

**Fund Processing Standardisation**  
**Annual Report**  
**on**  
**automation and standardisation of**  
**cross-border funds orders in 2016**

**12<sup>th</sup> June 2017**



## Table of contents

Background .....	4
Report Highlights .....	5
<b>A. Automation and standardisation of fund orders in Luxembourg and Ireland.....</b>	<b>5</b>
<b>B. Automation and standardisation of fund orders in Luxembourg .....</b>	<b>6</b>
<b>C. Automation and standardisation of fund orders in Ireland.....</b>	<b>7</b>
<b>A. Automation and standardisation of fund orders in Ireland and Luxembourg.....</b>	<b>8</b>
A.1. Total order volume evolution .....	8
A.2. Total automation and standardisation rates.....	9
Total automation rate.....	9
Total standardisation rate.....	9
A.3. Number of new automated links set up in 2016 .....	11
<b>B. Automation and standardisation of fund orders in Luxembourg .....</b>	<b>12</b>
B.1. Luxembourg order volume evolution .....	12
B.2. Luxembourg automation and standardisation rates.....	13
Luxembourg automation rate.....	13
Luxembourg standardisation rate .....	13
B.3. Luxembourg regional overview .....	15
Luxembourg regional split of volumes by order giver location .....	15
Luxembourg regional split of automation and standardisation rates .....	16
<b>C. Automation and standardisation of fund orders in Ireland.....</b>	<b>17</b>
C.1. Ireland order volume evolution.....	17
C.2. Ireland automation and standardisation rates.....	18
Ireland automation rate .....	18
Ireland standardisation rate.....	18
C.3. Ireland regional overview .....	20
Ireland regional split of volumes by order giver location.....	20
Ireland regional split of automation and standardisation rates .....	21
<b>D. Standardisation of fund processing in Germany in 2016.....</b>	<b>22</b>
<b>E. Next report.....</b>	<b>24</b>



## 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 2016 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 STP rates per fund processing centre.

This ongoing initiative has the goal to inform about industry's advancements toward increased automation of fund orders and the use of ISO standards, as recommended by EFAMA<sup>1</sup>. 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 2016.

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

---

<sup>1</sup> 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 rate<sup>2</sup>** of orders during Q4 2016 reached **86.7%**; this represents an increase of 1.3 percentage points compared to Q4 2015 (**85.4%**).
3. **ISO automation rate<sup>3</sup>** reached **53.4%** in Q4 2016 compared to **51.2%** in Q4 2015, an increase of 2.2 percentage point.
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 252 new ISO automated links implemented during 2016, compared to 6 new proprietary file transfer (FTP) links put in place in 2016.
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 **34 million orders** in 2016.
7. The **29 surveyed TAs manually processed 4.8 million orders in 2016**, compared to 5.5 million in 2015. Manual process rates decreased by 1.3 percentage points to 13.3% in Q4 2016 (against 14.6% in Q4 2015).

#### Fund orders automation and standardisation progress overview

GLOBAL OVERVIEW	Q4 2014	Q4 2015	Q4 2016	Change 15 - 16
Manual orders	17.4%	14.6%	13.3%	-1.3%
ISO automated orders	49.4%	51.2%	53.4%	2.2%
Proprietary FTP orders	33.2%	34.2%	33.3%	-0.9%
<b>Total automated</b>	<b>82.6%</b>	<b>85.4%</b>	<b>86.7%</b>	<b>1.3%</b>

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

<sup>2</sup> 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.

<sup>3</sup> 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 2016** (8 in-house and 12 third-party TAs).
2. The **total automation rate of orders** processed by Luxembourg TAs reached **84.4%** during Q4 2016, compared to 82.9% in Q4 2015.
3. The **ISO automation rate** reached 68.3% in Q4 2016 compared to 65% in Q4 2015, an increase of 3.3 percentage points. The rate of proprietary FTP decreased to 16.1% in Q4 2016 against 17.9% in Q4 2015, and the manual orders decreased to 15.6% in Q4 2016 compared to 17.1% in Q4 2015.
4. The **order volumes** processed by Luxembourg TAs reached **21.3 million** in 2016 compared to 22.6 million in 2015. The number of orders processed manually reached 3.5 million in 2016 compared to 4.1 million in 2015.
5. The **ISO automation rate** increased in the 3 regions. In the Americas and APAC regions it rose to 43.1% and 46% respectively in Q4 2016 (against 34.8% and 37.1% in Q4 2015). The ISO automation in EMEA increased to 69% in Q4 2016 compared to 66.1% in Q4 2015.

### Fund orders automation and standardisation progress overview- Luxembourg

GLOBAL OVERVIEW	Q4 2014	Q4 2015	Q4 2016	Change 15 - 16
Manual orders	18.7%	17.1%	15.6%	-1.5%
ISO automated orders	57.9%	65.0%	68.3%	3.3%
Proprietary FTP orders	23.4%	17.9%	16.1%	-1.8%
Total automated	81.3%	82.9%	84.4%	1.5%

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 90.6% in Q4 2016 compared to 89.7% in Q4 2015, an increase of 0.9 percentage points.
3. The percentage of automated orders based on **ISO messaging standards** increased to **27.8%**, in Q4 2016, from 26.9% in Q4 2015. The **rate of proprietary FTP orders** remained at **62.8%** in Q4 2016. The manual orders decreased from 10.3% in Q4 2015 to 9.4% in Q4 2016.
4. The **order volumes** processed by Irish TAs reached **12.5 million** in 2016 compared to 11.5 million in 2015.
5. The **ISO automation rate increased** in APAC region from 16.6% in Q4 2015 to 18.1% in Q4 2016. In EMEA and Americas regions, the ISO automation rate decreased respectively to 9.5% and 9.6% in Q4 2016 (against 11.4% and 10% in Q4 2015).

### Fund orders automation and standardisation progress overview – Ireland

GLOBAL OVERVIEW	Q4 2014	Q4 2015	Q4 2016	Change 15 - 16
Manual orders	14.4%	10.3%	9.4%	-0.9%
ISO automated orders	29.5%	26.9%	27.8%	0.9%
Proprietary FTP orders	56.1%	62.8%	62.8%	0%
<b>Total automated</b>	<b>85.6%</b>	<b>89.7%</b>	<b>90.6%</b>	<b>0.9%</b>

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 2016, 34 million orders have been processed by the 29 survey contributors across Ireland and Luxembourg. This represents an average volume of 2.82 million orders per month.

(in millions)	2014	2015	2016
<b>Total number of orders</b>	30.6	34.1	34
<b>Monthly average</b>	2.55	2.84	2.82

