



MassMutual

Market Update
September 3, 2020



Let's start with some context. The size of the entire U.S. economy is roughly \$21 trillion¹. The market capitalization of the largest stock (Apple) in the U.S. is roughly \$2.4 trillion, and the total U.S. government debt is roughly \$23 trillion². All are very large numbers.

Yet there's another market that is much larger, much more complex, and one our dear readers have likely heard very little of: London InterBank Offered Rate (LIBOR).

While I recognize the mere mention of the word is enough to make many of us begin longingly thinking about bedtime, I contend that given the size and complexity of the LIBOR market, it is worth understanding.

This index rate is estimated to influence more than \$200 trillion of loans, securities and deposits³. It is massive, it is controversial, and it is going away. That's right – one of the world's most important reference rates is going to be replaced in some form or fashion by the end of 2021 (as it stands now), and we don't yet really know how it's going to work.

Yet where chaos and ambiguity reside, opportunities for learnings flourish.

As such, in this update we will attempt to tackle two issues: the latest on the COVID-19 outbreak, as well as a dissection of LIBOR (what it is, why it matters, and what MassMutual is doing about it).

With that, let us begin.

Section 1: COVID-19

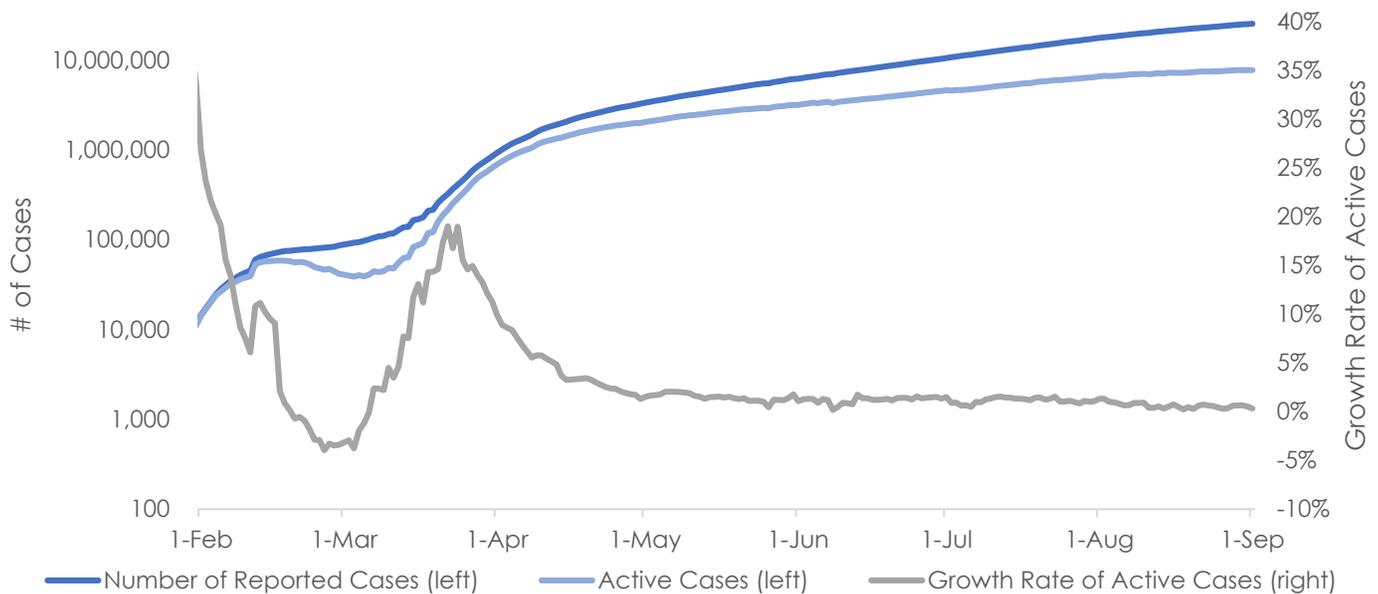
Charts 1 and 2 are my favorite representations of what is happening in the world with respect to COVID-19 because the charts a) ignore the headlines, b) zoom out far enough to discern the relevant trends, and c) show both the levels and the growth rates (I continue to argue the growth rates are what matters).

