The Institutes
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COVID-19 and the Economic Downturn's Effect on P&C Insurance: An Opportunity for Technology?

The outbreak of the novel coronavirus (COVID-19) and the shelter-in-place response has wounded the US economy. Business and consumer-oriented economic indicators show the extent of the damage thus far, but economic data released in spring/summer months are likely to demonstrate further deterioration. The P&C insurance industry has not been immune to the economic fallout. The downturn is likely to strain underwriting profits, and the decline in interest rates and financial markets will undoubtedly impact net investment yields, which will exacerbate the industry-wide profitability efforts. The P&C insurance industry should expect differing impacts dependent on the insurance line. The line by line policy and loss impacts are studied within this article. Going forward, it is anticipated the pandemic response and economic downturn may expedite technological change and adoption, as industry players seek to maximize operational efficiency in a new world.

The Economic Downturn
The emergence of the pandemic has wreaked havoc on consumer activity, business activity and governments. Declines in manufacturing, residential housing, trade, business formation, and retail/food sales have all shown up in April's economic indicators. These numbers are likely to worsen with May releases.

(see next page for Figure 1 chart)

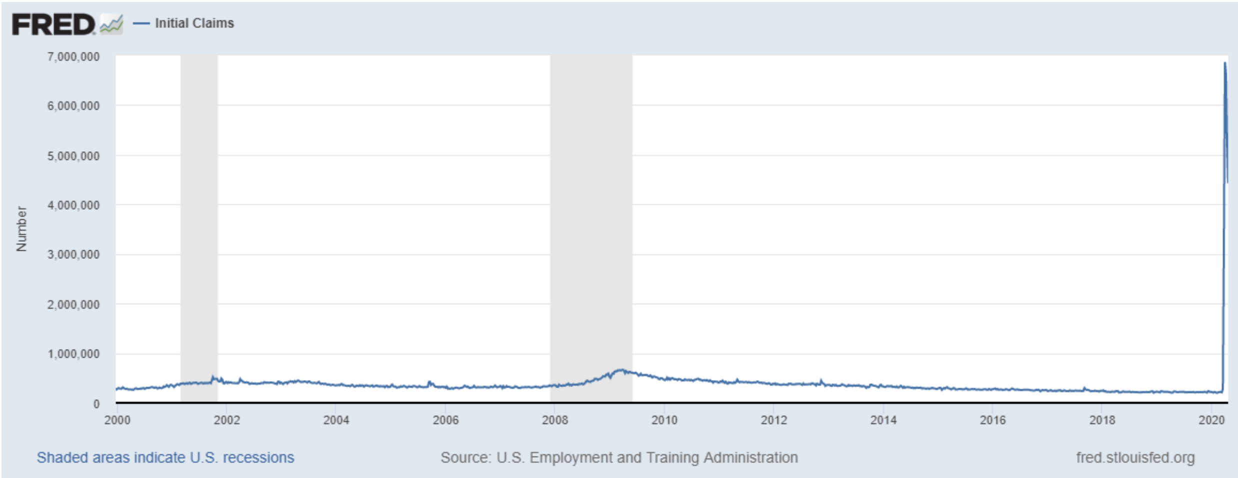
Figure 1:

Indicator	Description	Released	Next Release	Current	Prior
Advance Report on Durable Goods Manufacturers' Shipments, Inventories, and Orders	New orders for manufactured durable goods in March decreased $36.0 billion or 14.4 percent to $213.2 billion.	April 24, 2020	May 28, 2020	March 2020: -14.4° % change	February 2020 (r): +1.1° % change
New Residential Sales	Sales of new single-family houses in March 2020 were at a seasonally adjusted annual rate of 627,000. This is 15.4 percent (+/- 14.8%) below the revised February 2020 estimate of 741,000.	April 23, 2020	May 26, 2020	March 2020: -15.4 % change	February 2020 (r): -4.6* % change
New Residential Construction	Privately-owned housing starts in March 2020 were at a seasonally adjusted annual rate of 1,216,000. This is 22.3 percent (+/- 12.2%) below the revised February 2020 estimate of 1,564,000.	April 16, 2020	May 19, 2020	March 2020: -22.3 % change	February 2020 (r): -3.4* % change
Manufacturing and Trade Inventories and Sales	U.S. total business end-of-month inventories for February 2020 were $2,012.7 billion, down 0.4 percent (+/- 0.1 percent) from last month. U.S. total business sales were $1,464.2 billion, down 0.5 percent (+/-0.2 percent) from last month.	April 15, 2020	May 15, 2020	February 2020: -0.4 % change in Inventories	January 2020 (r): -0.3 % change in Inventories
Business Formation Statistics	Total U.S. Business Applications were 842,614 in the first quarter of 2020, down 4.5% from fourth quarter 2019.	April 15, 2020	July 15, 2020	1st Qtr 2020: -4.5° % change	4th Qtr 2019 (r): +2.5° % change
Advance Monthly Sales for Retail and Food Services	U.S. retail and food services sales for March 2020 were $483.1 billion, a decrease of 8.7 percent (+/-0.4%) from the previous month.	April 15, 2020	May 15, 2020	March 2020: -8.7 % change	February 2020 (r): -0.4 % change
Monthly Wholesale Trade	February 2020 sales of merchant wholesalers were $500.7 billion, down 0.8 percent (+/- 0.5 percent) from last month. End-of-month inventories were $655.8 billion, down 0.7 percent (+/- 0.2 percent) from last month.	April 9, 2020	May 8, 2020	February 2020: -0.7 % change in Inventories	January 2020 (r): -0.6 % change in Inventories
U.S. International Trade in Goods and Services	The nation's international trade deficit in goods and services decreased to $39.9 billion in February from $45.5 billion in January (revised), as imports decreased more than exports.	April 2, 2020	May 5, 2020	February 2020: 39.9° $ billion	January 2020 (r): 45.5° $ billion

