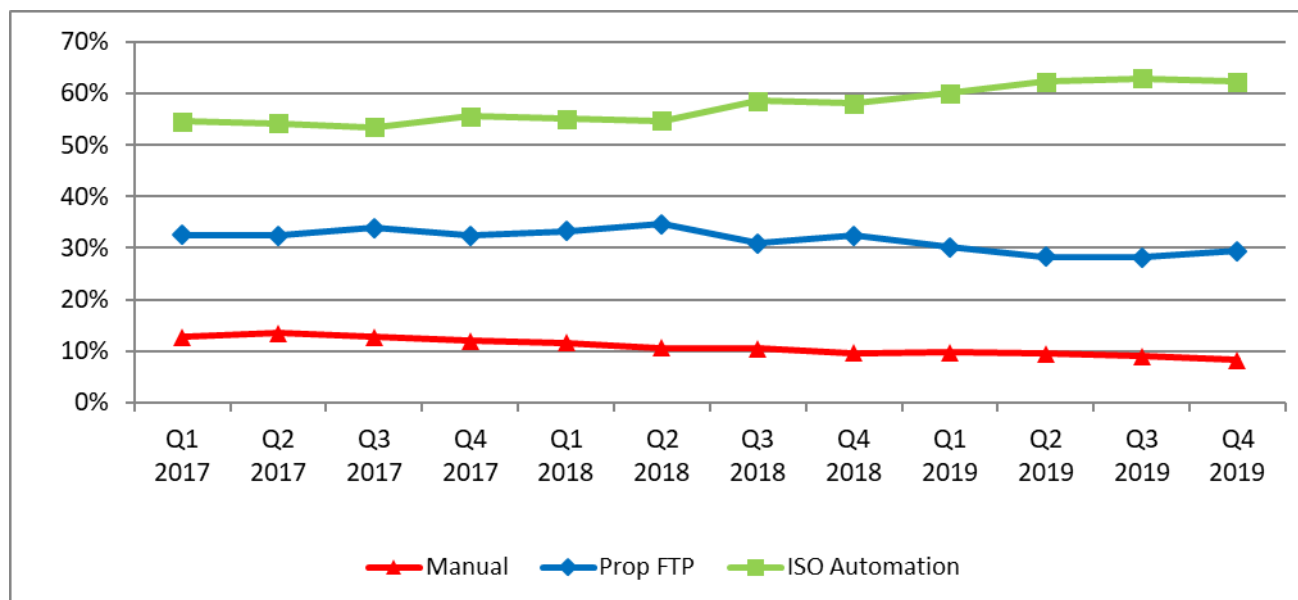


Figure 4 - Total fund order processing rates evolution 2017-2019 (by quarter)

The adoption of proprietary FTPs decreased to 29.5% in Q4 2019 compared to 32.4% in Q4 2018, and the share of manual orders fell from 9.6% in Q4 2018 to 8.2% in Q4 2019. The above trends show a continuous increase of the ISO standards adoption, and a continuous decrease of manual orders.⁴

The table below provides detailed rates per quarter.

ISO automation rate	Q1	Q2	Q3	Q4
2017	54.6%	54.2%	53.4%	55.5%
2018	55.1%	54.7%	58.6%	58.0%
2019	60.1%	62.3%	62.9%	62.3%
Proprietary FTP rate	Q1	Q2	Q3	Q4
2017	32.6%	32.4%	33.9%	32.5%
2018	33.3%	34.6%	30.9%	32.4%
2019	30.2%	28.3%	28.1%	29.5%
Manual rate	Q1	Q2	Q3	Q4
2017	12.8%	13.4%	12.7%	12.0%
2018	11.6%	10.6%	10.5%	9.6%
2019	9.8%	9.4%	9.0%	8.2%

Table 6 - Total fund order processing rates evolution 2017-2019 (by quarter)

⁴ The reported share of “Total ISO” covers ISO 15022 and ISO 20022 messages. The migration programme from ISO 15022 fund messages into ISO 20022 fund messages is ongoing with the consequence that the ISO 20022 message will become the single ISO open market standard for fund messages, as recommended by EFAMA.

A.3. Number of new automated links set up in 2019

To better understand the automation trend, an additional survey was carried out in 2019 among 29 TAs to look at the number of **new automated links implemented** between January and December 2019 with new counterparties.

The surveyed TAs implemented new ISO links with 163 counterparties. Out of these new ISO links, 161 counterparties were previously using fax (representing 98.8% of all new links). Brand new ISO links have been set up with the 2 (1.2%) remaining counterparties in 2019.

This result confirms that ISO standards remain widely favoured in the market as the most efficient automation option.

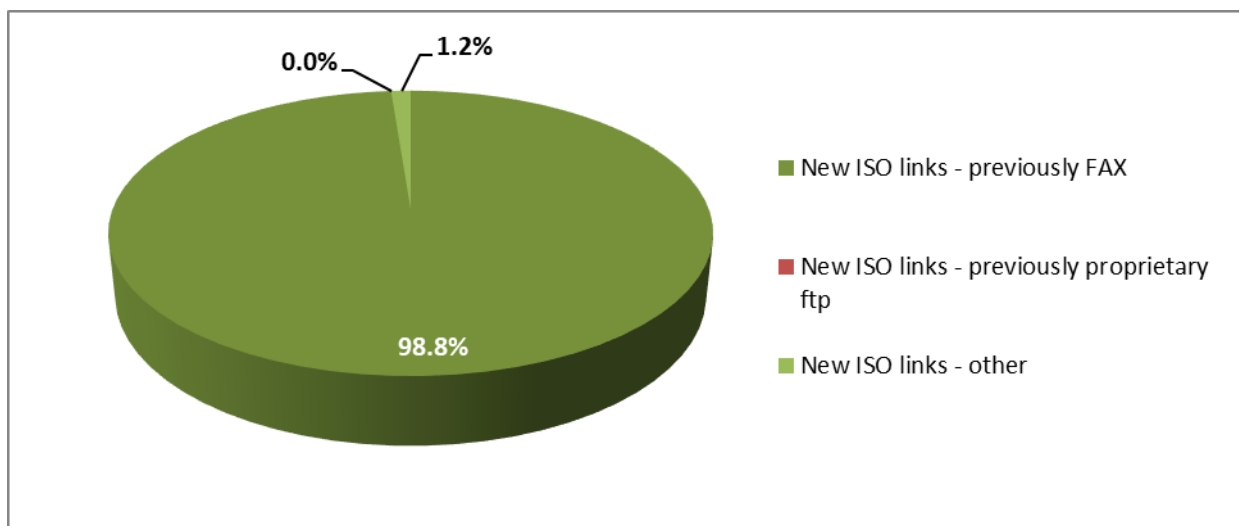


Figure 5 - New automated links launches (2019)

The new ISO adopters on the distribution side are mainly located in the EMEA region in the United Kingdom, Luxembourg, France, Sweden, Switzerland, Germany, Spain, but some were also set up in Poland, Greece, and Belgium. In APAC, new connections came primarily from Singapore and Taiwan. In Americas, new connections came mainly from the United States.

