Metromile and the Field of Dreams strategy (Part 2/2)

- *Customer acquisition is likely to be the key determinant of success for "InsurTechs"– not their data science expertise or product innovations.*
- *Metromile's recent product filings show an increasing of acquisition cost expense out of line with its disclosure to investors, with some red flags of potential loosening of underwriting standards.*
- *The failure of aspiring disruptors to find a successful growth strategy to date should be seen as a bull signal for winning incumbents*

For all the focus on competitive advantages in data science and technology, our view is that customer acquisition and a successful distribution strategy will be the single most important determinant of success for aspiring "InsurTech" companies.

This is even more so for Metromile, now a decade into its existence without any evidence to date of a compelling growth narrative, and still only 10% of the way to its self-identified break-even level of premium volume to scale its expense base.

In our analysis of Root, the firm's flawed growth model that has led to rapid growth but with a heavy and accidental non-standard skew was the single "rosebud" that explains its poor retention, weak underwriting performance, and nascent growth challenges as it begins to grasp the nettle and re-underwrite (with rate increases, tiered acquisition expenses, and the addition of explicit non-standard underwriting factors).

It is somewhat ironic that Metromile's rush to the public markets via a SPAC merger seems to on the one hand be motivated by the speculative fever enabled Root to float with a double-digit times revenue multiple.

Yet on the other, Metromile seems conscious of the perception of its competitor's growth model among informed investors, and sought to play up its contrast at almost every available opportunity.

For example, on its investor call following the deal, CEO Dan Preston tried to emphasize the firm's apparent sustainable growth philosophy in terms of a focus on unit economics.

Dan Preston CEO	*"As we've grown, we've built the business in a purposeful way and have prioritized unit economics over "growth at all costs", giving us a meaningful business advantage for many years to come."*

As we pointed out in Part One of this series, it should be said there are data points to support this positive contrast to Root beyond management commentary – including its disclosed retention, customer credit scores, and better track record on its loss ratio.

However, we should note from the outset that – if there is some evidence that Metromile's conservatism and focus on unit economics has been a contributor to slower growth – there is also plenty of evidence in our view that its constrained growth to date is as much a function of a flawed growth model and a smaller than expected TAM.

Below, we outline our concerns with Metromile's growth prospects.

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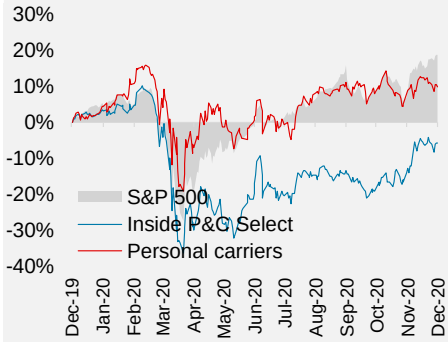
Composite	YTD px chg.	P/B
Large comm.	(10.3)%	0.9x
Regional	(20.5)%	1.3x
Specialty	(9.8)%	1.5x
Personal	7.0%	1.8x
Bermuda	(18.9)%	1.1x
Florida	(41.1)%	0.8x
Brokers	6.1%	-
IPC Select	(8.3)%	1.2x
S&P 500 Fin.	(7.2)%	-
S&P 500	13.6%	-

1YR Price Peformance



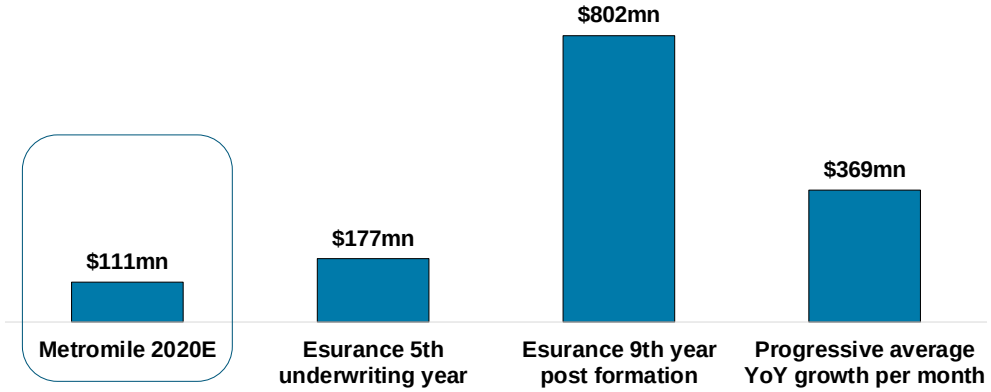
(1) METROMILE IS NOT A YOUNG COMPANY – AND ITS GROWTH TRACK RECORD TO DATE IS POOR

It is worth noting emphatically that Metromile has a poor track record of growth, and has a slowing growth problem that predates the pandemic.

In some ways, it is strange that a company founded in 2011, with a five-year underwriting history, could be considered as a potential disruptor when it has only reached ~$100mn DPW in that time. By way of comparison, Esurance was founded in 1999, had reached close to $200mn in its fifth underwriting year, and was at ~$800mn by its ninth year post formation (comparable to Metromile today – note these numbers are not adjusted for inflation). Another data-point – Progressive grows NPW by ~$369mn every month.

Exhibit: Metromile 2020 DWP run rate estimate vs Esurance at past periods and Progressive average month growth

Source: SNL, Company reports



We would also point out the company's disclosures to investors try to explain away a recent slowdown in growth as due to a collapse in miles driven and therefore premium volumes (due to pay per mile) linked to the pandemic.

However, against that, it is clear that Metromile's growth challenges emerged prior to Covid-19 and related shutdowns. Indeed, per stat data, all its states excluding Washington and Arizona reached peak DWP by Q3:19 or Q3:18.

Exhibit: Heatmap of DWP by states (in $mn) with peak periods highlighted

Note: Each state has its own heat scale

Source: SNL

State	Q3:16	Q4:16	Q1:17	Q2:17	Q3:17	Q4:17	Q1:18	Q2:18	Q3:18	Q4:18	Q1:19	Q2:19	Q3:19	Q4:19	Q1:20	Q2:20	Q3:20
California	-	1.65	5.00	6.19	8.09	8.70	11.16	11.75	14.24	13.81	16.01	14.99	**16.69**	12.22	15.61	12.41	16.51
Washington	-	0.27	1.01	1.16	1.46	1.45	1.95	1.98	2.45	2.31	2.66	2.68	3.03	2.60	2.99	2.55	**3.25**
New Jersey	0.10	0.89	1.43	1.69	1.78	1.84	2.13	2.36	**2.72**	2.60	2.72	2.63	2.63	2.21	2.35	1.98	2.64
Oregon	0.03	0.49	1.09	1.06	1.34	1.21	1.59	1.62	2.03	1.72	2.11	2.01	**2.26**	1.73	2.03	1.55	1.94
Arizona	-	-	0.00	-	-	-	0.00	0.08	0.30	0.40	0.61	0.84	1.13	1.12	1.19	1.12	**1.28**
Illinois	0.01	0.38	0.75	0.89	0.98	1.00	1.03	1.13	1.24	1.26	1.20	1.35	**1.45**	1.18	1.12	1.06	1.15
Pennsylvania	0.05	0.52	0.81	0.84	0.87	0.85	0.88	0.93	**0.99**	0.89	0.88	0.88	0.88	0.71	0.77	0.66	0.85
Virginia	0.00	0.15	0.29	0.33	0.36	0.33	0.40	0.38	0.47	0.43	0.48	0.47	**0.51**	0.42	0.48	0.42	0.47

