The Impact of Monetary Policy on Insurance Performance: A Forward View

May 15, 2023

INSURANCE INFORMATION INSTITUTE

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P&C industry financials stable in light of market volatility

Policyholders' surplus decreased -5.99% from a high of $1,052.9 billion on December 31, 2021, to $989.8 billion as of June 30, 2022, largely due to unrealized equity capital losses. However, policyholders' surplus remains up 6.51% from 2020's 929.3 billion to 2022's 989.8 billion, and assets under management continue to be invested in conservative fixed income investments.

POLICYHOLDERS' SURPLUS

($ in billions)

2022	$989.8
2021	$1052.9
2020	$929.3

Source: NAIC

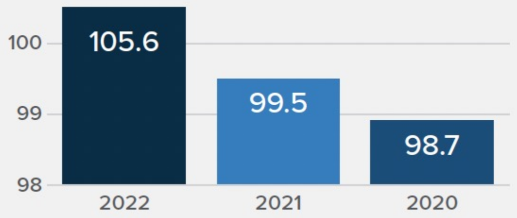
INVESTMENT INCOME (EARNED)

($ in billions for six months ended June 30)

2022	$39.2
2021	$28.9
2020	$28.3

Source: NAIC

COMBINED RATIO



Source: Triple-I & Milliman

REALIZED GAINS (LOSSES)

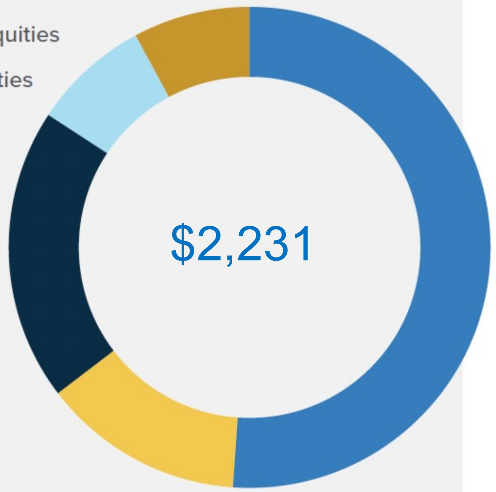
($ in billions for six months ended June 30)

2022	$3.6
2021	$9.7
2020	$-0.9

Source: NAIC

ASSETS UNDER MANAGEMENT

51.1%	Bonds
13.5%	Unaffiliated Equities
19.7%	Affiliated Equities
7.8%	BA Assets
7.9%	Others



Source: NAIC

Hard Market Conditions Push Premium Growth Higher

P&C net premiums written are forecasted to continue to grow due to hard market conditions regardless of slowing underlying growth, but underwriting losses are expected to persist driven by challenging results in personal lines.

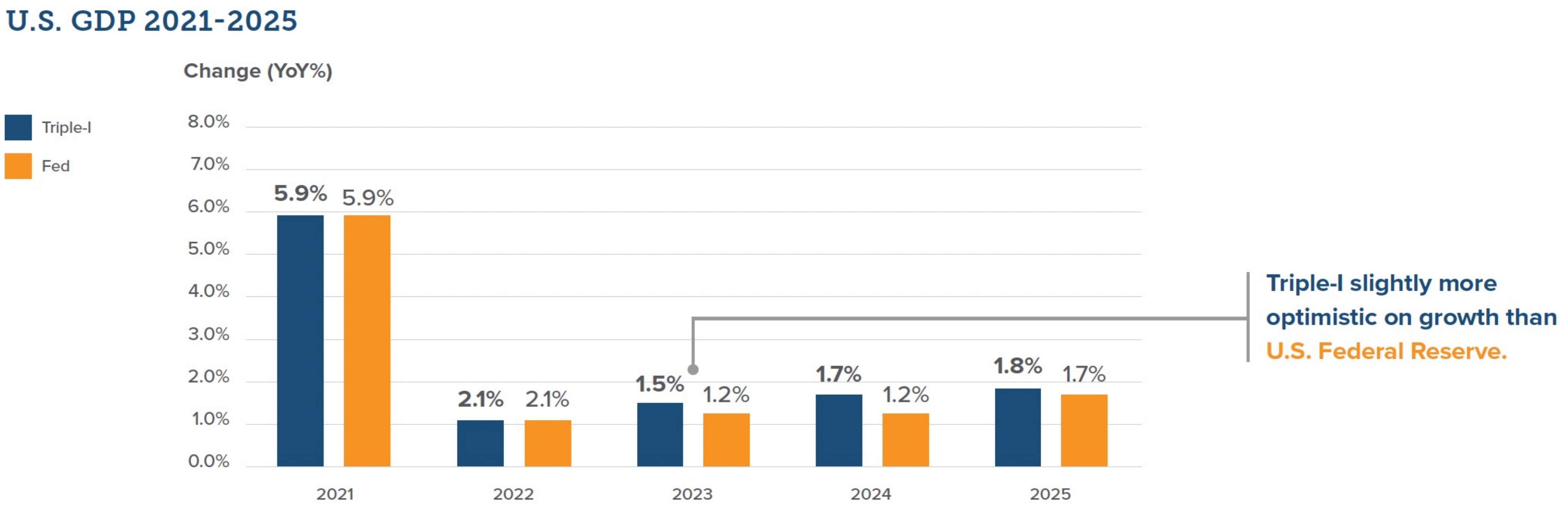
COMBINED RATIO MODEL

All P&C lines ($ in billions)

	2021	2022E	2023F	2024F
Combined Ratio	99.5%	105.8%	102.5%	101.1%
Net Written Premium	$716.0B	$776.1B	$841.8B	$901.1B
Net Incurred Loss	$430.0B	$498.0B	$517.6B	$547.1B
Underwriting Income	$-3.0B	$-51.5B	$-29.3B	$-17.3B

Triple-I Forecasts U.S. GDP Growth to Remain Below Fed's Target

Triple-I forecasts U.S. GDP to grow slightly above Fed expectations between 2023 and 2025 but to remain below the Fed's long term growth expectation for the foreseeable future.



Source: Federal Reserve (as of 12/14/2022) and **Triple-I** (as of 03/20/2023)

Triple-I Monetary Policy Outlook - UPDATE

Federal Funds Rate Projected Appropriate Policy Path (Median) Federal Reserve Board of Governors					
	2022 (June)	2022 (Dec)	2023	2024	Longer Run
Board Leans	Dovish	Dovish	Hawkish	Hawkish	Hawkish
March 2022	1.0%	1.9%	2.8%	2.8%	1.6% – 2.4%
December 2021	0.3%	0.9%	1.6%	2.1%	0.6% – 0.9%

FMOC Statement May 04, 2022

Deciphering “Fed Talk”

Although (**negates**) economic activity edged down in first quarter

Household spending and business investment **remained strong**

unemployment rate has **declined substantially**

Inflation **elevated** (**but**) related to the pandemic, higher energy prices, and broader price pressures

Ukraine upward **pressure** on inflation

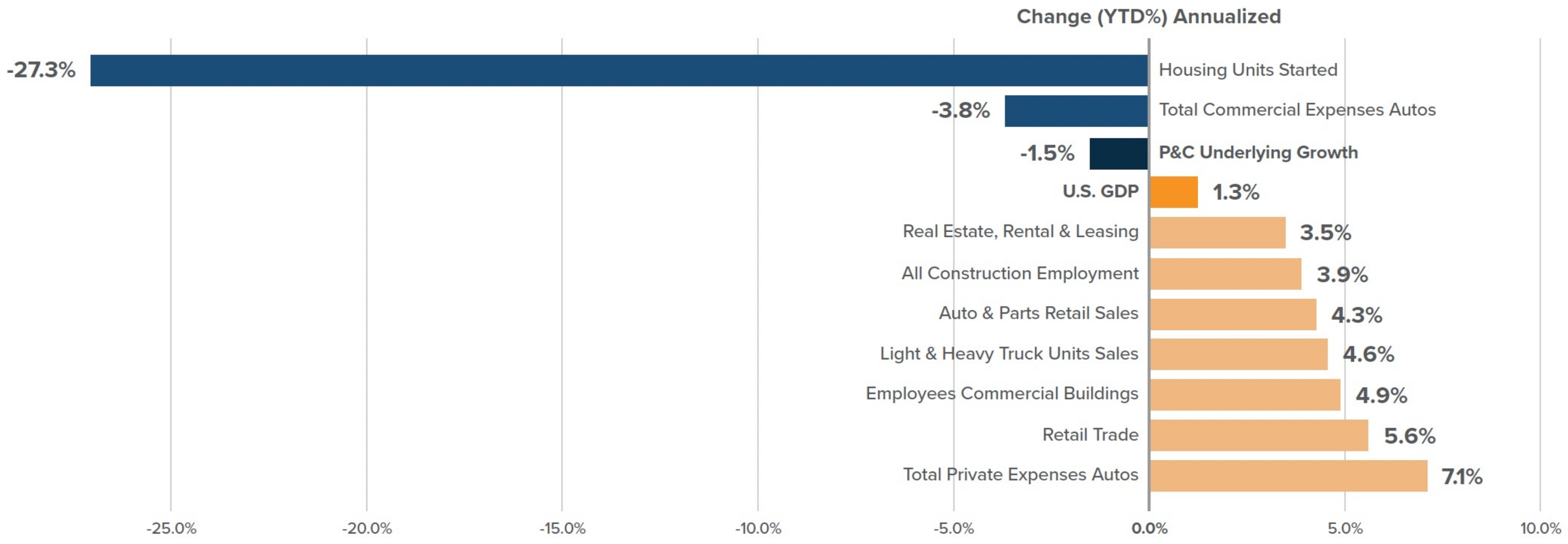
lockdowns in China **exacerbate** supply chain disruptions.

