

Allianz Global Corporate & Specialty

Global Claims Review

Liability In Focus

Loss trends and emerging
risks for businesses

Allianz 

Scope of the Report

This report focuses on global developments in liability-related insurance claims over the period 2011 to 2016 (*September 13*), identifying the top causes of loss and other trends across a number of different business sectors, regions and countries.

The findings detailed in this report are based on the analysis of **100,073** liability-related insurance claims from 100+ countries (with a total value of more than **€8.85bn (US\$9.3bn)**. It is important to note that all claims figures quoted are 100% of the total loss – the data set does not just include the Allianz Global Corporate & Specialty (AGCS) share but also includes the share of other insurers involved in the risk. In addition the data set only examines the liability component of the loss and does not include the hull (property) damage element, when this has also been a feature of a specific incident.

Liability losses are pervasive. Claims payments can vary enormously in scale. The top 10 largest claims (very large events) account for approximately a third of the value of all claims analyzed and therefore can significantly impact the value of an average claim for a particular cause of loss. Conversely, liability losses also include a huge number of small payments, which can reduce the average claim value. Therefore we have included both average and median claims values to illustrate the top causes of liability loss. All claims totals are in **€**.

While the losses analyzed are not representative of the industry as a whole, and also reflect risk appetite, they provide a strong indication of the major risks which dominate liability insurance.

Financial lines claims are not included in the analysis set.

Allianz Global Corporate & Specialty business scope

Allianz Global Corporate & Specialty (AGCS) is the Allianz Group's dedicated carrier for corporate and specialty insurance business. AGCS provides insurance and risk consultancy across the whole spectrum of specialty, alternative risk transfer and corporate business.

Insurance product lines covered – herein referred to as lines of business – include:

- Aviation (including space)
- Energy
- Engineering
- Entertainment
- Financial Lines (including directors' and officers' [D&O])
- Liability
- Marine
- Mid-Corporate
- Property

In addition AGCS also provides alternative risk transfer coverage through its subsidiary, Allianz Risk Transfer AG.

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Executive Summary

Modern corporate liability exposures can arise from many sources including third parties, products, the environment, as well as a host of other emerging risks, driven by increasing global interconnectivity and ever-growing reliance on new technology. While improvements in risk management and safety regulation are leading towards a gradual reduction in everyday incidents such as slips and falls, accidents and workplace injuries in developed markets, there is increasing potential for larger liability claims to become more expensive, complex and international, demonstrating the pervasive and long-term nature of liability losses.

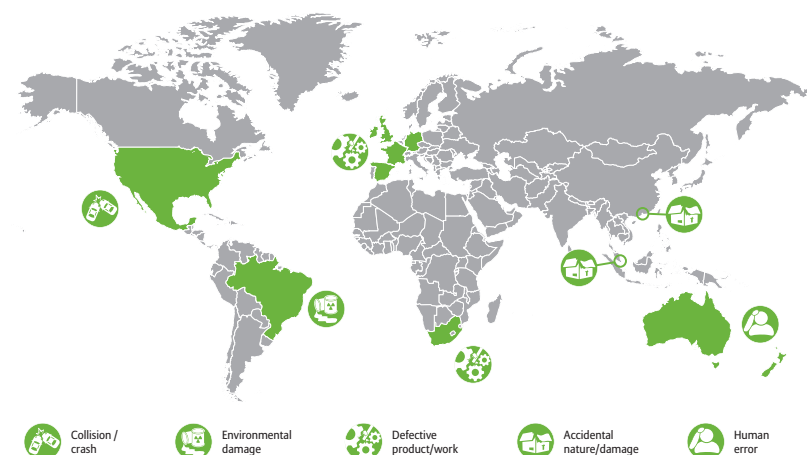
Top causes of liability loss analysis

Defective product/work incidents are the top cause of liability losses for businesses globally, based on analysis of more than 100,000 claims from 100+ countries over five years. These account for almost a quarter (23%) of the value of all claims received. The number of incidents has been rising, while today's complex global supply chains can result in larger claims, which are more challenging to settle.

Safety improvements have led to a recent reduction in the number of **collision/crash** incidents overall. However, the impact of such events is still a major driver of liability loss, accounting for over a fifth (22%) of the value of all claims.

Human error is the third top cause of liability loss (19%), although it accounts for around just 1% of all claims received by insurers. While this loss category focuses on the impact of everyday employee errors in the workplace it also includes the effect of much larger events where human error has been a factor, such as in aviation or shipping accidents.

Top causes of liability loss for businesses around the world*



*according to value of claims. Total number of claims analyzed 100,073. Analysis does not include financial lines claims. Source: Allianz Global Corporate & Specialty

Top 10 causes of liability loss by total value of claims (2011-2016*):

1	Defective product/work	23%
2	Collision/crash	22%
3	Human error	19%
4	Accidental nature/damage	6%
5	Slips/falls/falling objects	6%
6	Water/fire/smoke damage	3%
7	Environmental damage	3%
8	Natural hazards	2%
9	Vandalism/terrorism	1%
10	Property damage	1%

*Causes of loss detailed above include awards for cases of bodily injury/death. Analysis does not include financial lines claims. Source: Allianz Global Corporate & Specialty

Liability claims trends

100,073

Total number of claims analyzed

Impact of collision/crash and **slips/falls/falling objects** are the most frequent liability claims for insurers, accounting for almost half (48%) of all claims by number. However, the frequency of these claims has been declining in many major casualty markets, a reflection of improvements in risk management and better safety regulation, as well as a shift away from heavy industry.

€8.85bn

Total value of claims analyzed

Conversely, there is increasing potential for large liability claims to become more expensive, complex and international. Industrial, environmental, product liability and financial lines claims in excess of \$1bn¹ are more commonplace and are no longer confined to just the US and Europe.

€88,408

Average value of liability claim

The emissions testing issues in the automotive industry are an example of just how complex liability losses can become, giving rise to multi-jurisdictional regulatory investigations and litigation. While very large liability losses can impact individual companies, they also can trigger systemic risks that can affect many companies within a given sector.

€2,712

Median value of liability claim

Regulators around the world have become tougher, making corporations and their directors more accountable, while investor activism has been on the rise. At the same time, consumer protection laws have been strengthened in many countries and US-style litigation continues to spread around the globe. There is now greater awareness among consumers of compensation in countries such as China, Singapore and Japan. Meanwhile, liability claims for specialist insurance such as cyber risk and environmental liability are expected to increase in Asia as such coverages become more widely purchased.

100+

countries in which claims arose

Large environmental liability claims, such as pollution, are increasing, particularly from the mining and construction sectors. Such claims can be complex, costly and take a long time to settle. They can be particularly challenging in emerging markets, given cultural differences, language and legal systems that may be different to US and European courts.

80%+

of the value of all losses can be attributed to 10 causes

Global class actions will become more significant. Although class actions by consumers and investors remain a largely US affair, collective redress is taking on a more international dimension, including in Europe.

Liability losses can range from everyday occurrences to the major disaster events which make global headlines. However, they can also incorporate more unusual events. For example, almost 2% of liability claims analyzed involve

animals. Deer are the most dangerous due to collisions with vehicles, while bedbugs are an increasing bugbear for insurers with the number of incidents increasing.

Future influencers

New technology will drive a big shift in liability claims. Broadly speaking, the frequency of claims is expected to decline, although this will be accompanied by new threats, such as increasing cyber and product liabilities and recall risks. Business models in the digital economy are more complex and without borders, making liability harder to apportion and claims more complex to settle. Automation is likely to lead to increased product liability for machinery and component manufacturers and software providers in particular.

The rise of **autonomous driving** will have a number of implications for insurers. Technology is likely to contribute towards a decline in car ownership in favor of motor fleets, car-sharing and driverless taxis. This could see insurers move away from providing millions of single annual motor insurance policies to drivers, instead providing large policies purchased by manufacturers and fleet owners and operators. The shift to product liability will require insurers to develop technical expertise and not rely on historic data and driver profiling for pricing. Meanwhile, new manufacturing techniques such as **3D printing** could play a positive role in addressing rising business interruption exposures, but could also make it harder to trace products through the supply chain.

The growing **"sharing economy"** raises new questions for liability. For example, a road traffic accident featuring an autonomous car share vehicle could involve the vehicle manufacturer, software provider and the fleet operator, as well as third parties involved in the accident, again making liability potentially more challenging to apportion.

With liability claims becoming more complex and technical, investing in claims expertise and knowledge is just as important for liability lines as it is for property and specialty lines. As businesses grow ever more sophisticated and connected, insurers need to ensure that their claims handling processes stay up-to-date. For example, a road traffic accident involving a vehicle with advanced driver assistance technology requires claims handlers to understand sensors and algorithms to determine the cause of an accident. In the pharmaceutical space, legal requirements and regulation for drugs are becoming more complex, requiring more research to assess liability.

¹ The Global Insurance Market Opportunities, Tenth edition, 2015 study by Aon identified 86 corporate liability losses in excess of \$1bn since 1989.

Introduction:

Drivers of the liability loss landscape

The third in the series of AGCS' **Global Claims Review** reports examines liability loss and claims developments through the years 2011 to 2016*. The fact that during this time period more than **100,000** claims from over **100** countries were received by insurers, including AGCS, provides an indication of how vast the risk landscape is. Liability losses can range from the minor (goods damaged in transit) to the bizarre (a run-in with a flying squirrel) to major disaster events which dominate the global headlines...

40%+

decrease in slip and fall claims over five years

The liability claims analyzed for this latest edition of the **Global Claims Review** have an approximate value in excess of **€8.85bn (\$9.3bn)**. This means that insurers have paid out – on average – more than **€4.3m (\$4.5m)** every day for more than five years to cover losses – outlining the important role the sector has to play in helping businesses manage and mitigate such perils.

of the total value of all claims analyzed. Conversely, around 80% of claims are valued at or below €20,000, accounting for just 3% of total value.

80%+

increase in defective product claims over five years

Claims payments can vary enormously in scale (see *table, right*), reflecting the widespread nature of the risk landscape. Major liability losses (**>€1m**) such as aviation, shipping or terrorism incidents, for example, account for fewer than 1% of claims by number but **74% (>€6.5bn)**

According to AGCS claims analysis, **defective product/work** incidents are the top cause of liability-related losses for businesses globally, accounting for almost a quarter (23%) of the value of all claims received, as well as being the third highest generator in terms of number of claims. Protection against property damages, bodily injury or recall costs caused by a business' products, or work performed, is an important offering from the industrial insurance sector. And today's complex global supply chains, which

*up to September 13, 2016

Top 10 causes of liability loss for business explained*



1

Defective product/work

e.g. tainted medicine; hot coffee spills in lap of a customer causing scalding; contaminated agricultural product causes illness; car explodes due to faulty gas tank design; electric blanket causes electrocution after overheating; worker injured when faulty welder explodes



2

Collision/crash

e.g. vehicle strikes pedestrian placing traffic cones on roadway; car collides with deer totaling the vehicle; driver speaking on cell phone crashes into another vehicle; driver intoxication causes vehicle to crash into other vehicles; outdoor venue collapses injuring public; technical problems lead to aircraft crash



3

Human error

e.g. introduction of wrong fuel type causes a vehicle to lose power and crash; employee spreads a virus through company's IT systems after opening an attachment; a private contractor disconnects a pump and doesn't reconnect it, flooding a business; cause of aviation or shipping incident



4

Accidental nature/damage

e.g. passenger injured due to an aircraft's hard landing; passenger injured during emergency evacuation of aircraft; goods damaged during transit; a pipe bursts and causes flooding to a building



5

Slips/falls/falling objects

e.g. customer slips on wet floor in a restaurant; pedestrian hit by falling tools from a construction worker; a pedestrian slips on a raised portion of sidewalk at a business and is injured; heavy object falls from aircraft onto tarmac injuring airport worker

*Examples of claims/loss scenarios

involve large numbers of products and suppliers concentrated on a smaller number of larger companies, means such claims have been becoming larger and more challenging to settle. Generally, the number of reported incidents, particularly with regards to product recall, have been rising, driven by a more robust focus on both safety and regulation.

