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# NEW VIRUS NORMAL

- Assessing GDP and Jobs Progression Through 2021 in a “U” Shaped, Sluggish Recovery
- Banks Significantly Under-Reserved Based on Piper Sandler Regression Model

We preface this report with deepest sympathy and sorrow for the loss of life, the suffering, and the economic loss of families across the nation. Nothing can remotely express the sadness for this historic disaster.

That said, our job is to at least try to help assess damage to the broader economy and credit losses now facing the financial sector due to the lockdown. We look through three windows, starting with the future of employment then examining broader economic variables and finally determining the probable cumulative loan losses banks will need to absorb. We do not see a “V” recovery except for a first rush as we exit the lockdown. The pattern is more likely a “U” (or “W” pending the potential return of the virus offset with limited medical abilities.)

**1) Jobs that don’t come back:** The April employment statistics were unsurprising but nonetheless disturbing. The jobs number is history but the labor force number contains some embedded forward vision. Jobs declined 20,500,000 while the labor force declined 6,432,000 (down 13% and 4%, respectively). We know both are understated due to a mid-April sample point and lower-than-normal survey response. Since February, the labor force is down a little over 8 million and we can see the true decline closer to 10 million. This is perhaps more unprecedented than the jobs lost these past two months, as rebuilding the labor pool likely takes longer than rebuilding labor demand. For perspective, the 2008/9 recession saw 3.8 million in job losses while the labor force actually advanced, slightly, by 800,000. The worst full year for the labor force was a decline of a mere 129,000 for all of 2009.

The labor force decline captures more core-in-nature weakness in future jobs rather than a large portion of the current job loss that is presumed to be temporary due to COVID-19. We tried to exercise reason in making what are clearly guesstimates of embedded job loss beyond lockdown relaxation and, hopefully, a major retreat in the virus. We have selected less than half the BLS employment sectors for embedded loss and a range of 20% down to 5% in loss projection for these categories in the following table, proportionally based on current loss rankings.

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Job (000s)	February	March	April	2 mos	%	Feb mix	Jobs unlikely to return	
Education & Health	24,586	24,485	21,941	(2,645)	-11%	17.5%	5%	1,229
Government	22,745	22,717	21,737	(1,008)	-4%	16.2%		
Professional & Biz Svcs	21,529	21,460	19,332	(2,197)	-10%	15.3%	5%	1,076
Leisure & Hospitality	16,867	16,368	8,715	(8,152)	-48%	12.0%	20%	3,373
Retail Trade	15,672	15,627	13,520	(2,152)	-14%	11.2%	15%	2,351
Manufacturing	12,852	12,818	11,488	(1,364)	-11%	9.2%	5%	643
Financial Svcs	8,845	8,842	8,580	(265)	-3%	6.3%		
Construction	7,639	7,606	6,631	(1,008)	-13%	5.4%	5%	382
Information Svcs	2,894	2,890	2,636	(258)	-9%	2.1%		
Mining & Logging	714	707	657	(57)	-8%	0.5%		
Oil & Gas	157	157	152	(5)	-3%	0.1%		
Other Svcs	5,941	5,903	4,636	(1,305)	-22%	4.2%	5%	297
TOTAL in SECTORS	140,441	139,580	120,025	(20,416)	-15%	100.0%	7%	9,352
TOTAL	152,442	151,572	131,072	(21,370)	-14%			10,155

Source: Bureau of Labor Statistics and PSC estimates

Leisure and hospitality is clearly the most vulnerable even during an economic recovery as it suffers personal behavioral changes heavily influencing future revenues. Job losses have massively dropped by 48% since February and in our view are unlikely to fully recover through 2021, if then. Air travel seems forever changed at the moment with business travel avoidance where possible and sharply reduced leisure demand. Virtual conferencing is already well-entrenched and discretionary holiday travel restraints will take considerable time to wear off, if ever. We have heard from many sources the belief that a third of restaurants are unlikely to reopen. So we make a best guess that 20% of this employment category are beyond recovery for the foreseeable future. Perhaps 2022 at the earliest.

Our second-worst damage estimate, of 15%, is in retail trade to reflect the virus-accelerated migration to digital shopping channels as well as the financial precariousness of the small and medium-sized enterprises (SMEs) that inhabit the retail shopping medium across the spectrum. (More on the Payroll Protection Program in a moment.) The remaining four categories already exhibiting low double-digit losses are assigned an embedded loss of 5%.

The result is over ten million jobs “unlikely to return” and whose losses can only be recovered in the fullness of time from employment expansion in other sectors. This figure roughly fits with the structural deterioration in the labor force itself.

Ten million lost jobs is almost a 6% shrink. Assuming lower income jobs dominate the loss, perhaps 4% disposable income shrinkage is a reasonable macroeconomic impact estimate. Thus intermediate term GDP, say yearend 2021, could be \$650 billion short of its last peak.