The Committee is highly attentive to inflation risks (**no mea culpa**)

Monetary Policy Pushes Economy to Brink of Recession

U.S. growth dropped over the last six months as rising interest rates depress new housing starts, corporate capital investments and spending on vehicles.

REAL GDP GROWTH KEY COMPONENTS 2022-2023



U.S. GDP Recovery on Hold Until Fed Changes Course

Prospect for a U.S. recovery by end of 2023 is dim as Fed remains hawkish, putting its long-term growth expectation further out-of-reach.

REAL GDP GROWTH KEY COMPONENTS 2022-2025

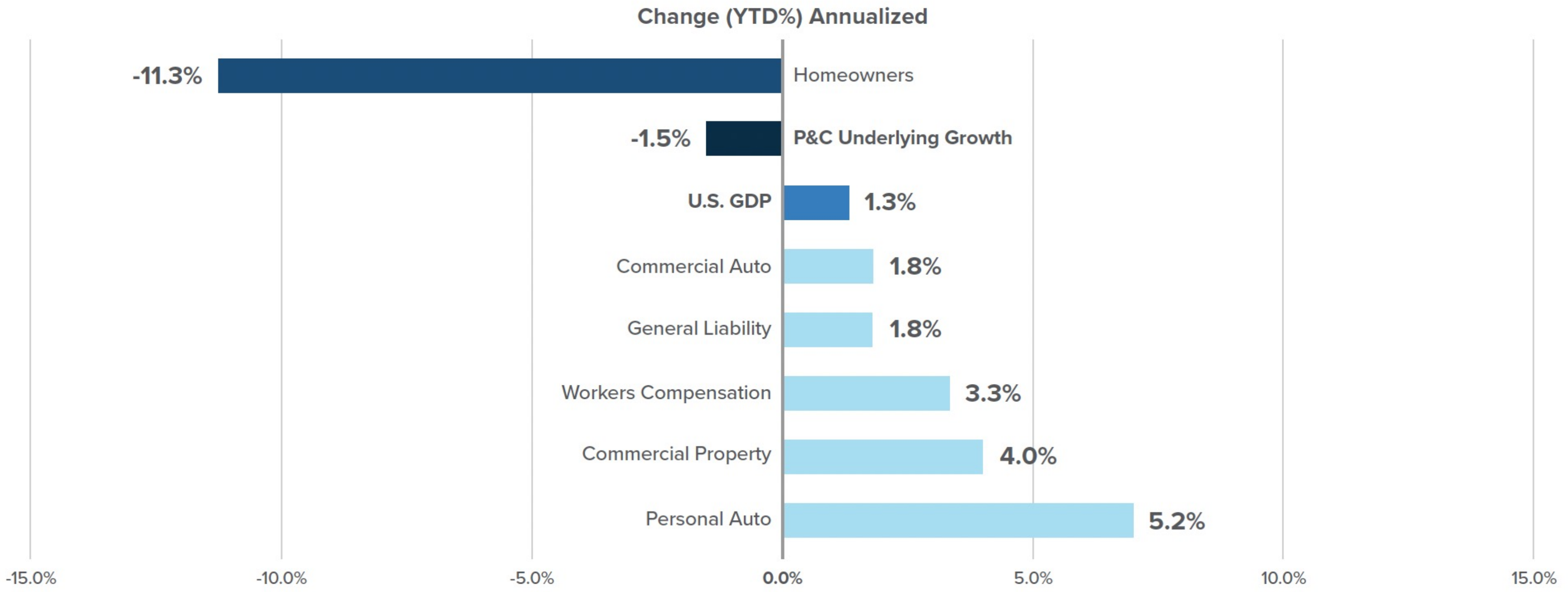
Change (YoY%)

	2022	2023	2024	2025
U.S. GDP	**2.1%**	**1.2%**	**1.2%**	**1.7%**
P&C Underlying Growth	**2.0%**	**0.4%**	**2.6%**	**4.5%**
All Construction Employment	4.2%	2.9%	1.9%	2.7%
Auto & Parts Retail Sales	3.9%	4.4%	4.6%	7.2%
Employees Commercial Buildings	4.6%	3.0%	1.2%	2.0%
Housing Unit Starts	-5.6%	-13.6%	2.0%	4.8%
Light & Heavy Truck Units Sales	-4.9%	0.6%	-3.5%	1.3%
Real Estate, Rental & Leasing	3.5%	2.6%	1.7%	1.7%
Retail Trade	6.8%	4.4%	2.8%	2.9%
Total Commercial Expenses Autos	4.7%	-6.6%	-9.3%	-3.1%
Total Private Expenses Autos	4.6%	6.4%	5.8%	7.0%

P&C Cyclical Underlying Growth Rebound Fails to Materialize

Overall P&C underlying growth fails to recover in Q1 2023, dragged down by a double-digit decrease in homeowners underlying growth caused by aggressive interest rates tightening.

UNDERLYING GROWTH KEY P&C LINES 2022-2023



P&C Underlying Growth May Rebound Following Shift in Monetary Policy

Prospects of a rebound in P&C underlying growth pushed back from 2023 to 2024, or at least two quarters after Fed signals end of monetary tightening.

UNDERLYING GROWTH KEY P&C LINES 2022-2025

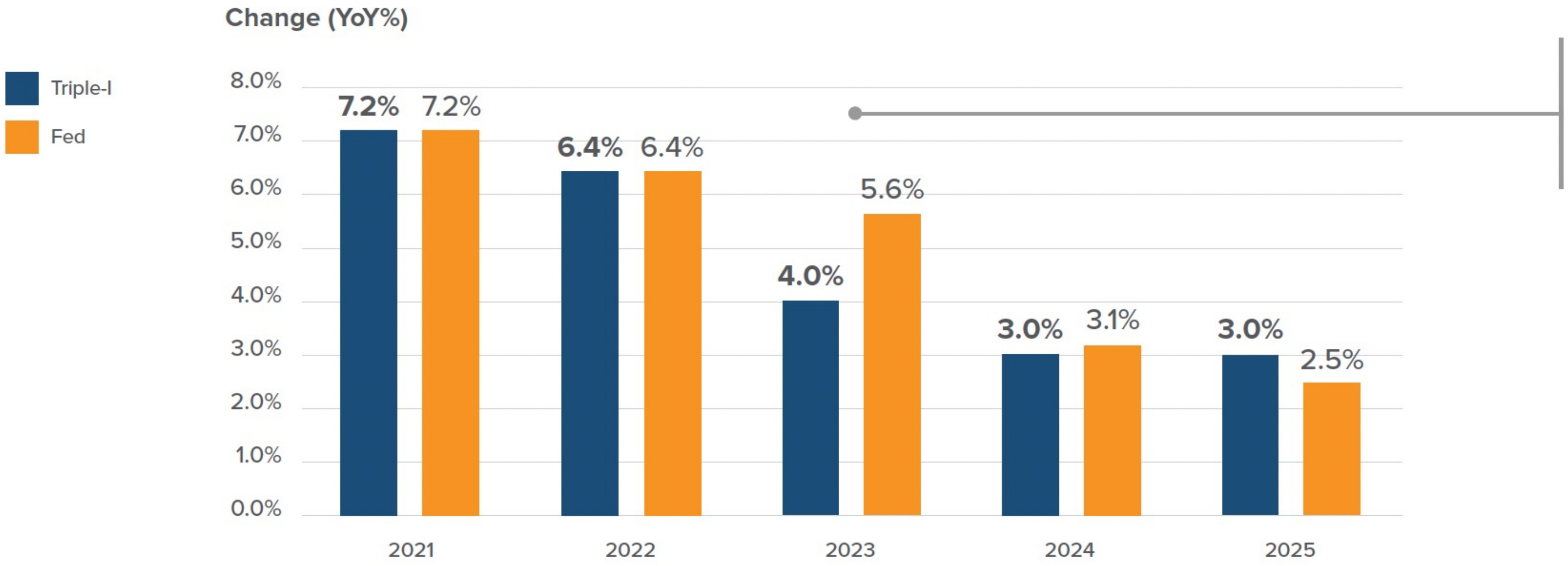
Change (YoY%)