Table 4 – Total order volume evolution 2014 – 2016

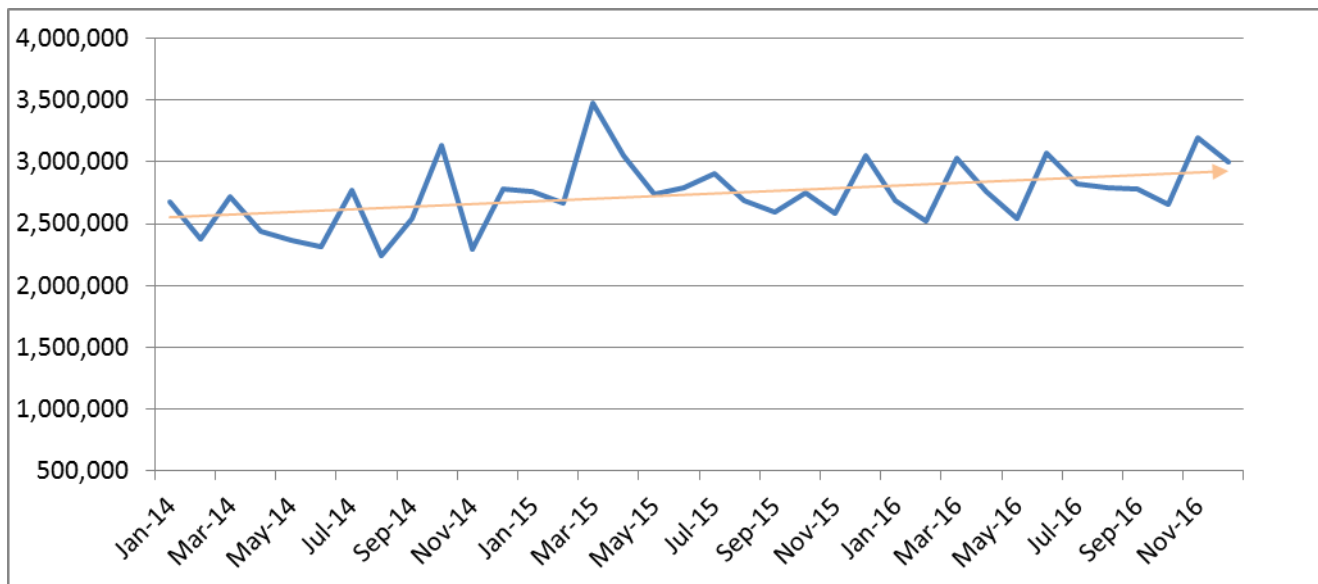


Figure 1 – Total order volume evolution 2014-2016

## A.2. Total automation and standardisation rates

### Total automation rate

The total automation rate reached 86.7% in Q4 2016, compared to 85.4% in Q4 2015. This increase was accompanied with a decrease in the manual processing rate (from 14.6% in Q4 2015 to 13.3% in Q4 2016), mainly to the benefit of ISO automation.

Total automation rate	Q1	Q2	Q3	Q4
2014	79.0%	79.3%	80.4%	82.6%
2015	82.7%	83.5%	84.4%	85.4%
2016	85.7%	84.4%	86.1%	86.7%

Table 5 – Total automation rate evolution 2014 - 2016 (by quarter)

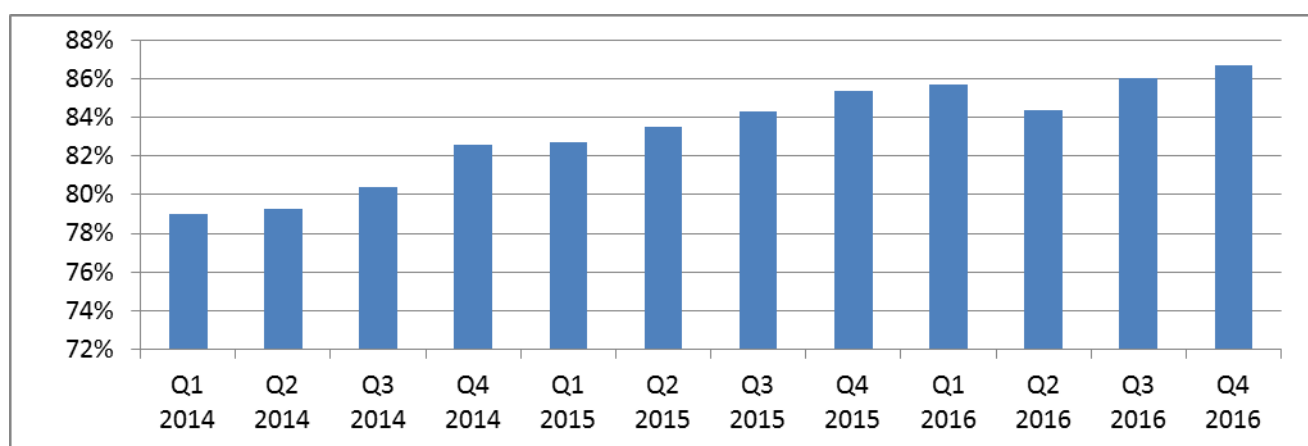


Figure 2 – Total automation level evolution (by quarter)

### Total standardisation rate

The use of the ISO messaging standard increased by 2.2 percentage points in the course of 2016 to reach 53.4% in Q4 2016 (against 51.2% in Q4 2015).

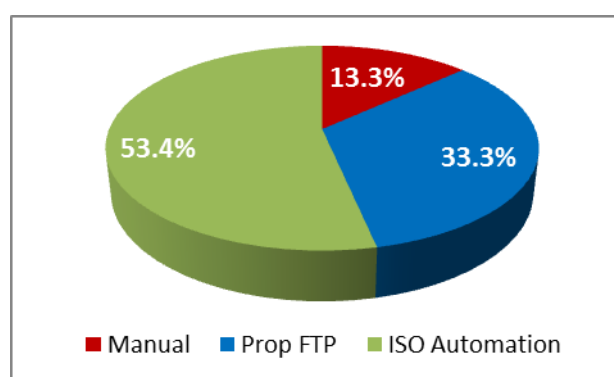
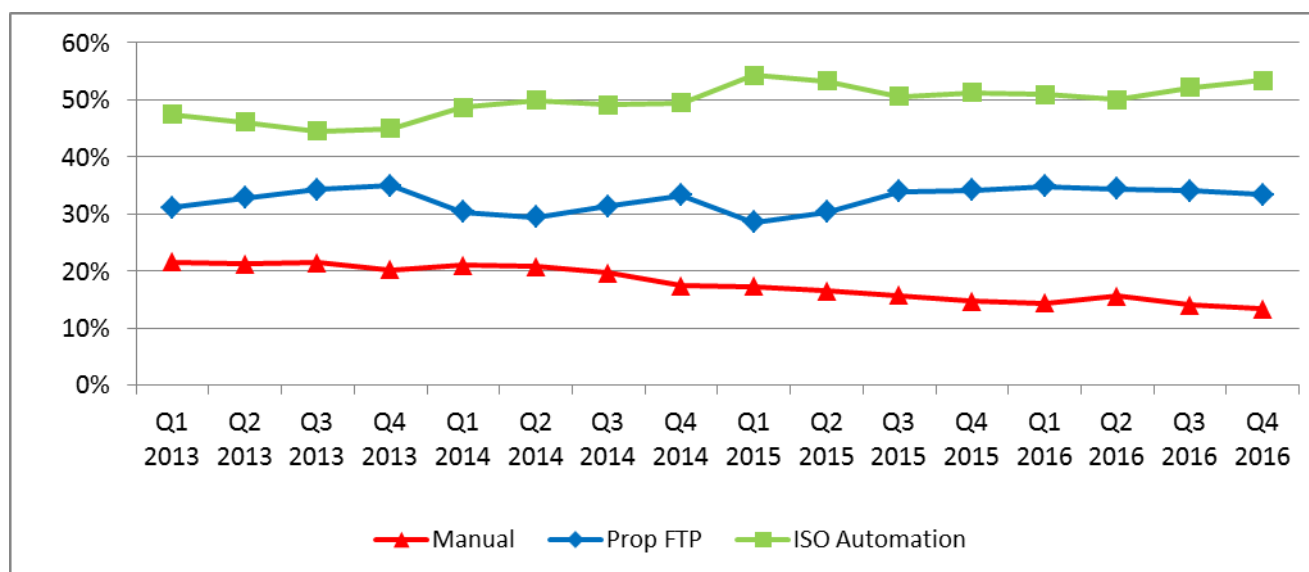


Figure 3 – Total fund order processing rates (Q4 2016)

The graph below shows the various rates evolution since the beginning of 2013.



**Figure 4 – Total fund order processing rates evolution 2013 - 2016**

The adoption of proprietary FTPs decreased to 33.3% in Q4 2016 compared to 34.2% in Q4 2015, and the share of manual orders fell from 14.6% in Q4 2015 to 13.3% in Q4 2016. The above trends show a continuous increase of the ISO standards adoption, and a continuous decrease of manual.<sup>4</sup>

The table below provides detailed rates per quarter.

