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Economic Overview for Insurance Industry Leaders

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CONTENT

- P&C Economic Fundamentals
- Key P&C Lines Review
- Return to Normal Road Map

KEY INSIGHT

- Fed expects large turnaround between YTD and Year-End GDP/CPI; overly optimistic
- Insurance Underlying Growth may overtake overall GDP 6.7% to 2.8% by year end
- Insurance Replacement Costs to remain above CPI 9.91% to 4.30% by year end; spread shrinking
- Ukraine war may reduce insurance underlying growth by -1% and Increase replacement costs by +1.5%
- Cyber risk (state or non-state) most significant threat to economic activity

Economic Fundamentals Aligning for Peak P&C Performance

Concepts & Definitions

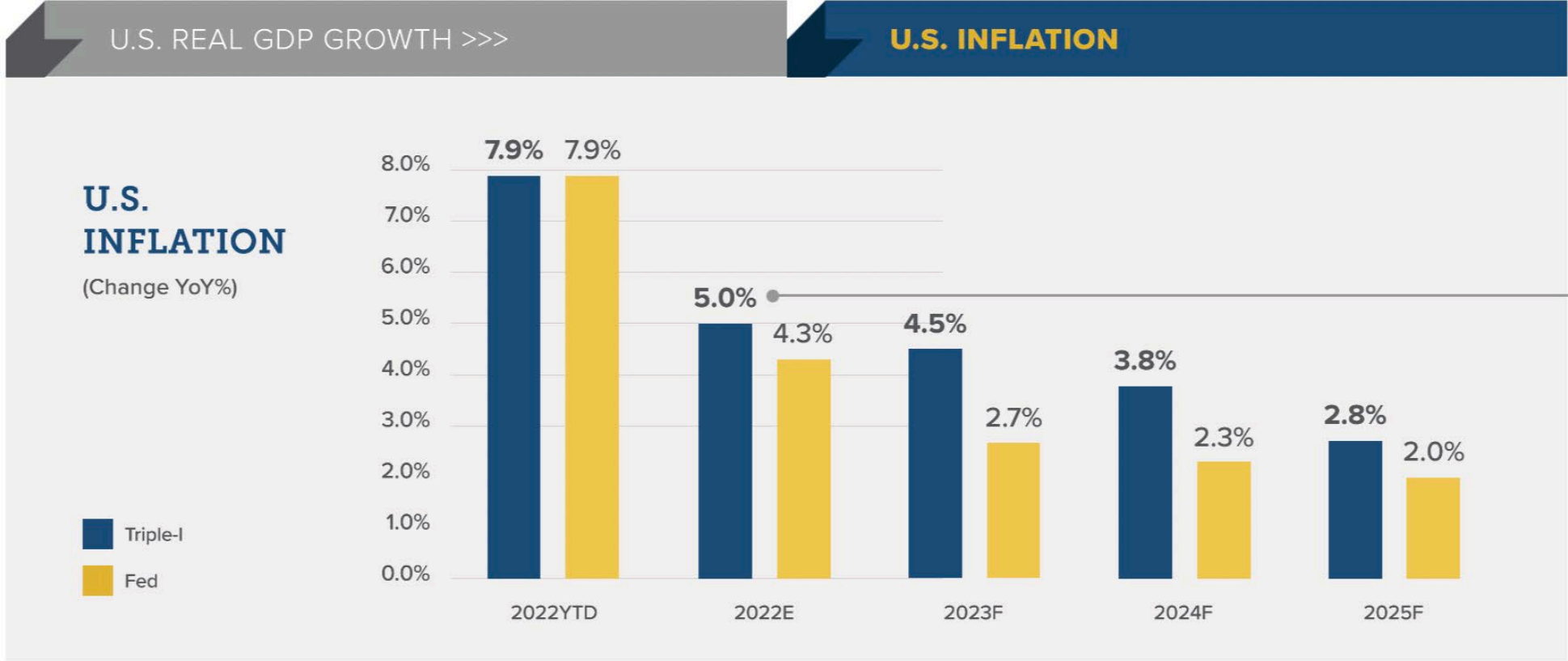
Insurance Underlying Growth: The weighted average of Real GDP Growth (YoY) for a set of GDP components driving each line's premium growth.

Insurance Replacement Costs: The weighted average of inflation increases (YoY) for a set of CPI goods & services representing each line's paid claims.

The analysis focuses solely on the impact of economic drivers (GDP & CPI) on premium growth and replacement costs. It does not factor in other actuarial assumptions.

Analysis and forecasts are generated by Triple-I using current economic data sourced from the BLS and US Fed; and insurance data from NAIC sourced through S&P.

Fed Forecasts Multi-Year Low Growth Decrease

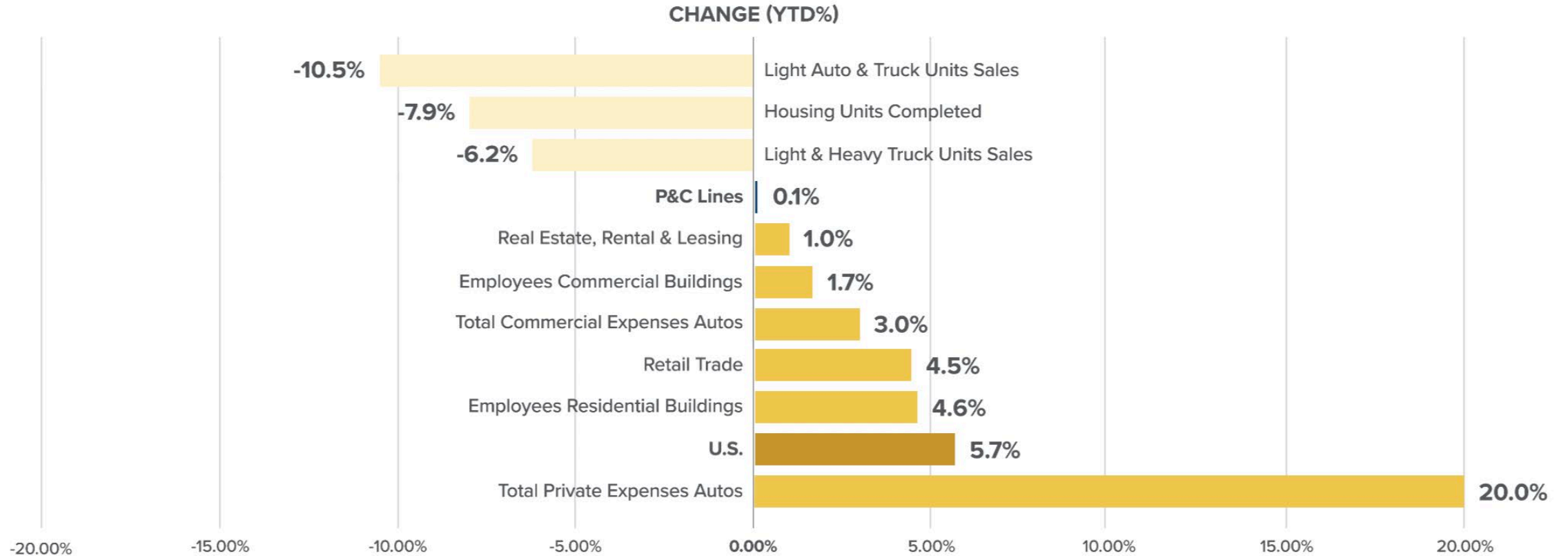


The Fed expects a rapid decrease in CPI by year-end; Triple-I expects a longer transition.

Source: YTD: BLS; 2022-2025: Federal Reserve and Triple-I (as of 03/20/2022)

Overall U.S. Growth Decelerating in Q1 2022

REAL GDP GROWTH KEY COMPONENTS 2021-2022



Source: US: BLS; Insurance Lines: **Triple-I** (as of 03/01/2022)

