Root IPO: InsurTech and The Big Lie

Of the 165 pages in Root's S1, a total of 28 are devoted to outlining the firm's vision of a disruptive strategy versus an "archaic" industry.

If we allow for a little creative license and salesmanship that comes with the territory of a stock sale, the company lays out a reasonable enough narrative of telematics-led disruption in auto insurance and the advent of mobile-first distribution.

For sure, it would have been a little more radical in 2010 than 2020, and certainly the company seems to use an industry strawman "incumbent" based on its worst competitors rather than its best, but the fundamental premise seems reasonable enough.

The only problem is that Root seems to have some very large challenges that are laid bare once you get past the 28-pages of carefully crafted narrative and into the actual numbers of the business as it exists today. In essence, the strategy statement gives the game plan, but how well have they executed on that vision? We see two key issues that are worthy of scrutiny.

The first is that the bold and visionary company outlined in the strategy overview appears not to be grounded in reality.

The Root in the strategy segment appears to be not well acquainted with the Root outlined in the numbers. Indeed, it seems as if they have never even met.

Unlike even Lemonade which has improved its loss ratio towards sustainable levels and is now simply facing questions around its ultimate TAM and the return on its acquisition costs, Root appears to be struggling across most facets of its core business competencies. As we get into below, its loss ratios are too high (and do not seem to be improving fast enough); it is not particularly efficient at acquiring customers; and it is <u>horrific</u> at retaining them.

Frankly, take out the InsurTech spin and it simply looks like a non-standard auto company going through an adverse selection cycle from growing too fast due to poor segmentation – an irony given this is the exact opposite of its self-defined narrative of a company with a better mouse trap. Perhaps nothing exemplifies this more than the fact the company's strategy statement on its underwriting model repeatedly touts its efficacy against hypothetical baselines, without referencing their <u>actual results</u> as seen in reality through the loss ratio.

The second is that Root appears to be in desperate need of money.

As we highlighted back in [March](#), the company is burning cash at alarming rates. The company, with around $550mn in earned premiums (annualized), has 901 employees as of mid-year, a number that will require substantial growth to scale into. Operating costs alone are over 40% of NEP – and the all-in expense ratio is over 80%. Combined with a >100% loss ratio, and the company is losing money fast.

Indeed, it has an accumulated loss of $500mn since 2017, and lost $282mn in 2019 alone. But for an assist from Covid-linked lower frequency that burn rate would likely be accelerating. As of mid-year, Root had just $241mn in cash, though it is worth noting that given other items on its balance sheet, including maturing debt obligations, this is likely fairly well restricted to maintain capital levels in statutory insurance companies.

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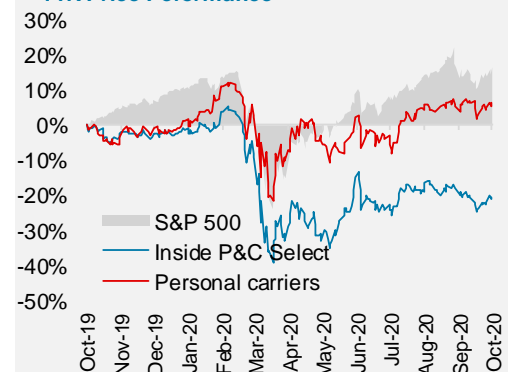**T:** (212) 224 3326

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Composite	YTD px chg.	P/B
Large comm.	(29.0)%	0.8x
Regional	(26.7)%	1.3x
Specialty	(17.0)%	1.5x
Personal	7.3%	1.9x
Bermuda	(25.4)%	1.0x
Florida	(39.4)%	0.8x
Brokers	4.3%	-
IPC Select	(19.0)%	1.1x
S&P 500 Fin.	(19.2)%	-
S&P 500	5.8%	-

1YR Price Peformance

Indeed, for all its talk of a data-driven flywheel that provides a competitive advantage, the real flywheel likely to dominate Root's fate appears to be a capital-burn/capital raise cycle. Its unprofitable growth requires a constant inflow of new capital to (a) replace lost money, (b) buy new growth to maintain and improve the valuation, and (c) as capital to support that growth. The bigger it gets, the harder this cycle will prove, and embed an inherent vulnerability should it lose access to capital markets.

Indeed, it appears as if debt markets have got the joke first. In a world of near zero interest rates, Root's latest financing of a $100mn Term Loan B initiated in November 2019 carries a 7% spread to Libor, and grants the investor warrants for 2.8 million shares with an implied 20-30% return, according to the S-1. Furthermore, the company is currently paying the interest in PIK on a quarterly basis. This seems at the very highest end of expected mezzanine financing rates, and is bordering on distressed financing terms..

The company also has $100mn of debt due on October 16 (e.g Friday next week) under its Term Loan A. Its balance sheet states cash and investments at mid-year of just $463mn, with insurance liabilities of $346mn.

In total, the company has fair value debt liabilities of ~$220mn (inc. warrants), an extraordinary amount for a company with $290mn in 2019 revenue and hundreds of millions of losses behind it.

Another indicator of financial distress in its disclosures is that the Ohio Department of Insurance has determined that Root meets the requirements to be monitored under the NAIC's Hazardous Financial Conditions Standards, requiring the company to file monthly financial reports.

For Root, the game plan appears simple. Avoid the market that prices you based on your ability to pay back, and access the market that values you based on your ability to tell a big story.

In spite of all this, Root is being marketed as a "hot ticket" IPO, with a whisper number valuation target of up to $6bn.

This would value it at 12x annualized H1 2020 revenues.

In propaganda there is an infamous theory called the "big lie". The idea is that most people are relatively skeptical of small untruths or sales tactics, but can be convinced by a lie so big they start to doubt that anybody would make it up. This "insight" is starting to seem like the secret sauce of InsurTech: paint a picture of a strategic vision and addressable market so big that the present is irrelevant. Profitable incumbency becomes a disadvantage, and losing money a virtue that old-timers don't get.

In many ways this transforms the core competency of InsurTechs away from operations and towards capital raising. As insurance investor Ian Gutterman has written: raise enough money at low enough rates, and you give yourself a decent shot at building a successful something. This may explain why the vision section of the S-1 (as with Lemonade) is so overly polished, and also so divorced from the reality of the numbers as they are today.

One final point is worth making. Equity markets are currently in love with the idea of driverless cars, pricing in this future as near certainty in the market's favorite stocks. In many ways, Root represents a one-way and mutually exclusive bet in the other direction. The firm's fundamental vision is to replace all underwriting variables with driver behavior only. In a world of driverless cars, this person-centered insight is worth near zero.

