It takes

Aviva Presentation to AIRB Annual Review August 17, 2023

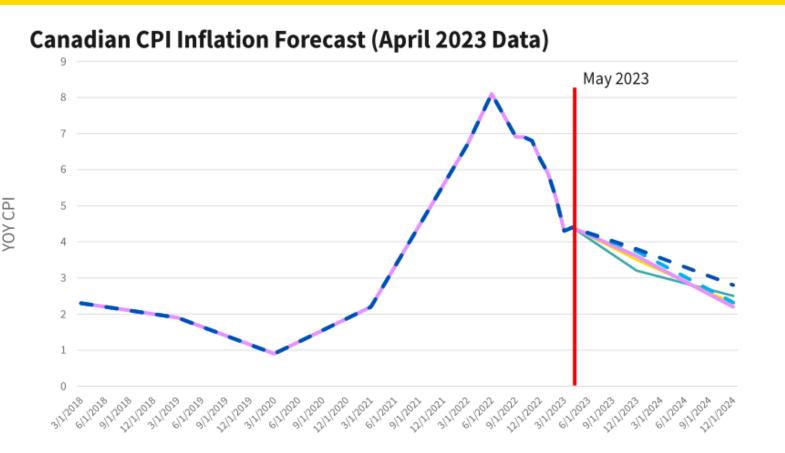


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Executive Summary

- Aviva agrees with OW's 2022-2 Industry loss trends selections
 - Trends are appropriate at the aggregate level
- There are still uncertainties about inflation, the impact of reforms and individual insurer claim experience
- OW acknowledges the significant increase in PD/COL severity that occurred in 2021 and the need to adjust historical accident years (2021-2 and before) to account for elevated inflation
 - But elevated inflation will persist until at least 2024 so adjustment is also needed for the initial years following late 2021
- Continuing long-term uncertainties from Bill 41 reform impact and the potential delay in inflation for BI and AB
- 2022-2 frequency level alone is not reliable to conclude a "new normal" frequency
- Watch for migration of auto theft from Ontario to Alberta
- AIRB should continue to consider the individual experience of the insurers and give weight to opinions of company's actuaries

Inflation has likely peaked Though underlying core inflation will remain sticky



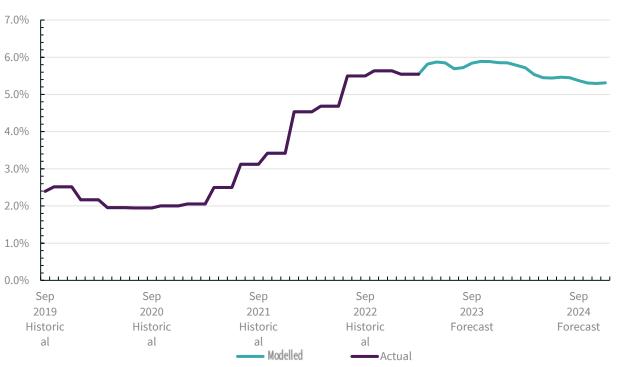
Inflation projections vary depending on the source. We selected CPI Rate Projections based on inflation-linked securities Market Data.

-	US ZCIS
-	BOC
-	Bloomberg
-	- Model
-	- New Select

Inflation is moderating but underlying core inflation will remain sticky – Inflation is likely to be structurally higher over the longer term too

- Premium growth will be offset by inflation-driven increases in claims costs for P&C insurers.
- Rising costs will continue to erode profit margins for insurers that are unable to achieve sufficient rate.
- Inflation will also drive up wages as insurers seek to retain talent.

Auto Parts Inflation



Canadian Parts YoY Change

Auto parts inflation is a good indicator for Physical Damage inflation

- Aviva has been modelling PD/ COL claims inflation with parts price index
- Parts inflation has not returned to pre-2021 level
- Insurers should have flexibility to adopt a different trend for post-2021 or include an inflation adjustment factor for the early periods after 2021

Used Car Inflation

Used car inflation is a good indicator for Physical Damage inflation

- Aviva has been modelling PD/ COL claims inflation with used car price index
- Used car inflation is projected to return to pre-2021 level in 2024
- Insurers should have flexibility to adopt a different trend for post-2021 or include an inflation adjustment factor for the early periods after 2021

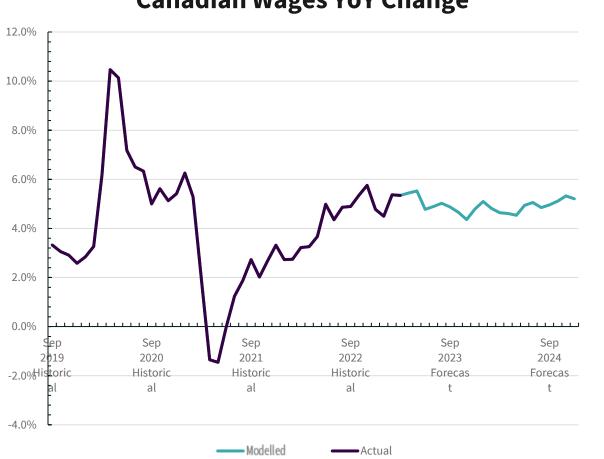
30.0% 25.0% 20.0% 15.0% 10.0% 5.0% 0.0% Sep Sep Sep Sep Sep 2020 2021 2022 2023 2024 Histori Histori Histori Foreca Foreca -5.0% cal cal cal st st