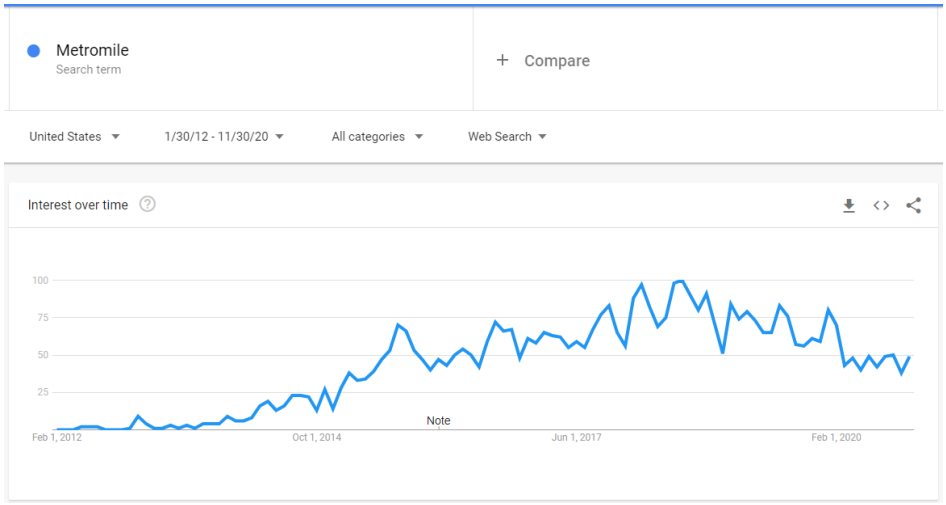
This seems to bring into question the company's S-4 commentary about its growth model to first experiment in new geographies but then "quickly scale".

Metromile **Merger prospectus**	*"We have an exciting and ambitious growth plan that we believe will help us quickly scale nationally. Our disciplined marketing strategy allows us to understand unit economics in each state before investing too far ahead of returns. Prior to initiating rapid growth in a state, we develop our rating and underwriting models, and introduce rates into the market with low marketing spend for the first few quarters as we test and measure key performance indicators. This introductory period allows us to refine our model and underwrite policies with an aim of achieving profitable growth. Once we obtain sufficient data and proof points, we accelerate marketing spend and quickly scale."*

We'd also note that the firm's decline in premium growth coincides with a decline in interest in Google searches for the company.

Exhibit: Google Trends analysis for "Metromile"

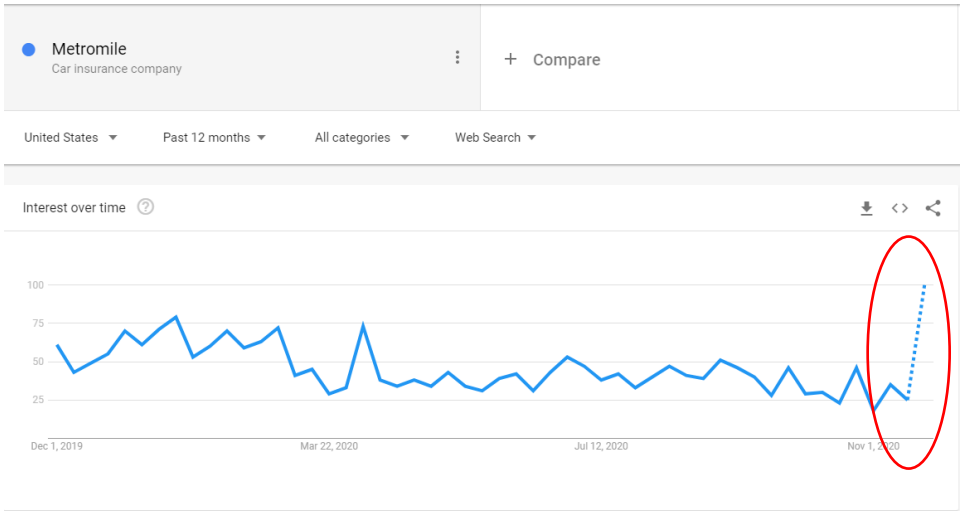
Source: Google



Out of pure amusement, we highlight that the peak interest in Metromile as a Google search term in 2020 appears to be within the last week. It seems that potential investors are more interested in the company than potential customers.

Exhibit: Google Trends analysis for "Metromile" in 2020

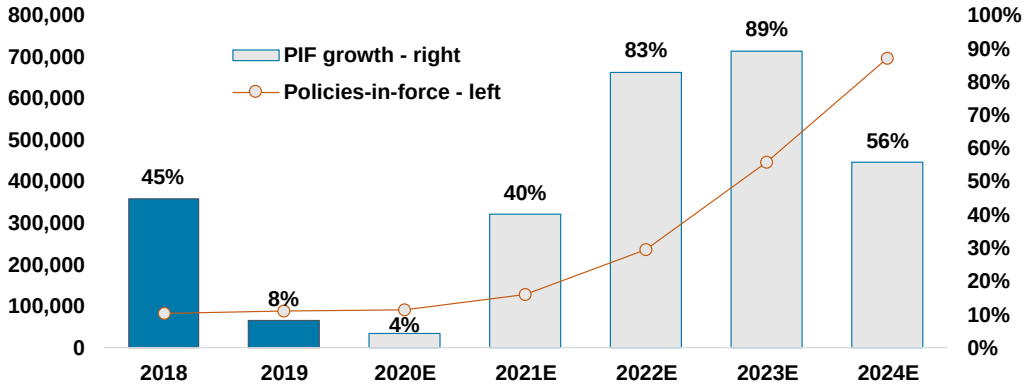
Source: Google



On top of these trends, disclosed unit growth – which is unaffected by premium per policy – shows the company only grew units 8% in 2019 and 4% in 2020 – a level that could tank the stock of some more mature and fully scaled companies.