On top of that, the frothy valuations of the InsurTech disruptors (e.g. Lemonade) seem premised on a "winner takes all" model emerging, with a company taking their foothold in one market to become a dominant consumer franchise in insurance. The more of these similar "first x, then the world" plays come a long and are priced for inevitable success, the more certain it becomes many of them will not deliver long term growth and profitability to support their valuations.

Now markets can handle a lot of intellectual disagreement, uncertainty, and contradictory bets –that's what makes a market. But a lot of one-way and mutually exclusive bets pricing in zero sum games as simultaneous successes starts to look heck of a lot like irrational exuberance. It remains to be seen, but Root may provide another data point in that direction.

Intro: Another InsurTech unicorn, another shower of rainbow vomit

Human beings are fundamentally programmed to copy each other. It is hardwired into our brains from birth. Powerful brain centers called mirror neurons provide an essential connection between your brain and the people around you. Simply put, if you see another human being moving their hand, the part of your brain that controls your hand is firing too. This biological programming forms the foundation of learning in children and empathy in adults. It is the reason you flinch when you see a person get injured, why you yawn when they yawn, or wretch when they vomit.

So it is, it appears, with unicorns. If one unicorn vomits a rainbow, and gets rewarded for it, very soon every unicorn in the whole InsurTech universe is going to be wretching up whatever they have in their most ambitious pitchbooks.

Following the successful IPO of renters insurer Lemonade at a $1.6bn valuation (19x TTM revenue), a stampede of unicorn hoofs behind it was always likely (shares are also +85% since IPO). The first to follow, as expected, was Root. As has previously been reported, the firm is targeting an IPO with an ambitious $6bn valuation, or 14x TTM revenue. On Tuesday, the company followed through with the filing of its S-1, giving public market investors the first detailed look at the company beyond what is available from stat filings (which can exclude important information due to costs at the holding company level). Below, we outline our thoughts from Root's S-1, in three parts.

In part one, we outline Root's stated strategy. We argue Root has a plausibly "good enough" strategy, albeit a decade too late to be truly disruptive and likely to prove a dollar short on execution. Additionally, we argue it fundamentally overstates its competitive advantages, overstates the uniqueness of its model, and under-estimates the competitive advantages of profitable incumbency.

In part two, we compare how the firm's numbers to date speak to execution against its vision (spoiler alert: not good). We outline the company's problems underwriting to an acceptable loss ratio, its inefficiency at acquiring customers, and its inability to retain them. All speak powerfully against successful execution of the firm's strategy.

In part three, we outline the firm's problems with cash burn, and its accelerating challenge of raising fresh capital to (a) replenish capital from net losses, (b) fund customer acquisition to maintain growth and continue access to capital markets, and (c) new capital to fund that growth. For us, this capital burn/capital raise flywheel will have more control over the firm's fate than its grand data-collection flywheel it outlines as key to its success. Finally, we note the company's recent debt financing points to an assessment of financial distress, a fact that stands in stark contrast to its ambitions of a $6bn valuation (12x 2020 annualized revenue) in public equity markets.

In a bonus part four / appendix, we outline some other S-1 "highlights" including the firm's weak corporate governance practices, "adjusted" accounting terms, plans for reinsurance shrinkage, and disclosure of market conduct examinations.

Exhibit: Root target valuation versus peers, and relative to revenues
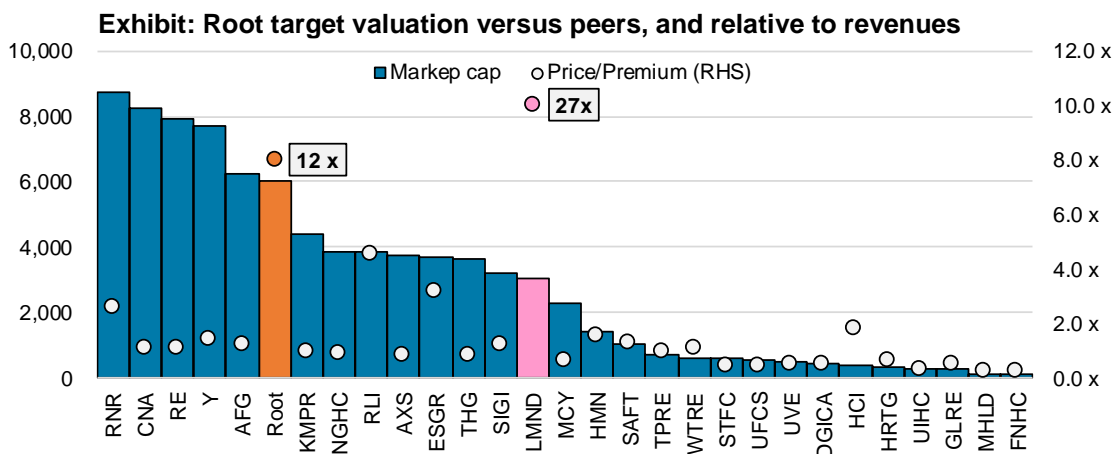
PART ONE – THE STRATEGIC VISION.

An ambitious strategy, but a day late, a dollar short, and a fundamental under-estimation of the power of incumbency.

Of the 165 pages in Root's S1, a total of 28 are devoted out to outlining the firm's vision of a disruptive strategy versus an "archaic" industry.

At its core, Root's stated strategy has three key pillars.

(1) Using "behavioral data" and telematics to better segment risk and grow by finding over-charged but low risk customers. Essentially, the "better underwriting mousetrap" play.

(2) Though the company frames its second pillar around "customer experience", in truth the key insight seems to be that the company expects a first mover advantage from its mobile-first interface with customers.

(3) Claims that its business model is "capital-light" (though it is not clear relative to what).

As a standalone piece of strategic analysis and ultimate vision, it stands up as a reasonable, "good enough" strategy. We'd argue that it is probably a decade late to be truly disruptive, and highly likely to prove a dollar short on execution due to the inherent complexity of building the model from scratch without an existing book of business. Readers interested in more details should delve into the summary at the top of the S-1 rather than have us repeat the vision verbatim.

However, there is a problem with each of the claims, which we get into below.

First, on behavioral data and telematics, the company seems to wildly overstate its competitive advantage relative to peers.

Throughout the S-1, the company makes multiple references to its competitive advantages relative to "incumbents" that don't use telematics. Here is an example.

