

CHIEF INVESTMENT OFFICE

Investment Insights

Whatever it takes: The U.S. policy response to coronavirus

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The unprecedented shutdown of broad swaths of the U.S. and global economies has prompted an unprecedented policy response. As former Federal Reserve (Fed) Chair Ben Bernanke noted recently, the country is in for a "sharp, short recession," and he sees a "fairly quick rebound" ahead. This optimistic view is based on the expected trajectory of the pandemic case curve and the magnitude and timing of the policy response. The fiscal policy response, the Coronavirus Aid, Relief and Economic Security Act ("CARES Act") is specifically designed to counteract the disruptions from the roughly three-month shock to the economy from the coronavirus. The monetary policy response seeks to end the current financial market disorder and stimulate the economy once this crisis has passed. Here we present a detailed look at the policies that will help shape the post-coronavirus recovery.

The fiscal response is focused on building a bridge over a "sharp, short" valley of recession. Over the next few months, the bill provides support for families and businesses to minimize the chances of a prolonged recession. During the 2008 Great Financial Crisis (GFC), fiscal policy was too little too late, never amounting to more than 2% or 3% of gross domestic product (GDP) in any given year. The main final stimulus in 2009, the American Recovery and Reinvestment Act (ARRA), came when the recession was more than a year old and was applied over a decade. In contrast this stimulus is about 10% of GDP applied in a few months. It is specifically tailored to tide the economy over during a brief shutdown period. Should the shutdown last longer than anticipated, more help is likely.

The panic in financial markets has been addressed by dusting off Fed facilities created in the GFC. New ones have been created as needed. The CARES Act has provided ample funds and legal authority for this "whatever it takes" approach, which has currently calmed markets. Beyond the crisis the Fed has pledged unprecedented monetary stimulus for the indefinite future. The GFC playbook has made this rapid response possible.

Ultimately the timeline of the pandemic will set the timeline for the recovery. Referring to the number of new cases each day, Dr. Anthony Fauci, member of the White House Coronavirus task force, has said, "What you need to see is the trajectory curve starting to come down." Best estimates point to new U.S. cases peaking by mid-April based on the experiences in China, Korea and Italy, among other countries. If that timeline plays out, the dramatic shift in fiscal and monetary policy is likely to put the U.S. economy on a much stronger path through 2021.

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Data as of 3/30/2020 and subject to change.

THE FISCAL POLICY RESPONSE

The problem: A large portion of real economy has been put on hold, as local stay-athome orders and a disruption of business activity have resulted in millions of job losses.

The response: U.S. lawmakers have swiftly responded to the coronavirus economic crisis through various waves of fiscal stimulus, with the potential for further easing if the economic outlook fails to improve. On March 6, \$8.3 billion of emergency funding was authorized, with spending mainly geared toward assisting the health response to the crisis. In the following weeks, President Trump declared a national emergency, unleashing an additional \$50 billion of funding, and the Internal Revenue Service (IRS) delayed the tax deadline to July 15, providing further easing to households and small businesses.

On March 18, a second phase of fiscal stimulus was enacted, estimated to cost around \$100 billion. This expanded stimulus includes sick and paid leave, increased unemployment insurance, free coronavirus testing and other measures.

The latest round of U.S. stimulus, the \$2.2 trillion CARES Act, was signed into law on Friday, March 27, and includes:

- Generously expanded unemployment insurance (\$250 billion), with the federal government to provide an extra \$600/week per individual on top of states' payouts. The legislation also extends the maximum number of weeks to receive unemployment insurance by 13 weeks, and expands eligibility to include gig workers, self-employed people, and voluntary job-leavers for coronavirus-related reasons.
- Recovery rebates to individuals (\$290 billion). \$1,200/\$2,400 provided to individuals/couples making less than \$75k/\$150k, with a phase-out to \$99k/\$198k, respectively. Plus \$500 per qualified child.
- Loans for small businesses and nonprofits (\$349 billion). Through the Paycheck Protection Program (PPP), loans can be made up to a maximum of \$10 million, or 2.5 times average monthly payroll. Businesses may be eligible to have all or a portion of the loan forgiven, equivalent to the amount spent on payroll, mortgage/rent payments and utility costs during an eight-week period after the loan origination date.
- Industry support for airlines and other significantly affected sectors (\$78 billion). This is done through cash grants and direct lending, with conditions limiting buybacks, dividends and executive compensation.
- Added Treasury capital to backstop the Fed's lending facilities (\$454 billion).
 To be used to support short-term lending markets, corporate bond markets, state and local government lending as well as small and mid-sized business lending in a new Main Street Lending Program (see monetary policy section below).
- **Appropriations (\$340 billion)** for hospitals and health systems, veterans care, food security programs and other programs.
- Payments to states and territories (\$150 billion) for coronavirus-related relief.
- Additional tax relief measures for individuals and businesses (\$232 billion).

