O.R.X

Annual Banking Loss Report

An analysis of the operational risk loss data in the ORX global banking database from 2014-2019

83
current banking members

63,942
average annual frequency of loss events since 2014

€482bn
losses in the database up until the end of 2019

778,639
loss events reported up until the end of 2019

€15.8bn
total gross loss in 2019

Managing risk together

orx.org

Contents

ORX Banking Operational Risk Reporting Standards

Our reporting standards are the foundation of ORX's high-quality loss data. By working closely with our global community of financial institutions, we lead the way in setting the reporting standards by which the industry views operational risk events. Because we update them regularly, our standards reflect current industry and supervisory practice.

We have separate reporting standards for both the banking and insurance sectors. These standards are some of the many resources we make publicly available to help improve operational risk management across financial services.

Many institutions use our standards to support their operational risk event collection and reporting practices.

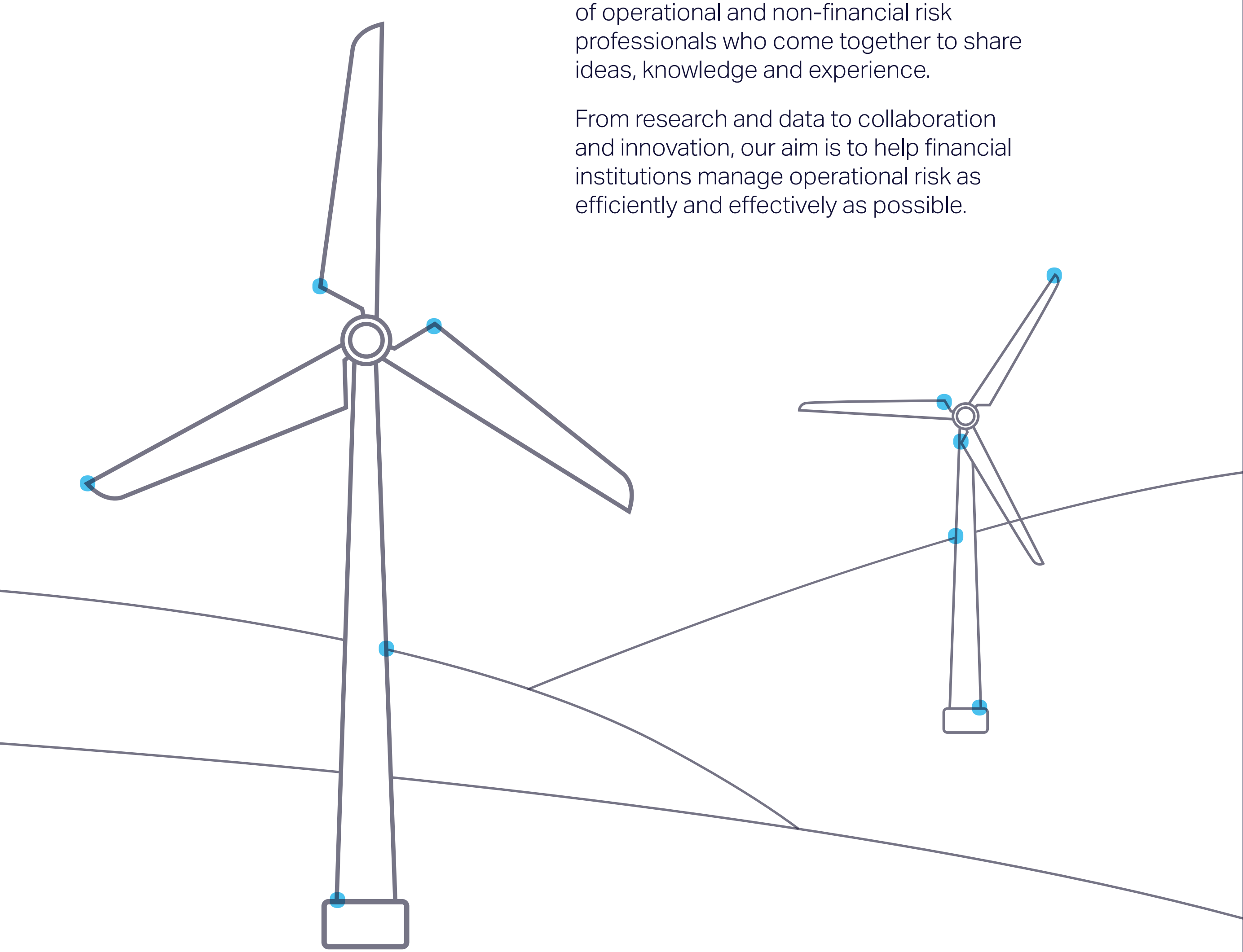
For your free copy of the ORX standards, visit: managingrisktogether.orx.org/standards

Foreword

Since 2002, ORX has supported financial institutions in all elements of their operational risk management.

We are an ever-expanding global community of operational and non-financial risk professionals who come together to share ideas, knowledge and experience.

From research and data to collaboration and innovation, our aim is to help financial institutions manage operational risk as efficiently and effectively as possible.



Op risk area: Measurement & data

Topics covered:

Loss data

Coronavirus

Natural disasters

This report is derived from the ORX global banking loss data service. Available as part of ORX Membership, this service allows financial organisations to exchange high-quality data relating to operational risk losses in a completely secure and anonymised way.

Our annual loss data reports are a free resource to all. To find out what other free resources are available from ORX, visit our website: www.orx.org

ORX global loss data

Nobody understands better than we do that high-quality data powers operational risk management. As an association, ORX was initially set up by a group of banks to provide a global platform for the secure and anonymous exchange of data. Although we now do much more than this, data remains a cornerstone of ORX. Our members value our global loss data for effective modelling and risk management. They use it to see how their loss profile compares against their peers and to identify where they should focus effort and resources.

An ever-expanding database

Our membership has been continually growing since we began in 2002, and for some time now we've been the world's largest operational risk association in the financial sector. From our original 12 founding members, we have grown to over 80 member banks, including some of the largest financial institutions from around the globe. As a result of this, we provide more valuable data than ever before. The ORX global banking database now contains over 750,000 events, worth more than €480 billion in losses.

> "The ORX loss data allows us to compare loss experience against our peers and identify areas for focusing our loss mitigation efforts and resources."

ORX member

Figure 1: Growth of the global banking operational loss database

	Cumulative total gross loss	Cumulative frequency of operational risk events reported to ORX	Total number of firms that have contributed data
up to 2014	€247bn	419,954	80
up to 2015	€325bn	490,044	85
up to 2016	€371bn	566,590	92
up to 2017	€419bn	634,512	96
up to 2018	€458bn	695,139	97
up to 2019	€482bn	778,639	100

Furthering op risk management throughout financial services

Part of ORX's ambition for the future is to improve operational risk management beyond just our membership. Each year, we publish two freely available reports on our loss database, summarising the data and exploring key trends. This is our tenth annual report analysing the ORX global banking loss database, while the other focuses on the insurance sector. These reports are just one way in which we provide vital information to operational risk professionals around the globe – we also share some of our research, data and resources publicly. You can find all of this on our website at www.orx.org, where you can also learn about the different ways you can get involved in ORX's work.

A note about this report

As was noted in this report last year, we continue to see a slight decline in key operational risk metrics at an industry level (the total operational risk loss, the total number of operational risk events, average loss size and loss as a percentage of income). While the long running nature of some operational risk losses means annual totals are likely to increase in future years, the evidence does appear to suggest again that the trend of declining losses post the financial crisis continues.

While External Fraud and execution-related events remain the most common, total loss is driven by events related to Clients, Products and Business Practices due to their higher average impacts.