Quote	*"Today, we believe we are the only P&C insurance carrier with a scaled proprietary telematics solution designed to price an entire book of business. We believe we have the largest proprietary data set of miles driven, driving behavior and associated claims experience in the market. This data advantage, matching driving performance to actual claims, provides proprietary insight around accident causality, which enables us to uniquely segment risk, make smarter pricing decisions and grow our business rapidly and deliberately."*

The major problem with this is that it seems more like a strategy document the founders may have put together when pitching the idea five years ago, but seems not marked to market for developments since. Most major auto carriers have significant telematics programs, including notably Progressive and Allstate. Indeed, Progressive has been pioneering telematics for <u>decades</u>.

Exhibit: sample of carrier telematics programs
Source: company websites, Inside P&C

Carrier:	Telematics Program	app option:	Headline measurements:			
			Time of Day:	Acceleration:	Braking:	Distraction:
State Farm	Drive Safe & Save	app + beacon	yes	yes	yes	yes
Geico	DriveEasy	app based	yes	yes	yes	yes
Progressive	Snapshot	app based	yes	yes	yes	yes
Allstate	Drivewise	app based	yes	unclear	yes	unclear
USAA	SafePilot	app based	yes	yes	yes	yes
Liberty	RightTrack	app based	yes	yes	yes	likely w/ app
Farmers	Signal	app based	yes	yes	yes	yes
Nationwide	SmartRide	app based	yes	yes	yes	yes
AmFam	KnowYourDrive	app based	yes	yes	yes	yes
Travelers	IntelliDrive	90 day app based	yes	yes	yes	yes
Root	Root test	few weeks app based	yes	yes	yes	yes

Note: most programs collect additional data including weather, distance, road type, cornering, etc.
Note: discounts range 20-30%, and most include a small discount just for signing up

Root's S-1 tries to square this awkwardness by claiming that prior telematics programs were not scalable and that only the mass adoption made possible by mobile phones have made a truly behavior-centered model possible. Indeed, the company references "many" competitors that rely on outdated "dongle" technologies rather than mobile devices, though it is not clear that any serious competitors do.

Indeed, this does not account for the fact that major national carriers with huge competitive advantages on scale do have major mobile-delivered telematics programs. Again, it seems to be arguing against a straw man of its worst competitors rather than its best, and arguing against a status quo circa 2015 when it was founded rather than today.

Another attempt to play up the uniqueness of its model (and side-step the above critique) is to claim that Root is the only company to apply telematics across its "entire" book, rather than just a sub-segment.

Again, we would argue this is a weakness not a strength. The genius of Progressive's Snapshot innovation has been that it is able to apply the discovery from its Snapshot program across its entire book of business. This allows it to have a competitive offering with customers who are ok with sharing their driving data, while also capturing part of the benefit for a large segment of customers who are not. Progressive arguably gets the best of both worlds and a larger addressable market, whereas Root limits itself to a niche sub-segment of potential customers.

Finally, like all start-ups the company makes vague allusions to an addressable market of extraordinary proportions (at one point referencing a $2,000bn TAM). However, the company does not make any attempt to explain why its supposed competitive advantage in measuring auto risks will translate to better underwriting in other adjacencies, other than the cost-efficiency of cross-selling (something available to every incumbent).

Second, Root's supposed competitive advantages from a mobile first strategy relies on assuming a non-response by profitable incumbents.

Similar to Lemonade, one of the central pillars of Root's strategy pitch is a reinvention of the insurance "customer experience". The company has a mobile first strategy (75% of policies sold on mobiles and 90% of claim-initiations), which it argues gives it an advantage in a world shifting more direct, and more mobile-centered.

Now, there is plenty in this critique, and this may be a key competitive advantage in the near term for the likes of Root and Lemonade with a certain type of younger consumer as the world exists today.

But it is less clear that it is an enduring and sustainable competitive advantage. It is not as if companies like Geico and Progressive have totally neglected mobile. Nor is there any secret sauce to any of these "innovations" at InsurTechs that aren't essentially replicable to the point of splitting hairs – especially at profitable incumbents with billions of dollars of head room in margins to invest to protect their turf.

The company seems to assume away these problems by outlining a vision of a "slow" and change-averse industry with legacy systems that mean they can't or won't adapt. While there is some merit in this critique, the company seems to be relying on the strawman of explaining why it will beat companies that are already losing, without answering how it will beat those that are winning and building barriers to entry like Geico or Progressive.

We would also note that our view of the future of consumer insurance will be won by companies best able to compete in an omni-channel world (See: Omni-wars). By being single channel, Root is limiting itself to a certain type of insurance customer, and may struggle to compete for customers with more complex needs (who are often the higher quality, stickier customers).

In short, having a good mobile solution is good, and indeed perhaps there are efficiencies to scale from a mobile-first strategy. But we're not sure a single channel approach is quite the virtue the company makes it out to be.

We would also add that our view has long been that direct to consumer offerings in personal insurance will struggle against a deep moat built up by the "direct duopoly" of Geico and Progressive in the form of $3.6bn (cumulative) in annual advertising spend.

Exhibit: competitor ad-spend
Source: SNL, Inside P&C
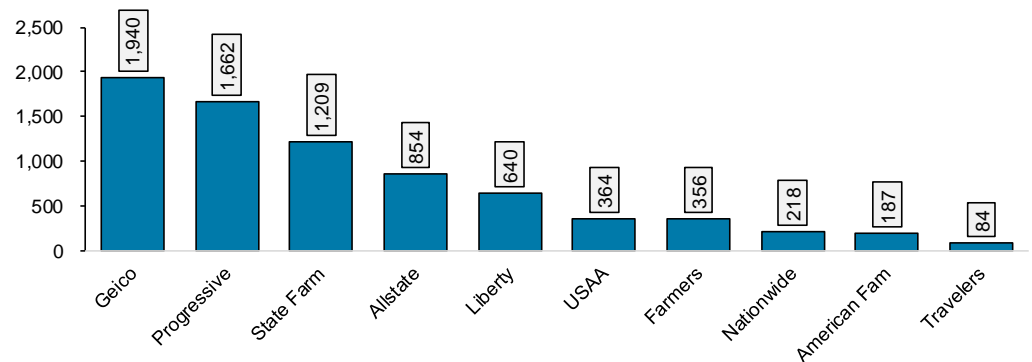
While there is plenty of room for niche offerings and affinity products micro-targeting certain customer sub-segments (like Root's Gas-buddy partnership), success on the national scale – of the type that could lead to a mass adoption event - is an uphill battle so long as customers find shopping for insurance a chore and tend to search for a quote or two only at firms that are "top of mind".

Other drivers of mass adoption essentially reduce to offering a lower cost product, either due to (a) a better underwriting mouse trap as outlined above, or (b) being a low cost producer on an efficient expense base. As we argue below, both do not appear to be the case at Root currently.
Finally we would note that Root currently has a well below average complaint index score with the NAIC, with a 5.36 rating – essentially implying it has ~5x the share of customer complaints relative to its market share.

