ASSURED BRIEFING

May, 2022

What's Inside

The *Assured Briefing* is a monthly research note analyzing business development, financial, legal, or claim matters relevant to property/casualty insurance professionals.

In this edition

In the research pipeline

Our annual *Assured Industry Study* of Atlantic Hurricanes will be released in mid-May; that's before the official start of hurricane season but maybe hurricane season is shifting as with other perils. We'll return to our *Assured Report* on ROE Dispersions and test the upward (and downward) mobility of companies based on their annual returns. We'll continue to mine the NCEI databases on perils as we assess the nation's rising catastrophe burden.

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Industry Analysis: P/C Industry Recession Resistant, Not Recession Proof

Stocks are defensive as investors understand that P/C insurers enjoy relatively inelastic demand

Well, that didn't take long. Yesterday we were arguing over the magnitude of the post-pandemic economic boom and today we're writing a note about the impact of a "Volcker-style, Fed-induced" recession to borrow a recent description from the CFO of JP Morgan.

The **takeaways** from our experiences and research on the performance of P/C insurers (and stocks) in the face of recessions include:

1) P/C operations are recession resistant, but not recession proof. Going back to 1951, the written premium growth of the P/C industry is 5.1% in years touched by a recession and 7.3% in years of economic expansion.

2) Considering the unique nature of the current, post-pandemic spending patterns and supply chain constricted economy, **it is helpful to consider the prospects of P/C insurers in the context of the goods-producing economy and the services-providing economy**. Insofar as **the goods-producing economy might be more susceptible to demand destruction** from inflation and rising interest rates, **the good news is that the services-providing sectors purchase about 2.8x the quantum of commercial P/C insurance: $232 bil. vs. $84 bil** by the goods-producing sectors.

*Near term recession or not, **we remain bullish on the medium- and longer-term growth prospects for P/C insurers**. Macro trends unleashed by the pandemic and geopolitical realignments include: 1) bringing critical industries back to the U.S., 2) shortening supply chains; 3) building the infrastructure to expand renewable energy sources; and 4) the already passed infrastructure package which we think will add some $2-$2.5 billion to annual premiums.*

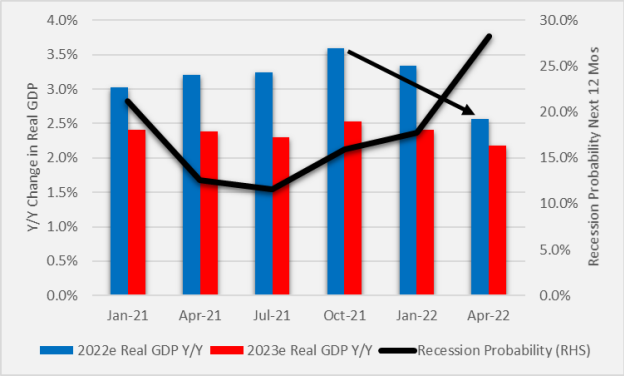
3) Comparing the income streams and ROEs of U.S. corporations to those for P/C insurers, we see that **the returns of P/C insurers are noticeably more volatile**. That's no surprise considering the outsized impact of catastrophes. Make no mistake, however, **over the medium and longer-terms the income and growth of P/C insurers will be directly influenced by U.S. economic health and macro trends**.

4) Investors understand the relatively less elastic demand for P/C products (e.g., compared to discretionary purchases of goods or services, for instance) **and the relatively less correlated nature of returns to the economy** (e.g., catastrophes strike independently of whether GDP is growing or shrinking, interest rates rising or falling). Taken **together, these characteristics lead the P/C stocks to be defensive relative to the SP500**. That is, they tend to rise less than the SP500 in good times, but importantly decline less in the bad…when the SP500 retreats.

The probability of a recession has increased…Jamie Dimon sees storm clouds

Economists polled in early April by the *Wall Street Journal* **raised their probability of a recession (over the next 12 months) to 28% from 18% in early January of this year**. Moreover, **they've been steadily downgrading expectations for real GDP growth**. For instance, their 2022e has fallen to 2.6% growth, a full point less than their forecast for '22 made in the fall of last year. Figure 1 shows how expectations for 2022/2023 GDP growth and a recession have evolved.

Figure 1: WSJ Poll for GDP Growth and Recession



Source: WSJ (April '22 poll), Assured Research

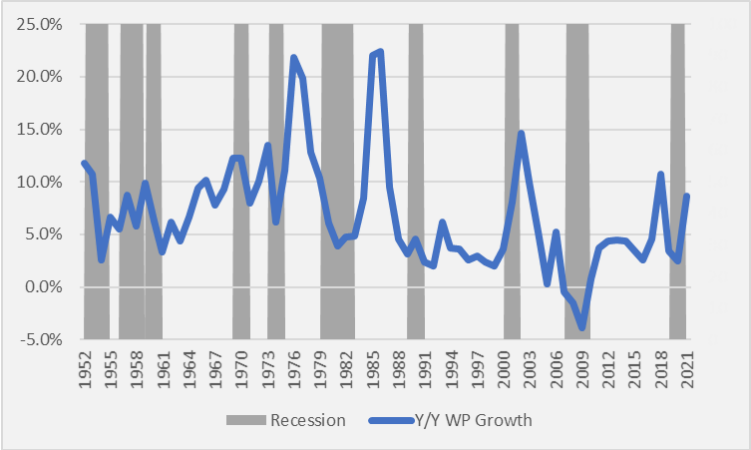
To keep the length of this note manageable, we'll only touch lightly on **the confluence of pressures that raise the risk of recession**. Most will know from their everyday reading that **the crux of the issue is the Fed's newfound determination to raise interest rates to beat back generationally high levels of inflation**. Adding to the mix are **geopolitical tensions and COVID** (presently, in China where lockdowns are hurting manufacturing); **both of which have conspired to keep supply chains snarled** longer than anyone on the planet had hoped.

> *Businesses are in good shape. Home prices were up. Credit is extraordinarily good. You've got two other very large countervailing factors. One is inflation…and the second is the war in Ukraine. I'm simply pointing out that those are storm clouds on the horizon that may disappear, they may not.*
>
> *Excerpts from Jamie Dimon, CEO of JPM on 1Q22CC*

P/C Insurers are recession resistant, not recession proof

Mindful of 'selling past the close,' we'll just remind readers that **P/C insurers enjoy a relatively inelastic demand for most of their products**. The health of the economy matters, of course, but properties and automobiles have to be insured even if they aren't being used as heavily in times of a downturn. But workers'

Figure 2: WP Growth and Recessions Since 1951



Source: AM Best, ©2022 S&P Global, Natl Bureau of Economic Research (Recessions)

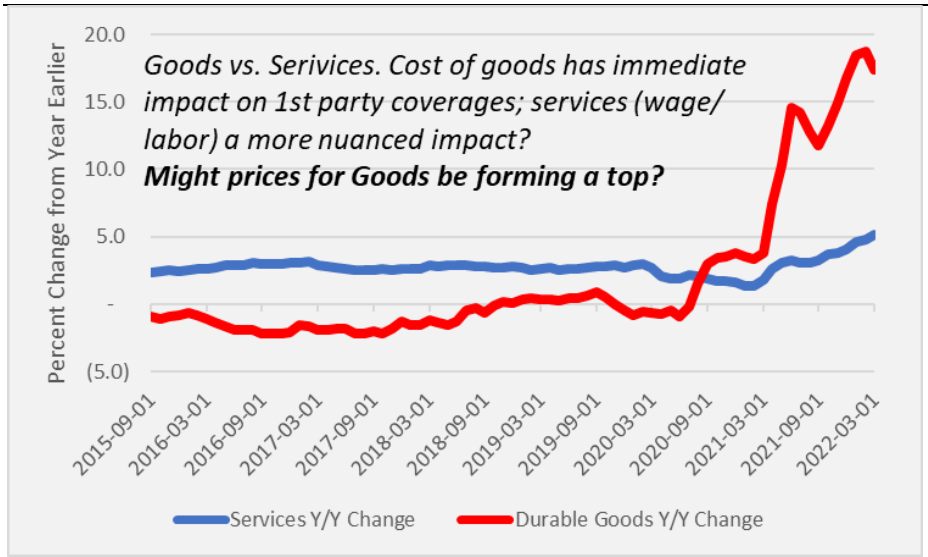
compensation premiums will rise and fall with employment levels, as will some liability premiums that are rated on sales. **A careful examination of Figure 2 will reveal that P&C premium growth decelerates during years touched by a recession, but it *generally* remains positive** (the years of the financial crisis a notable exception). In years of economic expansion P/C premium growth averages 7.3%, decelerating to 5.1% in years touched by a recession.

