

En cas de pandémie, quels sont les défis lors de la mise en réserve dans le secteur de l'assurance non vie?

20 May 2022

Agenda

1. The impacts of the pandemic in the insurance industry + Reserving process
2. What are the main challenges for the different reserve types ?
3. What are the main challenges for IBNR reserving?
4. How were the claims patterns impacted by the pandemic?
5. What is one of the main forward looking challenges?
6. What does it mean for the Actuary?
7. Conclusions

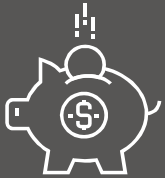
The impacts of the pandemic in the insurance industry + Reserving process



- Underwriting



- Investments portfolio

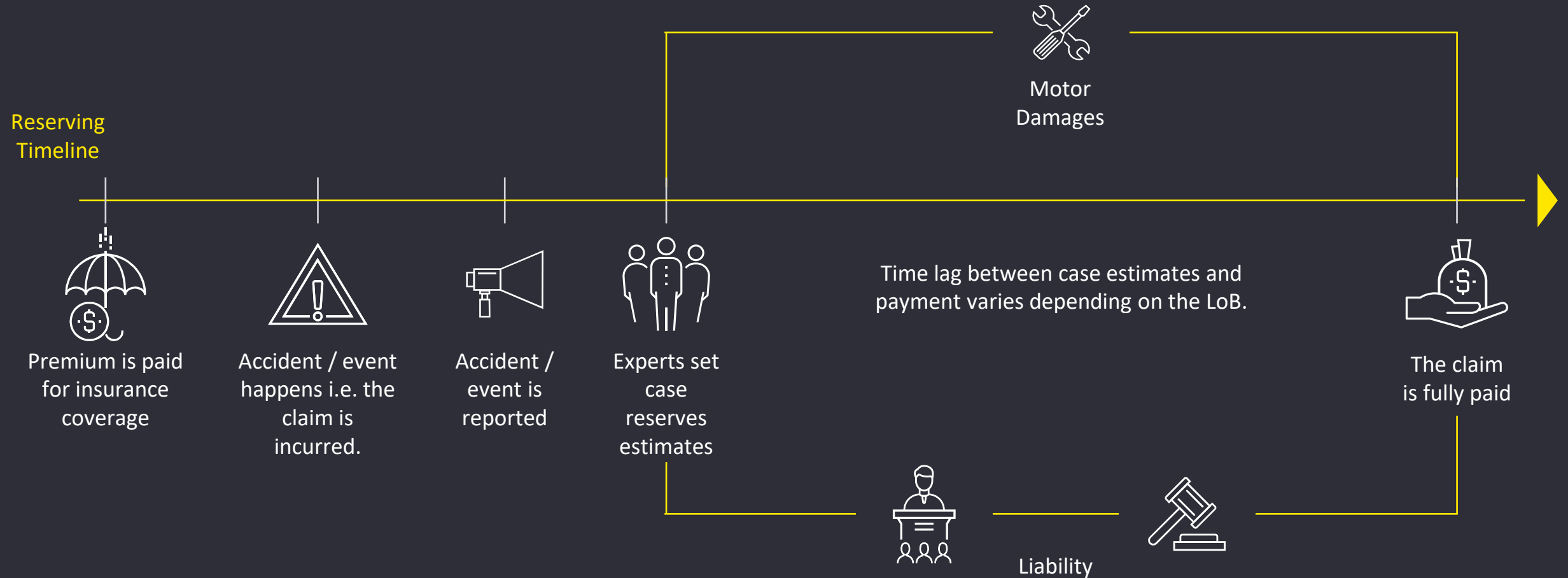


- Reserving