Perhaps there are good reasons for this. But it is at least a red flag worthy of more scrutiny that its "maniacal focus" on customer experience struggles outside of the mobile app experience and into the real world of claims where scale is a real competitive advantage.

Exhibit: Statutory LAE ratio

Source: SNL

Firm:	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Q1:20	Q2:20
Progressive	10.98	10.51	10.43	10.37	10.31	10.59	10.70	10.91	10.09	9.84	10.29	8.68
Mercury	14.92	12.53	13.32	13.11	12.80	12.28	11.47	12.54	12.59	13.10	11.58	14.01
Allstate	11.99	13.31	12.84	12.22	10.92	10.73	11.42	11.39	10.73	11.09	9.30	11.52
Kemper	11.33	13.18	12.44	12.12	12.24	11.35	12.11	11.78	11.18	11.30	12.05	11.25
Horace Mann	10.56	10.15	10.31	9.28	9.28	9.55	9.88	10.26	10.01	9.39	8.91	9.75
State Farm	12.85	12.72	14.53	14.46	15.35	15.20	14.27	12.20	11.16	10.86	10.54	11.66
Geico	13.73	13.00	11.53	10.77	9.65	10.53	10.62	10.59	9.89	10.20	9.53	9.52
USAA	10.25	10.03	9.27	8.62	8.14	7.94	8.84	9.37	9.58	9.73	9.39	10.13
Liberty	14.58	15.90	15.18	14.36	13.73	12.79	13.29	13.60	12.23	12.62	11.17	11.14
Farmers	11.54	12.28	12.23	9.93	10.02	10.06	10.54	10.18	9.93	10.45	10.10	10.11
Nationwide	10.92	11.93	12.29	11.15	10.48	9.88	10.00	10.59	10.96	10.65	10.16	10.08
AmFam	11.00	11.80	10.48	10.02	9.57	9.77	10.73	11.69	11.16	11.16	10.20	12.27
Industry	12.54	12.58	12.39	11.94	11.82	11.83	11.61	11.76	10.70	10.98	10.18	10.81
Root	NM	NM	NM	NM	NM	NM	NM	18.39	18.13	14.76	18.08	22.55

Third, Root's pitch as a "capital light" business model seems vacuous to the point of absurdity – more aimed at attracting a certain type of investor than describing reality.

Root's third pillar of its central pitch to investors is that it has a "full stack insurance company" and a "capital light business model". If we are honest, we are not really sure what it is trying to argue with either.

On the first point of being a full stack insurance company, this is likely to differentiate itself from InsurTech peers that have built in more dependency risk through an MGA style structure. This is fair enough, but sort of reduces to saying "we are an insurance company", of which there are plenty of public peers out there – none of whom either (a) boast about it or (b) get a premium valuation for it.

In terms of capital efficiency, the company is again vague. It mentions its ability to scale up or down reinsurance spend depending on market conditions, but again there is nothing unique about this relative to any of the "incumbent" competition it so derides.

It does mention its captive reinsurer in the Cayman Islands to which it cedes 15% of premiums, and leverages it at more than double its target onshore (at 8:1). But this is as much "additional risk through leverage" as it is "capital efficient".
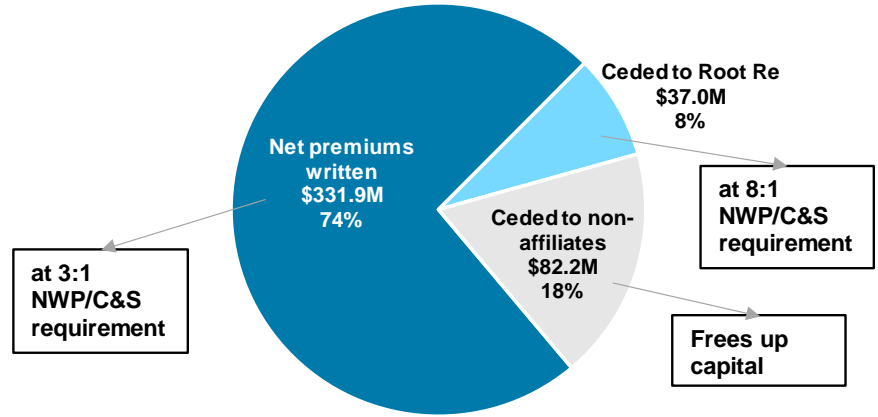
In short, the only conclusion from this is that the company is targeting a particular type of technology investor who has a predilection for "capital light" business models. This both fits with (a) the pitch Lemonade gave to investors and (b) Root's constant insertion of buzzwords like "machine learning" at every possible opportunity (12 mentions in S-1). But other than being how it pitches itself, it is not entirely clear how it is true in any meaningful way.

Exhibit: Root direct premiums written breakdown
Source: S-1 filing Note: major third party reinsurers in 2019 included Topsail Re, Berkshire Hathaway, and PartnerRe.

Out of $451M 2019 direct premiums written

Net premiums
written
$331.9M
74%

Ceded to Root Re
$37.0M
8%

Ceded to non-
affiliates
$82.2M
18%

at 3:1
NWP/C&S
requirement

at 8:1
NWP/C&S
requirement

Frees up
capital

PART TWO – OPERATING REALITY
Looking past the grand strategy statement on the future, the present as defined by actual business results to date looks less bright

Whatever you think of the strategy as outlined – whether visionary and disruptive, or a decade late and a dollar short – the major problems with Root lie not with in the 28 pages of vision, but in the reality of the business as it is today as shown by the numbers.

We are not going to do a full-break down of the company's financials (there's plenty of folks out there that do that for a living).

But we will simply highlight the three key data points that we think highlight challenges that deserve more scrutiny from potential investors as to how well the company is executing against the vision it has outlined: On (a) its underwriting performance as shown by the loss ratio, (b) its efficiency of acquiring customers through its mobile-first strategy, and (c) its retention of customers (speaking to both its underwriting model and customer experience).

First, Root's loss ratio performance is not suggestive in any way of a company with a superior underwriting mouse trap. In fact, quit the opposite.