	2022	2023	2024	2025
U.S. GDP	**2.1%**	**1.2%**	**1.2%**	**1.7%**
P&C Underlying Growth	**2.0%**	**0.4%**	**2.6%**	**4.5%**
Commercial Auto	-1.6%	-1.8%	-5.4%	-0.2%
Commercial Property	3.9%	2.8%	1.5%	1.8%
General Liability	2.0%	1.5%	1.6%	2.1%
Homeowners	0.03%	-5.0%	2.2%	3.8%
Personal Auto	4.1%	5.1%	5.0%	7.1%
Workers Compensation	4.3%	2.1%	0.7%	1.2%

Triple-I Forecasts U.S. CPI to Remain Above Fed's Long-Term Target

Triple-I forecast U.S. CPI to continue to decrease faster than the Fed's expectations but to remain above the Fed's own long term target of 2.0% for the foreseeable future.

U.S. INFLATION 2021-2025

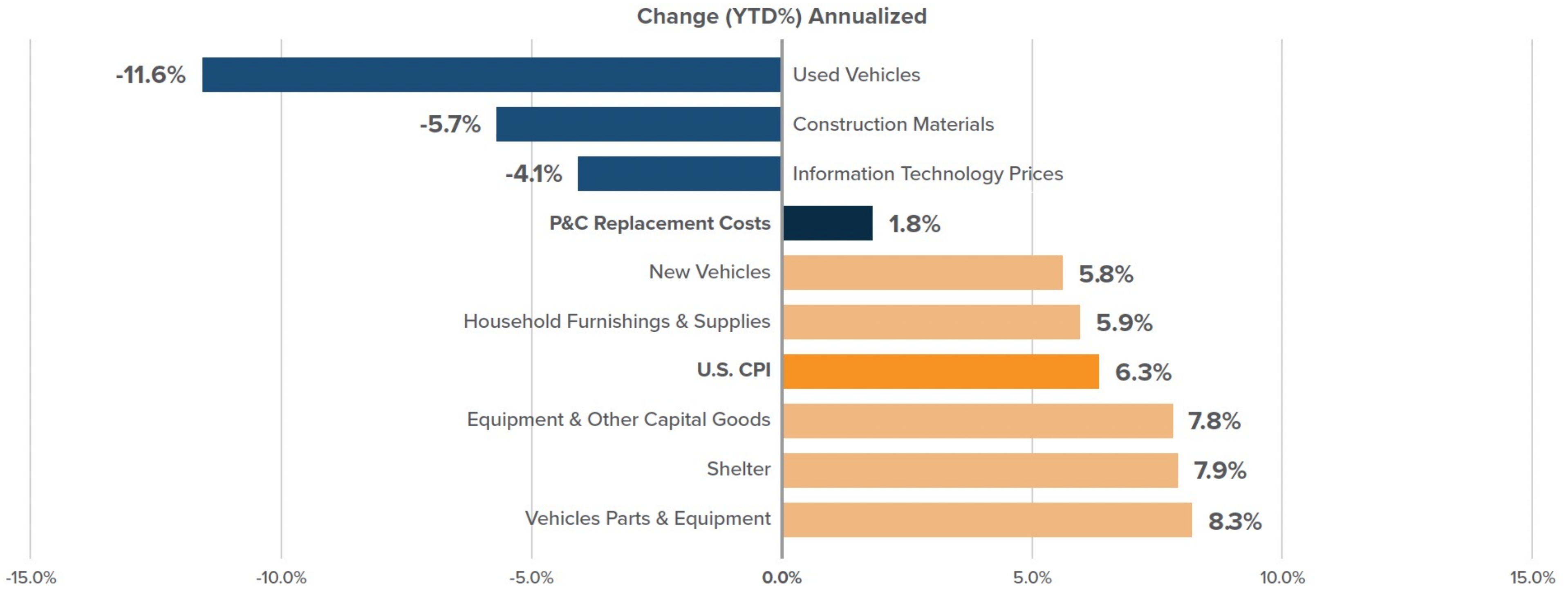


Triple-I more pessimistic on inflation than U.S. Federal Reserve in the long-term

U.S. CPI Is Decreasing But Don't Thank Interest Rates

U.S. CPI continues to decrease as pandemic supply chain disruptions in vehicles ease – and commodity and energy prices reach precarious war-time equilibrium.

INFLATION KEY CPI COMPONENTS 2022-2023



U.S. CPI Unlikely to Fall Below Fed Target

U.S. CPI is likely to remain above Fed 2% target for foreseeable future – or at least two quarters after geopolitical risk due to Russia's invasion of Ukraine subsides.

INFLATION KEY COMPONENTS 2022-2025

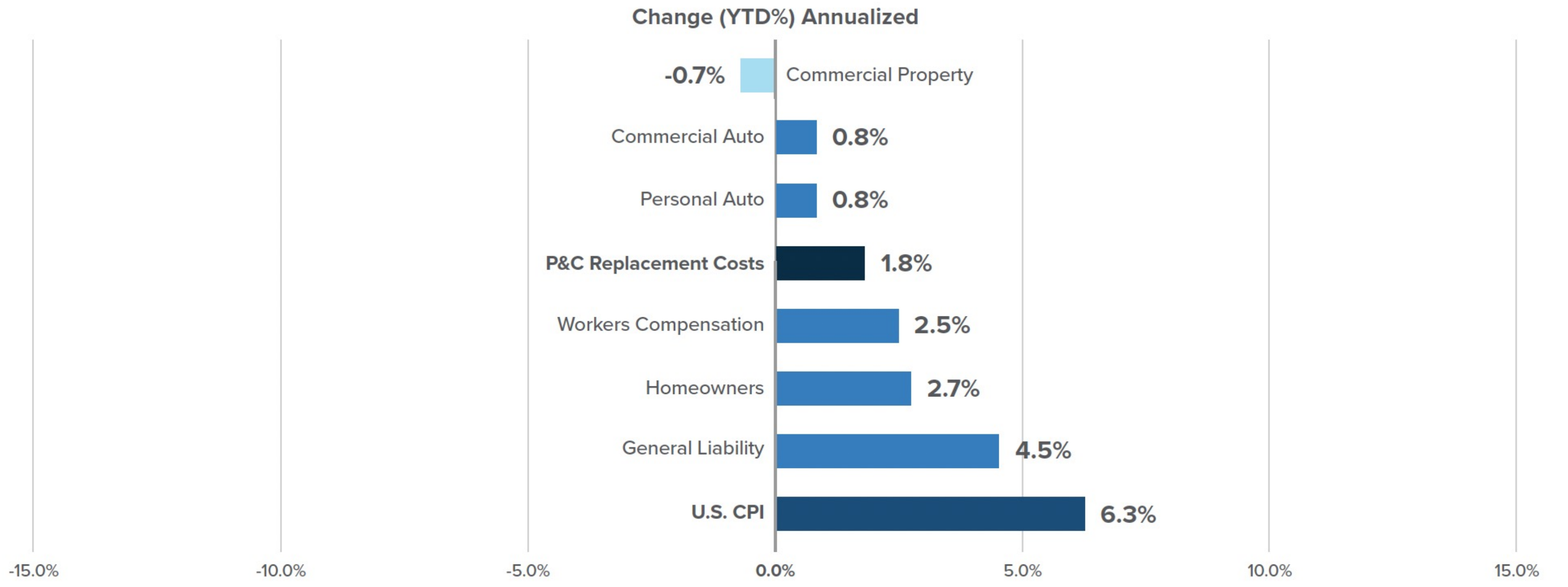
Change (YoY%)

	2022	2023	2024	2025
U.S. CPI	**6.4%**	**5.6%**	**3.1%**	**2.5%**
P&C Replacement Costs	**3.1%**	**1.7%**	**2.0%**	**1.9%**
Construction Materials	-2.6%	-1.6%	2.4%	3.0%
Household Furnishings & Supplies	6.7%	4.5%	2.2%	2.0%
New Vehicles	5.9%	3.9%	1.9%	1.5%
Shelter	7.5%	3.4%	2.3%	2.0%
Used Vehicles	-8.6%	-5.1%	1.4%	2.1%
Vehicles Parts & Equipment	9.9%	5.4%	2.6%	2.0%

P&C Replacement Costs Decreased in First Three Months of 2023

Overall P&C replacement costs continued to decrease faster than U.S. CPI in first three months of 2023 due to significant slowdown in homeowners and commercial property replacement cost increases.