B. Automation and standardisation of fund orders in Luxembourg

B.1. Luxembourg order volume evolution

In the course of 2019, the 20 Luxembourg survey contributors processed 27.4 million orders. This represented a monthly average of 2.29 million orders.

(in millions)	2017	2018	2019
Total number of orders	23.9	24.3	27.4
Monthly average	1.99	2.02	2.29

Table 7 - Luxembourg order volume evolution 2017 - 2019

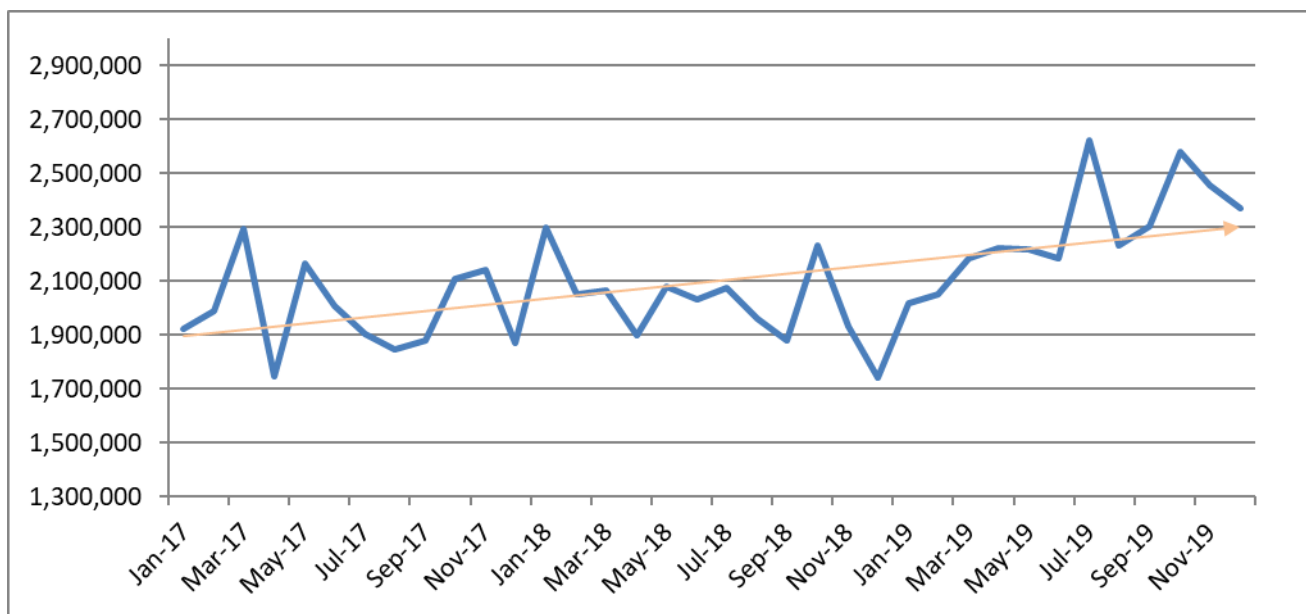


Figure 6 - Luxembourg order volume evolution 2017 - 2019

B.2. Luxembourg automation and standardisation rates

Luxembourg automation rate

The total automation rate reached 90.2% in Q4 2019, compared to 89% in Q4 2018.

Total automation rate	Q1	Q2	Q3	Q4
2017	85.4%	84.0%	84.2%	85.4%
2018	86.2%	87.0%	88.1%	89.0%
2019	88.5%	89.1%	89.6%	90.2%

Table 8 - Luxembourg automation rate evolution 2017 - 2019 (by quarter)

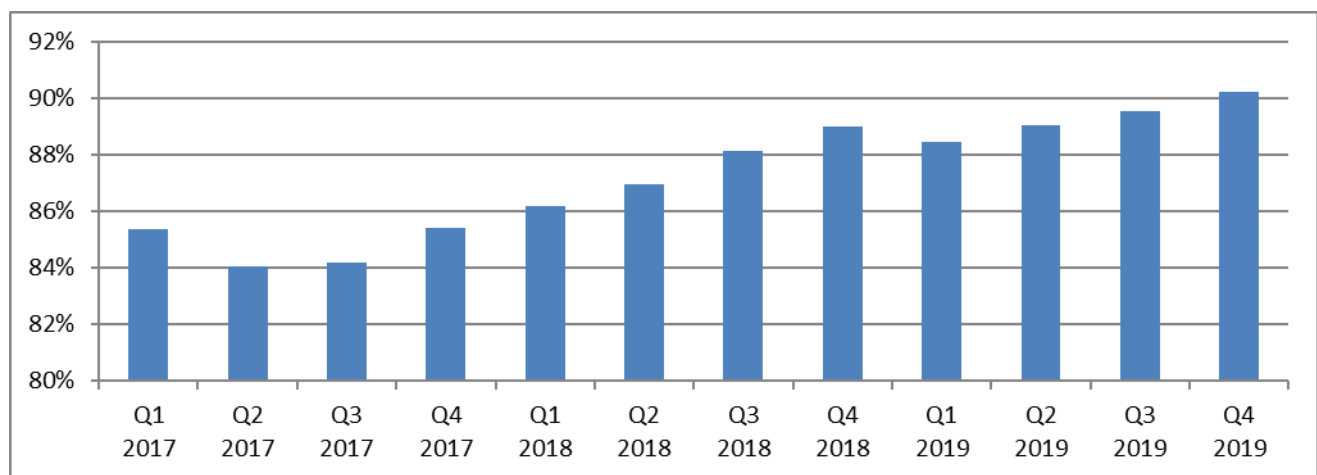


Figure 7 – Luxembourg automation rate evolution 2017 - 2019 (by quarter)

Luxembourg standardisation rate

The use of ISO increased from 72.2% in Q4 2018 to 76.6% in Q4 2019, and the adoption of proprietary formats decreased from 16.8% in Q4 2018 to 13.6% in Q4 2019. The share of manual orders decreased from 11% in Q4 2018 to 9.8% in Q4 2019.

