Commentary
Global Cash Management

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Credit Research Update

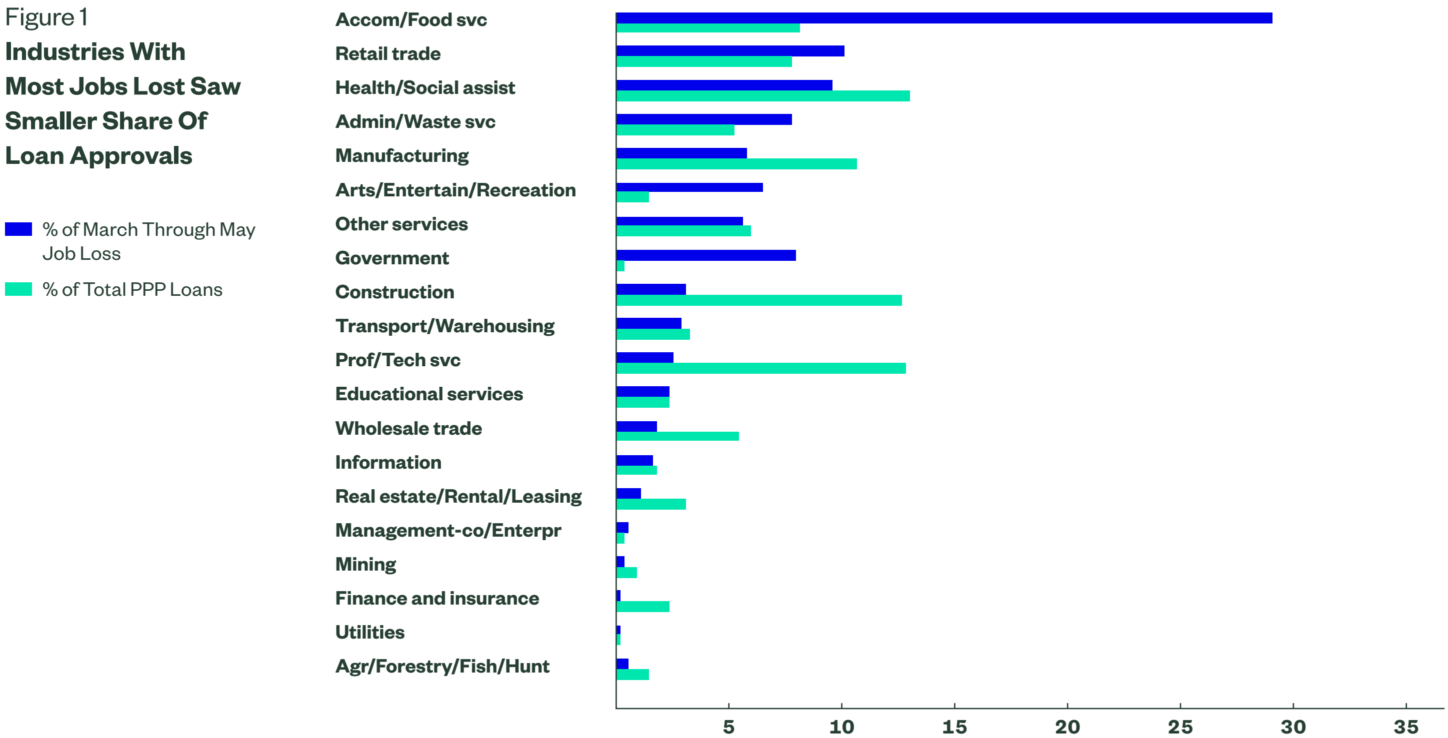
Peter Hajjar
Head of Cash and Structured Credit Research
Fixed Income, Cash and Currency

By the beginning of the second quarter, it was clear that the global economy would experience the deepest recession since World War II. Yet some recent data releases from the US, Europe, Canada, Australia and China have given hope that it could also be one of the shortest. Despite these economic green shoots, there is still a wide growth gap to make up before the economic damage from Coronavirus is fully recovered.