Coronavirus

The impact of coronavirus (Covid-19) is top of all operational risk agendas. While the direct impact of the pandemic is frequently recorded in a Natural Disasters category, the broader consequences are likely to affect a range of operational risk types. To accurately record losses banks plan to use a mixture of existing operational risk categories and introduce specific coronavirus flags. To further support consistency, ORX has worked closely with our members to produce guidance to support the industry in recording coronavirus-related losses[1]. This will provide the foundation for future benchmarking.

I hope you find this report useful. If you'd like more information about the data behind the report, please don't hesitate to contact me.

Luke Carrivick

Research & Information Director, ORX
luke.carrivick@orx.org

Thank you to our banking members who make this work possible

ABN AMRO*
ABSA Group Limited
Allied Irish Bank
Ally Financial
ANZ
Banco Bradesco S/A
Banco de Sabadell S/A
Banco do Brasil S/A
Bank of America
Bank of Ireland Group
Barclays Bank
BBVA*
BCP
Bendigo and Adelaide
BMO
BNP Paribas*
BNY Mellon
BPCE
CaixaBank
Capital One
CBA
CIBC
Clydesdale Bank plc
Commerzbank AG*
Credit Agricole SA
Credit Suisse
Danske Bank*
DBS
Deutsche Bank*
Discover Financial
Ecobank
Erste Bank
Euroclear*
FirstRand
Grupo Santander
Handelsbanken
HSBC
ING*
Intesa SanPaolo*
Investec Limited
JPMorgan Chase*
KBC Bank
Lloyds Banking Group
M&T Bank Corporation
Macquarie Group
Mediobanca
Millennium BCP
Morgan Stanley
National Australia Bank
Nationwide
Nedbank
Nomura Holdings plc
Nordea Bank
Northern Trust
OTP Bank
PNC Bank
Rabobank
RBC
RBI
RBS
Schroders
Scotiabank*
SEB
Siam Commercial
Société Générale
Standard Bank
Standard Chartered Bank
State Street
Suncorp Bank
Swedbank
Synchrony
TD Bank
The Co-operative Bank plc
Goldman Sachs
Turkiye Is Bankasi
UBS
Unicredit
UOB
US Bancorp
Wells Fargo & Company
Westpac

[1] ORX, Capturing operational risk impacts of the coronavirus

* Founding banking members

The global banking loss database – developments in loss frequency and severity from 2014 to 2019

In 2019, we collected a total of 59,437 operational risk loss events with a gross value of €15.8bn from our members. Averaging only €17.8bn in the last three years (2017 to 2019) compared to €30.4bn between 2014 and 2016, there has been a notable decrease in operational risk losses.

The first three years saw a large peak in 2014, followed by two years of stability. Looking at the data in more detail, the peak in 2014 was partly due to a single event that was double the size of any other loss across the six-years.

To some extent, the decrease in levels of loss can be attributed to the nature of operational risk events and their corresponding reporting requirements. Loss events are recorded at their first date of recognition, rather than occurrence or discovery. This means that existing losses can increase in size over time.

Annual event frequencies showed considerably less variation, with a small increase between 2014 and 2015, followed by a year-on-year decrease (figure 3). Further highlighting the stability in the number of operational risk events, the largest deviation from the mean was in 2015, which was only 9 per cent away from the mean of 63,942 events.

Averaging only €17.8bn in the last three years (2017 to 2019) compared to €30.4bn between 2014 and 2016, there has been a notable decrease in operational risk losses.

Figure 2: Total gross loss of events reported per year

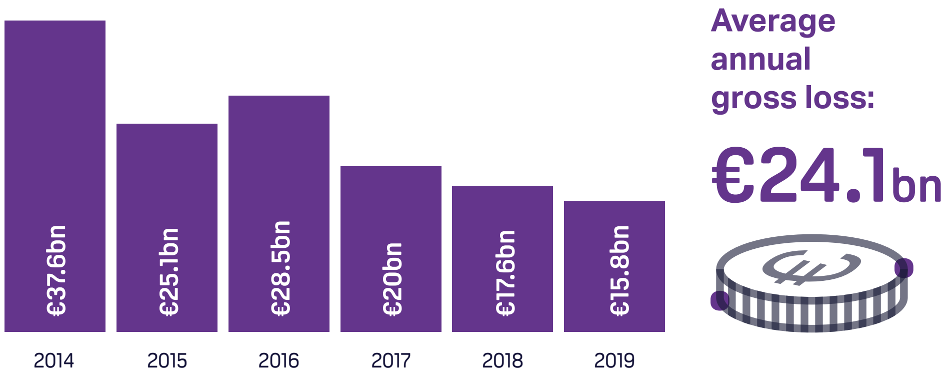


Figure 3: Total number of events reported per year

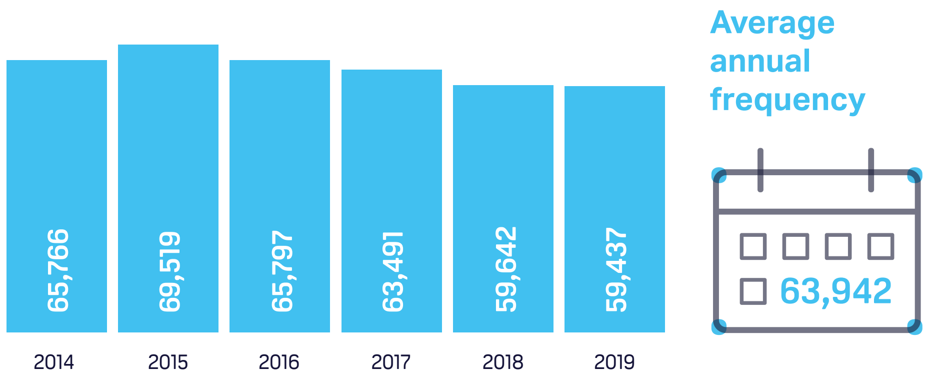


Figure 4 shows the average size of a loss event in each year. The large average in 2014 was driven by the previously mentioned outlier. After excluding this event, the average gross loss in that year decreases from €571,571 to €471,930, becoming more in line with 2016. Average gross loss in 2019 was again the lowest across the six-years at only €265,024.

Banks also report their gross income to the global banking loss database. From this we can examine annual levels of industry loss as a percentage of gross income (figure 5), which also shows a downward trend from 2014 onwards.

The lowest levels are seen in 2019, where industry loss accounted for 1.17 per cent of income. This is caused by a marginal increase in income and the decreasing levels of annual loss shown in figure 2.

Figure 4: Average size of an operational risk event (gross loss)

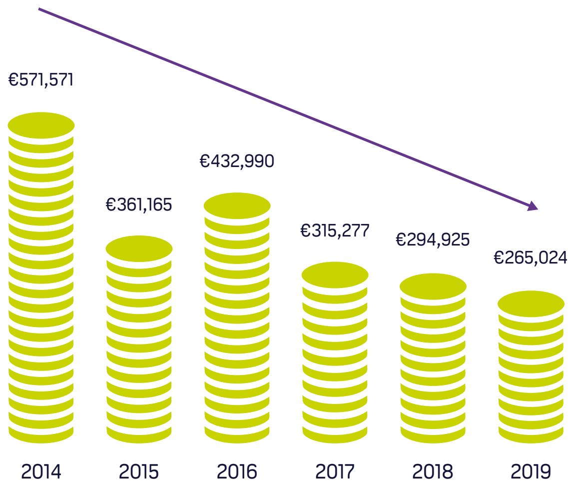
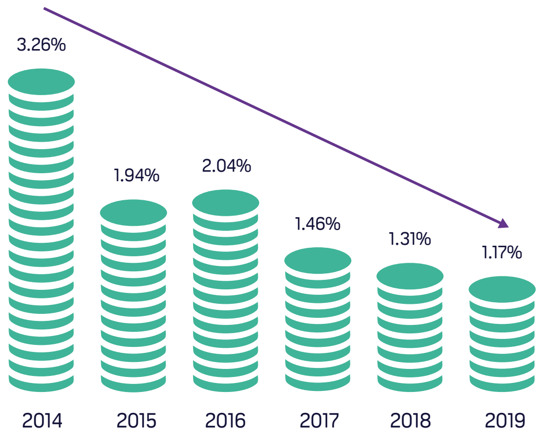


Figure 5: Total operational risk loss as a percentage of income



How does it work?