Exhibit: Policies-in-force in PIF growth

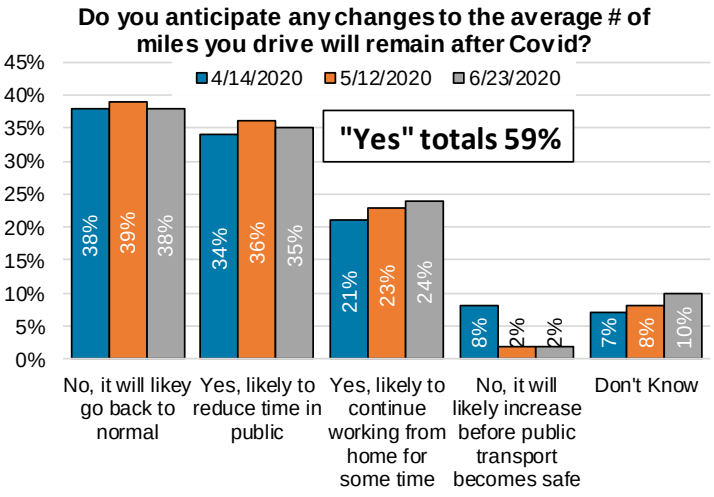
Source: Company reports

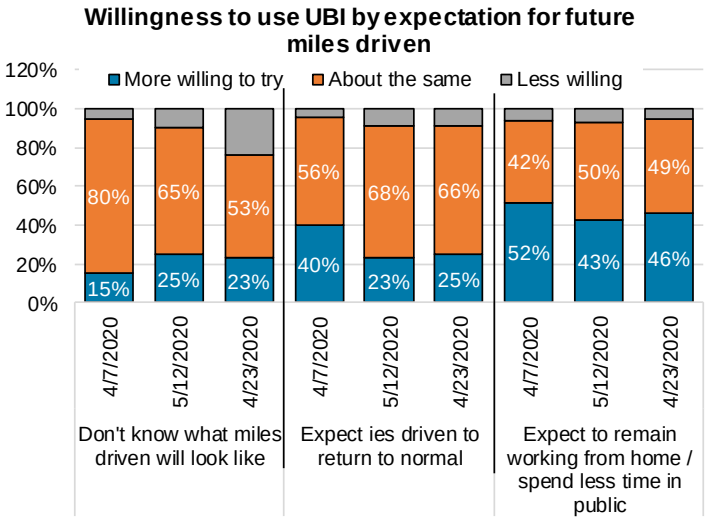


And one point is worth making emphatically. If anything, the collapse in premium per policy should have been the ultimate proof point of the company's value proposition to its customers, and led to viral growth from referrals given the challenging economic environment and uptick in interest in telematics. If not now, then when?

Exhibit: JD Power survey response

Source: JD Power, Inside P&C





We note that one way that bullish equity analysts have justified their support of Root in spite of several thousand years of epistemology is to simply say the company is "yet to prove" it has a better mouse trap on underwriting or customer acquisition.

Against that, it is our contention that at some point, the sample size becomes big enough that an absence of evidence becomes reason to reject the alternative hypothesis. To put it more colloquially, our Director of Research is 35, and is "yet to prove" he is a world class athlete in any discipline. There comes a time when absence of evidence is a sufficient condition to let it go (to paraphrase St Augustine, "but not yet").

Our point here is to say that Metromile is not a young company, and has "yet to prove" it has a compelling growth model worth paying attention to.

If it is unable to generate an organic "viral" moment in the midst of once in a hundred-year "perfect storm" conditions to prove its value proposition, it is unlikely to do so any time soon beyond a typical growth curve defined and constrained by its marketing budget.

(2) WHAT'S GONE WRONG WITH GROWTH? WE SEE THREE KEY PROBLEMS…

Our analysis of Metromile's growth problems to date is based on a detailed product review in all eight states as an overlay to an analysis of the company's public disclosures. We see three key issues.

First, there are signs that Metromile's chosen niche may have a narrower TAM than it anticipated.

In some ways our prior bias would be to assume Metromile's model of pay-per-mile combined with the use of a dongle would generate more attractive unit economics than an app-based and behavior-driven telematics offering like Root.

Our assumption would be that people are better at assessing their driving *usage* than they are their *behaviors* (=everyone thinks they are better than average). This should lead to better conversion, fewer early-stage drop-offs and recissions, fewer negative online product reviews – all leading to more efficient CAC.

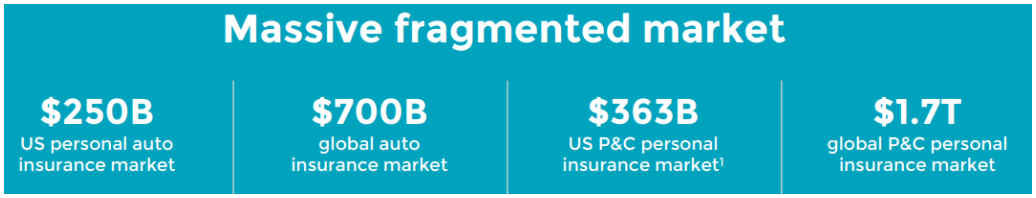
Additionally, the delayed gratification at the point of purchase due to having to wait for a physically mailed dongle also likely self-selects for a certain type of less non-standard customer.

These factors likely explain some of the better metrics Metromile reports for factors that control its unit economics versus Root. However, the trade-off for this seems to be a much smaller TAM, and much slower growth. This is a problem for a company that has made a huge upfront investment in overheads that by its own estimates requires $1bn in premium to scale, even if we assume positive unit economics.

In a time honored tradition, Metromile's pitch to investors is filled with references to enormous and fragmented addressable markets. Yet we think its growth to date gives little evidence it is well positioned to fully target the opportunity set it identifies beyond certain narrow niches.

Exhibit: Metromile's reported addressable markets

Source: Company reports



As a starting point, we should point out that the "simple needs" auto market that Metromile seems positioned to address is only 60% of the market. But we think the problem runs much deeper than that.

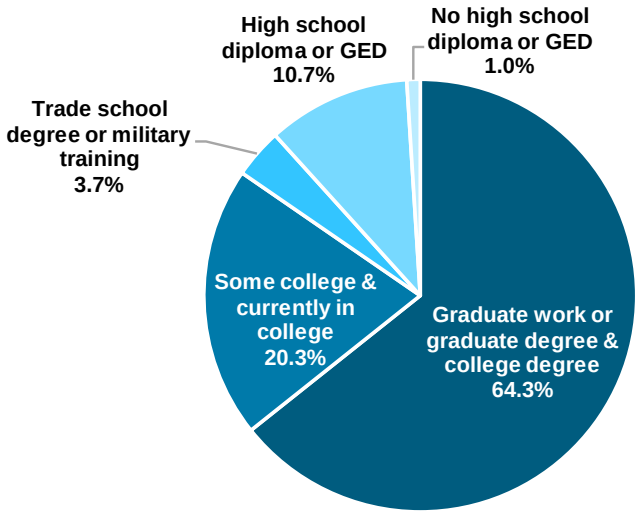
As evidence to support our hypothesis of a smaller than anticipated TAM, we cite the heavy urban and college educated skew of its book.