P&C Growth Expected to Change Course by Year-End

UNDERLYING GROWTH KEY P&C LINES

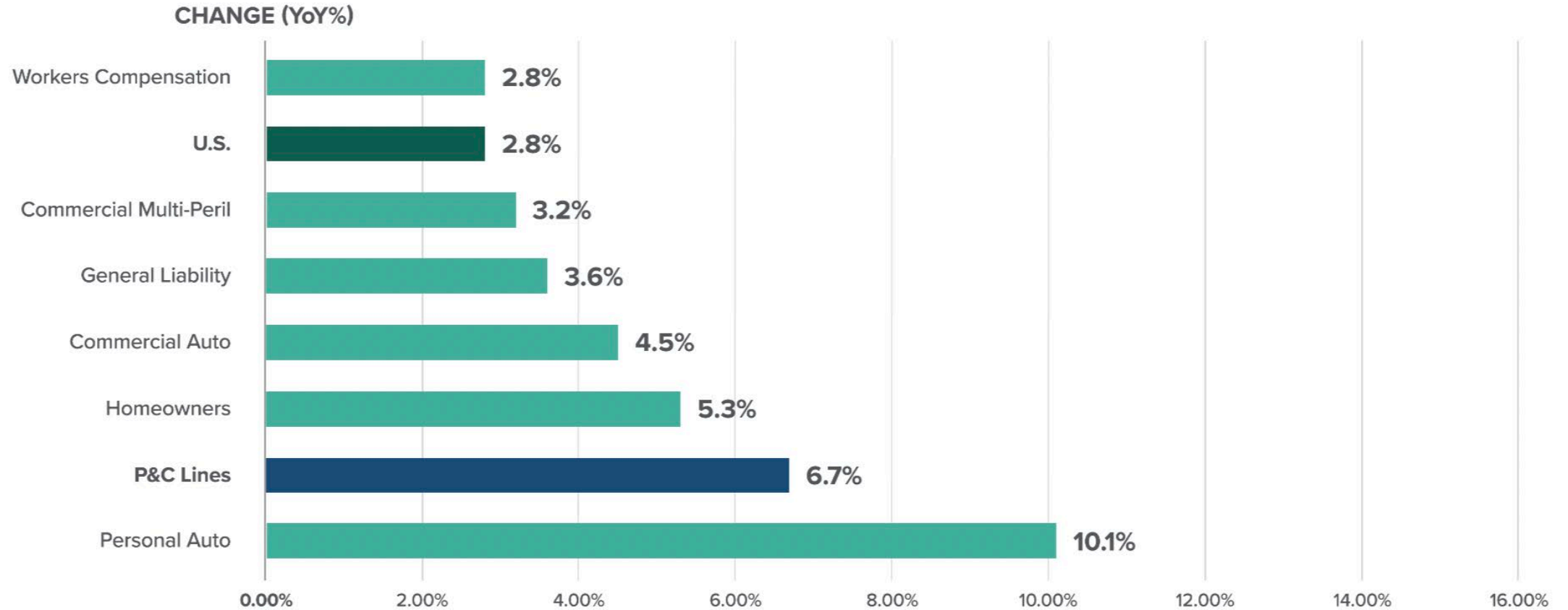
CHANGE (YoY%)

	Feb-22	2022E	2023F	2024F	2025F
U.S.	5.7%	2.8%	2.3%	1.9%	1.9%
P&C Lines	0.1%	6.7%	4.6%	3.4%	2.5%
Homeowners	-0.8%	5.3%	5.9%	5.1%	3.8%
Personal Auto	-0.1%	10.1%	4.4%	2.3%	1.7%
Commercial Multi-Peril	1.2%	3.2%	3.2%	2.7%	2.2%
Commercial Auto	-4.2%	4.5%	2.1%	1.5%	1.0%
General Liability	4.8%	3.6%	3.2%	2.8%	2.4%
Workers Compensation	4.6%	2.8%	2.5%	2.0%	1.5%

Source: US: BLS; Insurance Lines: **Triple-I** (as of 03/01/2022)

P&C Growth May Exceed Overall Growth by Year-End

UNDERLYING GROWTH KEY P&C LINES 2021-2022E



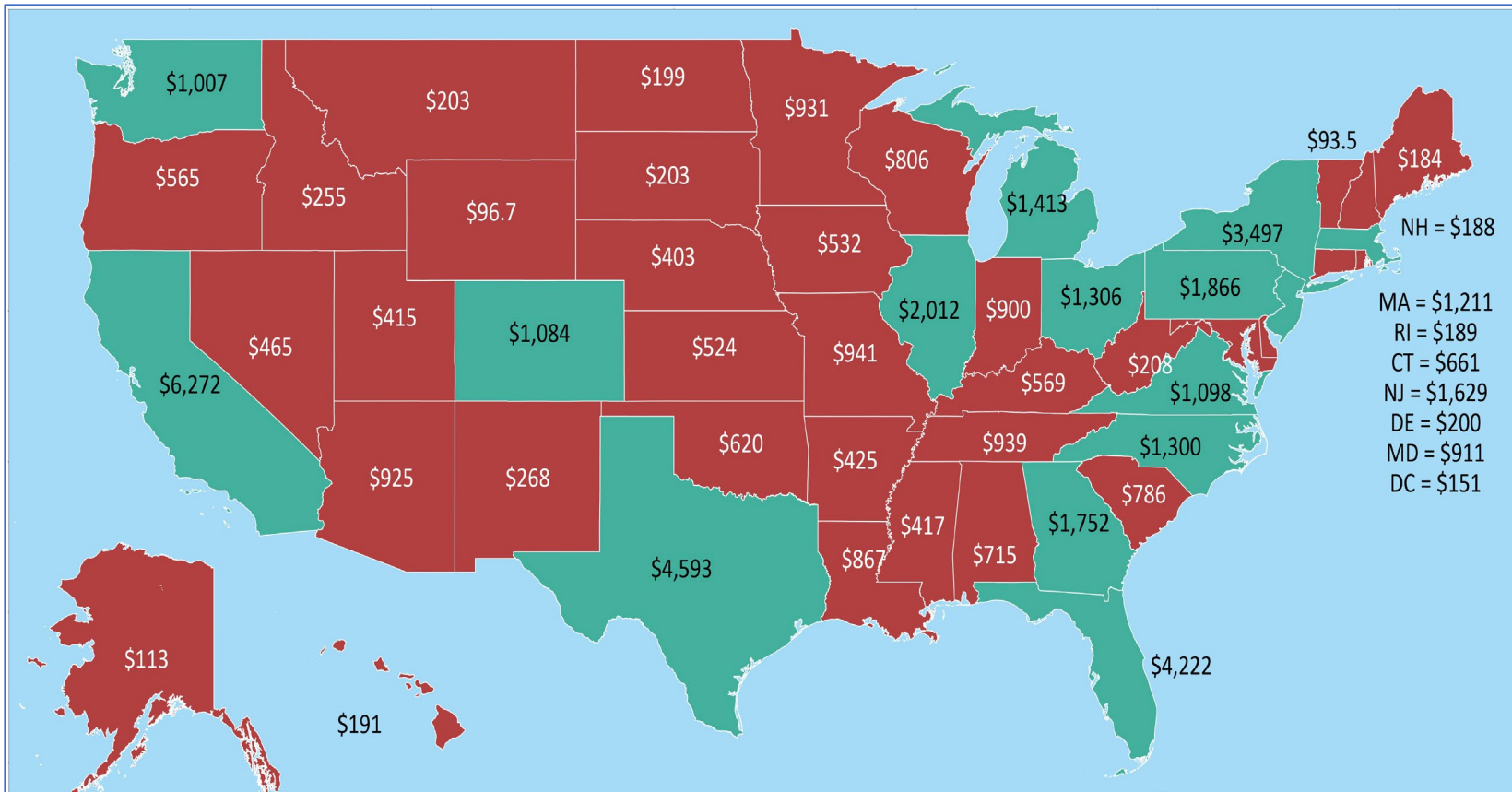
Source: US: BLS; Insurance Lines: **Triple-I** (as of 03/01/2022)

Premium Growth: P&C Lines 2022E

Pattern: Highest in largest insurance state markets

Direct Written Premium Growth: P&C Lines 2022E

Additional Premium By State (Change YoY\$ in Millions)



Green: Above national average
Red: Below national average

Source: Triple-I (as of 03/22/22)
 Insurance Data: 2021A
 Economic Data: 2022E

Underlying Growth: Key Industries 2022E

Strongest growth for professional services, hotels, and food services

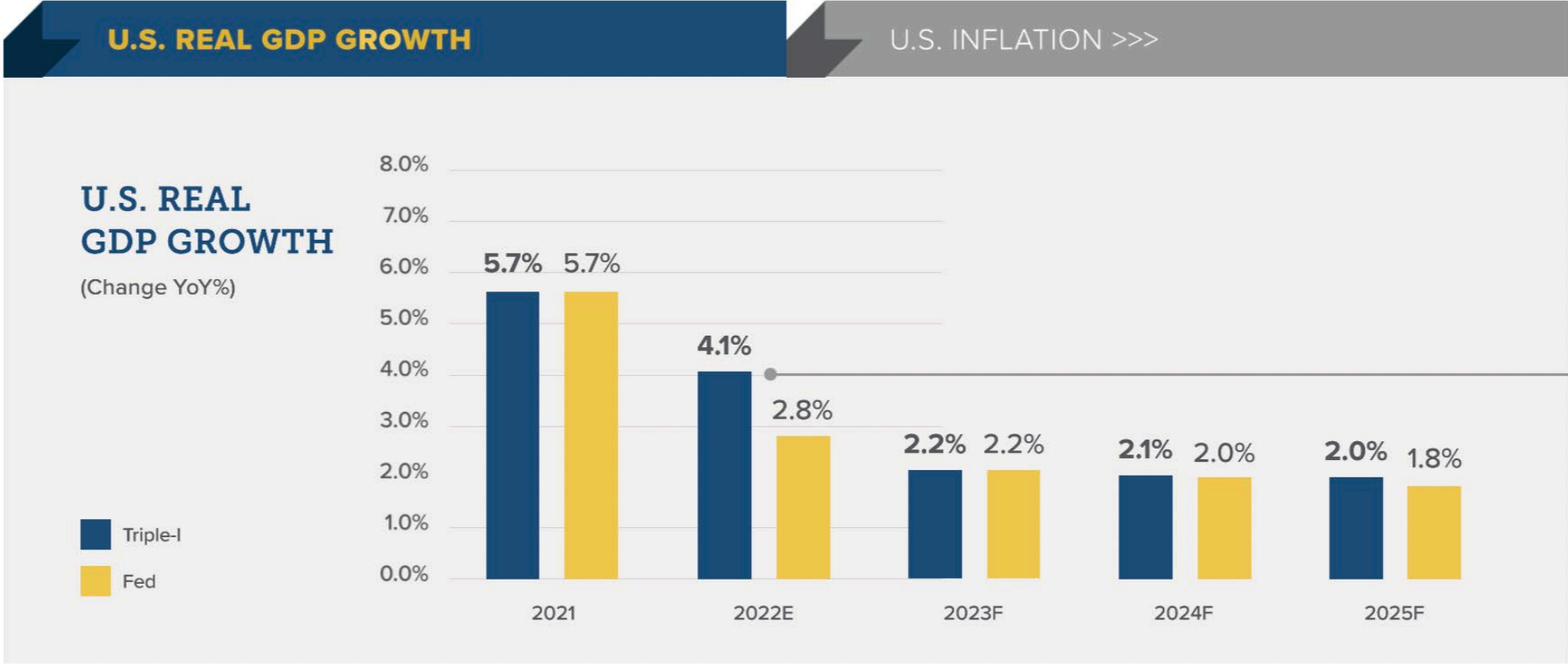
Real GDP Growth by Industry Q3 2020 to Q3 2021