**2) Investment spending contraction deepens:** It has often been mentioned that the one piece of good news was that we had a strong economy going into the pandemic. We did not. As we have highlighted in the past, business spending / CAPEX had been rapidly decelerating for the six sequential quarters ending last year. Nonresidential fixed investment was showing annualized growth of 7.6% (real) back in the second quarter of 2018 but finished at a negative 2.5% pace in the fourth quarter of 2019. At the time we were predicating any economic optimism on a trend reversal of some degree by the first quarter or future job growth would ultimately suffer, perhaps substantively.

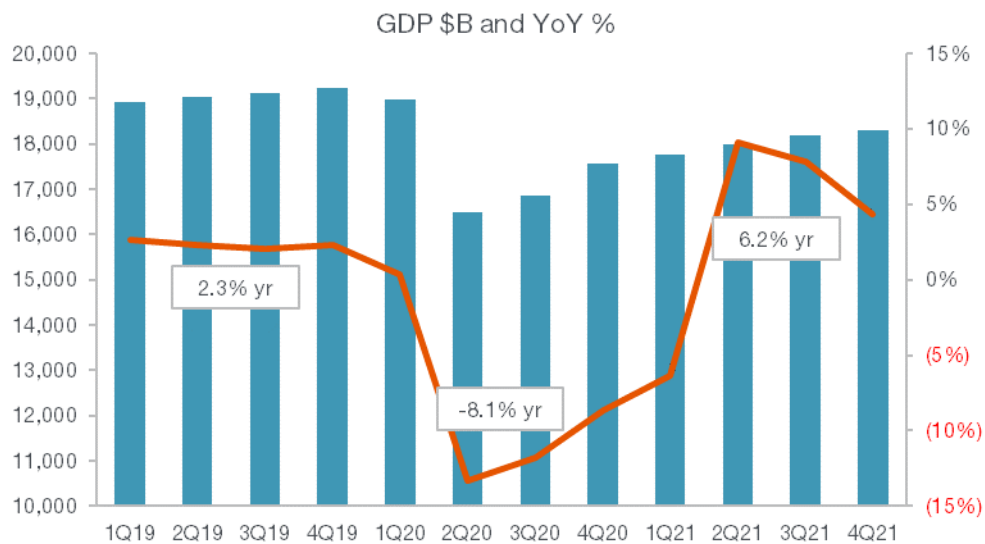
The reason for investment spending erosion was largely from eroding sentiment. The first quarter not only saw further and dramatic sentiment damage, the oil and gas sector experienced a record price collapse that, in combination, drove fixed investment to a negative 8.9% annualized pace. The largest and more broadly indicative subsector, equipment spending, came in at a negative 16.2% annualized pace. As most of these conditions meteorically worsened after the month of March, the second quarter is set up for a more serious hit.

We have little ability to bracket the course of investment spending either in the second quarter or beyond. Our best guess for the second quarter would be something in the vicinity of negative 13% (unannualized).

**3) GDP outlook:** Total fixed investment, including residential, comprises 17.5% of GDP. Consumer spending is now 70% of GDP. Net exports are weakening further, federal government spending will be up, but state and municipal spending are sharply lower. The combination is unknowable. Putting what we can together the second quarter “private sector” GDP works out to \$16.5 trillion, down \$2.8 trillion on a linked quarter basis or down 13.1%, down 52% annualized and down 13.3% on a year-over-year basis. We know this quarter will be ugly, but our numbers can only be in the ballpark, although we believe they are well worse than the current consensus.

When we turn to our regression analysis for cumulative loan losses, sensitivity to the second quarter assumption is the most important. Our best reasonableness test for the second quarter is the GDP Economic Index from the New York Fed, which read a negative 11.9% as of May 2<sup>nd</sup>.

Assuming partial recovery begins by the third quarter, the following exhibit illustrates our pattern for real GDP through the end of next year. We are assuming a \$1.1 trillion recovery in the second half of this year for a full year decline of 8.1%. The fourth quarter of 2021 in our rough model is still \$300 billion shy of the fourth quarter of 2019 as we expect drag from embedded unemployment and slow business sentiment improvement.