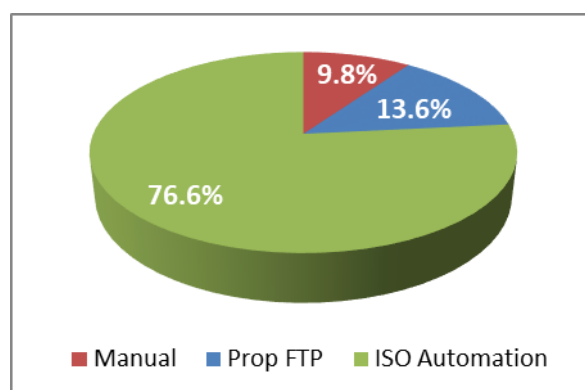


Figure 8 - Luxembourg fund order processing rates (Q4 2019)

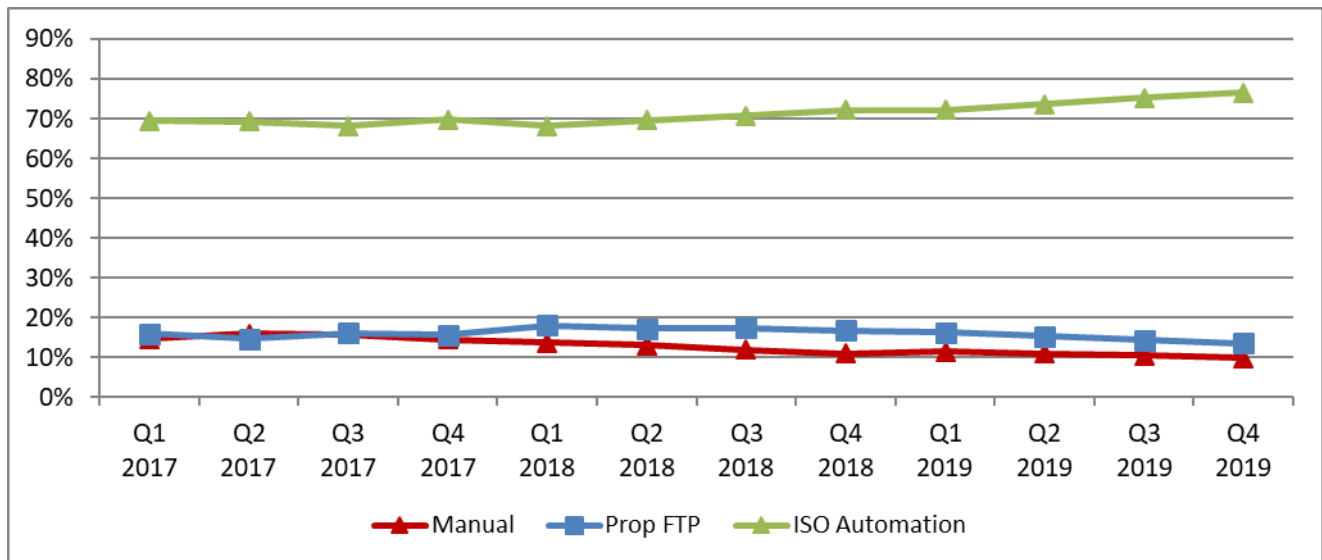


Figure 9 - Luxembourg fund order processing rates evolution 2017-2019 (by quarter)

The table below provides detailed rates per quarter.

ISO automation rate	Q1	Q2	Q3	Q4
2017	69.4%	69.4%	68.1%	69.8%
2018	68.2%	69.6%	70.7%	72.2%
2019	72.1%	73.7%	75.2%	76.6%
Proprietary FTP rate	Q1	Q2	Q3	Q4
2017	15.9%	14.7%	16.1%	15.6%
2018	18.0%	17.3%	17.4%	16.8%
2019	16.3%	15.4%	14.3%	13.6%
Manual rate	Q1	Q2	Q3	Q4
2017	14.6%	16.0%	15.8%	14.6%
2018	13.8%	13.0%	11.9%	11.0%
2019	11.5%	10.9%	10.4%	9.8%

Table 9 - Luxembourg fund order processing rates evolution 2017-2019 (by quarter)⁵

⁵ In 2019, the median for the Luxembourg total automation rate and the ISO automation rate was 89% and 75%, respectively, compared to 88% and 73%, in 2018. The manual median rate decreased to 11% in 2019 (compared to 12% in 2018). The median is the numeric value separating the higher half of a sample, from the lower half. The median has been calculated on the basis of 2019 volumes.

B.3. Luxembourg regional overview

Regional breakdown information is available from a subset of the Luxembourg survey contributors (14 out of 20) representing 13.2 million orders in 2019 or 48% of the volumes. The regional percentages are calculated on this subset.

Luxembourg regional split of volumes by order giver location

APAC-based order givers generated 24% of incoming order volumes in Luxembourg during Q4 2019. The percentage of orders from order givers in EMEA was 73% against 3% from Americas-based order senders.