While the precise depth of the global recession is becoming increasingly clear, the pace of the recovery will be the determining factor in full credit cycle developments. Forecasters that predict a historically short recession with a relatively strong recovery, hinge expectations on the view that global policymakers have learned from 2008–2009 and have unleashed a fiscal and monetary policy response of an entirely different scale and magnitude. The G4 central banks will expand their balance sheet collectively by 28% of gross domestic product (GDP) in this cycle, compared with the 7.1% from September to December of 2008 during the Global Financial Crisis (GFC). Headline fiscal deficits across the G4 and China will also widen to a historical high of 16.9% of GDP in 2020, up from 5.6% in 2019.[1] Importantly, the magnitude and scope of the monetary and fiscal response continues to evolve on an increasingly proactive trajectory, even as financial markets demonstrate periods of positive trends. Still, we have to recognize the epidemiological risks that no one can accurately handicap at this point, and realize that the global economic recovery is continuously fragile.

It is a sensible base case that the Coronavirus will be a factor for developed market economies for quarters to come, and there will be periodic fluctuations of infections and hospitalizations, accompanied by selective lockdowns. We've seen market reactions when the virus spread accelerated in some US states during recent weeks. However, Capital Economics observed that "an increase in hospital capacity and better preparedness at the state and local level means we are still a long way from renewed fears of hospitals systems being overwhelmed which motivated widespread restrictions in the Spring" and "infections and deaths have remained stable or trended lower in most states, despite a gradual return to normalcy, as well as mass protests in recent weeks".[2] Elsewhere in developed world markets (Europe, Australia, Canada), the transition to economic openings has been less volatile from a health perspective, relative to the US. However, the risk of a repeat of the strict lockdown measures implemented earlier this year will persist and represent a significant risk to the prospects of a recovery. Even if such scenarios are largely avoided, there is risk that economic damage already absorbed may serve as a lasting headwind to a strong, sustained recovery. Sticking with an example in the US, the Paycheck Protection Program (PPP) was designed by the Treasury department to help small- and medium-sized businesses (SMB) weather the economic downturn during the pandemic and incentivized them to keep employees on the payroll. Given SMBs account for ~50% of total employment in the US economy,[3] the health of this business segment is extremely important to the economic recovery. However, research conducted by S&P Global Ratings indicates that only ~42% of PPP loans were approved to service industries significantly affected by social distancing, and that there has not been a strong correlation between the industry-specific distribution of funds and the amount of job losses in industries.

Figure 1
Industries With Most Jobs Lost Saw Smaller Share Of Loan Approvals



Source: S&P Global Economic Research; "The Paycheck Protection Program Update"; 06/12/2020.

While the opening of some US states will likely help many businesses in the service sector survive, it remains unclear how many of these companies will survive the first stage of the sudden stop recession. There is still a long way to go and this data indicates the unemployment rates will likely remain elevated in the US, for an extended period of time. These factors will make the climb back to pre-pandemic economic levels materially steeper in the US. We'd note that very similar dynamics are evolving in most developed market economies (EU, EUK, Canada, Australia, Japan), as various forms of subsidized or guaranteed business loan programs, and wage-protection schemes, have been launched and are ongoing. There is no question that these programs will have a positive macroeconomic impact, but it remains highly uncertain how efficient funds distribution from these programs will be with regard to saving businesses. Further, results may vary from country to country, so it's something that our credit research team will be monitoring closely.

As the State Street Global Advisors' Global Cash investment universe is most concentrated in debt issued by large banks and financial institutions, we always consider the condition of the credit cycle within that context. As noted in our last quarterly publication, the current recession certainly wasn't triggered by factors related to global bank balance sheets. Nonetheless beginning in March we had to assess the impact an economic sudden stop and the onset of a deep global recession on the credit profiles of banks in our approval universe. The situation prompted immediate adjustments to our credit approval list, most frequently through changes in the maturity restrictions we place on approved investment counterparties. Detailed assessments of each issuer were made and the degree of adjustment varied. For example, banks exhibiting higher-risk in their corporate loan books (especially for obligors whose business is most immediately impacted by the pandemic — energy, travel/leisure, retail, etc.), relatively weaker capital levels and/or pre-virus challenged business models often experienced the most pronounced maturity restriction adjustments.

Earnings releases from major global banks in April and May allowed our team to further assess the implications of the pandemic on the credit profiles of our approved investment counterparties. While the announcement of materially higher loan-loss provisions made financial-press headlines, it was the disclosure detail around those provisions which was most valuable to our team in further assessing credit profiles. We looked most favorably on banks that provided enhanced transparency on:

- Loan portfolios (industry, capital structure, collateralization, underwriting considerations)

- The impact of the government and central bank support programs (direct-to-consumer payments, payment holidays, corporate/SMB lending) on loan portfolios

- Details related to the assumed macroeconomic conditions that went into the banks' own scenario analyses when determining provisions

Enhanced disclosure allows our team to assess the adequacy of the stated provisions, as well as the potential to assess capital levels for ourselves, using our own proprietary models.