Modelled

-----Actual

Canadian Used Car Price YOY Change

Wage Inflation



Canadian Wages YoY Change

Wage inflation is a key predictor for claim cost inflation

- Aviva has been modelling PD, COL, BI, AB claims inflation with used Canadian wage data
- Wage inflation has not returned to the pre-2021 level
- Insurers should have flexibility to adopt a different trend for post-2021 or include an inflation adjustment factor for the early periods after 2021

Inflation Shock Impact

- Inflation Shock (also known as elevated inflation) is the difference between the CPI Rate Projection and the normal average CPI in the historical years.
- Inflation Shock represents the increase we expect to see above the regular inflation / loss trend.
- Oliver Wayman estimated a one-time severity increase at 2021-2 for PD and COL.
- Using the data and expert opinion, we estimated the degree to which the inflation shock will impact each coverage. For example, the inflation of PD claim cost is 11.5% higher than the regular inflation in 2022.
- We expect inflation shock to persist beyond 2021. Insurers must factor in the additional cost in their indications.

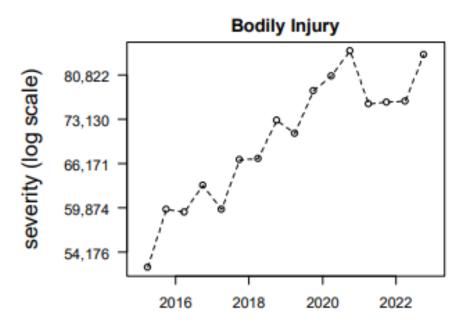
Inflation Shock by Coverage (Year over year)

	Baseline	2022	2023	2024	2025	2026
Auto Physical Damage	1.74%	11.50%	2.50%	2.00%	0.75%	0.75%
Auto Accident Benefits	1.80%	2.50%	1.50%	1.00%	0.75%	0.75%
Auto Bodily Injury	2.07%	3.50%	2.00%	1.50%	1.10%	1.10%
Personal Property	1.77%	4.00%	2.00%	1.00%	0.75%	0.75%

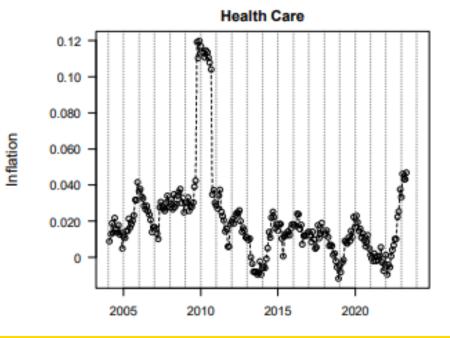
Impact of inflation and reforms on BI and AB remain uncertain

- BI severity has increased in 2022-2
- Pre-judgment interest is high as it fluctuates with CPI interest rates after Bill 41, and the current interest rates are high
- Aviva agrees with OW that inflationary pressures on health care costs have lagged behind physical damage
- AIRB should be flexible when assessing insurers' BI and AB severity projections

Historical severity (Figure 12) provided by Oliver Wyman:



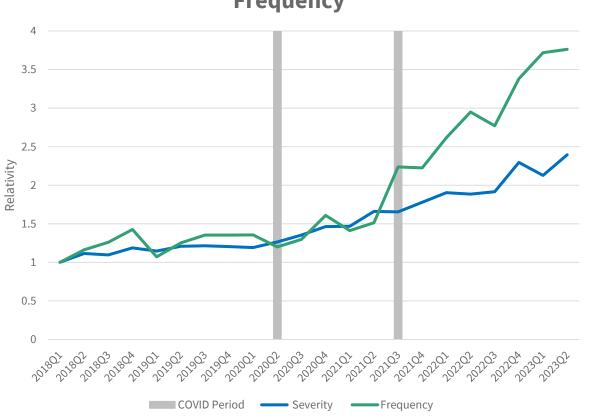
Consumer Price index (Figure 11) provided by Oliver Wyman:



"New Normal" Claim Frequency Level

- Aviva agrees with OW's recommended adjustment to historical accident years to reflect the change in claims frequency expected as a result of the reforms and the general shift toward a hybrid workplace
- OW considers 2022-2 to be the starting point of the "new normal" and suggests a prospective adjustment to the historical accident years based on 2022-2's trended frequency level
- Aviva believes that 2022-2 **may be a starting point** but it is premature to say that 2022-2 is the new normal" because:
 - PD claim frequency in 2022-2 is even higher than the pre-pandemic level. Aviva does not believe the increased frequency is due to a shift from collision to DCPD claims.
 - Data suggests total kms driven is increasing despite hybrid work.
 - Companies continue to encourage employees to spend more days working in the office which may continue to increase total kms driven and claim frequency.
 - It's too early to conclude we have already seen the full impact of the reforms.

Auto Theft Crisis



Aviva Ontario PPV Theft Comp Severity and Frequency

Auto theft has hit crisis levels across Canada.

- •Theft claims frequency and severity have increased significantly especially in Ontario due to organized crime
- Alberta has not experienced the same increase in auto theft as Ontario
- As Ontario clamps down on auto theft, we should watch for criminal organizations to move their operations to other provinces

Conclusion

- Aviva recommends additional consideration be given to the following:
 - Elevated inflation after 2021
 - Long-term uncertainties from Bill 41 reform impact
 - Uncertainties of the "new normal" frequency level
 - Potential migration of auto theft from Ontario to Alberta
- We encourage the Board to consider that insurers have different claims experience from the industry average



Thank you

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