Data categorisation

The data in the global banking loss database provides a large selection of alternative data attributes. These allow operational risk teams to gain a deeper understanding of the data, while also maintaining anonymity.

Examples of the attributes include:

- Gross loss values, recovery values, and net loss values after recovery
- Dates of occurrence, discovery, and recognition
- Business lines, event types, products and processes
- Regions where the loss events occurred
- Industry loss events (ILEs) for large losses, including the mis-selling of mortgage backed securities, payment protection insurance and interest rate manipulation.

Find out more about ORX loss data services at managingrisktogether.orx.org/orx-membership /loss-data

Operational risk distributions and tail losses between 2014 and 2019

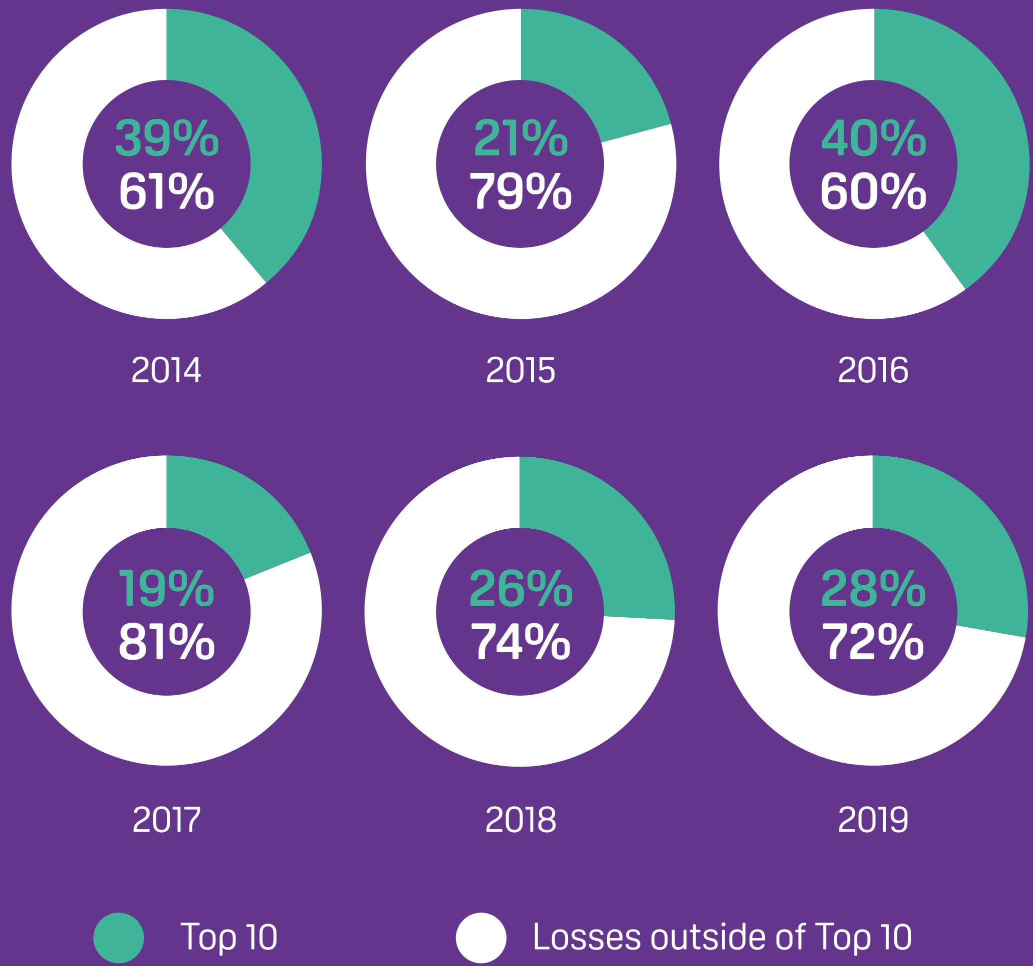
Operational risk is characterised by infrequent but very large events, which leads to "heavy tailed" distributions for loss severity. Looking at the ten largest losses in each year over the last six years shows the impact that a small number of large events can have on industry loss (figure 6).

The percentage of total loss from the ten largest losses in each year varies between 19 and 40 per cent. While the top ten events in 2019 accounted for 28 per cent of annual total loss, the years of 2014 and 2016 showed the largest proportions of loss at 39 and 40 per cent, respectively. This equates to a total loss from the top 10 loss events of €14.5 and €11.3 billion for those years.

"The standard achieved in ORX data collection is impressive and has helped us take forward operational risk measurement."

ORX member

Figure 6: Annual proportion of total gross loss within (and outside) the top ten largest loss events



The 10 largest losses in each year over the last six years account for between

19-40%

of annual gross loss

Figures 7 and 8 compare 2019 to previous years across different loss size bins. Figure 7 shows the percentage of total loss falling within each bin, while figure 8 shows the percentage of loss event frequency. These figures illustrate that operational risk loss is dominated by a small number of very costly events; correspondingly, a large number of events have relatively low severity.

The distribution of loss is fairly consistent between years. The largest difference can be seen in the €10m+ loss size bin in figure 7, equating to around 11 per cent. This difference is largely due to the top losses in earlier years being proportionally larger in size. This is highlighted in figure 6 where large losses in 2014 and 2016 constitute a large proportion of total annual loss.

Figure 7: Percentage of total loss falling in each loss size bin[2]

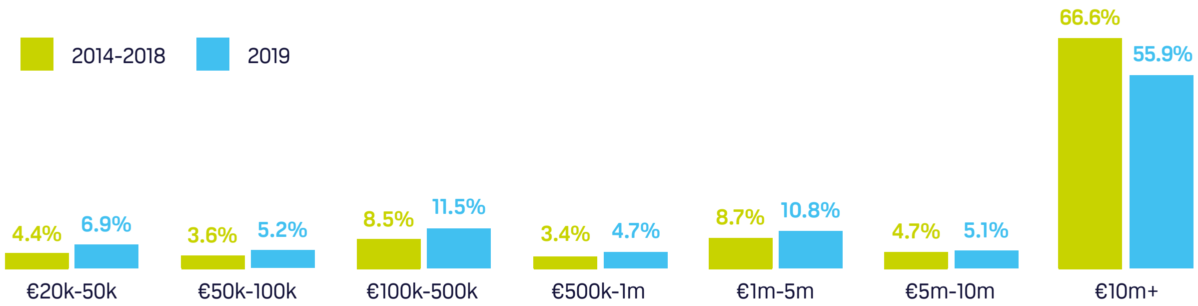
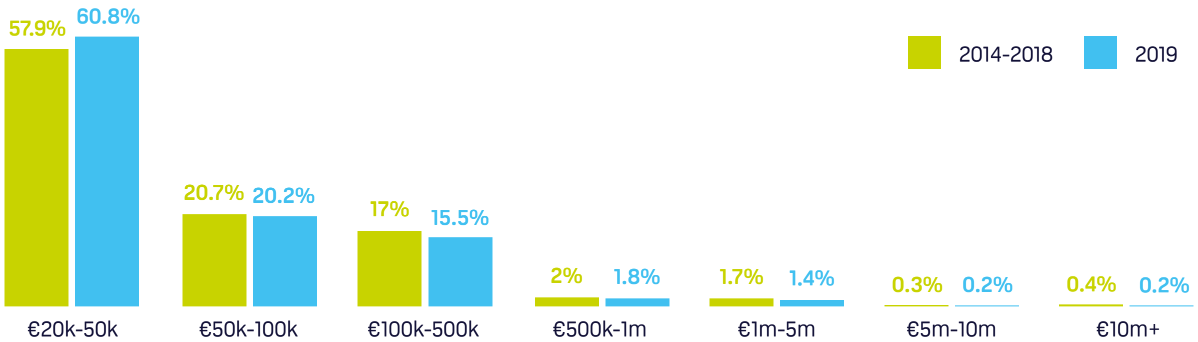