Framing the impact on P/C insurers in the context of Goods and Services

We find that **the graph tracking the impact of inflation for goods-producing and services-providing industries is a useful way to link the "story" of the economic changes** we've all lived through these past two years **to the P/C insurance industry**. Importantly, **it may also help P/C professionals consider how their businesses could be impacted by a recession.**

Figure 3 will be all too familiar, and intuitive to most readers. The graph shows the impact on prices for durable goods which began to accelerate shortly after the initial lockdown in early 2020, but then 'went parabolic' last year as the "post" pandemic spending boom met with snarled supply chains and shortages in materials necessary to build those durables.

Figure 3: Impact of Inflation on Durable Goods and Services through March, 2022



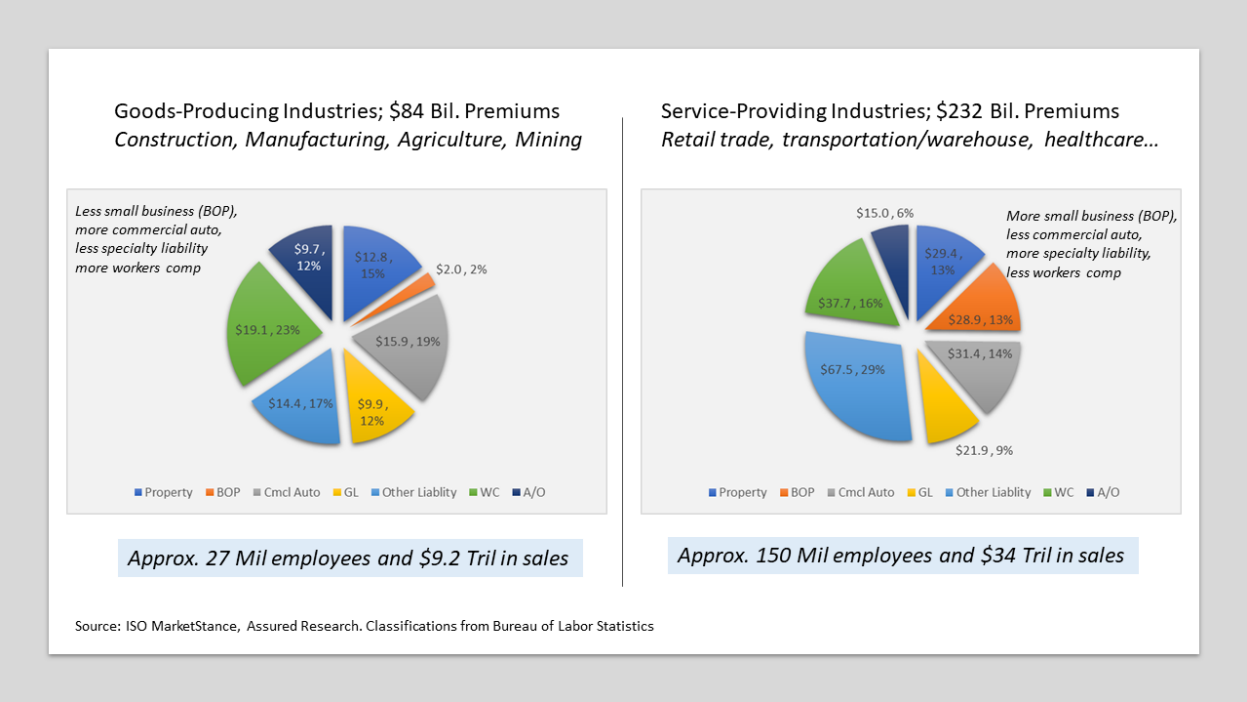
Inflation for goods may be forming a top. Inflation creates its own disincentive to buy more durable goods (as do rising interest rates). And at some point, demand for durables will be sated.

Source: BLS via St. Louis Fed (FRED), Assured Research

The real value in sharing Figure 3 is to consider the potentially different impact of the Fed's effort to slow inflation (via rising rates) on goods-producing and services-providing sectors of the economy. We know that **rising interest rates** impact nearly every aspect of our lives, but they **will particularly impact the cost of longer-lived goods** (many of which are financed at purchase) **as well as borrowings to fund construction projects and capital investments** (e.g., building new manufacturing facilities for green energy or semi-conductor chips).

We can all hope the Fed engineers a soft landing (and as noted in the sidebar to Figure 3, inflation and sated demand for goods naturally lowers subsequent demand, in turn inflation), but **insofar as rising interest rates may have a more immediate and negative impact on goods-producing industries than services-providing industries, it makes sense to consider the quantum and types of commercial insurance purchased by those industries**. Data from ISO MarketStance makes that analysis possible, which we share in Figure 4.

Figure 4: P/C Premiums and Products Purchased by Goods and Services Industries



The U.S. economy is dominated by the services sector, so it makes sense that the **commercial premiums in the service sector are some 2.8x those purchased by the construction, manufacturing, mining, and agricultural sectors which constitute the good-producing industries**. But **if the goods-producing industries begin to contract, expect that to have an outsized impact on workers' compensation and commercial auto premiums**. Property premiums, interestingly, are of similar orders-of-magnitude across the two sectors, while sales of small commercial (BOP) policies and special liability insurance products (D&O, E&O, EPLI, etc.) may hold up relatively well if the services sector doesn't contact much.

We're only touching the surface here, more in depth analysis is both possible and warranted if your in-house economic view recognizes, as does that of JP Morgan's, that there are 'storm clouds on the horizon.'

P&C Earnings and Stocks are Defensive

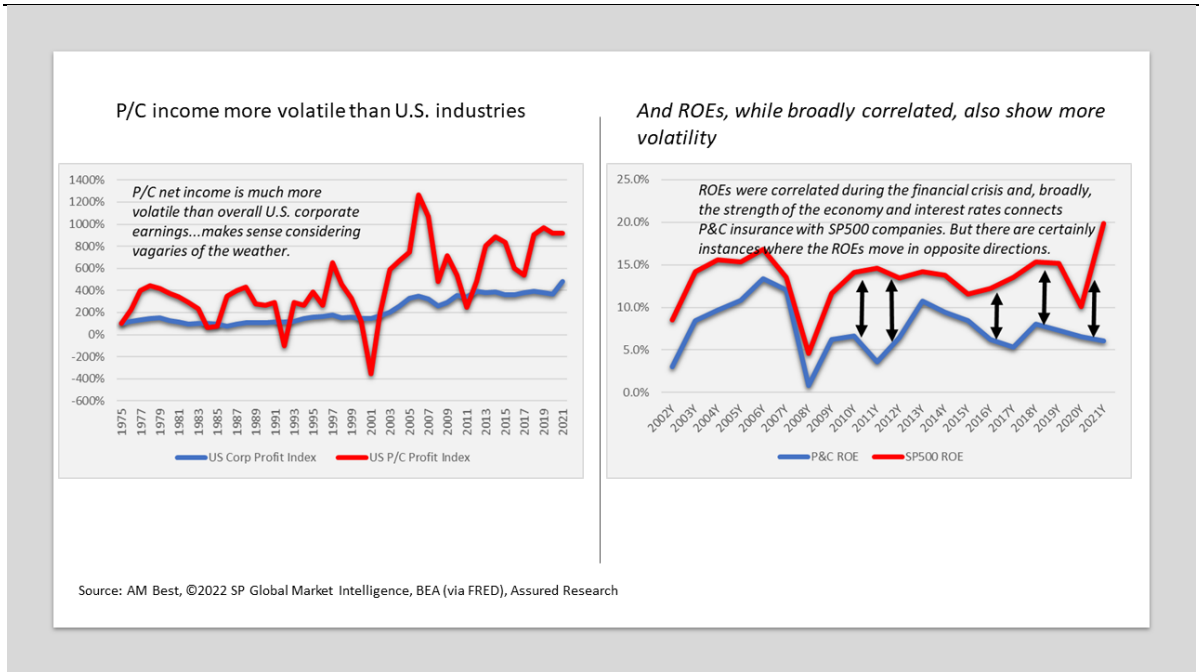
We were last concerned about an economic downturn in November, 2019 when we wrote an *Assured Briefing* note entitled: Defensive Nature of P/C Stocks Ready to Shine. Coincidentally, Fed Chairman Powell began to lower the Federal Funds rate during the second half of 2019, the exact opposite of the expected path this year. This also helps to illustrate that the Fed lowers interest rates to stimulate demand in a flagging economy and raises interest rates to cool demand and inflation; in turn, leading to the concern today that the Fed will overshoot and cause the "Volcker-style, Fed-induced" recession referred to by the JP Morgan CFO.

In our last note on the defensive nature of P/C stocks we wrote: **In a positive stock market the P/C stocks will generally rise less than the market, and conversely, they will decline less in weak markets**.