(Change YoY% from Q3 2020 to Q3)

U.S. Real GDP Growth (All Industries)	4.95%
Agriculture, Forestry, Fishing, Hunting	-9.29%
Utilities	-8.24%
Construction	1.88%
Manufacturing	4.12%
Retail Trade	-3.70%
Transportation and Warehousing	3.70%
Real Estate, Rental and Leasing	2.83%
Professional, Scientific, and Technical Services	10.71%
Educational Services	2.51%
Health Care and Social Assistance	3.58%
Industry Accommodation and Food Services	22.02%

Source: BLS (as of 03/22/22)

Fed Year-End Inflation Forecast Optimistic

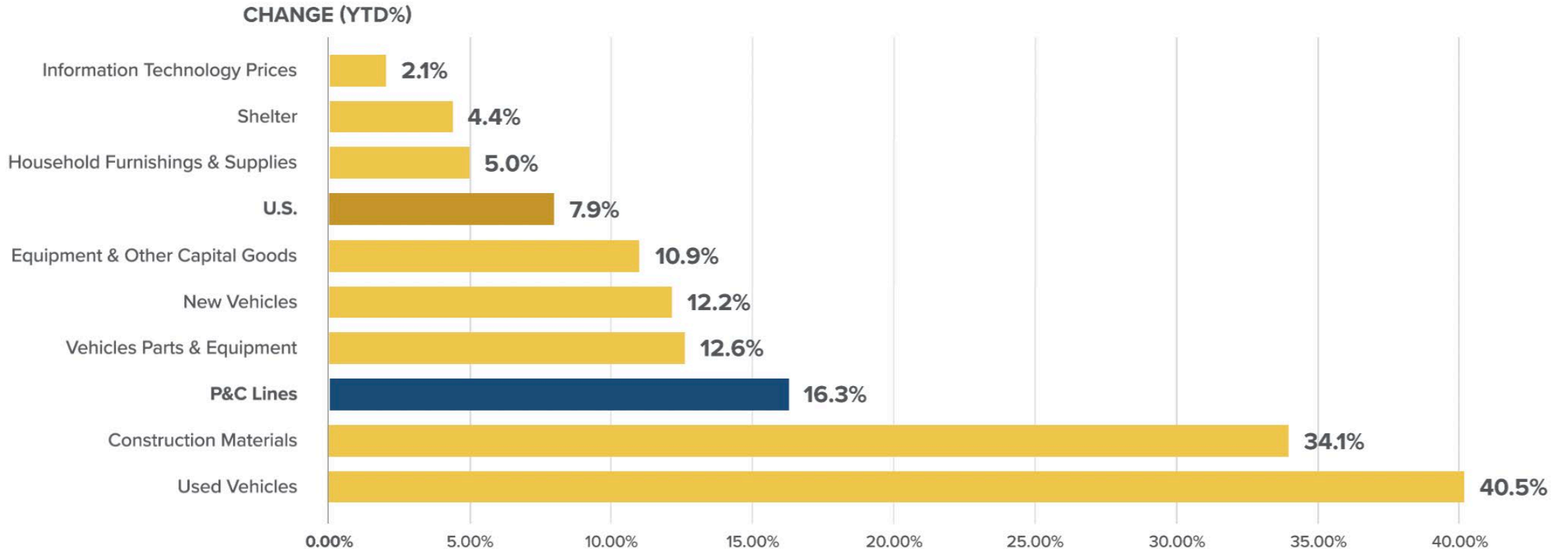


The Fed expects a rapid GDP decrease by year-end, Triple-I expects a longer transition.

Source: YTD: BLS; 2022-2025: Federal Reserve and Triple-I (as of 03/20/2022)

U.S. Inflation Reaches Record High on Materials, Autos and Labor

INFLATION KEY CPI COMPONENTS 2021-2022



Source: US: BLS; Insurance Lines: **Triple-I** (as of 03/01/2022)

P&C Replacements Historical High in Q1

REPLACEMENT COSTS KEY P&C LINES

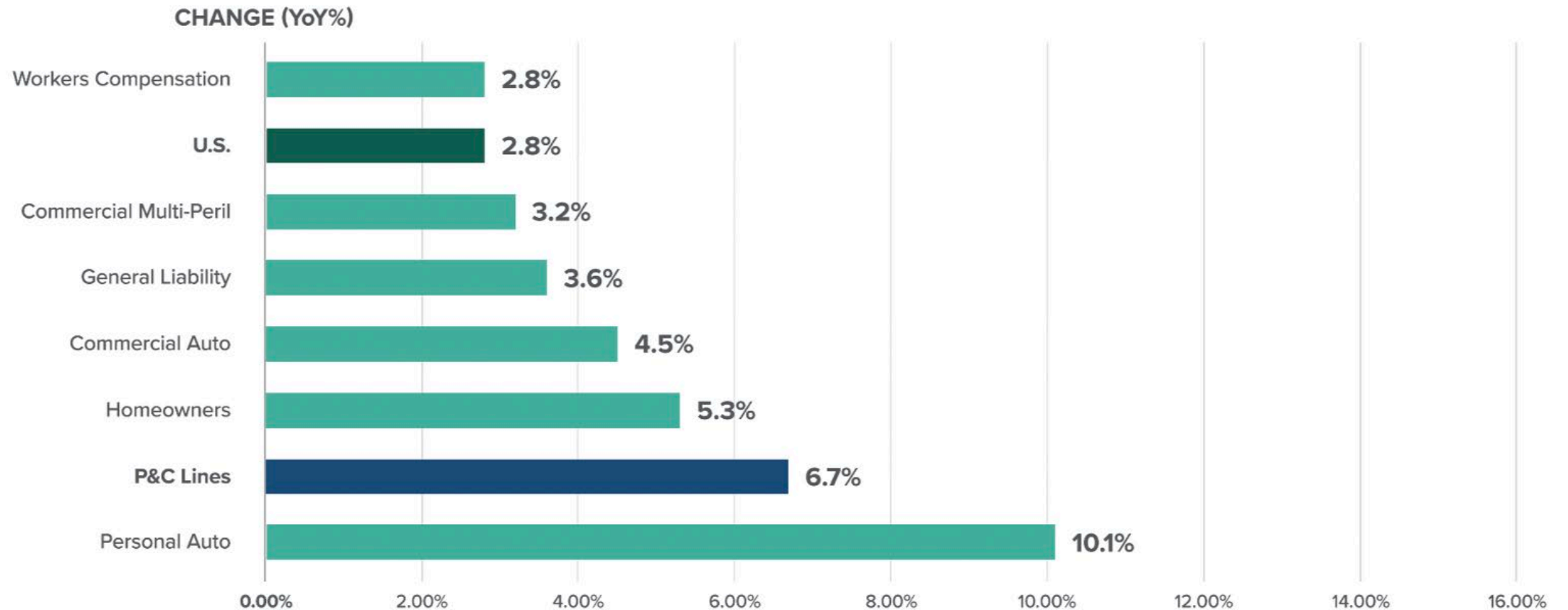
CHANGE (YoY%)

	Feb-22	2022E	2023F	2024F	2025F
U.S.	7.9%	4.3%	2.7%	2.3%	2.0%
P&C Lines	16.3%	9.9%	6.7%	3.8%	2.5%
Homeowners	14.5%	11.5%	7.5%	5.2%	3.2%
Personal Auto	21.8%	11.0%	7.7%	3.2%	2.5%
Commercial Multi-Peril	15.7%	13.8%	10.0%	7.2%	3.2%
Commercial Auto	21.3%	6.2%	4.4%	2.5%	1.5%
General Liability	3.7%	2.1%	1.4%	1.1%	0.8%
Workers Compensation	3.1%	2.3%	1.5%	1.3%	1.0%

Source: US: BLS; Insurance Lines: **Triple-I** (as of 03/01/2022)