Figure 8: Percentage of loss events falling in each loss size bin[2]



[2] Numbers have been rounded to one decimal place and therefore do not add up to 100%

Bringing the industry together

Not only does ORX Membership give financial institutions access to data and research, members also benefit from the opportunity to meet, work with, and learn from other operational risk professionals.

Each year, we hold regular forums and roundtables around the world, providing valuable opportunities for collaboration.

We also run working groups and host online meetings, which allow our members to interact on areas they are especially knowledgeable or interested in through regular calls and webinars.

Find out more about the benefits of ORX Membership: managingrisktogether.orx.org/orx-membership

Event frequency by business line and event type

The global banking loss database provides attributes for each loss event. This allows ORX members to gain insights and filter the data according to their own exposures (see the 'How does it work?' section on page 7 for more information on these attributes). Figure 9 shows the frequency distribution across ORX business lines and event types (which relate very closely to Basel) over the last six years.

Most events were reported in Banking business lines, which includes retail, private and commercial banking (73 per cent). Trading and Investment business lines, which includes trading and sales and corporate finance, accounted for 7 per cent of the total number of loss events. Thirteen per cent of the events were attributed to corporate items[3], while Other business lines made up the remaining 7 per cent.

The event type with the highest frequency for most business lines was Execution, Delivery and Process Management (EDPM). These events are caused by failed transaction processing or process management and from relations with trade counterparties and vendors. With 4,155 events, Disasters & Public Safety was the event type with the fewest number of reported losses. However, we can expect this to increase next year as more direct costs associated with the coronavirus pandemic become recognised.

Within retail banking, External Fraud events were most common. In contrast, events relating to EDPM occurred more frequently for trading and sales, and Clients, Products and Business Practices was most common for retail brokerage and corporate items.

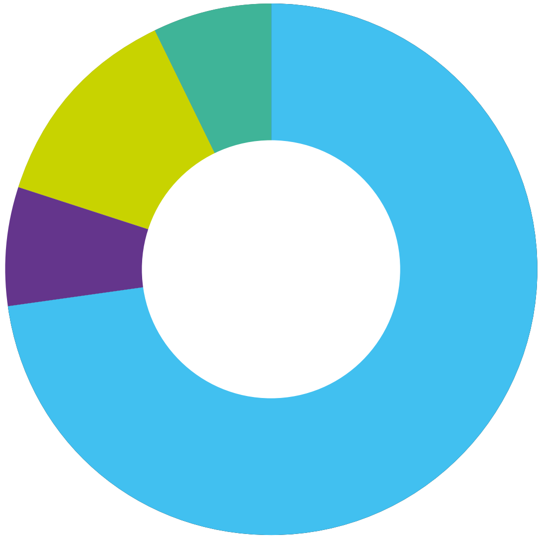
Proportion of events reported by business type

Banking
73%

Trading and Investment
7%

Corporate Items
13%

Other
7%



The event type with the highest frequencies for most business lines was...

Execution, Delivery and Process Management

108,461

> "Going beyond pure data exchange is highly valuable for us, as research, benchmarking and active exchange among members supports us in keeping on track in the operational risk environment."
>
> ORX member

[3] Losses reported as corporate items are experienced at a firm level, rather than affecting specific revenue-generating lines of business.

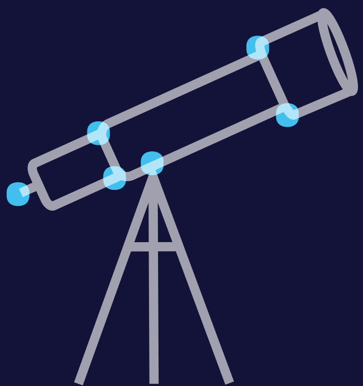
Figure 9: Number of events submitted in each business line and event type between 2014 and 2019

		Internal Fraud (IF)	External Fraud (EF)	Employment Practices & Workplace Safety (EPWS)	Clients, Products & Business Practices (CPBP)	Disasters & Public Safety (DPS)	Technology & Infrastructure Failure (TIF)	Execution, Delivery & Process Management (EDPM)
Trading & Investment	Corporate Finance	31	155	210	488	168	60	992
	Trading & Sales	71	260	785	2,545	38	1,974	17,475
Banking	Retail Banking	4,561	100,361	35,026	39,991	2,509	2,116	51,352
	Private Banking	140	1,671	1,794	3,268	23	110	3,947
	Commercial Banking	327	8,949	2,033	7,891	206	631	13,462
Other	Clearing	27	1,272	276	172	16	159	2,015
	Agency Services	10	64	705	404	25	261	5,005
	Asset Management	29	104	309	1,237	5	157	3,284
	Retail Brokerage	434	962	1,387	6,081	18	162	3,147
	Corporate Items	181	1,301	15,541	24,075	1,147	278	7,782

Accelerating operational risk management

Alongside our loss data services, we run an extensive research programme exploring operational risk measurement, management and strategic development. ORX members can take part in our research studies for free as part of their membership, while non-members can get involved in individual studies by getting in touch with us.

Visit our website to see what research we're working on now: www.orx.org



Total loss by business line and event type

Figure 10 shows the total gross loss for each business line and event type. Overall, Banking business lines experienced the largest proportion of total gross loss (56 per cent), while Trading and Investment business lines incurred 25 per cent, Corporate Items 12 per cent and Other business lines the remaining 7 per cent.

The largest aggregate loss for almost all business lines was due to events categorised as Clients, Products and Business Practices (CPBP), which cost a total of €75.3 billion. These events relate to the unintentional or negligent failure to meet a professional obligation to specific clients and corporate stakeholders, e.g. regulators, or from the nature or design of a product. Within agency services and clearing businesses, the most significant losses were due to events categorised as EDPM.

By combining total loss and frequency (figures 9 and 10), we can compare the average size of a loss within each category. Costing members €1.1 million on average, events classified as Technology & Infrastructure Failures were largest. These losses arise from disruption of business or system failures.

The average cost of an Internal Fraud event (€475k) was more than four times External Fraud (€117k). Indeed, within the Trading and Investment business lines, the average Internal Fraud event cost firms €9.7 million. However, within banking businesses, Internal Fraud only cost firms €252k on average. For Banking business lines, the average cost of CPBP was largest at €820k.

The average CPBP event cost Trading and Investment business lines eight times more than for Banking business lines. Generally, comparing Trading and Investment to Banking business lines shows that the ranges of average loss differed considerably – ranging from €239,828 to €9.7m in the former and €99,568 to €819,600 in the latter. As such, losses experienced in Trading and Investment tend to be less frequent, but comparatively larger in size.