Throughout the lengthy strategy segment of the S-1, Root makes claim after claim after claim about the efficacy of its underwriting models. However, most of these are either conceptual (how it should work) or else strange references to its efficacy versus the baseline of the third party model it started with (supplied apparently by Milliman – so maligned through unflattering comparison in this document that we hope they were well paid for their work).
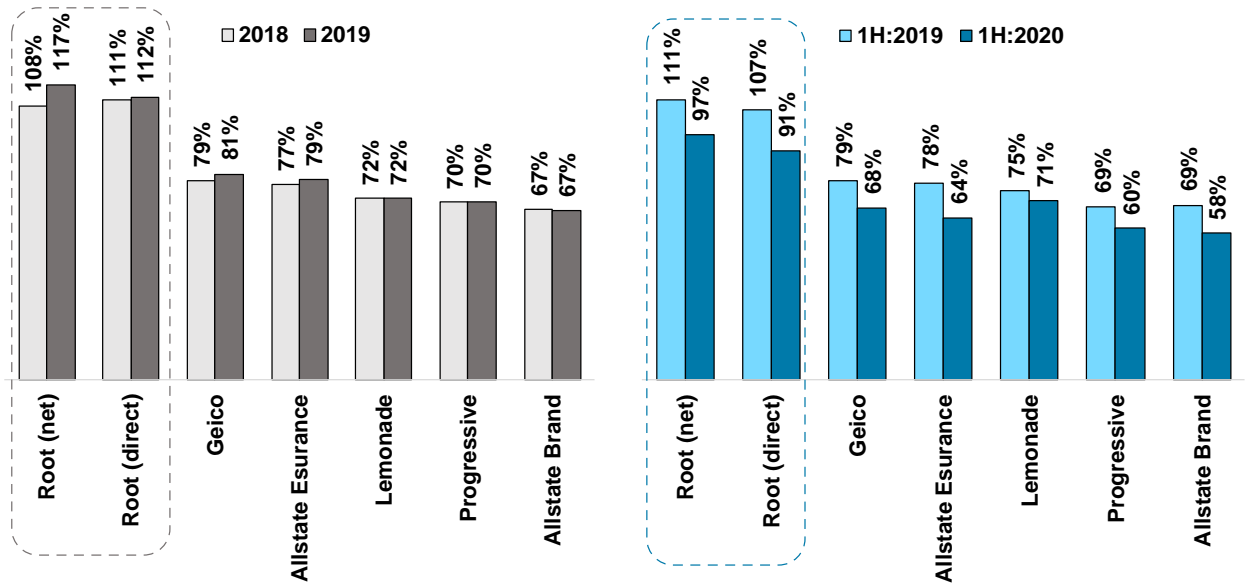
Yet what the company does not reference as evidence of this efficacious underwriting mouse trap is <u>its actual underwriting performance</u>. And no wonder when one gets to the numbers. In 2018, the firm put up a 108% loss ratio. In 2019, through all the powerful iterations of improvement the company outlines, the loss ratio worsened to 117%.

Even adjusting for reserve movements, the 2017 130% loss ratio only improved marginally to a still horrific 109% in 2018, and 103% in 2019, according to statutory filings (= all on a fully developed basis).

We'd note, for what it's worth, that the apparent 2019 accident year improvement seems to at least screen as worthy of further scrutiny in terms of reserve strength. For example, the YoY reported-to-ultimate ratio in auto liability (per Schedule P) deteriorated from 63% in 2018 to 75% in 2019, while the paid-to-reported loss ratio deteriorated from 34% to 45%. Its short operating history make any real interpretation irresponsible, but it should at least be monitored.

Now, the all-in GAAP loss ratio did improve ~15pts in H1 2020. However, this is unlikely due to fundamental improvement, as this is comparable to the 5-15pts decline seen at auto peers due to Covid-linked frequency declines.

Exhibit: Loss ratio versus peers
Source: Company reports

	2018	2019	1H:2019	1H:2020
Root (net)	108%	117%	111%	97%
Root (direct)	111%	112%	107%	91%
Geico	79%	81%	79%	68%
Allstate Esurance	77%	79%	78%	64%
Lemonade	72%	72%	75%	71%
Progressive	70%	70%	69%	60%
Allstate Brand	67%	67%	69%	58%

We'd argue that this is a crucial – perhaps the most crucial – data point in the entire S1. Not only does it undermine the central premise of the company's pitch to investors (= a better underwriting mouse trap) it also makes the wisdom of continued growth at a 200% combined ratio seem questionable. This isn't just a debate about whether the company can scale into its expense base, but whether it has any sort of edge at all.

Most successful tech companies have a wonderful product or solution that is able to do something very well. The issue is then finding ways to commercialize it and making sure unit economics of product/solutions justify the high S&M funneling in growth. This unit economic debate is essentially the argument we made against Lemonade.

For Root, its wonderful product/solution is supposed to be its ability to better price policies with its telematics system. **But it is not clear it exists based on performance to date.** Nor is this a start-up with limited operating history, and no time to iterate based on experience. Root has been operating since 2015.

One somewhat oblique defense made by the company is that the loss ratio will improve when a larger portion of its book is mature and renewed business rather than new business.

Root S-1	*"Over time we expect that our book of business will naturally mature as renewal premiums outweigh new premiums, driving profitability. Renewal premiums are characterized by lower loss ratios, and our accident period renewal loss ratio was significantly lower than our new business accident year loss ratio for the trailing 12-month period ended June 30, 2020. As our renewal premium base expands from 47% as of June 30, 2020 to align over time."*

But there are two problems with this. The first, as we get into below, the company seems to have a severe retention problem or else a business that looks more like non-standard auto than preferred auto. Without a change in these dynamics this will mean the book is <u>always</u> underweight "mature" business and overweight new business.

The second is that it somewhat undermines Root's claims to its superior mousetrap. The firm's entire proposition is that it can better understand risk <u>at the time of underwriting</u> because it measures behavior. If this is true, there should be a notably

smaller difference between first year and second year loss ratios than there are at peers (where a 10pt delta is common). It's hard – perhaps even logically inconsistent - for the company to have it both ways.

One last point that we cannot help ourselves but include. The below chart included in the S1 not once but twice is beyond contempt for having removed the figures from the chart to make the loss ratio progress look good without attaching the numbers. For the record, the numbers per Schedule P are FY18: 109%, FY19 103%, and LTM: unknown). An improvement from "terrible" to "less terrible but still terrible" is not worthy of highlighting, as any chart with the numbers attached would have shown.

Assuming it is deliberate – and that seems a reasonable assumption given how carefully these documents are vetted and lawyered - removing the numbers is surely a "tell" on what management thinks of its status quo.

Exhibit: Root KPIs
Source: Root S-1

Second, the company's supposed advantage through mobile-first distribution does not seem to be translating to efficient customer acquisition.

One of the primary arguments we would level at the new generation of InsurTechs is their pitch to investors seem to rely more upon the world as they would like it to be rather than the world as it is.

