

Fund Processing Standardisation
Annual Report
on
automation and standardisation of
cross-border funds orders in 2020

26 October 2021

Table of contents

Background	2
Report Highlights	3
A. Automation and standardisation of fund orders in Luxembourg and Ireland.....	3
B. Automation and standardisation of fund orders in Luxembourg	4
C. Automation and standardisation of fund orders in Ireland.....	5
A. Automation and standardisation of fund orders in Ireland and Luxembourg.....	6
A.1. Total order volume evolution	6
A.2. Total automation and standardisation rates.....	7
Total automation rate.....	7
Total standardisation rate.....	7
A.3. Number of new automated links set up in 2020	9
B. Automation and standardisation of fund orders in Luxembourg	10
B.1. Luxembourg order volume evolution	10
B.2. Luxembourg automation and standardisation rates.....	11
Luxembourg automation rate.....	11
Luxembourg standardisation rate	11
B.3. Luxembourg regional overview	13
Luxembourg regional split of volumes by order giver location	13
Luxembourg regional split of automation and standardisation rates	14
C. Automation and standardisation of fund orders in Ireland.....	15
C.1. Ireland order volume evolution.....	15
C.2. Ireland automation and standardisation rates.....	16
Ireland automation rate	16
Ireland standardisation rate.....	16
C.3. Ireland regional overview	18
Ireland regional split of volumes by order giver location.....	18
Ireland regional split of automation and standardisation rates	19
D. Standardisation of fund processing in Germany in 2020.....	20
E. Next report.....	22

Background

Since May 2009, EFAMA & SWIFT publish twice a year reports on trends in standardisation and automation rates of fund orders received by transfer agents (TAs) in Luxembourg and Ireland. The target audience are institutions involved in fund processing, as well as the European Commission, the European Parliament and other interested stakeholders.

This latest version covers the full-year 2020, and highlights the progress made in the increased automation of fund orders and the use of ISO standards, as recommended by EFAMA¹.

In addition to data on 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 2020.

The reports published by EFAMA and SWIFT 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

1. **Survey coverage: 29 transfer agents (TAs)** contribute to the survey
 - a. **20 Luxembourg-based TAs**
 - b. **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.
2. **Total automation rate²** of orders during Q4 2020 reached **93.2%**; this represents an increase of 1.4 percentage points compared to Q4 2019 (**91.8%**).
3. **ISO automation rate³** reached **59.4%** in Q4 2020 compared to **62.3%** in Q4 2019, a decrease of 2.9 percentage points.
4. 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 272 new ISO automated links implemented during 2020.
5. 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.
6. The **order volumes** processed by the 29 survey contributors reached **48.7 million orders** in 2020.
7. The **29 surveyed TAs manually processed 3.7 million orders in 2020**, compared to 3.8 million in 2019. Manual process rates decreased by 1.4 percentage points to 6.8% in Q4 2020 (against 8.2% in Q4 2019).

Fund orders automation and standardisation progress overview

GLOBAL OVERVIEW	Q4 2018	Q4 2019	Q4 2020	Change 19 - 20
Manual orders	9.6%	8.2%	6.8%	-1.4%
ISO automated orders	58%	62.3%	59.4%	-2.9%
Proprietary FTP orders	32.4%	29.5%	33.8%	4.3%
Total automated	90.4%	91.8%	93.2%	1.4%

Table 1 - Automation and standardisation rate evolution

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 150222 'fund template').

B. Automation and standardisation of fund orders in Luxembourg

1. **Survey coverage: 20 TAs contributed to the survey in 2020** (8 in-house and 12 third-party TAs).
2. The **total automation rate of orders** processed by Luxembourg TAs reached **91.2%** during Q4 2020, compared to 90.2% in Q4 2019.
3. The **ISO automation rate** reached 78.4% in Q4 2020 compared to 76.6% in Q4 2019, an increase of 1.8 percentage points. The rate of proprietary FTP decreased to 12.8% in Q4 2020 against 13.6% in Q4 2019, and the manual orders decreased to 8.8% in Q4 2020 compared to 9.8% in Q4 2019.
4. The **order volumes** processed by Luxembourg TAs reached **28.3 million** in 2020 compared to 27.4 million in 2019. The number of orders processed manually reached 2.8 million in 2020 compared to 2.9 million in 2019.
5. The **ISO automation rate** increased in all regions. In EMEA and APAC regions the rate increased in Q4 2020 to 73.8% and 61.6%, respectively (compared to 69.9% and 55.4% in Q4 2019). In the Americas region, the ISO automation rate increased to 62.5% in Q4 2020 (compared to 43.3% in Q4 2019).

Fund orders automation and standardisation progress overview- Luxembourg

GLOBAL OVERVIEW	Q4 2018	Q4 2019	Q4 2020	Change 19 - 20
Manual orders	11%	9.8%	8.8%	-1%
ISO automated orders	72.2%	76.6%	78.4%	1.8%
Proprietary FTP orders	16.8%	13.6%	12.8%	-0.8%
Total automated	89%	90.2%	91.2%	1%

Table 2 - Luxembourg automation and standardisation rate evolution

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 95.9% in Q4 2020 compared to 94.6% in Q4 2019, an increase of 1.3 percentage points.
3. The percentage of automated orders based on **ISO messaging standards** decreased to **33.6%**, in Q4 2020, from 36.6% in Q4 2019. The **rate of proprietary FTP orders increased to 62.3%** in Q4 2020 (compared to 58% in Q4 2019). The manual orders decreased from 5.4% in Q4 2019 to 4.1% in Q4 2020.
4. The **order volumes** processed by Irish TAs reached **20.4 million** in 2020, compared to 14.8 million in 2019.
5. In the Americas region, the ISO automation rate increased in Q4 2020 to 25% (compared to 16.2% in Q4 2019). The **ISO automation rate decreased** in the EMEA and APAC regions to 11.6% and 18.3% in Q4 2020, respectively (compared to 13.6% and 26.3% in Q4 2019).

Fund orders automation and standardisation progress overview – Ireland

GLOBAL OVERVIEW	Q4 2018	Q4 2019	Q4 2020	Change 19 - 20
Manual orders	7.2%	5.4%	4.1%	-1.3%
ISO automated orders	34.7%	36.6%	33.6%	-3%
Proprietary FTP orders	58.1%	58.0%	62.3%	4.3%
Total automated	92.8%	94.6%	95.9%	1.3%

Table 3 - Ireland automation and standardisation rate evolution

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

A.1. Total order volume evolution

In 2020, 48.7 million orders have been processed by the 29 survey contributors across Ireland and Luxembourg. This represents an average volume of 4.1 million orders per month.

(in millions)	2018	2019	2020
Total number of orders	39	42.2	48.7
Monthly average	3.25	3.52	4.1