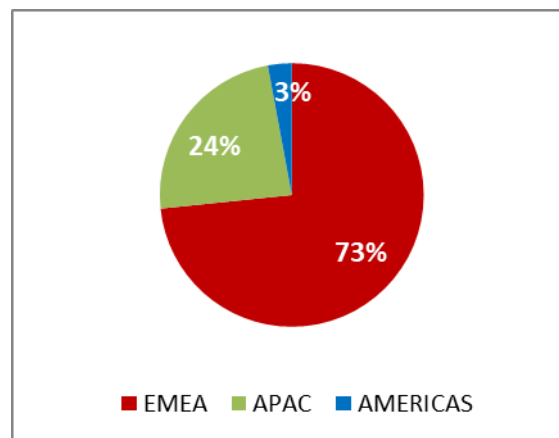


Figure 10 - Luxembourg order volumes per region (by order giver location - Q4 2019)

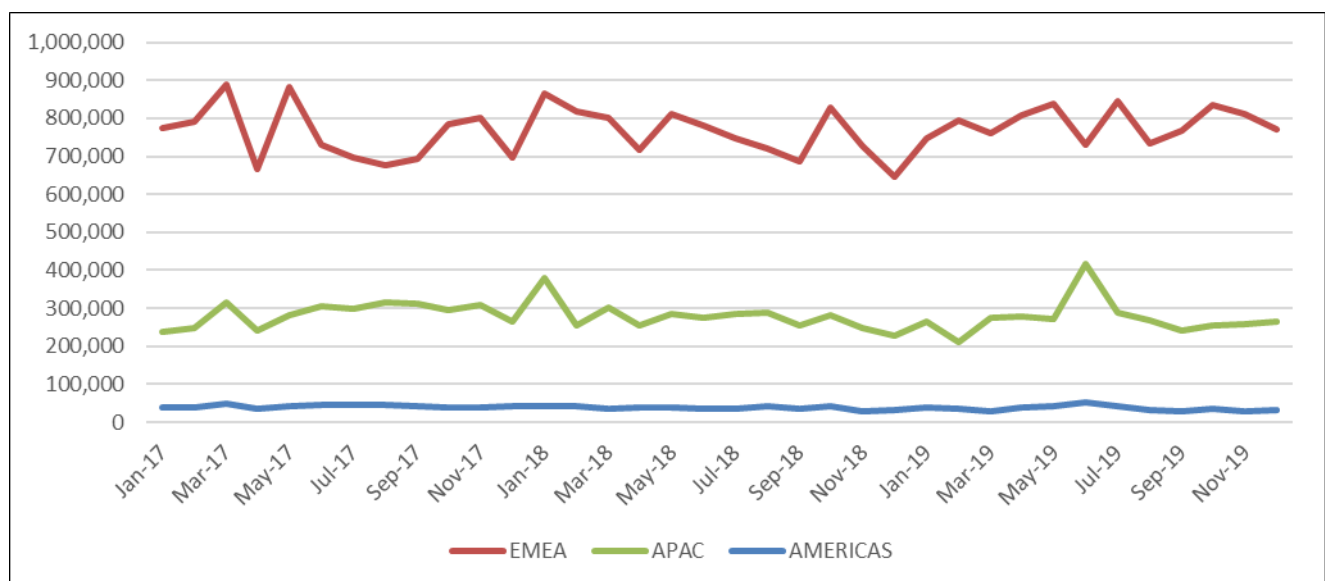


Figure 11 - Luxembourg order volumes evolution per region (2017 - 2019)

Luxembourg regional split of automation and standardisation rates

In EMEA and APAC regions, the ISO automation rates respectively increased to 69.9% and 55.4% in Q4 2019, compared to 65.8% and 51.2% in Q4 2018. In Americas region, the rate decreased from 49.6% in Q4 2018 to 43.3% in Q4 2019.

The total automation (ISO + proprietary) rate increased in EMEA and APAC regions. In EMEA, the total automation increased from 88.8% in Q4 2018 to 89% in Q4 2019; in APAC it rose to 86.2% (compared to 81% in Q4 2018). In Americas region, the rate decreased from 85.7% in Q4 2018 to 80.3% in Q4 2019.

	ISO automation			Total automation (ISO + proprietary formats)		
	EMEA	APAC	Americas	EMEA	APAC	Americas
Q4 2017	67.0%	45.6%	46.6%	84.4%	76.9%	82.4%
Q4 2018	65.8%	51.2%	49.6%	88.8%	81.0%	85.7%
Q4 2019	69.9%	55.4%	43.3%	89.0%	86.2%	80.3%

Table 10 - Luxembourg fund order automation rates evolution per region (Q4 data)

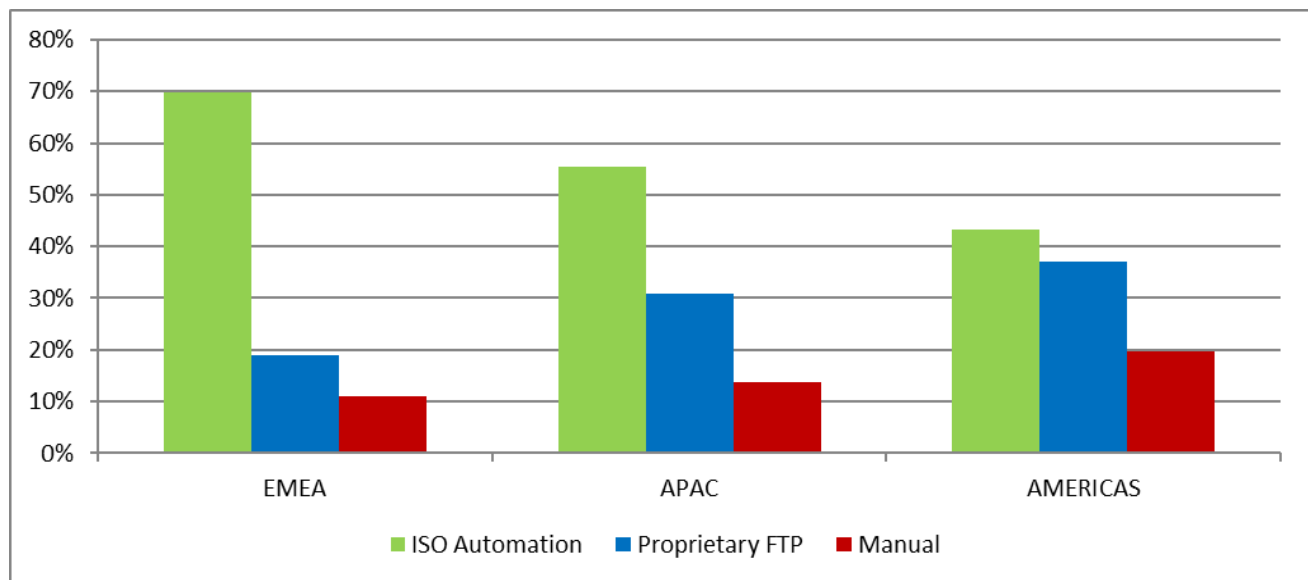


Figure 12 - Luxembourg fund order processing rates per region (Q4 2019)

C. Automation and standardisation of fund orders in Ireland

C.1. Ireland order volume evolution

In 2019, 14.8 million orders were processed by the 9 Irish survey contributors. This represented an average of 1.23 million monthly volume of orders.