The major banking systems were only modestly impacted by the first leg of the Coronavirus crisis due to fortified balance sheets (high capital levels, conservative liquidity and funding profiles) and central bank support. Yet the prospects of materially higher loan losses and a prolonged period of low interest rates pose a massive headwind to future earnings, which provide absorption capacity for credit losses and are an organic source of capital build. Our credit research team's base case does not assume a V-shaped recovery in the global economy, and as such, we favor banks that have provisioned conservatively, thus far, as this conservatism reduces balance sheet risk if the recovery is muted and volatile. In our view, the US, UK, Australian and Canadian banking systems generally fit this description. Many European banking systems have been less conservative in provisioning, to date. Of course, the effectiveness of the plethora of consumer and business support programs implemented by global governments and central banks will be a key determining factor in the adequacy of bank loan-loss provisioning. For example, the ECB estimates that government-guaranteed business loan programs throughout Europe may absorb as much as 65% of corporate losses from European banks.[4] If this estimate proves correct, then perhaps European bank provisioning is more conservative than it looks, but we remain skeptical until we see more evidence. The release of second quarter earnings in July should provide some clarity on these issues. Our credit research team will continue to assess our estimates for bank capital adequacy, provision build, and profitability expectations, and we will continue to adjust our credit approval list based on these assessments.

Financial Institutions

United States

A broad economic shutdown caused by the Coronavirus pandemic saw the US economy enter a steep recession in February and unemployment surge at an unprecedented pace during the second quarter. While consensus coalesced with the second quarter, representing one of the sharpest contractions in economic activity in modern history, some positive data surprises later in the quarter seem to have alleviated concerns around worst-case outcomes. In financial markets, debt and equity valuations fell violently during the first quarter but then rebounded sharply in the second quarter on the back of both precedented and unprecedented monetary and fiscal stimulus, the latter of which has provided much needed income and liquidity support to the private sector. The role of the Federal Reserve (Fed) and other central banks as a relief valve in financial markets should not be understated as it relates both to bank creditworthiness and market risk generally. While US bank credit spreads continue to trade wider than they did pre-crisis, they have retrenched considerably from their peak and outperformed industrials during the second quarter. Nevertheless, there remains considerable uncertainty around the outlook and at minimum we expect that the impacts of this recession will be long lasting for the economy and the banking sector.

Compared to 2008–2009, US banks have helped to moderate the economic downturn rather than amplify it and have become agents of government policy. First quarter results released in April revealed just how much banks have used their balance sheets to help facilitate lending despite detrimental impacts on capital, which declined on balance. Despite torrid loan growth driven by commercial borrowers, bank liquidity levels were robust and improved materially driven by significant deposit inflows. From an operating standpoint, first quarter results were characterized by substantial reserve-building given both the implementation of a new accounting standards and the onset of a deep recession. Asset quality and reserve adequacy will remain in the spotlight for the foreseeable future with first quarter results representing the calm before the storm. In the short term however, the market appears to be looking past second quarter earnings, which will see another round of heavy reserve building and will rather be looking for evidence of underlying borrower health. For the largest banks, a key difference from 2008–2009 is that capital markets revenues have been very strong this cycle, supported by Fed intervention, and helpful in offsetting higher credit costs and declining net interest margins. The risks seem more skewed to the downside for smaller and less diversified regional banks for this cycle.

Looking ahead, there is still significant uncertainty around the shape of the economic recovery and the ability of businesses, both small and large, to effectively restart their operations until demand fully recovers. The challenges appear particularly acute in the small business community. As banks have both direct and indirect exposures to many of these businesses and their employees, trends will be watched carefully. However, since stimulus packages and bank deferral programs are so prominent, they obscure visibility into underlying economic and credit quality trends. We believe clarity on bank asset quality and on the ultimate economic fallout of Coronavirus is unlikely for several quarters. While many bank management teams have been quick to cite green shoots related to consumer spending, commercial loan paydowns, deferral requests and the percentage of customers in deferral making payments, the duration of the Coronavirus crisis and the degree of ongoing fiscal support will influence net charge-off order of magnitude this cycle. For banks, a key risk would be a steep and prolonged recession — a severe double-dip recession — which causes higher-than-expected losses, but we view another full-scale economic shutdown as unlikely and believe that additional stimulus should be forthcoming as needed including to mitigate policy cliffs such as unemployment benefits and other government programs.