Proportion of total gross loss reported to each business line

Banking	56%
Trading & Investment	25%
Corporate Items	12%
Other	7%

The largest aggregate loss for most business lines was due to…

Clients, Products and Business Practices

CPBP

€73.5bn

Figure 10: Total loss submitted in each business line and event type between 2014 and 2019

		Internal Fraud (IF)	External Fraud (EF)	Employment Practices & Workplace Safety (EPWS)	Clients, Products & Business Practices (CPBP)	Disasters & Public Safety (DPS)	Technology & Infrastructure Failure (TIF)	Execution, Delivery & Process Management (EDPM)
Trading & Investment	Corporate Finance	€98.9m	€465.2m	€76.7m	€1,816.4m	€40.0m	€50.3m	€407.5m
	Trading & Sales	€890.9m	€589.2m	€291.0m	€18,275.0	€9.4m	€3,851.0m	€9,353.1m
Banking	Retail Banking	€950.0m	€7,045.2m	€3,394.7m	€26,504.3m	€389.7m	€844.4m	€13,655.6m
	Private Banking	€161.1m	€304.4m	€233.8m	€2,456.2m	€2.1m	€27.6m	€886.6m
	Commercial Banking	€158.4m	€4,514.0m	€240.0m	€12,962.0m	€30.3m	€678.4m	€5425.1m
Other	Clearing	€11.2m	€104.1m	€26.9m	€75.5m	€3.8m	€507.2m	€729.1m
	Agency Services	€2.1m	€35.6m	€68.8m	€942.9m	€3.4m	€52.7m	€1970.9m
	Asset Management	€12.8m	€34.6m	€57.6m	€1,460.2m	€0.4m	€33.2m	€764.7m
	Retail Brokerage	€312.3m	€105.0m	€676.7m	€1,825.3m	€2.7m	€76.3m	€440.5m
	Corporate Items	€161.8m	€321.9m	€1,459.0m	€9,000.8m	€655.7m	€468.1m	€5,064.6m

Risk in focus – Coronavirus and Natural Disasters

Capturing the costs of coronavirus

Without warning the coronavirus (Covid-19) crisis changed the world as we know it. Financial institutions across the globe reacted swiftly and redefined their operations to ensure critical services continued. Business continuity plans were largely successful and operational risk functions have taken a much more active role than ever before in facilitating change and guiding firms through the crisis.

Internal and external collaboration has been key for firms managing the effects of the coronavirus. Organisations that facilitate industry cooperation, such as ORX, have hosted discussions and conducted studies on the operational risk impacts of coronavirus, supporting the industry by providing guidance and facilitating knowledge sharing. Working together with others in the industry helps firms to share lessons learned during incredibly challenging times.

Capturing the costs of the pandemic in a consistent way is a key issue facing the industry, with both direct and indirect operational risk impacts needing to be considered. Identifying and categorising indirect costs can be very difficult due to wide-ranging impacts. Firms typically aggregate and report direct operational risk losses as a single event under the Natural Disasters and Other Events category (EL0501). However, as indirect losses are more complex, they are typically individually tagged with a coronavirus flag which allows for more detailed analysis at a later stage. Page 15 provides a summary of some of the direct and indirect operational risk impacts of coronavirus.

ORX has worked closely with its members to produce guidance to support the industry in recording coronavirus-related losses. The general approach is to ask the question:

"Would the impact have been experienced without the pandemic?"

This is a simple, yet effective approach in determining related losses. This means costs must have arisen as a result of the coronavirus pandemic, they were unexpected (not planned or budgeted for, or part of any strategic plan), and exclude good will payments. ORX will maintain the development of this guidance to provide even more specific examples to support the industry.

ORX members will continue to report their direct operational losses due to coronavirus as EL0501 and indirect losses through the use of an industry loss event flag. By 2021, we will begin to have a clearer picture of how much the coronavirus crisis has cost the industry over the course of 2020. This will allow us to truly understand the full operational costs the industry has suffered. Until then, we must work together to manage the impacts of this crisis.

Download the latest guidance on capturing op risk losses due to coronavirus

"We are going to leverage ORX risk reporting standards on the coronavirus. We need this guidance so we can determine what losses are actually caused by Covid-19 and to avoid duplication. Thank you ORX for sharing this information."

ORX member.

[4] ORX, Capturing operational risk impacts of the coronavirus

There will be many direct and indirect operational risk impacts of the coronavirus

Direct impacts may include:

Cleaning costs clearly attributable to the pandemic, such as the cost of deep cleaning buildings where staff have tested positive for coronavirus

Building costs, such as purchasing additional equipment and office modifications to support social distancing

Additional **administrative costs** for issuing government schemes such as mortgage holidays and business interruption loans

One-off **IT costs** for purchasing additional remote working equipment and services required as a result of the pandemic

Indirect impacts may include:

Exposure to **conduct risk** due to the relaxation of controls (i.e. management cannot physically oversee staff and provide guidance)

Cyber-attacks attempting to exploit coronavirus disruption such as phishing and man in-the-middle attacks

Third party disruption to services provided, such as offshore call centres and IT infrastructure

External fraud targeting vulnerable customers, such as fraudsters confiscating "infected" banknotes[5]

Reputational impacts are also in sharp focus currently, particularly with increased media coverage on financial institution activity

[5] Cash scam

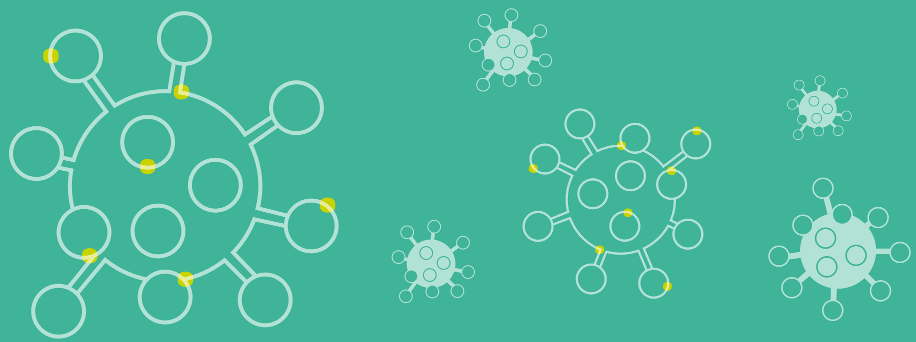
Coronavirus resources

Helping you manage the ongoing impacts of the pandemic

Since the outbreak of the pandemic, ORX has been producing coronavirus-related resources to support our membership and the wider operational risk industry. From reports to news roundups and discussions to videos, our resources have been made freely available to help operational risk teams through this situation. Resources include:

- **Covid Risk Review report exploring the change in operational risk profiles**
- **A regular round-up of the latest coronavirus in operational risk news**
- **Scenario Development Handbook: Pandemic**
- **Guidance on capturing the impacts of the pandemic**
- **Summaries from industry discussions on how to manage coronavirus**

Explore the resources and see how ORX can support you during this crisis on our website: managingrisktogether.orx.org/coronavirus



O.R.X | News

The hub that puts global loss events at your fingertips

Whether you're looking to enrich your operational risk loss data, train employees on what could happen or enhance your scenario development, ORX News can help.

ORX News provides you with up-to-date information on publicly-reported operational risk loss events, Deep Dives and trends and analysis.

"ORX News gives us information at our fingertips for any of the main types of operational loss events. It is simple and easy to use and can provide all the detailed information needed."

ORX News subscriber

Find out more about ORX News

Exploring Natural Disasters and Other Events

Natural Disasters and Other Events may have been an event type that had a low priority due to the low likelihood of events occurring, however we have not seen anything on the scale of the coronavirus crisis. Lessons learned from other natural disasters can help us improve business continuity and crisis planning for these more extreme events.