Economic Indicators released in April indicated a sharp decline in residential and business activity. The decline in residential and business activity underscored by worsening economic indicators (shown above) forced businesses to reevaluate their operations. Many have cut costs, including staff. This process has resulted in an unprecedented spike in unemployment claims.

(see next page for Figure 2 chart)

Figure 2:



Unemployment claims spiked in April 2020

The recent spike in unemployment is extremely alarming, and despite efforts by government and the Federal Reserve to provide temporary backstops, the impact is already showing up in lower frequency economic indicators, such as Gross Domestic Product (GDP). In the first quarter of 2020, GDP was estimated to have declined by 4.8%. Interestingly, a significant piece of this decline was a contraction in healthcare. The “flattening of the curve” was a mantra aimed at ensuring protection of the healthcare industry during the global pandemic, but an associated decline in elective procedures has resulted in significant losses for many hospitals.

(see next page for Figure 3 chart)

Figure 3:

April 29, 2020

Table 2. Contributions to Percent Change in Real Gross Domestic Product

Line		2017	2018	2019	Seasonally adjusted at annual rates 2016 Q2	2016 Q3	2016 Q4	2017 Q1	2017 Q2	2017 Q3	2017 Q4	2018 Q1	2018 Q2	2018 Q3	2018 Q4	2019 Q1	2019 Q2	2019 Q3	2019 Q4	2020 Q1	Line
	Percent change at annual rate:																				
1	**Gross domestic product**	**2.4**	**2.9**	**2.3**	**1.9**	**2.2**	**2.0**	**2.3**	**2.2**	**3.2**	**3.5**	**2.5**	**3.5**	**2.9**	**1.1**	**3.1**	**2.0**	**2.1**	**2.1**	**-4.8**	1
	Percentage points at annual rates:																				
2	**Personal consumption expenditures**	**1.78**	**2.05**	**1.76**	**1.95**	**1.74**	**1.70**	**1.63**	**1.63**	**1.61**	**3.12**	**1.15**	**2.70**	**2.34**	**0.97**	**0.78**	**3.03**	**2.12**	**1.24**	**-5.26**	2
3	**Goods**	**0.83**	**0.86**	**0.78**	**0.94**	**0.84**	**0.41**	**0.68**	**1.14**	**0.85**	**1.55**	**0.27**	**1.13**	**0.75**	**0.33**	**0.32**	**1.74**	**1.09**	**0.12**	**-0.27**	3
4	Durable goods	0.49	0.44	0.34	0.49	0.75	0.41	0.24	0.54	0.55	0.84	0.16	0.56	0.25	0.09	0.02	0.87	0.56	0.20	-1.21	4
5	Motor vehicles and parts	0.13	0.11	0.05	0.14	0.34	0.18	-0.12	0.11	0.23	0.39	-0.15	0.18	0.01	0.07	-0.27	0.37	0.06	0.13	-0.95	5
6	Furnishings and durable household equipment	0.13	0.10	0.05	0.11	0.14	0.06	0.15	0.13	0.15	0.19	0.07	0.08	0.09	-0.09	0.03	0.14	0.10	0.02	-0.11	6
7	Recreational goods and vehicles	0.19	0.16	0.19	0.26	0.22	0.15	0.21	0.25	0.05	0.22	0.17	0.17	0.12	0.04	0.23	0.32	0.31	0.04	0.00	7
8	Other durable goods	0.03	0.08	0.05	-0.02	0.05	0.01	0.00	0.04	0.12	0.04	0.08	0.13	0.03	0.07	0.03	0.04	0.09	0.01	-0.15	8
9	Nondurable goods	0.35	0.42	0.45	0.45	0.09	0.00	0.44	0.60	0.31	0.71	0.11	0.57	0.50	0.24	0.30	0.87	0.53	-0.08	0.94	9
10	Food and beverages purchased for off-premises consumption	0.16	0.16	0.09	0.30	0.12	0.17	0.15	0.09	0.19	0.31	0.12	0.09	0.13	0.07	-0.08	0.25	0.26	-0.06	1.11	10
11	Clothing and footwear	0.02	0.07	0.06	0.02	0.05	-0.09	0.00	0.12	0.00	0.12	-0.03	0.18	0.15	0.00	-0.07	0.25	-0.04	0.09	-0.78	11
12	Gasoline and other energy goods	-0.01	0.00	0.00	-0.05	-0.03	-0.05	-0.04	0.10	-0.04	-0.01	-0.04	0.05	-0.04	0.03	0.01	0.02	-0.02	-0.03	-0.09	12
13	Other nondurable goods	0.18	0.19	0.29	0.18	-0.05	-0.02	0.33	0.29	0.15	0.29	0.06	0.24	0.27	0.14	0.44	0.35	0.33	-0.07	0.70	13