We'll complete the picture with Fig 5 which shows that **insurers' earnings and ROEs, though correlated with U.S. industries over the longer run, are more volatile and sometimes disconnected from the economy as from the adverse impact of cats and social inflation (to the negative) and the pricing cycle to the positive.**

> ***P/C stocks are defensive**. Since 2001, the median stock performance of 33 publicly traded insurers has been +13% during up markets compared to an average SP500 increase of 17%. And during down markets when the SP500 has lost an average of 19%, P/C stocks have lost only 5%.*

Figure 4: P/C Earnings and ROEs Sometimes Disconnect from the Economy (in short run)



Summary

Storm clouds are on the horizon. The good news is that P/C insurance is inflation resistant.

Property Cat: Raising Hail to its Rightful Place Alongside Tornadoes

Frequency is the problem more than severity, but the number of $billion loss events is similar

When it comes to catastrophic losses, **hailstorms receive far less attention than hurricanes and tornadoes** in part because they are visually less dramatic. **But there are thousands of hailstorms** (some 8x the annual number of tornadoes), so even if the individual losses aren't large, **cumulatively they cause considerable insured losses** on homeowners' and auto policies. And because many hailstorms occur in rural areas there can be meaningful crop damage. Moreover, it may surprise some to learn that **hail losses can rival the severity of tornadoes; the number of hail events causing more than $1 billion of economic losses over the past decade is virtually the same**.

As catastrophes take an increasingly higher percentage of P/C industry losses we continue our studies of various perils. In this note we focus on hailstorms using statistics from the National Centers for Environmental Information's Storm Events Database.

If there's any **good news** it's that **the frequency of hailstorms isn't increasing for now, nor are hailstones getting larger in size**.

On the troublesome side, while we don't want to overstate this point, **there is evidence that the number of events is expanding outside the traditional "hail alley" toward the Southeast and that is concerning because of the greater population density in that region**.

A word on our data

To study hailstorms, **we used 2011 to 2021 data** from NCEI's Storm Events Database (the complete database lists all storm events back to 1950). **During this 11-year period hailstorms averaged about 10,000 per annum compared to 1,200 tornadoes**. Even though the losses from individual hailstorms are generally smaller than from tornadoes, the large number make the cumulative economic and insured losses significant.

A Summary of Physical Considerations

Hail is simply solid ice that freezes inside a cumulonimbus cloud (which is better known as a thunder cloud). These clouds sometimes also spawn intense winds and tornadoes which is why these perils can occasionally occur together. These clouds have considerable vertical height, often stretching from close to ground level into the top reaches of the troposphere, or possibly as high as four to six miles), and they carry extreme precipitation. *(If you see a cloud like this, get away fast.)*

Hail falls to the ground when the updrafts within the thunderclouds can no longer support the weight. In other words, gravity pulls them down, and their descending pattern can be either vertical or horizontal depending on the wind speeds and the weight of the stones. **While hail can occur in varying sizes, the 1.00-2.00 square inch range is the most prevalent. Hailstones below 1.00 are viewed as "less severe" by NOAA and not apt to cause much property damage**.

Sq. In	Object
1.00	*Quarter*
1.50	*Walnut*
1.75	*Golf Ball*
2.00	*Egg*
2.50	*Tennis Ball*
2.75	*Baseball*
3.00	*Teacup*
4.00	*Softball*
4.50	*Grapefruit*

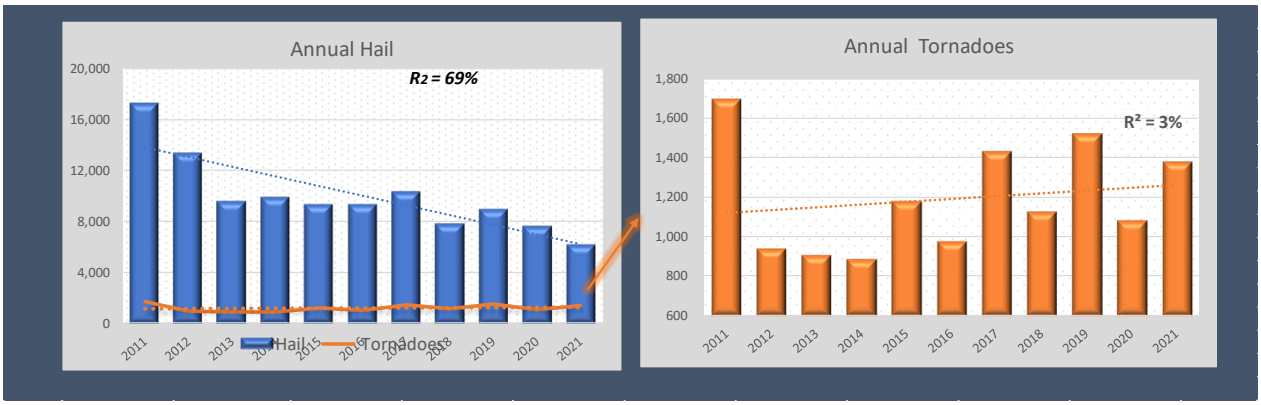
To help visualize hail, NOAA describes the sizes relative to various common objects listed in the sidebar. The largest hailstone ever recorded was in South Dakota in 2010 and had an eight-inch diameter, an 18.6-inch circumference, and weighed 1 lb. 15 oz. Ouch!

Hail Statistics – Just the facts

Number: Over the last 11 years hail events have averaged 10,000 per year. By comparison, tornadoes during this period have averaged about 1,200.

Figure 1 shows the comparison. In the hail chart on the left we have included tornadoes on the same scale as hail so you can appreciate how many more hailstorms there are. In the tornado chart on the right (which is the same annual data) we expand the scale so you can appreciate the greater variability of tornado occurrences. The message is that **the annual number of hailstorms is relatively stable while the number of tornadoes is quite variable**.

Figure 1: Hail Events and Tornadoes: 2011-2021

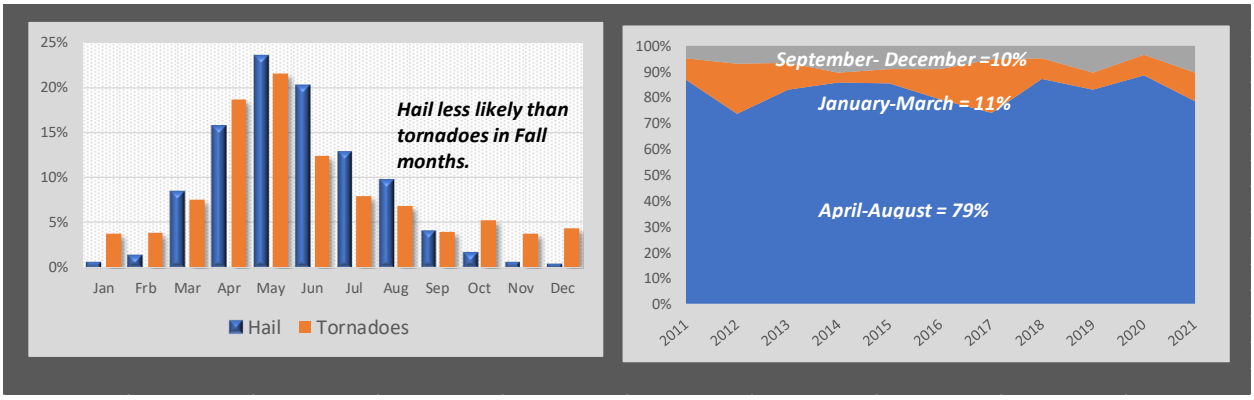


Source: National Centers for Environmental Information (NCEI), Assured Research. 2011/12 were exceptionally active years

Seasonal pattern: Because **hailstorms and tornadoes have the same meteorological underpinnings** (albeit with hail being more frequent), **the seasonal patterns tend to be similar** with most occurring in the months from April to August, as shown in Figure 2 (left side). There are more occurrences of tornadoes in the Fall months, but as the right side of Figure 2 shows

there have been no indications that the seasonal pattern of hailstorms is changing as the April-August percentages have remained constant.