- Capital Management

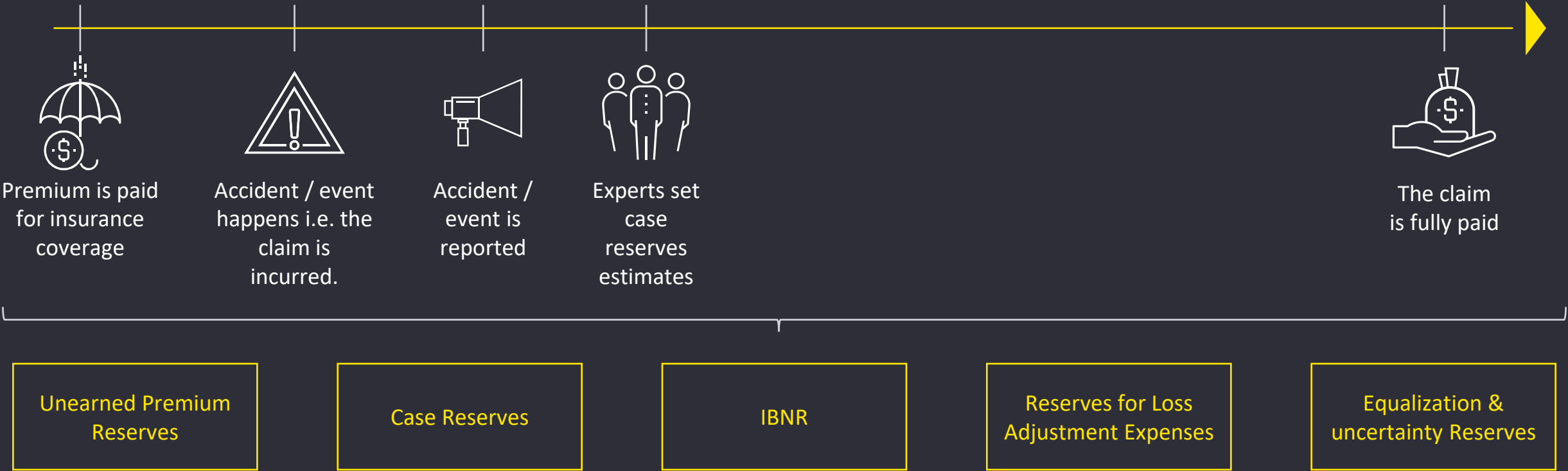
The impacts of the pandemic in the insurance industry + Reserving process



The impacts of the pandemic in the insurance industry + Reserving process

All of the reserves have been impacted due to the Pandemic!

Reserving
Timeline



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What are the main challenges for the different reserve types ?

Unearned Premium Reserves

- Distortion in Loss Ratios for 2020 and 2021 for eg. SST/SII

Case Reserves

- Delays in claims handling process
- Coverage uncertainties

IBNR

- Actuarial IBNR → distortions in historical claims, and uncertainties on the future development
- Additional IBNR → new estimations needed