More detailed individual and business provisions of the CARES Act are provided in Exhibit 2 at the end of the report. For more information on the CARES Act and tax implications, please see the latest Chief Investment Office National Wealth Strategies Tax Bulletin, released March 27.

¹ Source: Cornerstone Macro Policy Research, March 26, 2020.

THE MONETARY POLICY RESPONSE

The problem: Growing stress in credit markets; liquidity and funding issues for companies.

The response: The Fed has implemented aggressive monetary stimulus measures, through both traditional tools and its emergency lending facilities. To support the Fed's financing capabilities, the Treasury will provide an additional \$454 billion of capital to backstop lending. This was done through the CARES Act signed by Congress. The Fed can lend against this capital at approximately 10x leverage to provide some \$4.5 trillion in funding to markets. Below we outline some of the major Fed programs implemented in the past few weeks:

Direct monetary policy tools: As a first line of defense, the Fed cut interest rates to the effective zero lower bound (0-25bp) and restarted its quantitative easing (QE) purchases of Treasurys and Agency mortgage-backed securities (MBS). Back in March, amid heightened coronavirus related financial market stress, the Fed was purchasing more in one day (\$125 billion in Treasurys and MBS) than in a month during the GFC. Recently, the pace of asset purchases has been reduced to \$45 billion per day as market functioning has improved.² The Fed has committed to open-ended QE, or purchasing whatever amount is needed to support the markets. These purchases also include agency commercial mortgage-backed securities (CMBS).

In addition to QE and cuts to the Fed funds rate, the Fed has expanded its foreign exchange (FX) swap lines to increase U.S. dollar liquidity in foreign markets; expanded the scope of its repo operations; lowered the discount rate to 0.25% and encouraged direct lending from banks using the discount window; eliminated banks' reserve requirements; and provided other liquidity and capital relief.

Other emergency facilities: The Fed has launched a series of other emergency funding programs spanning multiple markets in order to provide liquidity and keep markets functioning during times of stress. As a side note, the Fed can legally only purchase sovereign and agency debt and foreign exchange, but can work around this limitation by invoking section 13(3) of the Federal Reserve Act and lending against riskier collateral to banks and other organizations, usually through a special purpose vehicle (SPV). There are several emergency funding facilities that the Fed has implemented over the past few weeks:

- Commercial Paper Funding Facility (CPFF)—To help corporations issue commercial paper (CP) in the primary market, the Fed lends to an SPV, which buys commercial paper from eligible issuers via primary dealers. This was expanded to include municipal CP.
- Money Market Mutual Fund Liquidity Facility (MMLF)—To help restore the CP secondary market function, the Fed guarantees funding for dealers to buy secondary market CP from money market funds. This has recently been amended to include some short-term municipal securities and bank certificates of deposit (CDs). Essentially, the Fed lends to borrowers (deposit-taking institutions, bank holding companies, or U.S. branches of foreign banks), which then provide liquidity to money market mutual funds.
- **Primary Dealer Credit Facility (PDCF)**—Through the PDCF, the Fed extends credit to primary dealers of the New York Fed, providing financing for a wide range of collateral.
- **Primary Market Corporate Credit Facility (PMCCF)**—To help corporations raise money in the primary bond markets, the Fed provides credit to U.S. companies through an SPV.

² Source: Evercore ISI, "Fed Pares Back Market-Functioning QE Further," April 9, 2020.

