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Economics Group

WELLS FARGO SECURITIES

Special Commentary

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How Long Can U.S. Businesses Remain Shut Down?

Executive Summary

The sudden stop in economic activity that the COVID-19 pandemic has caused means that many businesses will need to rely on their cash reserves to survive the next few months. If businesses can forgo profits temporarily and do not need to purchase most inputs, then we estimate that the overall business sector could hold on for roughly four months. We arrive at this rough estimate whether we use a top-down or a bottom-up methodology. Given that we are already more than a month into the current lockdown, the business sector could potentially hold on until July, three months from now. Of course, timelines for individual businesses will vary depending on the amount of cash they had on hand prior to the stay-at-home orders.

The lending programs that have been put in place for small- and medium-sized enterprises by the Small Business Administration and the Federal Reserve buy more time for many of these businesses, and many large enterprises have been able to lock in lower borrowing costs via record issuance recently in corporate bond markets. But this flow of credit to the non-financial business sector will eventually need to be repaid. Furthermore, the employees that have been displaced from businesses that have failed already or are soon to do so may remain unemployed for some time. These lending measures should help to keep many otherwise healthy businesses viable, but they do not ensure that the economy returns to its pre-pandemic state in a quick fashion.

Top-Down: The Business Sector Could Survive For Four Months

How much time does the business sector have?

The COVID-19 outbreak has brought the U.S. economy to a screeching halt as most states have issued social distancing guidelines, leading many businesses to sharply curtail operations, if not close down entirely. If many parts of the country remain in a virtual state of lockdown for the foreseeable future, then many businesses will eventually run out of cash and they will be forced to close their doors for good. But exactly how much time do they have?

Giving a precise answer to that question would require detailed financial data, which simply are not readily available, on the nearly eight million businesses in the United States. But in an effort to provide some general answers, we turn to publically available financial data on a sector basis. We attempt to corroborate the answers we find via a top-down approach with a subsequent bottom-up methodology.

Let's start with a top-down approach. According to data from the Bureau of Economic Analysis (BEA), the gross output (i.e., revenues) of the U.S. private sector totaled $33.7 trillion last year.[1] If we assume that the production of this output is evenly distributed over the twelve months of the year, then businesses would lose roughly $2.8 trillion in revenue for every month that they remain shut down (Figure 1). Data from the Federal Reserve show that the non-financial business sector

[1] Nominal GDP totaled $21.4 trillion last year. GDP aggregates all final goods and services that are produced in the economy, but it excludes inputs because the value of those inputs are already captured in the value of final goods and services. Gross output is the aggregate value of all goods and services produced in the economy, regardless of their position in the chain of production.

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The business sector could operate for only two months if it had to replace all of its lost revenue.

had $6.7 trillion of cash and cash-like equivalents on hand at the end of 2019 (Figure 1).[2] So the overall business sector could remain shuttered for a little more than two months before it burned through all of its cash and cash-like equivalents and was forced to shut down for good. Obviously, the longevity of individual businesses would vary depending on the distribution of cash, a topic to which we will return later.

But the situation is not quite as dire as depicted in Figure 1 because not all revenue needs to be replaced, at least not immediately, to keep a temporarily shuttered business financially viable. According to the BEA, corporate profits totaled roughly $2.1 trillion in 2019 with proprietors earning an additional $1.7 trillion. Operating at zero profit for a temporary period of time, while far from ideal, is a much more manageable situation than operating at a loss. So nearly $4 trillion of the above-referenced $33.7 trillion would not need to be replaced, at least not immediately, to keep a temporarily closed business financially operational.

Figure 1

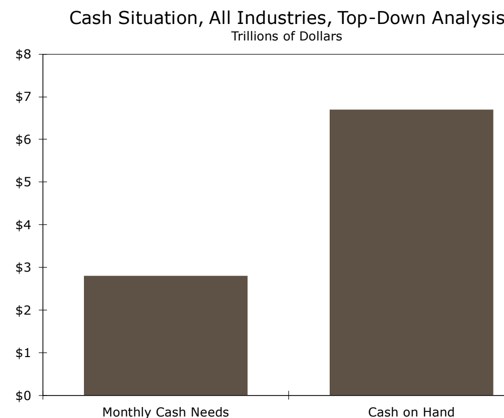
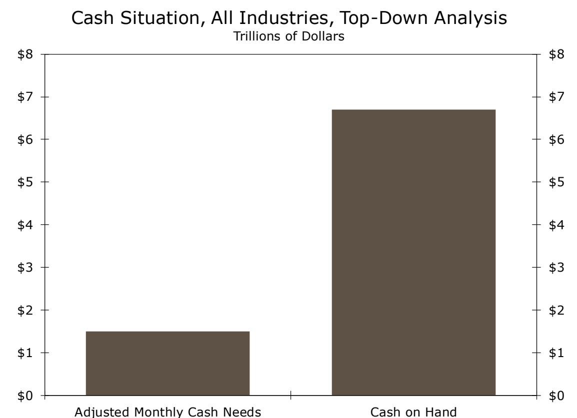


Figure 2



Source: U.S. Department of Commerce, Federal Reserve Board and Wells Fargo Securities

Furthermore, if a business suspends its operations on a temporary basis, then it does not need to buy most inputs from other businesses in order to sustain production. An auto manufacturer that has suspended production, for example, does not need to buy much steel. Using the input-output tables that the BEA compiles for the U.S. economy, we estimate that the value of intermediate inputs, which does not include labor compensation costs, totaled nearly $15 trillion in 2019. Included in this total, however, is the $3 trillion of payments that businesses made to the finance, insurance and real estate sector (FIRE) as well as payments to the rental and leasing sector. We assume that temporarily shuttered businesses must continue to make these payments due to contractual reasons, which leaves $12 trillion of payments that can be foregone on a temporary basis.