Equalization Reserves

- Determining the right amount inline with the business plan




Reserves for Loss Adjustment Expenses

- Increase in court cases due to policy wording

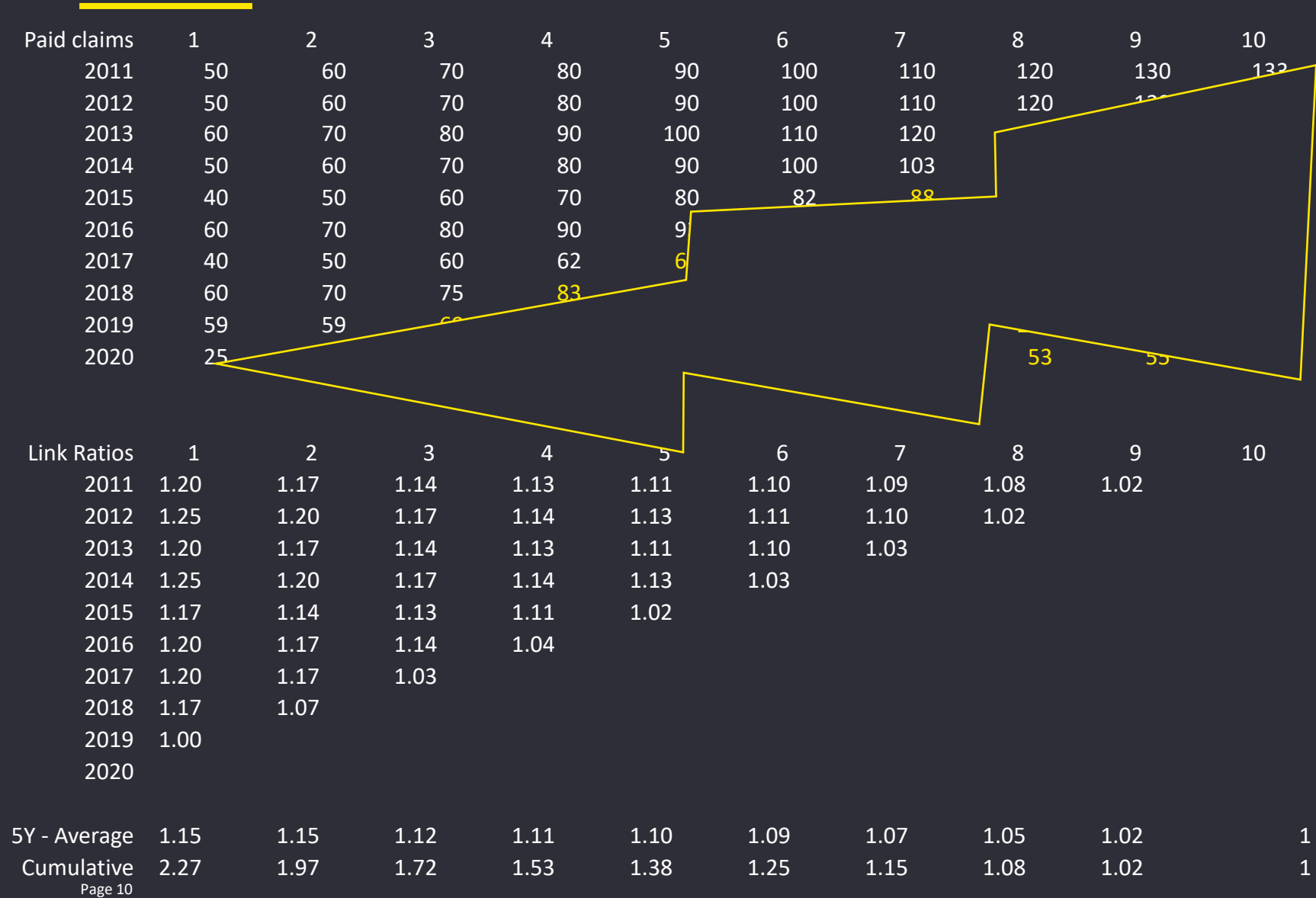
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What are the main challenges for IBNR reserving?

Paid claims	1	2	3	4	5	6	7	8	9	10	Loss Ratios	<div><p>The basic reserving methods such as Chain-ladder and Bornhuetter Ferguson, are based under the assumption that there is a mirroring effect. i.e. the past historical data is representative of the future</p></div>
2011	50	60	70	80	90	100	110	120	130	133	101%	
2012	50	60	70	80	90	100	110	120	122		102%	
2013	60	70	80	90	100	110	120	123			105%	
2014	50	60	70	80	90	100	103				95%	
2015	40	50	60	70	80	82					102%	
2016	60	70	80	90	93						98%	
2017	40	50	60	62							103%	
2018	60	70	75								95%	
2019	59	59									104%	
2020	25										70%	
Link Ratios	1	2	3	4	5	6	7	8	9	10		<div><p>The basic reserving methods such as Chain-ladder and Bornhuetter Ferguson, are based under the assumption that there is a mirroring effect. i.e. the past historical data is representative of the future</p></div>
2011	1.20	1.17	1.14	1.13	1.11	1.10	1.09	1.08	1.02			
2012	1.25	1.20	1.17	1.14	1.13	1.11	1.10	1.02				
2013	1.20	1.17	1.14	1.13	1.11	1.10	1.03					
2014	1.25	1.20	1.17	1.14	1.13	1.03						
2015	1.17	1.14	1.13	1.11	1.02							
2016	1.20	1.17	1.14	1.04								
2017	1.20	1.17	1.03									
2018	1.17	1.07										
2019	1.00											
2020												
5Y - Average	1.15	1.15	1.12	1.11	1.10	1.09	1.07	1.05	1.02	1		<div><p>The basic reserving methods such as Chain-ladder and Bornhuetter Ferguson, are based under the assumption that there is a mirroring effect. i.e. the past historical data is representative of the future</p></div>
Cumulative	2.27	1.97	1.72	1.53	1.38	1.25	1.15	1.08	1.02	1		

What are the main challenges for IBNR reserving?