ISO automation rate	Q1	Q2	Q3	Q4
2014	48.7%	49.9%	49.0%	49.4%
2015	54.3%	53.2%	50.5%	51.2%
2016	50.9%	50.0%	52.1%	53.4%
Proprietary FTP rate	Q1	Q2	Q3	Q4
2014	30.3%	29.4%	31.3%	33.2%
2015	28.5%	30.3%	33.8%	34.2%
2016	34.8%	34.4%	34.0%	33.3%
Manual rate	Q1	Q2	Q3	Q4
2014	21.0%	20.7%	19.6%	17.4%
2015	17.3%	16.5%	15.6%	14.6%
2016	14.3%	15.6%	13.9%	13.3%

**Table 6 – Total fund order processing rates evolution 2014 - 2016 (by quarter)**

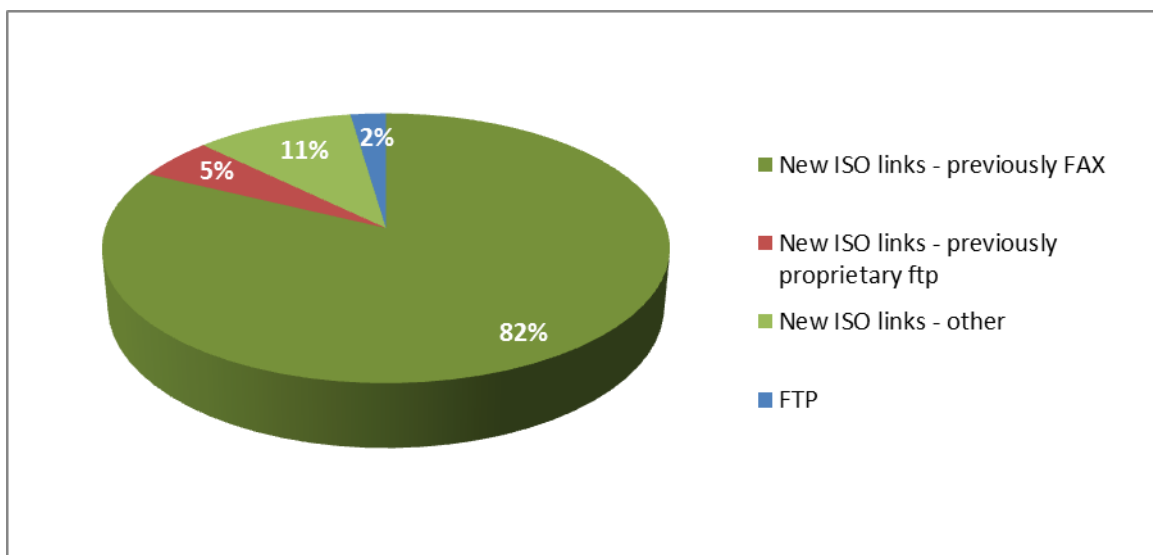
<sup>4</sup> The reported share of “Total ISO” covers ISO 15022 and ISO 20022 messages. The migration programme from ISO 15022 fund messages into ISO 20022 fund messages is ongoing with the consequence that the ISO 20022 message will become the single ISO open market standard for fund messages, as recommended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

### A.3. Number of new automated links set up in 2016

To better understand the automation trend, an additional survey was carried out in 2016 among 29 TAs to look at the number of **new automated links implemented** between January and December 2016 with new counterparties.

The surveyed TAs implemented new ISO links with 252 counterparties, compared to 6 new links using a proprietary FTP. Out of these new ISO links, 212 counterparties were previously using fax (representing 82% of all new links) and 13 used proprietary FTP files (5%). Brand new ISO links have been set up with the 27 (11%) remaining counterparties in 2016.

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



**Figure 5 - New automated links launches (2016)**

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

## B. Automation and standardisation of fund orders in Luxembourg

### B.1. Luxembourg order volume evolution

In the course of 2016, the 20 Luxembourg survey contributors processed 21.3 million orders. This represented a monthly average of 1.78 million orders, a decrease by 5.5% compared to 2015.

(in millions)	2014	2015	2016
<b>Total number of orders</b>	21.1	22.6	21.3
<b>Monthly average</b>	1.76	1.88	1.78

Table 7 – Order volume evolution Luxembourg 2014 – 2016

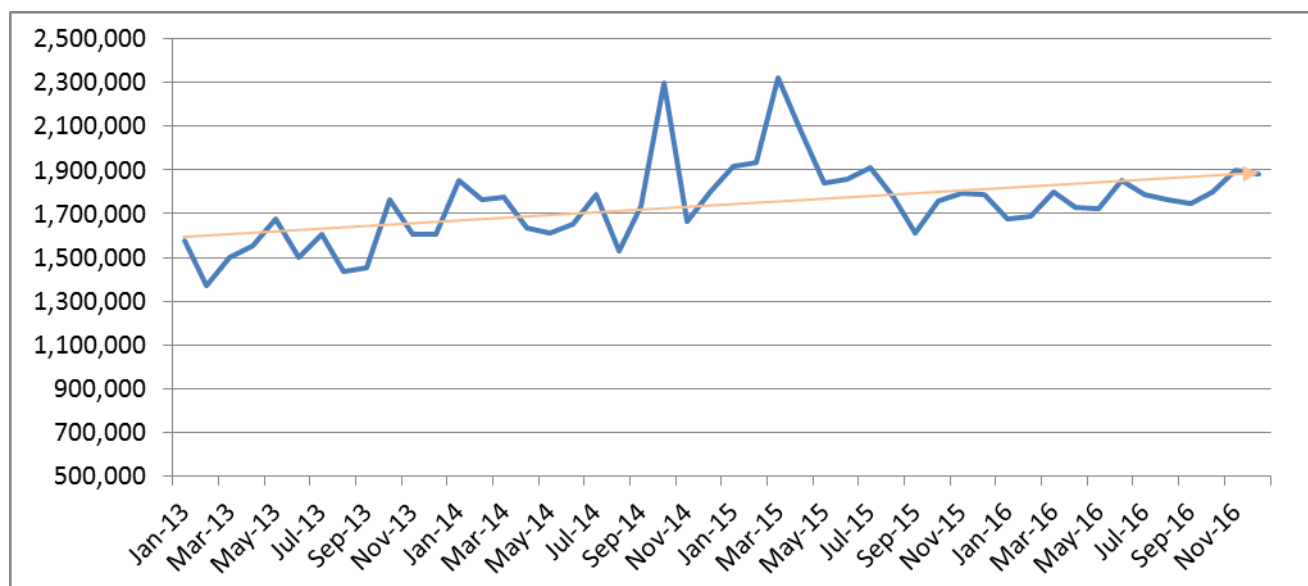


Figure 6 – Luxembourg order volume evolution 2013 - 2016

## B.2. Luxembourg automation and standardisation rates

### Luxembourg automation rate

The total automation rate reached 84.4% in Q4 2016, compared to 82.9% in Q4 2015.