Europe

Government intervention and accommodation were the dominant themes of earnings season for European banks. Having been through two prior crises (2007 subprime residential mortgage-backed securities and 2010 EU sovereigns), regulators wasted no time reacting. Rapidly deploying rate cuts, substantial fiscal stimulus, unemployment assistance and relaxing financial rules. For banks this included halting equity dividends, loosening capital buffers and encouraging consumer debt moratoriums. This is to ensure banks have ample lending capacity to support the economy.

These government actions blunted the initial crisis impact for banks in the first quarter but make for a grim 2020 outlook. At the top-line, lower rates and the drop in economic activity (fees, card payments, etc.) will curtail revenue. Pre-planned expense cut goals will now be more challenging to meet given the additional costs required to enhance technology systems due to the work-from-home shift and the pressure to expediate digital banking capabilities. Finally, loan losses are expected to surge in the Fall when six-month payment moratoriums end.

We expect that banks will struggle to stay above break-even in 2020, but that this deterioration will largely be confined to shareholder returns. Bondholders benefit from the banks entering this crisis with improved capital positions as well as the aforementioned government support. On the positive side, first quarter trading losses from the plunge in market values were manageable, skewed to French banks, from their overweights to equity structured products. Balance sheet increases from corporate drawdowns were not an issue. For the most part, all the increase in risk-weighted assets from drawdowns, higher market risk, and/or credit risk were offset by the cancellation of equity dividends. Winners (a loose use of the term) in this environment look like diversified investment banks, who are able to take advantage of the volatility and wider bid/ask spreads and to a lesser extent retail mortgage banks. Those with large, prime mortgage books should suffer the least loan losses in 2020. However this outperformance will be tempered by the medium — to long-term impact of lower rates cutting into already thin mortgage book margins.

Canada

Canadian banks reported relatively weak quarterly results in May featuring average net income down by nearly half year-over-year driven by substantial provisions for credit losses. On an underlying basis excluding credit costs, pre-tax pre-provision earnings growth was decent overall and supported by strong results in capital markets and higher loan balances. Liquidity levels rose on the back of substantial actions taken by the Bank of Canada including various programs to improve funding market conditions. Fiscal policies have also been significant in providing income and liquidity support consumers and businesses. Since Canadian banks report off-cycle, asset quality began to show greater signs of weakness than US peers, particularly in commercial lending, and capital levels generally fell reflecting balance sheet growth. Asset quality deterioration was most notable across oil and gas exposures which are manageable at 1%–3% of loans but still likely to cause additional headaches. In our view, while economic growth in Canada is highly correlated with that of the US, private sector debt concerns are more prominent in Canada since it did not endure a deleveraging cycle post-crisis. An example of this would be mortgage deferral rates in Canada which are a larger proportion of balances relative to the US, though this also may speak to a very strong coordination between banks and policy makers which we view as an advantage. Looking ahead, the Bank of Canada's annual Financial Stability Review indicates that significant fiscal support provided to the economy in 1H20 should serve to materially reduce peak loan losses this cycle, all else equal, with additional support likely to be forthcoming as needed to support the recovery.

While Canadian banks outperformed global banking peers in 2008–2009, the impacts of the current recession appear more wide-ranging with credit losses hinging on the duration and depth of the crisis. Positively, May's unemployment report came in better than expected and alleviated concerns around worst-case credit outcomes. Still, like in other jurisdictions, various government programs and bank deferrals are obscuring underlying economic and asset quality trends. Though it is possible that provisions have peaked, forward guidance has been inconstant. While we expect reserve-building to continue next quarter, the market's attention will be focused on the impact to capital levels from lower earnings and the inflation of risk-weighted assets. One point of differentiation for Canadian banks is that roughly a third of residential mortgage loans, and the riskiest from a collateral perspective (i.e. borrowers with <20% down payment), are insured by the government. Still, the proportion of insured loans has declined in recent years and the banks do have sizable unsecured consumer lending books. In our own internal stress testing, we find that banks can absorb very significant losses and risk weighted asset inflation, supported profitability levels, and the Bank of Canada agreed during its recent Financial Stability Review. Still, Fitch placed the Big 6 banks on negative outlook in April.