Since the launch of ORX News in 2012, we have collected 19 events categorised as Natural Disasters and Other Events (EL0501), totalling around €77 million of industry loss. Using the ORX News database of events impacting banks and insurers, we can explore detailed storylines and additional information that can help us understand how these events may occur.

This section examines Natural Disaster and Other Events collected in the ORX News database, across the Asia-Pacific and North American regions – the two regions with the largest number of events. We have also provided summaries of related ORX News stories, which mostly relate to localised weather disasters.

Natural disaster events in the ORX News database

Total loss: **€76,786,948**

Total number of events: **19**

Average loss: **€4,041,418**

Figure 11: Frequency and severity of loss reported under Natural Disasters and Other Events

North America

Total loss:

€43,962,260

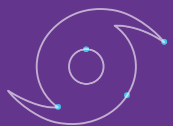
Frequency:

6

Mean loss:

€7,327,043

ORX News summaries



A hurricane caused mass closures of branches across several institutions. Key staff at some major banks were accommodated in hotels the night before the storm hit, and some employees worked from home. The NYSE was shut down due to weather for the first time since the Great Blizzard of 1888. The hurricane also resulted in floods, damaging physical bond and share certificates.

An oil spill led to a decrease in performance and negatively affected operations and shareholder value for a bank. The bank also suffered stresses to real estate appraisals, loan collateral values, loan loss reserves and loan losses.

Asia Pacific

Total loss:

€12,458,858

Frequency:

9

Mean loss:

€1,384,317

ORX News summaries

Severe storms caused heavy damage to bank notes and power outages resulted in issues with ATMs and card transactions

Tropical cyclone led to disaster relief repayment options for its customers within developmental programmes in affected rural and agricultural areas

Earthquakes and tsunamis caused large pay-outs due to the costs of repairing property damage

Classified under the pandemic scenario category (SC0033), there was an event where a company needed to close and pay for deep cleaning expenses due to an employee being infected by Covid-19

Geographic distribution of losses reported to ORX in 2018/19

Comparing 2019 with 2018, gross operational risk loss increased in half of the ORX regions, while it decreased in the Americas and remained unchanged in the Asia-Pacific region (figure 12). Event frequency on the other hand, remained stable, only slightly increasing in half of the ORX regions, and marginally decreasing in the other. These differences reflect industry trends but also the composition of the ORX membership.

In terms of gross loss, North America witnessed substantial reductions in Clients, Products and Business Practices (CPBP) (€3.6bn), which contributed the most to the €3.2bn decrease in total gross loss. There was also a notable increase in loss relating to Technology & Infrastructure Failures of €1.2bn. However, this was not enough to offset the decrease in gross loss seen across all other event types.

In Western Europe, increases of €605m and €533m due to CPBP and External Fraud respectively, contributed to most of the €1.3bn increase in total gross loss. CPBP and External Fraud were also the largest contributors to the increase in loss seen in Africa, with €17m and €19m of loss, respectively. While CPBP contributed to the increase in loss seen in Eastern Europe (€120m), it resulted in the largest reduction in gross loss for Latin America & the Caribbean, with a decrease of €80m.

The largest increase in frequency for a single event type in Eastern Europe was due to CPBP (205 events), while in North America and the Asia-Pacific region it was External Fraud, which increased by 1,735 and 230 events, respectively.

The decrease in events seen in Africa and Western Europe was mainly due to Execution, Delivery & Process Management (81 and 599 events, respectively). Latin America and the Caribbean on the other hand, exhibited the largest reduction in CPBP (1,181 events).

Figure 12: Frequency and severity of losses reported within each region in 2019 (compared with 2018)

North America

Frequency:
20,211 ▲ (20,199)

Total loss:
€4bn ▼ (€7.2bn)

Western Europe

Frequency:
20,024 ▼ (20,302)

Total loss:
€7.1bn ▲ (€5.8bn)

Eastern Europe

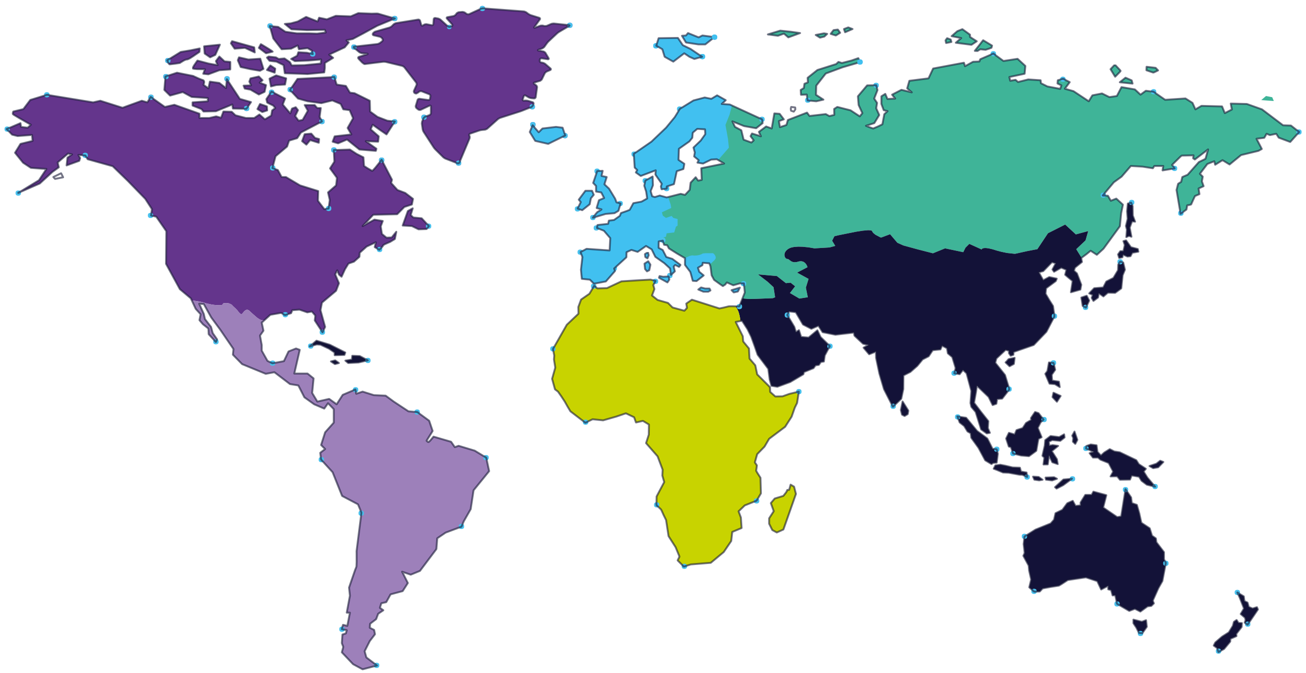
Frequency:
1,579 ▲ (1,350)

Total loss:
€367m ▲ (€240m)

Asia Pacific

Frequency:
3,472 ▲ (3,300)

Total loss:
€2.9bn — (€2.9bn)



Latin America & Caribbean

Frequency:
13,107 ▼ (13,310)

Total loss:
€1.1bn ▼ (€1.2bn)

Africa

Frequency:
1,044 ▼ (1,181)

Total loss:
€262m ▲ (€231m)

Losses by business type

This section looks in more detail at the two key business areas that report losses to the ORX global banking database; the Banking and Trading and Investment business lines described on pages 10-11. Figure 13 shows the annual total gross loss attributed to these two business types. Together, they represent the largest proportion (81 per cent) of loss reported to the global banking database across 2014 to 2019.