- Secondary Market Corporate Credit Facility (SMCCF)—To help improve trading liquidity in the bond markets, the Fed will purchase corporate bonds and exchange-traded funds (ETFs) in the secondary market through an SPV. The two corporate credit facilities combined will purchase up to \$750 billion in corporate bonds.
- Term Asset-Backed Securities Loan Facility (TALF)—Provides up to \$100 billion
 of lending to support asset-backed security (ABS) issuance. Securitizations include
 Small Business Administration (SBA) loans, credit card loans, auto loans/leases and
 student loans. Eligible collateral was recently expanded to include AAA tranches of
 outstanding CMBS and newly issued Collateralized Loan Obligations (CLOs).
- Foreign International Monetary Authorities Repo Facility (FIMA)—To improve U.S. dollar liquidity in foreign markets, foreign central banks sell U.S. Treasurys to the Fed in exchange for U.S. dollars and agree to repurchase them at a later date.
- Main Street Lending Program—Includes two new facilities to support up to \$600 billion in lending to small- and medium sized businesses. These two facilities will purchase loans from eligible banks originating new loans (through the Main Street New Loan Facility (MSNLF)), or increasing the size of existing loans to businesses (through the Main Street Expanded Loan Facility (MSELF)). In both programs, the Fed lends to an SPV which purchases loans from eligible lenders.
- Municipal Liquidity Facility (MLF)—To help alleviate cash flow stresses of state and local governments, the Fed provides up to \$500 billion in lending to states and municipalities. The Fed will lend to an SPV which directly purchases eligible short term notes.
- Paycheck Protection Program Liquidity Facility (PPPLF)—To improve the
 effectiveness of the Small Business Administration's PPP, the Fed will provide
 credit to financial institutions making loans to small businesses, and take the PPP
 loans as collateral.

In the details: More details of each program are provided in Exhibit 3 at end of this report. In addition, a few important caveats and features of the Fed's liquidity and funding measures should be noted.

Share buybacks/dividends restrictions. Recent stimulus passed by Congress disallows borrowers that receive "direct lending" from the federal government from buying back shares or paying dividends for the term of the loan plus one year after the loan is paid off. It also places limits on management compensation. This definition of "direct lending" applies to the Main Street Lending Program, although the conditionality restrictions likely do not apply to the corporate credit facilities. The terms for the PMCCF were updated last week and do not classify the credit as a "direct loan" subject to the CARES Act restrictions on dividends, buybacks and compensation.

Excluded companies: Companies receiving direct financial aid from another federal program (for example, airlines) cannot participate in the corporate credit facilities (SMCCF, PMCCF).

Time to market of new programs: Given the complexity of the programs, it could take some time to fully roll them out, with the small and medium-sized business facilities likely to take some time to come online. Still, the stimulus unleashed just in the past few weeks has been done at an extraordinary pace, much faster than the policy response during the GFC, when programs were implemented rather sequentially over the course of a year. (See Exhibit 1.)

Exhibit 1: Crisis-Era Stimulus: Then and Now

2008/2009 Global Financial Crisis

Feb 07 - Housing bubble bursts

Apr 07 – Subprime bankruptcies proliferate

Sep 07 – Federal Open Market Committee (FOMC) first cuts rates (to 4.75% from 5.25%)

Oct 07 – Stock market peak

Nov 07 - Treasury creates \$75 billion superfund

Dec 07 - Fed announces US\$ swap lines and term auction facility

Jan 08 – Fed cuts rates a fifth time (to 3%)

Feb 08 - Economic Stimulus Act

Mar 08 - Fed guarantees \$30b of Bear Stearns' assets; Announces PDCF, TSLF

Apr 08 - FOMC cuts rates a seventh time (to 2%)

Jun 08 - Supplemental Appropriations Act

Jul 08 - Housing & Economic Recovery Act

Sep 08 – Fannie/Freddie nationalized; Lehman fails; AIG rescue; AMLF; extend swap lines

Oct 08 – Congress passes TARP; Fed announces Commercial Paper Funding Facility (CPFF)

Nov 08 – Fed announces QE and TALF; Unemployment Compensation Extension Act

Dec 08 – FOMC cuts rates to zero (10th and final rate cut during crisis); auto bailouts begin

Feb 09 – American Recovery and Reinvestment Act (\$787b stimulus), financial rescue plan

Mar 09 – Stock market bottoms

2020 Coronavirus Crisis

Dec 2019 – China confirms first coronavirus cases

Jan 11, 2020 - China reports first coronavirus death

Feb 19, 2020 – S&P 500 peak

March/April 2020

Mar 3 – 50bp emergency Fed rate cut to 1.00%-1.25% target range

Mar 6 - Phase 1 fiscal stimulus: \$8.3b to fight health crisis

Mar 12 – Fed announces it will inject \$1.5t in liquidity

Mar 13 – National emergency declared (\$50b in funding for states)

Mar 15 – Fed cuts rates 100bps to zero, restarts QE (\$700b)

US\$ swap lines, discount window lending encouraged, other easing

Mar 17 – IRS delays tax deadline by 90 days

CPFF (commercial paper), PDCF (primary dealer) Fed facilities

Mar 18 - Phase 2: Families First bill becomes law (~\$100b);

Fed announces Money Market Mutual Fund Liquidity Facility (MMLF)