Table 4 - Total order volume evolution 2018 - 2020

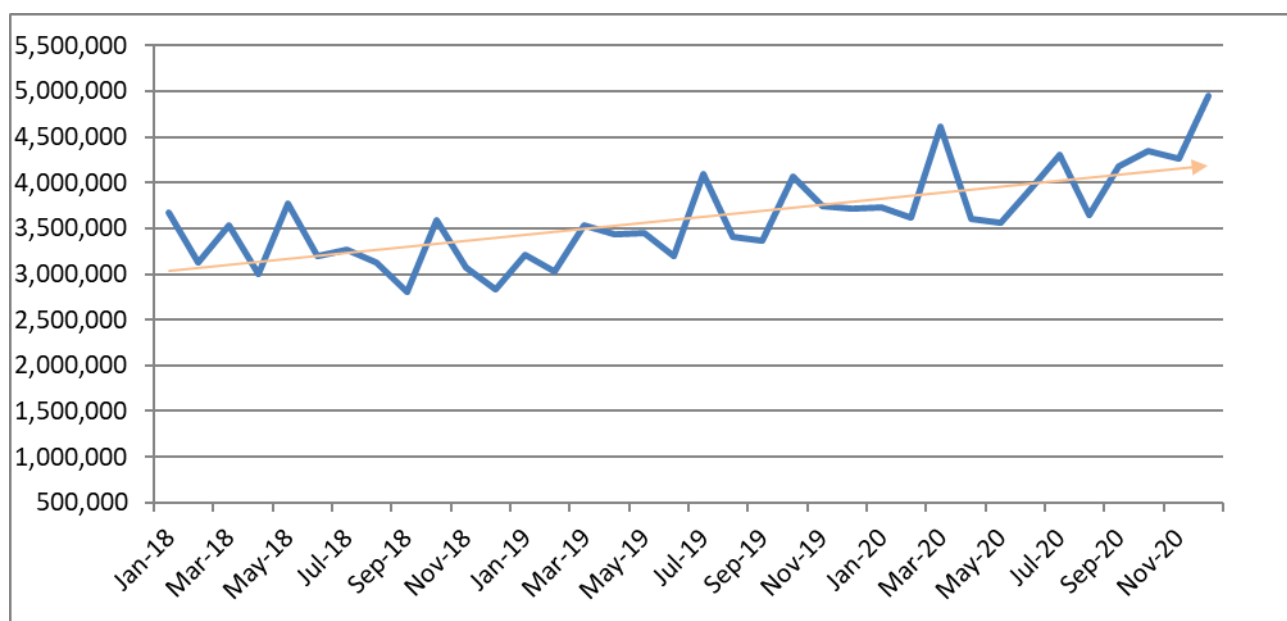


Figure 1 - Total order volume evolution 2018 - 2020

A.2. Total automation and standardisation rates

Total automation rate

The total automation rate reached 93.2% in Q4 2020, compared to 91.8% in Q4 2019. This increase was accompanied with a decrease in the manual processing rate (from 8.2% in Q4 2019 to 6.8% in Q4 2020), mainly to the benefit of Proprietary FTP.

Total automation rate	Q1	Q2	Q3	Q4
2018	88.4%	89.4%	89.5%	90.4%
2019	90.2%	90.6%	91.0%	91.8%
2020	91.7%	91.9%	92.6%	93.2%

Table 5 - Total automation rate evolution 2018 - 2020

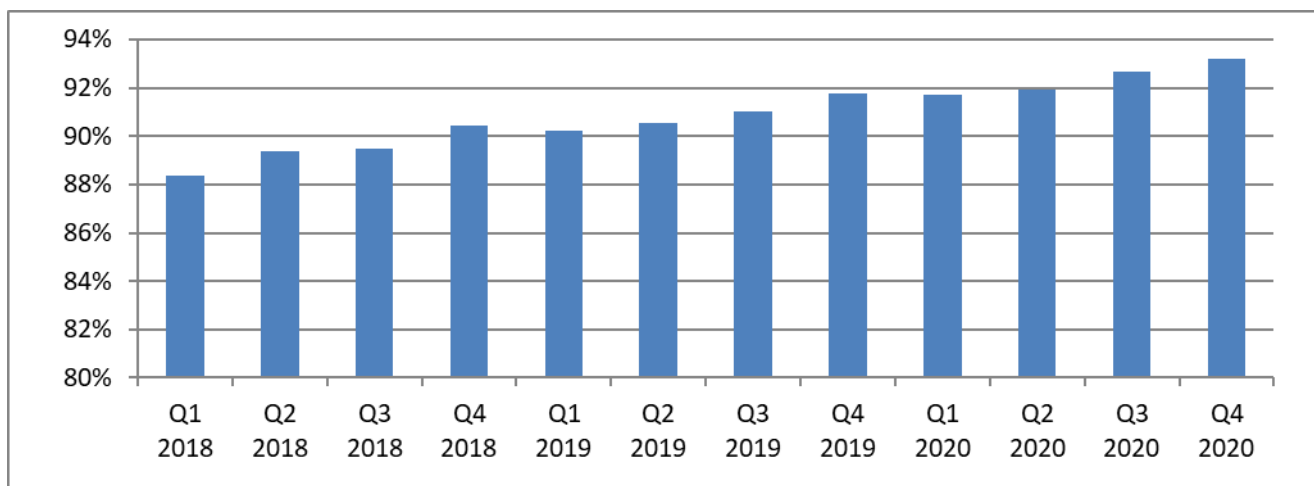


Figure 2 - Total automation level evolution 2018 - 2020

Total standardisation rate

The use of the ISO messaging standard decreased by 2.9 percentage points in the course of 2020 to reach 59.4% in Q4 2020 (against 62.3% in Q4 2019).

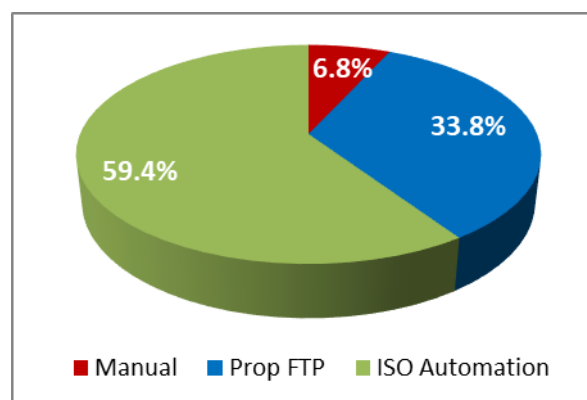


Figure 3 - Total fund order processing rates (Q4 2020)

The graph below shows the various rates evolution since the beginning of 2018.