For banking business lines, the figure shows a spike in 2014, followed by three years of stable loss and considerably lower levels of loss seen in 2018 and 2019. The high gross loss in 2014 mainly consists of losses within the Commercial Banking line of business, which includes a single event that accounted for around 29 per cent of total gross loss for all banking business lines. In line with the findings shown in figure 2, 2019 also saw the lowest levels of loss within Banking business lines. Total gross loss in 2019 was €7.3bn – considerably lower than the six-year annual average of €13.5bn.

The average annual gross loss for Trading and Investment business lines was €6bn. While average gross loss for Trading and Investment was smaller than in Banking businesses, with a larger relative standard deviation, the variability of losses for Trading and Investment was greater. In particular, loss in 2019 was 69 per cent larger than 2018.

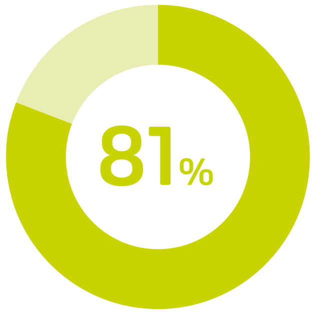
As well as broadly decreasing levels of total loss, we also see losses decreasing as a proportion of gross income for Banking. The gross loss to income ratio has reduced from a 2014 high of €3.04, to a 2019 low of €0.81 per €100 of income. This is driven by lower levels of loss and increasing income. For Trading and Investment, the gross loss to income ratio has decreased from a 2014 high of €4.56, to a 2017 low of €0.95 per €100 of income (page 21). However, the gross loss to income ratio has increased from €0.95 in 2017 to €1.93 in 2019, further highlighting the recent uptick in loss for Trading and Investment.

Key ORX business types for the global banking loss database:

Banking

Trading & Investment

These make up **81% of total gross loss** experienced in the global banking loss database across the six-year period.



The average annual gross loss for **Banking** business lines was...

€13.5bn

in the six-year period

The average annual gross loss for **Trading & Investment** business lines was...

€6bn

in the six-year period

2014 showed a spike of...

€23bn

Multiple spikes in 2014 and 2016 of...

€9.6bn & €9.4bn

respectively

In 2019, total gross loss declined to only...

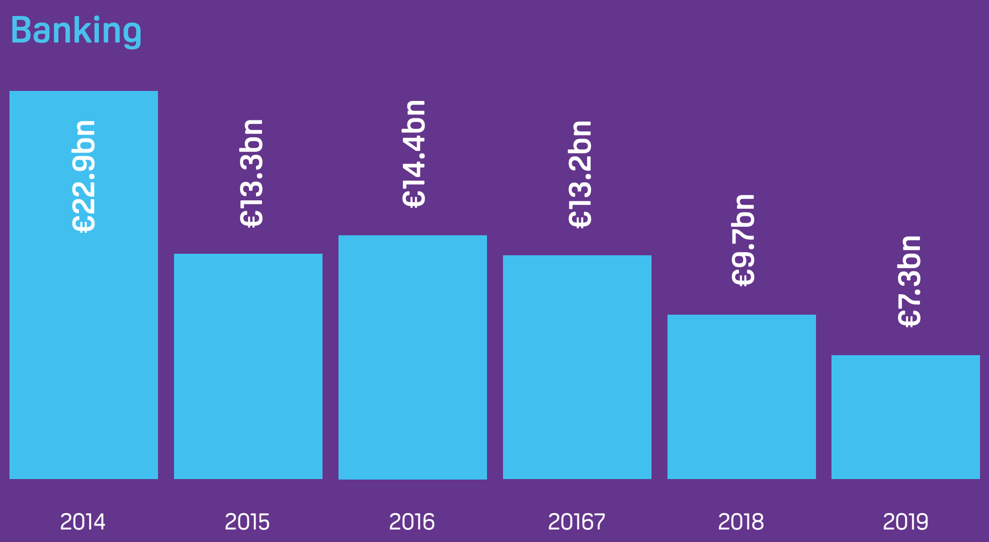
€7bn

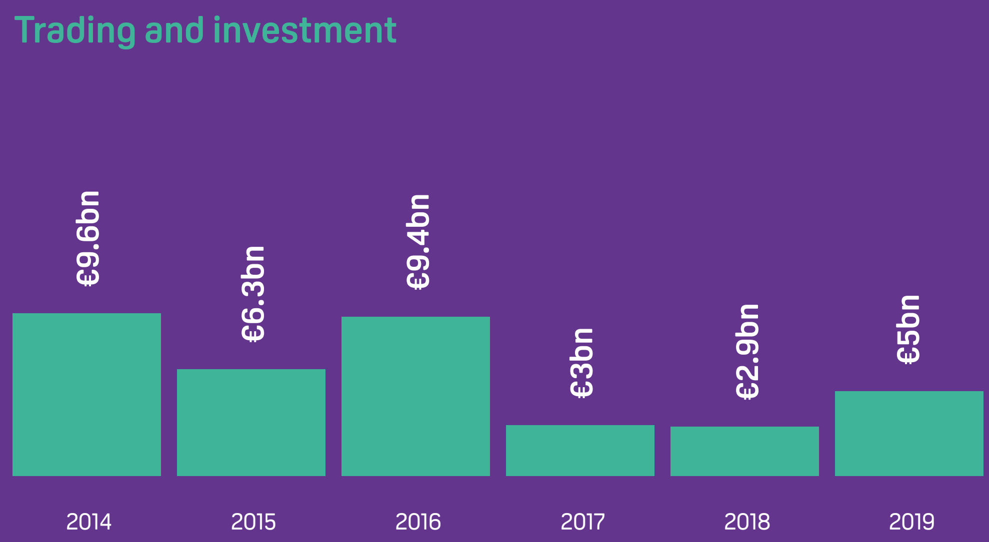
which was considerably lower than the six-year average

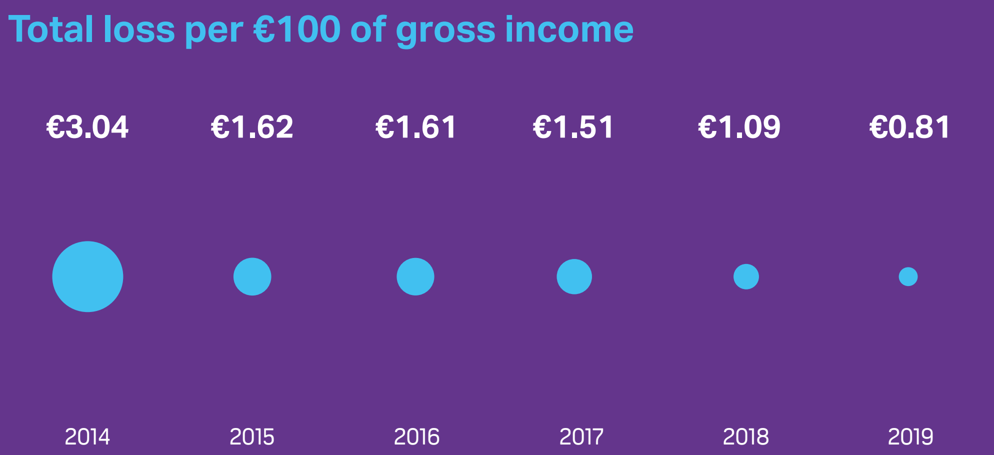
Recent uptick in gross loss per income seen between...