Significant improvements in the areas of automotive and aviation safety may have reduced the number of major causes of **collision/crash** incidents, such as road traffic and aircraft accidents in recent decades, but the impact of such events is still a major contributor of liability losses globally, accounting for over a fifth (22%) of the value of all claims, as well as generating the most claims.

Human error is the third top cause of liability loss according to total value of all claims analyzed (19%),

although this is a relatively low driver of claims in terms of frequency, accounting for around just 1%. While this loss category includes the impact of everyday employee errors in and around the workplace (*see page 6*), it also includes the impact of much larger events where human error has been judged to be the main cause, such as major aviation and shipping events. For example, in the shipping sector it is estimated that between 75% and 96% of all accidents can be attributed to human error¹. Claims payments for major human error events will obviously be significantly higher than the norm.

Collectively, the top three causes of loss account for over 60% of the value of all liability losses analyzed, while the top 10 causes of loss for global businesses account for over 80% of all liability losses (*see page 8*).

¹ Safety & Shipping 1912-2012 From Titanic to Costa Concordia, Allianz Global Corporate & Specialty

The pervasive nature of liability claims

Loss level	Total number of claims received	Total value of claims	Number share	Value share
Up to €1,000	29,118	€12,019,466	29%	0%
€1,000 to €5,000	32,651	€79,761,749	33%	1%
€5,000 to €20,000	20,096	€204,653,295	20%	2%
€20,000 to €100,000	12,338	€544,385,915	12%	6%
€100,000 to €1m	5,116	€1,447,492,477	5%	16%
>€1m	754	€6,558,898,673	1%	74%
Total	100,073	€8,847,211,575	100%	100%*

The claims analyzed include the shares of other insurers in addition to Allianz Global Corporate & Specialty. Financial lines claims are not included in this analysis.

*rounded up

Source: Allianz Global Corporate & Specialty



6

Water/smoke/fire damage

e.g. factory machine overheats and explodes; leaking chimney causes smoke damage to business premises; after a fire, mold and ash in the air ducts cause air quality concerns; condenser water line fails and causes water damage



7

Environmental damage

e.g. property damage due to chemical spill; jet fuel leaks into ground; noise pollution claim by resident living under airport flight path; farm crops damaged during heavy industrial dust spill; faulty water treatment facilities cause legionellosis outbreak



8

Natural hazards

e.g. lightning hits a transformer, causing it to explode; a business is lost due to a wildfire; a windstorm blows the roof off of an office leading to flooding; hailstorms decimate an area in which a business has several offices



9

Vandalism/terrorism

e.g. construction project incurs malicious damage from intruders; a business endures loss of property and injuries to employees and customers during a terrorism incident



10

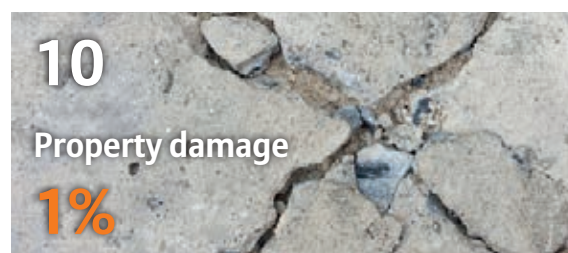
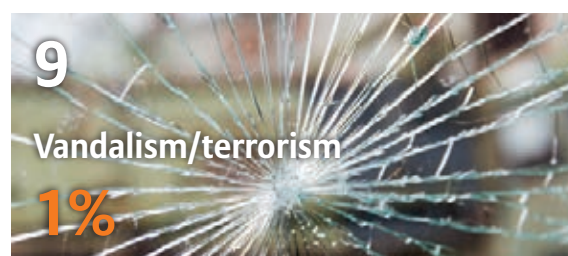
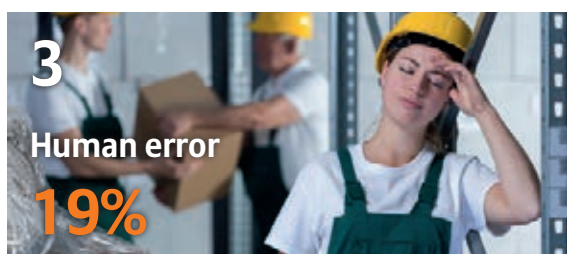
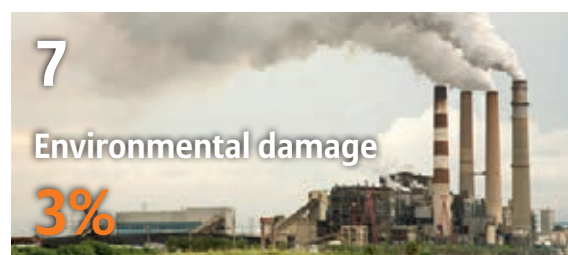
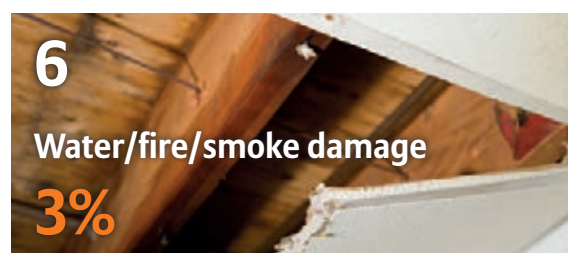
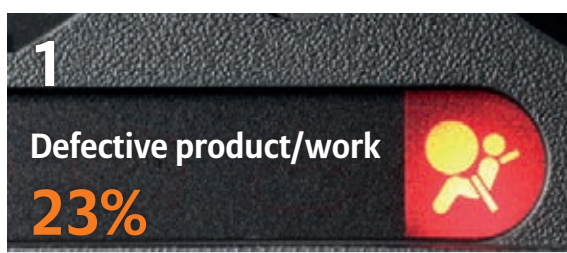
Property damage

e.g. temperature change causes thawing, producing flood damage; storm causes mudslides destroying or damaging farmland and homes; a cable repairman damages cable lines causing power to go offline; a drone operator flies a drone into a transformer leading to a power blackout

Allianz Claims Dashboard

At-a-glance data identifying the top causes of liability loss for businesses and breakdown of insurance claims by average and median payments, region and selected countries. **100,073** claims with a total value of approximately **€8.85bn** were analyzed between 2011 and 2016.*

Top causes of **liability loss** according to value of claims**



The top 10 causes of loss for global businesses account for over 80% of all liability losses.

* Up to September 13, 2016. See full methodology on page 2.

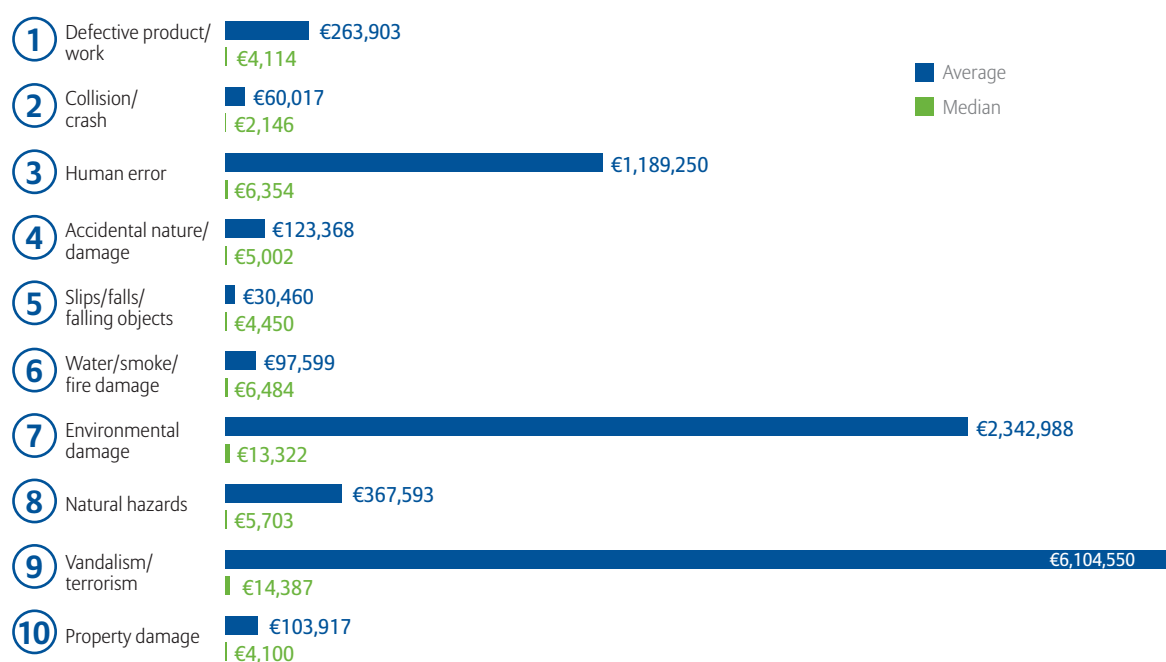
** Top causes of liability loss expressed as a % of value of all claims analyzed. Other causes of loss account for 14% of the value of all claims analyzed. Causes of loss detailed above include awards for cases of bodily injury/death. Analysis does not include financial lines claims.