Figure 2: Hail Events and Tornadoes: Averages (Left); Hail Monthly Pattern (Right): 2011-2021



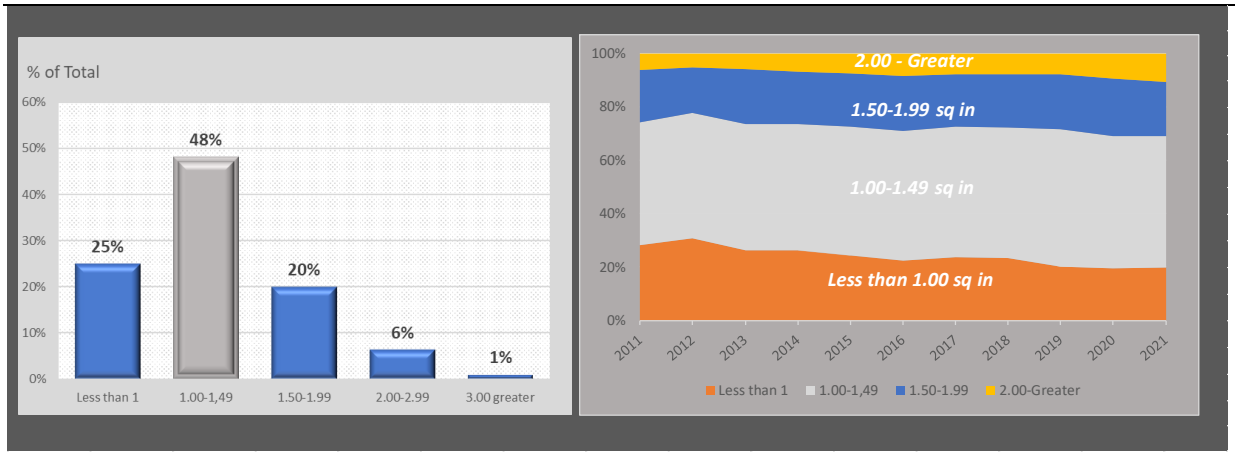
Source: National Centers for Environmental Information (NCEI), Assured Research

Time of day: The vast majority of hailstorms occur in the afternoon and early evening. This pattern is similar to tornadoes. **What time an event happens during the day has implications for losses. On the positive side, the preponderance occurring from noon to nine PM means people are likely awake and able to take shelter** or other precautionary measures. **From the vehicle perspective, though, it means cars are more likely to be on the roads or in parking lots rather garaged for the night**.

Hail Size: Hail can vary in size, and Figure 3 (left) shows that **the most prevalent measurement is 1.00-1.49 square inches. Hail below 1.00,** which accounts for 25% of all hail, is classified by NOAA as "less severe" and **generally does not do much damage**.

The average size has not changed much over time, as the right side of the chart shows

Figure 3: Hail by Size 2021(Left); Size by Year 2011-2021 (Right)



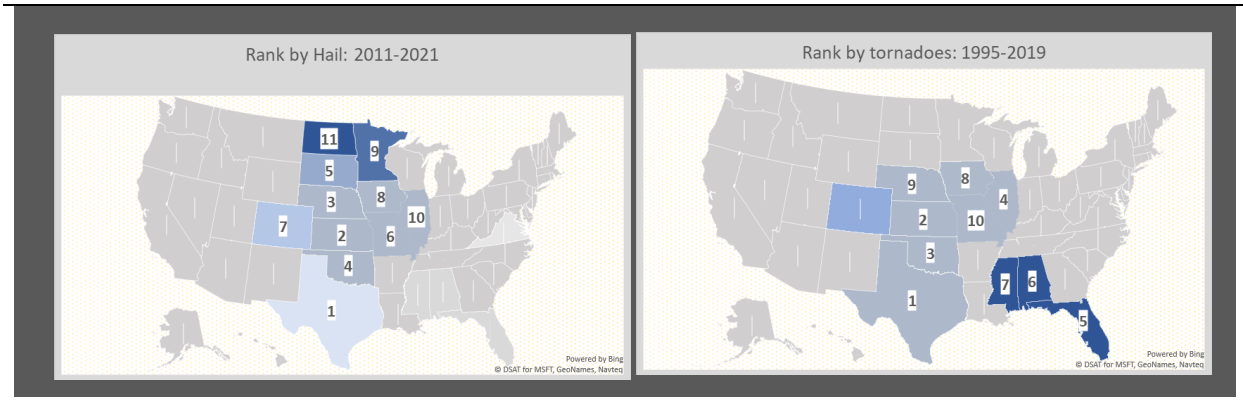
Source: National Centers for Environmental Information (NCEI), Assured Research

Location, Location, Location

As in the case of tornadoes, **the majority of hailstorms occur in the Midwest/Plains states** which, in terminology similar to tornadoes, are generally referred to as **"hail alley."** Figure 4 shows the largest states by hail, and for comparison, also shows the rankings for tornadoes. The two maps show a similar pattern with some exceptions. **Three of the Southeastern states are more prone to tornadoes, but less so for hail**. **The Dakotas, Minnesota, and Illinois rank among the top hail states, a rank they don't have for tornadoes**.

These **eleven states account for 60% of the hailstorms**. Texas ranks number one for both hail and tornadoes.

Figure 4: Hail and Tornadoes; Largest States



Source: National Centers for Environmental Information (NCEI), Assured Research

Hail Losses Per Capita

We believe it is important to analyze all catastrophe occurrences adjusted for population since that is how insurance coverage is written. Consequently, **looking at hail, occurrences adjusted for population gives a slightly different perspective which we show in Figure 5**. In this case **Texas, Minnesota, and Illinois (light brown) drop out of the top eleven rankings while Wyoming, Montana, and Arkansas** (dark brown) **are added**.

Figure 5: Hail Losses Per Capita

Source: NCEI, U.S. Census Bureau, Assured Research

South Dakota is the #1 ranked number ranked state for hail losses per capita.

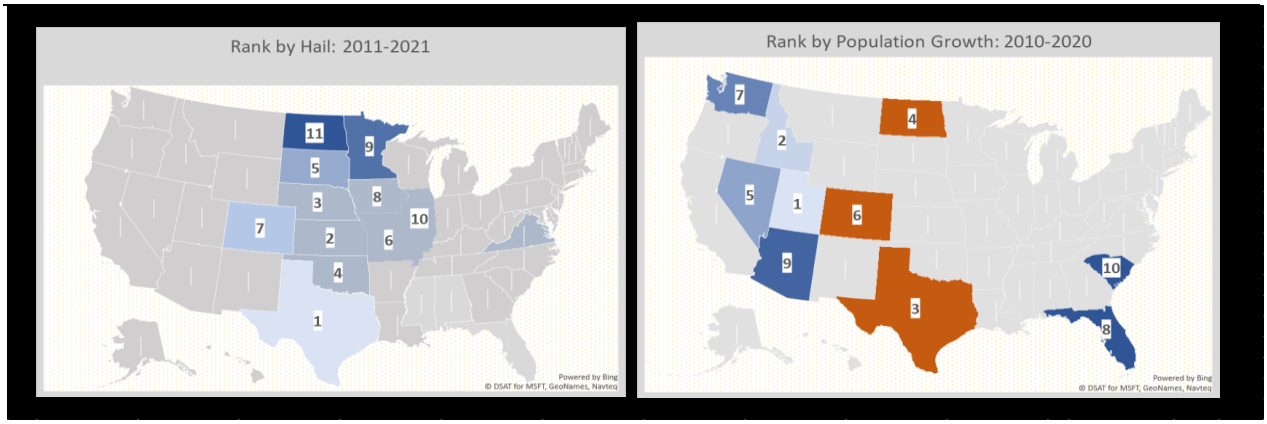
One important characteristic of the "hail alley" states is that they are predominantly rural (except for Illinois). **Kansas is a good example of how hail occurs in rural areas. In that state, 75% of the hailstorms occurred in counties that accounted for 25% of the state's population**.

Hail Alley States are Among the Slower-Growing; People NOT Moving into Harm's Way

Another positive consideration for hail exposures is that **the "hail alley" states are <u>not</u> among the fastest growing in the U.S.** This is important because as we (and various academics) have reiterated innumerable times that **the incidence of natural catastrophes is not rising but the losses are increasing because "people are moving into harm's way."**

Figure 6 compares the largest hail states with those that grew the fastest between 2010 and 2020. **Only three of the hail states - Texas, Colorado, and North Dakota - rank among the ten fastest growing**.

Figure 6: Largest Hail States vs. U.S. States Ranked by 2010-2020 Population Growth



Source: National Centers for Environmental Information (NCEI), U.S. Census Bureau, Assured Research

Is Hail Alley Shifting Toward the Southeast?

One of the major concerns with tornadoes is that the events are gradually expanding out of the traditional "tornado alley" states and moving toward the Southeast. **When we look at hail, we can say that there is *some* evidence that this is happening**, but we don't want to overstate the case. Over the eleven years we've been studying, hail losses in traditional "hail alley" states ticked down from 63% to 61% (% the U.S. total) while in the Southeast they ticked higher from 12% to 18%. That seems like a notable increase, but it's largely because the 'rest of the country' experienced slightly less hail during the past decade.

While we don't want to make too much of this, it is also important that **more hail in the Southeast would be a problem because the states have a greater population density** and are not as rural as the traditional hail states.

Hail losses in Perspective: Events Causing $Billions of Insured Losses Similar to Tornadoes

Based on our review of various sources, **convective storms account for about one-third of property losses**, but it can be hard to determine how this breaks down among tornadoes, hail, and straight wind-related losses.