Both Root and Lemonade outline a competitive profile of "incumbents" as if leading tech-driven and direct to consumer "winners" like Progressive and Geico don't exist, and they only have to compete against the Tractor Mutuals of North Western Pennsylvania to win at scale.

Direct to consumer is not an innovation. It has existed in the insurance industry for close to a century. Indeed, we would argue that the first mover advantage of the early direct to consumer businesses (e.g. Geico and Progressive) have made a formidable barrier to entry to new entrants in the form of ~ $2bn advertising budgets. As noted above, consumer mindshare on a national level is expensive to acquire.

To that end, we think one of the most significant data points in Root's S-1 was its disclosure that its average customer acquisition cost is $332. Combined with the premium per policy numbers, and retention statistics it disclosed – which we get into below – assuming an average policy duration of 1-2 years (= generous) implies an acquisition cost of 9-18% even on a life time basis. In short, it is hard to imagine the economics of its direct distribution will be even as cost comparable as paying commissions to agents or online intermediaries without (a) extending its average policy lifetimes considerably, (b) increasing multi-product penetrations, or (c) reducing the cost to acquire each customer.

Third, the company's retention metrics look appalling, and indeed make the terrible numbers seen at Lemonade appear world class.

Recall, one of our primary critiques of Lemonade's business model was its claim that its renter's first approach would be the beach-head that would lead to a multi-year relationship as urban millennials graduated to more complicated product needs like home, auto, and umbrella. This seemed particularly tough to swallow given the company's disclosed retention metrics came in at 75% (62% gross with rescissions and non-renewals due to regulatory risk assessment) for year 1 and 76% (71% gross) for year two, implying only 44% of customers were left by year 3.

At Root, the problem appears even worse. The company disclosed first year retention of 84%, which shrinks to 51% when including company rescissions. For year two, the figure is 75%, or 65% when including rescissions. This implies that only 33% of policyholders are left by year 3, and indeed points to an average policy duration of around 1-2 years (see chart below).

And note, we are generously interpreting "term" as "year". If the company means per 6-month auto policy term, the problem is twice as big as we are stating here – with only 33% of customers left <u>by the end of year 1</u>, and an average policy life time of less than a year.

Exhibit: Illustrative journey of 100 policies through two policy terms at disclosed retentions
Source: S-1 filing
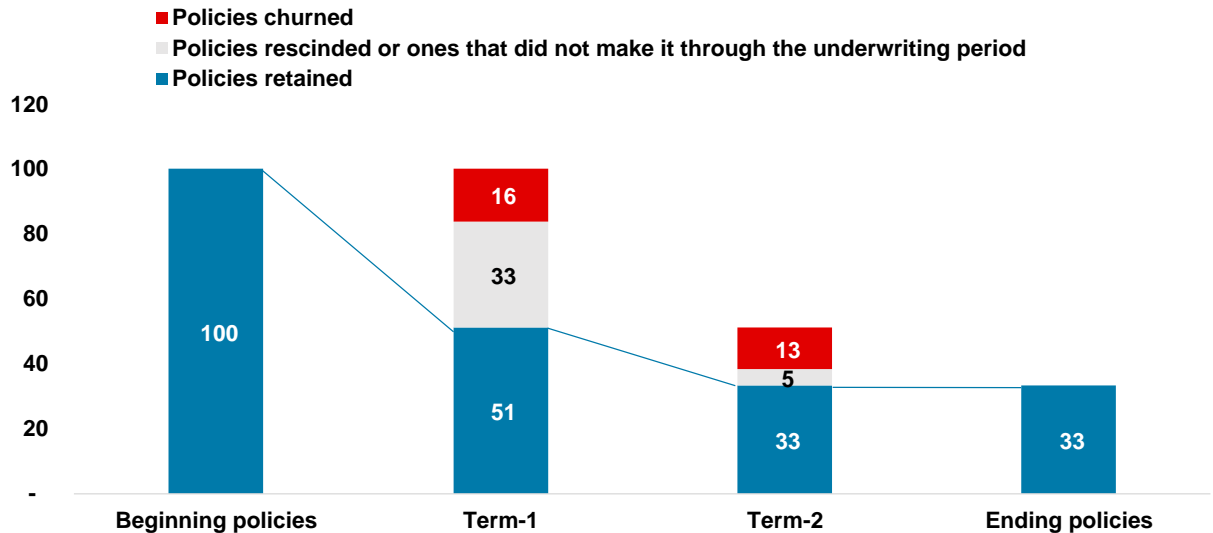
This raises awkward questions about the company's plans to develop long-term relationships with customers and expand into new lines. As noted above, it also raises questions about the company's claims that its loss ratio will improve as a higher percentage of the book becomes "mature".

We should also note these are terrible metrics when compared against high quality peers with mature portfolios in the 80s to 90s. (Though peers disclose all-in retention rather than term 1 and term 2, the short duration of Root's average policy holder lifetime make it possible to approximate).

For us, the picture simplifies to this. The company appears to have the characteristics of a non-standard auto company with a high turnover of customers.

This may not be particularly surprising given that it is both under pressure to grow rapidly, and essentially competing every year for customers among a pool of buyers who are shopping for insurance, not the entire universe of insurance customers.

This simple fact that high quality customers don't shop is one of the reasons incumbency is criminally undervalued relative to "start-ups" that are prone to adverse selection cycles without a true secret sauce on underwriting. Additionally, its direct to consumer, mobile first business model is likely to skew away from the demographics typically considered more attractive and stickier customers (e.g. older drivers and homeowners).

Furthermore, it is even possible its telematics approach may ironically disproportionately attract some riskier customers who are priced out by traditional metrics – for instance those with a recent accident history. Given that Root's measurement period is only 2-4 weeks, there is an available arbitrage for customers unable to find cheap traditional insurance to switch, drive well for the measurement period, then revert to old habits.

Of course, this is all speculation. But what is not speculative is the cold hard facts of the firm's financial performance. It is spending a lot of money (>40% of NEP), to acquire customers who do not stay with the company for long, and who have disproportionately high loss costs relative to higher quality incumbents. All this looks solidly like a non-standard auto company, growing too fast without properly understanding the risks it is taking – or put another way, an adverse selection cycle. Ironically, this is the polar opposite of what Root's business model claims to achieve.

Finally, we'd note there is nothing wrong with non-standard auto, and plenty of people do it very well. The fundamental issue is that you have to play the game you're in, not the one you wish you were in. Root's pressure to grow for investors, and need to establish a growth profile that outlines a path to being a dominant consumer insurance franchise to justify its valuation, is likely to make it hard for the company to accept the game it is in.