Mar 19 – Fed announces US\$ swap lines with more central banks

Mar 20 – MMLF expanded to include muni funds/muni collateral

Mar 23 – Fed expands QE (unlimited); Adds agency CMBS to QE; Announces TALF; reduces pricing on CPFF; amends MMLF to include VRDNs/bank CDs; announces corporate bond primary/secondary market facilities; announces new Main Street Lending Facility for small/medium businesses

Mar 27 – Phase 3: \$2.2 trillion CARES Act, includes \$454b of capital for Fed facilities

Trump invokes Defense Production Act

Mar 31 – Fed announces repo facility for foreign central banks to access US\$ (FIMA)

Apr 9 – Fed details \$2.3t in financing to support SMEs, state and local gov'ts; increses size and scope of corporate credit facilities; broadens TALF

(Blue is coronavirus fiscal stimulus)

(Red is stock market events - peak and trough)

Note: PDCF = Primary Dealer Credit Facility. TSLF = Term Securities Lending Facility. ASML = Asset Backed Commercial Paper Money Market Mutual Fund Liquidity Facility. TALF= Term Asset Backed Securities Loan Facility. SMEs= Small and Medium Sized Enterprises.

Source: Bank of America Chief Investment Office. Data as of April 2020.

WHAT LIES AHEAD?

There remains a great amount of uncertainty about the duration of the health crisis, and therefore the long-term effectiveness of these policies. While the \$2 trillion fiscal stimulus should be able to stimulate the economy over the next three months or so, if conditions fail to improve, more will need to be done.

The Fed has already eased up on bank regulations, eliminating the reserve requirement and encouraging banks to reach into their capital/liquidity buffers to boost lending. Further regulatory easing could be another way to soften the economic blow of the coronavirus. Other tools to fight the crisis could include a suspension of tariffs, further expansion of the Fed's lending programs, relief for mortgage servicers, or more fiscal stimulus, with the Fed monetizing the debt in line with 2% inflation targeting. Future fiscal stimulus measures could include an expansion of the small business lending program, an extension of some individual provisions of the CARES Act (extended unemployment benefits and another round of tax rebates), as well as increased funding for state and local governments.

The Fed would likely avoid going to negative interest rates. Of course this is a possibility, but in our view this has not been a productive and effective policy tool to encourage economic activity. The Fed has indicated this is not an appropriate policy for the U.S.