Australia

Three of the four major Australian banks reported their half-year results and one provided a quarterly update. Unsurprisingly, earnings fell because of large increases in credit costs for provisions as well as, in some cases, charges for non-recurring items. Setting aside provisions, underlying operating results were highlighted by anemic revenue trends and a pick-up in loan growth driven by corporate/commercial clients. While capital levels were down modestly, the banks have taken a more conservative stance on shareholder payouts and one bank raised common equity. Disclosures around potential risk-weighted asset inflation was a key takeaway of the results and will become more important as forbearance arrangements are withdrawn and overall asset quality weakens. Looking ahead, all eyes will be on the severity of the loan loss cycle. While risks remain in non-housing loans, commercial real estate growth has been dominated by foreign banks of late (though exposures remain material) and consumer unsecured lending exposure is low. Above all else, the hope is that a sharp, broad-based downturn in the housing market can be avoided given the size of these exposures on bank balance sheets, though losses here have historically very low given strong collateralization.

From a credit standpoint, it is notable that coming into this Coronavirus downturn the Big 4 Australian banks faced more onerous capital requirements and have been de-risking over the past five to six years. Credit growth had slowed considerably on the back of macroprudential measures in the housing market and implications following a government inquiry in to banking sector misconduct. Positively, behind wide-ranging fiscal and monetary policy responses this cycle, the path ahead appears more promising in Australia (and New Zealand) than for other countries as infection rates have fallen and have been well-contained, economies are being actively re-opened in stages and consumer confidence has returned to near pre-Coronavirus levels. As well, the Reserve Bank of Australia recently suggested the downturn might be shallower than it originally thought and revised down its expectation for the JobKeeper wage subsidy program, suggesting businesses are coping better than expected. While the unemployment rate spiked to 7.1% in May, which was above consensus, Australia's first quarter GDP decline outperformed several other developed economies. Moving into the back-half 2020, the legislated end to the JobKeeper program in late September — which coincides with the end of mortgage deferral periods — is an important risk though we expect continued support from policymakers to help bridge the gap. A risk to the banks would be a prolonged downturn with historically elevated unemployment remaining over the medium-term.

Asia

The three Japanese megabanks reported their quarterly results and issued guidance for FY21, which will be weaker than FY20. In general, earnings continue to feel strain on an underlying basis reflecting perpetually low rates and downward pressure on net interest margins, which has been the case for quite some time. Rising credit costs resulted in greater pressure on bank profitability this period and this is expected to continue. In our view, credit performance this cycle is likely to hinge on overseas loan books which have accounted for virtually all lending growth over the past decade for the Big 3. Conversely, domestic loan growth has been dominated by regional lenders where competition is fierce and risk-taking appears to be greater. While Big 3 lending exposures are typically oriented towards larger investment grade-rated corporate borrowers and the banks do relatively little unsecured consumer lending, this could also result in large, lumpy losses. Based on recent guidance, estimated credit costs from a group of major banks appeared lower than many had assumed though much will depend on the duration of the pandemic and the pace of return to normalcy.

From a credit standpoint, while a range of support measures from the Japanese government should help domestic borrowers, they are unlikely to be a panacea. The upshot is that Big 3 capital levels have improved significantly post-crisis even when excluding large unrealized securities gains. However, the fall in investment securities values during the most recent quarter illustrates the volatility inherent in unadjusted Tier 1 capital levels. While holdings of high-yield bonds are small, Japanese banks do have exposures to collateralized loan obligations (almost all AAA-rated), other structured products, domestic/foreign bonds, real estate investment trusts and some equities. The Bank of Japan (BOJ) expressed concerns over losses on these investments but believe they are likely to be more than offset by gains on banks' large holdings of government bonds. As well, their analysis of a scenario like 2008–2009 indicated that the Big 3 can work through a crisis with significant hits to profitability while remaining adequately capitalized. In loans, the BOJ believes the bulk of losses would arise from lower rated exposures, including energy loans and that offshore loans would see a higher loss rate than domestic loans.

Figure 2
Asset-Backed Securities (ABS) — US

Asset Type (in millions)	YTD 2020 ($)	YTD 2019 ($)	Δ (%)
Credit Cards	2.3	12.6	-81.7
Autos	43.9	60.5	-27.4
Student Loans	7.5	6.5	15.4
Equipment	6.5	9.4	-30.9
Floorplan	0.4	5.4	-92.6
Unsecured Consumer	3.1	7.5	-58.7
Other	6.4	15.2	-57.9
Total	**70.1**	**117.1**	**-40.1**

Source: JPM BAS Weekly Volume Data Sheet; 06/12/2020.