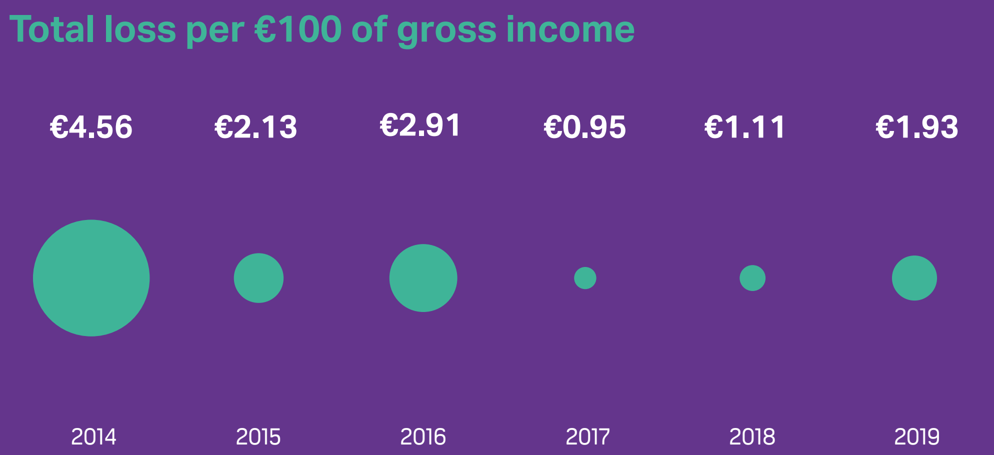
2018 & 2019

Figure 13: Total gross loss in the Banking and Trading and Investment business lines between 2014 and 2019









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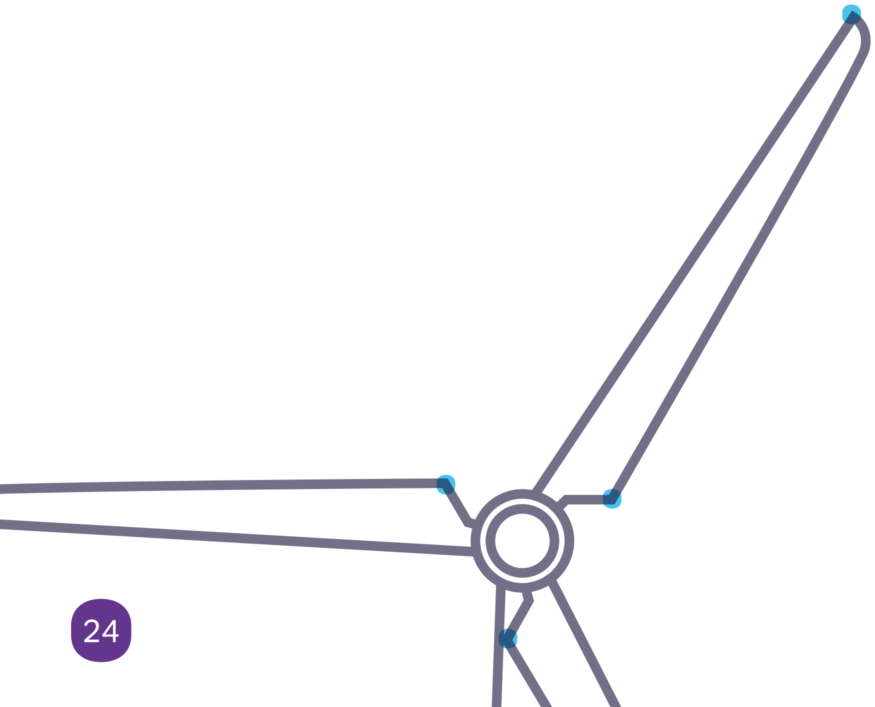

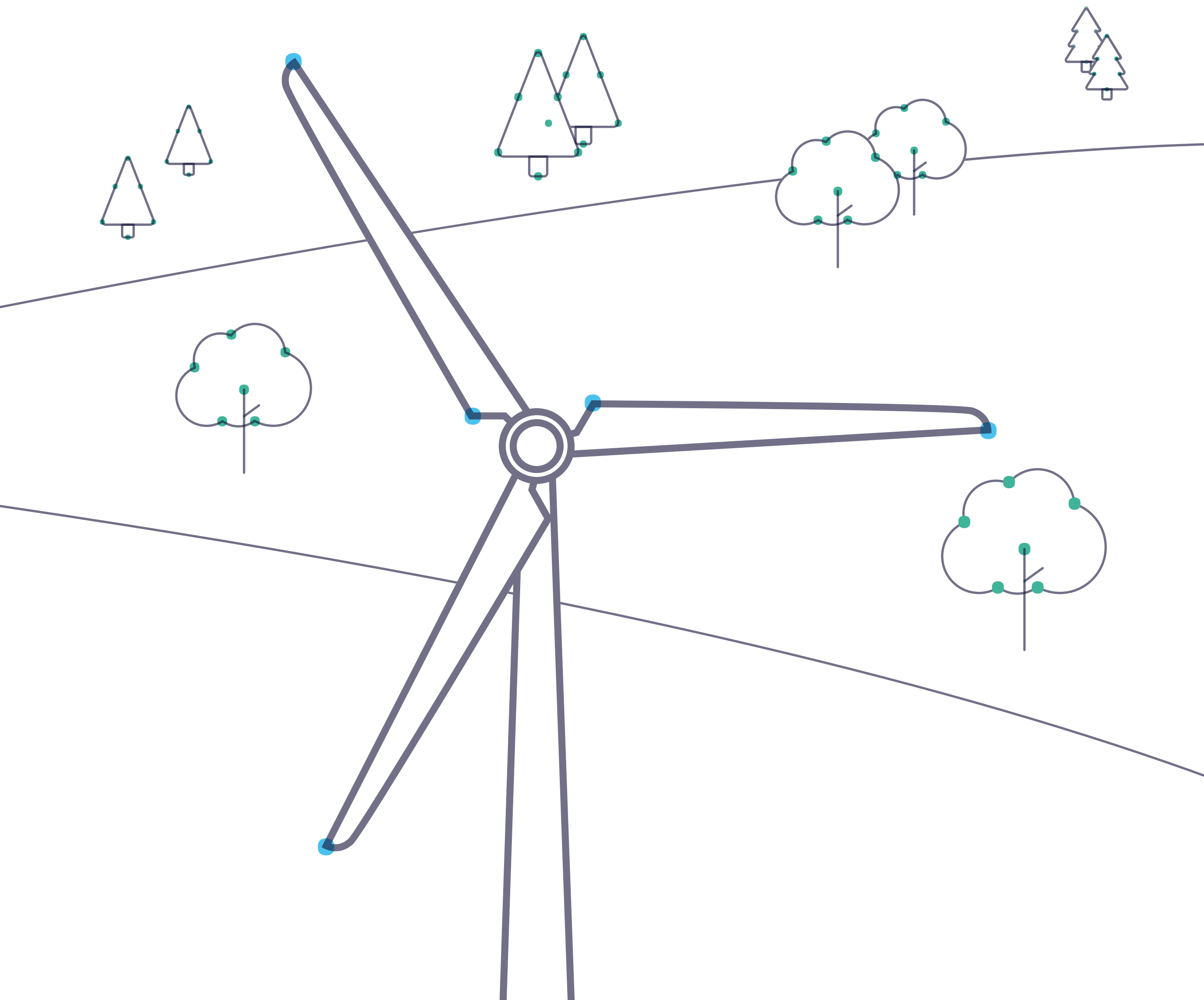

Report contact

Luke Carrivick
Research & Information Director
luke.carrivick@orx.org

Roland Kennett
Membership Director
roland.kennett@orx.org

Authors

Sarah Astill
Head of Risk Measurement

Ibrahim Basmer
Research Analyst

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