Loss Ratios

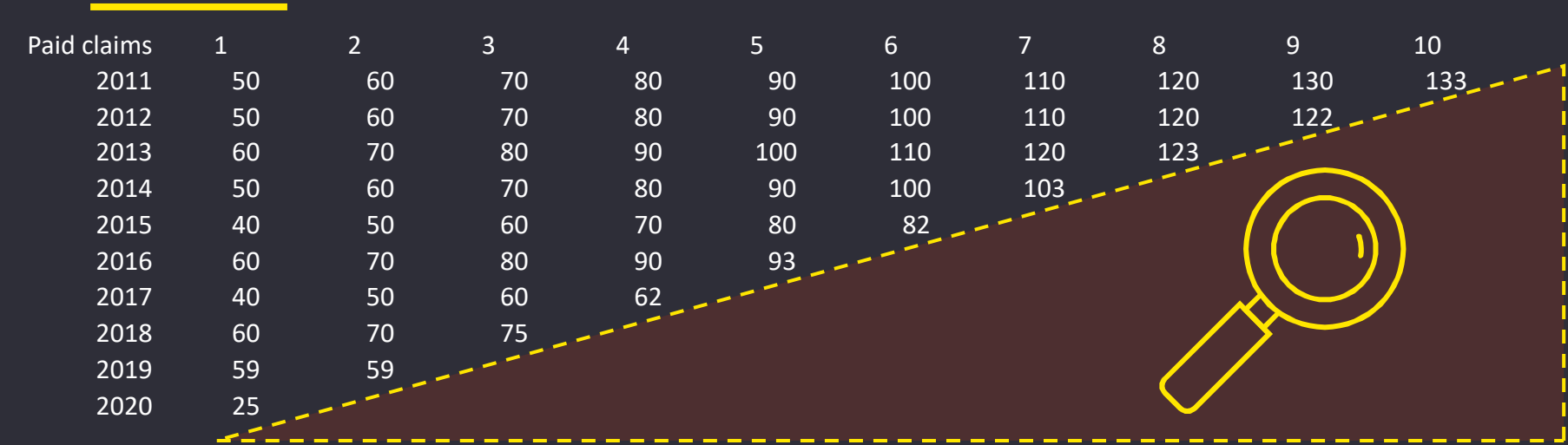
101%
102%
105%
95%
102%
98%
103%
95%
104%

The basic reserving methods such as Chain-ladder and Bornhuetter Ferguson, are based under the assumption that there is a mirroring effect. i.e. the past historical data is representative of the future

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What happens if there is a “Black Swan Event” such as COVID 19, where the future development is no longer representative of the future?

What are the main challenges for IBNR reserving?



Link Ratios	1	2	3	4	5	6	7	8	9	10
2011	1.20	1.17	1.14	1.13	1.11	1.10	1.09	1.08	1.02	
2012	1.25	1.20	1.17	1.14	1.13	1.11	1.10	1.02		
2013	1.20	1.17	1.14	1.13	1.11	1.10	1.03			
2014	1.25	1.20	1.17	1.14	1.13	1.03				
2015	1.17	1.14	1.13	1.11	1.02					
2016	1.20	1.17	1.14	1.04						
2017	1.20	1.17	1.03							
2018	1.17	1.07								
2019	1.00									
2020										
5Y - Average	1.15	1.15	1.12	1.11	1.10	1.09	1.07	1.05	1.02	1
Cumulative	2.27	1.97	1.72	1.53	1.38	1.25	1.15	1.08	1.02	1

Loss Ratios

101%
102%
105%
95%
102%
98%
103%
95%
104%

The basic reserving methods such as Chain-ladder and Bornhuetter Ferguson, are based under the assumption that there is a mirroring effect. i.e. the past historical data is representative of the future

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What happens if there is a “Black Swan Event” such as COVID 19, where the future development is no longer representative of the future?

In 2020 the lower end of the triangle was uncertain. However many analysts believed that 2020 would just be an outlier.

What are the main challenges for IBNR reserving?

- (A) Distortions on the Claims Pattern
- (B) Distortions on Loss Ratios
- (C) Forward Looking challenges

Paid claims	1	2	3	4	5	6	7	8	9	10
2013	50	60	70	80	90	100	110	113	115	117
2014	40	50	60	70	80	90	93	97	99	101
2015	60	70	80	90	100	102	103	106	108	110
2016	50	60	70	80	83	84	86	89	90	92
2017	50	60	70	72	74	76	79	81	83	84
2018	60	70	75	78	79	83	87	90	91	93
2019	50	50	52	54	57	61	63	65	66	68
2020	20	23	24	26	28	29	30	31	32	33
2021	25	25	27	30	31	33	35	36	37	37
2022	30	33	36	39	42	44	46	48	48	49

Loss Ratios
105%
95%
102%
98%
103%
95%
104%
40%
75%
?