In Figure 7, events causing economic losses greater than $1 bil. are summed into seven classifications. **Severe storms, which include tornadoes, hail, and other wind-related losses, have the most events (91) and rank second in the dollar value of losses behind hurricanes**. To further delineate the losses within the severe storm category, **we reviewed the NCEI writeups on each of the 91 severe storms and classified them based on the predominant cause**. The right side of Figure 7 shows the break down. Since most of these severe storms have elements of all three categories, **our designations are interpretive but seem to be in the right direction**.

Figure 7: Economic Catastrophe Losses Greater than $1 Billion, By Source: 2011-2021

	Cumulative losses		Number of events	
	($ Bil.)	%	#	%
Hurricanes	$598.1	54%	23	9%
Severe storms	215.2	20%	91	36%
Drought	98.4	9%	10	4%
Wildfires	90.6	8%	9	4%
Flooding	62.5	6%	18	7%
Winter storms	36.1	3%	6	2%
Freezes	1.1	0%	1	0%
Total	$1,102.0	100%	256	100%

Category	Events	Losses $ Billion
Tornado	31	$90.4
Hail	32	$62.1
Combination	21	$37.7
Wind/Storms	7	$25.1
Total	91	$215.2

Source: National Centers for Environmental Information (NCEI), Assured Research

Two points seem to be the most important: 1) **the number of predominantly hail events is about the same as tornadoes**, and 2) **excluding the $25 billion of losses from the two massive tornado events in 2011** (Joplin, Missouri and Tuscaloosa, Alabama) **the hail and tornado losses are about the same**. *We found these observations to be surprising since tornadoes are generally thought to be far more costly, and they receive far greater attention (from the media and analysts anyway).*

Summary

Most hailstorms don't cause major damage. But since their annual frequency is some 8x that of tornadoes (and around 10K per annum), they actually cause about as many billion-dollar loss events as tornadoes. The good news is that their annual frequency and severity are not changing, and states most exposed to hail are growing more slowly than the rest of the U.S. But most insurers will know to give hail its due respect; cumulatively they cause substantial losses to property.

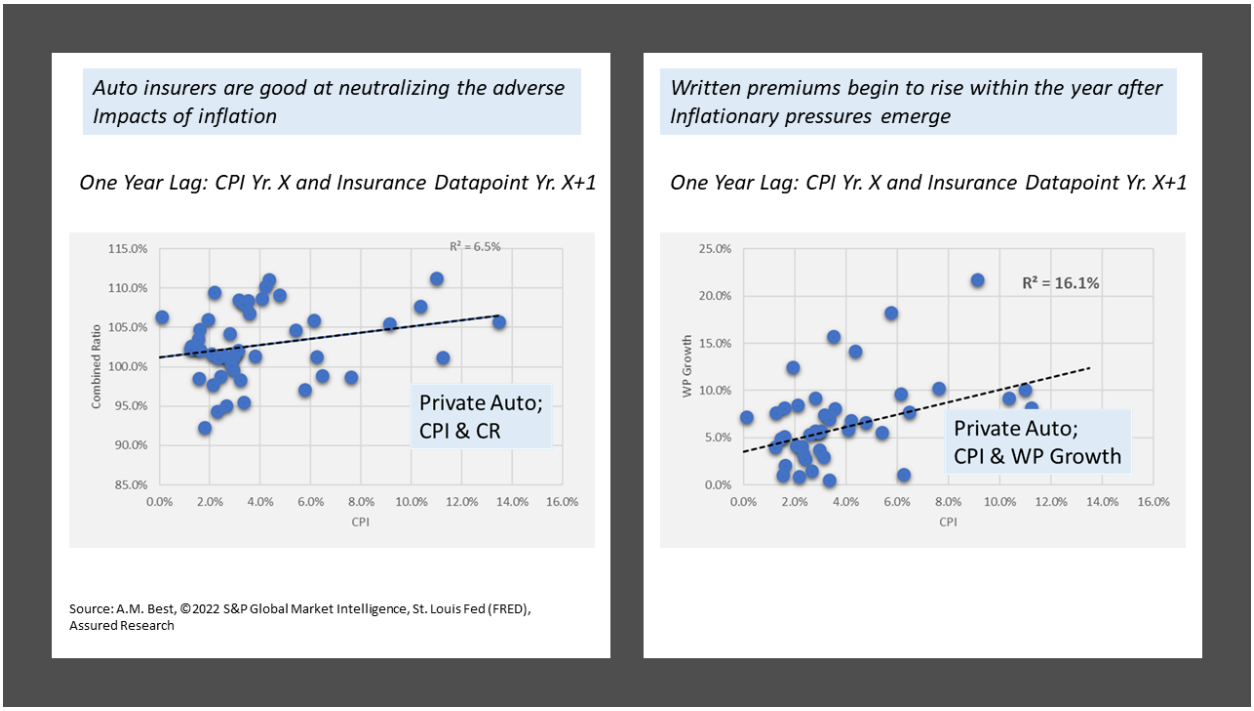
Auto Insurance: Auto Insurers Making Progress Against Inflation

But there is more work to do, ground will be lost unless rates accelerate from 1Q22 levels

Insurers are adept at neutralizing the negative impacts of inflation via pricing actions. That's particularly true for shorter-tailed lines like private passenger auto (PPA) insurance where the claim feedback loop is short and most costs can be measured objectively and with only a short lag using myriad external indices.

Figure 1 repeats a chart we showed earlier this year: **With data back to the early 1970s, there is only a very weak relationship between inflation and the underwriting results of private passenger auto insurers** (using the CPI as an inflation proxy). **Written premium growth** with a one-year lag, however, **shows a more robust correlation to inflation since auto insurers tend to change rates as they are informed by inflation gauges**.

Figure 1: The PPA Combined Ratio and CPI (left), and PPW WP Growth and CPI (right)



Where is the PPA industry through 1Q22? On the right path but rates need to accelerate!

Using rate filing data through the 1Q22, **we endeavored to answer the question: Will the $260 billion PPA industry make progress, hold steady, or lose ground to inflation in 2022?** There are many moving parts to answer that question, so holding steady an assumption of loss cost inflation ('22/'21) at just under 10%, **our answer**:

If rate filing trends remain unchanged from 1Q22, the industry will lose ground – maybe as much as 3 combined ratio (CR) points, **taking the 2022e PPA CR (liability + physical damage) up to 104%**...a level not seen since the soft market of 2016/2017. This landing spot is marked in red in the graph visible in Figure 2.

If rate filings and approved rate increases accelerate, as they appeared to be doing throughout 1Q22, **the industry should about break-even on inflation during 2022**. **That would leave the 2022e CR near 101% (or, at 2021 levels)**. Notably, we're assuming normalized auto losses of $207 billion that inflate near 10% from 2021 to 2022; that's about $20.6 billion of increased losses in the 'system' that need to be covered by premium rate increases (after accounting for variable expenses). This landing spot is marked in yellow in graph visible in Figure 2.

And **if rate filings accelerate to touch more policyholders and at notably higher approved increases, the industry *could* reach 2019 levels**. That'll take some serious effort however; **our work shows the industry would need to reach a pace of touching some $46 billion of premium monthly at an average increase nearing 13% to meaningfully lower its 2022 CR**. This is the green dot in Fig. 2.

Figure 2 provides the numbers behind these scenarios, and the balance of the note gives details on each scenario. Our sense: **It seems likely the industry can break even on inflation and produce a 101% CR in 2022. Making progress beyond that seems possible, but getting to 2019 levels may require a 'break' on either inflation or accident frequency/severity.**

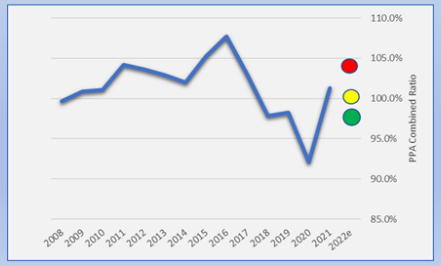
Figure 2: Scenario Analysis for PPA Industry Results in 2022

CR	2018	2019	2020	2021	2022e Scenario 1	2022e Scenario 2	2022e Scenario 3
PPA Liability	101.1%	101.1%	94.4%	99.7%			
PPA Phy Dmg	92.9%	93.9%	88.9%	103.6%			
Total CR	97.8%	98.2%	92.1%	101.3%	104.0%	100.9%	97.9%
Chg from '21					2.7%	-0.4%	-3.4%
Chg from '19			-6.1%	3.1%	5.8%	2.7%	-0.3%

Scenario 1: Industry filing/approval pattern for 2022 matches 1Q22
Scenario 2: Breakeven; Industry covers inflation and CR for 2022 is about the same as 2021
Scenario 3: 2019; Industry raises pace of filing and rates enough to reach 2019 CR of 98%

It seems likely the industry can break even on inflation and produce a 101% CR. Making progress beyond that seems possible, but getting to 2019 levels may require a 'break' on either inflation or accident frequency/severity.