Top causes of liability loss according to value of claims: average and median values

The average claim value can be impacted by "very large events" - which are significantly different relative to "normal" claims activity associated with the cause of loss. On the other hand liability losses also incorporate a huge number of small claims, which can reduce the average value significantly (see page 11).

e.g. the average liability claim for a defective product/work incident is **€263,903**

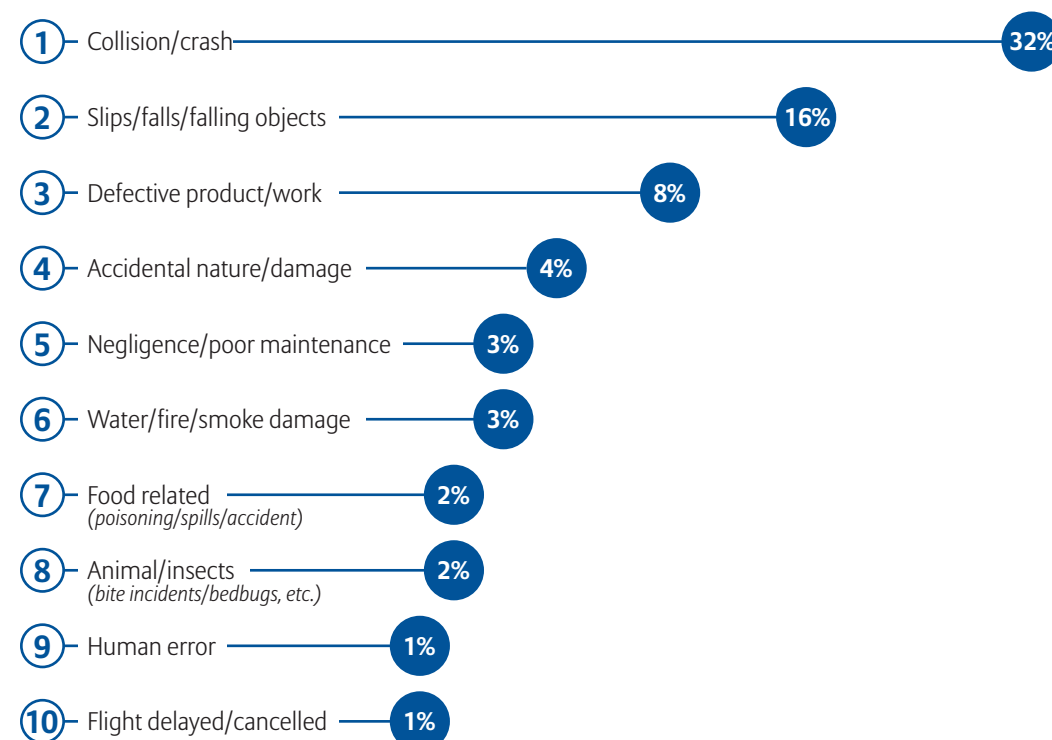
The median claim value is the value which separates the higher half of all claims payments relating to the cause of loss from the lower half. e.g. the median claim value for a defective product/work incident is **€4,114**



Total number of claims analyzed 100,073. Causes of loss detailed above include awards for cases of bodily injury/death. Analysis does not include financial lines claims.

Top causes of liability loss according to number of claims received

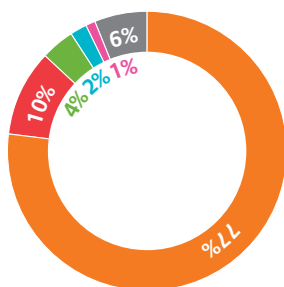
Impact of **collision/crash** accounts for almost a third of liability claims by number



Total number of claims analyzed 100,073. Top causes of liability loss expressed as a % of number of claims received. Other causes of loss account for 28% of number of claims. Causes of loss detailed above include awards for cases of bodily injury/death. Analysis does not include financial lines claims.

Top causes of liability loss per region (by value of claims)

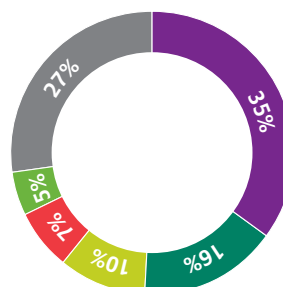
Africa



Human error	77%
Defective product/work	10%
Natural hazards	4%
Water/fire/smoke damage	2%
Property damage	1%
Other	6%

179 claims analyzed. Financial lines claims not included.

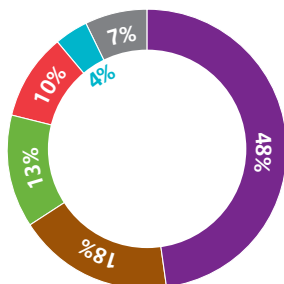
Americas



Collision/crash	35%
Slips/falls/falling objects	16%
Environmental damage	10%
Defective product/work	7%
Accidental nature/damage	5%
Other	27%

56,729 claims analyzed. Financial lines claims not included.

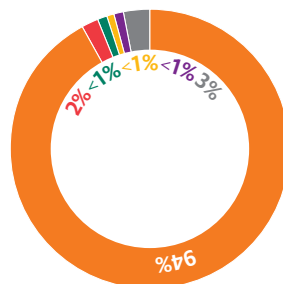
Asia



Collision/crash	48%
Natural hazards	18%
Accidental nature/damage	13%
Defective product/work	10%
Water/fire/smoke damage	4%
Other	7%

1,239 claims analyzed. Financial lines claims not included.

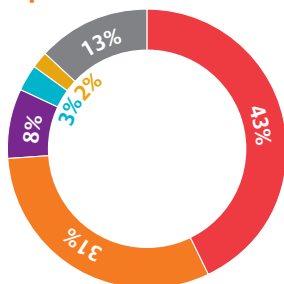
Australia & New Zealand



Human error	94%
Defective product/work	2%
Slips/falls/falling objects	<1%
Negligence/poor maintenance	<1%
Collision/crash	<1%
Other	3%

133 claims analyzed. Financial lines claims not included.

Europe



Defective product/work	43%
Human error	31%
Collision/crash	8%
Water/fire/smoke damage	3%
Vandalism/terrorism	2%
Other	13%

34,122 claims analyzed. Financial lines claims not included.

Human error incidents are the top cause of liability loss in the **Africa** and **Australia & New Zealand** regions, according to value of claims. While this loss category includes the impact of everyday employee errors, payments are significantly higher where incidents result in major losses such as aviation and shipping incidents or serious employee injury, for example.

Collision/crash incidents are the top cause of liability loss in the **Americas** and **Asia** regions, accounting for almost half of claims value in Asia (48%) and over a third of claims value in the Americas (35%), driven by automotive and aviation sector loss activity in particular.

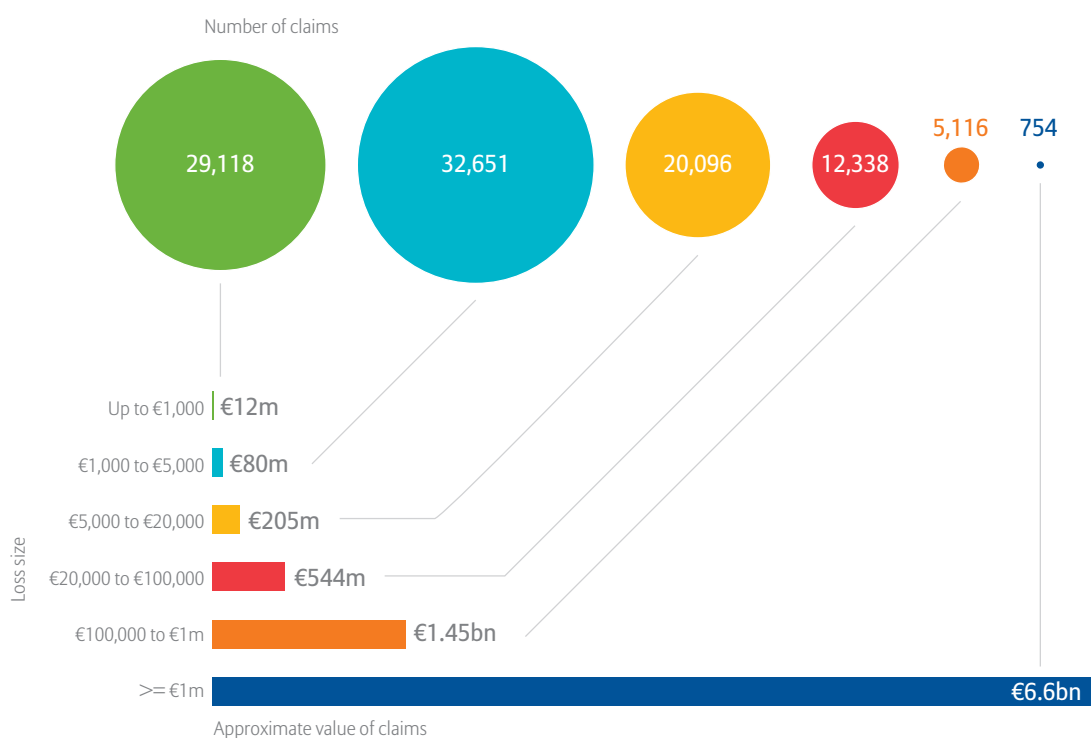
Defective product/work incidents, including costs associated with product recalls, are the main liability loss driver in **Europe**, accounting for over 40% of total claims value, with the automotive and engineering sectors being particularly impacted.

How the numbers stack up: distribution of liability claims payments

The **10** largest claims (very large events) account for approximately **34%** of the value of **all** claims analyzed (see *Scope of the Report*).

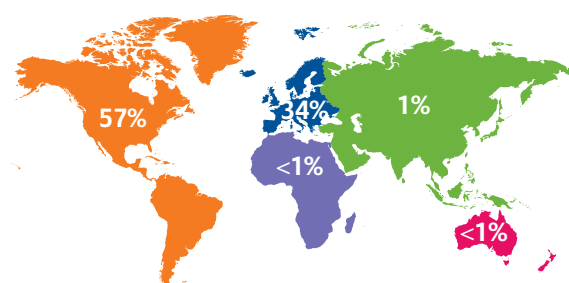
1% of liability claims by number account for **74%** of the total value of **all** claims.

62% of liability claims by number account for **1%** of the total value of **all** claims.



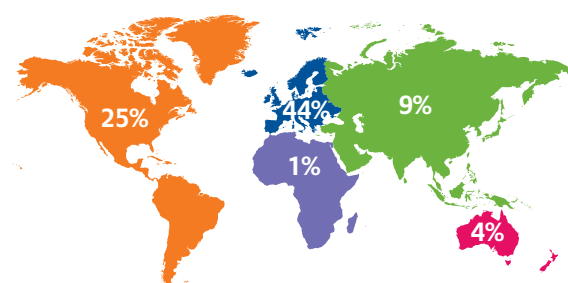
Total number of claims analyzed 100,073, worth approximately €8.85bn. Causes of loss detailed above include awards for cases of bodily injury/death. Analysis does not include financial lines claims.

Breakdown of liability losses per region (by number of claims)



Africa	<1%
Americas	57%
Asia	1%
Australia incl. New Zealand	<1%
Europe	34%

Breakdown of liability losses per region (by value of claims)



Europe	44%
Americas	25%
Asia	9%
Australia incl. New Zealand	4%
Africa	1%

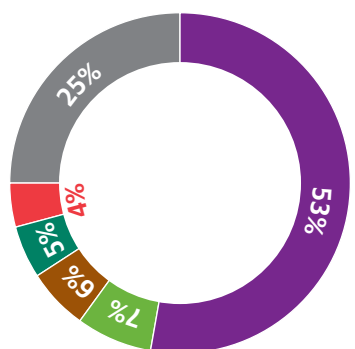
Total number of claims analyzed 100,073. Causes of loss detailed above include awards for cases of bodily injury/death. Analysis does not include financial lines claims.

The Americas region, driven by the US, continues to be the largest liability market in terms of number of claims generated, accounting for over half of all claims

analyzed. Today, liability loss activity is largely driven by the US and Europe. However, claims in Asia and Latin America in particular are likely to increase further in future.

Top causes of liability loss per line of business (by value of claims)

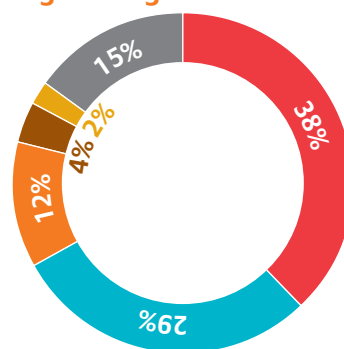
Aviation



Collision/crash	53%
Accidental nature/damage	7%
Natural hazards	6%
Slips/falls/falling objects	5%
Defective product/work	4%
Other	25%

8,770 claims analyzed.

Engineering



Defective product/work	38%
Water/fire/smoke damage	29%
Human error	12%
Natural hazards	4%
Vandalism/terrorism	2%
Other	15%

2,394 claims analyzed.