For example, per data contained in various product filings we reviewed, in Oregon, 85% of its customer base has at least some college education or higher, with fully 64% having some graduate degree work or a full bachelor's. This compares to 33% of American adults with a bachelor's degree or higher, according to the Census Bureau.

Only 1% of its customers have no high school diploma, compared to ~11% in the population more broadly.

Exhibit: Metromile Oregon education level exposure distribution

Source: Metromile product filing (Oregon 08/19/2020)

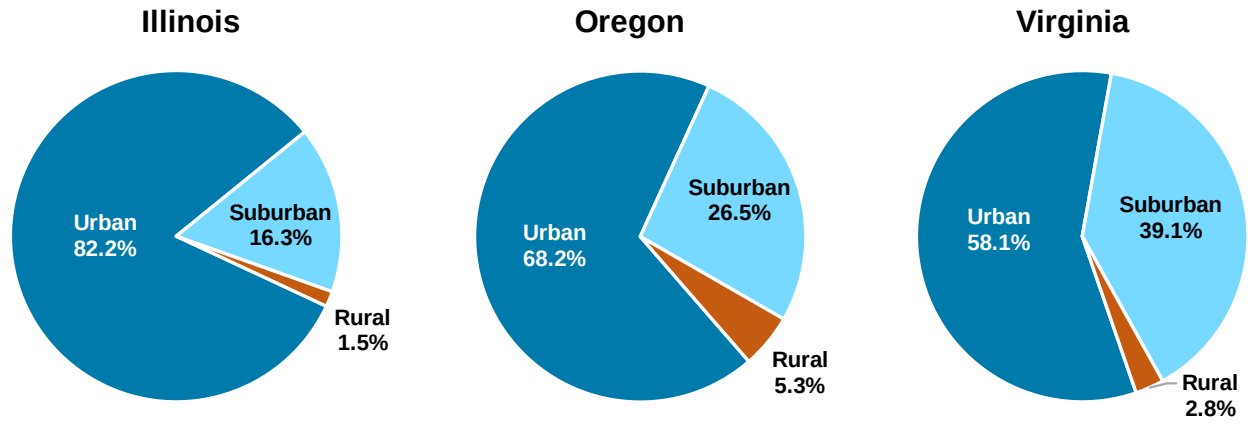


Similarly, product filings with a break-down of mix by location factors show a heavy urban skew: at 82% in Illinois, 68% in Oregon, and 58% in Virginia. Customers in rural areas are just 2-5% of these states. By contrast, America's population is split 31% in urban areas, 55% in suburban, and 14% in rural areas, according to Pew Research (The Census Bureau does not collect data in line with Metromile's disclosures).

Note, Google trends data for its largest state California also suggest a heavy urban skew to the Bay Area, as further confirmation. Indeed, perhaps investors' own biases and lived experience are skewing their expectation of the average consumers' willingness to think through the trade-offs of fixed or floating insurance premium rates.

Exhibit: Metromile urban-suburban-rural exposure distribution in Illinois, Oregon and Virginia

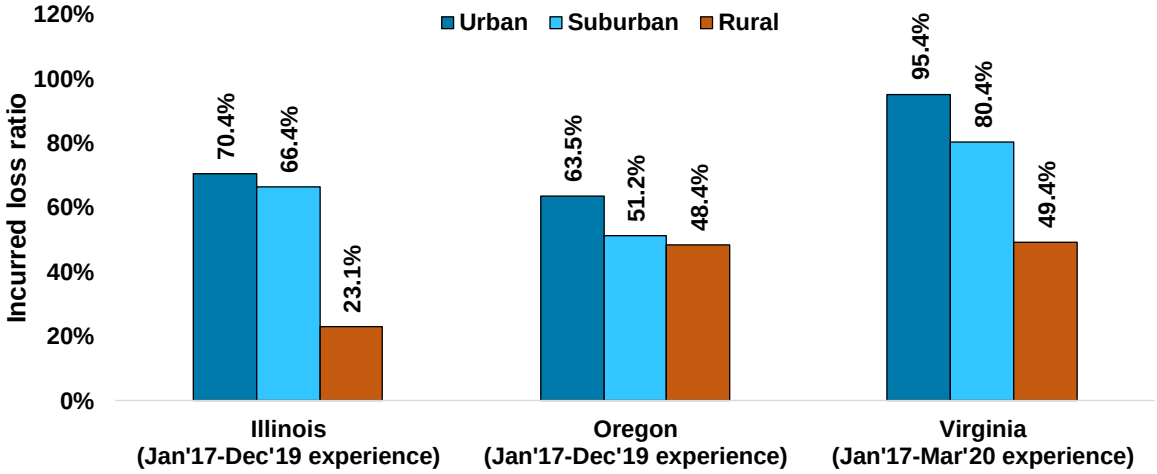
Source: Metromile product filings (Illinois 06/08/2020, Oregon 08/19/2020, Virginia 10/05/2020)



These filings also show that suburban and rural loss ratios are performing much better than urban – an irony given Metromile's apparent difficulty in attracting this type of customer (assuming these states are representative at ~15% of the DPW).

Exhibit: Metromile incurred loss ratios by urban-suburban-rural exposure in Illinois, Oregon and Virginia

Source: Metromile product filings (Illinois 06/08/2020, Oregon 08/19/2020, Virginia 10/05/2020)



We should note before moving on that we got this data from factors altering base rates on customer geography. There is some irony in adding new rating factors for things like urban versus rural while simultaneously making a big deal out of removing rating factors like education and occupation and claiming it as evidence of anti-discrimination. A lot of these type of factors are strongly correlated, making it simply "discrimination" with plausible deniability.

Second, we believe the company has systemically underinvested in marketing, and been too optimistic in its CAC assumptions.

Per Coverager, we also note the company has had four CMOs in nine years, and fired all of its marketing staff in early 2020.

Blaming marketing for its lack of growth screams of a "Field of Dreams" strategy problem, where management can't accept that if they build it people won't necessarily come. All evidence points to the fact that the company needs to rethink its marketing approach if it is to avoid becoming the "Betamax" of insurance – with a "better product" that nobody wants.

We struggle to understand a DTC business plan that seems to place so much emphasis on product and R&D, and yet so little sustained strategy on marketing.