The PPA liability CR is typically above 100% (average 104.7% since 2008) while the Auto Physical damage CR is typically below 100% (avg. 96.5% since 2008). The year 2021 was a sharp reversal of that pattern, thanks in no small part to inflation impacting used cars, parts and repair costs.



Source: ©2022 S&P Global Market Intelligence Assured Research

First, a look back at rate filing trends from January, 2021 through 1Q22

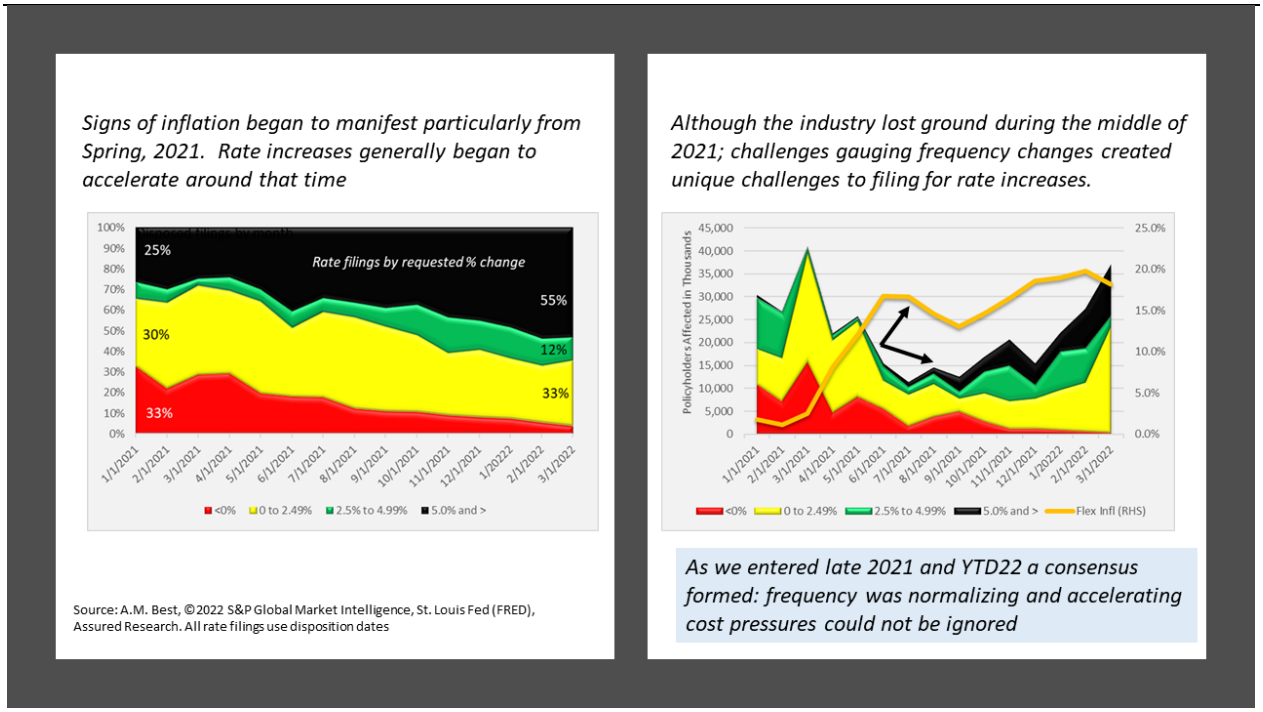
To set the stage for our analysis, **it's instructive to first look back at rate filing trends over the past 5 quarters**. On the left side of Figure 3 we show rate changes across four rating bands, with the easily-observed conclusion that **rate increases of 5% or more have risen sharply (presently about 55% of total filings compared to 25% in early 2021). Moreover, rate decreases (shown in red) have virtually disappeared**.

When we organize the data by the number of policyholders affected by rate changes (the graph on the right), **we see too a sharp acceleration in the number of policyholders impacted by rate increases – particularly from the 3Q21 and onward**. The current run-rate is about 35 mil. auto policyholders are being impacted each month by a rate change.

For illustration, we include in the graph on the right the 'flexible' inflationary series of the CPI. Regular readers will recall our earlier observations that many auto-related costs are flexible which means they (re)price frequently – one of the reasons auto insurers were hit quickly by the adverse effects of accelerating inflation during 2021.

And while it's not the focus of this note, we'd draw attention to the timeframe (highlighted by arrows in the graph on the right) where there was a wide gap between accelerating inflation and the number of policyholders being touched by rate increases. We expect this gap sowed the seeds of the weak financial performance by many auto insurers during the 2H21; in turn setting off the alarm bells that fueled the ongoing hard market in private passenger auto.

Figure 3: PPA Rate Filing Trends from Jan.' 21 (left); Policyholders Affected (right)



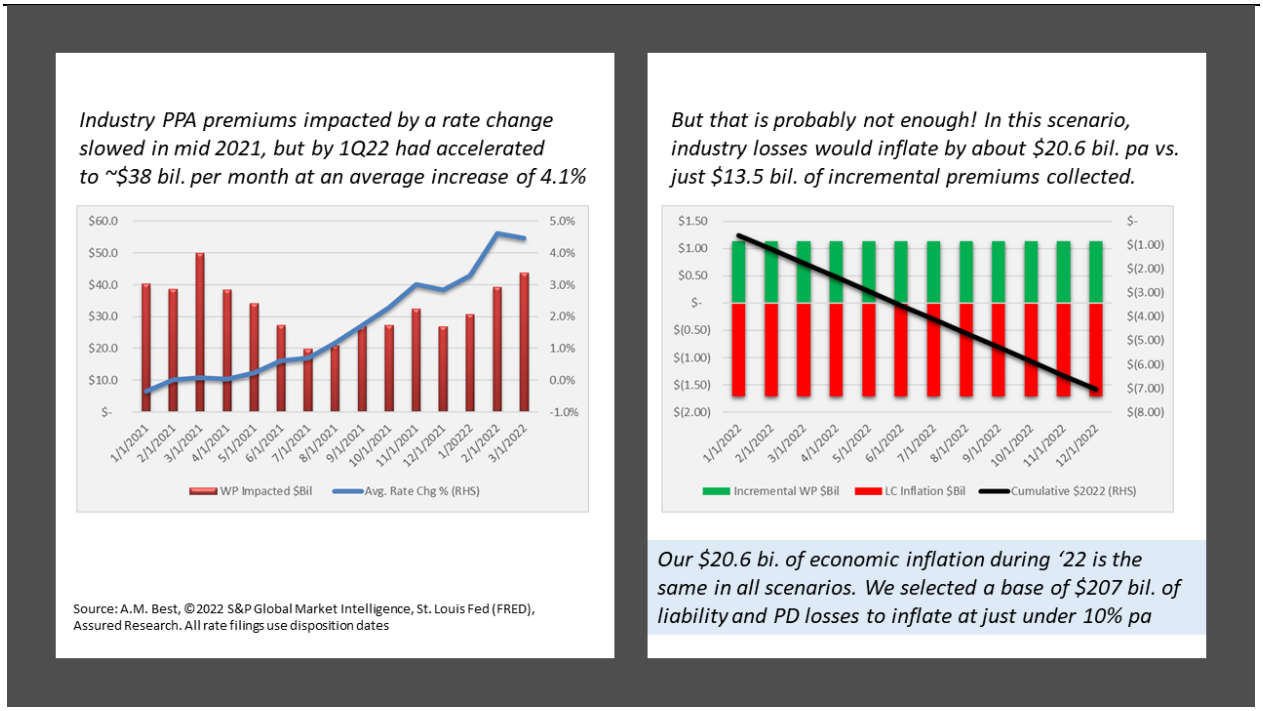
Auto insurers are beginning to make progress against inflation, but it's not enough (yet)

The graph on the left-side of Figure 4 presents another useful way of considering the industry's progress toward stemming the adverse impact of inflation. We show that **rate changes by PPA insurers during 1Q22 impacted about $38 bil. of auto premiums *each month* with approved rate increases of 4.1%**. The math says **that leads to** $1.6 bil. of additional premiums to combat inflation, ($38 bil. x 4.1%), though after variable expenses and wage pressures on fixed expenses we reckon that leaves closer to **an incremental $1.1 billion each month to cover inflation on losses and settlement costs**.

And on inflation, we'll remind that **in our work shown in Figures 4 & 5 we incorporate a blended liability and physical damage increase over *normalized* 2021 loss levels of just under 10%**. We can run other scenarios, but if inflation runs hotter it'll take higher increases and more policyholder 'touches' to cover inflation during 2022 (and vice versa if lower).