IN FOCUS:

Aviation

Unsurprisingly **collision/crash** is the top cause of liability loss, accounting for over half of the value of claims (53%). However, such incidents do not just include major commercial aviation incidents, they also incorporate such loss activity in the general aviation sector and ground handling incidents as well. Accidental nature/damage, natural hazards, slips/falls and impact of falling objects and defective product/work are the other leading causes of liability loss in the sector.

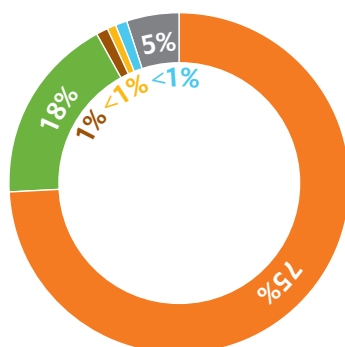
Engineering

Impact of **defective product/work** incidents is the top cause of liability loss in the sector, followed by damage caused to equipment and premises by water, fire and smoke. Together, these two top causes of loss account for over two thirds of claims according to value. Human error, natural hazards and vandalism/terrorism are the other top causes of loss, with human error generating the highest number of claims for insurers.

Mid-corporate

The mid-corporate line of business incorporates small- to mid-sized businesses across different industries. Impact of **collision/crash** incidents is the top cause of liability loss according to both value of claims and number of claims received, reflecting the large number of automotive incidents. Slips/falls and impact of falling objects accounts for over a third of claims according to value and around a quarter of all claims according to number. Food-related claims, including poisoning incidents, spills and accidents, are a major cause of liability loss in this line of business, reflecting the fact that it incorporates the hospitality sector.

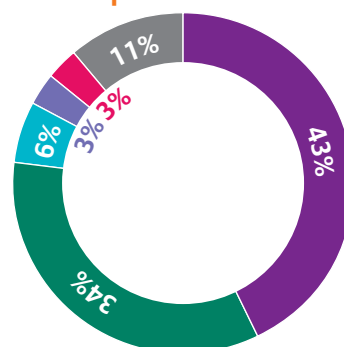
Marine



Human error	75%
Accidental nature/damage	18%
Natural hazards	1%
Negligence/poor maintenance	<1%
Failure to provide service	<1%
Other	5%

14,828 claims analyzed.

Mid-Corporate



Collision/crash	43%
Slips/falls/falling objects	34%
Water/fire/smoke damage	6%
Crime against persons/property	3%
Food-related (poisoning/spills/incidents)	3%
Other	11%

44,417 claims analyzed.

Mid-corporate includes small- to mid-sized businesses across different industries.

Marine

Human error has long been regarded as a major cause of incidents in the shipping sector. It is estimated that between 75% to 96% of marine accidents can be attributed to human error¹. Such incidents also rank as the top cause of liability loss, driven by the high costs that can be associated with the impact of a major event, such as wreck removal (which is becoming more complex and expensive, primarily due to larger ships and environmental concerns), passenger and crew liabilities and pollution and litigation costs, for example. The **Costa Concordia** and **MV Rena** groundings are two well-documented incidents caused by human error² which have resulted in significant liability losses over the past five years.

Crew negligence and inadequate vessel maintenance are potentially increasing areas of risk in the current tough economic shipping environment, particularly if shipowners opt to recruit crew with less experience and

fewer qualifications/training in order to save money or choose to stretch maintenance work to the longest possible intervals. **Negligence/poor maintenance** is already one of the top causes of liability loss in the sector, so vigorous inspection and maintenance regimes are crucial. Obtaining buy-in from all levels of the workforce is important in creating a transparent and effective mechanism for reporting accidents and other potential areas of concern, learning lessons and, ultimately, implementing preventative measures as a result.

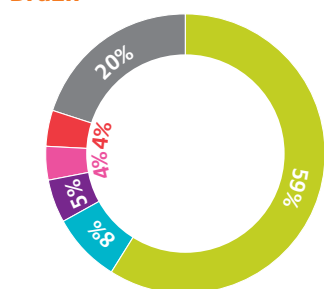
Other major causes of liability loss include: crew injuries, subsequent loss of income and expenses such as medical costs; damages to cargo while engaged in handling activities; leaks at port terminals resulting in environmental damages; vessel collisions leading to pollution spills; and accidental damage to key infrastructure, such as natural gas pipes, for example.

¹ Safety & Shipping 1912-2012 From Titanic to Costa Concordia, Allianz Global Corporate & Specialty

² Cruise ship owners admit 'human error', BBC, January 16, 2012. Two jailed over New Zealand Rena ship disaster, BBC, May 25, 2012

Top causes of liability loss per (selected) countries (by value of claims)

Brazil



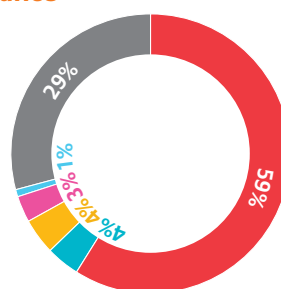
When **environmental damage** incidents occur they can be costly, accounting for over half the value of all liability claims analyzed.

Average liability claim value: **€219,651**

Environmental damage	59%
Water/fire/smoke damage	8%
Collision/crash	5%
Property damage	4%
Defective product/work	4%
Other	20%

1,059 claims analyzed. Financial lines claims not included.

France



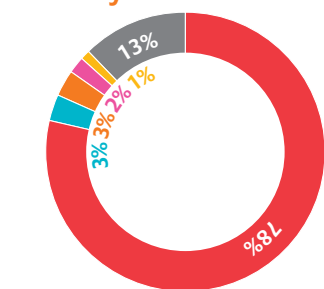
Defective product or work resulting in recalls or injury is the top cause of liability loss according to both value and number of claims received.

Average liability claim value: **€27,380**

Defective product/work	59%
Water/fire/smoke damage	4%
Negligence/poor maintenance	4%
Property damage	3%
Failure to provide service	1%
Other	29%

10,899 claims analyzed. Financial lines claims not included.

Germany



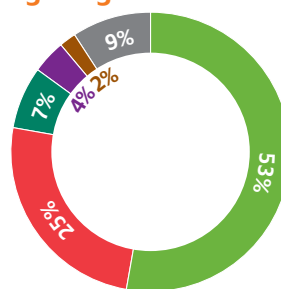
Claims from **defective product/work** are high in volume and value.

Average liability claim value: **€163,135**

Defective product/work	78%
Water/fire/smoke damage	3%
Human error	3%
Property damage	2%
Negligence/poor maintenance	1%
Other	13%

9,369 claims analyzed. Financial lines claims not included.

Hong Kong

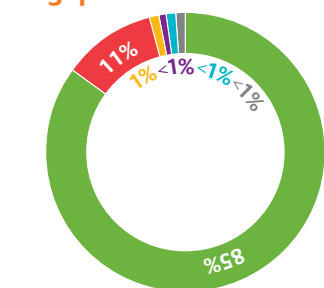


Acts of an **accidental nature**, resulting in damaged property or equipment, for example, account for over half of the value of all claims.

Accidental nature/damage	53%
Defective product/work	25%
Slips/falls/falling objects	7%
Collision/crash	4%
Natural hazards	2%
Other	9%

116 claims analyzed. Financial lines claims not included.

Singapore

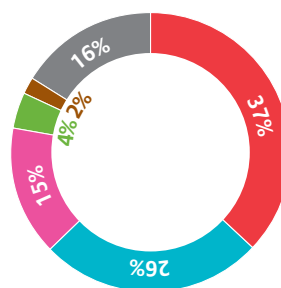


Acts of an **accidental nature/damage** are the top driver of claims activity with a number of incidents occurring in the aviation and shipping sectors.

Accidental nature/damage	85%
Defective product/work	11%
Negligence/poor maintenance	1%
Collision/crash	<1%
Water/fire/smoke damage	<1%
Other	<1%

50 claims analyzed. Financial lines claims not included.

South Africa

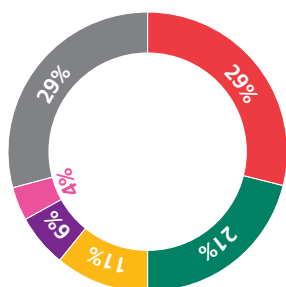


Defective product/work accounts for over a third of liability claims according to value.

Defective product/work	37%
Water/fire/smoke damage	26%
Property damage	15%
Accidental nature/damage	4%
Natural hazards	2%
Other	16%

106 claims analyzed. Financial lines claims not included.

Spain



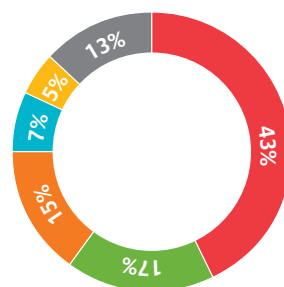
Defective product/work	29%
Slips/falls/falling objects	21%
Negligence/poor maintenance	11%
Collision/crash	6%
Property damage	4%
Other	29%

Slips, falls and falling objects are responsible for the highest number of claims. However, **defective product/work** incidents generate the highest value claims.

Average liability claim value: **€16,229**

3,874 claims analyzed. Financial lines claims not included.

UK



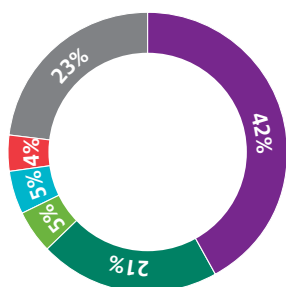
Defective product/work	43%
Accidental nature/damage	17%
Human error	15%
Water/fire/smoke damage	7%
Negligence/poor maintenance	5%
Other	13%

Defective product/work, acts of an **accidental nature/damage**, and **human error** account for 75% of all claims by value.

Average liability claim value: **€116,333**

1,924 claims analyzed. Financial lines claims not included.

USA



Collision/crash	42%
Slips/falls/falling objects	21%
Accidental nature/damage	5%
Water/fire/smoke damage	5%
Defective product/work	4%
Other	23%

Impact of **collision/crash**, particularly motor-related, is the main driver of loss activity in the US. **Slips/falls/falling objects** is the second top cause of loss.

Average liability claim value: **€32,017***

*Including claims from small-to-mid-sized businesses, which reduces the size of the average claim value.

52,361 claims analyzed. Financial lines claims not included.

Key Statistics: Analysis includes Allianz Global Corporate & Specialty claims and those from other insurers

Total number of claims analyzed: **100,073**

Total value of claims analyzed: **€8.85bn**

Average claim value: **€88,408**

Median claim value: **€2,712**

Countries in which claims arose: **100+**

Claims >€1m: **754**

Average Euros paid per day (all insurers): **€4.3m**

Average Euros paid per day (AGCS only): **€1.6m**

Methodology: AGCS has analyzed 100,073 claims from 100+ countries with a total value of more than €8.85bn, recorded for the years 2011 to 2016 (September 13). All claims figures quoted are 100% of the total claim (e.g. not only the AGCS share of the claim, but includes the share of coinsurers as well). Financial lines claims are not included in this analysis. While the losses analyzed are not representative of the industry as a whole they give a strong indication of the major risks which dominate liability insurance.

Unusual liability claims

From rutting deer to strutting peacocks – when animals attack...



1. Deer

1,090 claims

Liability losses can range from everyday occurrences to the major disaster events which make global headlines. However, they can also incorporate more unusual events as well. For example, almost 2% of liability claims analyzed involve incidents with animals...