14	**Services**	**0.94**	**1.18**	**0.98**	**1.01**	**0.90**	**1.29**	**0.95**	**0.49**	**0.76**	**1.57**	**0.88**	**1.57**	**1.59**	**0.65**	**0.46**	**1.29**	**1.02**	**1.12**	**-4.99**	14
15	Household consumption expenditures (for services)	0.94	1.08	1.01	1.07	0.57	1.30	0.94	0.61	0.81	1.55	0.78	1.33	1.46	0.24	1.00	1.26	1.04	1.28	-5.61	15
16	Housing and utilities	0.10	0.17	0.12	0.35	0.27	-0.12	-0.13	0.37	0.04	0.33	0.05	0.29	0.07	0.12	0.01	0.14	0.28	0.05	0.08	16
17	Health care	0.27	0.34	0.35	0.84	-0.40	0.80	0.09	-0.03	0.56	0.43	0.20	0.39	0.60	-0.22	0.72	0.38	0.07	0.55	-2.25	17
18	Transportation services	0.08	0.07	0.04	0.02	0.15	0.11	-0.04	0.12	0.13	0.18	0.13	-0.10	-0.02	-0.02	0.01	0.17	0.10	0.02	-0.74	18
19	Recreation services	0.03	0.06	0.07	-0.08	0.12	0.13	0.07	-0.05	-0.05	-0.06	0.16	0.17	0.02	0.09	-0.03	0.17	0.00	0.15	-1.01	19
20	Food services and accommodations	0.12	0.19	0.09	0.04	0.06	0.07	0.33	-0.06	0.11	0.19	0.26	0.23	0.35	-0.12	-0.06	0.22	0.16	0.05	-1.61	20
21	Financial services and insurance	0.10	0.06	0.10	-0.21	0.10	-0.03	0.33	-0.01	0.11	0.14	0.05	-0.04	0.05	0.10	0.15	0.05	0.12	0.20	0.15	21
22	Other services	0.24	0.19	0.26	0.11	0.26	0.33	0.29	0.28	-0.09	0.35	-0.08	0.39	0.38	0.30	0.20	0.13	0.32	0.26	-0.25	22
23	Final consumption expenditures of nonprofit institutions serving households	0.01	0.10	-0.04	-0.06	0.33	-0.02	0.01	-0.12	-0.05	0.02	0.10	0.24	0.13	0.41	-0.54	0.03	-0.02	-0.16	0.63	23
24	Gross output of nonprofit institutions	0.12	0.20	0.18	0.45	0.22	0.32	0.03	-0.23	0.24	0.13	-0.03	0.57	0.45	0.07	0.19	0.14	0.00	0.07	-0.07	24
25	Less: Receipts from sales of goods and services by nonprofit institutions	0.11	0.10	0.22	0.51	-0.11	0.34	0.02	-0.11	0.30	0.11	-0.13	0.33	0.32	-0.34	0.72	0.12	0.02	0.23	-0.69	25
26	**Gross private domestic investment**	**0.75**	**0.87**	**0.32**	**-0.28**	**0.09**	**1.50**	**0.57**	**0.59**	**1.25**	**0.80**	**1.07**	**-0.30**	**2.27**	**0.53**	**1.09**	**-1.16**	**-0.17**	**-1.07**	**-0.96**	26
27	**Fixed investment**	**0.70**	**0.78**	**0.22**	**0.44**	**0.62**	**0.33**	**1.27**	**0.48**	**0.25**	**1.45**	**0.94**	**0.89**	**0.13**	**0.46**	**0.56**	**-0.25**	**-0.14**	**-0.09**	**-0.43**	27
28	Nonresidential	0.57	0.84	0.28	0.52	0.72	0.09	0.84	0.57	0.32	1.08	1.15	1.04	0.29	0.64	0.60	-0.14	-0.31	-0.33	-1.17	28
29	Structures	0.14	0.12	-0.13	0.27	0.50	0.07	0.21	0.06	-0.24	0.15	0.35	0.33	-0.07	-0.29	0.12	-0.36	-0.30	-0.21	-0.28	29
30	Equipment	0.27	0.39	0.08	-0.14	0.02	0.02	0.36	0.50	0.36	0.72	0.39	0.20	0.17	0.42	0.00	0.05	-0.22	-0.25	-0.91	30
31	Information processing equipment	0.18	0.18	0.08	0.05	0.21	0.11	0.18	0.26	0.16	0.28	0.20	0.08	0.20	-0.04	0.17	0.13	-0.13	0.01	-0.30	31
32	Industrial equipment	0.07	0.05	0.01	0.04	-0.02	0.07	0.08	0.14	0.06	0.09	0.07	-0.05	0.07	0.08	-0.04	0.02	0.08	-0.16	-0.08	32
33	Transportation equipment	-0.08	0.09	-0.01	-0.15	-0.19	-0.15	-0.07	-0.08	0.02	0.21	0.12	0.09	-0.07	0.29	-0.06	-0.14	-0.17	-0.01	-0.48	33
34	Other equipment	0.10	0.07	0.00	-0.07	0.02	0.00	0.16	0.18	0.12	0.14	0.00	0.09	-0.03	0.10	-0.08	0.04	0.00	-0.10	-0.04	34
35	Intellectual property products	0.16	0.32	0.34	0.39	0.20	0.00	0.27	0.01	0.21	0.20	0.41	0.51	0.18	0.51	0.48	0.17	0.22	0.13	0.02	35
36	Software	0.14	0.19	0.19	0.12	0.14	0.11	0.19	0.09	0.17	0.10	0.29	0.18	0.15	0.19	0.26	0.11	0.18	0.17	0.16	36
37	Research and development	0.01	0.12	0.14	0.27	0.03	-0.13	0.08	-0.08	0.04	0.07	0.10	0.30	0.01	0.29	0.21	0.06	0.01	-0.05	-0.10	37