Exhibit 2: Individual and Business Provisions of the CARES Act

	CARES Act: Coronavirus Aid, Relief, and Economic Se	ecurity Act	
	Individual Provisions		
Recovery Rebates	Eligible taxpayers who are not a dependent of another taxpayer will receive \$1,200 (\$2,400 for couples) plus \$500 for each qualifying child. Applies whether or not the taxpayer has any income. Payment to be made as "rapidly as possible," electronically or by check.	The rebate begins to phase-out at adjusted gross income of \$75,000 (\$150,000 for couple). Rebate is reduced by \$5 for each \$100 over these limits. Fully phased out at \$99,000 (\$198,000 for couples).	
Tax-Favored Withdrawals from Retirement Plans (coronavirus-related distributions)	Withdrawals up to \$100,000 during 2020 without 10% early withdrawal penalty for those under age 59½. Eligible if you, your spouse or dependent was diagnosed with coronavirus or experiences certain adverse financial consequences.	Withdrawal may be repaid (to the plan or an IRA) in one or more payments at any time during the 3-year period beginning on the day after the funds were received.	
Existing Loans from Qualified Plans	Existing loans from retirement plans.	Loans from plans with a due date in 2020 will be delayed for 1 year.	
Loan Limit from Qualified Plans	Loan limit from qualified plans increased to \$100,000 from \$50,000 (but cannot exceed plan balance).	Applies only to loans made within 180-day window from passage of CARES Act.	
Waiver of Required Minimum Distributions (RMD)	Temporary waiver of RMD for certain defined contribution plans (such as 401(k)) and Individual Retirement Accounts (IRAs) for 2020.	RMDs for 2020 are waived, as are RMDs for 2019, which were to be taken by April 1, 2020.	
Charitable Contributions	Up to \$300 of charitable contributions can be deducted (above the line) by taxpayers who do not itemize.	This is not a temporary provision. Contribution must be in cash and generally made to public charities.	
Charitable Contribution Deduction Limit for 2020	Can deduct up to 100% of income for certain charitable contributions (25% base for corporations for cash or food inventory).	Individual must make the contribution in cash in 2020 and elect the benefits of this provision. Generally, only for public charities.	
Student Loan Payments	Temporary relief for federal student loan borrowers.	All (federal and federally guaranteed) loan payments (princ and associated interest) suspended for 6 months, through September 30, 2020, without penalty. Covers 95% of stud- loan borrowers.	
Student Loan Payments	Employers can provide student loan repayment benefits to employees tax-free up to \$5,250.	Applies to loan repayments after date of enactment and on or before December 31, 2020. Can be made to employee or to the lender.	
Loss Limitation Modification for Pass- Through Businesses	For sole proprietors and pass-through businesses (S-Corps and partnerships).	For 2021 to 2025 losses, deduction rules liberalized.	
	Business Provisions		
Delay of Payment of Payroll Taxes	Employers and self-employed individuals can defer the 6.2% employer portion of Social Security taxes with respect to their employees.	Deferral applies to payroll taxes for the period from enactment to December 31, 2020, and will be payable: 50% on December 31, 2021, and 50% on December 31, 2022.	
Employee Retention Tax Credit	Certain employers are eligible for a tax credit against their employment tax equal to 50% of qualified wages (up to \$10,000 of wages) paid to each employee. If the business received a loan under the new Paycheck Protection Program (small business loan provisions), the business is not eligible for an Employee Retention Tax Credit.	An employer is eligible for this credit only if they were carrying on a trade or business in 2020 and (i) the operation of that business is fully or partially suspended (for specified reasons) by the government, or (ii) the business has seen a significant decline in gross revenue (50% less than in the prior year), and only until the business recovers to 80% of prior year's revenue.	
Net Operating Losses Modification	Relaxes the limitations on a company's use of losses. Losses from 2018, 2019 and 2020 can be carried back for five years and without regard to a taxable income limitation (thus losses can fully offset income).	Potential for losses to be carried back to tax years when the business was subject to a 35% tax rate (current corporate rate is 21%).	
Increase in Limit on Business Interest Expense	For 2019 and 2020, businesses can deduct interest up to 50% of taxable income (up from 30%).	Special rules apply to pass-through businesses – noted above.	
Qualified Improvement Property	Allows full deduction (write-off) of certain costs associated with improving facilities.	This is a technical correction to the 2017 Tax Reform Act. The change is retroactive back to the original legislation, and therefore businesses could amend their returns to seek the benefit of this change.	
Charitable Contribution Deduction Limits Increased	Corporations can deduct up to 25% of taxable income for certain charitable contributions (up from 10%). Corporations can deduct up to 25% of taxable income for certain charitable contributions of food inventory (up from 15%).	Contribution must be in cash, paid in 2020. Generally, only for public charities. Contribution must be made in 2020. Generally, only for public charities.	

Source: Bank of America Chief Investment Office, National Wealth Strategies. Data as of March 27, 2020.