Total automation rate	Q1	Q2	Q3	Q4
2013	76.3%	76.2%	76.1%	76.6%
2014	76.9%	77.5%	78.0%	81.3%
2015	81.1%	81.2%	81.6%	82.9%
2016	83.7%	81.7%	83.8%	84.4%

Table 8 – Luxembourg total automation rate evolution 2013- 2016 (by quarter)

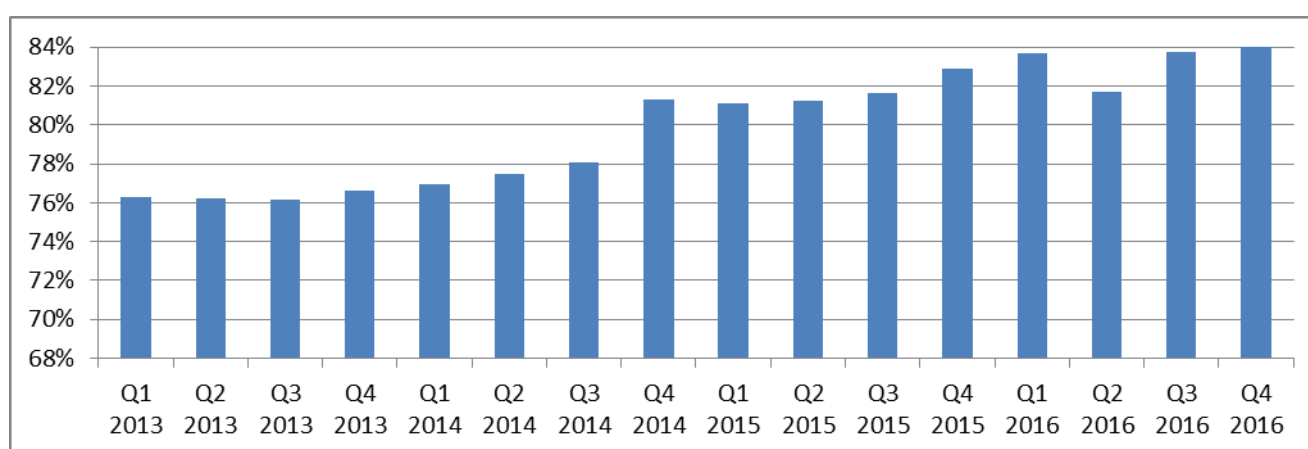


Figure 7 – Luxembourg automation level evolution 2013 - 2016 (by quarter)

### Luxembourg standardisation rate

The use of ISO increased from 65% in Q4 2015 to 68.3% in Q4 2016, and the adoption of proprietary formats decreased by 1.8 percentage points in Q4 2016. The share of manual orders decreased from 17.1% in Q4 2015 to 15.6% in Q4 2016.

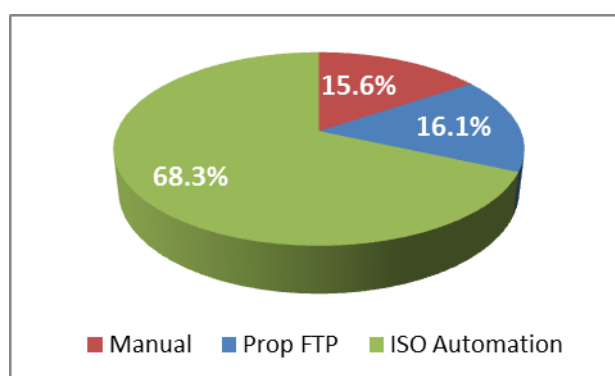
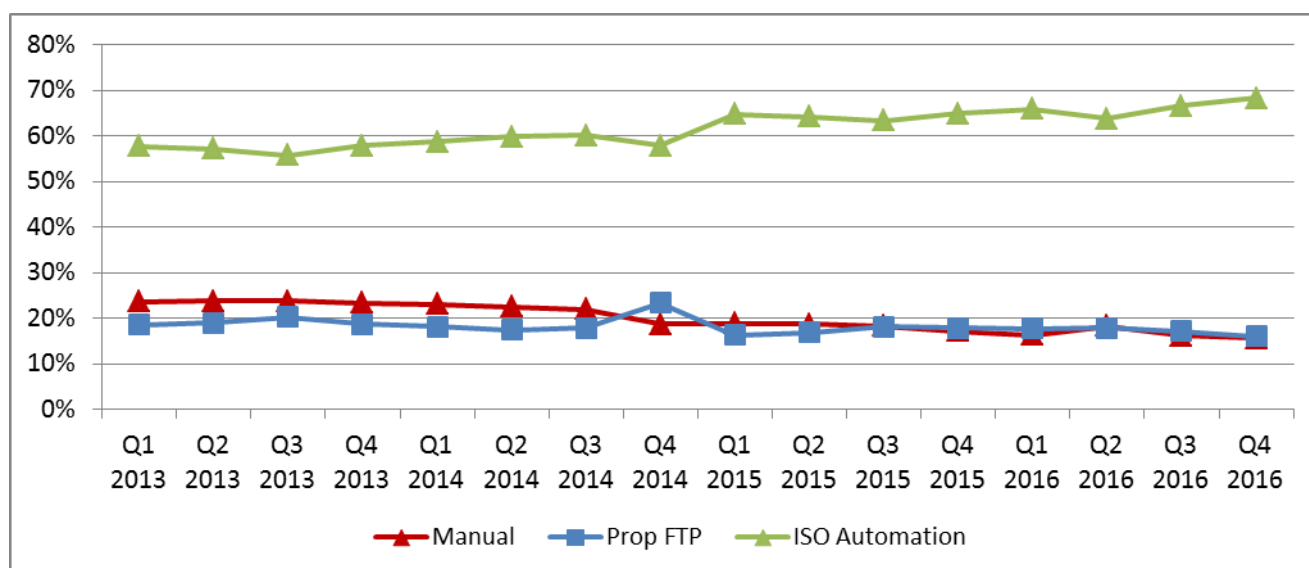


Figure 8 - Luxembourg fund order processing rates 2016 (Q4 2016)



**Figure 9 - Luxembourg fund order processing rates evolution 2013 – 2016**

The table below provides detailed rates per quarter.

<b>ISO automation rate</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>
2013	57.7%	57.3%	55.8%	57.9%
2014	58.7%	59.9%	60.1%	57.9%
2015	64.8%	64.3%	63.4%	65.0%
2016	65.9%	63.8%	66.6%	68.3%
<b>Proprietary FTP rate</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>
2013	18.5%	19.0%	20.3%	18.8%
2014	18.2%	17.5%	17.9%	23.4%
2015	16.3%	16.9%	18.2%	17.9%
2016	17.8%	17.9%	17.2%	16.1%
<b>Manual rate</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>
2013	23.7%	23.8%	23.9%	23.4%
2014	23.1%	22.5%	22.0%	18.7%
2015	18.9%	18.8%	18.4%	17.1%
2016	16.3%	18.3%	16.2%	15.6%

**Table 9 – Luxembourg fund order processing rates evolution 2013- 2016 (by quarter)<sup>5</sup>**

<sup>5</sup> The median for the Luxembourg total automation rate and the ISO automation rate evolved to respectively 85% and 65% compared to the previous year were it stood at 82% and 60%. The manual median rate decreased to 15% (compared to 18% last year). The median is the numeric value separating the higher half of a sample, from the lower half. The median has been calculated on 2016 volumes.

### B.3. Luxembourg regional overview

Regional breakdown information is available from a subset of the Luxembourg survey contributors (14 out of 20) representing 12.6 million orders in 2016 or 59% 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 2016. The percentage of orders from order givers in EMEA was 71% against 4% from Americas-based order senders.