38	Entertainment, literary, and artistic originals	0.01	0.02	0.01	0.00	0.04	0.02	0.00	0.00	0.01	0.03	0.02	0.02	0.02	0.03	0.00	0.00	0.02	0.01	-0.03	38
39	Residential	0.13	-0.06	-0.06	-0.07	-0.10	0.24	0.43	-0.09	-0.08	0.37	-0.21	-0.15	-0.16	-0.18	-0.04	-0.11	0.17	0.24	0.74	39
40	**Change in private inventories**	**0.04**	**0.09**	**0.09**	**-0.72**	**-0.53**	**1.18**	**-0.70**	**0.11**	**1.00**	**-0.64**	**0.13**	**-1.20**	**2.14**	**0.07**	**0.53**	**-0.91**	**-0.03**	**-0.98**	**-0.53**	40
41	Farm	0.01	-0.02	0.00	0.18	0.08	-0.12	0.04	0.01	-0.03	0.01	-0.03	-0.02	-0.06	-0.05	0.01	0.04	0.01	0.06	0.10	41
42	Nonfarm	0.03	0.11	0.10	-0.90	-0.61	1.30	-0.74	0.10	1.03	-0.65	0.16	-1.18	2.20	0.12	0.52	-0.95	-0.04	-1.04	-0.63	42
43	**Net exports of goods and services**	**-0.28**	**-0.29**	**-0.15**	**0.35**	**0.05**	**-1.36**	**0.13**	**-0.31**	**0.35**	**-0.80**	**0.00**	**0.67**	**-2.05**	**-0.35**	**0.73**	**-0.68**	**-0.14**	**1.51**	**1.30**	43
44	**Exports**	**0.41**	**0.37**	**0.00**	**0.45**	**0.71**	**-0.30**	**0.72**	**0.20**	**0.54**	**1.19**	**0.10**	**0.71**	**-0.78**	**0.18**	**0.49**	**-0.69**	**0.11**	**0.24**	**-1.02**	44
45	Goods	0.30	0.34	0.02	0.20	0.54	-0.06	0.46	0.18	0.18	1.03	0.11	0.94	-0.78	0.21	0.36	-0.48	0.17	-0.04	-0.08	45
46	Services	0.11	0.03	-0.02	0.25	0.17	-0.24	0.25	0.01	0.36	0.16	0.00	-0.23	0.00	-0.03	0.13	-0.21	-0.05	0.28	-0.93	46
47	**Imports**	**-0.69**	**-0.66**	**-0.15**	**-0.10**	**-0.66**	**-1.06**	**-0.58**	**-0.51**	**-0.18**	**-1.99**	**-0.10**	**-0.04**	**-1.27**	**-0.53**	**0.23**	**0.01**	**-0.26**	**1.27**	**2.32**	47
48	Goods	-0.57	-0.61	-0.04	-0.11	-0.42	-0.92	-0.48	-0.40	-0.10	-1.86	-0.18	-0.10	-1.11	-0.28	0.36	-0.02	-0.13	1.41	1.35	48
49	Services	-0.12	-0.05	-0.12	0.01	-0.24	-0.14	-0.10	-0.11	-0.08	-0.12	0.08	0.06	-0.16	-0.24	-0.13	0.02	-0.13	-0.14	0.96	49
50	**Government consumption expenditures and gross investment**	**0.12**	**0.30**	**0.41**	**-0.12**	**0.31**	**0.19**	**-0.04**	**0.24**	**-0.02**	**0.42**	**0.33**	**0.44**	**0.36**	**-0.07**	**0.50**	**0.82**	**0.30**	**0.44**	**0.13**	50
51	**Federal**	**0.05**	**0.19**	**0.23**	**-0.18**	**0.13**	**0.04**	**-0.08**	**0.21**	**0.01**	**0.30**	**0.18**	**0.25**	**0.19**	**0.07**	**0.14**	**0.53**	**0.22**	**0.22**	**0.12**	51
52	National defense	0.03	0.13	0.19	-0.21	0.13	-0.04	-0.07	0.25	-0.06	0.17	0.02	0.28	0.11	0.20	0.29	0.13	0.09	0.17	0.03	52
53	Consumption expenditures	0.00	0.09	0.14	-0.13	0.16	-0.01	-0.13	0.15	-0.06	0.10	0.02	0.23	0.11	0.07	0.25	0.13	0.01	0.09	0.11	53
54	Gross investment	0.03	0.04	0.05	-0.07	-0.03	-0.02	0.06	0.10	0.00	0.07	0.00	0.05	0.01	0.12	0.04	-0.01	0.08	0.08	-0.08	54
55	Nondefense	0.02	0.07	0.04	0.03	0.00	0.08	0.00	-0.04	0.07	0.13	0.16	-0.03	0.07	-0.12	-0.15	0.40	0.13	0.05	0.08	55
56	Consumption expenditures	0.01	0.06	0.02	0.01	-0.01	0.05	-0.02	-0.06	0.07	0.10	0.18	-0.03	0.05	-0.14	-0.16	0.36	0.10	0.05	0.07	56
57	Gross investment	0.02	0.00	0.02	0.02	0.01	0.02	0.02	0.01	0.00	0.03	-0.02	0.00	0.02	0.02	0.01	0.04	0.03	0.00	0.01	57
58	**State and local**	**0.07**	**0.11**	**0.18**	**0.06**	**0.18**	**0.15**	**0.03**	**0.03**	**-0.02**	**0.12**	**0.15**	**0.19**	**0.17**	**-0.14**	**0.36**	**0.29**	**0.08**	**0.22**	**0.02**	58
59	Consumption expenditures	0.07	0.08	0.10	0.18	0.22	0.06	0.01	0.04	0.07	0.07	0.08	0.10	0.14	0.06	0.10	0.07	0.15	0.11	-0.08	59
60	Gross investment	0.00	0.02	0.08	-0.12	-0.05	0.09	0.02	-0.01	-0.09	0.06	0.07	0.10	0.03	-0.20	0.26	0.23	-0.08	0.11	0.09	60