Exhibit 3: Monetary Policy Stimulus: The Fed's Funding Facilities

The Fed's Funding Facilities					
Program	Date Announced	Goal	Description	Eligibility	Additional Details
Commercial Paper Funding Facility (CPFF)	17-Mar-2020	Help corporations issue commercial paper in the primary market.	New York Fed will lend to a special purpose vehicle (SPV), which will buy 3-month US\$ CP from eligible issuers via the primary dealers.	Eligible purchases: Primarily dollar-denominated CP rated at least A1/P1/F1. Amended to include high-quality, tax-exempt CP. Eligible issuers: U.S. issuers of CP, including municipal issuers and U.S. issuers with a foreign parent company.	Limits per issuer: The greatest amount of US\$ CP that an issuer had between 16-Mar-2019 and 16-Mar-2020. Pricing: 3-month overnight index swap rate + 110 bps; facility fee equal to 10 bps of the maximum amount of its CP that the facility can own. Program termination: 17-Mar-2021
Primary Dealer Credit Facility (PDCF)	17-Mar-2020	Provide dealers financing for a wide range of collateral; to support the credit needs of households and businesses.	The Fed extends low-interest credit to primary dealers of the New York Fed. The dealers provide the Fed with collateral.	Eligible collateral: All collateral eligible for pledge in open market operations plus: investment grade corporate debt securities; international agency securities; municipal securities; mortgage-backed securities; asset-backed securities; certain equity securities; AAA-rated CMBS, collateralized loan obligations (CLOs) and collateralized debt obligations (CDOs); commercial paper.	Term: Up to 90 days. Rate: Primary credit rate via discount window (0.25%). Prepayment: Borrowers can prepay at any time. Loan Size: Limited to the amount of margin-adjusted eligible collateral pledged by the dealer and assigned to the New York Fed's account at the clearing bank. Recourse: Loans are made with recourse beyond the pledged collateral to the primary dealer entity. Program Duration: 6 months (or longer if necessary).
Money Market Mutual Fund Liquidity Facility (MMLF)	18-Mar-2020	Help money market funds deal with redemptions.	Federal Reserve Bank Boston lends to borrowers, who then provide liquidity to money market mutual funds.	Borrowers are U.S. depository institutions, bank holding companies, U.S. branches/agencies of foreign banks. Funds include Prime money market funds. Single-state/other tax-exempt money market funds also added. Eligible Collateral: U.S. Treasurys & Fully Guaranteed Agencies; securities issued by U.S. gov't-sponsorted enterprises; certain asset-backed CP, unsecured CP, CDs; certain U.S. municipal short-term debt added 20-Mar. VRDNs added 23-Mar. Note: Receivables from certain repurchase agreements also acceptable.	Rate: Treasurys/government-sponsored enterprise (GSE) at primary credit rate (0.25%). Municipal at primary credit +25 bps (0.50%). All others primary credit rate +100 bps (1.25%). Collateral Valuation: Amortized cost or fair value. Asset-backed CP, CP, CDs, munis at amortized cost. Credit Protection: Treasury Department provides \$10b credit protection using Exchange Stabilization Fund. Program Termination: September 30, 2020.
Foreign and International Monetary Authorities (FIMA) Repo Facility	31-Mar-2020	Improve liquidity in the Treasury market for Foreign Central Banks. Make U.S. dollars available to foreign markets.	FIMA account holders exchange Treasurys with the Fed for U.S. dollars, which can then be made available to institutions within those banks' jurisdictions.	Eligible Participants: Most FIMA account holders (e.g. central banks and other foreign monetary authorities) with accounts at the New York Fed.	Structure/Pricing: Overnight (but can be rolled over) at IOER + 25 bps (0.35%). Program Duration: At least 6 months.
Term Asset-Backed Securities Loan Facility (TALF)	23-Mar-2020 (updated 9-Apr-2020)	Help restart the Asset Backed Securities (ABS) new issue market.	NY Fed will lend up to \$100B through an SPV, three year term, to be secured by eligible ABS.	Eligible Borrowers: All U.S. companies that maintain an account relationship with a primary dealer. Eligible Collateral: ABS with a credit rating in the highest investment-grade rating category. Auto loans and leases; Student loans; Credit card receivables (consumer / corporate); Equipment loans; Floor plan loans; Insurance premium finance loans; Certain small business loans guaranteed by the Small Business Administration; Leveraged loans; or Commercial mortgages.	Collateral valuation: Collateral will be valued and assigned a haircut specific to its sector and weighted average life. Pricing: CLOs: 30-day average SOFR + 150 bps; SBA Pool Certificates (7(a) loans): top of the FF target range (25 bps) + 75 bps.; SBA Development Company Participation Certificates (504 loans) 3-year FF OIS + 75 bps; All others: 2-year OIS +125 bps for securities with a weighted average life <2 years, or 3-year OIS +125 bps for securities with a weighted average life >= 2 years. Fees: 10 bps of the loan amount. Maturity: 3 years. Prepayable: Yes. Program Termination: 30-Sept-2020.