When an American Airlines flight bound for Mississippi from Charlotte declared an emergency after colliding with a deer during take-off in February 2017¹ it provided further evidence of why deer can be particularly dangerous animals (*see below*) for both members of the public and insurers.

Although none of the passengers were injured in the collision, with the plane able to land safely on this occasion, according to AGCS analysis of liability claims, **deer incidents** (particularly involving collisions with cars) are already a notable cause of loss. On average they can cost in excess of **€4,000 (\$4,225)** and account for over half of all animal-related liability claims received by insurers. The peak period for incidents (and claims) in the US is during October and November each year – otherwise known as the rutting season, which is when deer are engaging in fierce mating battles.



2. Bedbugs

397 claims



3. Insects

147 claims



4. Dogs

114 claims



5. Cattle

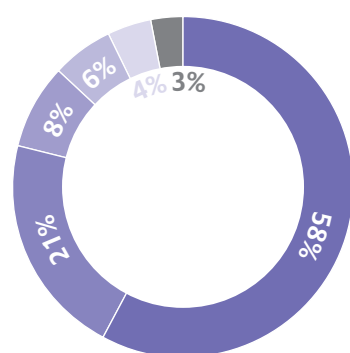
82 claims

Bedbug/insect incidents account for almost 30% of liability related claims received by insurers, with the number of bedbug incidents in particular on the rise in the US. According to the Bedbug Registry, a nationwide database of bedbug reports and complaints, bedbug sightings in New York hotels alone jumped more than 44% between 2014 and 2015 and this trend is reflected more widely in the insurance claims analysis, which reveals a gradual increase in the number of related claims received over the past five years. While bed bugs are found year-round, infestations and incidents peak during the warmer months of the year (April to August). The number of claims received in May for example is over double that received in February.

Other unusual animal-related liability claims include one from a hotel guest whose room was invaded by a flying squirrel, another hotel guest whose hearing aid and slippers were destroyed by a rodent, while at least two members of the public have been attacked by aggressive peacocks...

¹ Plane collides with deer in Charlotte, N.C, CBS News, February 15, 2017

Top 5 animal-related causes of liability loss (according to number of claims)

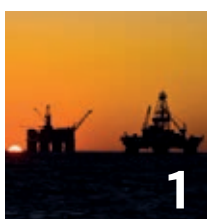


- 1 Deer incidents – collision with vehicles etc. 58%
- 2 Bedbug bites/infestation 21%
- 3 Insects bites/infestation 8%
- 4 Dog 6%
- 5 Cattle 4%
- Other 3%

Total number of claims analyzed 1,880. Top causes of loss expressed as a % of number of claims received. US claims only.
Source: Allianz Global Corporate & Specialty.

Liability claims trends

AGCS experts examine **10 emerging developments** in liability insurance



Large liability claims becoming more expensive ► 19



Environmental claims increasing ► 20



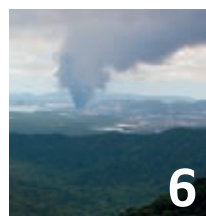
Large industrial claims potential materializing in Latin America ► 21



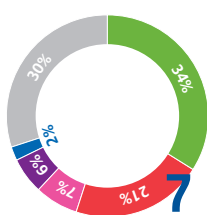
More challenging product liability and recall incident environment ► 22



Liability on the rise outside of the US ► 23



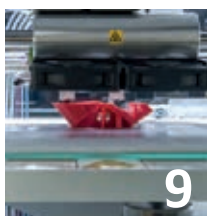
Global class actions to become more significant ► 25



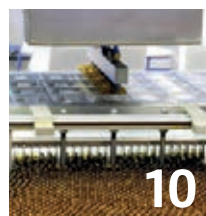
Overseas liability exposures growing for new global giants ► 26



Fewer accidents, but general liability increases globally ► 27



Technology to drive big shifts in liability claims ► 29



Impact of increasingly technical nature of claims, talent issues and innovative tools ► 31



The largest corporate liability loss of recent times was the 2010 Deepwater Horizon explosion and oil spill.

Photo: iStock

1. Large liability claims becoming more expensive

Worldwide, the potential for large liability insurance claims has been increasing. From industrial accidents and pollution events to product recalls and corporate liability, large claims are becoming more expensive, complex and international, with activity increasing outside of the US.

“While we have not necessarily seen an increase in the frequency of large liability claims, those that are filed are typically now more complex and with a higher spend than in the past,” says **Larry Crotser, Head of AGCS Chief Claims Office, North America**.

“This can be seen in the cost of product liability claims, which have been rising, while we now also see a far bigger impact from environmental liability claims,” he adds.

While personal injury claims – such as road traffic accidents, slips and trips and accidents at work – account for the lion’s share of liability claims by frequency (see page 9), commercial liability claims account for the largest claims by value.

Although recent years have seen a noticeable rise in large environmental liability claims, pharmaceutical and automotive product liability and product defect/recall are the main drivers for large liability claims globally.

The rise of catastrophic and systemic casualty losses

Although rare, large corporate liability cases can be catastrophic in scale, involving multiple jurisdictions, large numbers of claimants and other interested parties.

A 2015 study by insurance broker Aon identified 86 corporate liability losses in excess of \$1bn since 1989. Some 57 of these losses were in excess of \$2bn and 13 over \$10bn, mostly from pollution incidents and regulatory actions¹.

The largest corporate liability loss in recent times was the 2010 **Deepwater Horizon** explosion and oil spill which looks set to cost energy company BP a total of \$61.6bn², covering multiple liability settlements with federal and state authorities, shareholders, property owners and consumers.

The emissions testing issues in the automotive industry are an example of just how complex liability losses can become. Allegations of emissions testing cheating have given rise to a number of multi-jurisdictional regulatory investigations and litigation for car maker Volkswagen and its directors.

In October 2016, Volkswagen agreed to a \$15bn settlement with a group of US federal and state regulators covering some 475,000 vehicle owners in the US. In December 2016, it agreed to a further \$1bn settlement to fix or buy back another 80,000 diesel vehicles sold in the US.³

While very large liability losses can impact individual companies, they also can trigger systemic risks that affect many companies within a given sector.

The banking sector, and more recently the automotive sector, have both been subject to such large and complex liability events, which have involved huge settlements with regulators, investors and consumers.

Since the financial crisis, breaches of trade sanctions and conduct issues have led to large settlements for financial services companies in the US, while bribery and corruption and cartel allegations have resulted in large financial penalties in Germany.

In the UK, the mis-selling of payment protection insurance (PPI) has cost banks over \$50bn (£40bn) in compensation payments and regulatory fines as of 2016.⁴

¹ Global Insurance Market Opportunities, Tenth edition, 2015, Aon

² BP says total Gulf spill bill \$61.6bn, July 14, 2016, BBC

³ VW agrees further \$1bn settlement deal over emissions scandal, December 20, 2016, The Guardian

⁴ The top 10 retail banking scandals, New City Agenda



The town of Bento Rodrigues in Brazil following the collapse of a nearby tailings dam.

Photo: Wikimedia Commons

2. Environmental claims increasing

Over the past five years insurers have experienced a significant increase in large environmental liability claims from the mining and construction sectors, in particular from **Latin America**.

For example, one of the largest losses of 2015 involved the breach of an iron ore tailings dam at the Samarco mine in Bento Rodrigues, Brazil. One of the country's largest ever environmental disasters, it resulted in 19 deaths, as well as extensive pollution and property damage. More than 700 people were left homeless by the disaster.

Samarco and its owners (the mine is a joint venture between Vale and BHP Billiton) have agreed to settle a \$48bn compensation claim from federal prosecutors by June 2017. In addition, the two mining companies reached a settlement with Brazilian authorities of at least \$2.6bn to cover clean-up costs and compensation.¹

While there have been environmental liability losses in Brazil in the past, they have not been of the magnitude of the Bento Rodrigues dam disaster, which was unprecedented in terms of its size and cost, explains **Tiago Santos Badin, Claims Manager, AGCS Brazil**.

"There has been a significant increase in environmental exposure and claims in Brazil as environmental laws have been clarified and as the regulator has become more aggressive," he says.

Recent years have seen other costly environmental disasters, including personal injury and property damage claims in **Australia** following bushfires and floods. In **Peru**, a number of separate oil pipeline spills have polluted rivers in the Amazon basin and affected indigenous communities. Meanwhile, flooding of a construction site in **Chile** has also generated a multi-million dollar claim. Large environmental claims can be complex, costly and take a long time to settle, whether they are in the US, Europe or emerging markets, according to Crotser. "Large pollution liability claims are now among some of the largest claims that we have seen in the past five years," he says.

However, **Peter Oenning, Global Head of Claims Liability, AGCS**, notes that environmental liability claims can be particularly challenging in emerging markets. "They can be complex and difficult to deal with, given cultural differences, language and legal systems that may be less predictable than courts in the US and Europe," he says.

¹ BHP and Vale agree deadline to settle \$48bn disaster claim, Financial Times January 19, 2017

3. Large industrial claims potential materializing in Latin America

The Bento Rodrigues dam disaster also demonstrates the increasing potential for large industrial liability claims in emerging markets.

For example, in Brazil, economic activity is increasingly concentrated in single locations – such as ports and industrial zones – and with the expansion of national companies into overseas markets. At the same time Brazilian companies are buying more liability insurance. “The potential for large claims in Brazil is growing and we do see large claims getting larger. Exposures are increasing. Today, the insurance market is offering a much greater range of specialist coverages than it has in the past. Liability policies are generally much broader,” says Santos Badin.

The potential for large complex industrial liability losses was also highlighted by the April 2, 2015 fire at a fuel storage terminal at Brazil’s Port of Santos, one of Latin America’s largest transit hubs.

The fire and explosions at the Ultracargo liquid bulk terminal in Alemoa, Brazil, disrupted operations at the nearby Brazil Terminal Portuario and forced several vessels to divert. In addition to material damage, the fire also caused substantial disruption to port facilities and nearby businesses, with loss of access and pollution-related losses.

“The fire and explosion at the port, the biggest in Brazil, caused significant damage to third parties, both property damage and business interruption. The incident shows the potential for a large loss in Latin America where multiple third parties are located close together and where multiple policies are triggered,” says Santos Badin.



The potential for large complex industrial liability losses was highlighted by a fire at a refinery next to the Port of Santos in April 2015.

Photo: Will Rodrigues/Shutterstock

\$5bn+

Estimated cost of Samsung Galaxy Note 7 smartphone recall to date following battery issues²



Food recalls rising

The food and beverage industry is particularly exposed to recalls. In the US recalls rose 12% to 246 during Q4 2016 – the highest since Q1 2010 – with bacterial contamination the major cause. In Europe the number of recalls/notifications in Q4, 2016 also increased by 12% to 787 – the highest for two years⁸. Growing supply chains, tightening of safety regulations and faster dissemination of information are all factors in the increasing number of incidents, which can have a devastating impact on a company's reputation. However, if a recall is professionally managed it can help to minimize damage. Contaminated products insurance can protect businesses against financial losses resulting from the recall of a product following either accidental or malicious contamination.

4. More challenging product liability and recall incident environment

With complex global supply chains and large numbers of products and suppliers being concentrated on a smaller number of larger companies, product liability and recall claims have been becoming larger and more challenging to settle.