REPLACEMENT COSTS KEY P&C LINES 2022-2023



P&C Replacement Costs May Stabilize Slightly Below Overall CPI

Increases in P&C replacement costs may stabilize around 1.9% over the next three years, slightly below overall inflation, driven by lower replacement costs for commercial construction and auto compared to overall prices.

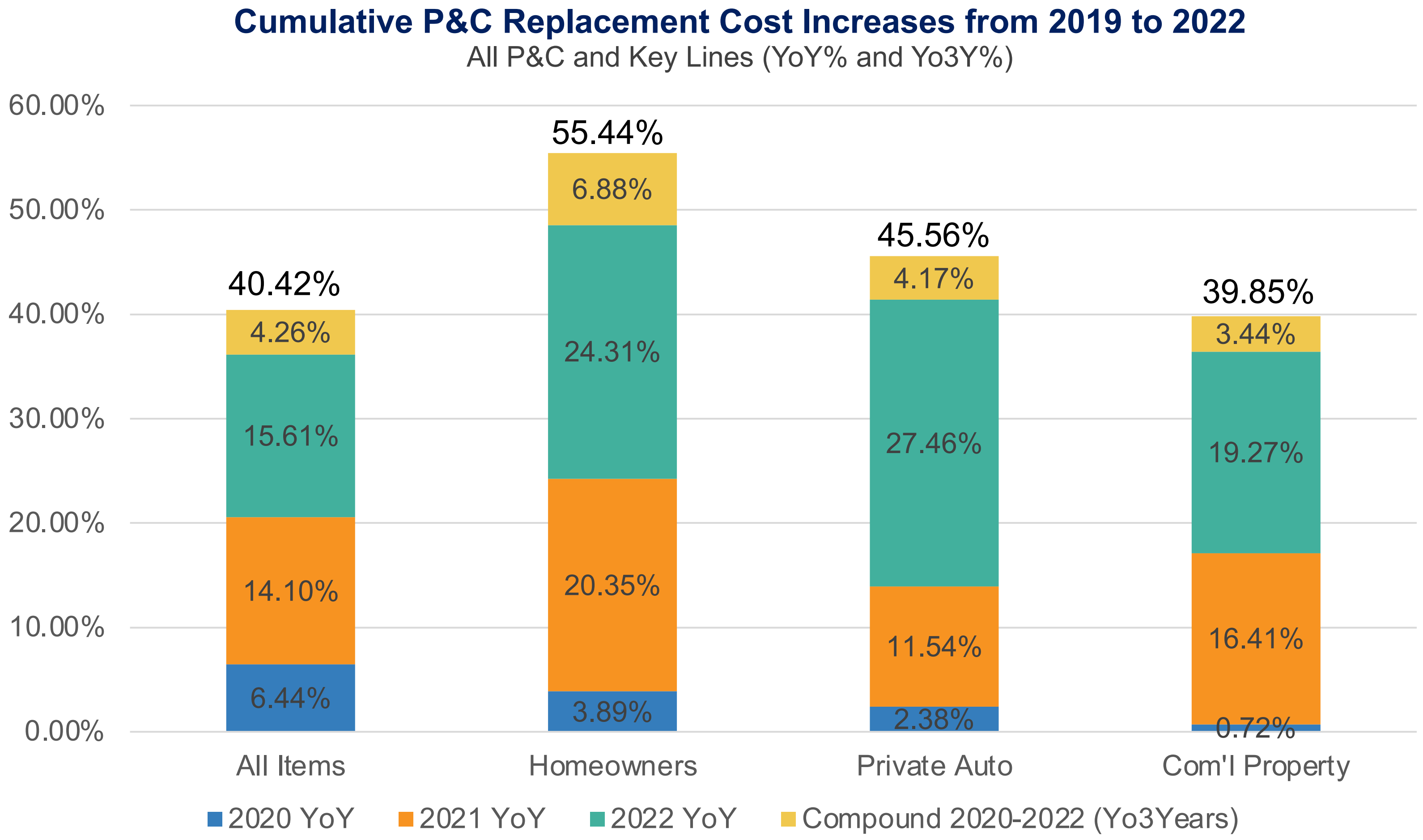
REPLACEMENT COSTS KEY P&C LINES 2022-2025

Change (YoY%)

	2022	2023	2024	2025
U.S. CPI	**6.4%**	**5.6%**	**3.1%**	**2.5%**
P&C Replacement Costs	**3.1%**	**1.7%**	**2.0%**	**1.9%**
Commercial Auto	2.3%	1.4%	2.0%	1.8%
Commercial Property	0.7%	0.3%	1.3%	1.4%
General Liability	4.5%	2.2%	1.5%	1.5%
Homeowners	3.9%	2.1%	2.3%	2.2%
Personal Auto	2.4%	1.4%	2.0%	1.9%
Workers Compensation	3.4%	1.6%	0.5%	1.2%

Cumulative Replacement Costs

Supply chain improving, labor costs to remain elevated, geopolitics main inflation driver



Replacement costs for all P&C lines increased 40.42% from 2019 to 2022 - even after the recent decreases in U.S. CPI.

Cumulative P&C Replacement Costs Increases (Yo3Y% 2019-22)

- All P&C Lines: 40.42%
- Homeowners: 55.44%
- Private Auto: 45.56%
- Commercial Property: 39.85%

Commercial Property Non-Liability Macroeconomic Drivers

The commercial property market is slowing down while materials and equipment replacement costs are returning to pre-pandemic levels bringing down overall P&C replacement costs

Commercial Property (Change YoY%)	2022	2023	2024	2025
Underlying GDP Growth	**3.9%**	**2.8%**	**1.5%**	**1.8%**
Real Estate, Rental & leasing	3.5%	2.6%	1.7%	1.7%
All Employees Commercial Buildings	4.6%	3.0%	1.2%	2.0%
Replacement Costs	**0.7%**	**0.3%**	**1.3%**	**1.4%**
Construction Materials	-2.6%	-1.6%	2.4%	3.0%
Equipment & Other Capital Goods	9.4%	5.2%	2.6%	2.1%
Information Technology Prices	-4.6%	-2.6%	-1.1%	-1.0%

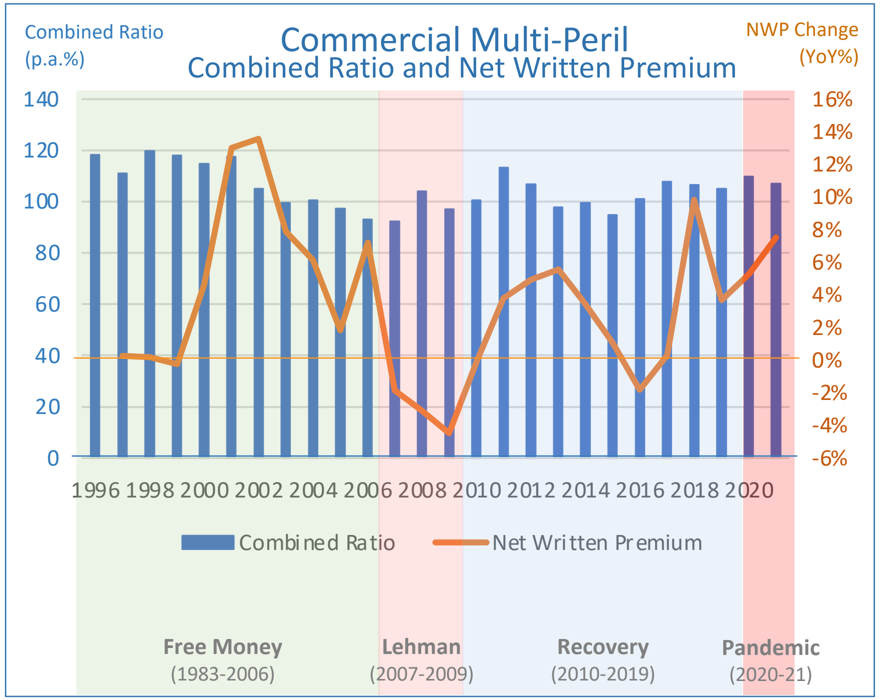
Commercial Property Performance through Economic Cycles