Source: U.S. Bureau of Economic Analysis

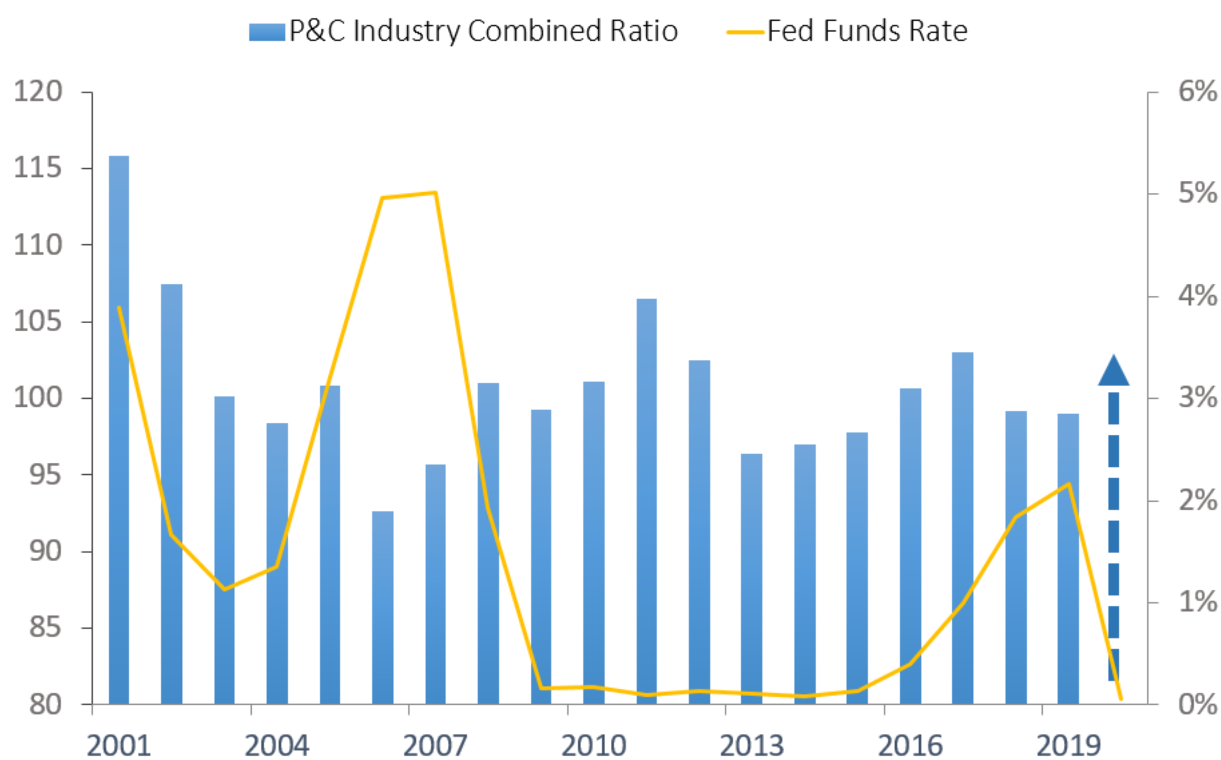
While the GDP decline was worse than initial estimates and undoubtedly indicates the start of a severe recession, it came in below the measure hit in Q4 2008 when GDP declined 8.4%. It is expected that the 2020 downturn will worsen significantly when 2nd quarter GDP is released in the summer. Some are estimating a 40% fall in GDP in Q2, hinting at an economic depression. Hopefully, that will be avoided.