PART THREE – A NEED FOR CASH

A rapid cash burn, and signs of distress in its debt financing

As we highlighted back in March, the company is burning cash at alarming rates. The company, with around $550mn in earned premiums (annualized), has 901 employees as of mid-year. The NEP per employee of $610,000 is the second lowest after Lemonade among 15 P&C firms with NEP between $100mn and $1bn.

Exhibit: Number of employees versus NEP for P&C firms with NEP between $100mn and $1bn (ranked by NEP)
Source: SNL, FactSet
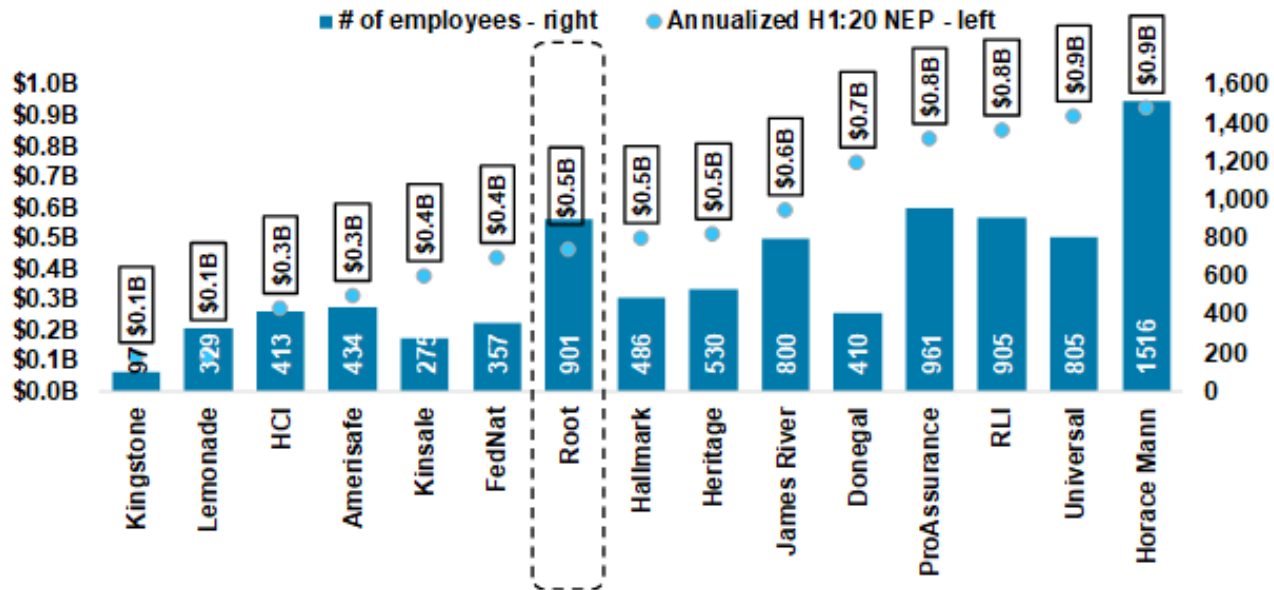
Even excluding high acquisition costs (~40% of NEP), its operating expense ratio is running at 43.3% in H1, and does not seem to be scaling rapidly (NEP up 585% in 2019 versus +431% for operating expenses, with public company expenses likely to be a further drag in the near term).

Exhibit: Root combined ratio breakdown
Source: S-1 filing
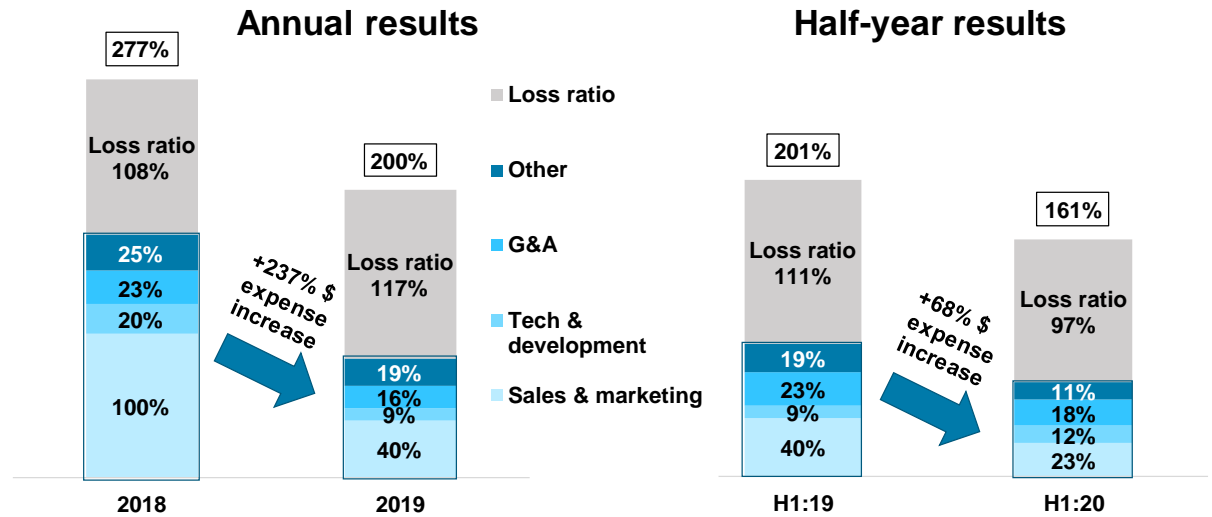
Annual results

	2018	2019
	277%	200%
Loss ratio	108%	117%
Other	25%	19%
G&A	23%	16%
Tech & development	20%	9%
Sales & marketing	100%	40%

+237% $ expense increase

Half-year results

	H1:19	H1:20
	201%	161%
Loss ratio	111%	97%
Other	19%	11%
G&A	23%	18%
Tech & development	9%	12%
Sales & marketing	40%	23%

+68% $ expense increase

Indeed, it has an accumulated loss of $500mn since 2017, and lost $282mn in 2019 alone. But for an assist from Covid-linked lower frequency that burn rate would likely be accelerating. As of mid-year, Root had just $241mn in cash on its balance sheet, though it is worth noting that given other items on its balance sheet, including maturing debt obligations, this is likely fairly well restricted to maintain capital levels in statutory insurance companies.

Indeed, for all its talk of a data-driven flywheel that provides a competitive advantage, the real flywheel likely to dominate Root's fate appears to be a capital-burn/capital raise cycle. Its unprofitable growth requires a constant inflow of new capital to (a) replace lost money, (b) buy new growth to maintain and improve the valuation, and (c) as capital to support that growth. And the bigger it gets, the harder this cycle will prove, and embed an inherent vulnerability should it lose access to capital markets.