CR relationship to materials prices stronger than to equipment's
(expected)

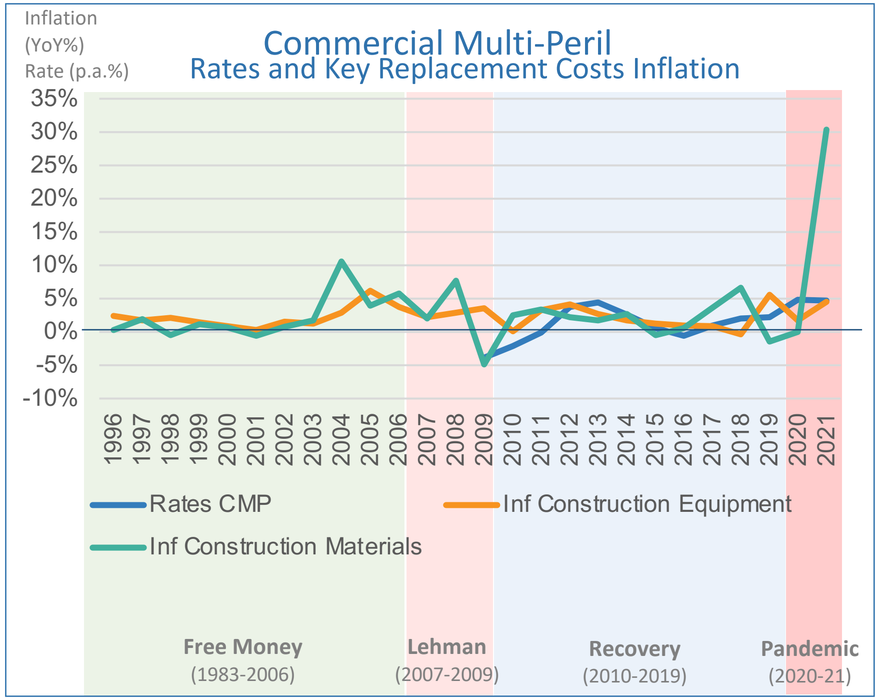
NWP relationship to material prices stronger than to equipment's
(expected)

CR performance less related to inflation volatility than other lines'
(unexpected)

Shaded areas' colors identify inflation cycles. They do not indicate inflation range or scale during each cycle.



Source: Economic Data FRED NWP & Combined Ratio Data: S&P; Rates Data: Market Scout; Chart & Analysis: Triple-I



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Homeowners Key Macroeconomic Drivers

Homeowners (Change YoY%)	2021	2023	2024	2025
Underlying GDP Growth	**-11.36%**	**3.19%**	**3.80%**	**3.95%**
Housing Units Starts	-13.00%	3.20%	4.18%	4.18%
All Construction Employment	6.80%	3.74%	3.78%	4.10%
Retail Trade	-14.70%	2.63%	3.04%	3.34%
Replacement Costs	**13.39%**	**3.21%**	**1.74%**	**2.12%**
Shelter	3.20%	4.14%	3.33%	3.35%
Household Furnishing & Supplies	4.80%	2.09%	-0.60%	-1.15%
Construction Materials	22.77%	3.40%	2.49%	4.17%

Commercial Property Performance through Economic Cycles

CR relationship to durables prices stronger than to shelter's *(unexpected)*

NWP relationship to durables prices stronger than to shelter's *(unexpected)*

CR outperforming during low inflation volatility as opposed to CPI trend *(expected)*

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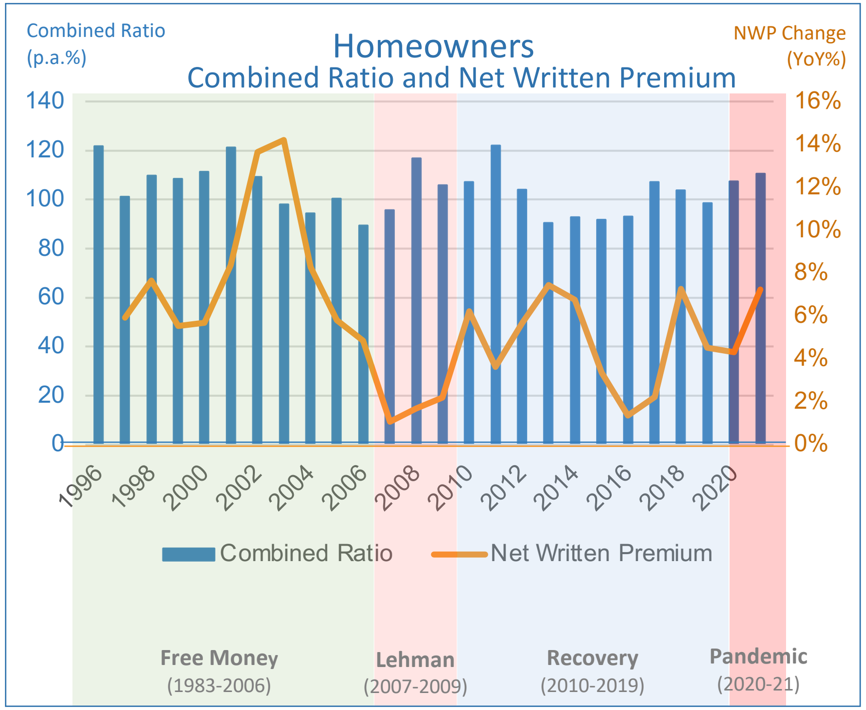

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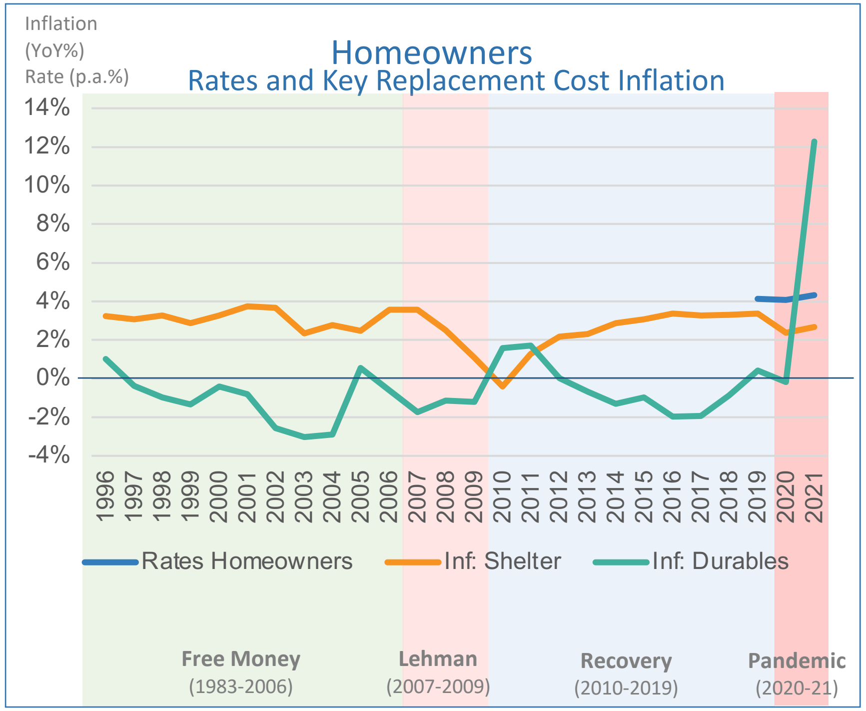

Source: Economic Data FRED NWP & Combined Ratio Data: S&P; Rates Data: Market Scout; Chart & Analysis: Triple-I

All Auto Key Macroeconomic Drivers

Increases in costs of vehicles and repairs are slowing down – but unlikely to make up for deteriorating driving trends

All Auto (Change YoY%)	2022	2023	2024	2025
Underlying GDP Growth	**4.1%**	**5.1%**	**5.0%**	**7.1%**
All Auto & Parts Retail Sales	3.9%	4.4%	4.6%	7.2%
Total Private Expenses	4.6%	6.4%	5.8%	7.0%
Replacement Costs	**2.4%**	**1.4%**	**2.0%**	**1.9%**
All New Vehicles	5.9%	3.9%	1.9%	1.5%
All Used Vehicles	-8.6%	-5.1%	1.4%	2.1%
All Parts & Equipment	9.9%	5.4%	2.6%	2.0%