Impact on the Overall P&C Insurance Industry
The P&C insurance industry is not insulated from the economic fallout. The impact on business activity is expected to be felt in commercial lines and the effects on residential activity and general consumer activity are expected to show up in personal lines. The effects are expected to impact the P&C combined ratio through changes to premiums, losses and expenses.

$$\text{Combined Ratio} = \frac{\text{Incurred Losses} + \text{Expenses}}{\text{Earned Premium}}$$

A combined ratio above 100 indicates the industry is paying out more money in claims then it is making from policies. Due to effects on policies and losses the industry should expect an increase in the combined ratio. Adding to industry stress, net investment yields are likely to decline as well. The industry typically invests very conservatively, so interest rates are a good measure to track as a proxy. Recently the Federal Reserve responded to the emerging economic crisis by expanding the money supply and reducing the federal funds' interest rate to near zero (again). The decline in P&C investment yields related to lower interest rates will constrain P&C insurance profitability further. The duration of ZIRP (zero-interest rate policy) will specifically impact areas of insurance with longer time horizons.

Figure 4:

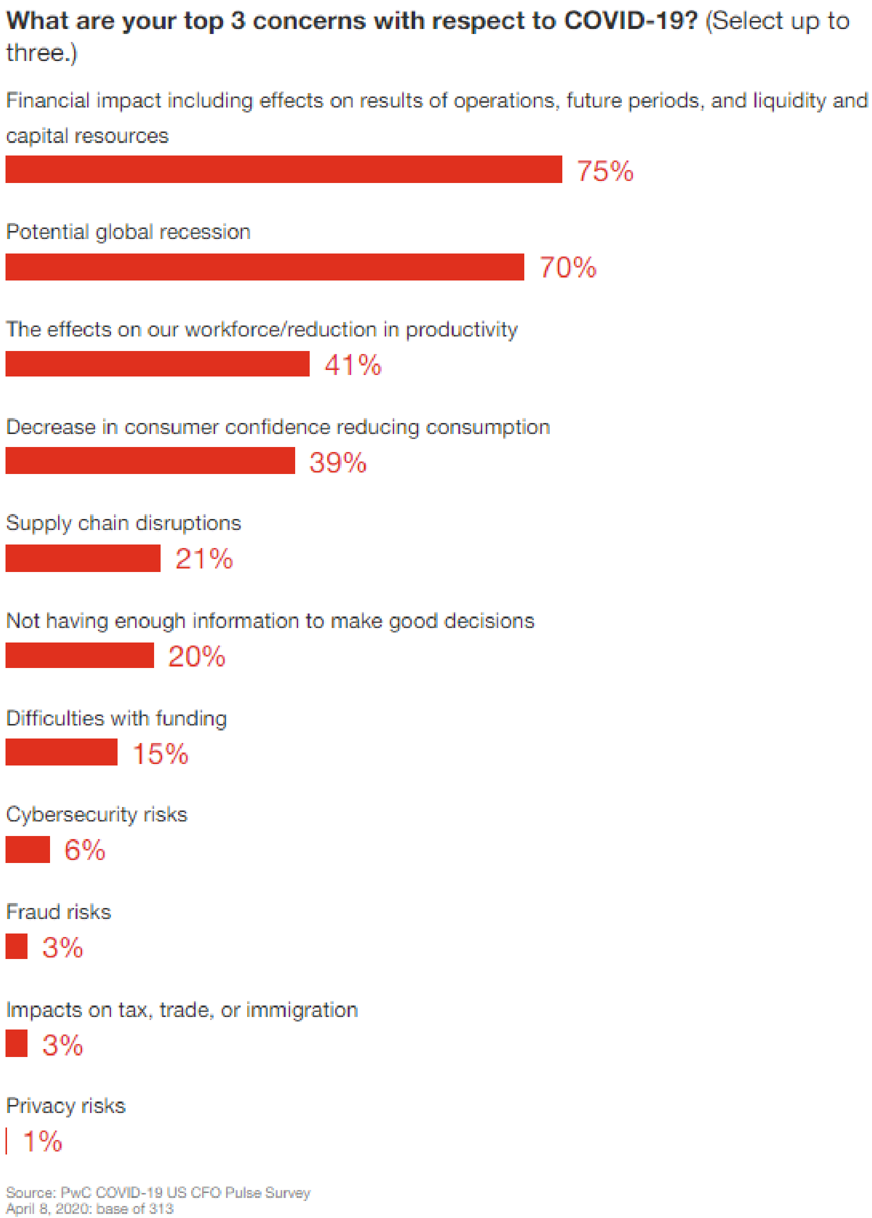


The industry-wide P&C combined ratio is expected to increase while interest rates (and investment yields) fall.

Which Areas (in P&C Insurance) are Expected to Be Most Severely Impacted?
While the magnitude of the impact on the P&C insurance industry combined ratio remains to be seen, the economic decline associated with sheltering in place from COVID-19 is bound to weigh on P&C insurance. There will undoubtedly be changes in the demand for insurance and the new environment will lead to alterations in insurance claims and losses. Down the road, this may also lead to changes in regulation and could even generate new business models.

Given the nature of the pandemic, it is challenging to predict all implications for insurance. A recent survey from PwC, for example, explored some potential areas of concern with finance leaders related to COVID-19 and found the following concerns rose to the top.