CPI & P&C Replacement Costs Gap To Shrink by Year-End

UNDERLYING GROWTH KEY P&C LINES 2021-2022E



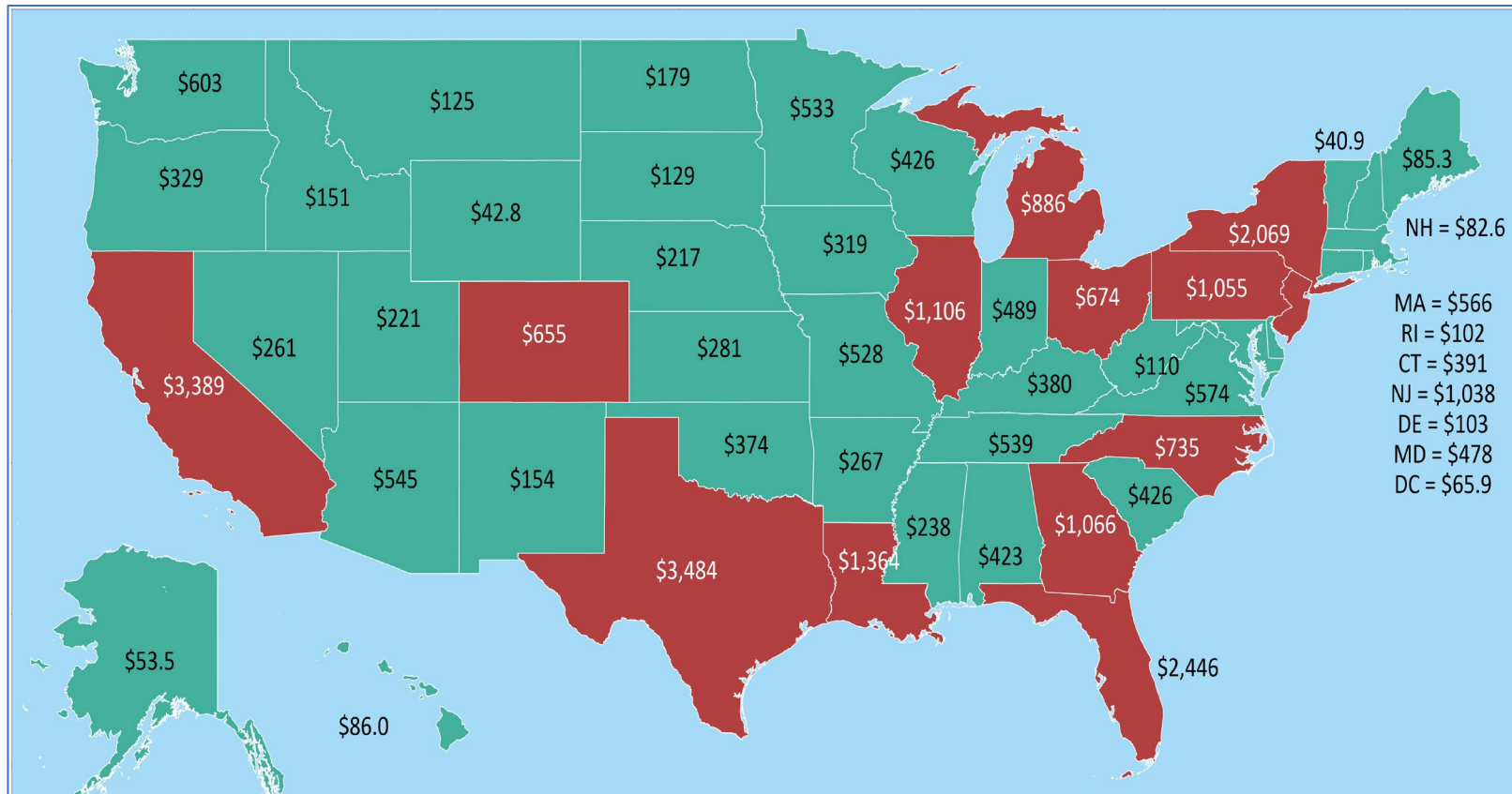
Source: US: BLS; Insurance Lines: **Triple-I** (as of 03/01/2022)

Replacement Costs Increases: P&C Lines 2022E

Highest in largest insurance state markets

Replacement Costs Increase: P&C Lines 2022E (Physical Damages)

Additional Replacement Costs by State (Change YoY\$ in Millions)



Green: Below national average
Red: Above national average

Source: Triple-I (as of 03/22/22)
 Insurance Data: 2021A
 Economic Data: 2022E

P&C Lines: Underlying Growth Increasing and
Replacement Costs Decreasing

(but too slowly)

Commercial Multi-Peril

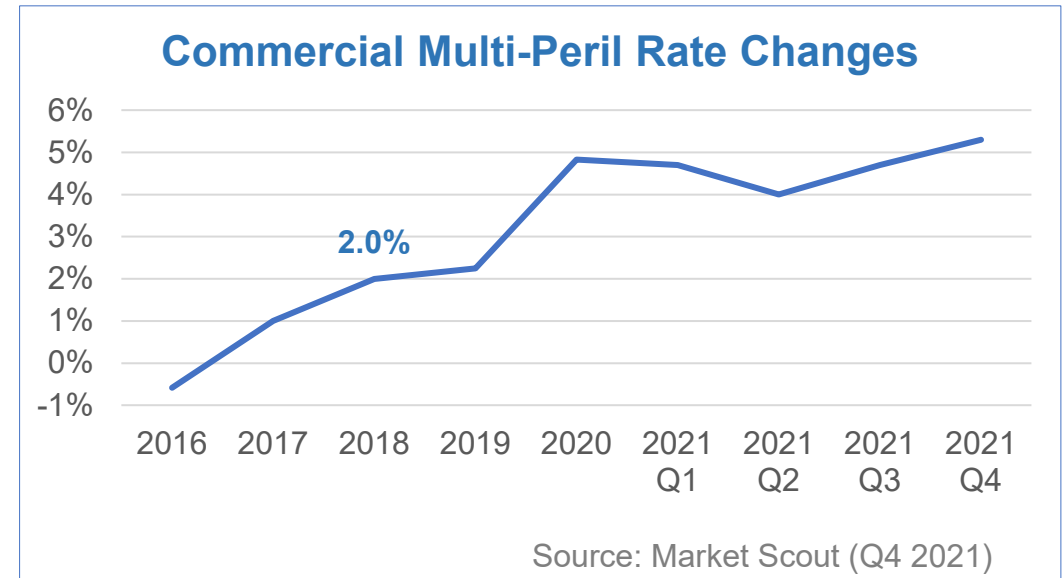
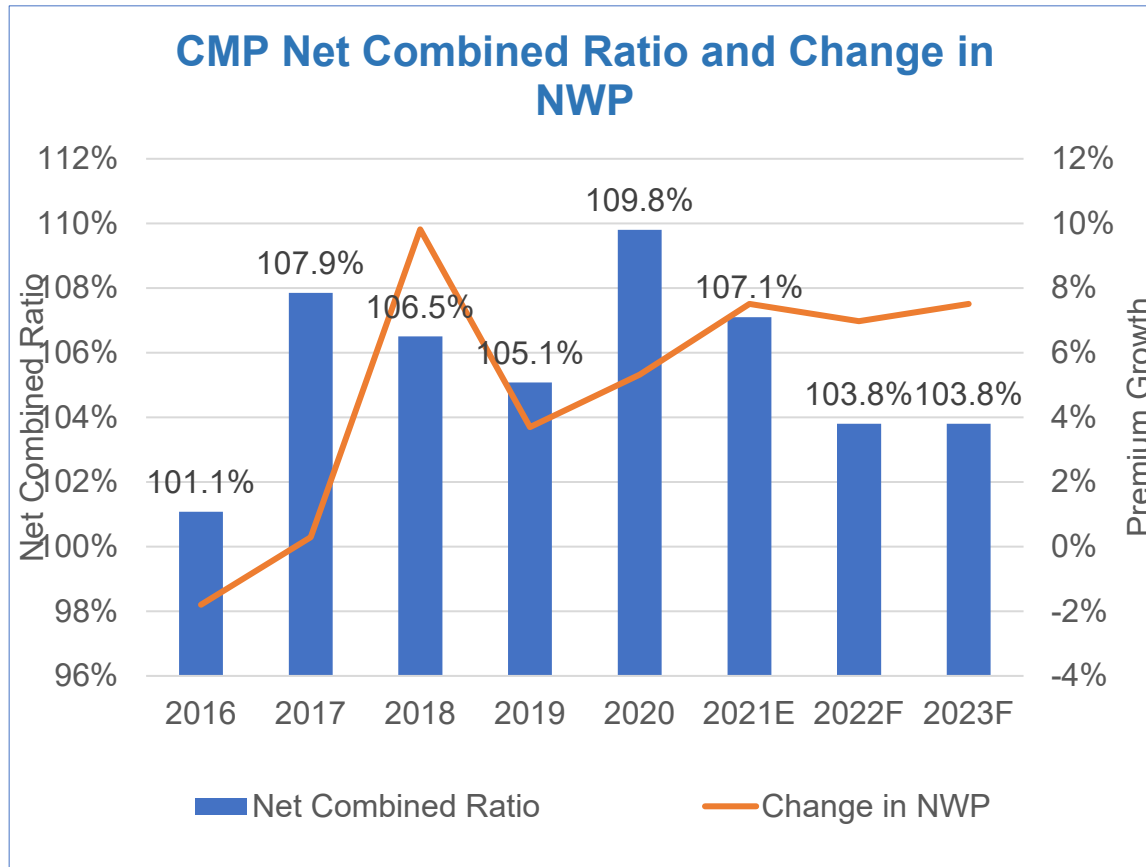
Labor disruptions and high commodity prices constrained performance in 2021 – disruptions likely to continue but prices to improve in 2022

Commercial Multi-Peril	2016	2017	2018	2019	2020	2021	2022E
Market Growth Index	1.97%	2.43%	3.41%	2.01%	-2.24%	1.94%	3.16%
Real Estate, Rental & leasing	0.7%	1.7%	2.8%	2.1%	-1.3%	2.3%	
All Employees Commercial Buildings	4.4%	3.8%	4.5%	1.8%	-4.0%	1.2%	
Replacement Cost Basket	-0.45%	0.94%	2.48%	0.36%	0.23%	10.83%	13.83%
Construction Materials	0.2%	3.6%	6.4%	0.0%	1.5%	26.7%	
Equipment & Other Capital Goods	1.6%	1.6%	3.1%	2.1%	0.1%	5.2%	
Information Technology Prices	-3.1%	-2.4%	-2.0%	-1.1%	-0.9%	0.6%	

Source: FRED data; Analysis: Triple-I. (As of 02/2022)

Commercial construction volume and labor costs less volatile during pandemic (and economic corrections) than homeowners

Commercial Multi-Peril



2021E Combined Ratio decreased to 107.1% primarily due to reallocation of Cats by product

Strong NWP growth from economic recovery and hard market

Watch for Business Interruption court decisions or potential federal legislation

Sources: NAIC Statutory Financial Data through S&P Global Market Intelligence
Analysis: Insurance Information Institute, Milliman.