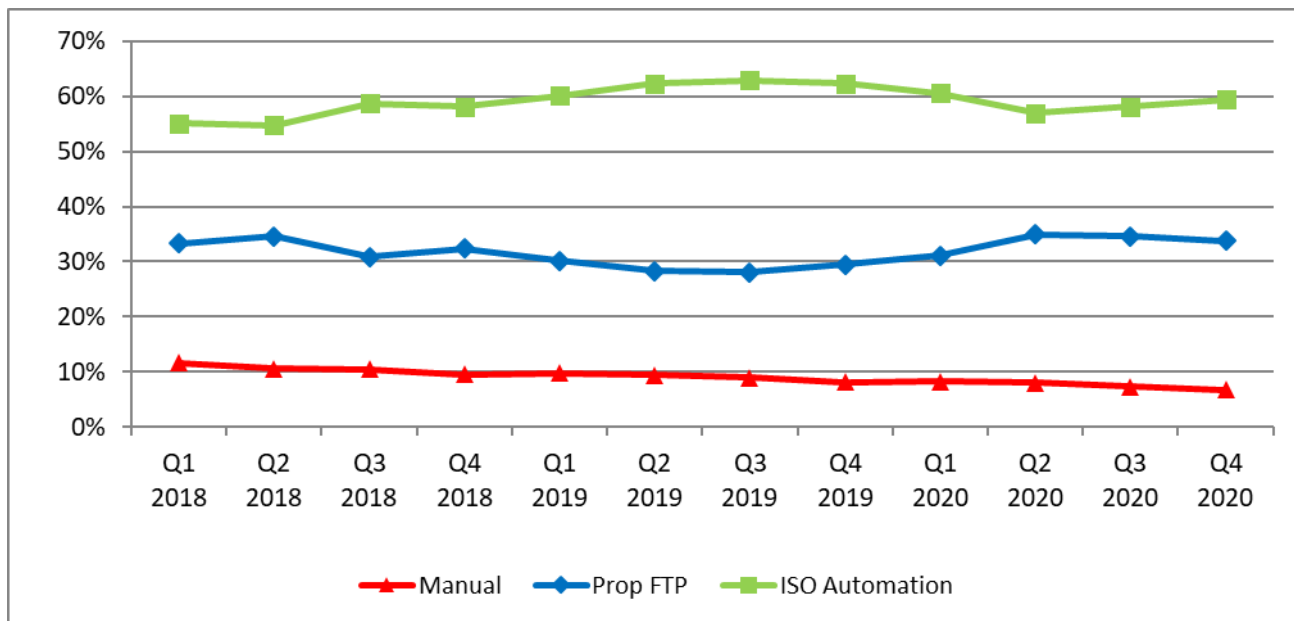


Figure 4 - Total fund order processing rates evolution 2018 - 2020

The adoption of proprietary FTPs increased to 33.8% in Q4 2020 compared to 29.5% in Q4 2019, and the share of manual orders fell from 8.2% in Q4 2019 to 6.8% in Q4 2020. 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
2018	55.1%	54.7%	58.6%	58.0%
2019	60.1%	62.3%	62.9%	62.3%
2020	60.6%	57.0%	58.0%	59.4%
Proprietary FTP rate	Q1	Q2	Q3	Q4
2018	33.3%	34.6%	30.9%	32.4%
2019	30.2%	28.3%	28.1%	29.5%
2020	31.1%	34.9%	34.6%	33.8%
Manual rate	Q1	Q2	Q3	Q4
2018	11.6%	10.6%	10.5%	9.6%
2019	9.8%	9.4%	9.0%	8.2%
2020	8.3%	8.1%	7.4%	6.8%

Table 6 - Total fund order processing rates evolution 2018 - 2020

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 2020

To better understand the automation trend, an additional survey was carried out in 2020 among 29 TAs to look at the number of **new automated links implemented** between January and December 2020 with new counterparties.

The surveyed TAs implemented new ISO links with 272 counterparties, compared to 2 new links using a proprietary FTP. Out of these new ISO links, 232 counterparties were previously using fax (representing 85.3% of all new links) and 8 used proprietary FTP files (2.9%). Brand new ISO links have been set up with the 32 (11.8%) remaining counterparties in 2020.

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

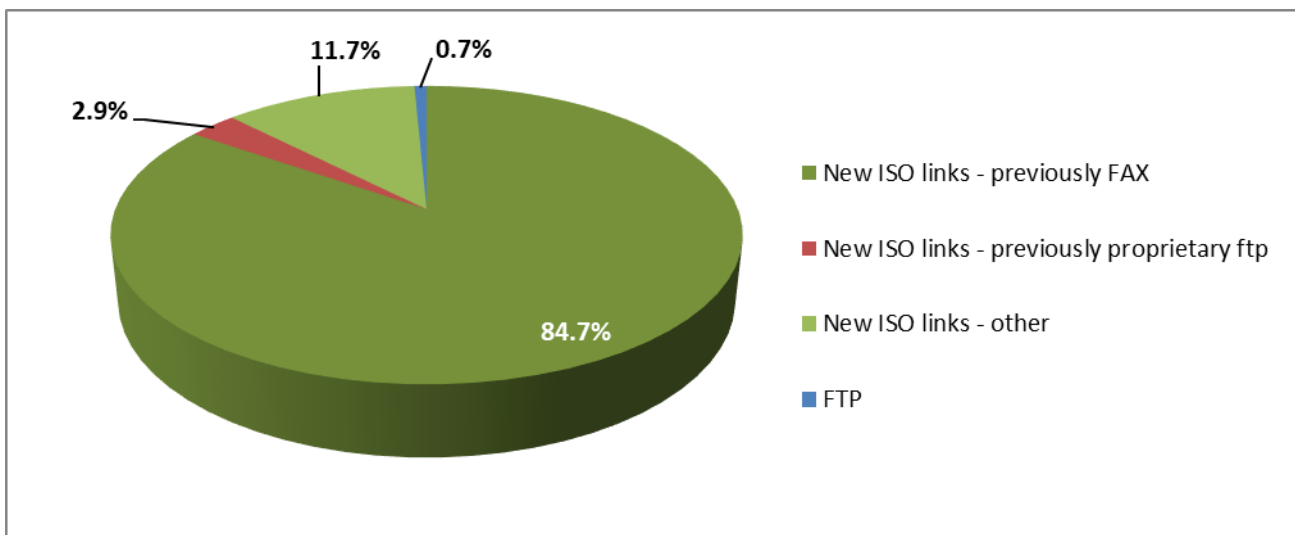


Figure 5 - New automated links launches (2020)

The new ISO adopters on the distribution side are mainly located in the EMEA region in the United Kingdom, Luxembourg, Switzerland, but some were also set up in Italy, Sweden, Belgium, Spain, Czech Republic. In APAC, new connections came primarily from Singapore, Hong Kong and Taiwan.

B. Automation and standardisation of fund orders in Luxembourg

B.1. Luxembourg order volume evolution

In the course of 2020, the 20 Luxembourg survey contributors processed 28.3 million orders. This represented a monthly average of 2.36 million orders.

(in millions)	2018	2019	2020
Total number of orders	24.3	27.4	28.3
Monthly average	2.02	2.29	2.36

Table 7 - Luxembourg order volume evolution 2018 - 2020

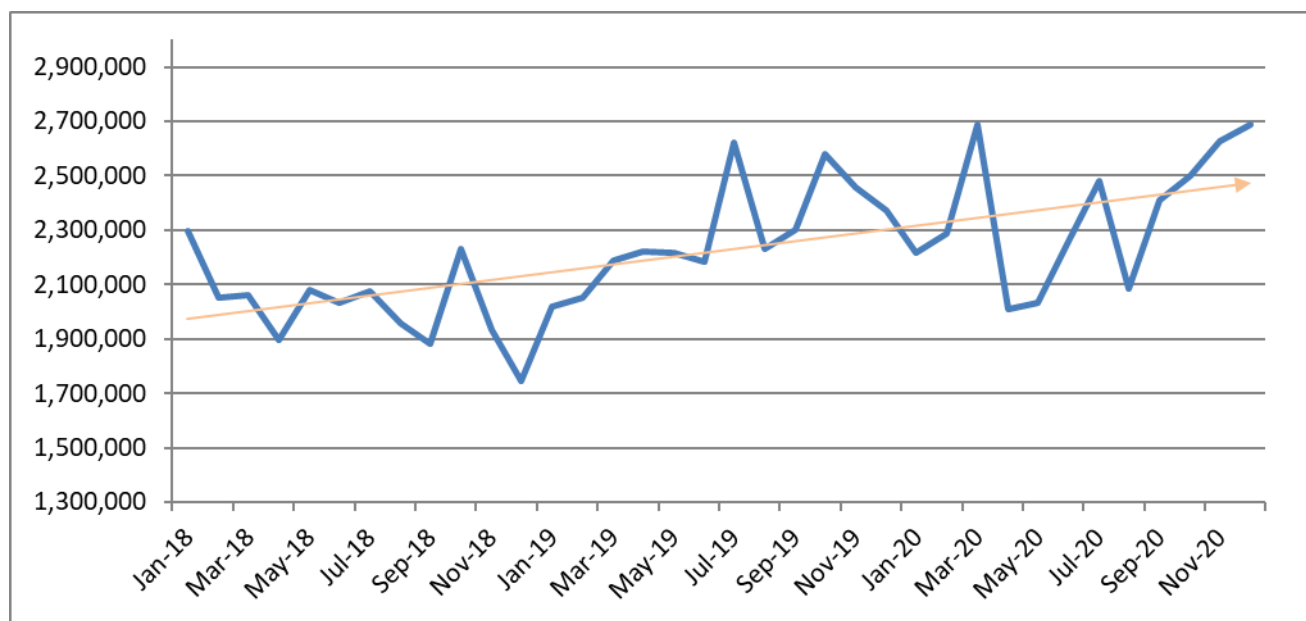


Figure 6 - Luxembourg order volume evolution 2018 - 2020

B.2. Luxembourg automation and standardisation rates

Luxembourg automation rate

The total automation rate reached 91.2% in Q4 2020, compared to 90.2% in Q4 2019.