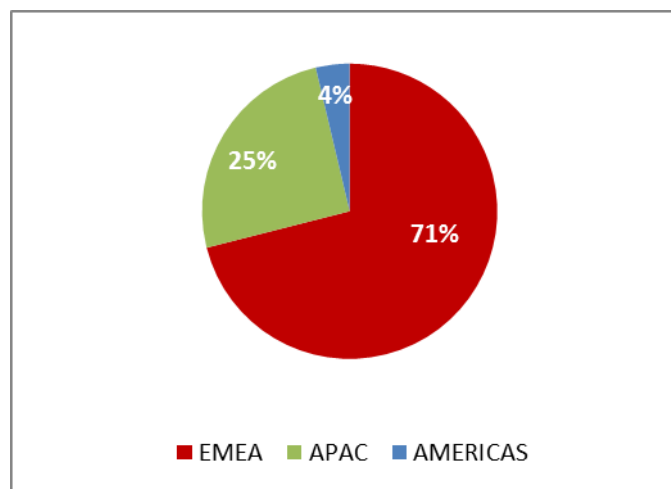


Figure 10 - Luxembourg order volumes per region (by order giver location –Q4 2016)

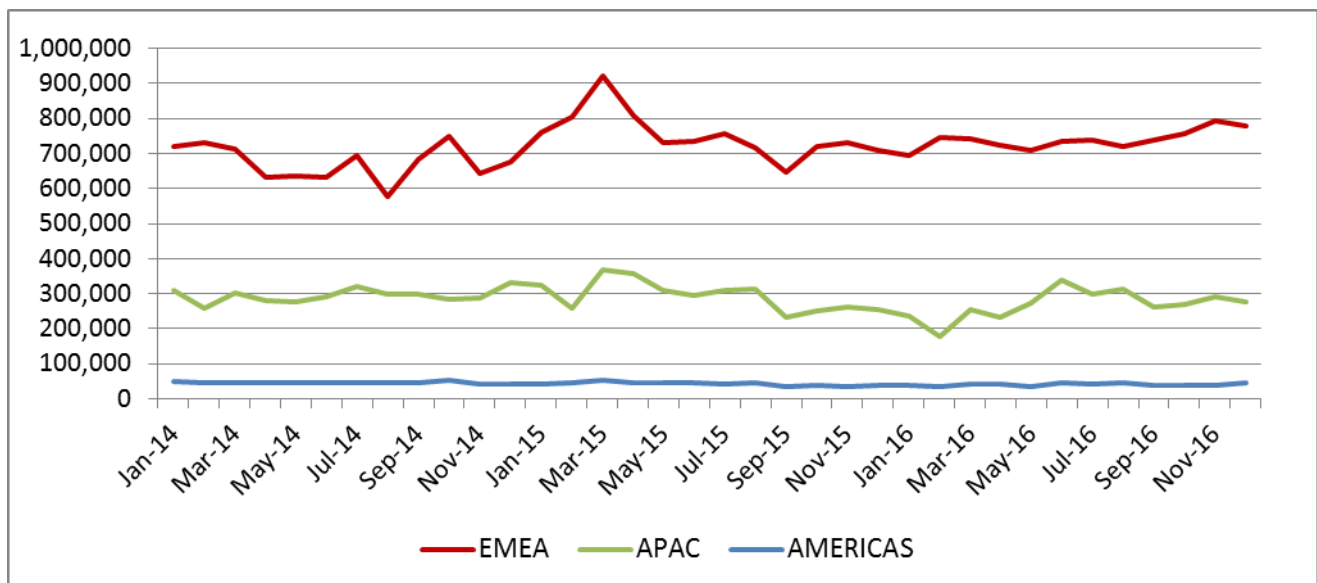


Figure 11 - Luxembourg order volumes evolution per region



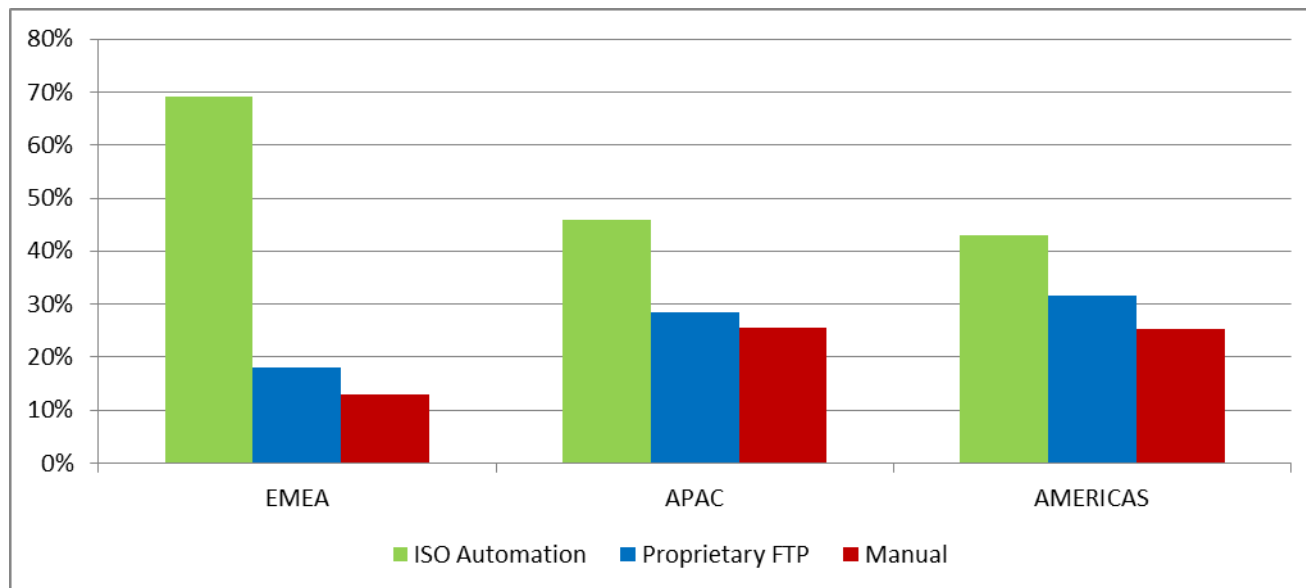
### Luxembourg regional split of automation and standardisation rates

ISO automation rates of APAC-based order giver and in the Americas increased sharply from respectively 37.1% and 34.8% in Q4 2015 to 46% and 43.1% in Q4 2016. In EMEA, the ISO adoption rate has increased by 2.9 percentage points.

The total automation (ISO + proprietary) rate increased in EMEA, APAC and in the Americas regions. In EMEA the total automation increased from 85.1% in Q4 2015 to 87% in Q4 2016, in APAC it has increased by 2.8 percentage points. In the Americas total automation rose to 74.6% in Q4 2016 from 73.9% in Q4 2015.

	ISO automation			Total automation (ISO+proprietary formats)		
	EMEA	APAC	Americas	EMEA	APAC	Americas
<b>Q4 2013</b>	64.5%	19.7%	33.3%	80.4%	57.6%	77.0%
<b>Q4 2014</b>	69.0%	28.2%	29.6%	83.3%	64.6%	74.9%
<b>Q4 2015</b>	66.1%	37.1%	34.8%	85.1%	71.6%	73.9%
<b>Q4 2016</b>	69.0%	46.0%	43.1%	87.0%	74.4%	74.6%

**Table 10 – Luxembourg fund order automation rates evolution by region**



**Figure 12 – Luxembourg fund order processing rates per region (Q4 2016)**

## C. Automation and standardisation of fund orders in Ireland

### C.1. Ireland order volume evolution

In 2016, 12.5 million orders were processed by the 9 Irish survey contributors. This represented an average 1.04 million monthly volume of orders, up by 8.9% compared to 2015.