Commercial Auto

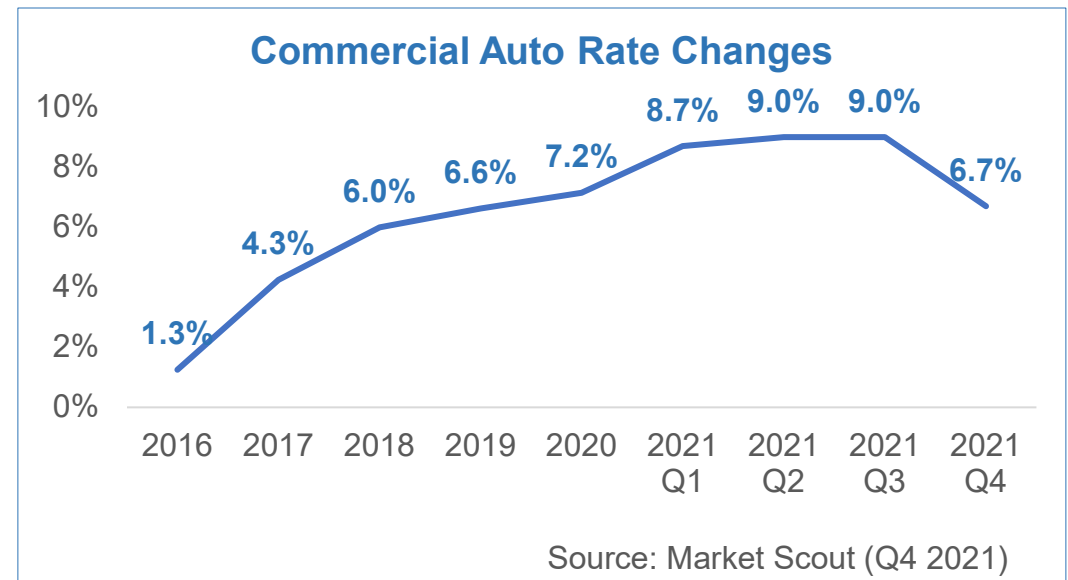
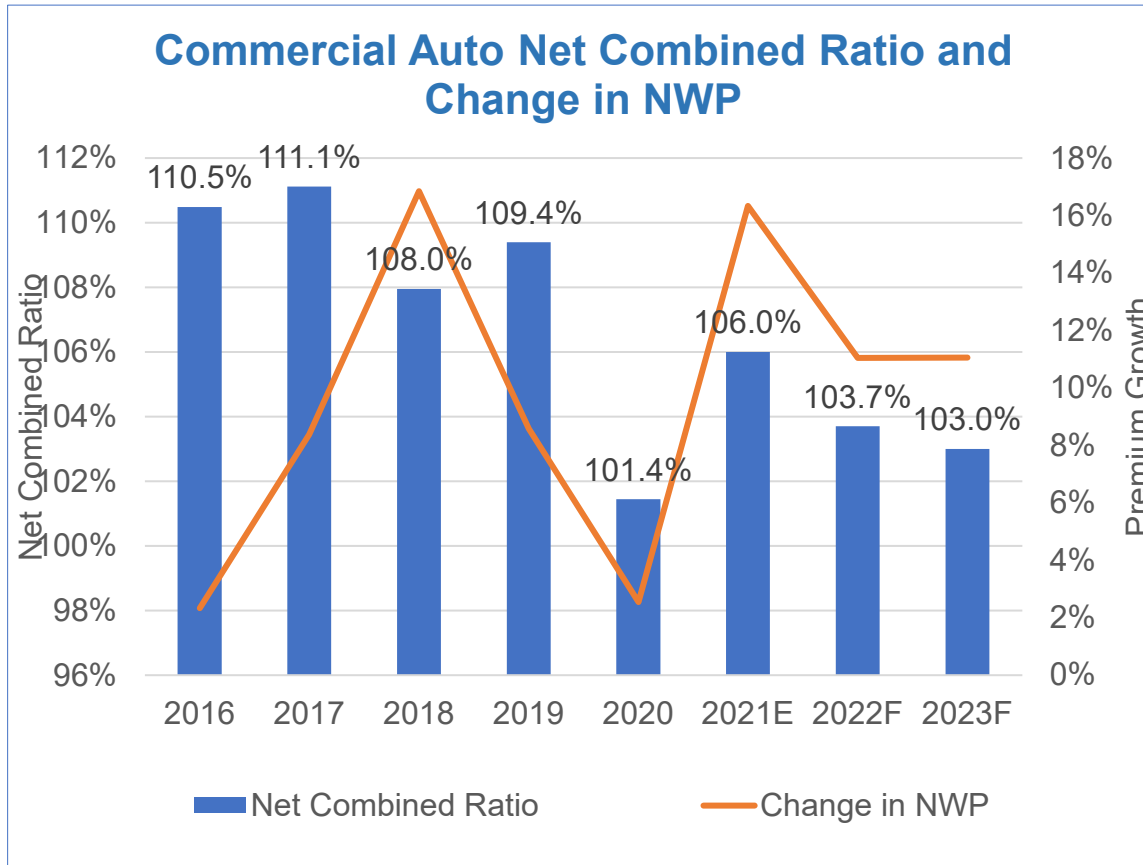
Low inventory and high labor costs constrained performance in 2021 – inventory expected to recover in 2022 while labor costs likely to remain elevated longer

Commercial Auto	2016	2017	2018	2019	2020	2021	2022E
Market Growth Index	1.26%	6.80%	4.72%	5.54%	-5.68%	9.55%	4.49%
Light & Heavy Truck Sales	6.6%	4.4%	8.2%	3.0%	-10.1%	14.5%	
Average Expenditures on Autos, All Units	-9.08%	11.56%	-1.95%	10.54%	2.94%		
Replacement Cost Basket	-1.74%	-0.21%	-0.60%	0.09%	1.11%	13.07%	6.17%
New Vehicles	0.2%	-0.2%	-0.5%	0.4%	0.5%	5.8%	
Used Vehicles	-2.6%	-3.6%	0.1%	1.0%	3.2%	26.5%	
Parts & Equipment	-2.8%	3.2%	-1.4%	-1.1%	-0.4%	6.9%	

Source: FRED data; Analysis: Triple-I. (AS of 02/2022)

Commercial auto sales and expenditures less volatile during pandemic (and economic corrections) than personal auto's