Figure 5:



These themes are also relevant for leadership within the P&C insurance sector. The entire insurance value chain — from policies, pricing and distribution; to underwriting and risk management; to claims and servicing; to finance, payments and accounting — will be impacted in some manner. The industry will have to navigate operational pressures as more employees work-from-home, while simultaneously finding ways to optimize profit as general business activity pulls back and the economy contracts. If premiums decline or losses spike, insurers will need to find ways to cut costs. Yet, each line of insurance will experience policy and loss effects differently. Figure 6 analyzes the directional impact to each line of P&C insurance.

Figure 6:

COVID-19 & Economic Downturn's Potential Impact on P&C Insurance Lines

Naic Line	Economic Effect on Premiums	Economic Effect on Losses	Overall Directional Impact on Line (0–5)
Aircraft	Down (due to flight reductions)	Down (due to reduced air traffic)	Moderate Down (3)
Boiler & Machinery / Equipment Breakdown & Machinery	Down (due to economy)	Stable	Modest Decline (2)
Burgulary & Theft	Down (due to economy)	Up (due to crime)	Down (4)
Combinations	Short term stable; Long term down (due to economy)	Down (due to economy, although fraud concerns)	Modest Decline (2)
Commercial Auto	Down (due to reduction in commercial activity)	Down (due to traffic reduction)	Moderate Down (3)
Commercial Multi-peril	Down (due to economy)	Stable; Except Business Continuity	Moderate Down (3)
Credit	Down (due to economy)	Up (Due to economy)	Large Down (5)
Crop	Short term stable; Long term down (due to economy)	Stable	Very Modest Decline (1)
Earthquake	Stable (slight reduction due to economy)	Stable	Relatively Stable (0)
Farmowners	Stable	Slightly up	Modest Decline (2)
Fidelity	Stable (due to work from home, may worsen longterm due to economy)	Stable	Modest Decline (2)
Financial Guarantee	Down (due to economy)	Significantly up (due to economy)	Down (4)
Flood	Down (due to economy)	Stable; Potential increase in fraud	Modest Decline (2)
Homeowners	Short term stable; Long term down (due to foreclosures)	Up (Work from home issues)	Down (4)
Inland Marine	Mixed (increase in personal shipping; but business activity slows)	Down (due to reduced traffic)	Relatively Stable (0)
Interline Filings	? - Depends on Lines	? - Depends on Lines	? - Depends on Lines
Medical Malpractice	Reduced (due to non-COVID healthcare traffic slowing)	Down for non-COVID; Up for COVID	Moderate Down (3)
Mobile Homes under Transport	Down (reduction in transport due to economy)	Down (due to reduced traffic)	Moderate Down (3)
Mortgage Guarantee	Long term down (due to economy)	Up (Due to foreclosures)	Large Down (5)
Ocean Marine	Down (due to decline in trade)	Down (due to less trade)	Modest Decline (2)
Other Liability	Short term stable; Long term down	Health-related (up); Other (down)	Modest Decline (2)
Other Lines	Short term stable; Long term down (due to economy)	? - Depends on Line	Modest Decline (2)
Personal Auto	Down (due to reduction in driving)	Down (due to traffic reduction)	Modest Decline (2)
Product Liability	Down (due to economy)	Down (due to economy)	Moderate Down (3)
Property	Short term stable; Long term down (due to foreclosures)	Stable; Except Business Continuity	Down (4)
Surety	Down (due to decline in projects)	Up (expectations of default)	Down (4)
Title	Short term stable; Long term down (due to economy)	Stable	Modest Decline (2)
Workers Compensation	Down (due to work from home and reduction in workforce)	Slightly Down (assuming COVID not work-related)	Moderate Down (3)

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Premiums are likely to contract across a variety of lines of insurance as the economy weighs on new exposures and causes early policy cancellations. General auto and air traffic will decline as more people stay home. The uptick in unemployment (shown in Figure 2) will undoubtedly show up in reduced premiums for personal auto, aircraft and commercial auto. The reduction in in workforce along with movement to new work-from-home environment may also result in businesses cutting workers compensation policies. COVID-19 and associated isolation policies impacted global trade (Figure 1) and business projects, which will reduce policies for various lines like ocean marine and surety. Areas related to housing, like homeowners or mortgage guarantee, may have some short-term stability, but long-term risk as foreclosures spike. Cost cutting, particularly within small business, is expected to constrain property premiums as many businesses consolidate. Finally, medical malpractice may see a reduction in policies particularly if the non-COVID healthcare slowdown (shown in Figure 3) continues and more hospitals cut back on elective procedures and associated expenses.

As shown in Figure 6, claim losses are also expected to vary by line. Reduced business and personal activity is expected to lower losses in a variety of lines, including auto, airlines and ocean marine. Credit, mortgage guarantee and surety losses are expected to increase as the economic downturn causes capital challenges and project cessations. Homeowners may see a slight uptick in losses as more residential activity takes place at home, due to school cancellations and work-from-home policies, thereby increasing risk.

Business interruption coverage, which can be included in property coverage (for example), is an area of question. This coverage indemnifies companies for lost profits for nonexcluded risks, yet outbreaks of disease are generally excluded. Certain policies include coverage for “interruption by communicable disease.” Even with this language included, some policies still exclude contamination due to a pathogenic organism, bacteria, virus or disease. There are a lot of elements to consider with this issue. Therefore, it is likely there will be challenges and litigation related to business interruption.