Four months is a more realistic estimate.

So if temporarily closed businesses can forgo profits for the time being and if they don't need to buy most inputs from other businesses, then their cash needs on an annual basis would be roughly $18 trillion ($34 trillion - $4 trillion -$12 trillion), or approximately $1.5 trillion per month. With cash on hand of $6.7 trillion, the entire business sector would be forced to shut down in roughly 4-½ months at that burn rate. (Figure 2).

But even this pared-down estimate of the monthly cash needs of the business sector surely is an upper bound because not all businesses are shuttered at present. Yes, most restaurants are closed, at least for dining-in purposes, as are many retail establishments. Airlines are more or less grounded as individuals eschew travel, and hotels are sparsely occupied. But utilities continue to supply electricity, natural gas and water, many critically important manufacturers continue to produce, trains and trucks continue to haul goods, banks remain open and grocery stores are doing

[2] We define cash and cash-like equivalents as the sum of checking and time deposits, mutual fund shares, repurchases agreements, and holdings of debt and equity securities.

a brisk business. That said, we recognize that many "critically important" industries are also experiencing weaker revenues due to the deep economic slump.

Bottom-Up: Answer Consistent with Top-Down Approach

To check the robustness of our top-down analysis above, we turn next to a bottom-up methodology. We start by assuming that the following 11 industries are completely closed down: motor vehicles and parts manufacturers; general merchandise stores; other retail; air transportation; water transportation; transit and ground passenger transportation; motion picture and sound recording industries; performing arts, spectator sports, museums and related activities; amusements, gambling and recreation; accommodation (*i.e.*, hotels); and food services & drinking places. Admittedly, our assumption that these 11 industries are completely closed down is a bit extreme because activity continues in most of them, albeit at a significantly lower level. But, as noted above, this is partially offset in our analysis since most other industries are currently operating at lower-than-normal levels of capacity.

BEA data show that the gross output of these 11 industries totals nearly $4 trillion on an annual basis, or roughly $330 billion on an average monthly basis. We do not have data on cash and cash-like equivalents of these 11 industries, but they collectively represent about 12% of the economy's gross output. So if we assume that they also hold about 12% of the business sector's $6.7 trillion of cash, then their cash holdings would total approximately $800 billion. At a burn rate of $330 billion per month, they would have enough cash to survive roughly 2-½ months of complete lockdown, which is more or less consistent with our top-down analysis.

The estimate from our bottom-up analysis is consistent with our top-down analysis.

But as noted above, the total revenue stream of these industries does not need to be entirely replaced. Although we do not have data on the profits of these 11 industries, the input-output table shows that they account for roughly 8% of the gross operating surplus of the business sector. Assuming they also account for 8% of corporate profits and proprietor income, then they could forego roughly $300 billion ($25 billion per month) on a temporary basis. Furthermore, these 11 industries purchase about $1.6 trillion of intermediate inputs (less FIRE, leasing and renting obligations), which could also be foregone if they are closed temporarily. Making these adjustments shows that these 11 industries would need about $2 trillion of cash on an annual basis ($175 billion at a monthly rate) to survive. At a burn rate of $175 billion per month, the $800 billion of cash holdings we estimate they have would allow them to remain shuttered for 4-½ months, which is consistent with the estimate that we calculated in our top-down analysis.

Figure 3

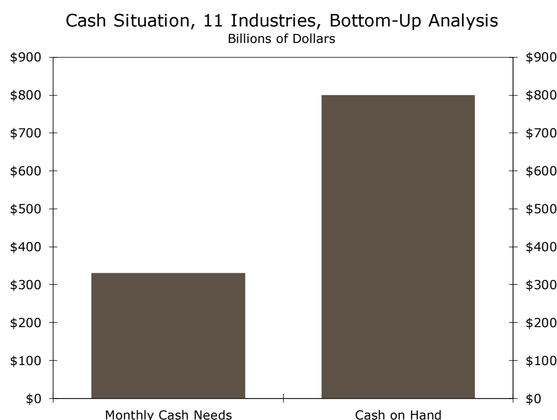
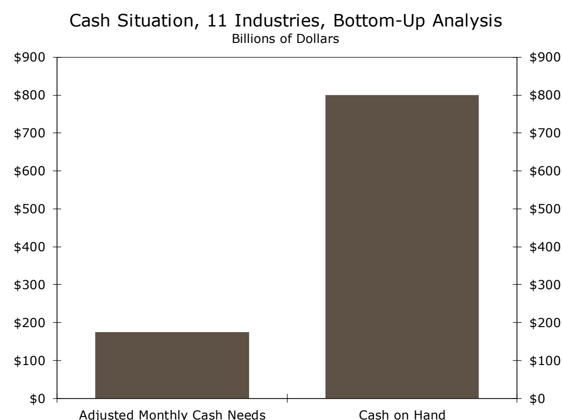