¹ <https://www.investopedia.com/insights/worlds-top-economies/#:~:text=U.S.%20Nominal%20GDP%3A%20%2421.44%20trillion,reach%20%2422.32%20trillion%20in%202020.>

² https://www.gao.gov/americas_fiscal_future?t=federal_debt#:~:text=Understanding%20the%20Debt,-When%20the%20federal&text=The%20federal%20debt%20is%20the_debt%20was%20%2422.8%20trillion%20dollars.

³ <https://www.reuters.com/article/us-usa-bonds-libor/u-s-libor-exposures-larger-than-thought-at-200-trillion-arc-idUSKBN1GH2Z8>

Chart 1: COVID-19 Worldwide Outbreak⁴



To orient, the blue lines demonstrate the total number of cases around the world and correspond with the left axis. The grey line demonstrates how the number of cases is growing and corresponds with the right axis.

The summary, thankfully, is that the growth rate of cases continues to slow. Both globally and domestically, the outlook continues to improve, and in dramatic fashion. For the first time since this started, the global number of cases has shrunk on a handful of days.

Case growth rates are falling, and death growth rates are falling. Things are getting better, and markets are reflecting what the data (not the financial press) is showing. This is great news, and while we are clearly not through this crisis (and there are valid reasons to be worried about fall and winter), there is no doubt the numbers reflect optimism.

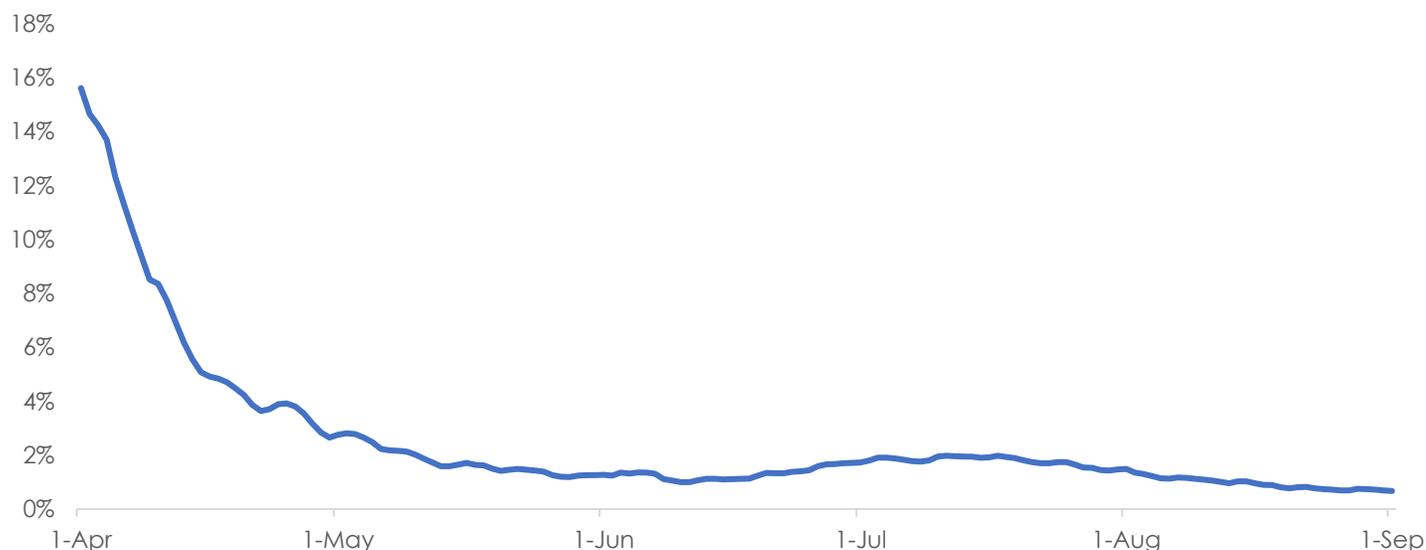
Domestically, the number of cases in the United States is now growing slower than at any time since the outbreak began in March. Back in March, when COVID-19 was expanding rapidly, case growth in the United States was growing at more than 30% per day, which is both terrifying and unsustainable. The country implemented social distancing, masks, restrictions, and the like, and growth rates fell to the mid-teens in April, down to 2% in June, and now, U.S. COVID-19 cases are growing at less than 0.6% per day (on average)⁵.