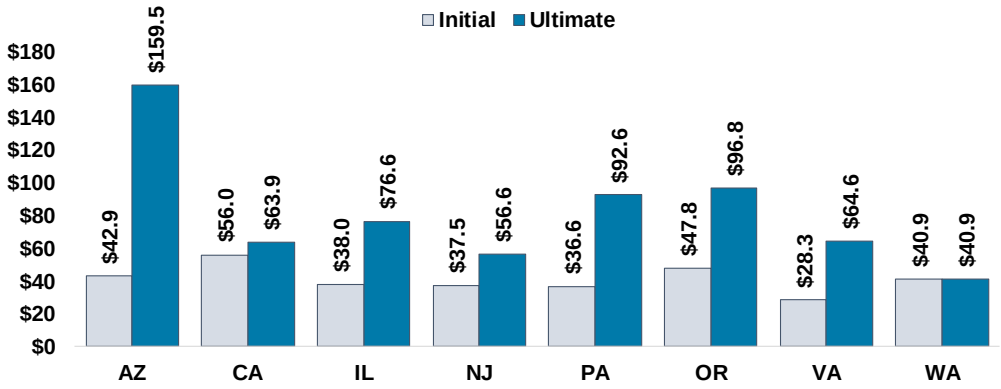
As noted above, there has been little evidence to date of a viral break out of the company, and the acceleration and deceleration of its unit growth seems positively correlated with its marketing spend.

Third, we see evidence of systemic underpricing of true acquisition costs, yet to be fully addressed, that appears to be slowing growth as price increases bleed in.

Similar to our analysis of Root, we see evidence that the company has been systematically under-estimating its true acquisition costs in its expenses. Per the table below, we can see base rates for acquisition costs have on average doubled from the level in their initial filing in each state. At about $50 per term, this represents something like a ~10% price increase. It is worth noting that the two states where growth has stayed positive through to Q3:20 include the only state that has yet to see an adjustment to acquisition costs (Washington), and Arizona where the pricing adjustment only came into force over the last few quarters.

Exhibit: Metromile acquisition expense base rates in eight states. Initial vs current

Source: Metromile product filings



Whether deliberate or not, this "price low to prove the concept and fix pricing later" is something all early-stage companies should be screened for. However, much of the focus in this regard typically tends to be on the loss ratio. As we showed with Root, this strategy appears to be a new frontier in regulatory arbitrage.

Even removing the cynicism and assuming it was a good faith error would show the company has been systematically too optimistic on its ability to convert customers on a small $ marketing budget. We dive deeper into its true cost of customer acquisition below.

We should also note that the investor deck points to potential savings for customers that switch of 47%. However, a footnote on one slide suggests this is based on 2018 data. We wonder why this has not been marked to market as the company has taken more price increases, and the broader market has gotten more competitive?

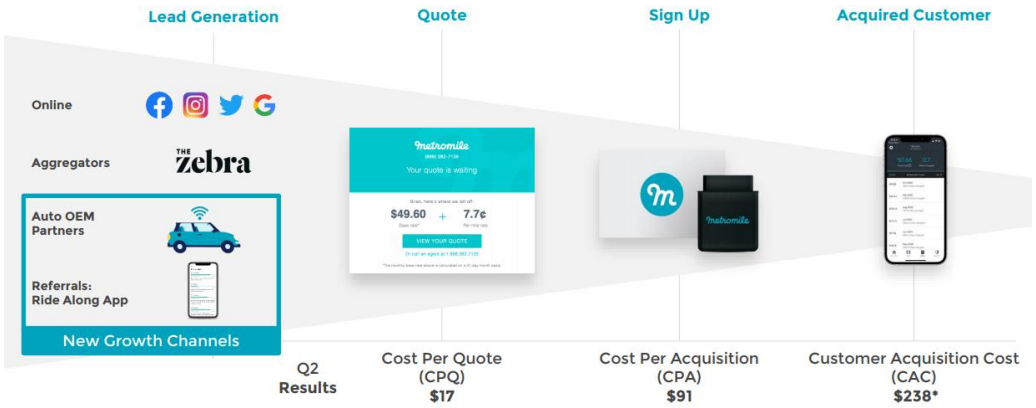
(3) A DEEPER DIVE ON METROMILE'S SELF-DISCLOSED CAC METRICS

Metromile's disclosures make several important claims about its efficiency at customer acquisition. If we're honest, we do not think any of these metrics are credible.

First on CAC, the company says it is able to acquire customers at $238 per customer. The company splits this out as $17 on cost per quote (essentially lead gen), $91 on cost per acquisition (with an image that implies it is associated with device costs), and $238 all-in for what it describes as CAC – implying $108 "other" costs.

Exhibit: CAC disclosures in its slide deck

Source: Metromile product filings



There are several problems with this. First, we should note straight away that it cites Q2:2020 CAC, a time when most companies (including, it seems, Metromile) had pulled their marketing spend and will likely represent a floor on CAC costs. Indeed, the S-4 cites a $289 figure for Q3.

Additionally, we should add that the footnote to this slide implies these costs include only underwriting fees and device costs on a cash basis. This seems to exclude sales and marketing expenses, which are the primary driver of true fully loaded CAC.

For what it's worth, we would note the company's product filings suggest dongle costs are more like $100-$140, while the company classifies these to regulators as operating expenses, not CAC. We think they are more akin to CAC.

On top of this, product filings with state regulators suggest customer acquisition costs are more like ~$350-$425 – driven by ~$300-$400 of sales and marketing expense (and excluding device costs which are included in op. costs). Here are three examples from Arizona, New Jersey and Virginia.

Exhibit: Acquisition expense support. New Jersey, Arizona and Virginia

Source: Metromile product filings (New Jersey 05/15/2019, Arizona 05/08/2020, Virginia 10/20/2020)

	New Jersey
Sales and Marketing Discovery	**$ 375**
Discovery	$ 40
Total One Time Service	$ 415
Total Ongoing Service	$ 10
Expected Policy Lifetime (Term)	4.50
Indicated ACQ Per Policy Per Term	$ 102
Average ACQ	$ 26
Indicated Change	290%
Selected Change	67%

	Arizona	Virginia
Projected Sales and Marketing Costs	**$ 300**	**$ 300**
Projected Discovery Costs	$ 40	$ 40
Projected Policy Term(s)	5.00	5.00
Projected Ongoing Servicing Costs	$ 10	$ 10
Projected Acquisition Cost Per Term	$ 78	$ 78
For Policies becoming effective since 4/5/2020:		
Total Calculated Acquisition Premium	$ 51,362	$ 131,900
Total Unique Policy Term Count	944	3,007
Projected Acquisition Cost Recovered Per Term	$ 54	$ 44
Indicated Acquisition Expense Change	43%	78%
Selected Acquisition Expense Change	40%	30%

We highlight that the company is estimating an average life of 2.5 years in its product filings and not the 3.4 years it estimates in its disclosures to investors. Perhaps the company is just being conservative, which we would support, but it is worth flagging. It is also worth mentioning that the filings suggest the company is not yet fully pricing for its CAC load, suggesting more price increases to come even in states where it has begun adjusting its base rates.