(in millions)	2014	2015	2016
<b>Total number of orders</b>	9.54	11.49	12.52
<b>Monthly average</b>	0.80	0.96	1.04

Table 11 – Order Volume evolution Ireland 2014 – 2016

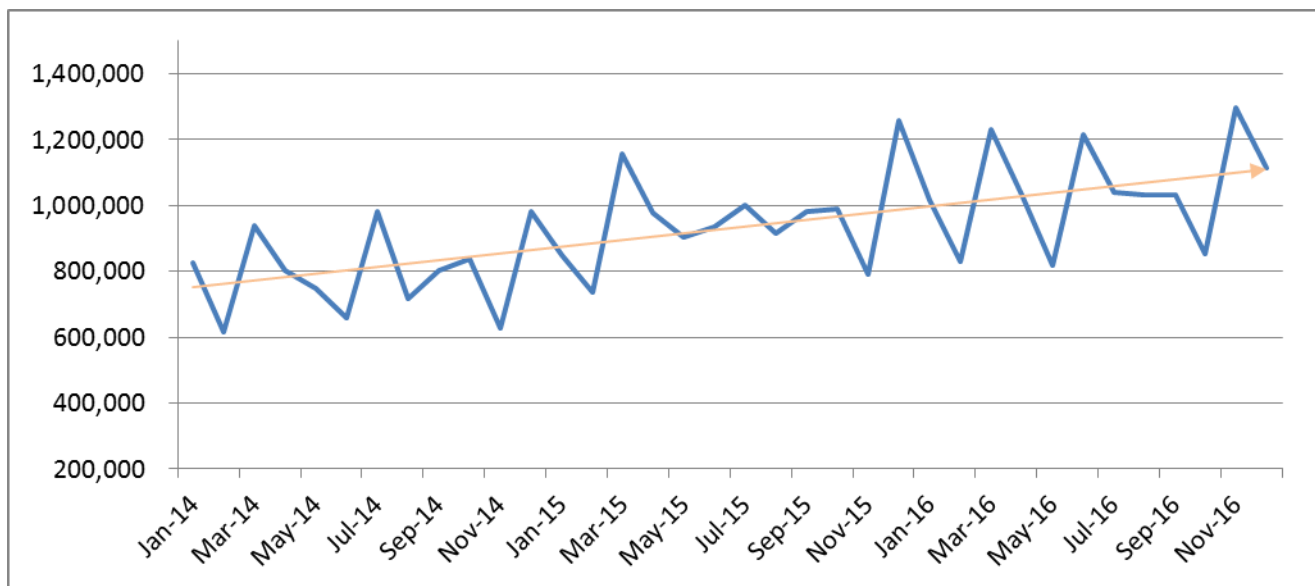


Figure 13 – Ireland order volume evolution 2014 – 2016

## C.2. Ireland automation and standardisation rates

### Ireland automation rate

The total automation rate reached 90.6% in Q4 2016, compared to 89.7% in Q4 2015.

Total automation rate	Q1	Q2	Q3	Q4
2014	83.8%	83.3%	85.1%	85.6%
2015	86.4%	88.3%	89.3%	89.7%
2016	89.0%	89.1%	89.9%	90.6%

Table 12 - Ireland automation rate evolution 2014 - 2016 (by quarter)

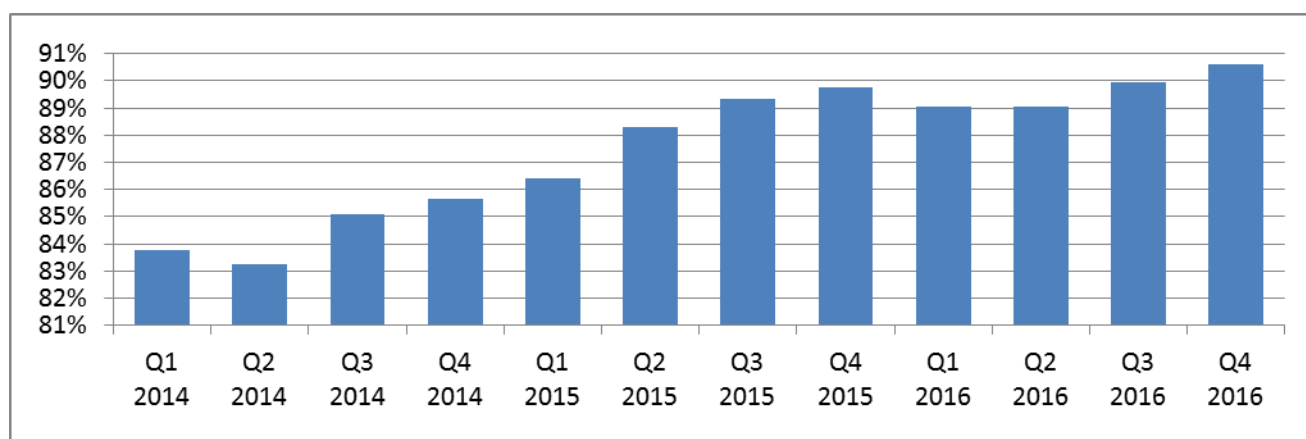


Figure 14 – Ireland automation rate evolution 2014 – 2016 (by quarter)

### Ireland standardisation rate

The ISO adoption rate reached 27.8% during Q4 2016, compared to 26.9% during Q4 2015, whereas the adoption of proprietary formats remained at 62.8% in Q4 2016. The share of manual orders decreased from 10.3% in Q4 2015 to 9.4% in Q4 2016.

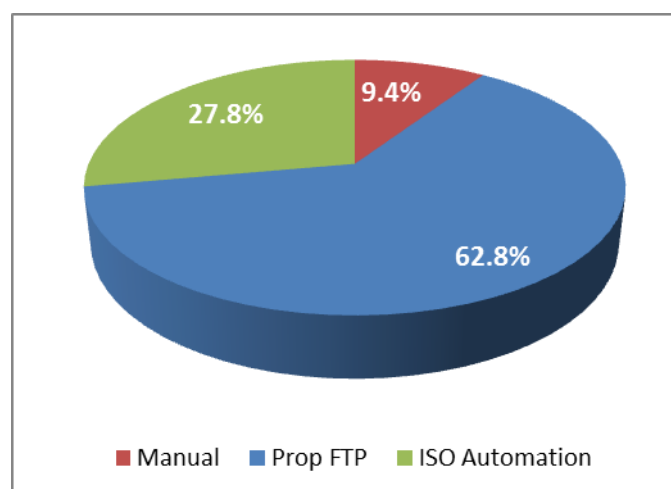


Figure 15 – Ireland fund order processing rates 2016 (Q4 2016)

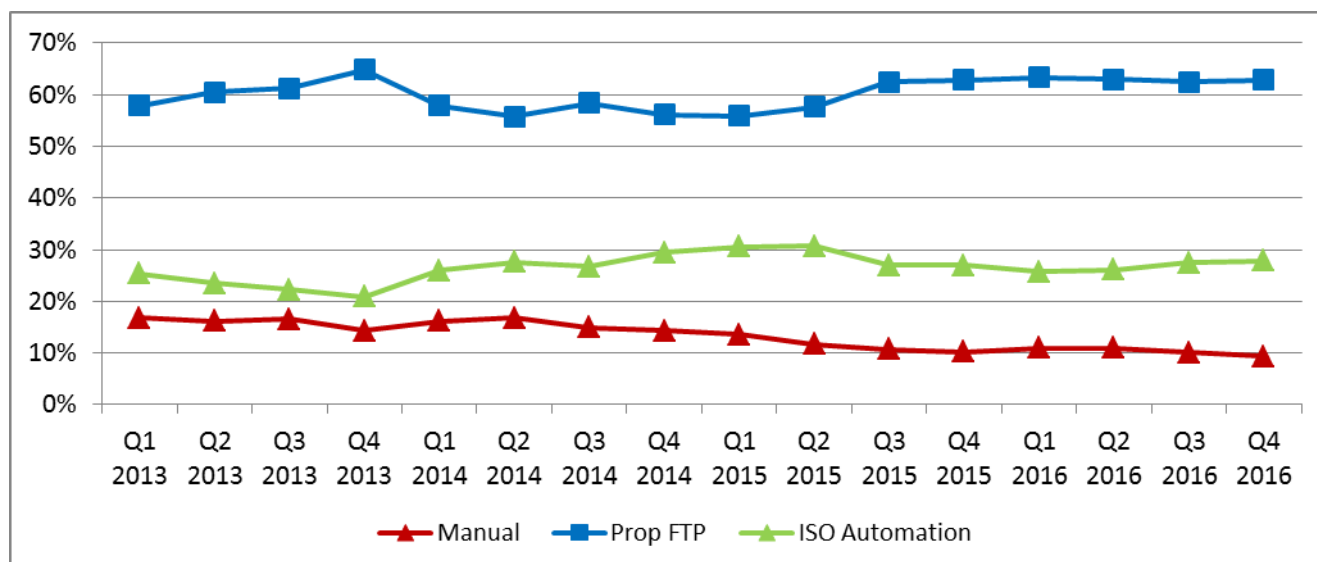


Figure 16 – Ireland standardisation rate 2013 – 2016

The table below provides detailed rates per quarter.