US Consumer ABS Credit Spreads (in bps)	As of 06/12/2020	As of 03/19/2020	Δ
2 Yr AAA Auto	25	200	-175
2 Yr AAA Credit Card	20	180	-160

Source: JPM Research — ABS Weekly Spreads; 06/12/2020.

Given the pandemic's impact on US car buying, consumer lending and consumer spending, particularly during March and April, it is not surprising that 2020 primary market issuance activity has been materially lower on a year-over-year basis. However, issuance pace has picked up materially over the past month as the economy has re-opened. In addition, and driven by the extraordinary level of support made available by Federal Reserve to debt capital markets, US ABS spreads have now retraced most of the spread widening experienced during the March market crash.

For the benchmark auto and credit card asset classes, we continue to expect significantly weaker loan pool credit performance, given the spike in US unemployment. However, the unprecedented level of stimulus and pervasive consumer relief programs should help reduce the sensitivity of credit performance to the increase in unemployment. The initial effectiveness of these programs is evident, as negative developments in auto and credit card ABS loan performance has been only modest through May. For example, Bank of America's Auto ABS surveillance data shows that for May the prime auto loan benchmark delinquency rate decreased by 19 basis points (bps) year-over-year to 1.27% while the net loss rate increased by 22 bps year-over-year to 0.71%. The delinquency rate has surely been impacted by deferrals which keep borrowers current. Going forward, we expect the delinquency rate to continue to increase, though the peak may be delayed until the second or third quarter as lenders offer temporary payment forbearance or deferrals[5]. Similarly, for the credit card surveillance data, benchmark charge-offs stand at 2.5% through May, which is at the low end of the index's historical range. However, the expected persistence of elevated unemployment will ultimately result in higher delinquencies and defaults, even as lenders offer modifications. We note that the index's monthly payment rate is currently down 467 bps year-over-year, indicating early signs of some stress in consumer credit line utilization.

We are preparing for loan pool performance in US ABS to weaken to levels seen during the 2008–2009 US recession, with balanced risks for better or worse outcomes, driven by the duration of the recovery. It is important to reiterate that ABS structures for the asset classes most prevalent today proved very resilient during the 2008–2009 recession, even with regard to credit rating stability. We would expect similar results during this recession, especially for auto and credit card issuers, as ABS structures are even more robust than they were in 2008–2009. However our confidence is far greater in this regard at the top of the capital structure (AAA-rated) and for top-tier sponsors. Subordinated bonds as well as lower-tier sponsors are more vulnerable to any credit weakness, in our view. Since the onset of the pandemic, we've seen credit rating stability for AAA-rated ABS, even as rating agencies have materially increased expectations for collateral pool performance deterioration and factored that into ratings. As we saw during 2008–2009, we have already seen sponsor support for certain asset classes. For example, BMW, Daimler and Nissan amended payment rate triggers and added credit enhancement to its outstanding auto floorplan ABS trusts, even with ratings unchanged, and in order to mitigate risk of future ratings downgrades. Such action underscore the importance of sponsor financial health during challenging times and the need for ABS credit spread tiering based on seller/servicer risks, particularly down in the capital structure and/or in off-the-run asset classes.

Non-Financial Corporate/Industrial — Global

For US non-financial corporates, the timing of first quarter earnings (books generally closed on 03/31) was such that the full-impact of the pandemic could not be assessed. Revenue and operating profit growth was still positive on a trailing four-quarter basis for the non-energy, non-financial US investment grade issuers at the end of the first quarter. However, prior recessions would suggest operating profit declines of 20% to 30% for the broad universe over the next few quarters. Total debt grew +6% year-over-year amid heavy late-quarter issuance in the universe. Gross and net-leverage levels were broadly flat, but these positive trends are unlikely to last, given the massive wave of investment grade debt issuance that has ensued since the end of the quarter.[6] To describe the new issuance pace for US investment grade companies in April, May and June as "blistering" would almost be an understatement. Year-to-date issuance has already exceeded 2019's full year total of $1.1 trillion. Net supply has been dramatically elevated as well, as issuers raised cash to build war chests for the recession. Nearly all of the largest US investment grade corporate borrowers accessed primary markets already in 2020. Initially, borrowers were raising cash to counterbalance declining revenues. However, more recently it seems that issuers are accessing primary markets more opportunistically. Bond call and tender activity has increased materially as issuers can now take advantage of yields that are near all-time lows. Supply could normalize as the year continues, especially if companies become more cautious on furthering increasing leverage, as we expect. The merger and acquisition pipeline also remains quite low, likely coinciding with still-low CEO confidence.