Personal Auto Performance Through Economic Cycles

CR relationship to used auto prices stronger than to new auto's *(unexpected)*

NWP relationship to new auto prices stronger than to used auto's *(expected)*

CR performance more related to overall growth than to inflation volatility *(expected)*

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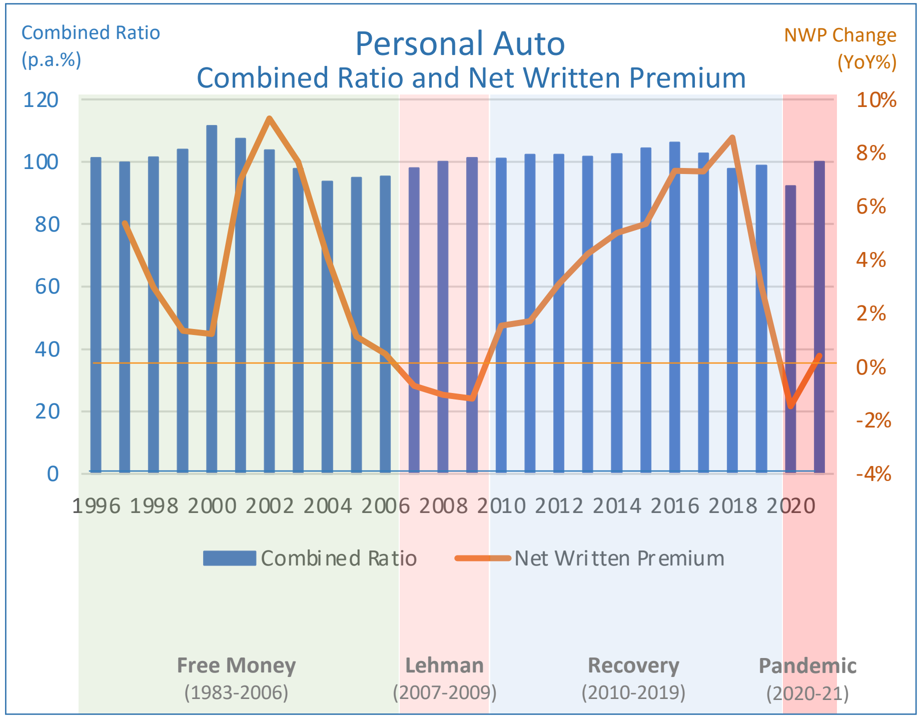

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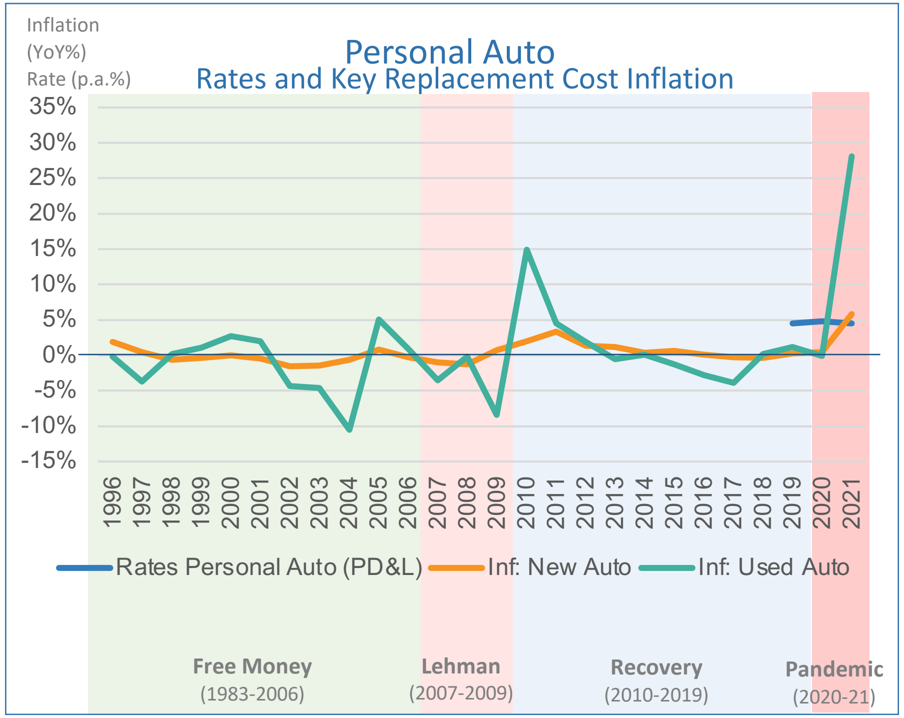

Source: Economic Data FRED NWP & Combined Ratio Data: S&P; Rates Data: Market Scout; Chart & Analysis: Triple-I

Commercial Auto Performance Through Economic Cycles

CR relationship to used auto prices stronger than to new auto's *(unexpected)*

NWP relationship to used auto prices stronger than to new auto's *(unexpected)*

CR performance shows limited relationship to inflation volatility or overall economic growth *(unexpected)*

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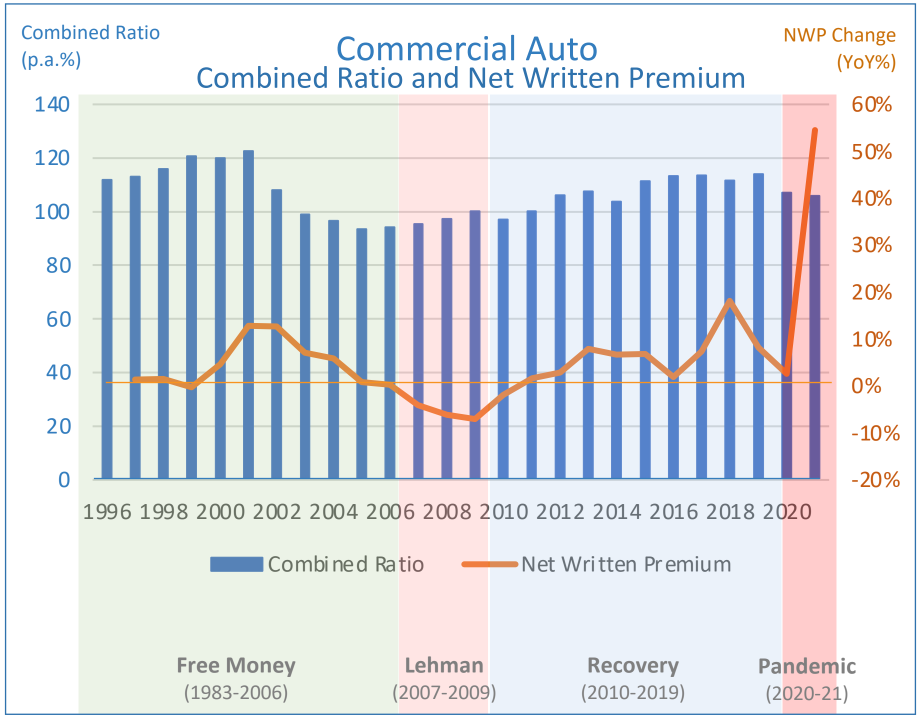

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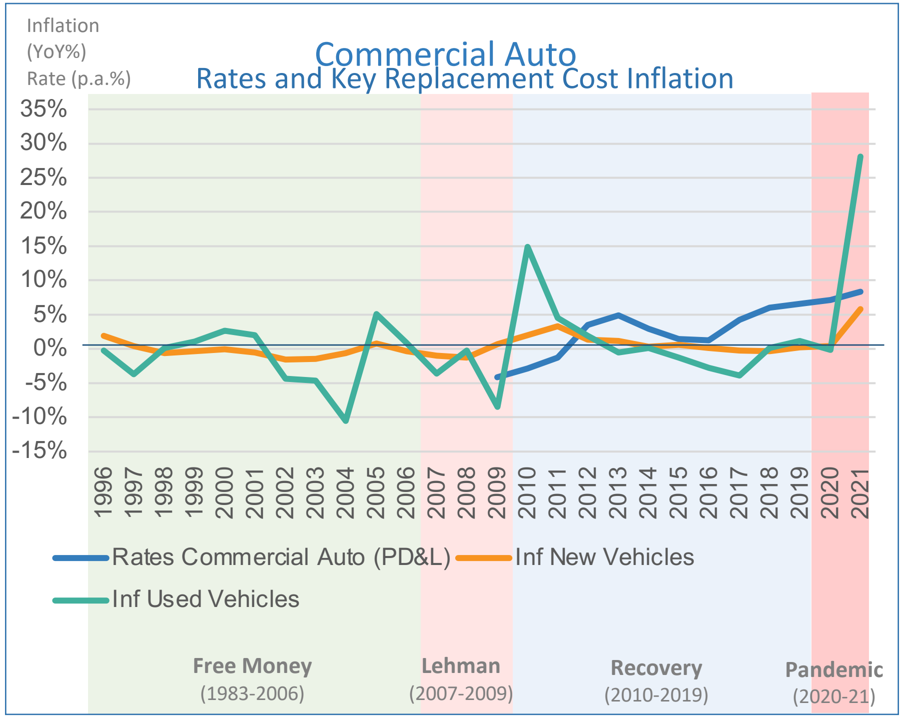