Total automation rate	Q1	Q2	Q3	Q4
2018	86.2%	87.0%	88.1%	89.0%
2019	88.5%	89.1%	89.6%	90.2%
2020	89.9%	89.4%	90.4%	91.2%

Table 8 - Luxembourg automation rate evolution 2018 - 2020

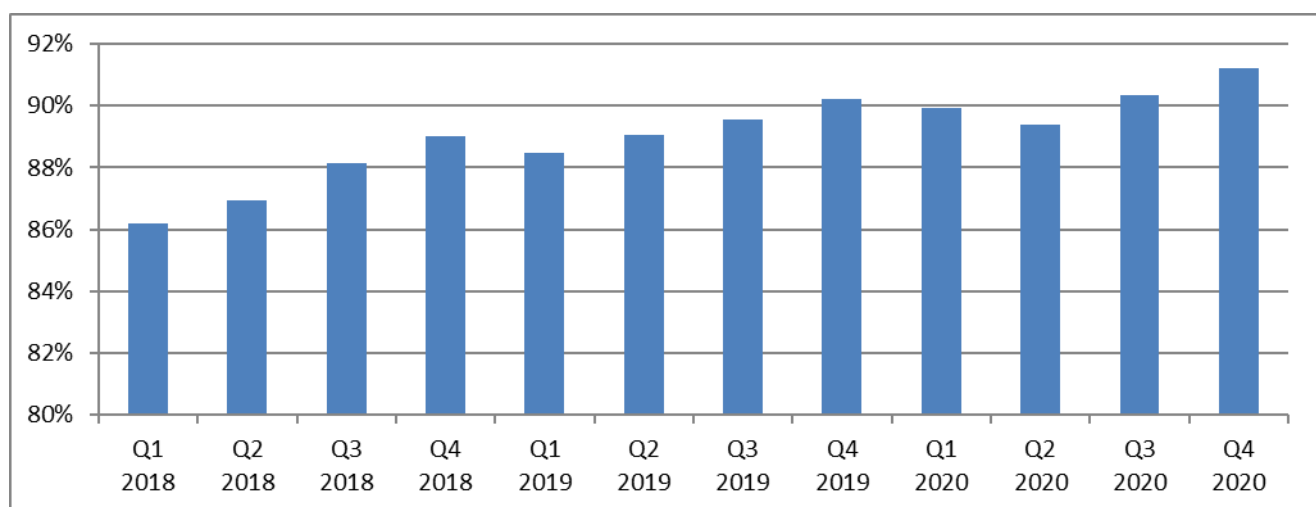


Figure 7 – Luxembourg automation rate evolution 2018 - 2020

Luxembourg standardisation rate

The use of ISO increased from 76.6% in Q4 2019 to 78.4% in Q4 2020, and the adoption of proprietary formats decreased from 13.6% in Q4 2019 to 12.8% in Q4 2020. The share of manual orders decreased from 9.8% in Q4 2019 to 8.8% in Q4 2020.

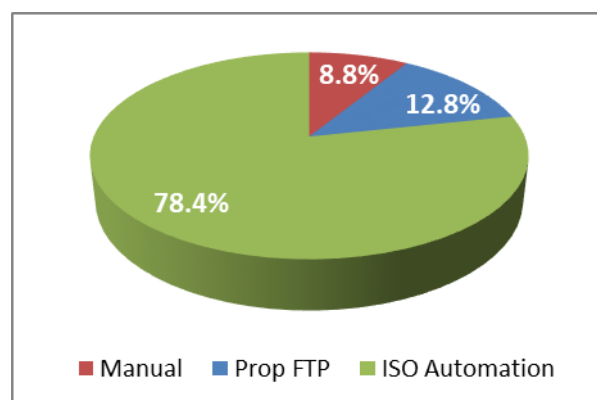


Figure 8 - Luxembourg fund order processing rates (Q4 2020)

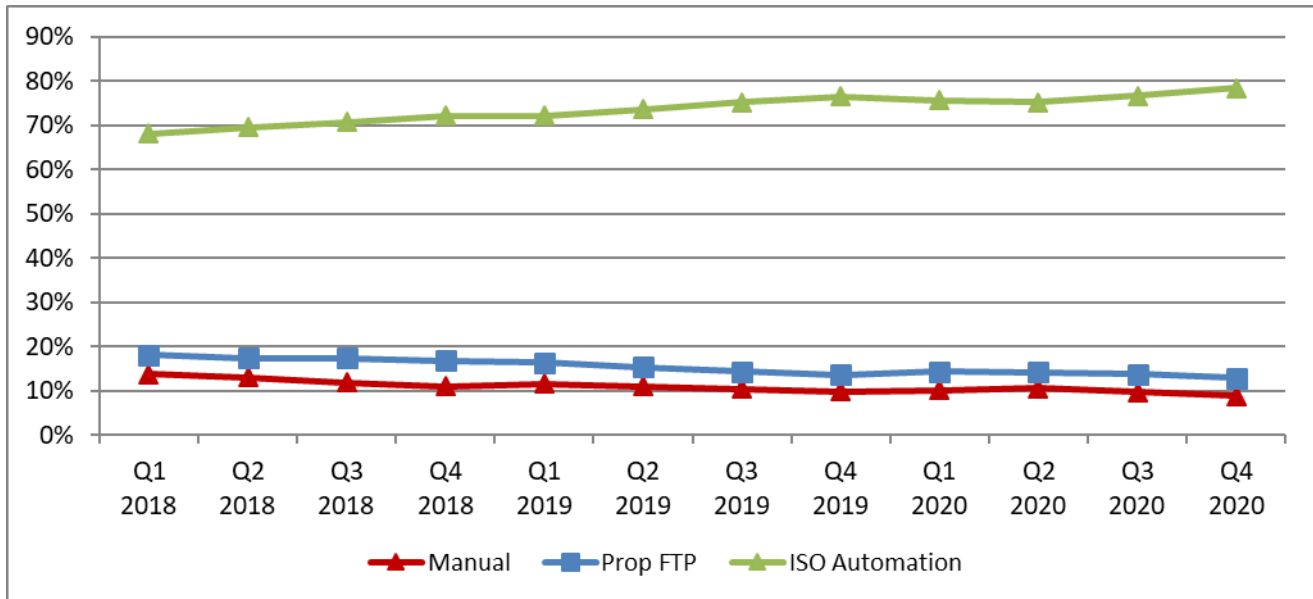


Figure 9 - Luxembourg fund order processing rates evolution 2018 - 2020

The table below provides detailed rates per quarter.

ISO automation rate	Q1	Q2	Q3	Q4
2018	68.2%	69.6%	70.7%	72.2%
2019	72.1%	73.7%	75.2%	76.6%
2020	75.6%	75.2%	76.6%	78.4%
Proprietary FTP rate	Q1	Q2	Q3	Q4
2018	18.0%	17.3%	17.4%	16.8%
2019	16.3%	15.4%	14.3%	13.6%
2020	14.3%	14.2%	13.7%	12.8%
Manual rate	Q1	Q2	Q3	Q4
2018	13.8%	13.0%	11.9%	11.0%
2019	11.5%	10.9%	10.4%	9.8%
2020	10.1%	10.6%	9.6%	8.8%

Table 9 - Luxembourg fund order processing rates evolution 2018 - 2020⁵

⁵ In 2020, the median for the Luxembourg total automation rate and the ISO automation rate was 90% and 81%, respectively, compared to 89% and 75%, in 2019. The manual median rate decreased to 10% in 2020 (compared to 11% in 2019). 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 2020 volumes.

B.3. Luxembourg regional overview

Regional breakdown information is available from a subset of the Luxembourg survey contributors (14 out of 20) representing 14.5 million orders in 2020 or 51% 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 25% of incoming order volumes in Luxembourg during Q4 2020. The percentage of orders from order givers in EMEA was 71% against 4% from Americas-based order senders.