For example, US automotive recalls have hit a record high for the past three years in a row, culminating in the recall of around 53.2m vehicles in 2016¹.

One of the major cases which has dominated the headlines is the massive recall of potentially faulty airbags made by Japanese manufacturer Takata. According to the National Highway Traffic Safety Administration (NHTSA), some 42m vehicles will be affected, impacting 19 automakers to date³. The corporation has agreed to plead guilty to criminal wrongdoing and pay approximately \$1bn to resolve a US Justice Department investigation into ruptures of its airbag inflators⁴.

"Product recalls in the automotive sector are getting bigger with a renewed focus on safety by regulators and with attempts to bring down the number of motor deaths," says Crotser.

This upwards trend is mirrored across Europe. According to Stericycle Expert Solutions the total number of automotive recall events in 2016 was 415, a jump of 76% over 2015 and the highest total recorded since the European Union's rapid alert system (RAPEX), which warns about non-food products that pose a risk to health and safety, began. Unsurprisingly, the top country for auto recalls was Germany, given the emissions testing issues experienced in the sector.

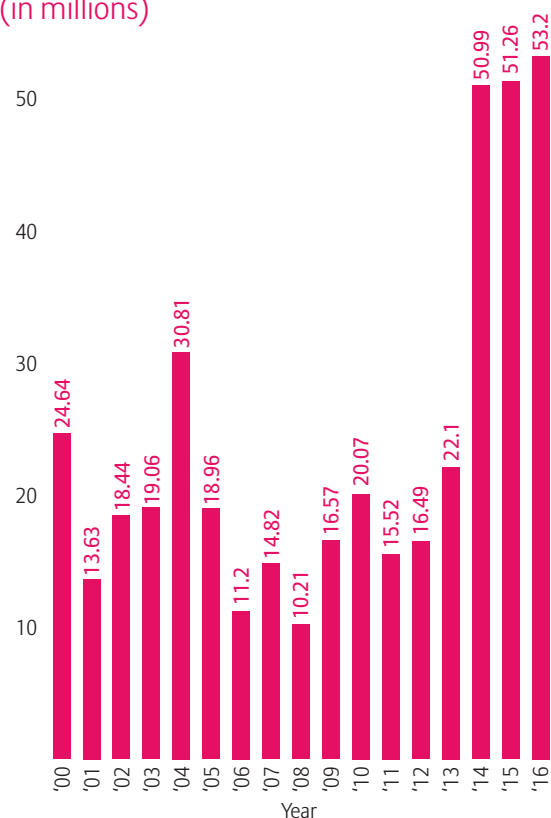
Meanwhile, pharmaceutical liability and recalls also continue to generate large claims. For example, the US has seen a rise in claims against pharmaceutical companies over suspected links between talcum powder and ovarian cancer, as well as a potential source of asbestos. In three separate cases during 2016, juries awarded \$72m, \$55m and \$71m respectively to plaintiffs in talcum powder cases tried in Missouri. As of October 2016, there were believed to be around 1,700 similar lawsuits in state and federal courts⁵.

"Generally the number of recalls has been steadily rising with increased focus on product and workplace safety, as well as more proactive regulation," says Crotser.

With an increasing proportion of goods now manufactured in Asia, product liability claims have become a significant driver for large liability claims from China.

In 2015, China accounted for 2,124 product recall cases in the US, followed by US companies at 685.⁶ China accounted for 62% of the product safety alerts issued by the European Union in 2015.⁷

Number of annual vehicle recalls in the US (in millions)



Auto recall numbers have been increasing over time and hit a record high in 2016

Source: National Highway Traffic Safety Administration.
Graphic: Allianz Global Corporate & Specialty

- ¹ US auto recalls hit record high 53.2 million in 2016, Reuters, Friday March 10, 2017
- ² Samsung says Galaxy Note 7 recall to cost at least \$5.3bn, thestar.com, October 14, 2016
- ³ www.nhtsa.gov, National Highway Traffic Safety Administration
- ⁴ Takata pleads guilty, pays \$1bn fine in US exploding airbags fine, Financial Times, January 13, 2017
- ⁵ J&J Loses Third Trial Over Cancer Link to Talcum Powder, Bloomberg, October 27, 2016
- ⁶ Consumer Product Safety Commission
- ⁷ Toys and Clothing Top The List of Dangerous Products Detected in 2015, European Commission
- ⁸ Stericycle Recall & Notification Index Q4, 2016

5. Liability on the rise outside of the US

The US continues to be the world's largest liability market. It is the country that generates both the highest number of claims (*see page 11*), and the largest claims according to value. However, a number of trends have converged in recent years that should see international markets account for an increasing proportion of the global liability market.

Liability claims in the US have stabilized somewhat in recent years, as past tort reforms have helped curtail the more frivolous litigation, with a general trend towards fewer everyday liability claims.

US litigation trends have been fairly consistent in recent years, in terms of frequency and costs, according to data from NERA Economic Consulting. It found that the number of securities class actions and the median settlement values have remained stable over the past five years¹, although it noted that during 2016 the pace of securities class action filings was the highest since the aftermath of the 2000 dot-com crash. However, there were also a record number of dismissals, coupled with a settlement rate that remains close to an-time low.² Outside the US, however, liability claims are increasing, particularly in emerging markets, but also in some parts of Europe.

"We do see a trend towards greater liability claims outside the US with increased awareness of consumer rights and compensation in Asia and Europe," says Oenning.

"For example, in Asia, we see far greater awareness among consumers of compensation in China, Singapore and Japan. While in Europe, the highest awards for pain and suffering in Germany a decade ago were around **€300,000**, now they can be around **€500,000** and above," he adds.

Increases in US legal costs have been largely steady-to-moderate since 2013. But in many countries outside the US, including parts of Europe and Asia, there is a clear trend towards higher legal costs, according to Oenning.

"There is a feeling that non-US liability will become more relevant as the percentage of claims in the US reduces, with increases in the Asia region (*see page 24*) and other emerging markets," he says.



There is growing awareness of consumer rights and compensation in traditionally non-litigious countries, such as Japan.

Photo: Shutterstock

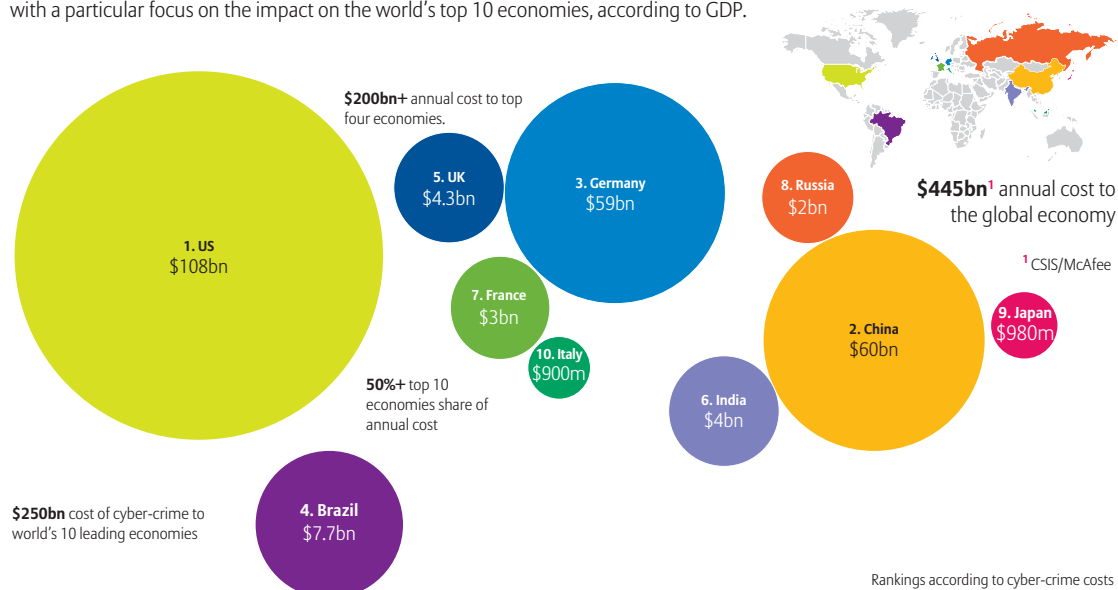
¹ Recent Trends in Securities Class Action Litigation, 2015 Full-Year Review, NERA Economic Consulting

² Recent Trends in Securities Class Action Litigation, 2016 Full-Year Review, NERA Economic Consulting

How much does **cyber-crime** cost the world's leading 10 economies?

2015

This **AGCS** atlas examines the estimated total cost to the global economy from cyber-crime per year, with a particular focus on the impact on the world's top 10 economies, according to GDP.



Country Ranking by GDP ¹		Cyber-crime as a % of GDP ²	Estimated cost ³	Country Ranking by GDP ¹		Cyber-crime as a % of GDP ²	Estimated cost ³
1	US	\$16.8trn	.64%	\$108bn	6	UK	\$2.7trn
2	China	\$9.5trn	.63%	\$60bn	7	Brazil	\$2.4trn
3	Japan	\$4.9trn	.02%	\$980m	8	Russia	\$2.1trn
4	Germany	\$3.7trn	1.60%	\$59bn	9	Italy	\$2.1trn
5	France	\$2.8trn	.11%	\$3bn	10	India	\$1.9trn
						.21%	\$4bn

Sources: ¹World Bank (2013) ²Net Losses: Estimating the Global Cost of Cyber-Crime, CSIS/McAfee ³Allianz Global Corporate & Specialty

China to see growth in cyber and environmental liability claims

Liability claims for specialist insurance, such as cyber risk and environmental liability, are expected to increase in Asia.

"Insurance products like cyber and crisis management will be purchased more and more by Chinese and Hong Kong companies, and therefore we expect to see more claims from these new lines of business in coming years," says **Patsy Wong, Head of Long Tail Claims Hong Kong & Greater China, AGCS**. It has been estimated that cyber-crime already costs the Chinese economy around \$60bn a year¹.

Meanwhile, environmental liabilities are increasing in China with the Chinese insurance regulator and the Ministry of Environmental Protection stepping up plans to introduce compulsory pollution liability insurance, which could cover such risks posed by heavy industry and the metals, textiles and chemical sectors.

"Market education in such new areas of liability are important in Asia. AGCS has launched an environmental liability product in China but the market still lacks awareness of the risk. Increasing the penetration is the next area to work on, while claims experience should help increase further awareness," says Wong.

¹ A Guide to Cyber Risk: Managing the Impact of Increasing Interconnectivity, Allianz Global Corporate & Specialty



Brazil is one of an increasing number of countries across Latin America that have some form of collective redress.

Photo: Shutterstock

6. Global class actions to become more significant

What is litigation funding?

Where a third party provides the financial resources to enable costly litigation or arbitration cases to proceed in return for a share of the proceeds.

Class actions by consumers and investors remain a largely US affair, but collective redress has taken on a more international dimension in recent years. A growing number of countries now allow for collective action, while foreign companies are increasingly being sued in the US (*see page 26*).

Recent years have seen a notable increase in shareholder actions outside the US, including Europe, Australia and Canada. Securities class action exposures in Australia are now second only to those of the US.

Brazil, Colombia, Mexico, Argentina, Chile and Venezuela all have some form of collective redress. And while class actions are still very limited in Europe, a number of countries have introduced legislation that allow for some form of collective redress for consumers and investors.