ISO automation rate	Q1	Q2	Q3	Q4
2014	26.0%	27.5%	26.7%	29.5%
2015	30.5%	30.7%	26.9%	26.9%
2016	25.8%	26.1%	27.5%	27.8%
Proprietary FTP rate	Q1	Q2	Q3	Q4
2014	57.8%	55.7%	58.4%	56.1%
2015	55.9%	57.6%	62.4%	62.8%
2016	63.3%	62.9%	62.5%	62.8%
Manual rate	Q1	Q2	Q3	Q4
2014	16.2%	16.7%	14.9%	14.4%
2015	13.6%	11.7%	10.7%	10.3%
2016	11.0%	10.9%	10.1%	9.4%

Table 13 – Ireland fund order processing rates evolution 2014 - 2016 (by quarter)<sup>6</sup>

<sup>6</sup> The median for Ireland total automation rate and the ISO automation rate evolved to 80% and 61%, respectively, compared to 77% and 52% in 2015. The manual rate median decreased to 20% compared to last year (23%).

### C.3. Ireland regional overview

Regional breakdown information is available from a subset of Ireland survey contributors (5 out of 9) representing 7.9 million orders in 2016 or 64% 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 2016. The percentage of orders from order givers in EMEA was 96% against 1% from Americas-based order senders.

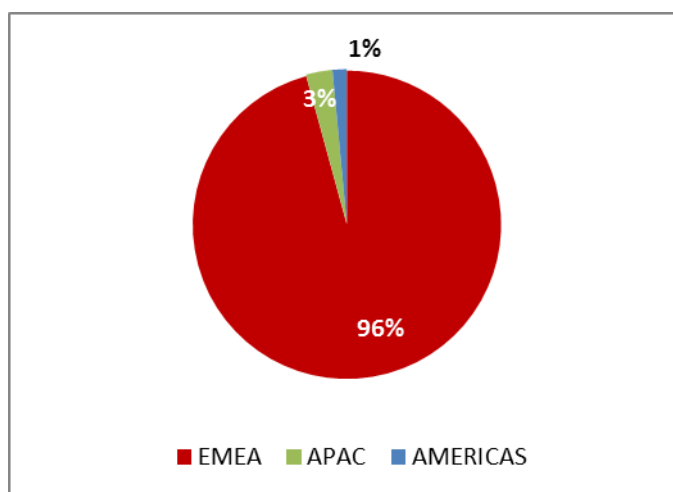


Figure 10 - Ireland order volumes per region (by order giver location –Q4 2016)

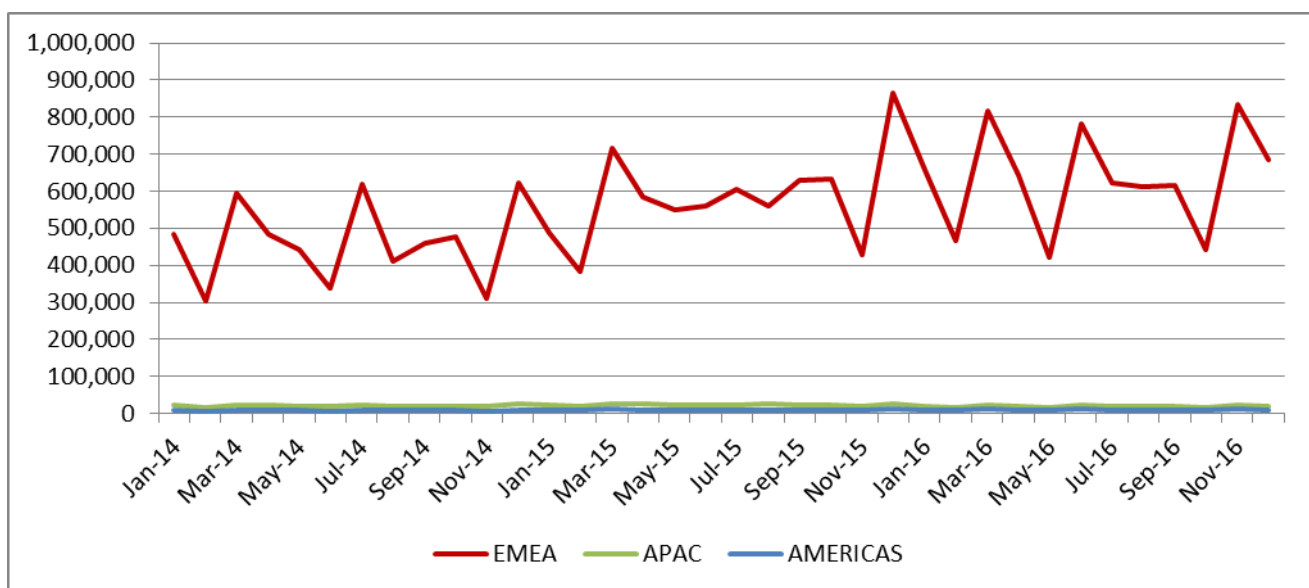


Figure 11 - Ireland order volumes evolution per region

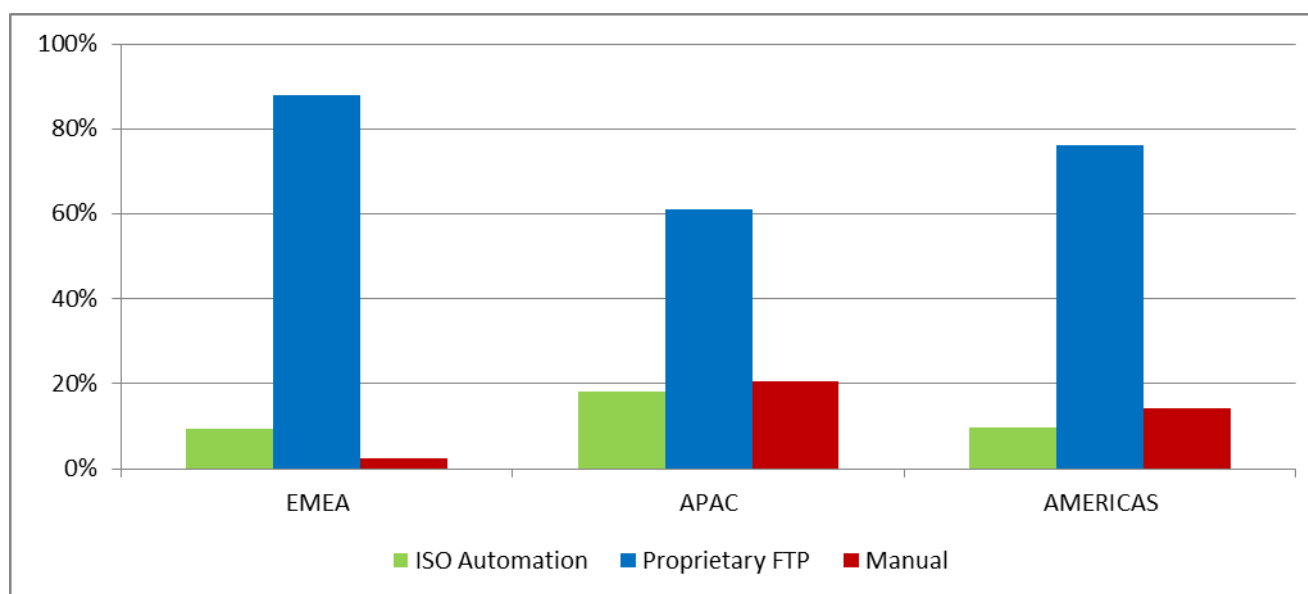
### **Ireland regional split of automation and standardisation rates**

ISO automation rates of APAC-based order giver increased from 16.6% in Q4 2015 to 18.1% in Q4 2016. While in EMEA and Americas, the rate respectively decreased to 9.5% and 9.6% in Q4 2016 compared to 11.4% and 10% in Q4 2015.