What happens if there is a “Black Swan Event” such as COVID 19, where the future development is no longer representative of the future?

In 2022 we have now the following challenges:

- (A) Disruptions in the triangles – due to 1st order effects.
- (B) Disruptions in premium vectors and Loss Ratios - due to 1st order effects.
- (C) Forward looking challenges – due to second order effects, such as Inflation.

Link Ratios	1	2	3	4	5	6	7	8	9	10
2013	1.20	1.17	1.14	1.13	1.11	1.10	1.03	1.02	1.02	
2014	1.25	1.20	1.17	1.14	1.13	1.03	1.04	1.02		
2015	1.17	1.14	1.13	1.11	1.02	1.01	1.03			
2016	1.20	1.17	1.14	1.04	1.01	1.02				
2017	1.20	1.17	1.03	1.03	1.03					
2018	1.17	1.07	1.04	1.01						
2019	1.00	1.04	1.04							
2020	0.5	1.04								
2021	1.00									
2022										

5Y - Average	1.10	1.10	1.08	1.07	1.06	1.04	1.03	1.02	1.02	1
Cumulative	1.64	1.49	1.36	1.26	1.18	1.12	1.07	1.04	1.02	1

What are the main challenges for IBNR reserving?

- A** Distortions on the Claims Pattern
- B** Distortions on Loss Ratios
- C** Forward Looking challenges

- The basic reserving methods rely on historical data – hence these are based on the assumption that the past represents the future (which currently this assumptions has proven to fail)
 - A** Disruptions in the triangles – Claims patterns
 - Frequency
 - Severity
 - Time Lags
 - B** Disruptions in premium vectors and Loss Ratios
 - C** Forward looking challenges
 - Inflation
 - Change in customer behavior in the long run
 - Change in legal environment
- Increased uncertainty in the amount to be reserved → additional reserves might be required

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How were the claims patterns impacted by the pandemic?

- A

Distortions on the Claims Pattern
- B

Distortions on the Loss Ratios
- C

Forward Looking challenges

	<u>COVID 19 Losses</u>	<u>COVID 19 Benefits</u>
Accident	(✓)	✓
Health	✓	✓
MAT		✓
Credit + Surety	(✓)	
MTPL		✓
Motor Damages		✓
Property	✓	
Liability	✓	
Directors & Officers	✓	

How were the claims patterns impacted by the pandemic?

MTPL

- A Distortions on the Claims Pattern
- B Distortions on the Loss Ratios
- C Forward Looking challenges

Key considerations

- The MTPL Lob has indeed seen a decrease in frequency → due to lockdowns, there are less cars circulating and therefore less accidents.
- In CH however, it has been evidenced a reverse frequency trend in 2021 and expect the same for 2022 compared to 2020 mainly due to the following:
 - Increase in car use → people prefer to use the car rather than public transportation to avoid exposure.
 - When restrictions were lifted there was a wave of people wanting to go out.
- Commercial vehicles → increase in severity because people were driving faster due to less traffic.
- In some countries such as Italy, it has been evidenced that there is a decrease in the severity, due to the so called “weekend-effect”. The “weekend-effect” refers to the effect that more severe accidents used to occur during the weekends due to higher alcohol consumption during the weekends. Due to lock-down of clubs and bars the weekend-effect was no longer present during AY 2020 and AY 2021.

Challenge

- This change of trend makes it difficult to reserve, as the post covid conditions 2022+ will indeed be different from the 2020 and 2021 lock-down situation, also certainly different than what we evidenced before the pandemic. The challenge here is that the historical claims and its past development do not necessarily represent the future for this LoB.

How were the claims patterns impacted by the pandemic?

- A

Distortions on the Claims Pattern
- B

Distortions on the Loss Ratios
- C

Forward Looking challenges

	COVID 19 Losses	COVID 19 Benefits
Accident		✓
Health	✓	✓
MAT		✓
Credit + Surety	✓	
MTPL		✓
Motor Damages		✓
Property	✓	
Liability	✓	
Directors & Officers	✓	

How were the claims patterns impacted by the pandemic?