“Legal frameworks that enable forms of collective redress now exist in the Netherlands, Italy and other European countries. On a daily basis this has yet to have the kind of impact seen in the US, but it could become more significant in the future,” says Oenning.

While still in the early days, there have been some notable uses for collective redress in Europe. In March 2016, Dutch bank Fortis agreed to a \$1.2bn settlement with investors under Dutch collective settlement procedures. Investors in Volkswagen have also looked to use collective redress legislation in the Netherlands and Germany to bring claims for losses related to emissions testing.

The UK is also seeing investors test legislation that allows for some limited form of collective address. In October 2016, investors in Tesco filed a financial misrepresentation claim against the retailer in the UK.

Meanwhile, the influence of third party litigation funders is changing the global litigation map, with this form of opportunistic funding pivotal in the development of collective actions against financial institutions and commercial entities and their directors and officers. These litigation funders are actively seeking out new jurisdictions and such activity is expected to increase.

7. Overseas liability exposures growing for new global giants

Both Latin American and Asian companies increasingly face overseas liability exposures, whether it's investor-led litigation in the US or product liability claims in North America and Europe.

Directors and officers (D&O) (see below) and product liability incidents are the main drivers behind large liability claims in Asia, where companies are increasingly exposed to more litigious and regulated overseas markets like in the US, Australia and Europe.

For example, an increasing number of Chinese companies have listed on the New York Stock Exchange over the past decade, but this has brought greater regulatory scrutiny and an increased liability exposure. Over the past five years there has been a significant up-tick in the number of Chinese companies caught up in US securities class actions. In 2015, Chinese companies accounted for around half of all class actions involving foreign companies in the US, with many cases focusing on cultural differences around governance and accounting.

In particular, securities claims against Chinese companies listed in the US were among the highest severity liability claims. Such claims are typically large and expensive. In 2015, more than 50% of the settlements were under \$10m, although a handful of claims have been in excess of \$1bn in the past decade, according to AGCS' Wong.

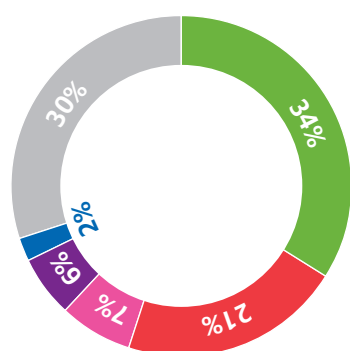
As with other parts of the world, there have been moves in Asia to make companies and individuals more accountable. Regulators in Hong Kong are now much more likely to carry out an investigation requiring costly defense that might lead to enforcement action and penalties.

"For financial lines and D&O we have seen a tendency for claims for regulatory investigations, which are a significant driver for both frequency and severity of claims. This is a trend we expect will continue through 2017," says Wong.

Meanwhile, Brazilian companies are also increasingly facing the prospect of liabilities overseas. For example, a number of companies face investor class actions in the US, including those for environmental disasters, tax liabilities and bribery and corruption allegations.

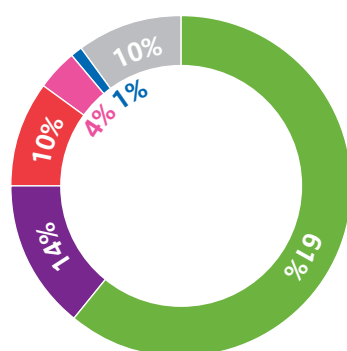
Top Causes of Losses for Directors' and Officers' (D&O)

D&O claims (by number)



Non-compliance with laws and regulations	34%
Negligence	21%
Maladministration/lack of controls	7%
Breach trust/fiduciary duty	6%
Inadequate/inaccurate disclosure	2%
Other	30%

D&O claims (by value)



Non-compliance with laws and regulations	61%
Breach trust/fiduciary duty	14%
Negligence	10%
Maladministration/lack of controls	4%
Inadequate/inaccurate disclosure	1%
Other	10%

Source: D&O Insurance Insights – Management liability today: What executives need to know, Allianz Global Corporate & Specialty. Data based on accident years 2011 to mid-year 2016. AGCS analyzed 576 claims from 49 countries. All claims figures quoted are 100% (not only the AGCS share but including coinsurers' shares).

In May 2016, investors filed a class action suit in the US against Brazilian steel company Gerdau SA alleging the company issued materially misleading business information filed to investors over tax liabilities. Several Brazilian companies caught up in the Operação Lava Jato (**Operation Car Wash**) investigation, including state-owned oil company, Petrobras, have also been the subject of US securities class actions ¹.

"As Brazilian companies have become more global we are seeing greater foreign liability exposures and more liability claims from overseas," says Santos Badin.

Both Brazilian and Chinese companies are now buying more cross border liability insurance programs and are looking to insurers to help manage liability claims across their global operations.

"The increase in international claims is a challenge for Asian companies and their insurers with regards to claims handling. For claims against China, Taiwan or Hong Kong-based companies in the US and Europe we have to leverage our global network and increase co-operation between our offices," says Wong.

¹ Yet Another Brazilian Company Hit with US Securities Suit, The D&O Diary, August 10, 2016

8. Fewer accidents, but general liability increases globally

In both Europe and the US, high frequency claims like slips and trips and workplace accidents have been reducing with more stringent safety regulations and better risk management, as well as a shift away from heavy industry in favor of services.

“Overall, we see no real tendency for an increase in frequency of liability claims in the US, and while loss costs have risen in some areas, this has not been an extreme increase,” says Crotser.

Big increases in vehicle safety have significantly reduced road traffic accident injuries over recent decades. For example, deaths from road traffic accidents in the UK reduced by 46% between 2005 and 2015, according to government statistics, while the number of serious injuries was down 24%.¹

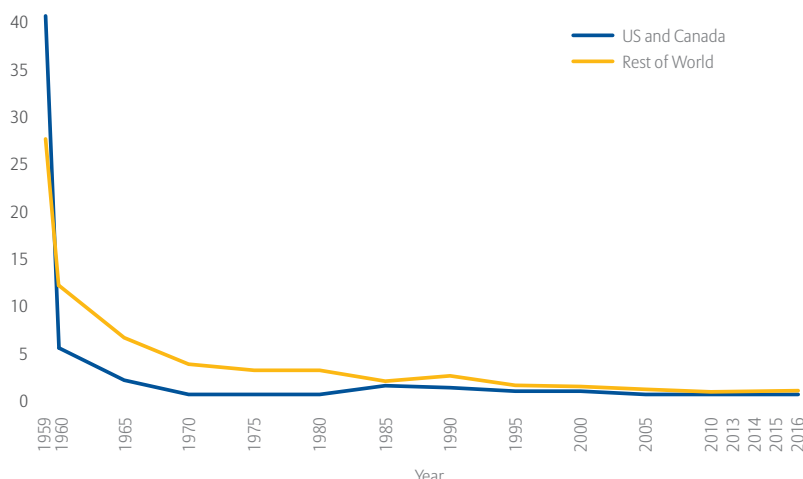
In the US, road traffic fatalities have also been decreasing for the past two decades – they have fallen from a 1972 peak of around 54,589 to around 35,000 in 2015.²

Air travel is another area where accident rates have fallen dramatically with improvements in risk management, technology and safety. Fatal accidents have fallen every decade since the 1950s, despite massive growth in air travel. In 1959, there were 40 fatal accidents per one million aircraft departures in the US, falling to around 0.1 per million today.³

Overall, improvements in risk management have significantly improved the workplace safety environment in many western countries in particular. For example, in the last 20 years there has been a downward trend in workplace fatalities in the UK, from just over one fatal injury per 100,000 workers to around 0.4.⁴

“Take the food packing industry. It would once have been common to see machinery related claims for injuries to workers’ hands and fingers, but this has reduced significantly as machines have become much safer,” says Crotser.

Worldwide annual fatal accident rates per million departures



Air travel is another area where accident rates have fallen dramatically. In 1959, there were 40 fatal accidents per one million aircraft departures in the US, falling to around 0.1 per million today

Sources: Boeing; Global Aviation Safety Study, Allianz Global Corporate & Specialty

¹ Reported road casualties, Great Britain 2015, Department for Transport

² National Highway Traffic Safety Administration

³ Global Aviation Safety Study, Allianz Global Corporate & Specialty

⁴ Statistics on fatal injuries in the workplace in Great Britain 2016, Health and Safety Executive

This trend is also borne out by a corresponding reduction in product claims against packing machinery manufacturers, many of which were in Germany, according to Oenning.

While the frequency of personal injury claims has been trending down in the US and Europe, everyday claims in what were once the emerging markets are increasing with economic development.

Generally speaking, liability claims have been increasing over the past five years in Latin America, with increased insurance penetration and with greater awareness of compensation among consumers, according to Santos Badin.

“There is an increasing tendency for a higher frequency of liability claims in Latin America from general, employers and product liability. Third parties are now more likely to bring a claim while people are more aware that they can claim for damages,” he says.

“At the same time knowledge of insurance has increased and companies are more likely to claim from their insurance,” he adds.

The picture is similar in Asia, where, broadly speaking, personal injury claims have been increasing as consumers become more inclined to seek compensation from insurance.

“For general liability we see claimants becoming more litigious and with a tendency to make a claim. The market has been changing with increased customer awareness of their rights and with increased knowledge,” says Wong.

Over the years, governments in Asia have strengthened the rights of consumers and investors, and made it easier to claim compensation in a range of areas, such as bodily injury, environmental and product liability.



Big improvements in vehicle safety have significantly reduced road traffic accident injuries in recent decades.

Photo: Shutterstock

9. Technology to drive big shifts in liability claims

Technology is likely to be a major driver of liability claims in coming years. Broadly speaking, the frequency of claims is expected to reduce although liability is likely to shift, with potentially increased liability for manufacturers and growing cyber liabilities.

For example, so-called smart factories should see fewer claims for workplace accidents while driverless cars are expected to bring about a dramatic reduction in accident rates over time, given 90%+ of accidents are currently believed to be caused by human error¹ But automation is likely to lead to increased product liability for machinery manufacturers, component manufacturers and software providers.

Autonomous driving will have a big effect, believes Oenning.

“The technology has really developed and the first autonomous cars are likely to hit the streets around 2020, after which we expect the percentage of autonomous cars on the roads to increase significantly. As a result, accident rates are expected to reduce, but we will see a shift in liability away from drivers to manufacturers,” he says. Technology is also changing existing business models and supply chains, disrupting well established lines of liability. For example, the US Food & Drug Administration (FDA) approved the first 3D-printed drug in 2016, an anti-seizure drug for epilepsy. The move introduces new liabilities to the traditional pharmaceutical supply chain model, expanding liability beyond doctors and pharmacists to include device manufacturers and software providers.

The growing “**sharing economy**” also raises new questions for liability. Liability in the sharing economy is likely to become more complex and potentially more challenging to apportion. For example, a road traffic accident involving an autonomous car share vehicle could involve the vehicle manufacturer, software provider and the fleet operator, as well as third parties involved in the accident.

The increasing digitalization of society and business also creates new liabilities, such as personal data and privacy exposures, as well as liabilities around business interruption, cyber security, directors and officers and product liability.

“Cyber claims are becoming more relevant. This is a huge area of growth for insurers,” says Oenning.