Either way, the unit economics seem more challenging than you might think given the company's "CAC" disclosure to investors. In particular, the company's skew to lower premium policies ($995 annualized) requires more discipline and lower CAC on a $ basis relative to non-pay per mile peers.

As a rule of thumb, we would expect the company to need to shoot for 10% upfront CAC relative to term premium (FWIW, Metromile's selected expense factors for its permissible loss ratio in product filings seem to agree with this).

Assuming a 2.5 year average policy life expectancy would imply permissible CAC of around ~$250, while a ~3.5 year average PLE would allow closer to $350. As we get into below, we don't believe the company is anywhere near that level of efficiency yet. And we should note, the filings above indicate the company is still pricing well below its expected acquisition cost load – that we think is too low.

Exhibit: Sensitivity of acquisition expense (CAC) as % of lifetime premium

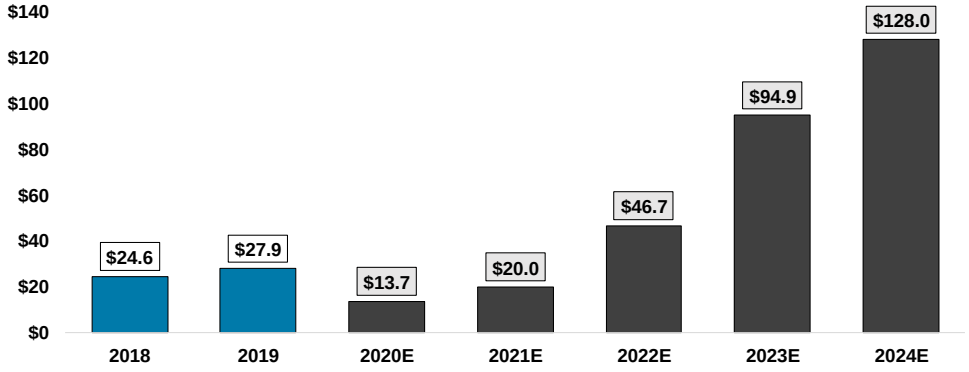
Source: Inside P&C

CAC ($)	Terms (6 months, $995 PPP Annualized)									
	1	2	3	4	5	6	7	8	9	10
100	20.1%	10.1%	6.7%	5.0%	4.0%	3.4%	2.9%	2.5%	2.2%	2.0%
200	40.2%	20.1%	13.4%	10.1%	8.0%	6.7%	5.7%	5.0%	4.5%	4.0%
300	60.3%	30.2%	20.1%	15.1%	12.1%	10.1%	8.6%	7.5%	6.7%	6.0%
400	80.4%	40.2%	26.8%	20.1%	16.1%	13.4%	11.5%	10.1%	8.9%	8.0%
500	100.5%	50.3%	33.5%	25.1%	20.1%	16.8%	14.4%	12.6%	11.2%	10.1%
600	120.6%	60.3%	40.2%	30.2%	24.1%	20.1%	17.2%	15.1%	13.4%	12.1%
700	140.7%	70.4%	46.9%	35.2%	28.1%	23.5%	20.1%	17.6%	15.6%	14.1%
800	160.8%	80.4%	53.6%	40.2%	32.2%	26.8%	23.0%	20.1%	17.9%	16.1%

Another way we can triangulate around this is to calculate our own estimates of fully loaded CAC based on income statement and PIF data. On one of its slides showing management's earnings estimates, Metromile cites a line called "total acquisition expenses", which totaled around $25mn in 2018 and $28mn in 2019.

Exhibit: Total CAC (in $mn). Actual and company estimates

Source: Company reports

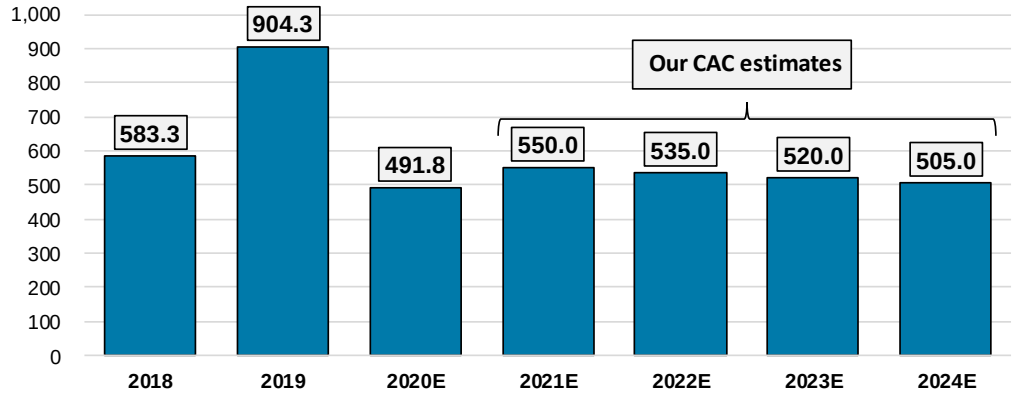


Using the company's disclosed retention metrics of 63% in year one and 5.5-year policy life expectancy thereafter, we can estimate the company's new PIF based on estimating its retained policies per cohort and its total PIF per period (given).

Using this, we can estimate total acquisition expenses per policy acquired of around $583 in 2018, $904 in 2019, and $492 in 2020. Based on disruptions to customer acquisition due to rate changes in 2018/2019, we'd assume ~$550 is a reasonable run-rate with a $15 step (= 2021E $550, 2022E $535, etc.).

Exhibit: 2018-2020 CAC, and IPC estimates

Source: company reports, Inside P&C



As an additional fact check, the company splits out S&M expense separately in its two-year consolidated income statement (but not for its forward projections). On this basis, S&M per acquired policy was $432 in 2018 and $778 in 2019. As both of these are about ~$130-$150 below the fully loaded CAC metric, we take this to be *prima facie* evidence that "total acquisition costs" represent S&M plus $100-$150 of device and other CAC-related costs.

As one final data point, we'd note the company gets a $313 upfront commission per policy from its reinsurer as a surplus relief mechanism, which points to higher than $238 per policy CAC. It is worth saying that we are aware that reinsurance ceding commissions can and do act as a contra-expense to CAC on a net basis. But as a sanity check on unit economics, it makes more sense to assess on a direct basis and assume no long-term arbitrage at scale.

Finally, we should note the company makes several references to a 3.1X LTV/CAC metric, and expectations of a 5.5X metric in 2024. Without knowing how this is calculated for both numerator and denominator, we cannot critically assess it. But based on the above, it can only plausibly make sense if "adjusted" in a way that we would likely take issue with.