Business Interruption

- A Distortions on the Claims Pattern
- B Distortions on the Loss Ratios
- C Forward Looking challenges

Key considerations

- Business interruption insurance is meant to help offset the financial losses when operations are temporarily halted due to a covered event.
- Usually this covers the losses after a relatively short waiting period (36-72h) from the event till the business is back to normal.

Challenge

- The challenge for the insurance industry during the COVID 19 pandemic was that many SMEs went bankrupt due to the pandemic and in some cases the business interruption policies were / will be triggered depending on the following variants:
 - Policy wording → some policies deliberately excluded pandemics, others did not.
 - Country Jurisdiction → definition and interpretation of what a business interruption policy should or should not cover.

How were the claims patterns impacted by the pandemic?

Business Interruption – Key Example

A	Distortions on the Claims Pattern
B	Distortions on the Loss Ratios
C	Forward Looking challenges



Helvetia case

- Helvetia as many other insurers had decided to voluntarily pay some policyholders due to Business Interruption for COVID 19 losses.
- While some policyholders accepted the payments, some others did not and one of them actually sued Helvetia for not fully covering the COVID 19 losses. The Restaurant owner Colombo from Baden decided to challenge the exceptions of a pandemic vs. epidemie in the contract.
- Although the Aargau Commerce Tribunal had ruled for the insured in 2021, after the appeal made by Helvetia to the Federal Tribunal, the Federal Tribunal ruled in favour of the Insurer, stating that the wording excluding phase 5 or 6 of the WHO was clear in the contract.
- This gives clarity and precedence not only for Helvetia, but for all of the insurance industry that have this exclusion in their policies, hence allowing for a more clear sensitivity around their reserving process.

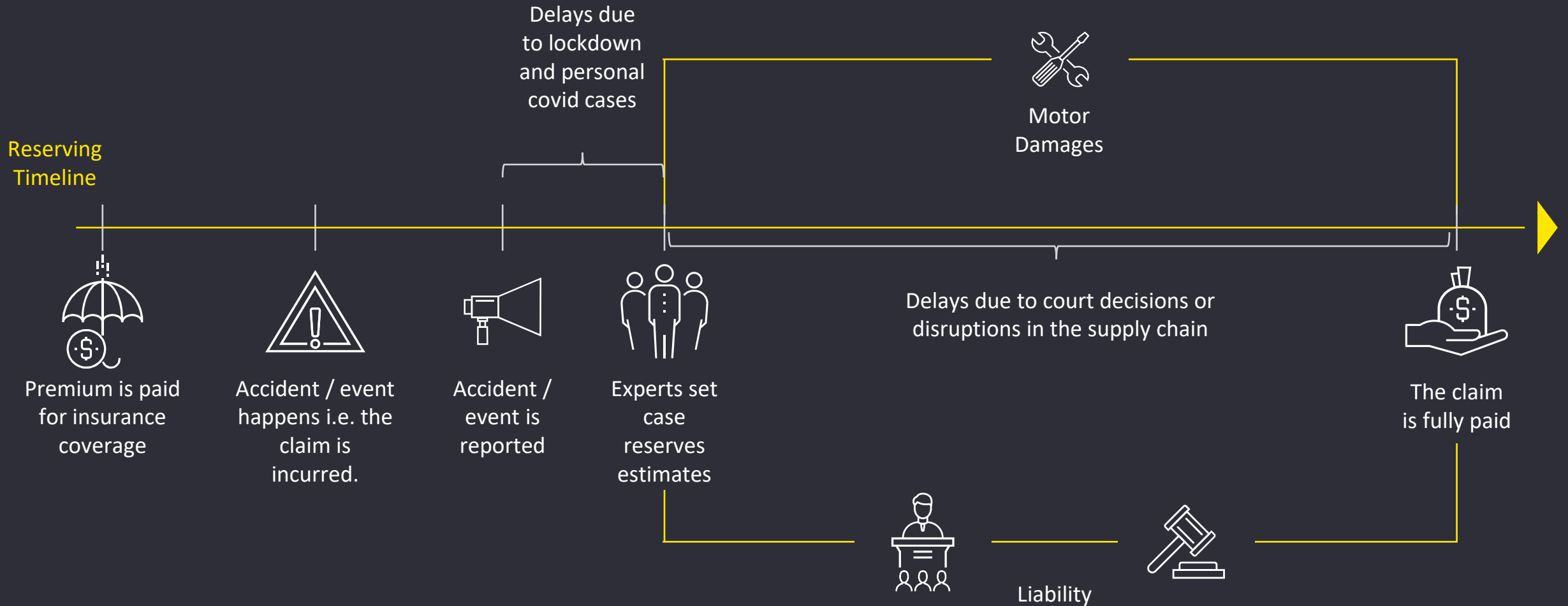
Challenge

The reserving challenge for the insurance industry is to determine the probability of success or failure from the Legal team and therefore determine the best estimate of losses.