(in millions)	2017	2018	2019
Total number of orders	14.9	14.7	14.8
Monthly average	1.24	1.23	1.23

Table 11 - Ireland order volume evolution 2017 -2019

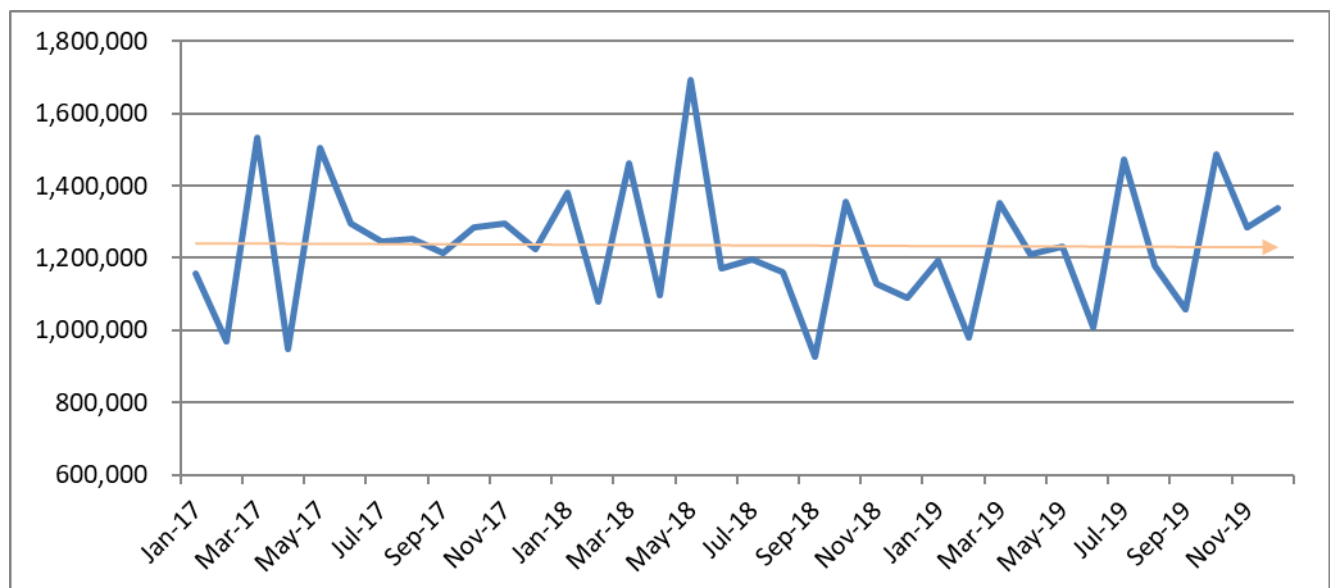


Figure 13 - Ireland order volume evolution 2017 -2019

C.2. Ireland automation and standardisation rates

Ireland automation rate

The total automation rate reached 94.6% in Q4 2019, compared to 92.8% in Q4 2018.

Total automation rate	Q1	Q2	Q3	Q4
2017	90.4%	90.6%	92.0%	92.1%
2018	92.0%	93.0%	92.0%	92.8%
2019	93.4%	93.5%	93.8%	94.6%

Table 12 - Ireland automation rate evolution 2017 - 2019 (by quarter)

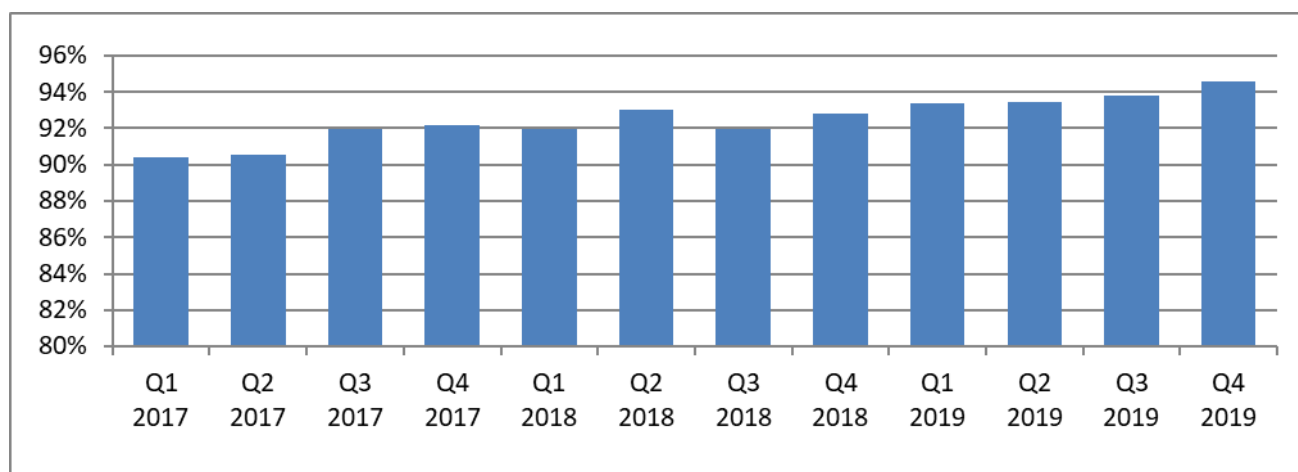


Figure 14 - Ireland automation rate evolution 2017 - 2019 (by quarter)

Ireland standardisation rate

The ISO adoption rate reached 36.6% in Q4 2019, compared to 34.7% in Q4 2018, whereas the adoption of proprietary formats remained stable at 58% in Q4 2019. The share of manual orders decreased from 7.2% in Q4 2018 to 5.4% in Q4 2019.