As noted in our last quarterly update, the credit rating agencies (understandably) were very active with negative rating action at the onset of the pandemic. However, the pace of US investment grade rating downgrades continue to subside, although nearly $100 billion of investment grade debt still saw at least one ratings downgrade in May. While credit deterioration has slowed in the investment grade universe, there remains over $600 billion of BBB/BBB — debt that carries either a watch for downgrade or a negative outlook from at least one agency.[7]

European investment grade primary market issuance pace has also been blistering. Consecutive months of +€100 billion issuance is also historical. However, by some metrics European investment grade non-financial corporates have built a cash hoard even larger than US companies, which could lead to a far slower pace of issuance for the rest of the year. JP Morgan European Credit Research has estimated that European non-financial investment grade companies have grown their ratio of average cash/operating income to +90% (cash levels almost equal to last year's earnings). This could build a more resilient corporate sector, which is good news for creditors, despite the continued risks associated with the unknown pace of economic recovery.[8]

Of course, the respective central banks, Fed and European Central Bank (ECB), are largely responsible for creating the conditions that encouraged issuers to use the primary market in such historical volumes. Moreover, the central banks continue to adjust support programs proactively. Recently, the Fed announced a new phase of its corporate bond purchase plan, whereas it will purchase "a broad portfolio of secondary bonds from US-based issuers. Crucially, they will not require issuers to self-certify that they meet the program's issuer requirement and that they did not receive aid from the CARES act. The self-certification requirement was a potential roadblock that some believed would prevent the bond buying from ever getting off the ground in material volume. Further, purchases of individual bonds will help the Fed prolong the effective life of the facility and fully utilize its capitalized capacity. Also demonstrating adjustment and adaptability, the ECB announced the expansion (in size and duration) of its Pandemic Emergency Purchase Program (PEPP). In combination with its pre-pandemic investment grade corporate credit purchase program (the Corporate Sector Purchase Program), the ECB now has enough purchase power to take holdings up to ~35% of the eligible universe by June 2021.[9] Further, the ECB left open the possibility to further expand the PEPP, to even make recent "fallen angels" eligible, if conditions merit that move.

Endnotes

1 Morgan Stanley Research: Global Mid-Year Outlook; 06/14/2020.

2 Capita Economics; US Economics Update; 6/17/2020.

3 Deutsche Bank Research; 05/21/2020.

4 BoA Global Research; European Bank Strategy; "Bond Boom: Bank Tail Risks Reduced"; 05/29/2020.

5 BoA Global Research: Consumer ABS Alert; 06/02/2020.

6 Citigroup Research: US High Grade Credit Strategy, Market Dashboard, 06/04/2020.

7 Credit Suisse Research; CS Credit Strategy Daily Comment; 06/09/2020.

8 JP Morgan European Credit Research: European Credit Outlook & Strategy 2020 Mid-Year Outlook; 06/17/2020.

9 BoA Global Research, European Credit Strategist; 06/05/2020.

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State Street Global Advisors Worldwide Entities