Commercial Auto



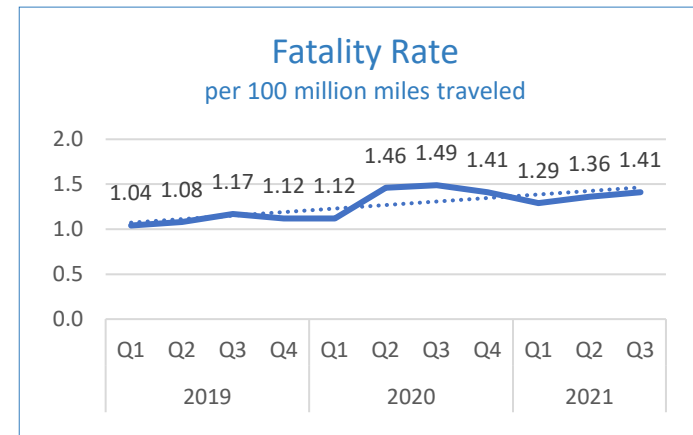
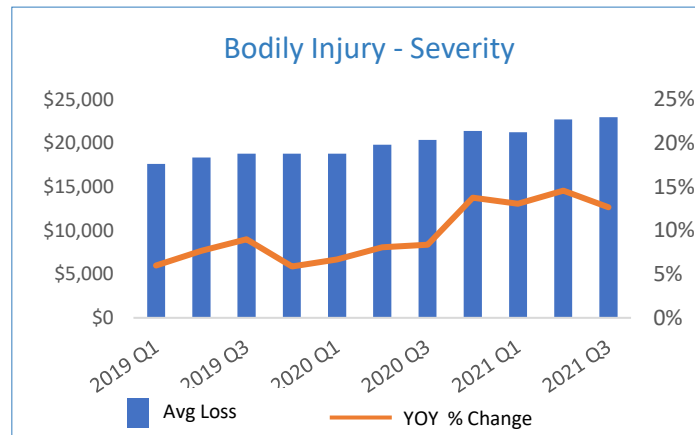
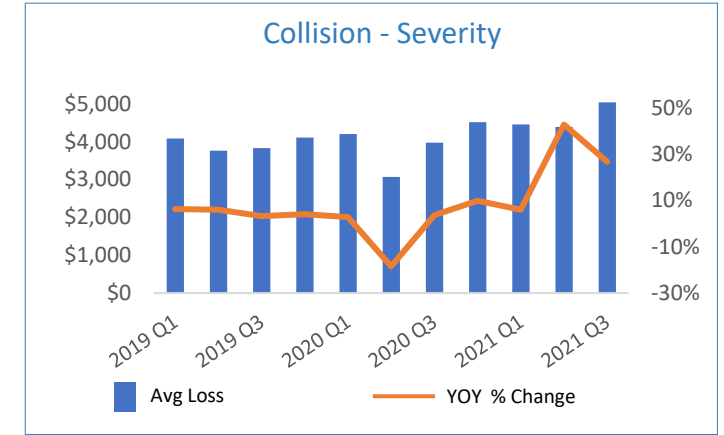
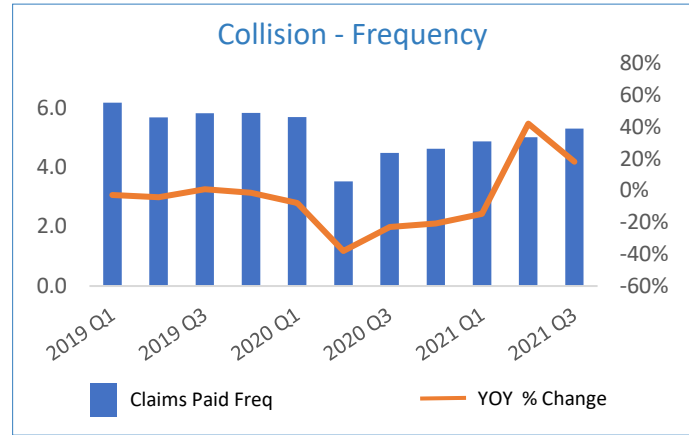
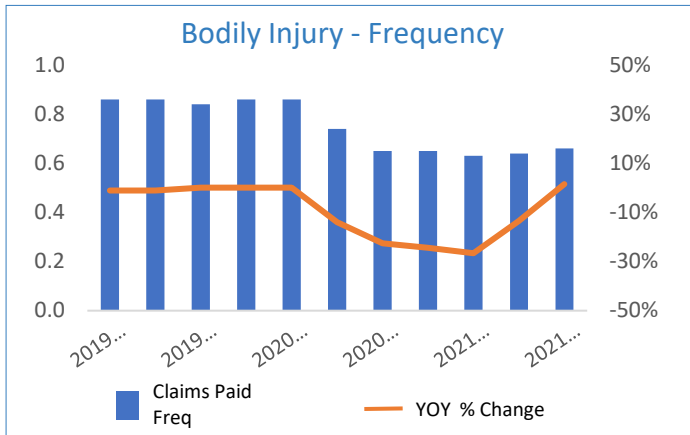
Underwriting losses continue through 2023F, but improving year-over-year

Strong NWP growth from economic recovery and hard market

Watch for social inflation loss pressure and prior year adverse loss development

Sources: NAIC Statutory Financial Data through S&P Global Market Intelligence
 Analysis: Insurance Information Institute, Milliman.

Auto: Deeper Look at Deteriorating Trends



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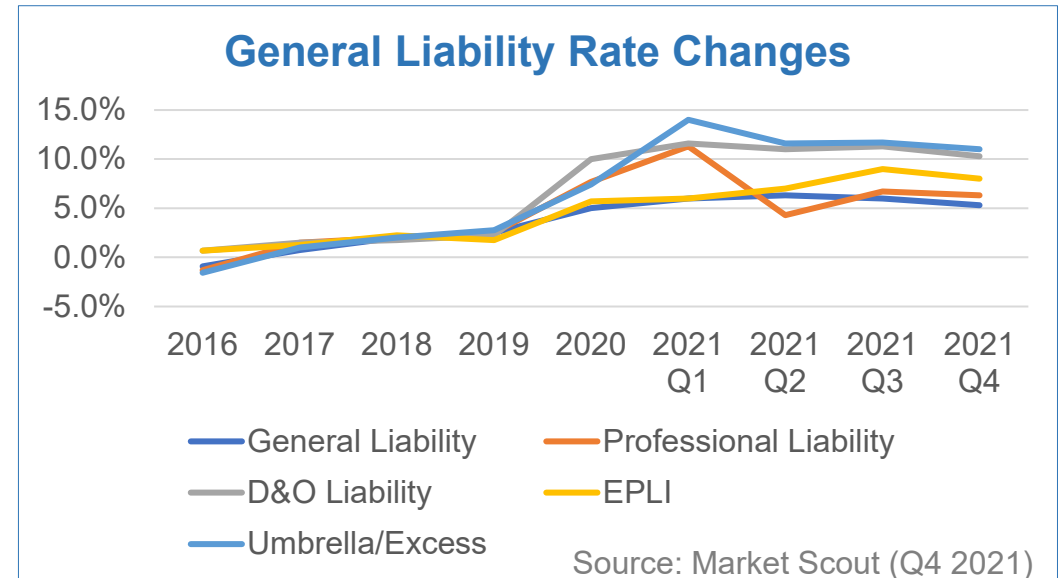
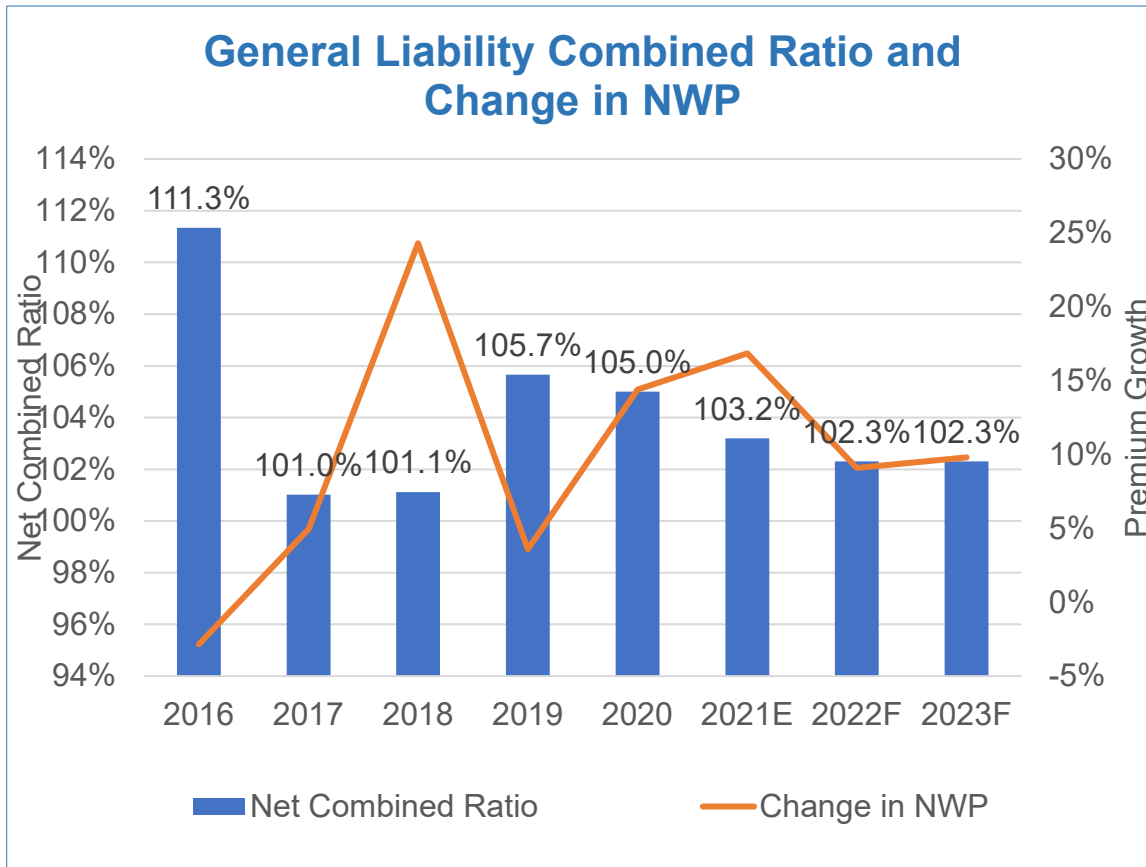
General Liability

Key economic fundamentals improved in 2021 pointing to rising exposure in 2022 – social inflation continues to trump economics as fundamental

General Liability	2016	2017	2018	2019	2020	2021	2022E
Market Growth Index	2.63%	0.83%	1.57%	2.08%	0.04%	7.19%	3.63%
Retail Trade	3.7%	3.3%	3.2%	2.5%	-2.9%	3.7%	
Finance & Insurance	1.5%	-1.7%	-0.1%	1.7%	3.0%	10.7%	
Replacement Cost Basket	2.82%	2.33%	1.65%	1.08%	1.10%	0.99%	2.05%
Medical Care Commodities	3.4%	2.8%	1.2%	0.0%	0.5%	-1.6%	
All CPI Items Less Food & Energy	2.2%	1.8%	2.1%	2.2%	1.7%	3.6%	

Source: FRED data; Analysis: Triple-I. (As of 02/2022)

General Liability



Sources: NAIC Statutory Financial Data through S&P Global Market Intelligence
 Analysis: Insurance Information Institute, Milliman.