The Fed's Funding Facilities					
Program	Date Announced	Goal	Description	Eligibility	Additional Details
Primary Market Corporate Credit Facility (PMCCF)	23-Mar-2020 (updated 9-Apr-2020)	Help corporations raise money in the primary bond markets.	The NY Fed lends to an SPV that will purchase bonds and portions of syndicated loans or bonds from issuers. The Treasury Department will make a \$75B equity investment in the SPV to support both the PMCCF and the SMCCF. The combined size will be up to \$750B.	Eligible Assets: Eligible corporate bonds: (1) issued by an eligible issuer; and (2) maturity <=4 years. Eligible syndicated loans/bonds: (1) issued by an eligible issuer; and (2) maturity<= 4 years. The Facility cannot buy any more than 25% of any loan syndication or bond issuance. Eligible Issuers: Investment grade rated U.S. businesses, excluding insured depository institution or depository institution holding companies. 9-Apr-2020: The Fed added Fallen Angels, must be rated at least BB-/Ba3.	Limits per Issuer: Cannot exceed 130% of the issuer's maximum outstanding bonds/ loans on any day between 22-Mar-2019 and 22-Mar-2020. The maximum amount of debt the Facility and SMCCF together will buy with respect to any issuer is capped at 1.5% percent of the combined potential size of the Facility and SMCCF. Pricing: Eligible corporate bonds: Issuer-specific with a 100 bps facility fee. Eligible syndicated loans and bonds: The same pricing as other syndicate members + a 100 bps facility fee. Program Termination: 30-Sept-2020.
Secondary Market Corporate Credit Facility (SMCCF)	23-Mar-2020 (updated 9-Apr-2020)	Help improve trading liquidity in the corporate bond/Exchange- Traded Fund (ETF) markets.	The NY Fed lends to an SPV that buys corporate bonds/ ETFs in the secondary market. The Treasury Department will make a \$75B equity investment to support the Facility and the PMCCF. The combined size will be up to \$750B.	Eligible Assets: Eligible Individual Corporate Bonds: (1) were issued by an eligible issuer; (2) maturity <= 5 years; (3) sold by an eligible seller. Eligible ETFs: U.Slisted ETFs whose investment objective is broad exposure to the U.S. corporate bond market, including high-yield corporate bonds. 9-Apr-2020: the Fed added high yield corporate bonds as eligible ETFs. Eligible Issuers for Individual Corporate Bonds: U.S. businesses, excluding insured depository institutions and depository institution holding companies. Rated investment grade. 9-Apr-2020: The Fed added Fallen Angels, must be rated at least BB-/Ba3.	Limits per Issuer/ETF: 1.5% of the combined potential size of the Facility and the PMCCF, for any one issuer (new on 9-Apr-2020); 10% of the issuer's maximum bonds outstanding on any day between 22-Mar-2019 and 22-Mar-2020; 20% of the ETF's outstanding shares. Pricing: Corporate bonds to be bought at fair market value. The Facility will avoid buying ETFs at prices that materially exceed the NAV of the underlying portfolio. Program Termination: No later than 30-Sep-2020.
Municipal Liquidity Facility (MLF)	9-Apr-2020	Provide short term financing to state and local governments.	The Fed lends to an SPV which buys debt from eligible states and municipalities. The facility will offer up to \$500B in lending, with \$35B of credit protection from the Treasury.	Eligible Notes: 1) tax anticipation notes; 2) tax and revenue anticipation notes; 3) bond anticipation notes. Other similar securities maturing no later than 24 months from issuance are also eligible. Eligible Participants: Lending can be provided to U.S. states (incl. the District of Columbia), U.S. counties with a population of at least 2mm, and U.S. cities with a population of at least 1mm. Only one issuer per State, City, or County is eligible.	Limits: Up to an aggregate amount of 20% of the general revenue of the State/City/County government for FY 2017. States may request SPV purchase notes in excess of limits to assist issuers that are not eligible for the facility. Pricing: Based on credit rating. Origination Fee: 10 basis points. Call Right: Callable at any time at par. Program Terminaton: 30- Sept- 2020.
Main Street New Loan Facility (MSNLF)	9-Apr-2020	Facilitate lending to small and medium-sized (SMEs) businesses.	The Fed lends to an SPV, which buys 95% participations in loans from eligible lenders, with the lender retaining 5%. The Treasury will make a \$75B equity investment in the single common SPV in connection with the Facility and the MSELF (Expanded Loan Facility). Combined size of the MSNLF/MSELF will be up to \$600B.	Eligible Lenders: U.S. insured depository institutions, U.S. bank holding companies, and U.S. savings and loan holding companies. Eligible Borrowers: U.S. businesses with up to 10,000 employees or up to \$2.5B in 2019 annual revenues. Borrowers cannot also use the MSELF or the Primary Market Corporate Credit Facility. Eligible Loans: Unsecured term loans made on/after April 8, 2020, that also have: 1) 4 year maturity; 2) Amortization of principal and interest deferred for one year; 3) Adjustable rate of SOFR +250-400 bps; 4) Minimum loan size of \$1mm; 5) Maximum loan size that is the lesser of (i) \$25mm or (ii) an amount that, when added to the borrower's existing outstanding and committed but undrawn debt, does not exceed four times the borrower's 2019 EBITA; and 6) No prepayment penalty.	Required Attestations: 1) Lender not to use loan to repay or refinance pre-existing loans or lines of credit made by lender to borrower; 2) Borrower not to use proceeds of the eligible loan to repay other loan balances. Cannot repay other debt of equal or lower priority, except mandatory principal payments, unless borrower has first repaid the loan in full; 3) Lender must not cancel/reduce lines of credit outstanding to the eligible borrower and borrower must not seek to cancel/reduce any LOCs with lender/other lenders; 4) Borrower must require financing due to exigent circumstances presented by COVID-19, and using proceeds will make reasonable efforts to maintain payroll/retain employees; 5) Meets an EBITDA leverage condition; 6) Borrower must follow compensation, stock repurchase, and capital distribution restrictions of CARES Act; 7) Lenders/borrowers certify that entity is eligible, and there are no conflicts of interest. Facility Fee: 100 bps of principal amount. Loan Origination and Servicing: Borrower pays the lender 100 bps origination fee; SPV pays the lender 25 bps per annum for loan servicing. Facility Termination: 30-Sep-2020.