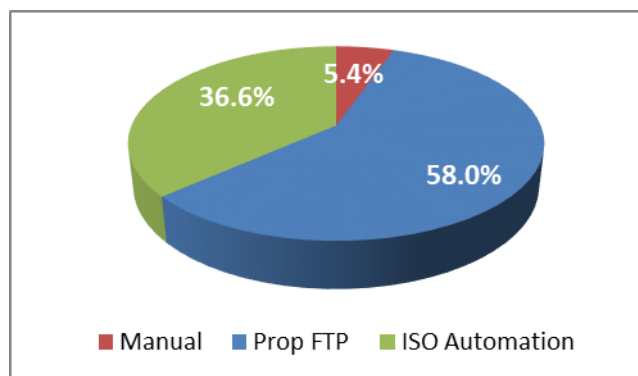


Figure 15 - Ireland fund order processing rates (Q4 2019)

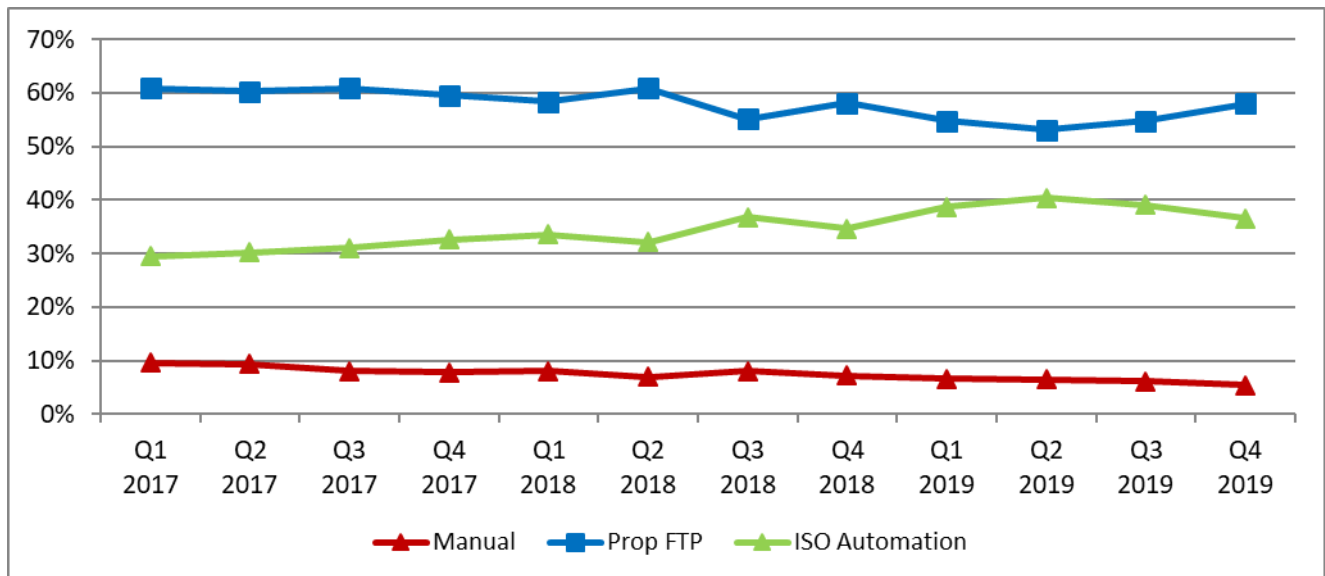


Figure 16 - Ireland fund order processing rates evolution 2017 - 2019 (by quarter)

The table below provides detailed rates per quarter.

ISO automation rate	Q1	Q2	Q3	Q4
2017	29.5%	30.3%	31.1%	32.5%
2018	33.6%	32.1%	36.8%	34.7%
2019	38.7%	40.3%	39.1%	36.6%
Proprietary FTP rate	Q1	Q2	Q3	Q4
2017	60.9%	60.3%	60.9%	59.6%
2018	58.3%	60.9%	55.2%	58.1%
2019	54.7%	53.1%	54.8%	58.0%
Manual rate	Q1	Q2	Q3	Q4
2017	9.6%	9.4%	8.0%	7.9%
2018	8.0%	7.0%	8.0%	7.2%
2019	6.6%	6.5%	6.2%	5.4%

Table 13 - Ireland fund order processing rates evolution 2017 - 2019 (by quarter)⁶

⁶ The median for Ireland total automation rate and the ISO automation rate evolved to 88% and 77% this year compared to 85% and 70% in 2018. The manual rate median decreased to 12% compared to last year (15%).

C.3. Ireland regional overview

Regional breakdown information is available from a subset of Ireland survey contributors (5 out of 9) mostly active in the EMEA region, who processed 8.9 million orders in 2019 or 60% of the volumes. The regional percentages are calculated on this subset.

Ireland regional split of volumes by order giver location

APAC-based order givers generated 3% of incoming order volumes in Ireland during Q4 2019. The percentage of orders from order givers in EMEA was 95%, against 2% from Americas-based order senders.

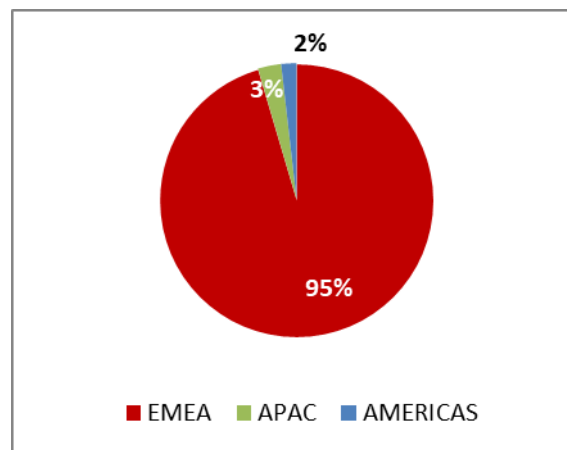


Figure 17 - Ireland order volumes per region (by order giver location - Q4 2019)