(4) TRUE CUSTOMER ACQUISITION COSTS SUGGEST GROWTH TARGETS WILL BE CHALLENGING TO MEET

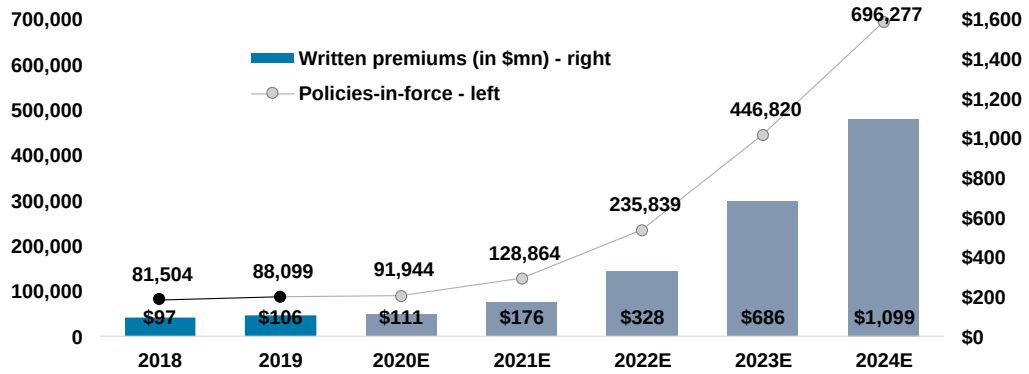
Based on the above, we do not think Metromile's forecasted growth is reasonable.

One area Metromile provided above average information was on management's forward expectations on growth and margins.

Relating to growth, the company is expecting to grow PIF at a ~66% CAGR over the next four years to almost 700k units from an estimated ~92k at year end 2020. On top of this, the company also forecasts out premium growth at a 77% CAGR to ~$1.1bn at year end 2024 – or 11x its year end 2020 level.

Exhibit: Premiums written (in $mn) and PIF. Actual and company estimates

Source: Company reports



There are several problems with this. The first is simply called the smell test. Even eyeballing that chart should give you reason to be skeptical. The company has grown units at a 6% CAGR over the last two years. This is a long enough stretch to not be a blip, and a re-inflection of growth should be premised on something material, not a Field of Dreams hope.

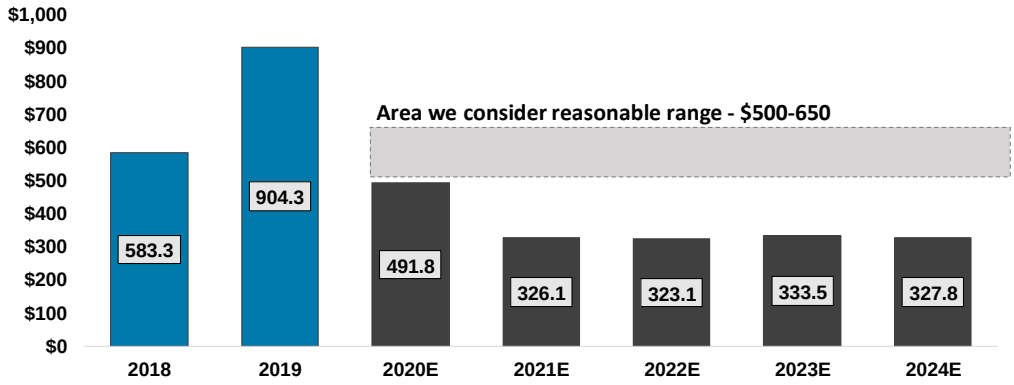
Additionally, we would note the higher forecasted annualized premium growth over PIF growth suggests the company is baking in material price increases into its estimates. Calculating an implied annualized premium per year-end policy suggests rate

increases at a 7% CAGR. Assuming all else is equal (e.g. customer mix, symbol drift etc), this should be a material headwind to growth.

Furthermore, the company also forecasts out its budgeted total acquisition costs – the metric above we assume includes S&M, plus device and servicing costs. Taking the company's implied PIF growth and CAC would imply an efficiency improvement of almost 40% by 2021 to around ~$325 and essentially through its growth forecast. As noted above, we believe a fully loaded number is more like ~$500-$600.

Exhibit: Implied CAC per acquired policy

Source: Company reports



Indeed, management's budgeted total CAC for 2021 is $20mn – 25% less than the level spent in 2018 and 2019. Yet the company is forecasting 40% unit growth in 2021.

Perhaps we could understand some level of CAC efficiency improvement as the company pivots towards an app and lowers its unit expense on devices, but we do not expect it will be this dramatic, or this rapid. Based on its budgeted marketing spend, we'd estimate an optimistic case where everything is working well likely looks something more like this.

Exhibit: PIF roll forward after adjusting CAC per new policy to the IPC outlook

Source: Company reports, Inside P&C analysis

Metromile ($M)	2018	2019	2020E	2021E	2022E	2023E	2024E
PIF Roll forward	**81,504**	**88,099**	**91,944**	**103,902**	**162,879**	**296,452**	**457,323**
Year 1	20,196	15,753	12,287	9,584	7,475	5,831	4,548
Year 2	19,137	14,927	11,643	9,082	7,084	5,525	4,310
Year 3		26,568	20,723	16,164	12,608	9,834	7,671
Year 4			19,437	15,160	11,825	9,224	7,194
Year 5				17,548	13,688	10,676	8,328
Year 6					22,909	17,869	13,938
Year 7						54,993	42,894
Year 8							114,975
Year 9							
Year 10							
Year 11							
Retained PIF	39,333	57,247	64,089	67,538	75,589	113,952	203,857
Acquired PIF	42,171	30,852	27,855	36,364	87,290	182,500	253,465
Lost PIF	16,935	24,257	24,010	24,406	28,313	48,927	92,594
Total car years	68,886	84,802	90,022	97,923	133,390	229,665	376,887
Total CAC ($M)	24.6	27.9	13.7	20.0	46.7	94.9	128.0
CAC / Acquired PIF	583.3	904.3	491.8	550.0	535.0	520.0	505.0
Book retention	69.9%	70.2%	72.7%	73.5%	72.8%	70.0%	68.8%
New / retained	1.1	0.5	0.4	0.5	1.2	1.6	1.2
Retained / total book	48.3%	65.0%	69.7%	65.0%	46.4%	38.4%	44.6%

Resulting PIF roll forward

Calculated using retention

Estimated acquired PIF per period

Adjusted to IPC estimate, decreasing due to app

Alternatively, if our math is roughly right, the company would likely need to increase its marketing spend by about ~55% across its forecast period, or about ~$160mn to hit its growth goals.