Source: Economic Data FRED NWP & Combined Ratio Data: S&P; Rates Data: Market Scout; Chart & Analysis: Triple-I

General Liability Key Macroeconomic Drivers

Retail trade activity collapses, contributing to reduction in exposure drivers, and unlikely to make up for social inflation impact

General Liability (Change YoY%)	2022	2023	2024	2025
Growth	**2.0%**	**1.5%**	**1.6%**	**2.1%**
Retail Trade	6.8%	4.4%	2.8%	2.9%
Finance & Insurance Sector	-2.7%	-1.3%	0.4%	1.4%
Cost Basis	**4.5%**	**2.2%**	**1.5%**	**1.5%**
Medical Care Commodities	3.2%	1.3%	1.1%	1.4%
All CPI Items Less Food & Energy	5.7%	3.0%	1.9%	1.6%

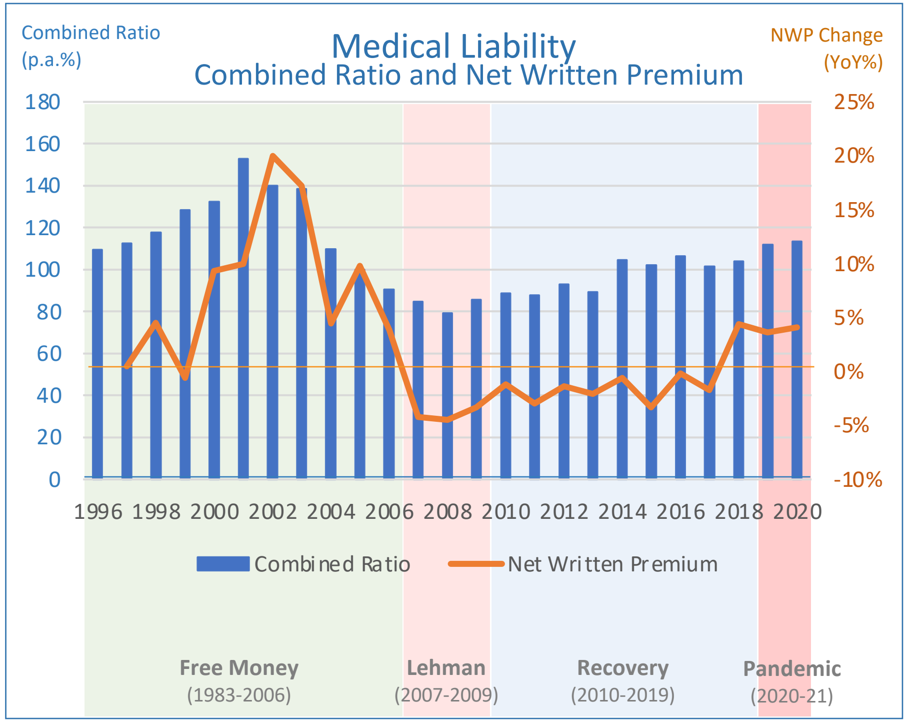
Medical Liability Performance Through Economic Cycles

Shaded areas' colors identify inflation cycles. They do not indicate inflation range or scale during each cycle.

CR has weaker relationship to related CPI components than other lines' *(expected)*

NWP relationship to medicals services prices stronger than to medical commodities' *(expected)*

CR outperforming during expansionary economic cycles *(expected)*



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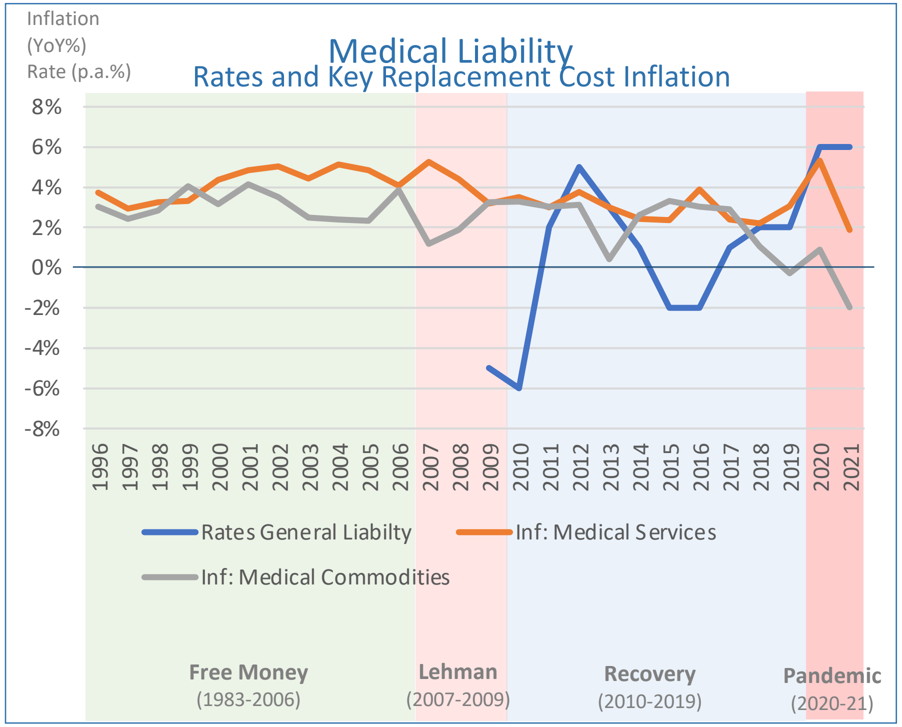

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Workers Compensation Key Macroeconomic Drivers

Payrolls growth slows down regardless of resilient employment numbers; compensation drops regardless of historically high inflation

Workers Compensation (Change YoY%)	2022	2023	2024	2025
Growth: Payrolls	4.3%	**2.1%**	0.7%	1.2%
Cost Basis: Total Wages and Salaries	3.4%	**1.6%**	0.5%	1.2%

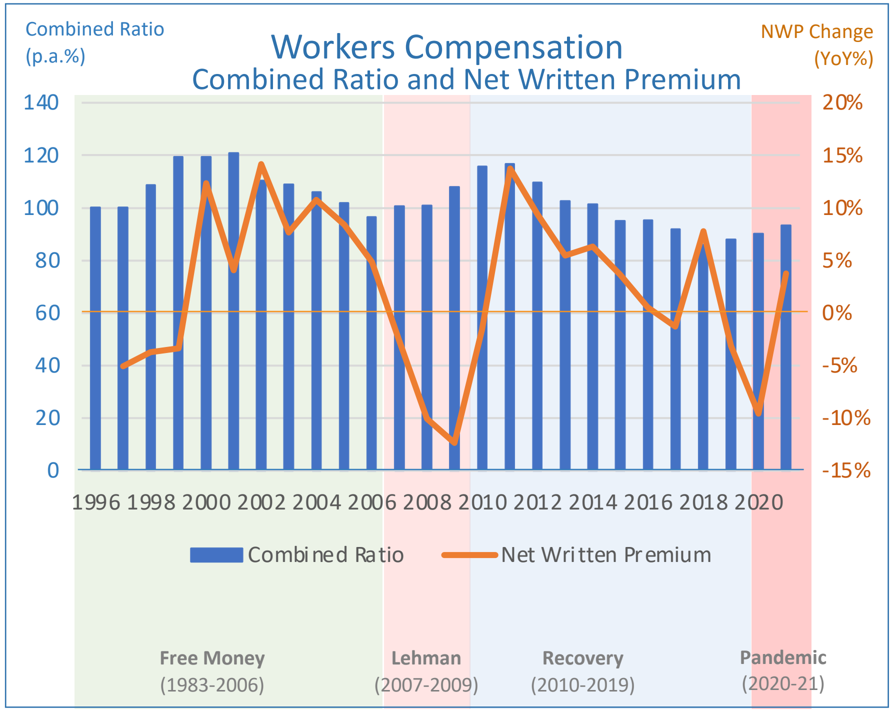
Workers Compensation Performance Through Economic Cycles

CR relationship to payrolls stronger than to wages *(neutral)*

NWP has is driven by both payroll and wages *(expected)*

CR performance shows limited relationship to inflation volatility or overall economic growth *(unexpected)*

Shaded areas' colors identify inflation cycles. They do not indicate inflation range or scale during each cycle.