Our work was informed by metrics available from the industry insurance expense exhibits. Lots of judgements were necessary, and some of ours will prove incorrect. But the broader point still holds: ***The PPA industry has to keep accelerating its pace of filings and rate increases to offset inflation during 2022. While it doesn't take heroic assumptions to show that it can offset the adverse impact of inflation, gaining ground will be harder.***

Figure 4: Industry Premiums Impacted by Rate Change(left); 2022 Scenario at 1Q Levels right)

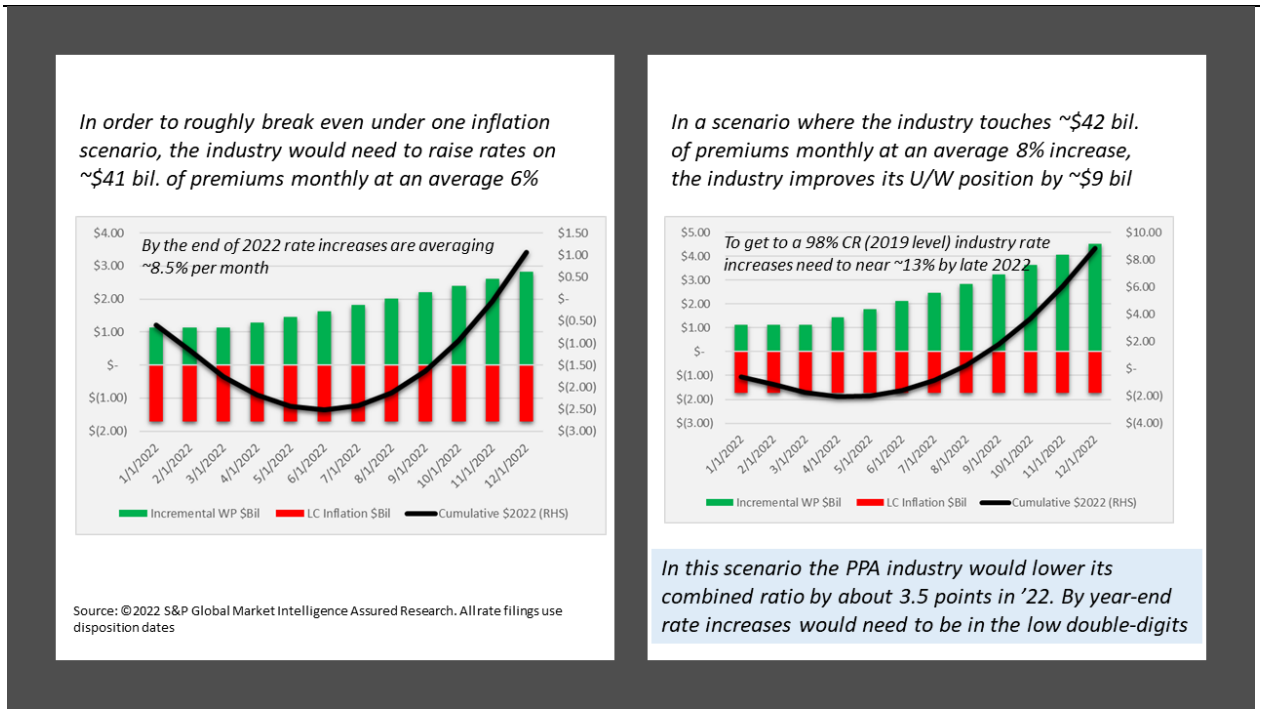


What's meant by *normalized* '21 losses? Economic inflation (and not changes in frequency or claim severity) should account for most of the movement in our losses from '21 to '22.

Pulling back from the weeds, the graph on the right of Figure 4 conveys that **if the industry continues to touch about $38 billion of premium each month at an average rate increase of about 4.1%, it'd continually lose ground to inflation and create a cumulative U/W hole of about $7 billion, or 2.7 combined ratio points** over the full year (*relative to 2021*).

Conversely, **in Figure 5 we present two, more optimistic scenarios**. In an inflation breakeven scenario (on the left), the industry touches about $41 bil. of premiums each month averaging a 6% increase. On the right, were the aim to reach the 2019 CR of 98% the industry would need to touch $42 bil. per month at an average 8% rate increase. **The scenario on the left is essentially breakeven (with losses from economic inflation and additional premiums collected each ~$21bil.). On the right, incremental monies collected exceed inflation by $9 bil over the course of 2022; that'd improve the industry CR by about 3.4 points compared to 2021**.

Figure 5: '22 Scenario Breakeven w/inflation (left); '22 Scenario to Reach 2019 CR (right)



Notably, **the dark lines in each graph illustrate the cumulative inflation deficit (or, surplus) in 2022. The inflection point in each scenario comes during the middle of 2022**

Summary

The auto industry is working hard to neutralize inflation. Based on this work, we think it's making progress but has to accelerate the pace and level of increases just to offset the adverse impact of inflation in 2022 and hold the industry CR steady (relative to 2021). To make progress against inflation and lower the industry CR will probably require rate increases that reach double-digit levels by the second half of 2022.

Liability Insurance: Civil Case Filings Down in 2021; Claims Down More

Leery of a head fake, insurers are reserving conservatively…in bulk

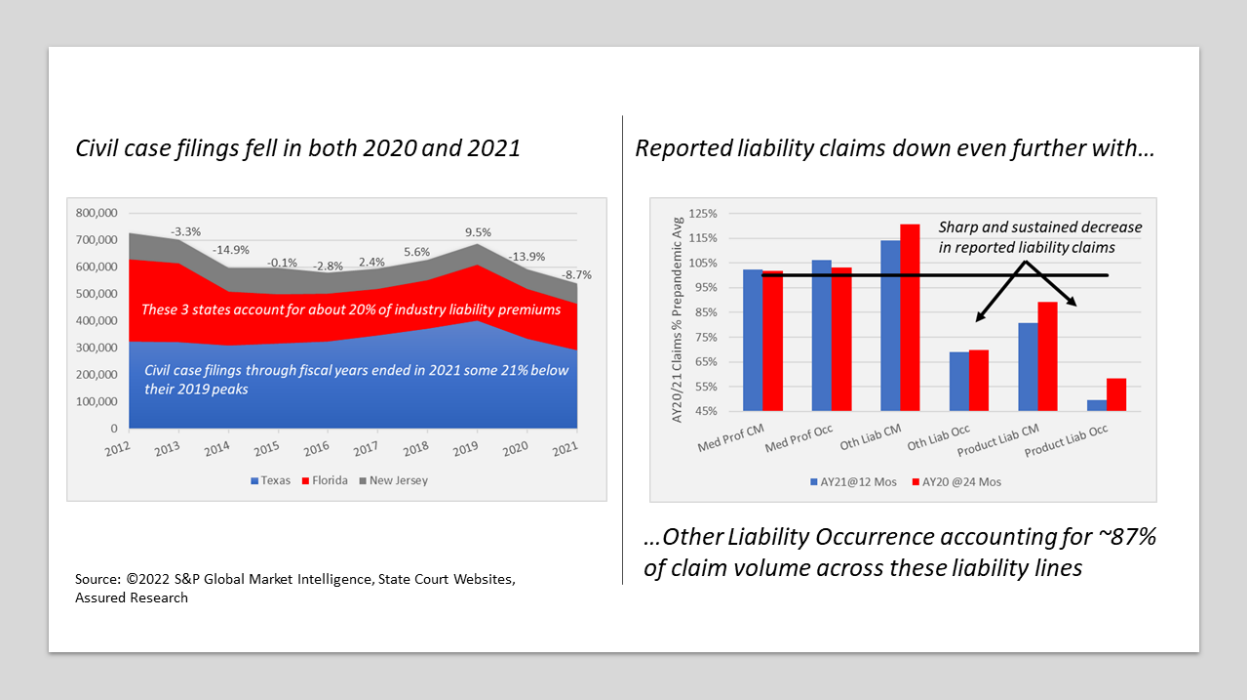
A debate is raging among insurance professionals: **Will liability claims revert to their pre-pandemic levels once the courts fully reopen?** A close corollary: **Is there a latent well of liability claims from 2020 and 2021 occurrences ready to materialize in claim reports and actuarial triangles** once plaintiff attorneys are confident that their more complex and high-valued cases can proceed; and with the prospect of jury trials? (We have always assumed these claims have been reported to insurers – they are not literally sitting in an attorney's desk drawer – but we acknowledge that tough cases have a way of creating negative surprises).

We put exactly those two questions to a prominent plaintiff's attorney during a recent webinar called After Nuclear Verdicts: Time to Exit the Fallout Shelter and Try Cases. The response from the plaintiff attorney: *It'll be like shooting pigs in bathtub.* That's really gross, and far more graphic than the customary *shooting fish in a barrel* phrase, but we include it because it lends insight into the mindset of at least one plaintiff attorney…and a concerning one at that.