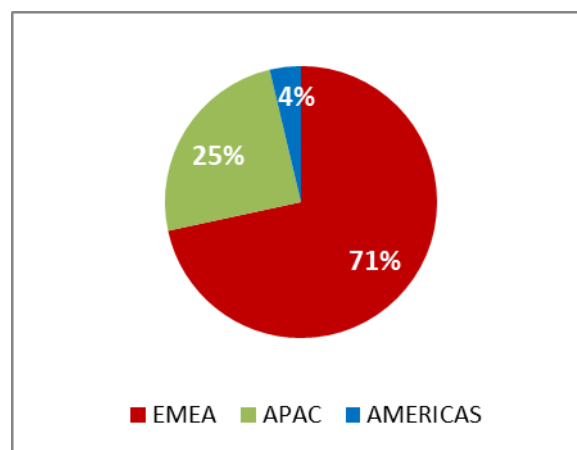


Figure 10 - Luxembourg order volumes per region (by order giver location - Q4 2020)

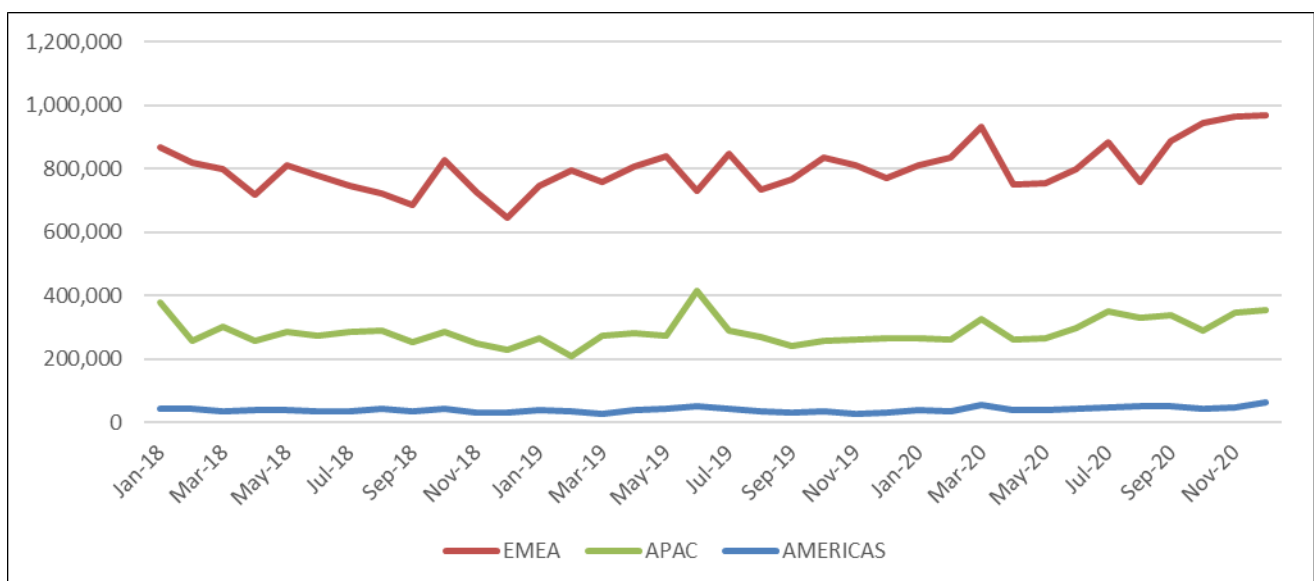


Figure 11 - Luxembourg order volumes evolution per region (2018 - 2020)

Luxembourg regional split of automation and standardisation rates

The ISO automation rates increased in all regions. In EMEA, the rate increased to 73.8% in Q4 2020 compared to 69.9% in Q4 2019. In APAC, the rate increased to 61.6% in Q4 2020 compared to 55.4% in Q4 2019 and in Americas region, the rate increased from 43.3% in Q4 2019 to 62.5% in Q4 2020.

The total automation (ISO + proprietary) rate increased in all regions. In EMEA, the total automation increased from 89% in Q4 2019 to 90.4% in Q4 2020; in APAC it rose to 88.1% (compared to 86.2% in Q4 2019). In Americas region, the rate increased from 80.3% in Q4 2019 to 87% in Q4 2020.

	ISO automation			Total automation (ISO + proprietary formats)		
	EMEA	APAC	Americas	EMEA	APAC	Americas
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%
Q4 2020	73.8%	61.6%	62.5%	90.4%	88.1%	87.0%

Table 10 - Luxembourg fund order automation rates evolution per region

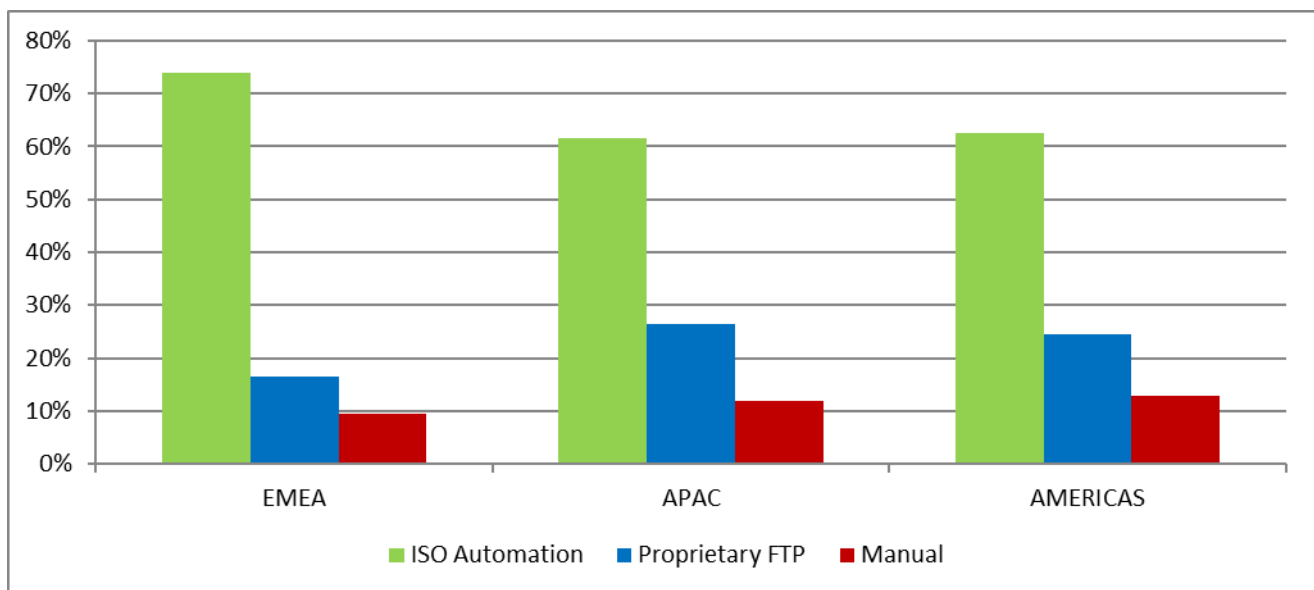


Figure 12 - Luxembourg fund order processing rates per region (Q4 2020)

C. Automation and standardisation of fund orders in Ireland

C.1. Ireland order volume evolution

In 2020, 20.4 million orders were processed by the 9 Irish survey contributors. This represented an average of 1.7 million monthly volume of orders.