Figure 4



Source: U.S. Department of Commerce, Federal Reserve Board and Wells Fargo Securities

Help Is on the Way

The bad news is that stay-at-home orders have been in effect for more than a month in many parts of the country, and it does not seem likely that many states will be fully open for business again for

some time. Even at a slower rate of cash burn (*i.e.*, one that excludes profits and payments for intermediate inputs), the clock is running on the ability of many businesses to stay afloat before they exhaust their financial resources and are forced to shut down for good. The good news, however, is that authorities are lending a helping hand via the provision of more financial resources.

PPP loans and loans from the Fed's Main Street Lending Program will offer support.

As part of the CARES Act that Congress enacted at the end of March, the Small Business Administration (SBA) was given about $350 billion for Paycheck Protection Program (PPP) loans. A central feature of these loans is that the government will forgive them as long as the recipient business uses the proceeds to cover costs for payrolls, mortgage interest, rent and utilities for eight weeks after the loan is made. In effect, the forgiveness aspect of the loans acts as a cash infusion for the business. Although a torrent of applications quickly exhausted the initial funds, Congress recently appropriated another $320 billion to the SBA, bringing the total firepower of the PPP program to $670 billion.

In addition, the Federal Reserve recently instituted its Main Street Lending Program under which it will purchase up to $600 billion of loans that commercial banks make to small- and medium-sized enterprises. The facility is supported by a $75 billion equity investment by the Treasury Department. The loans will have a term of four years, and principal and interest payments will be deferred for one year. The program effectively gives commercial banks the ability to increase the amount of loans they make to businesses, which must commit to make "reasonable" efforts to maintain their payrolls.

Issuance in the investment grade corporate bond market has been very strong recently.

The PPP and Main Street Lending programs apply to small- and medium-sized businesses, but authorities are offering support to large businesses as well. Specifically, the Federal Reserve is supporting corporate bond markets via purchases of securities in both the primary market and the secondary market. The size of these facilities, which have been capitalized by a $75 billion investment by the Treasury Department, is $750 billion. Issuance in the investment grade corporate bond market has surged in recent weeks, at least in part due to the Fed's programs. In short, investment grade companies have reduced their borrowing costs by re-financing higher cost debt and/or building up their cash buffers. Issuance in the high yield market has lagged issuance in the investment grade market, but it is starting to pick up as well.

As part of the CARES Act, Congress allocated about $450 billion to the Treasury Department to help support the Fed's lending facilities. So far, Treasury has used less than half (about $215 billion) of this allocation. As noted above, the Federal Reserve can lever the equity investments that the Treasury Department makes into a bigger war chest of lending facilities. So, if needed, the Treasury Department has the ability to further capitalize new or existing facilities that the Fed could then turn into an additional $2 trillion or so of potential financial support.

But with the exception of the PPP loans, which effectively turn into grants if the recipient businesses follow the guidelines, most of the financial support that is being offered to the business sector by public authorities takes the form of conventional loans. Yes, the loans offered through the Main Street Lending Program are structured so that principal and interest payments are deferred for a year. Nevertheless, they are loans that recipient businesses will eventually need to repay. Although these programs can help to keep businesses afloat in coming months, the repayments that eventually will need to be made could exert some headwinds on business fixed investment spending and payrolls in coming years.

Another point to consider is whether a business chooses to use its cash buffers to maintain operations. Presumably, a business that was operating profitably before the COVID-19 outbreak began would like to survive the current situation and once again resume operations after the pandemic has passed. But what if the business owners come to believe that the medium- to long-term prospects for profitability of the existing business are bleak? In that case, it may make more sense to close the business and use the remaining cash to finance more profitable opportunities elsewhere. If this potential scenario were to occur on a large scale, then the pace of the post-pandemic economic recovery could be adversely affected until the cash resources are successfully re-deployed in other business opportunities.

We end with a point that we briefly noted at the beginning of this report. Namely, cash is not distributed evenly among businesses. Some businesses have ample cash reserves while others have failed already due to insufficient liquidity. Although the financial support programs that have been put in place by the SBA and the Federal Reserve will extend the longevity of many businesses, the ones that have failed already or might soon do so will not be resuming operations. Consequently, many of the employees that have been displaced from those enterprises are now jobless and they may remain unemployed for some time. As we discuss in our most recent *Monthly Economic Outlook*, we look for the officially reported unemployment rate to skyrocket to more than 15% in the near term and for it to remain higher than 6% at the end of 2021. These lending programs may be able to keep many businesses afloat for some time, but they do not ensure that the economy returns to its pre-pandemic state in a quick fashion.

The economy may not return to its pre-pandemic state in a quick fashion.

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