Indeed, it appears as if debt markets have got the joke first. In a world of near zero interest rates, Root's latest financing of $100mn Term Loan B initiated in November 2019 carries a 7% spread to Libor, and grants the investor warrants for 2.8 million shares with an implied 20-30% return, according to the S-1. Furthermore, the company is currently paying the interest in PIK on a quarterly basis. This is distressed level financing.

The company also has $100mn of debt due on October 16 (e.g Friday next week) under its Term Loan A. Its balance sheet states cash and investments at mid-year of just $463mn, with insurance liabilities of $346mn. In total, the company has fair value debt liabilities of ~$220mn (including warrants), an extraordinary amount for a company with $290mn in 2019 revenue and hundreds of millions of losses behind it.

Another indicator of financial distress in its disclosures is that the Ohio Department of Insurance has determined that Root's meets the requirements to be monitored under the NAIC's Hazardous Financial Conditions Standards, requiring the company to file monthly financial reports.

For Root, the game plan appears simple. Avoid the market that prices you based on your ability to pay back, and access the market that values you based on your ability to tell a big story.

Exhibit: Root capital structure summary
Source: S-1 filing

Capital stock	Shares or diluted equivalent	Description
Common stock	41,425,056	Automatically reclassified into Class B common stock upon IPO
Preferred Series A redeemable convertible	40,000,000	Automatically converted into Class B common stock upon IPO
Preferred Series B redeemable convertible	41,700,000	Automatically converted into Class B common stock upon IPO
Preferred Series C redeemable convertible	35,366,030	Automatically converted into Class B common stock upon IPO
Preferred Series D redeemable convertible	19,339,702	Automatically converted into Class B common stock upon IPO
Preferred Series E redeemable convertible	25,400,000	Automatically converted into Class B common stock upon IPO
Warrant 1	2,801,300	Automatically exercised to buy Class B stock at an exercise price of $0.0001 upon IPO
Warrant 2	97,960	Exercisable to buy Series B redeemable convertible preferred stock at an exercise price of $0.81141
Warrant 3	500,000	Exercisable to buy Series A-3 redeemable convertible preferred stock at an exercise price of $0.28714
Class B stock issuable upon exercise of options outstanding	12,100,000	Exercisable to buy Class B common stock at a weighted-average exercise price of $1.68
Restricted stock units outstanding	84,051	Time-based vesting conditions not satisfied
Long-term debt	-	Carrying amount of $168M with fair value of $192M

BONUS APPENDIX – THE UNICORN TROT OF SHAME

Back by popular demand following our unicorn walk of shame on our note covering Lemonade's crimes against reasonable self-image

In this section we highlight other things that caught our eye from the S-1 that we couldn't fit into our framework above.

The first is the company's corporate governance framework, which we would characterize as very poor. We summarize their framework relative to best practice in the table below. We would note the staggered board and dual share structure as particularly anti-shareholder friendly, with the latter a potential blocker for the firm's inclusions in some stock indexes.

It should also be noted that these types of structures are typically only used by "hot ticket" items with a demand and supply imbalance for available securities, meaning issuers can dictate terms to potential investors.

Exhibit: Root corporate governance highlights
Source: S-1 filing

Corporate governance features	Root practice	Vs best practice
Staggered board	Three classes with staggered three-year terms	👎
Dual shareholder structure	Incumbent investors have 10x more voting rights per share	👎
Takeover defense	Charter and bylaws complicate hostile acquisitions, activism, and removal of executives or directors	👎
Director removal	Only for cause and by supermajority vote (66.67%)	👎
Special shareholder meeting	Can only be called by the chairman of the board, CEO or president, or majority of the board	👎
Advanced notice for director nominations	Shareholders must notify company before submitting nomination for the board	👌
Ability to act by written consent	Stockholders have no right to act by written consent without a meeting	👎
Amendment of governance provision	By supermajority vote	👎
Lock-up period	180 days	👌

While we're on the subject of good corporate governance, we'd note a throw-away line in the S-1 includes a reference to ~$4mn in loans made to CEO Alexander Timm and CTO Daniel Manges that were forgiven by the board, both principal and interest, as well as an additional bonus to cover the tax consequences. It does not explain why these "loans" were forgiven.

The second is the firm's adjusted profit numbers, which seem pretty aggressive to the point of making them meaningless.

The company defines "gross profit" as total revenue (e.g. including NII), minus net loss and LAE expenses and "other insurance expenses". This strips out significant buckets of expenses, some of which are surely characterized as variable and not purely fixed – including acquisition costs, tech and development, and G&A. If that wasn't enough, it throws in another "adjusted gross profit" with some more adjustments that strip out more costs. Of course, we'd need to see more performance over time to fully understand the efficacy of these metrics, but we'd be suspicious in the extreme in the short term.

The third, is the company's comments on reinsurance, which seem to say the quiet part out loud.

Part of the model of fast growing insurance companies is to use reinsurance a lot when they're losing money, and take it back in house when profitable and ceding away too much margin. But this is meant to be done to a willing counterparty who believes "this time will be different", like Lucy and the football in Peanuts. You aren't meant to quite so explicitly give the game away like this:

Root S-1	*"We expect to maintain this target level of third-party quota share reinsurance while rapidly growing our business in order to operate a capital light business model and mitigate market volatility. As our business scales, we expect to have the flexibility to reduce our quota share levels to maximize the return to shareholders."*

As noted above, in 2019 major reinsurance counterparties included Berkshire Hathaway, TopSail Re, and PartnerRe, according to stat filings.

Finally, we'd note the company sneaks in a reference to two market conduct examinations in states it operates in.

In general we'd say that Root's risk disclosures were pretty good, if a little lacking in supporting facts and data. However, this particular item buried in its S1 risk disclosures seemed somewhat buried. We'd argue that risks around its model of "behavior driven" underwriting may well be vulnerable to changing norms, and potentially legislation, around data security – especially if its "machine learning" results in "accidental" discrimination.

Root S-1	*"Insurance regulators of other states in which Root Insurance Company is licensed may also conduct examinations of the company. Root Insurance Company is presently undergoing two insurance department market conduct examinations, one by the Delaware Department of Insurance and the other by the Virginia Department of Insurance. The results of these examinations can give rise to fines and monetary penalties as well as regulatory orders requiring remedial, injunctive or other corrective action."*

This research report was written by Insider Publishing's Research team which includes Gavin Davis, Gianluca Casapietra, and Dan Lukpanov.

The content of this report includes opinions based on publicly disclosed financials and management commentary.