Chart 2 demonstrates this further by zooming in on the growth rate since the beginning of April.

⁴ Sources: Bloomberg, World Health Organization as of September 2, 2020

⁵ <https://www.worldometers.info/coronavirus/country/us/>

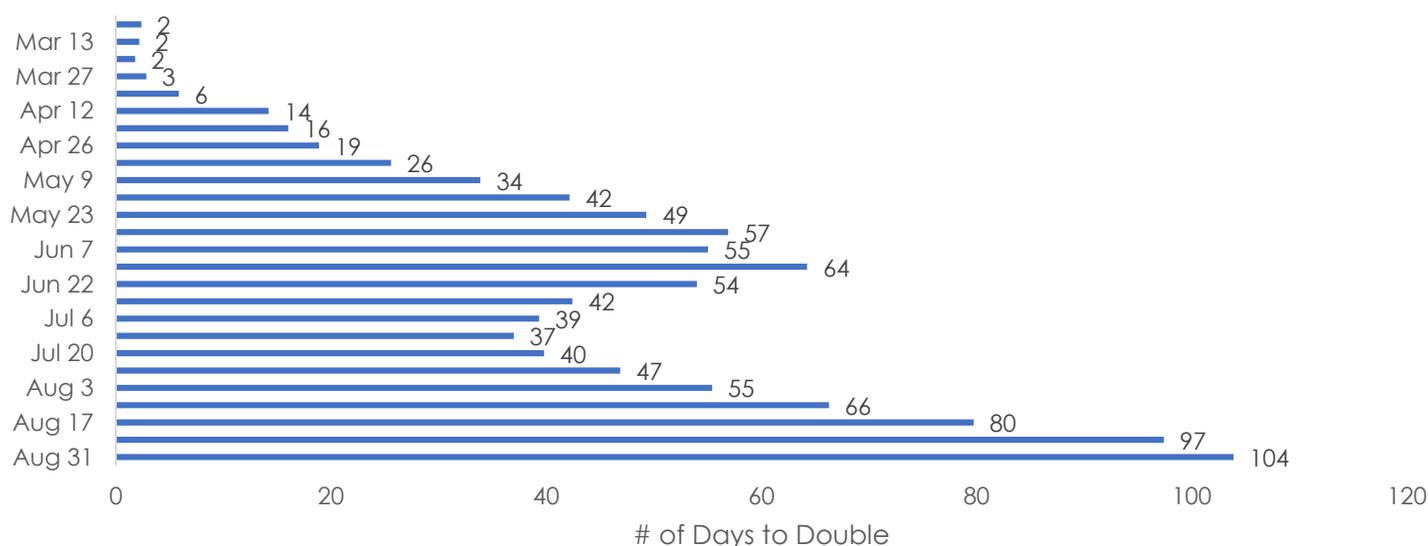
Chart 2: COVID-19 United States Case Growth Rate (since April 1)⁶



The blue line (U.S. only) in this chart corresponds with the grey line (global) in Chart 1. The growth rate was very high in early April, then fell very quickly, then rebounded a bit toward the beginning of July (as growth in the South exploded) and is now at all-time lows (roughly 0.89% on a five-day smoothed basis). To be clear, this is higher than the global growth rate, but improvement nonetheless.

Chart 3 takes the very same data and converts it to the number of days to double the cases in the United States. This is often a more intuitive and relatable way to understand how growth rates are changing.