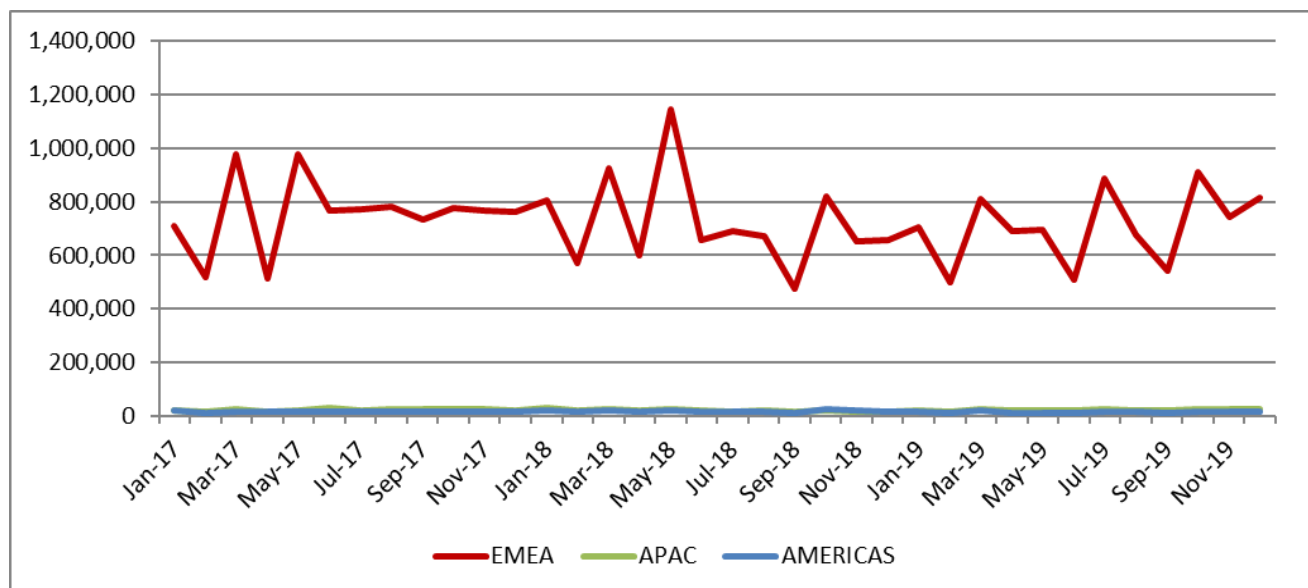


Figure 18 - Ireland order volumes evolution per region 2017-2019

Ireland regional split of automation and standardisation rates

In the EMEA region, the ISO automation rates decreased from 14.9% in Q4 2018 to 13.6% in Q4 2019. In APAC and Americas, the rate increased to 26.3% and 16.2%, respectively, compared to 4.6% and 14% in Q4 2018.

The total automation (ISO + proprietary) rate increased in all regions. In APAC and Americas, the rate reached 82.5% and 87.3% respectively, compared to 76.2% and 52.2% in Q4 2018. In EMEA the rate rose to 98.2% in Q4 2019, compared to 97.8% in Q4 2018.

	ISO automation			Total automation (ISO + proprietary formats)		
	EMEA	APAC	Americas	EMEA	APAC	Americas
Q4 2017	12.4%	26.6%	18.2%	97.4%	80.6%	72.1%
Q4 2018	14.9%	4.6%	14.0%	97.8%	76.2%	52.2%
Q4 2019	13.6%	26.3%	16.2%	98.2%	82.5%	87.3%

Table 14 - Ireland fund order automation rates evolution per region (Q4 data)