The total automation (ISO + proprietary) rate increased in all regions.

	ISO automation			Total automation (ISO+proprietary formats)		
	EMEA	APAC	Americas	EMEA	APAC	Americas
<b>Q4 2013</b>	7.4%	21.2%	5.9%	96.3%	71.5%	80.3%
<b>Q4 2014</b>	12.3%	18.9%	9.2%	95.6%	69.2%	80.2%
<b>Q4 2015</b>	11.4%	16.6%	10.0%	96.8%	77.7%	83.1%
<b>Q4 2016</b>	9.5%	18.1%	9.6%	97.7%	79.3%	85.8%

**Table 10 – Ireland fund order automation rates evolution by region**



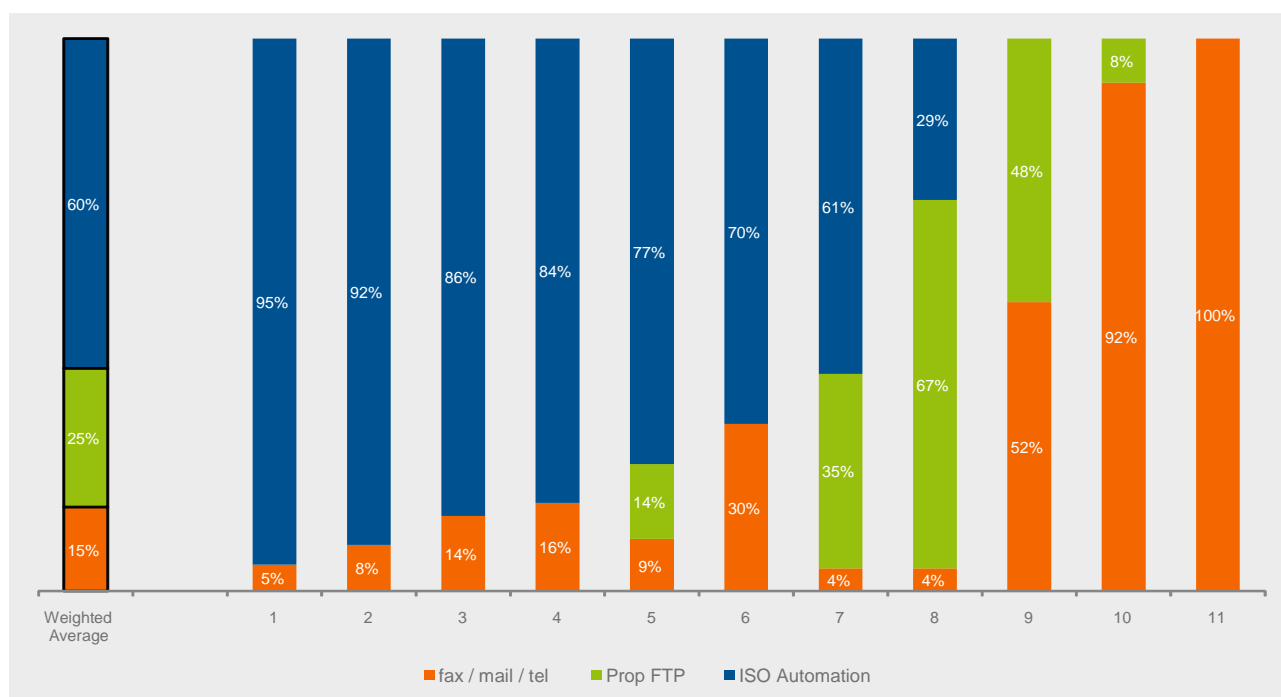
**Figure 12 – Ireland fund order processing rates per region (Q4 2016)**

## D. Standardisation of fund processing in Germany in 2016

Germany is the largest fund distribution market in the EU with over 80 million population. Therefore, it is good news that the Praxisforum Depotbanken (PFD) and BVI, the German Funds Association, agreed to cooperate on a survey of processing standardisation levels in the German fund market. This case study presents the fund processing transactions in 2016 between distributors or platforms – often banks – and currently 11 depository banks (“Verwahrstellen”) of different size acting as transfer agents (TA) of German domiciled funds (DE ISINs). This is not the full picture as transactions within the distribution chain before the TA may also use other means. For instance, it is still possible that financial advisors communicate with their platforms on the basis of fax or email. It should also be remembered that German funds are settling in the local CSD and not with a TA.

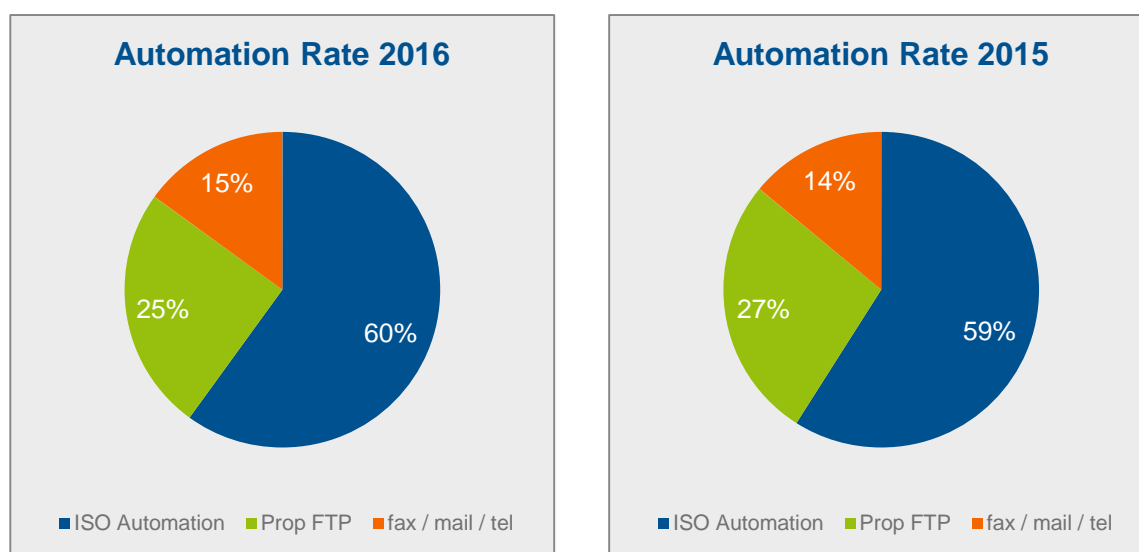
After a successful completion of the 2016 study a regular participation in this report may be expected from the German market place.

- **Survey coverage: 11 Verwahrstellen (referred to as TAs)** contributed to the survey; they cover about 60% of the German market. The order volumes processed by the 11 survey contributors reached 0.5 million orders in 2016.



**Germany fund order processing rates 2016**

- **Total automation rate<sup>7</sup>** of orders in 2016 is **85% as compared to 86% in 2015**. However, the above graph also shows a great dispersion of automation levels sometimes with considerable levels of non ISO format solutions and still considerable amounts of manual processing.
- **ISO automation rate<sup>8</sup>** reached **60%** in 2016 compared to **59%** in 2015.
- **25%** of the orders were processed using non ISO solutions in 2016 in comparison with **27%** in 2015.



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

<sup>7</sup> The 'total automation rate' is the sum of the 'ISO Automation', and the 'Prop FTP' rate.

<sup>8</sup> 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 2017 and will cover the development during the first half of 2017.

---