(in millions)	2018	2019	2020
Total number of orders	14.7	14.8	20.4
Monthly average	1.23	1.23	1.7

Table 11 - Ireland order volume evolution 2018 - 2020

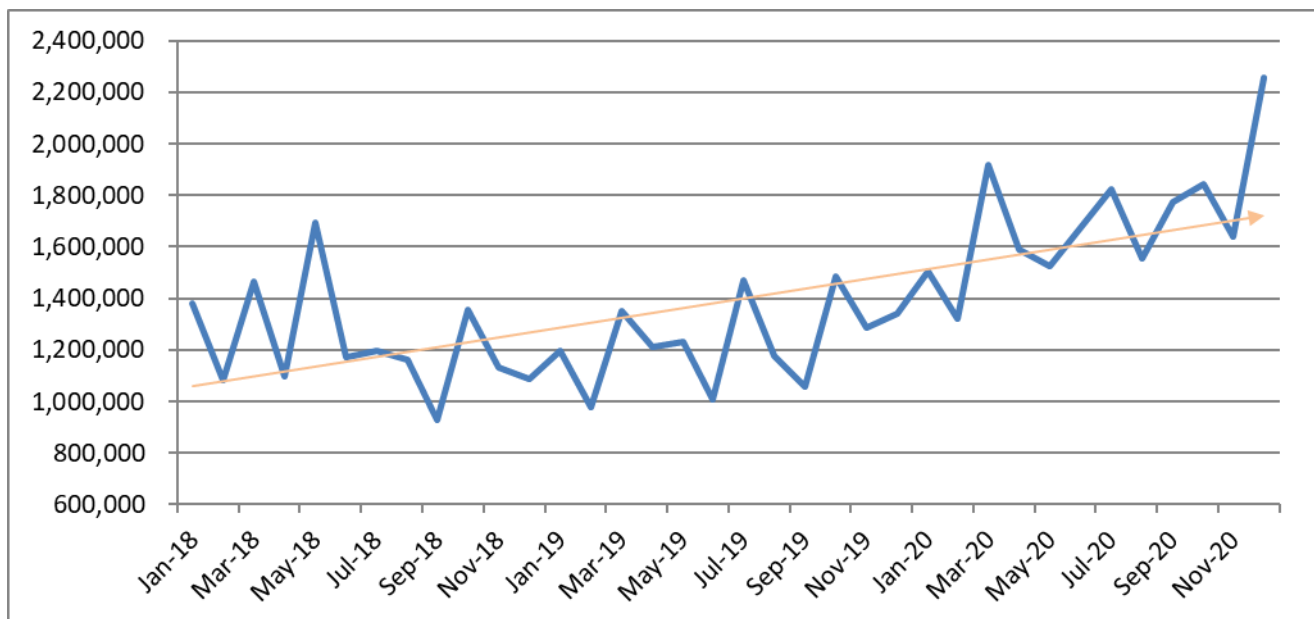


Figure 13 - Ireland order volume evolution 2018 - 2020

C.2. Ireland automation and standardisation rates

Ireland automation rate

The total automation rate reached 95.9% in Q4 2020, compared to 94.6% in Q4 2019.

Total automation rate	Q1	Q2	Q3	Q4
2018	92.0%	93.0%	92.0%	92.8%
2019	93.4%	93.5%	93.8%	94.6%
2020	94.4%	95.3%	95.8%	95.9%

Table 12 - Ireland automation rate evolution 2018 - 2020

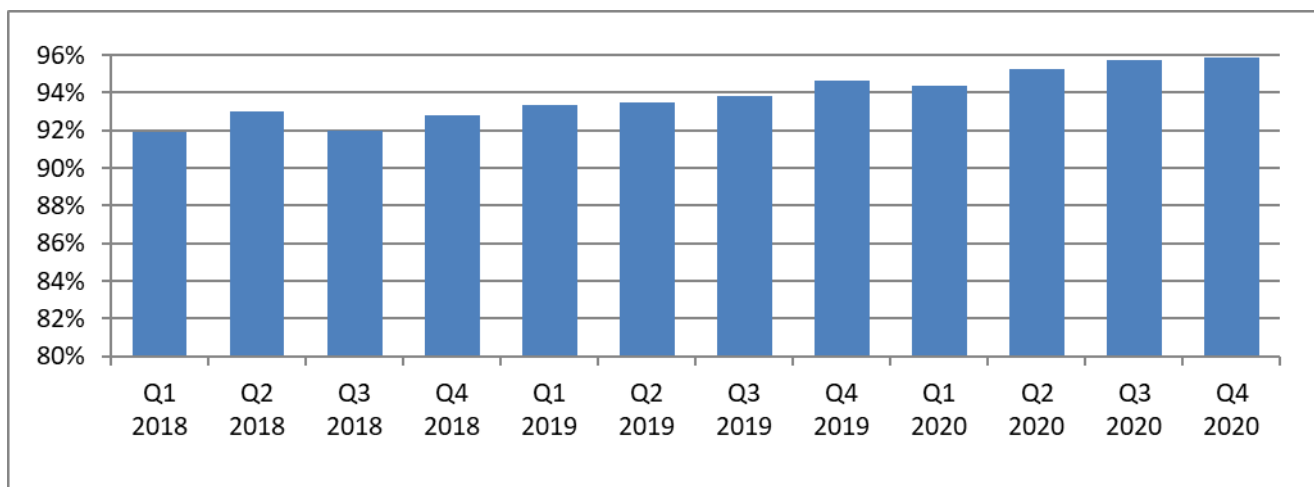


Figure 14 - Ireland automation rate evolution 2018 - 2020

Ireland standardisation rate

The ISO adoption rate decreased to 33.6% in Q4 2020, compared to 36.6% in Q4 2019, whereas the adoption of proprietary formats increased to 62.3% in Q4 2020, compared to 58% in Q4 2019. The share of manual orders decreased from 5.4% in Q4 2019 to 4.1% in Q4 2020.

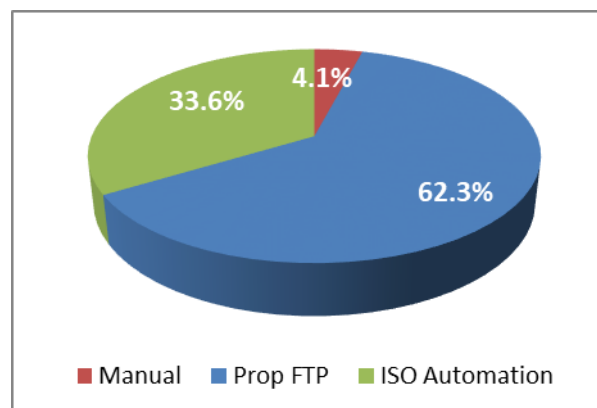


Figure 15 - Ireland fund order processing rates (Q4 2020)