Underwriting losses continue, but improving

Strong NWP growth from economic recovery and hard market

Watch for social inflation and cyber risk

Workers Compensation

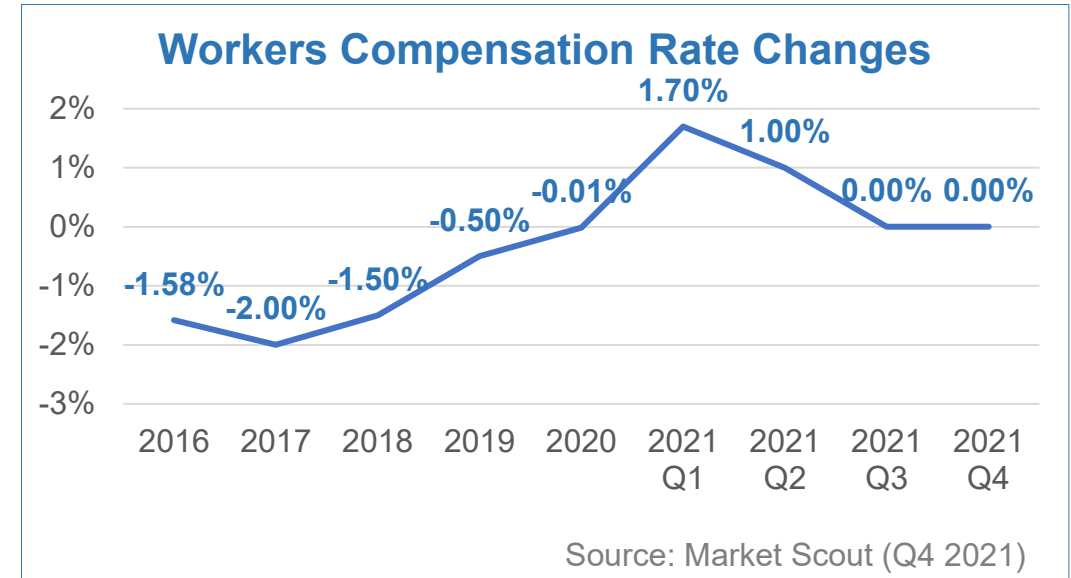
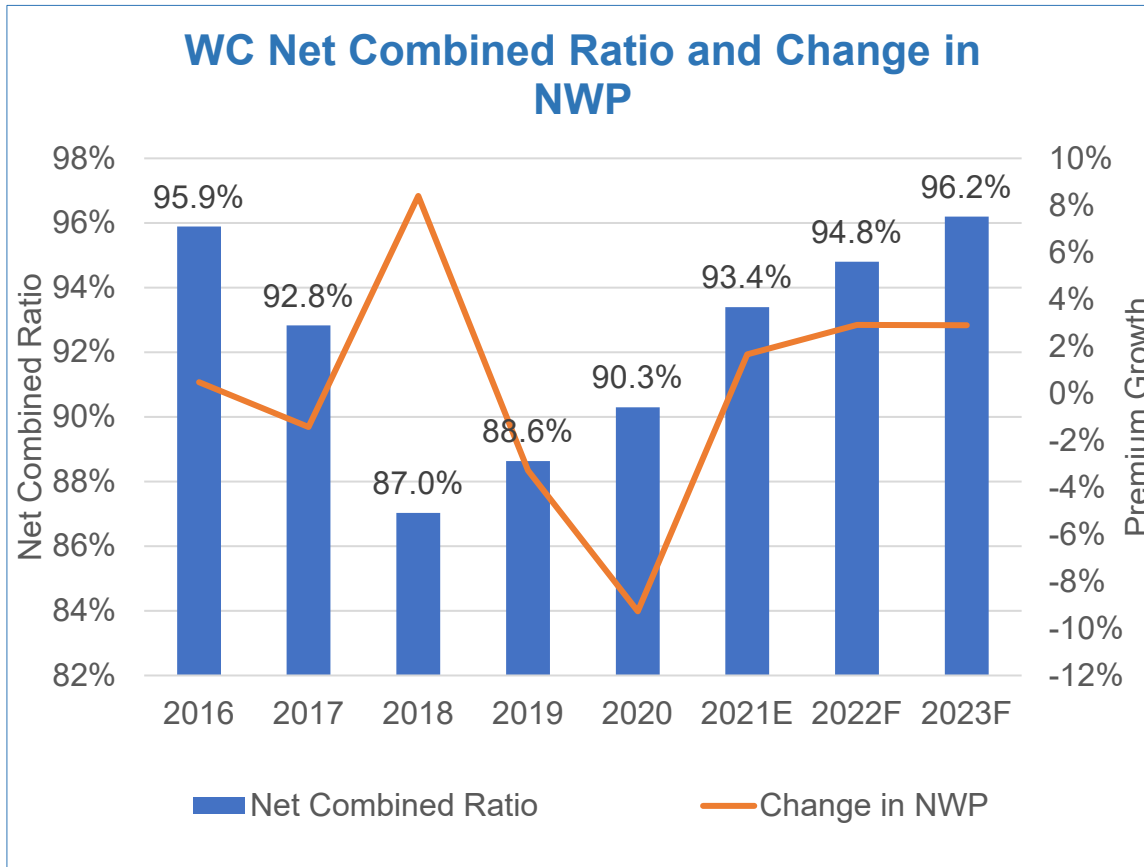
Payroll and compensation lagged overall growth and constrained performance in 2021 – expected to continue in 2022

Workers Compensation	2016	2017	2018	2019	2020	2021
Payroll	1.78%	1.57%	1.57%	1.35%	-5.72%	2.98%
Total Wages and Salaries	1.42%	1.50%	1.86%	0.96%	-5.41%	4.10%

Source: FRED data; Analysis: Triple-I. (As of 02/2022)

The *Great Resignation* and *Great Competition for Talent* narrative is not reflected by compensation that is failing to keep up with inflation – constraining net premium growth.

Workers Compensation



Underwriting profits continue, although margins shrinking
 Pandemic, recession, remote work, and economic recovery impacted volume and location of WC risk

Sources: NAIC Statutory Financial Data through S&P Global Market Intelligence
 Analysis: Insurance Information Institute, Milliman.

Political & Trade Credit Insurance

90% of World Trade relies on credit, insurance or guarantee issued by a bank, insurer, or other financial institution

ILLUSTRATIVE MARKET CAPACITY

Capacity: \$1.5-\$3.0 billion per risk

Rates: 0.25% < 2.5% off covered limit p.a.

Single market capacity: > \$200 million

Tenor: > 5 years

Governments

EXIMBANK (US)
EDC (Canada)
Euler Hermes (Germany)
COFACE (France)
Atradius (Netherlands)
Norwegian Export Credit Agency
Finnerva (Finland)
OPIC (US)
China Exim Bank (PRC)
JBIC (Japan)
Credendo (Belgium)
UK Export Finance (UK)

Private Markets

AIG (US)
AXA XL (UK)
FCIA (US)
Sovereign (Bermuda)
Zurich (North America)
Lloyd's
Caitlin
Ascot
MunichRe
AXIS
Aon (Broker)
Marsh (Broker)
WTS (Broker)

Multi-Laterals

MIGA (Global)
IFC (Global)
IADB (Latin-America)
EBRD (Europe)
African Development Bank
Asia Development Bank
Islamic Development Bank

Return to Normal: Road Map

Combined Ratio Increases on Constrained Economic Fundamentals

	YEARLY	YEAR-OVER-YEAR (YoY) >>>			
	2020	2021E	2022F	2023F	
COMBINED RATIO MODEL	Combined Ratio 98.7	Combined Ratio 101.3	Combined Ratio 99.3	Combined Ratio 99.7	
ALL P&C LINES					
(\$ in billions)					
	<ul style="list-style-type: none"> Net Written Premium \$655.5B Net Incurred Loss \$381.6B Underwriting Income \$8.4B 	<ul style="list-style-type: none"> Net Written Premium \$708.7B Net Incurred Loss \$424.9B Underwriting Income -\$9.2B 	<ul style="list-style-type: none"> Net Written Premium \$746.7B Net Incurred Loss \$439.0B Underwriting Income \$4.9B 	<ul style="list-style-type: none"> Net Written Premium \$788.8B Net Incurred Loss \$465.4B Underwriting Income \$2.0B 	

Source: Data: NAIC, S&P, MarketScout; Analysis: **Triple-I** and Milliman (as of 02/16/2022)

Further Deterioration Going into Rest of Year

YEARLY >>>

YEAR-OVER-YEAR (YoY)

COMBINED RATIO MODEL

ALL P&C LINES

2020

Combined Ratio
-0.10

- Net Written Premium
2.53%
- Net Incurred Loss
1.49%
- Underwriting Income
0.80%

2021E

Combined Ratio
2.60

- Net Written Premium
8.11%
- Net Incurred Loss
11.34%
- Underwriting Income
-17.50%

2022F

Combined Ratio
-2.00

- Net Written Premium
5.37%
- Net Incurred Loss
3.32%
- Underwriting Income
14.10%














2023F

Combined Ratio
0.40

- Net Written Premium
5.64%
- Net Incurred Loss
6.03%
- Underwriting Income
-2.90%

Source: Data: NAIC, S&P, MarketScout; Analysis: **Triple-I** and Milliman (as of 02/16/2022)