According to the **2017 Allianz Risk Barometer**, cyber risk now features in the top three corporate risks overall and exposures are increasing. Companies are worried about the growing sophistication of attacks but many still underestimate the impact of technical IT failure, human error or even rogue employees, which can also result in costly damages. Meanwhile, data protection rules are becoming increasingly tough as government agencies around the world bolster cyber security. This significantly impacts businesses as penalties for non-compliance can be severe. For example, the introduction of tough EU data protections laws in 2018 will increase a company’s liabilities for data breaches or personal misuse in Europe. Fines for breaching the rules could be as high as 4% of global revenues.

Standalone cyber insurance has been designed to specifically cover business losses and liabilities arising from cyber exposures. **Chief Claims Officer at AGCS, Alexander Mack**, compares cyber cover to D&O insurance, which was an exception 20 years ago but is commonplace today. “We will see the same trend in cyber, within the next five years,” he predicts.



Source: Allianz Risk Barometer 2017

¹ United Nations

Autonomous driving: implications for insurance



Photo: Shutterstock

The rise of autonomous driving will have a number of possible implications for insurance. For example, technology is likely to contribute towards a decline in car ownership, in favor of motor fleets, car-sharing and driverless taxis. This could see insurers move away from providing millions of single annual motor insurance policies to drivers, instead providing large policies purchased by manufacturers and fleet owners and operators.

Car manufacturers are already looking to offer broader “mobility services” that bundle running costs and insurance into a single fee. The shift to product liability will require insurers to develop technical expertise and not rely on historic data and driver profiling for pricing. Allianz has already started building teams of engineers with experience in automotive and driverless technology and is working with vehicle manufacturers and suppliers, discussing the potential risks and developing future coverages.

It has been developing insurance products in a number of areas. For example, it offers discounted motor insurance for drivers with cars that already include driver assistance technology. It is also insuring driverless technology during testing, as well as autonomous vehicles – in the US and the Netherlands it insures driverless buses. Meanwhile, together with auto giants BMW and Toyota, it has also joined forces with autonomous vehicle technology company Nauto. Under this agreement it will license data and technologies in order to better understand how drivers and vehicles behave and perform.

3D printing - implications for insurance



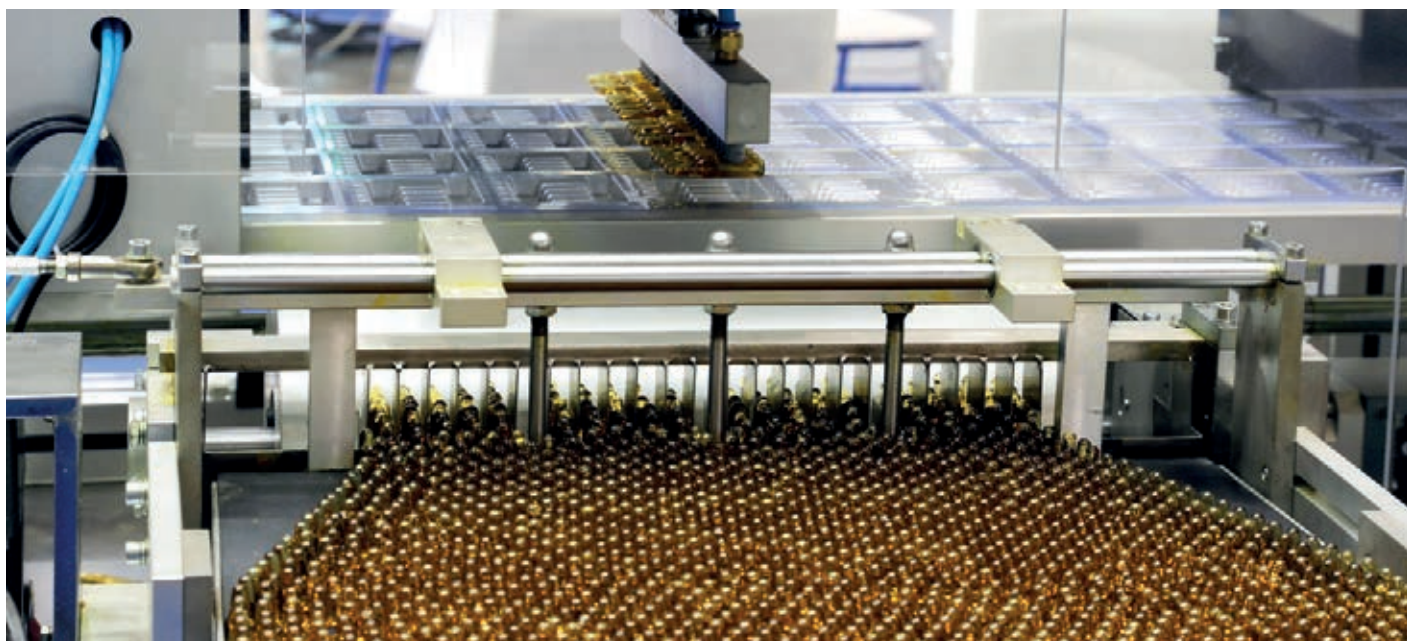
Photo: Shutterstock

3D printing is being hailed as a revolution in manufacturing, offering a faster, cheaper way of producing bespoke products. The technology is now widely used, especially for creating prototypes and bespoke parts in industries like aviation, automotive and the medical sector and this will have a number of potential implications for insurance.

Insurance policies most effected by the development of 3D printing will be product liability and product recall, although there are also implications for general liability, errors’ and omissions’, directors’ and officers’, workers’ compensation, as well as cyber insurance.

Insurers will have to keep an eye on how the materials used in 3D printing perform in the long-term. For example, products made on 3D printers use new materials, new techniques, and are used in new applications, all of which are untested over time.

There could also be wider implications for business interruption insurance, both positive and negative. The application of 3D printing could have important ramifications for the supply chain, although how this may pan out is still unclear. On the one hand, it could reduce an over-reliance on key suppliers and bring down the time and cost of providing replacement parts. On the other hand it could add complexity to some supply chains and make it harder to trace faults.



Legal requirements and regulation for drugs is becoming more complex and requires more research to assess liability.

Photo: Shutterstock

10. Impact of increasingly technical nature of claims, talent issues and innovative tools

The insurance industry is aging and risks a “brain drain” of claims professionals if it fails to invest in future talent, according to Crotser, who has over 20 years’ experience of claims handling.

AGCS is being proactive in recruiting and training the next generation of claims professionals at a time when claims handling is becoming increasingly technical. As businesses grow ever more sophisticated and connected, insurers need to ensure that their claims handling processes stay up-to-date.

For example, a road traffic accident involving a vehicle with advanced driver assistance technology requires claims handlers to understand sensors and algorithms to determine the cause of an accident. In the pharmaceutical space, legal requirements and regulation for drugs is becoming more complex and requires more research to assess liability.

With an increase in interconnected risks and globalization, large liability claims are becoming increasingly complex and expensive. They typically involve more parties, can be multi-jurisdictional and can involve large numbers of claimants.

Not only do claims teams need technical knowledge, they also need the resource to deal with multiple insureds involved in the same litigation, but with differing interests.

The complex nature of supply chains and consolidation of certain industries can see an insurer representing multiple entities in a claim. For example, in the event of an air crash, the airline, manufacturer or component manufacturer may be liable, but each of them could be insured by the same insurer.

Such claims require Chinese walls and access to separate expert legal representation, and could potentially see one insured sue another.

Liability insurers are also facing the challenge of a low yield environment and low premium rates, which creates pressure on expenses and can create tensions in claims handling.

“Liability for large commercial clients is complex and requires bespoke claims handling and strong relationships. So we need to strike a balance between service and the reality of income and costs,” concludes Crotser.

Liability risk management

Insurers have a vital role to play in ensuring the impact of a loss event is minimized but they can also help to prevent incidents from occurring in the first place through risk consulting services. Liability risk management covers exposure assessments and risk identification across many industries and sectors including:

Environmental liability is an increasingly common risk consulting service required by businesses from all industries – as awareness for environmental issues is rising in industrialized as well as emerging countries, driven by increased regulatory standards.

Product liability and recall – both involve planning, designing and testing of (new) products, quality control, checking advertising/sales literature, packaging and manuals.

Pharmaceutical products are unique: medical activities and possible side effects are extremely diverse, which is why pharmaceuticals need to be authorized before going to the market. Authorization is based on data derived from clinical trials. The level of information regarding drugs and their risks is constantly evolving. It takes specific clinical research and pharmacology experts to keep up with recent developments.

The information and telecommunications industry also looks at very specific risks such as security and compliance. IT risk management is becoming more critical for all industries.

Product tampering requires its own experts in terms of risk consulting as a lot of variables have to be considered: Who is a potential tamperer? What are feasible methods? Multiple levels of security need to be addressed to reduce the risk.

Construction liability includes public, owners and contractors' protective liabilities, accidents that are not covered under worker's compensation laws or injuries by third parties resulting from a construction site.

Employer's liability covers, for example, occupational disease claims or other injuries of employees. Depending on the industry, risk analysis is a complex task where experts are needed to determine the broad spectrum of exposures.

Claims expertise is a large part of the service offered. This service includes checking and detecting the cause of the loss, assessing the facts and valuing the insured amount of the claim, coordinating follow-up actions and designing preventive measures.

www.agcs.allianz.com/risk-consulting/liability/

Liability insurance

There are many different types of coverage available including:

Aerospace and aviation liability

For airlines, general aviation and the aerospace industry.

Clinical trials insurance

Covers the legal liability of sponsors (pharmaceutical companies) and investigators (doctors, hospitals, clinical research organizations) arising out of clinical trials.

Crisis management solutions

Wide-ranging crisis management insurance solutions that include product contamination and product recall insurance, as well as political violence coverage.

Employers' liability insurance

Covering the employer's liability for workplace accidents /diseases of the employees.

Environmental impairment liability

Pollution caused by the business' activities, emergency response and crisis communication services.

IT liability insurance

Protects against emerging liability exposures on a pure financial loss basis: for example, infringement of privacy rights, inadvertent transmission of computer viruses, tampering and other 'cyber threats'.

Products liability insurance

Cover for property damages or bodily injury caused by the insured's products or work performed.

Public liability insurance

Cover for liability arising from the insured's operations or premises to third parties.

Management liability insurance

Including Directors & Officers and professional indemnity insurance.

Marine liability insurance

Primary and excess liability for the marine and logistics industries.

www.agcs.allianz.com/services/liability/

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Further Reading



Global Claims Review

This report examines global developments in insurance claims, highlighting the top causes of loss. It also examines a number of emerging risks that will impact the claims landscape in future.



Global Claims Review: Business Interruption In Focus

Global trends and developments in business interruption claims.



D&O Insurance Insights: Management liability today: What executives need to know

This report examines both the present and future states of the Directors' and Officers' (D&O) landscape, including loss trends.

View our other insights at

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Editorial deadline - March 1, 2017

What are the top causes of liability loss for global businesses?*



The top 10 causes of loss account for over **80%** of all liability losses.

The average large defective product/work incident can cost **€263,903**

Total number of claims analyzed **100,073**, Total value of claims **€8.85bn**

Average claim value **€88,408**, Median claim value **€2,712**

100+ countries in which claims arose, **750+** claims above €1m



* Top causes of liability loss expressed as a % of value of all claims analyzed.

Data set includes claims from all insurers, not just Allianz Global Corporate & Specialty. Financial lines claims not included.

Source: Allianz Global Corporate & Specialty.



A fire burns at a refinery next to the Port of Santos in Brazil.
Photo: Shutterstock

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