Similar to the additional strain on cash we identified yesterday should loss ratios improve more in line with our view (~$35mn), these two factors combined would burn around ~$200mn of cash faster than forecast over the next four years.

Ultimately, we do not think the company's growth estimates are reasonable based on its budgeted marketing spend. One of these goals will likely have to give.

The company will either have to spend more on marketing to hit its numbers, or its growth will disappoint its forecasts.

Each of these would have significant implications for its capital budgeting needs, as faster marketing spend would burn cash faster, while a slower build to reach scale on its fixed expense base would also likely pressure capital plans due to its high fixed costs. Perhaps this would be manageable with a combination of debt and reinsurance, but there is real risk around the need for a further capital raise in our view.

Of course, other alternatives exist, including de-scaling the expense base. However, one alternative worth watching would be for the company to lower its underwriting standards to hit its growth goals…

(5) A STRATEGIC PIVOT IS A MOMENT OF PEAK RISK

Investors in Metromile need to recognize a simple truth. Whatever the company says about its conservative focus on unit economics, ultimately its high expense base and cash burn puts extraordinary pressure on the company to grow to scale its revenues to its expenses. These pressures will only grow with public investor, quarterly earnings scrutiny (See: Root's Q3:20), and aggressive published growth guidance that the company will be held to.

All else equal, the firm's pivot towards a new underwriting model – away from dongles and towards apps and OEMs, and expanding into new geographies – should be considered a higher risk part of its growth curve.

However, most pertinent to us is evidence we found in several of the company's recent product filings. In three filings in Oregon (#4 state), Illinois (#5), and Virginia (#8), all filed since late August, the company has outlined a series of similar rating moves that look oriented at relaxing its acquisition standards to accelerate growth.

For example, it reduced acquisition costs tiers for homeowners, customers with full coverage, and evidence of prior insurance – all explicitly factors to avoid direct higher acquisition costs towards more standard/preferred and stickier customers. Metromile explicitly says these moves are to more uniformly spread acquisition costs among customers regardless of expected tenure.

Virginia product filing 10/05/2020	*"Currently, Metromile's rate order of calculation for acquisition and operation costs attempts to estimate a customer's expected tenure and allocate the costs accordingly. With the proposed changes, the acquisition and operation costs will be allocated more uniformly to all customers regardless of their profile."*

The filings in Virginia and Oregon which were made two months after the filing in Illinois also had further product adjustments. The two states dropped underwriting factors related to education and occupation that it had copied from Progressive filings – again factors designed to be correlated with more standard/preferred customers.

Though the company frames this to its regulators as part of its mission to remove "cohort driven insurance" and "discrimination", recent filings also include introductions of cohort driven and discriminatory factors like price adjustments for urban, suburban, and rural zip-codes.

It also removed UBI factors in these two states, from operating costs, which we suspect may have a similar skew (though we can't confirm that), and removed rating variables based on gender.

All of the above changes are not necessarily precursors to an influx of a worse mix of customers and negative financial consequences – so long as the telematics model works. As such, it should be seen as an increase in execution risk at the very least, all else equal. We should also note that even if the telematics model can, potentially, control for loss costs, it can't control for retention, billing issues, and CAC efficiency.

Finally, filings in these two states also moved to shift a higher portion of its coverage pricing from fixed to variable. This to us seems like an attempt to solve for funnel conversion issues by giving more upfront savings – comparable to when Progressive began discounting Snapshot upfront for anyone opting in rather than in arears, which significantly accelerated growth. This reduction of the "sticker price" can be an important lubricant to the sales process to consumers not primed to prefer deferred gratification.

Exhibit. Fixed vs variable portion factor changes in Virginia and Oregon

Source: Product filings

Virginia 10/05/2020 filing

	Current fixed portion	Selected fixed portion	Selected variable portion
BI	40%	25%	75%
PD	40%	25%	75%
MED	40%	25%	75%
UMBI	40%	100%	0%
UMPD	40%	100%	0%
COLL	40%	25%	75%
OTC	40%	40%	60%
TRANSP EXP	40%	100%	0%
TOW	40%	100%	0%

Oregon 08/19/2020 filing

	Current fixed portion	Selected fixed portion	Selected variable portion
BI	40%	20%	80%
PD	40%	20%	80%
PIP	40%	20%	80%
UMBI	40%	100%	0%
UMPD	40%	100%	0%
COLL	40%	20%	80%
COMP	40%	40%	60%
RENT	40%	100%	0%
ROAD	40%	100%	0%

However, we should note that Root explicitly seems to have the opposite problem – of paying too much for customers who try the product and either drop out or are dropped by the company in the underwriting process – either way, wasting precious CAC dollars.

As mentioned above, potentially the pay-per-mile model is better insulated from this, as people are more likely to be better at self-evaluating their driving usage versus behaviors. However, the combination of a lower barrier to entry and a pivot to a more on-demand version of the product via an app rather than a dongle raises the risk of a poorly calibrated sales funnel, wasted CAC dollars, higher recissions, higher bad debt issues, and lower retentions.

Given that we have argued the company has a broken growth model, we do not fault the company for experimenting with ways to improve its sales pipeline and conversions. It clearly has to do something. However, such moves come with potential trade-offs, and a higher risk of attracting a more non-standard customer mix, akin to Root.

If so, this could have significant and complicated second order effects, including on CAC, retention, loss costs, claims infrastructure needs & LAE, and service intensity around billing, payments, and policy changes.

Further, we should explicitly point out that the positive effects of these moves are likely to be seen first via faster growth, while any second-order impacts on other metrics may well be long delayed, depending on the company's recognition of adverse trends and its transparency with investors.

Two factors we would watch closely for real time data is any reduction in term one retention (including by company induced recissions) and any indication of increasing bad debt accruals as symptomatic of a more non-standard mix.

Cynically, if you need to keep raising money, and don't like what people are saying about you, the simplest answer is to change the conversation.

In some ways it is easier to have a "new problem" that you can write off as a second-order consequence of "success on growth" than it is to be stuck with the same problem for too long and risk looking first-order broken. Only inertia is fatal.

As noted above, Metromile has gone to great lengths to draw contrast with Root. If two paths diverged long ago on Root and Metromile's growth models, there is great irony in the inverse symmetry of their current moments – one trying to get its growth standards under control, the other trying to open the floodgates and willing to take more risk to do so.

Indeed, the travails of two well-funded and prominent InsurTechs - one growing too fast and unable to control for quality, and the other growing too slowly to scale into its fixed expenses - should serve as a bull signal for the massive moat embedded in the existing DTC insurance businesses in the form of (a) their brand awareness, (b) their >$1.5bn annual marketing expense, and (c) simply their under-rated expertise at executing growth.

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.