Ukraine War Impact: Key P&C Lines

P&C LINE	IMPACT	TRANSMISSION MECHANISM
 Homeowners	 Replacement costs	Higher prices of lumber, apparel and appliances
	 Underlying growth	Rising mortgage rates and slowing home purchases
 Commercial Multi-Peril	 Replacement costs	Higher prices of copper, iron and technology equipment
	 Underlying growth	Postponed capital investments > economic uncertainty
 Commercial & Personal Auto	 Replacement costs	Continued higher costs of new & used cars, car parts, labor
	 Collision	Higher gas prices > fewer miles driven > lower speed
 General Liability	 Claims	Lower retail trade activity due to higher prices
 Workers Compensation	 Underlying growth	Postponed hiring due to economic uncertainty

Replacement Costs: Return to Trend Obstacles & Timeline

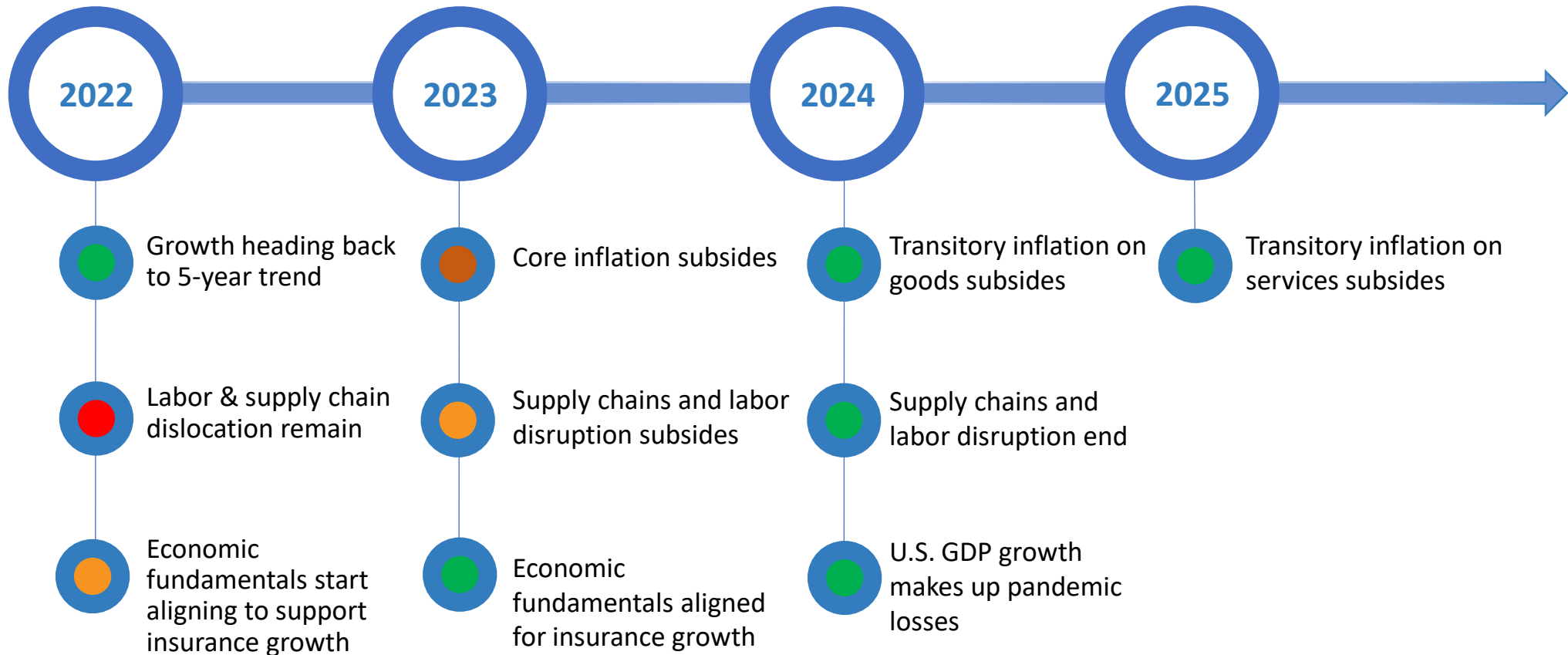
Supply chains' renewed COVID & Ukraine stress push back return to trends by one to two quarters

Replacement Costs: Return to Trend Obstacles & Forecasts							
	Return to Trend Obstacles			Forecasts (YoY%)			
	Supply	Labor	Demand	2022E	2023F	2024F	2025F
P&C Lines	•	•	•	9.11%	9.11%	9.11%	1.19%
Homeowners	•	•	•	10.6%	7.9%	5.1%	2.3%
Personal Auto	•		•	9.1%	6.4%	3.6%	0.9%
Commercial Multi-Perils	•	•	•	17.1%	12.6%	8.1%	3.6%
Commercial Auto	•		•	6.5%	1.45%		

Source: Triple-I (as of 03/22/22)

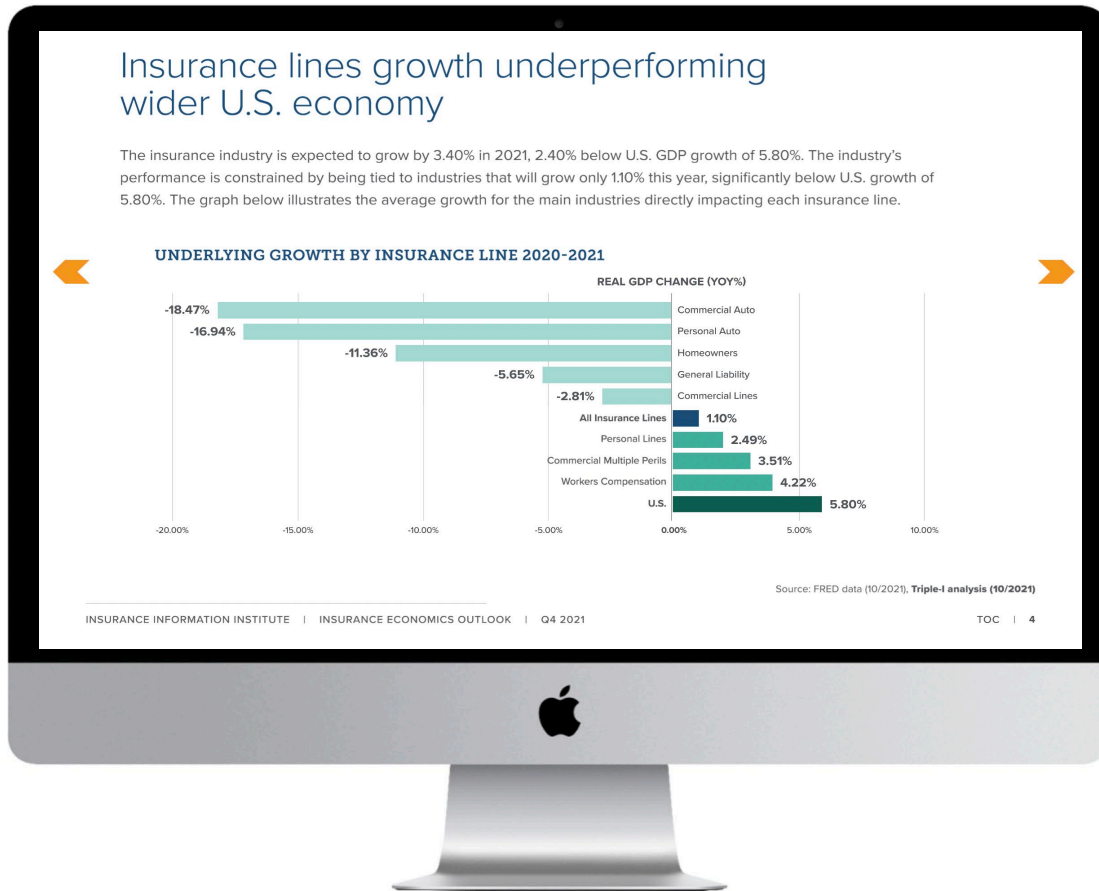
Timeline: Red & Green Flags

Macroeconomic drivers of insurance performance returning to growth alignment starting Q4 2022 and peaking 2023-2024



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Michel Léonard, PhD, CBE, is Chief Economist and Data Scientist at Triple-I where he leads the Economics and Analytics Department. He is responsible for providing analysis and insight on industry economics and business performance, as well as other forward-looking, data driven insurance insights. The Triple-I is an affiliate of The Institutes.

Michel brings more than twenty years of insurance experience to Triple-I, including senior and leadership positions such as Chief Economist for Trade Credit and Political Risk at Aon; Chief Economist at Jardine Lloyd Thompson; Chief Economist and Data Scientist at Alliant; and Chief Data Scientist at MaKro LLC. In these roles, he worked closely with underwriters, brokers and risk managers to model risk exposures for property-casualty and specialty lines such as credit, political risk, business interruption and cyber.

Michel also currently serves as adjunct faculty at New York University' Economics Department. Previous academic appointments include Adjunct Faculty in NYU's Center for Data Science and Adjunct Faculty at Columbia University's Data Science Institute and Statistics Department. He was the recipient of a grant from the Spencer Educational Foundation to develop a course in data analytics for insurance. In these capacities, Michel provides a key link between the Triple-I, its Non-Resident Scholars and academia.

Michel holds a Bachelors of Arts from McGill University, a Masters of Theological Studies from Harvard University, and a Masters of Arts and Doctorate of Philosophy in Political Economy from the University of Virginia, focusing on qualitative and quantitative risk modeling. He is a member of the Insurance Research Council Advisory Board.

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