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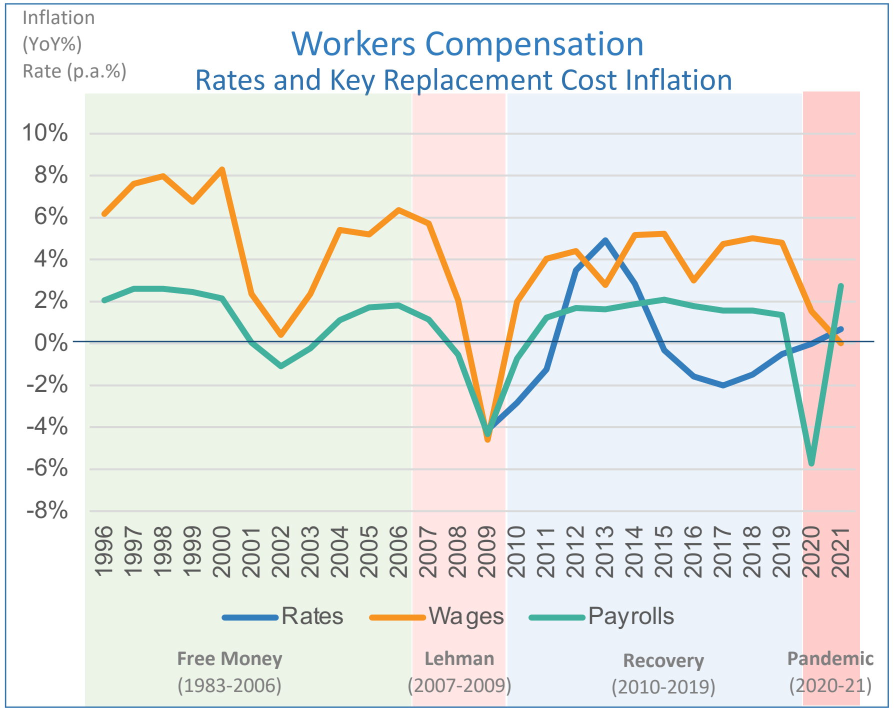

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Final Takeaways

- ✓ Monetary policy choked P&C growth and delayed recovery to at least Q4
- ✓ Improving replacement costs insufficient to make up for adverse underwriting trends
- ✓ Hard market conditions continue to push premium growth higher

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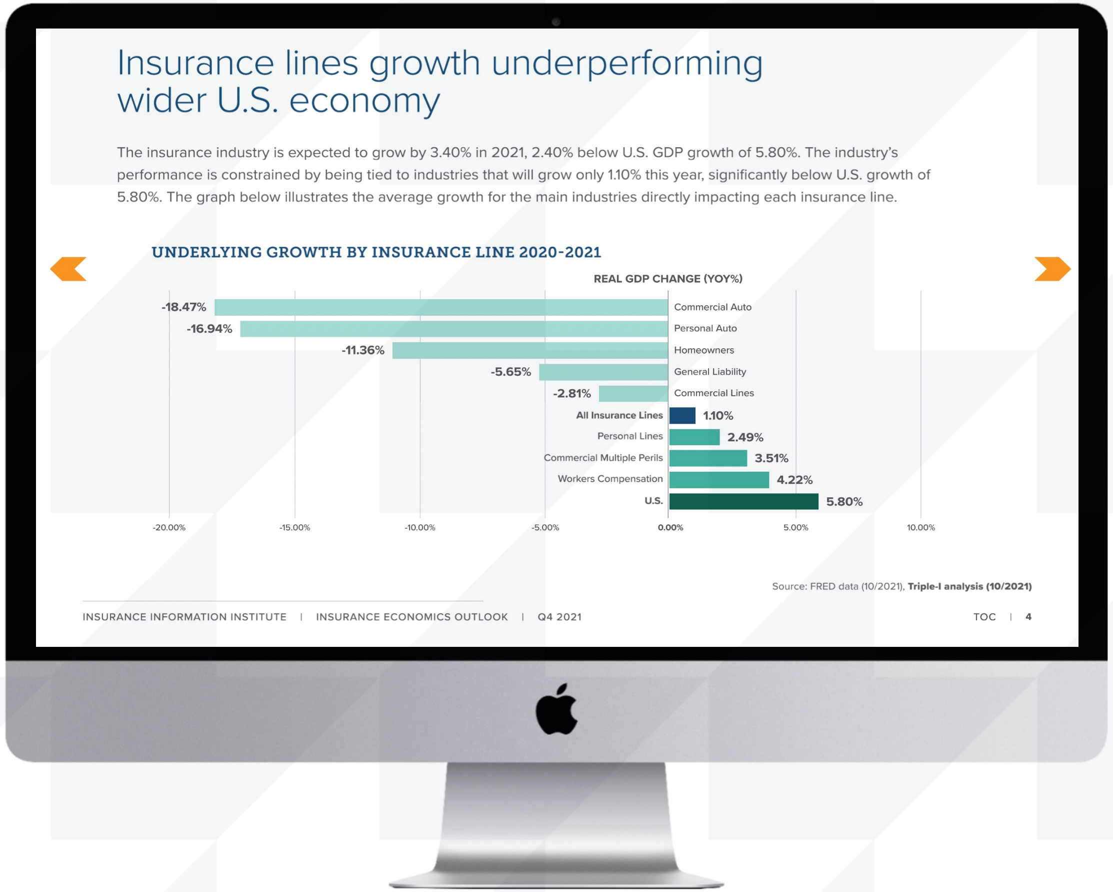

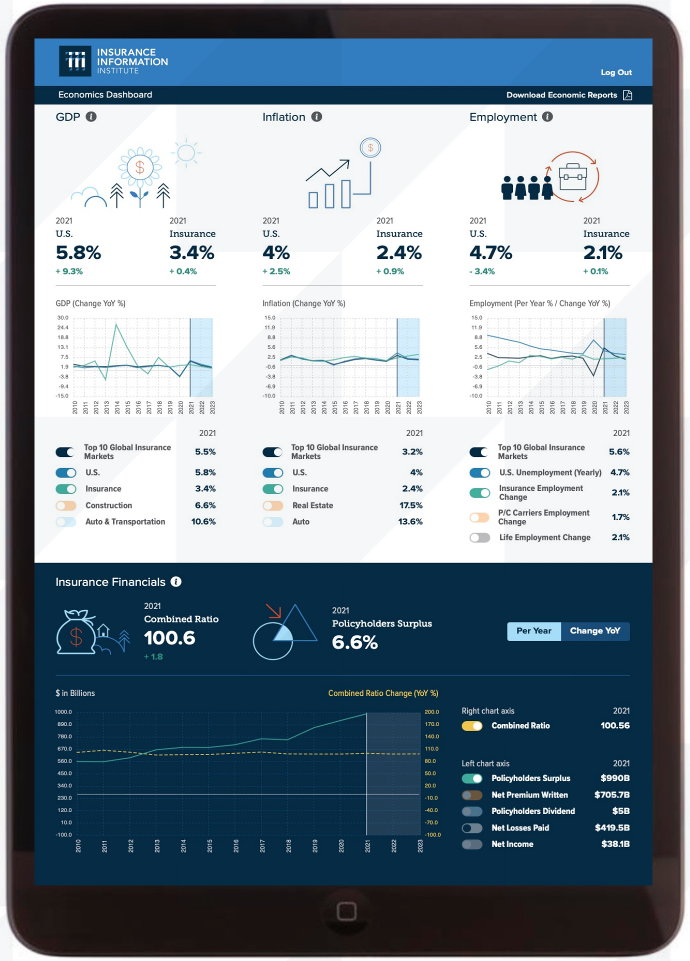

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Inflation Cycles & P&C Replacement Costs

STATISTICAL SPLINES | 1950 to 2022
Visualized by decade, year, and FRB Chair