Abu Dhabi: State Street Global Advisors Limited, ADGM Branch, Al Khatem Tower, Suite 42801, Level 28, ADGM Square, Al Maryah Island, P.O Box 76404, Abu Dhabi, United Arab Emirates. Regulated by the ADGM Financial Services Regulatory Authority. T: +971 2 245 9000. **Australia:** State Street Global Advisors, Australia, Limited (ABN 42 003 914 225) is the holder of an Australian Financial Services Licence (AFSL Number 238276). Registered office: Level 14, 420 George Street, Sydney, NSW 2000, Australia T: +612 9240-7600 F: +612 9240-7611. **Belgium:** State Street Global Advisors Belgium is a branch of State Street Global Advisors Ireland Limited, registered in Ireland with company number 145221, authorised and regulated by the Central Bank of Ireland, and whose registered office is at 78 Sir John Rogerson's Quay, Dublin 2. State Street Global Advisors Belgium is registered in Belgium with company number 701.885.466, and its office is located at Chaussée de La Hulpe 120, 1000 Brussels, Belgium. T: (+32) 2 663 2036, F: (+32) 2 672 2077. **Canada:** State Street Global Advisors, Ltd., 1981 McGill College Avenue, Suite 500 , Montreal, Qc, H3A 3A8, T: +514 282 2400 and 30 Adelaide Street East Suite 800, Toronto, Ontario M5C 3G6. T: +647 775 5900. **France:** State Street Global Advisors Ireland Limited, Paris Branch ("State Street Global Advisors Paris Branch") is a branch of State Street Global Advisors Ireland Limited, registered in Ireland with company number 145221, authorised and regulated by the Central Bank of Ireland, and whose registered office is at 78 Sir John Rogerson's Quay, Dublin 2. State Street Global Advisors Paris Branch is registered in France with company number RCS Nanterre 832 734 602, and its office is located at Immeuble Défense Plaza, 23-25 rue Delarivière-Lefoullon, 92064 Paris La Défense Cedex, France. T: (+33) 1 44 45 40 00. F: (+33) 1 44 45 41 92. **Germany:** State Street Global Advisors GmbH, Brienner Strasse 59, D-80333 Munich. Authorised and regulated by the Bundesanstalt für Finanzdienstleistungsaufsicht ("BaFin"). Registered with the Register of Commerce Munich HRB 121381. T: +49 (0)89-55878-400. F: +49 (0)89-55878-440. **Hong Kong:** State Street Global Advisors Asia Limited, 68/F, Two International Finance Centre, 8 Finance Street, Central, Hong Kong. T: +852 2103-0288. F: +852 2103-0200. **Ireland:** State Street Global Advisors Ireland Limited is regulated by the Central Bank of Ireland. Registered office address 78 Sir John Rogerson's Quay, Dublin 2. Registered Number: 145221. T: +353 (0)1 776 3000. F: +353 (0)1 776 3300. **Italy:** State Street Global Advisors Ireland Limited Milan Branch (Sede Secondaria di Milano) ("State Street Global Advisors Milan Branch") is a branch of State Street Global Advisors Ireland Limited, registered in Ireland with company number 145221, authorised and regulated by the Central Bank of Ireland, and whose registered office is at 78 Sir John Rogerson's Quay, Dublin 2. State Street Global Advisors Milan Branch is registered in Italy with company number 10495250960 — R.E.A. 2535585 and VAT number 10495250960, and its office is located at Via Ferrante Aporti, 10–20125 Milano, Italy. T: (+39) 02 32066 100. F: (+39) 02 32066 155. **Japan:** State Street Global Advisors (Japan) Co., Ltd., Toranomon Hills Mori Tower 25F 1-23-1 Toranomon, Minato-ku, Tokyo 105-6325 Japan. T: +81-3-4530-7380. Financial Instruments Business Operator, Kanto Local Financial Bureau (Kinsho #345), Membership: Japan Investment Advisers Association, The Investment Trust Association, Japan, Japan Securities Dealers' Association. **Singapore:** State Street Global Advisors Singapore Limited, 168, Robinson Road, #33-01 Capital Tower, Singapore 068912 (Company Reg. No: 200002719D, regulated by the Monetary Authority of Singapore). T: +65 6826-7555. F: +65 6826-7501. **Netherlands:** State Street Global Advisors Netherlands is a branch of State Street Global Advisors Ireland Limited, registered in Ireland with company number 145221, authorised and regulated by the Central Bank of Ireland, and whose registered office is at 78 Sir John Rogerson's Quay, Dublin 2. State Street Global Advisors Netherlands is registered in the Netherlands with company number 72421673, and its office is located at Apollo Building, 7th floor Herikerbergweg 29 1101 CN Amsterdam, Netherlands. T: (+31) 20 7181701. **Switzerland:** State Street Global Advisors AG, Beethovenstr. 19, CH-8027 Zurich. Registered with the Register of Commerce Zurich CHE-105.078.458. T: +41 (0)44 245 70 00. F: +41 (0)44 245 70 16. **United Kingdom:** State Street Global Advisors Limited. Authorised and regulated by the Financial Conduct Authority. Registered in England. Registered No. 2509928. VAT No. 5776591 81. Registered office: 20 Churchill Place, Canary Wharf, London, E14 5HJ. T: 020 3395 6000. **United States:** State Street Global Advisors, 1 Iron Street, Boston, MA 02210-1641.