The Fed's Funding Facilities					
Program	Date Announced	Goal	Description	Eligibility	Additional Details
Main Street Expanded Loan Facility (MSELF)	9-Apr-2020	Facilitate lending to small and medium- sized (SMEs) businesses.	The Fed lends to a SPV, which buys 95% participations in the upsized tranche of eligible loans, with the lender retaining 5%. The Treasury will make a \$75B equity investment in the single common SPV in connection with the Facility and the MSNLF. The combined size of the Facility and the MSNLF will be up to \$600B.	Eligible Lenders: U.S. insured depository institutions, U.S. bank holding companies, and U.S. savings and loan holding companies. Eligible Borrowers: U.S. businesses with up to 10,000 employees or up to \$2.5B in 2019 annual revenues. Cannot also participate in the MSNLF or the Primary Market Corporate Credit Facility. Eligible Loans: Upsized tranches of term loans originated before April 8, 2020 that also have: 1) 4 year maturity; 2) Amortization of principal and interest deferred for one year; 3) Adjustable rate of SOFR + 250-400 basis points; 4) Minimum loan size of \$1mm; 5) Maximum loan size that is the lesser of (i) \$150 million, (ii) 30% of borrower's existing outstanding and committed (but undrawn) bank debt or (iii) an amount that, when added to the borrower's existing outstanding and committed but undrawn debt, does not exceed six times the borrower's 2019 EBITDA 6) No prepayment penalty.	Required Attestations: 1) Lender willl not use proceeds to repay/refinance pre-existing loans or lines of credit; 2) Borrower refrain from using proceeds to repay other loans balances; 3) Lender can't cancel/reduce any lines of credit outstanding to the borrower. The borrower can't cancel/reduce outstanding lines of credit; 4) The borrower must require financing due to the COVID-19 pandemic, and it will use the proceeds to maintain its payroll; 5) Meets an EBITDA leverage condition; 6) Borrower must follow compensation, stock repurchase, and other capital distribution restrictions from the CARES Act; 7) Lenders/borrowers certify that entity is eligible, and there are no conflicts of interest. Loan Upsizing and Servicing: Borrower pays the lender 100 bps of principal amount of upsized tranche of eligible loans at the time of upsizing. SPV pays the lender 25bps per annum for loan servicing. Facility Termination: 30-Sep-2020.
Paycheck Protection Program Lending Facility (PPPLF)	9-Apr-2020	Help provide small business loans through the SBA's Paycheck Protection Program (PPP).	The Fed lends to eligible borrowers on a non-recourse basis, accepting PPP Loans as collateral.	Eligible Participants: All depository institutions that originate PPP loans. The Fed is looking into expanding to other lenders as well. Eligible Collateral: Only PPP loans guaranteed by the Small Business Administration.	Maturity: Equal to the maturity date of the underlying PPP loan, and can be accelerated if the underlying loan defaults or the borrower receives loan forgiveness reimbursement from the SBA. Rate: 35 bps. Regulatory Capital Treatment: PPP loans are assigned a risk weight of zero percent. Banks can neutralize the effect of PPP loans financed under the Facility on their leverage capital ratios. Collateral Valuation: Valued at the principal amount of the PPP Loan (i.e. no haircut). Program Termination: 30-Sept-2020.

Note: IOER = Interest Rate on Excess Reserves. SOFR: Secured Overnight Financing Rate. FF = Fed Funds. OIS: Overnight Indexed Swap. NAV = Net Asset Value. LOC= Line of Credit. EBITDA = earnings before interest, taxes, depreciation, and amortization.

Sources: Bank of America Chief Investment Office; Federal Reserve. Data as of April 2020.

Index Definitions

S&P 500 Index: Stock market index that measures the performance of 500 large companies listed on stock exchanges in the United States.

Overnight index swap applies an overnight rate index such as the federal funds or Libor rates. Index swaps are specialized groups of conventional fixed rate swaps, with terms that can be set from three months to more than a year.

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