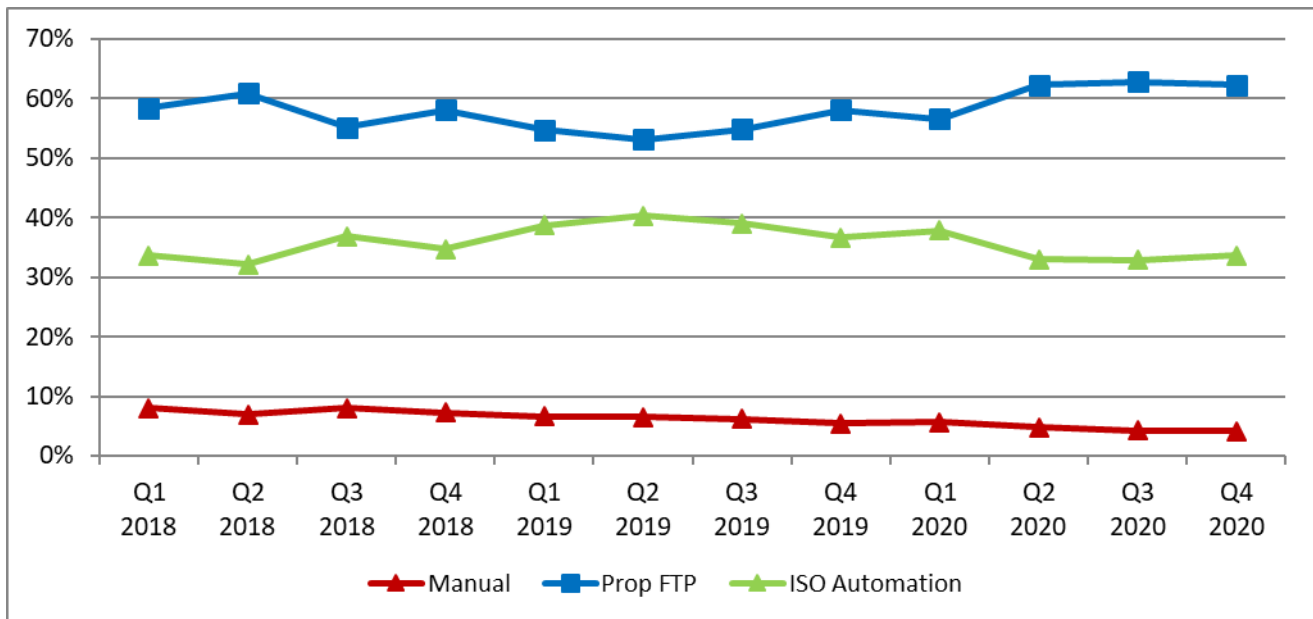


Figure 16 - Ireland fund order processing rates evolution 2018 - 2020

The table below provides detailed rates per quarter.

ISO automation rate	Q1	Q2	Q3	Q4
2018	33.6%	32.1%	36.8%	34.7%
2019	38.7%	40.3%	39.1%	36.6%
2020	37.8%	33.0%	32.9%	33.6%
Proprietary FTP rate	Q1	Q2	Q3	Q4
2018	58.3%	60.9%	55.2%	58.1%
2019	54.7%	53.1%	54.8%	58.0%
2020	56.6%	62.3%	62.8%	62.3%
Manual rate	Q1	Q2	Q3	Q4
2018	8.0%	7.0%	8.0%	7.2%
2019	6.6%	6.5%	6.2%	5.4%
2020	5.6%	4.7%	4.2%	4.1%

Table 13 - Ireland fund order processing rates evolution 2018 - 2020⁶

⁶ The median for Ireland total automation rate and the ISO automation rate evolved to 90% and 79% this year compared to 88% and 77% in 2019. The manual rate median decreased to 10% compared to last year (12%).

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 13.3 million orders in 2020 or 65% 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 2% of incoming order volumes in Ireland during Q4 2020. The percentage of orders from order givers in EMEA was 97%, against 1% from Americas-based order senders.

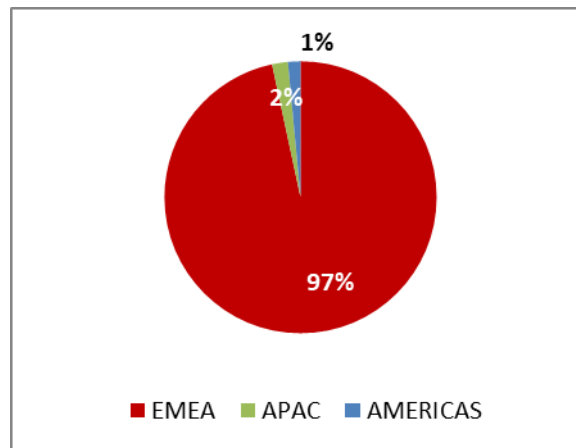


Figure 17 - Ireland order volumes per region (by order giver location - Q4 2020)

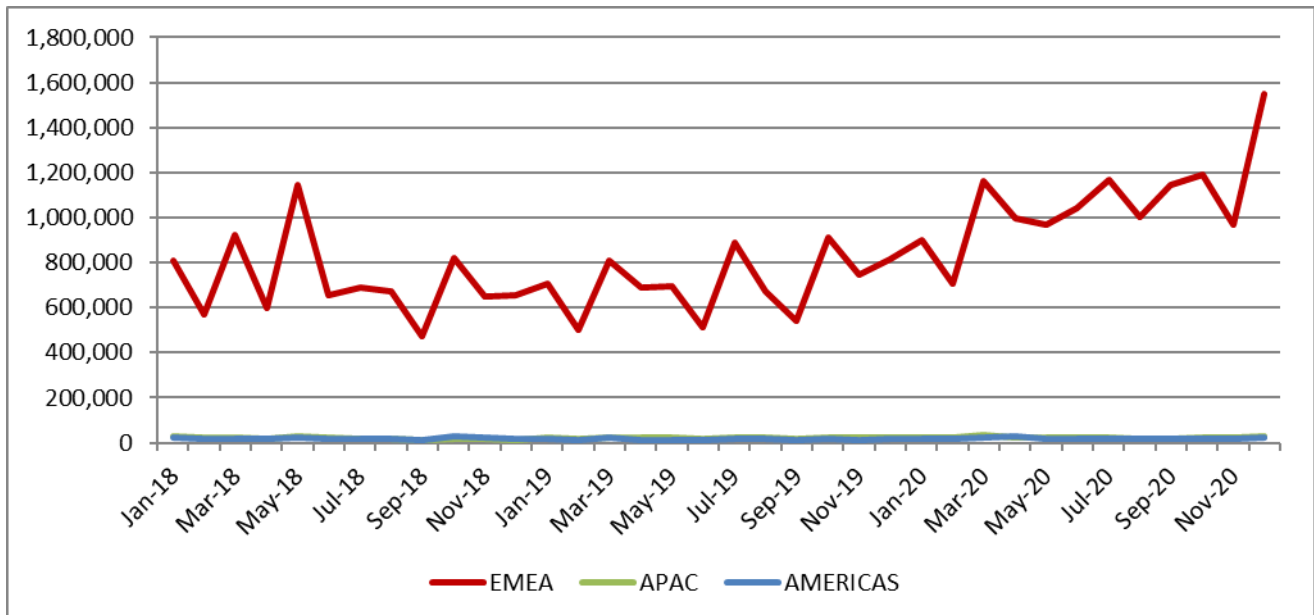


Figure 18 - Ireland order volumes evolution per region 2018 - 2020

Ireland regional split of automation and standardisation rates

In the EMEA and APAC region, the ISO automation rates decreased from 13.6% and 26.3% in Q4 2019, to 11.6% and 18.3% in Q4 2020, respectively. In the Americas region, the rate increased to 25% in Q4 2020, compared to 16.2% in Q4 2019.

The total automation (ISO + proprietary) rate increased in all regions. In APAC and Americas, the rate reached to 94.4% and 88.9%, compared to 82.5% and 87.3% in Q4 2019, respectively. In EMEA the rate rose to 99.1% in Q4 2020, compared to 98.2% in Q4 2019.