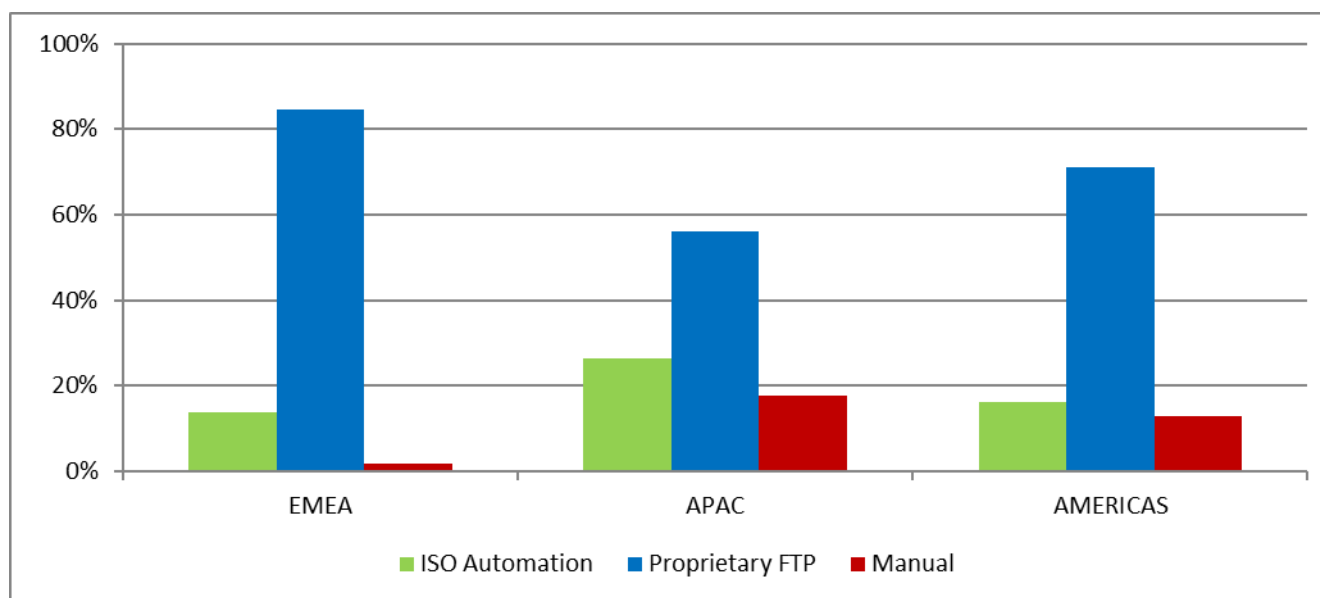


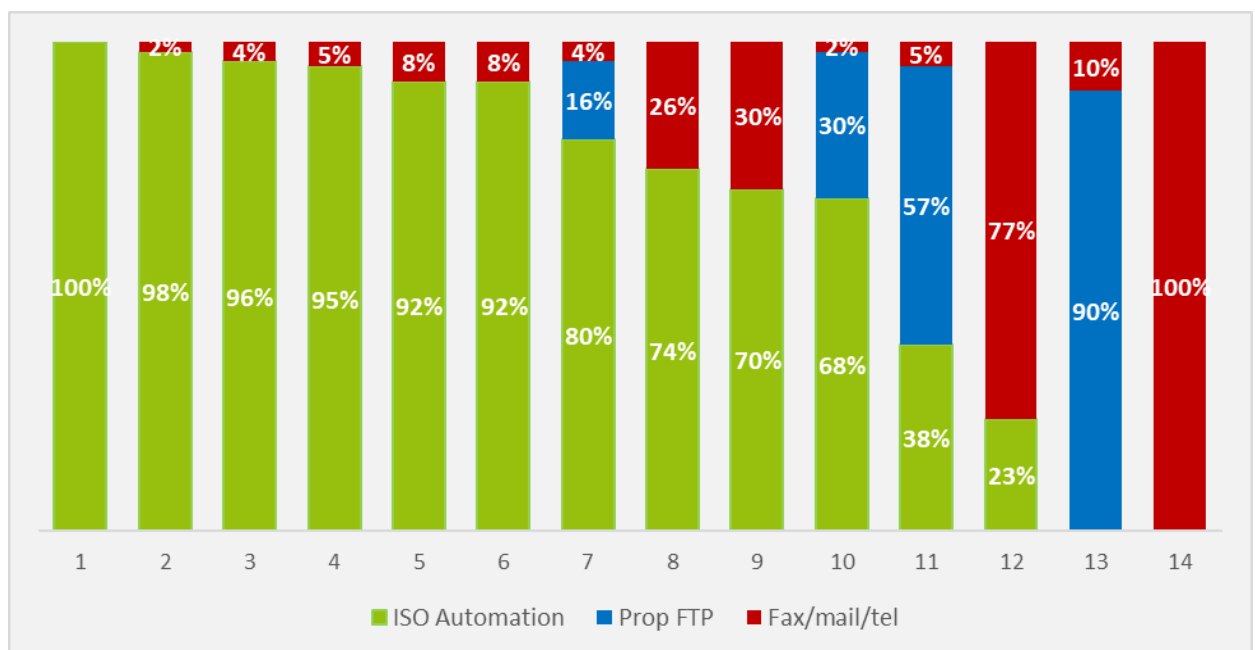
Figure 19 - Ireland fund order processing rates per region (Q4 2019)

D. Standardisation of fund processing in Germany in 2019

Germany is the largest fund distribution market in the EU with a market share of more than 20%. Nevertheless, fund investment penetration is still low, as only 20+ million inhabitants (out of a total population of 80 million) are estimated to hold fund units and shares.

The Praxisforum Depotbanken (PFD) and BVI, the German Funds Association, agreed in 2016 to cooperate on a survey of processing standardisation levels in the German fund market. The 2019 survey is the fourth annual survey and covers figures from distributors or platforms – often banks – and currently 14 depository banks (“Verwahrstellen”) of different size acting as transfer agents (TA) of German domiciled funds (DE ISINs). This, however, does not provide a complete picture, as transactions within the distribution chain before reaching the TA may also use other means of communication. For instance, it is possible that financial advisors communicate with their platforms on the basis of fax or email. It should also be remembered that German funds settle in the local CSD and not with a TA.

- **Survey coverage:** 14 Verwahrstellen (referred to as TAs) contributed to the survey (compared to 12 TAs in 2018); they represent about 91% of the German market. The order volumes processed by these 14 survey contributors reached 0.83 million orders in 2019.



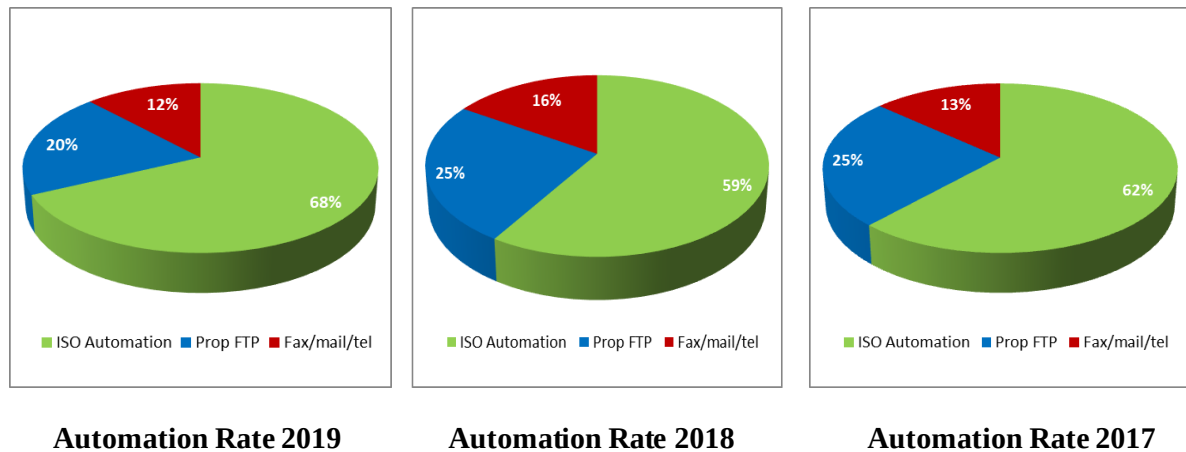
Germany fund order processing rates 2019

- **Total automation rate⁷** of orders in 2019 is **88%, compared to 84% in 2018**. However, there is still a large span in terms of the degrees of automation, sometimes with considerable levels of non-ISO format solutions and even of manual processing.

⁷ The ‘total automation rate’ is the sum of the ‘ISO Automation’, and the ‘Prop FTP’ rate.

- **ISO automation rate⁸** reached **68%** in 2019, compared to **59%** in 2018.
- **20%** of the orders were processed using non-ISO solutions in 2019.

In general, within the small time series we can see an improvement, but the pattern may be also due to the better market coverage achieved in 2019 compared to the years before.



BVI and the Praxisforum Depotbanken expect further improvement of automation rates in fund processing in Germany against the background of ISO 20022 settlements in T2S as well as general pressure on costs of funds.

⁸ The 'ISO automation rate' corresponds to the standardisation rate, i.e. the rate of automated orders using an SWIFT network or ISO 20022.

E. Next report

The next joint EFAMA-SWIFT Fund Processing Standardisation report is planned for publication in Q4 2019 and will cover the development during the first half of 2020.