How were the claims patterns impacted by the pandemic?

Delays in the claims handling process

- A Distortions on the Claims Pattern
- B Distortions on the Loss Ratios
- C Forward Looking challenges



Challenge

The reserving challenge is to determine whether a decrease in frequency is due to a change in risk profile or only due to delays in the claims handling process.

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What is one of the main forward looking challenges?

Inflation

- A Distortions on the Claims Pattern
- B Distortions on the Loss Ratios
- C Forward Looking challenges

Key considerations

- A major outcome of the COVID 19 pandemic is a rise in inflation in particular due to the following:
 - Supply chain disruptions →
 - The pandemic caused the greatest supply-chain disruption of the modern era. Lockdowns and COVID 19 measures has shorten the supply of workers and therefore reduced and delayed the supply of goods. From acquiring the raw materials, to processing them for production and then shipping them.
 - Demand remains high →
 - Government measures to protect consumers have made the demand to remain stable.
- Not only due to the pandemic but also due to the current Ukraine – Russia conflict, inflation is currently at the highest level compared to the last several decades.

Challenge

- The increase in inflation is a challenge for the insurance industry since the current practice is that claims inflation is already included in the historical claims data and therefore implicitly captured in the projections, however over the past decades we have been in a very low inflationary environment and therefore the past is no longer representative of the future.

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What does it mean for the Actuary?



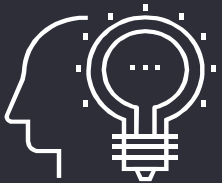
- The Actuary needs to work even more closely with the claims department, in order to understand the observed changes in the claims pattern and the trends going further.



- The actuary needs to closely monitor the reserves with AvE. and PYD analysis, as well as sensitivities and further rely on scenarios.



- The classical actuarial methods might need to be adjusted for certain LoBs.



- The Actuary needs to use more expert judgements in order to estimate additional reserves.



- Actuaries need to deal with new kinds of risks.

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Conclusions

- COVID 19 heavily impacted the whole insurance industry and the reserving process.
- The pandemic distorted the historical claims for the most recent accident years for several reasons. The challenge for the actuary is to determine whether this is to be considered as an outlier or if this will indeed impact the long term projections. Hence adjustments to the actuarial methods are required.
- COVID 19 has materially increased the uncertainties of the reserves estimates, additional reserves' estimations have to be provided for risks not evidenced in recent past → i.e. inflation risk, legal risks, others.
- Historically established parts of the reserving processes potentially needed to be adjusted (reserving guidelines, Business Plan, actuarial method documentation).

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- [Prices - Inflation forecast - OECD Data](#)

Appendix

Business Interruption – Key Example 2



Stonegate

- In the UK, for example the Supreme Court ruled in favour of the Financial Conduct Authority FCA, versus several insurance companies (Hiscox, Zurich, Britannica, Arch, Argenta, MS Amlin, QBE and RSA).
- The FCA performed a test case of 21 policy wording and the court concluded that the policyholders were indeed entitled to claim.
- Although the ruling did give a level of clarity around which policies should be affected (amounting to 1.2bn USD as of July 2021). It is now clearer that there will be a long tail for BI claims, mostly driven by further litigations covering for example:
 - Aggregation of losses for Big clients (1 pub or many pubs) → Where the limits set per location of in aggregate?
 - If multiple COVID 19 lockdowns should be considered as 1 event or as many different events.
 - Some wording related to untested policies by the FCA have still some ground for appeal.

“Insurers might accept that coverage was triggered, but how many incidents, occurrences or events there were, and related aggregation issues, drives how much the policyholder can recover” Lydia Savill, a counsel at Hogan Lovells.



Thank you very much for your attention!