	ISO automation			Total automation (ISO + proprietary formats)		
	EMEA	APAC	Americas	EMEA	APAC	Americas
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%
Q4 2020	11.6%	18.3%	25.0%	99.1%	94.4%	88.9%

Table 14 - Ireland fund order automation rates evolution per region

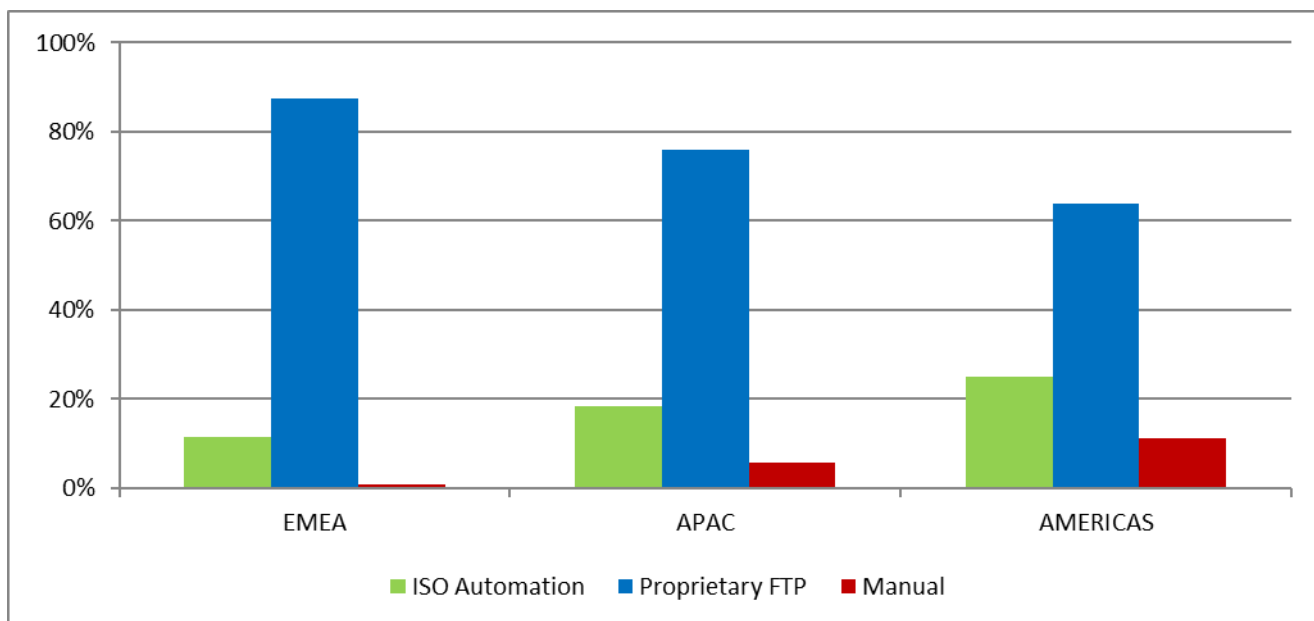
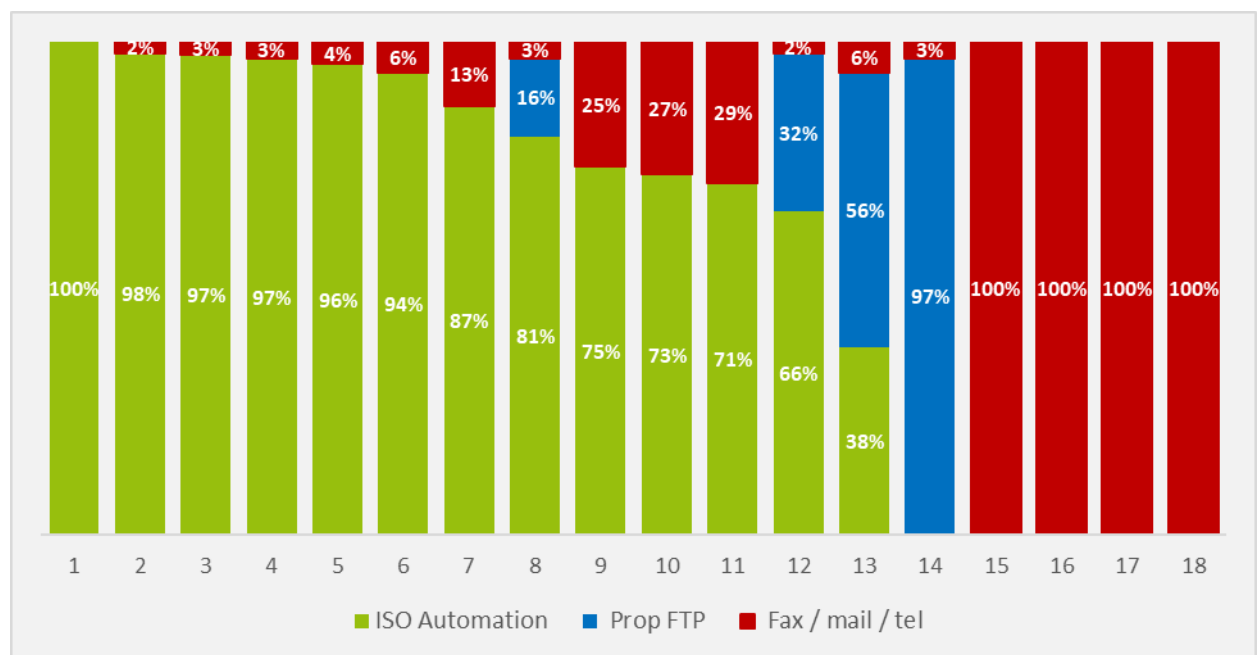


Figure 19 - Ireland fund order processing rates per region (Q4 2020)

D. Standardisation of fund processing in Germany in 2020

Germany is the largest fund distribution market in the EU with well over 25% market share and over 80 million population. Fund investment penetration is still low as only 20+ million inhabitants are estimated to hold fund units and shares directly. 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. This case study on the results in 2020 now is the fifth annual survey covering the figures from distributors or platforms – often banks – and currently 18 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: 18 Verwahrstellen (referred to as TAs)** contributed to the survey (compared to 14 TAs in 2019); they represent about 96% of the German market. The order volumes processed by these 18 survey contributors reached 0.98 million orders in 2020.



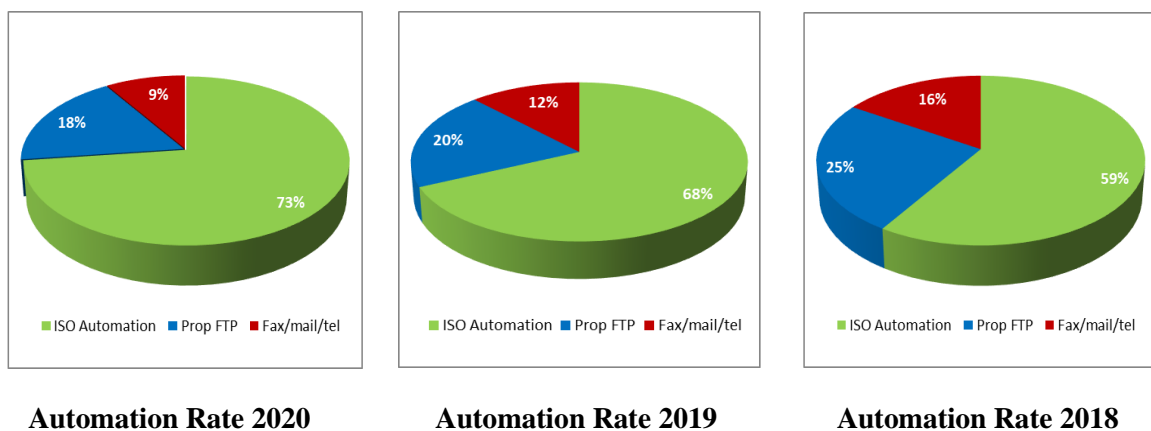
Germany fund order processing rates 2020

- **Total automation rate⁷** of orders in 2020 is **91% as compared to 88% in 2019**. 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 **73%** in 2020 compared to **68%** in 2019.
- **18%** of the orders were processed using non-ISO solutions in 2020.

The increased total automation rate is stemming from true technical improvements, not from a positive bias due to new participants in the survey. 3 out of 4 respondents having recently participated for the first time are processing orders on an exclusively manual basis. Within the 13 depositary banks having participated in the surveys of 2020 as well as 2019, and that are using ISO Automation, 9 made individual progress in improving their total automation rates, 2 showed no differences between their 2019 and 2020 figures (1 of them already having reached an automation rate of 100%), another 2 exhibited poorer results than in the year before.



BVI and the Praxisforum Depotbanken again 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 2021 and will cover the development during the first half of 2021.