What's happening with civil cases? They trended lower in '21 and are 21% below 2019.

In Figure 1 we show our first look at civil case filings in 3 states reporting out their fiscal years ending in 2021. We'll note that the years typically ended in July or August, so we're still missing the last quarter+ of 2021 civil filings…but state courts are frustratingly slow to report data.

Figure 1: Civil Case Filings in 3 Major States (left); Reported Insurance Liability Claims (right)

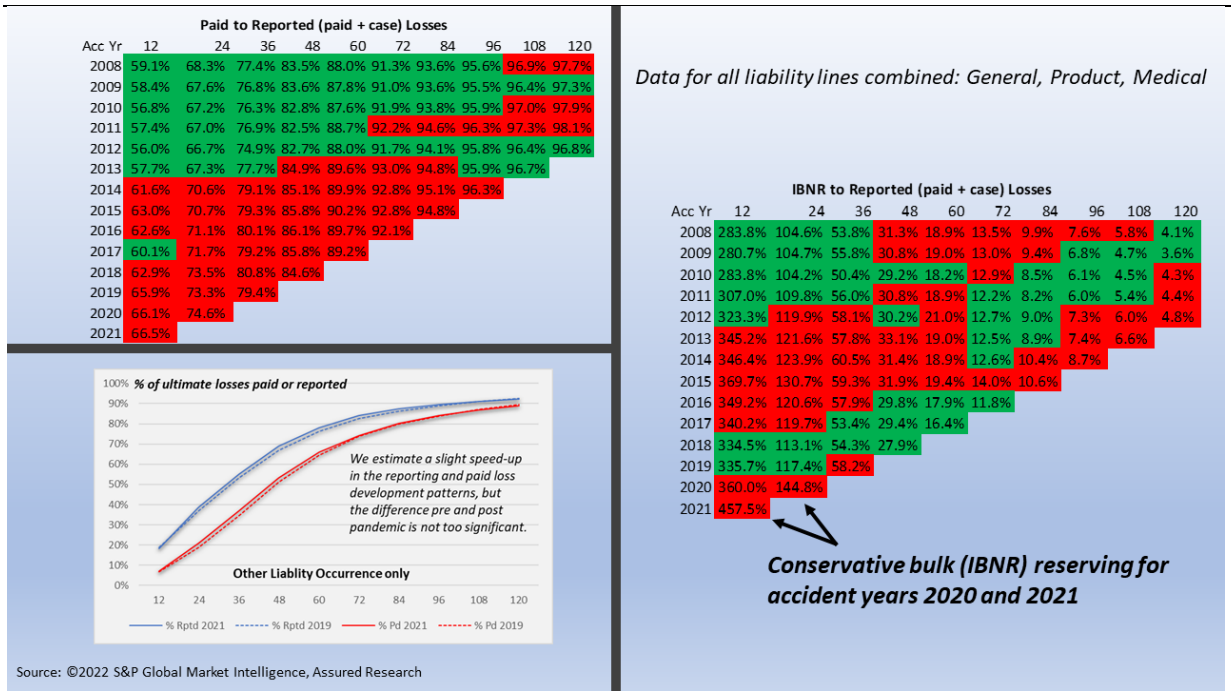


We might have been surprised by the ongoing, post-pandemic decline in civil case filings, but we actually received YE21 insurance claim filing data back in early March – that's the graph on the right-hand side of Figure 1. **When comparing reported claims for accident years '20 and '21 to their respective 5-year, pre-pandemic averages, Other Liability Occurrence** – with the largest claim volume by far – **shows reported claims for AYs '20 and '21 some 30% below pre-pandemic averages**. That's broadly commensurate with the 21% decline in case filings across TX, FL, and NJ. These 3 states account for about 20% of industry liability premiums so represent a robust, but not complete sample of civil case filings.

How have reserving trends been impacted by the lower liability claim volumes?

Surprisingly, not much. The upper left graph in Figure 2 shows the relationships between paid and reported losses (paid + case reserves) across all the major liability lines. The ratio has been steadily rising from which we can infer that claims are paying more quickly, or case reserves are declining, or both. But the graph beneath it shows only the slightest of changes in the claim reporting or payment patterns based on our reserving work at YE19 and YE21. **The biggest change – IBNR % reported losses is sharply higher for the pandemic years 2020 and 2021**.

Figure 2: Actuarial Diagnostics for Combined Liability Lines (Red> Col. Avg; Green< Col. Avg)



Summary

One prominent insurance executive has said his company won't fall for the 'head fake' of lower civil case filings and liability claims translating into lower ultimate losses. Based on what we see here, the industry broadly agrees and is holding substantially higher sums of IBNR in relation to reported losses for the two pandemic years. It looks like the industry will be financially ready if those plaintiff attorneys start shooting…fish in a barrel…when courts fully reopen.

Essay on Risk: Enhancing Shareholder Value is No Longer Sufficient

P/C insurers need to understand the changing ground rules whether as U/W or investors

In the world of Milton Friedman and other leading economists, **the only role of corporate management was to enhance shareholder value**. While that left unsettled whether to maximize long term cash flows or take actions to enhance quarterly earnings per share and stock prices, it simplified decision making as all other actions became superfluous.

But that's not the world we now live in! Now **corporations are expected to consider all stakeholders**, not just shareholders, in developing and executing strategies. But, beyond just considering stakeholders, **companies are increasingly being asked (required) to perform many of the tasks that previously were thought of as being Government responsibilities** and to play an important part in solving many societal problems. **In other words, it has become imperative for companies to be seen as a good corporate citizens.**

The push to broaden goals and actions is coming from many different directions. **Shareholders are involved because in many cases they believe solving problems will lead to better corporate returns**. Large investors are also pushing companies in this direction and there is no better example than Larry Fink of Blackrock urging companies to adjust to this new reality in his 2002 letter to CEOs entitled *The Power of Capitalism*.

P/C insurers are affected by these trends in multiple directions. As major corporations it will be necessary for companies to demonstrate that they are good corporate citizens and are making a positive contribution to society.

As underwriters and investors, though, insurers will need to re-orient strategies to assist in promoting social welfare.

This will present both opportunities and challenges but understanding the changing ground rules can help with getting it right.

Customers are also playing a major role. Corporate actions have now become more sensitive as many people seem to want to do business with companies that have values consistent with their personal views.

Employees are on both sides of this evolution. On one hand they are encouraging company actions while at the same time it has become imperative for corporations to provide positive experiences to employees through increased attention to health, wellness, and diversity.

Climate concerns led the way since governments need buy-in from corporations.

The current push has been evolving for some time but became increasingly visible with climate concerns and the globally adopted goals toward decarbonization. **There is clear recognition that governments can't reach their targets alone and that companies will have to play a**

major part in the move toward emission neutrality. There are many examples of corporate actions, but the strategic moves of the major oil companies to deemphasize fossil fuels is probably the most visible example, as are the global auto manufacturers' push toward electric vehicles. And, it has become increasingly necessary for companies to articulate the steps they are taking to reach carbon neutrality and to identify their target dates.

But not far behind are myriad other social concerns and objectives

While climate concerns may have been the starting point, **problems with racial disparities, gender equality, rioting, and gun violence in schools and cities have also required corporate responses**. In this regard, consider how many companies have expanded the management roles for diversity officers and broadened representations of their Boards of Directors. **Companies are increasingly being pushed (often by their employees) to state their positions on social issues** and while this essay is not meant to be political, you can't ignore the travails that Disney is enduring after opposing Florida's Parental Rights in Education law. Undoubtedly, in the future, other companies will face similar conundrums.

While all this was evolving **the pandemic** made these issues more visible and **presented companies with the opportunity to benefit global health by repositioning their manufacturing processes to produce the supplies necessary to combat the virus**. And, of course, the ability of corporations to respond quickly was demonstrated by the rapid development of the vaccines which offers the best example of how companies can both benefit society and enhance returns.

Finally, **there is no better example of companies having to assist with societal goals than the Russian/Ukrainian war**. **While governments can send arms, provide financial aid, and mandate sanctions it takes the business community to make the sanctions work.**

While there are many positives to the new direction, **there is also the concern that trying to achieve multiple goals can lead to reduced corporate dynamism and excuses for poor or disappointing results**. (It's not hard to imagine a CEO explaining to analysts that trying to pursue a certain societal goal reduced earnings.)

Final Thoughts

If there's any way to think about the future, it is that the rules for corporate operations are being constantly rewritten. But, no doubt, the future will be characterized by increased complexity with greater volatility and uncertainty and corporations will have to navigate a host of challenges to compete and succeed. This has always been the case but now it seems more complicated as geopolitical realignments will make the next 30 years look different from the last thirty. **For an industry such as P/C insurance that provides risk transfer products, this evolution will present both challenges and opportunities. Understanding these developments can help with getting it right.**