Why the Pandemic May Be a Catalyst for Tech-Adoption in Insurance

The P&C insurance industry was thrust into a new business environment due to the global pandemic. Within a week a relatively manual industry, which relies heavily on face-to-face interaction, showed an impressive ability to adjust and leverage technology to continue to provide products and services. While some firms within the insurance industry had already made strides in tech-related innovation and automation prior to the pandemic, the industry as a whole has been somewhat reluctant to adopt emerging technologies. On the surface, it may seem unlikely that the efforts over the past few months may have lasting impacts and change tech-adoption rates within the industry. Digging deeper, the pandemic and the associated economic fallout may windup being the key catalyst for widespread tech-adoption within insurance.

Prior to the pandemic the stage for large-scale technological adoption within insurance was already set. While the economic downturn will lower the quantity of available start-ups and InsurTechs, the quality and adoption rates associated with InsurTech may increase. In addition, the count of internal projects for brokers, carriers and reinsurers leveraging new technologies has been rising over the past few years. Industry organizations had already understood the importance of innovation, yet had less reason to trigger production usage. Some forward-looking credit agencies understood the industry-wide hesitancy and have created scores for innovation. AM Best released its innovation score methodology in March, 2020. They explain that these company-specific innovation efforts (or lack thereof) are likely to have a long-term impact on an insurer’s financial strength. Put differently, in order to profit maximize, insurers need to innovate. In this new world, they need to do so now.

While innovation can include elements outside of technology, much of it is directly related to technology. A notable constraint to technological adoption within insurance has been lack of customer adoption. Telematics, for example, has been around for an extended period of time, but never experienced robust demand. It’s possible the pandemic could change this. In an environment where miles driven has collapsed and more customers are now unemployed, Telematics and Usage-Based-Insurance (UBI) may provide angles for auto insurers to maximize retention of policyholders. The cost-benefit for consumers to exchange private information for a reduced rate is likely to be changing as well.

One major challenge with consumer and business-adoption of internet connected devices, like those proposed with UBI, has been data security risk. There are still some concerns, but security is slowly improving and the risk is becoming more manageable. It’s likely that there’s a methodical upturn in IoT usage over the next few years, but any increase in insurance usage will be deliberate focusing on areas where security is tight. Interestingly, the large scale public adoption of IoT-oriented devices and the data streams associated may also present new insurable opportunities, while simultaneously providing insurers with an ability to further improve operational efficiency through automation.

It was shown in Figure 6 that certain insurance lines are expected to experience an increase in losses as the economy flounders. Some of the increase may wind up being attributed to fraud. AI and machine learning systems may help reduce the cost of reviewing potentially fraudulent transactions identified by traditional rule-based systems. An additional benefit of cognitive fraud detection systems is that they can detect fraud patterns that humans may overlook. This can help save insurers money in a challenging economic environment.

In an era where insurers are aiming to maximize policies while reducing expenses, AI may also be able to help. Artificially intelligent systems have been developed to read contracts, assess which areas of potential risk, and even offer suggestions on how to improve the terms of the contract.

Blockchain may be another useful tool as it emerges through the ‘trough of disillusionment’ towards production usage. According to Gartner, Practical Blockchain is a Top 10 Strategic Technology Trend for 2020. Within insurance, The Institutes RiskStream Collaborative has been working with roughly 40 P&C and L&A insurance-related organizations to design use cases for life and annuities, personal lines, commercial lines and reinsurance over the past few years. RiskStream had expected a downturn in industry participation in our working groups and committees due to COVID, yet we have been surprised to witness more participation. This may be another signal that the pandemic and economic downturn is causing industry participants to re-evaluate the need for cost savings through technology.

RISKSTREAM DEMO VIDEO:
https://youtu.be/vRf2kuKlcH4

The timing of involvement in industry-wide initiatives may be also be ideal. RiskStream’s Proof of Insurance and First Notice of Loss solutions described in the video above, have moved through multiple path to adoption steps with members. Therefore, the associated ROI is within reach. Once adopted, it’s likely the path forged within these personal lines areas will allow for easier adoption of use cases being designed/built in other areas, such as commercial lines, reinsurance and life & annuities. RiskStream’s is not alone in demonstrating progress within blockchain. Other industries are also noticing advanced interest in their blockchain initiatives, such as MOBI (in mobility), BiTA (in logistics) and OCC (in energy). Each of these initiatives may also be of interest to insurers.

Whether insurers decide to leverage IoT, AI, blockchain or other forms of technology, there’s little doubt that firms that have made technological adoption progress have more room to withstand the economic downturn’s effects. This article demonstrated that the economic downturn will effect insurance, but also showed each insurance line will be impacted differently. The ROI of technological adoption is dependent on the underlying technology and the specific use case. While use cases for various tech have not necessarily grown since the onset of the pandemic, the overall economic environment has worsened, increasing the need for immediate operational efficiency. Insurers will be required to produce more with less resources. Optimization within the insurance industry, and business overall, will likely be more and more important in a world that is volatile and changing. Careful investment in technology is likely to be a useful resilience tool for insurers in this new, volatile environment.

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Patrick Schmid, PhD
Economist and VP for The Institutes RiskStream Collaborative – a blockchain insurance consortium. Oversees all departments: products, operations & technology.