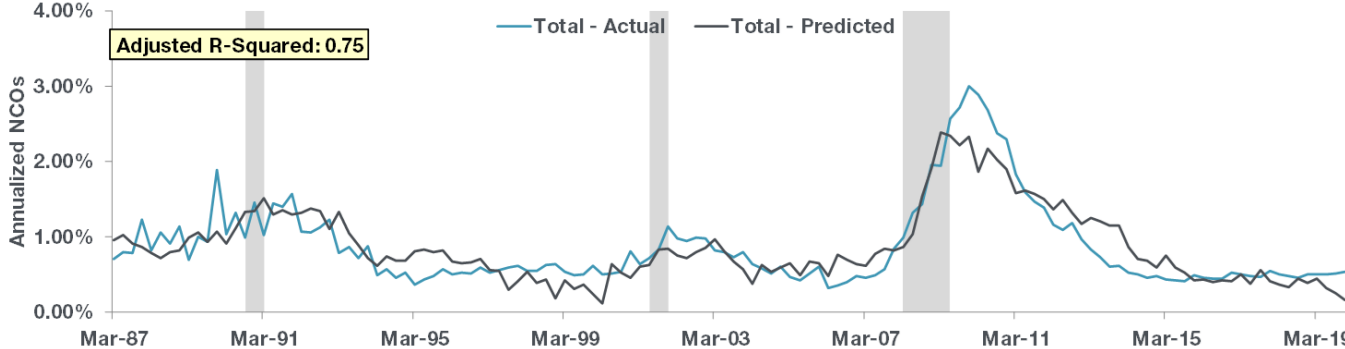
Source: Bureau of Labor Statistics and PSC estimates

**4) PPP limits:** Our greatest economic concern is for the SME universe currently providing 47% of all U.S. jobs, as we mentioned earlier. For the first time in history this lockdown has uniquely and dramatically interrupted their cash flow across the panoply of industrial, geographic, services and product sectors. The Payroll Protection Program (PPP) was wisely developed to address this widespread vulnerability to mass bankruptcies. Unfortunately it may not be enough and was more designed as an alternative to unemployment benefits. The first \$350 billion tranche only reached 1.5 million SMEs. The second \$310 billion has gotten off to a slow start but is apparently reaching the smaller SMEs. We think it could reach another 2.5-3 million SMEs, but the total penetration will still be a modest at 15% at best. There are 30.1 million SMEs in the U.S.

**5) Regression analysis of credit losses:** We see significant, perhaps unexpected damage in both commercial & industrial as well as commercial real estate portfolios emanating from the lock down. Portfolio residential loans should not be anything like the epicenter they were for banks in the financial crisis, but secondary residential markets are at risk via the nonbank mortgage players, which now dominate originations and servicing.

We believe banks are still potentially significantly under-reserved. Even after CECL adoptions in January and their further reserve additions last month, the average bank only has a 1.1-1.5% loss reserve ratio to loans.

Substantially more will likely be needed and recorded over the next two quarters. Our conclusion stems from the application of our proprietary multi variable regression model, created by our bankers, when we input the above outlook for jobs and GDP. This model seeks to predict cumulative loan losses over the next six quarters. The historical correlation beginning in 1987 is a respectable 0.75 R-Squared as the following exhibit illustrates.



Source: FDIC and Piper Sandler model

The theoretical calculation result is for a 6.3% cumulative six quarter loss, akin to the most recent, severely adverse DFAST over eight quarters. Commercial & industrial as well as construction & development are the outliers, as expected. Several macro variables comprise the inputs, not all of which are relevant to individual loan sectors, and the individual correlations vary. Nonetheless, the necessary reserving is four-fold higher than existing reserves based on our essentially severe macro assumptions. Other levels of reserving can be calculated using lower prevailing macro assumptions such as Moody’s. This version clearly fits a severely adverse environment, which we believe we are in.

Industry Ratios	R-squared	Cumulative Losses (bp) 2Q20-3Q21	Severely Adverse 2019 DFAST (bp) 1Q19-1Q21
Construction & Development	0.75	931	640
Single Family	0.76	314	200
Commercial Real Estate	0.67	186	640
Commercial & Industrial	0.56	791	630
Credit Cards	0.44	1,247	1,680
Consumer and Other	0.53	906	470
<b>Total</b>		<b>627</b>	<b>630</b>

Source: Federal Reserve and Piper Sandler model

Historical regression models have their limits. It strikes us that the CRE projection is potentially light and that the residential mortgage projection is potentially heavy. The comparability in totals supports reasonableness in the model and our assumptions. Some optimists have argued the losses could be similar to the financial crisis. The result here is three-fold higher, so we obviously conclude otherwise. The financial crisis then was more the result of capital and liquidity deficiencies, although actual loan losses were elevated, particularly in non-prime mortgages. The current situation is fundamentally different, unprecedented and the potential loss damage is likely much higher.

The good news is that banks carry substantially higher levels of capital, as well as higher pre-provision profitability. While we see record losses we do not necessarily see a record need for capital raising. In some cases banks will

need to raise additional debt and preferred, while others will require equity capital top ups. More dividend cuts are also in the offing.

The level of loss reserve additions in the next two quarters could well exceed first quarter hikes. Actual losses are more likely to begin in the third quarter. But by the fourth quarter, reality should have set in along with higher reserves and whatever capital actions are necessary. This will be the buying opportunity, if not beforehand if the magnitude of loss content becomes apparent earlier.

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