Chart 3: United States: Number of Days to Double Confirmed Cases⁷



⁶ Sources: Bloomberg, World Health Organization

⁷ Sources: <https://www.worldometers.info/coronavirus/country/us/>, as of September 2, 2020

The chart largely follows the story of the United States. In late March, the U.S. was in complete lockdown as case growth was largely out of control. At that point, the U.S. was doubling cases every three to five days. We learned, we evolved (and no, not quickly enough), but we nonetheless improved to late May and early June where we were doubling cases every 64 days.

The South then began to re-open, and many states pushed back entirely on some of the government guidelines. Growth rates increased again, and the days to double fell to 37 days on July 13.

Fortunately, the trend has now reversed.

The U.S. is now doubling cases in more than 100 days, which is an all-time high (meaning growth is at an all-time low) since the beginning of the pandemic in March. The world is now doubling cases every 200 days and continues to slow. This is tremendous news on many fronts.

Section 2: London InterBank Offered Rate (LIBOR)

Let me state upfront this discussion on LIBOR is a delicate story to tell. If we dive too far into the details, eyes will roll, and the sound of snoring will be heard far and wide from our beloved readership. Yet what makes this delicate is that LIBOR itself is a fairly detail-packed subject. As such, let's try and be methodical by breaking it down into Context, Why We Care, How It Works Now, Why This is Changing, What It is Changing To, and What Are We Doing About It.

Context

LIBOR is the world's most widely used benchmark for short-term rates, but its era of influence is slated to end by December 2021.

Some \$200-\$300 trillion in mortgages, consumer loans, corporate debt, derivatives and other financial instruments reference LIBOR, and its influence as a market barometer is even more far reaching.

Once the phase-out occurs, all dollar-denominated loans, derivatives and debt will reference a new rate.

Why We Care

Many, many different instruments and securities reference LIBOR, and many of them have no legal language that contemplates what to transition to. Examples include student loans, mortgages, credit cards, certain types of bonds, lines of credit, swaps, CDs, CDOs, and on and on and on.

As such, if the rate changes, consumers and businesses have either less money or more money to spend on other items.

How It Works Now

The concept of LIBOR is fairly straightforward. Banks need to figure out what to charge (individuals, other banks, etc.) for a loan, and so they start with how much it costs them to get the money for that loan.

Every day, a group of pre-selected banks are polled to ask at what cost they can borrow from each

other. The banks respond, and with a quick process of “remove the highest, the lowest and average the rest,” the rate is set (yes, it’s a tad more complicated, but honestly not much).

Why This is Changing

As an astute reader may recognize, the aforementioned process leaves some room for interpretation and potential manipulation. In 2008, a subset of those banks manipulated the LIBOR rate for their own gain. Once discovered, this resulted in billions of dollars of fines and profit disgorgement and, to bring this full circle, the desire to improve upon the process⁸.

What This is Changing To

This is where it gets a tad confusing. The short answer is the answer isn’t yet known. There are dominant possibilities (in the U.S. something called SOFR is leading the race, although Ameribor is making a comeback), but the path has not yet been crystalized. Part of the problem is that different participants have different needs and borrowing costs and, therefore, support different rates.

Each rate has its own process, and each has its own strengths and weaknesses.

What is important is that the adopted rate will likely be more objective (and less likely to be manipulated), but the transition itself may be chaotic.

Regardless, the debate is ongoing, and we are watching it closely.

What We Are Doing About It

At the corporate level, MassMutual has established a cross-functional LIBOR Transition program and is actively focused on the various aspects of the transition.

The summary thus far, is that we do not believe the LIBOR transition will have a material impact on the business of MassMutual nor our policyholders.

In short, it’s a complicated subject, with a straightforward and yet fragile core. We are watching it closely and will update you again as we get closer to the transition.

Stay safe, stay calm, and please turn off the financial news channels.

We remain at your service and watching closely. Please let us or your financial professional know how we can serve you.

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⁸ <https://www.reuters.com/article/us-libor-rbs-scandal/timeline-how-the-libor-scandal-unfolded-idUSBRE9150TB20130206>

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