T.RowePrice®
INVEST WITH CONFIDENCE

- U.S. Stocks
- International Stocks
- Fixed Income Markets
- Global Capital Markets Environment
- Emerging Markets Stocks
- U.S. Municipal Markets

First Quarter 2020

QUARTERLY MARKET REVIEW

T.RowePrice®
INVEST WITH CONFIDENCE

QUARTERLY MARKET REVIEW

U.S. Stocks

First Quarter 2020

Stocks suffered their worst quarterly declines since the financial crisis in late 2008 as the accelerating coronavirus pandemic led to the shutdown of significant portions of the global economy. Extraordinary volatility led to automatic trading halts on several occasions late in the quarter, and the Cboe Volatility Index (VIX) briefly surpassed its financial crisis peak to hit a record high. The declines brought a decisive end to the record-long bull market that began in 2009, although a late rally helped moderate the losses.

Every sector within the S&P 500 recorded losses, but they varied considerably. An oil price war between Saudi Arabia and Russia slashed global oil prices by more than three-quarters, causing energy shares to fall over 50% on a total return (including dividends) basis. Technology shares suffered steep losses but fared better, declining around 12%. Health care and consumer staples stocks also held up relatively well.

Phase One Trade Deal Helps Quarter Start on a Strong Note

Markets advanced throughout much of the first half of the quarter, helped by the consummation of a "phase one" trade deal with China on January 15. Lessening tensions appeared poised to spur a rebound in global growth in 2020, and domestic economic signals were particularly encouraging. Employers added 225,000 nonfarm jobs in January, well above estimates, and personal incomes rose the most in nearly a year. Even the beleaguered manufacturing sector appeared to be picking up steam, with factory activity in January expanding for the first time since July. Housing signals were also positive, with building permits reaching a 13-year peak. The positive economic data and a better-than-expected fourth-quarter earnings season pushed the large-cap indexes and the technology-heavy Nasdaq Composite Index to record highs by mid-February.

Evidence of the Coronavirus's Quick Spread Beyond China Brings an Abrupt End to Rally

Reports of the spread of the coronavirus in China periodically unsettled markets throughout January and early February, but it was evidence that the virus was spreading quickly elsewhere that soon unwound the market's gains. Stocks

Total Returns

	1Q 2020	Year-to-Date
Dow Jones Industrial Average	-22.73%	-22.73%
S&P 500 Index	-19.60	-19.60
Nasdaq Composite Index	-14.18	-14.18
S&P MidCap 400 Index	-29.70	-29.70
Russell 2000 Index	-30.61	-30.61

Past performance is not a reliable indicator of future performance.

Note: Returns are for the periods ended March 31, 2020. The returns include dividends based on data compiled by T. Rowe Price, except for the Nasdaq Composite, whose return is principal only.

Sources: Standard & Poor's, LSE Group. See Additional Disclosures.

began falling sharply on February 21, following reports of a widespread outbreak in South Korea. Selling accelerated the following week on news of large outbreaks in Iran and Italy, along with reports of scattered infections in dozens of other countries. News of the first infections in the U.S. without any apparent direct connection to China seemed to weigh particularly heavy on sentiment.

The major indexes continued their slide in late February and early March as cases mounted both in the U.S. and overseas. Wall Street suffered its biggest downdraft on March 16—with the S&P 500 falling nearly 12%, the most since 1987—after President Donald Trump stated that the coronavirus might not be contained until late summer. Governors and mayors quickly announced closures of schools, restaurants, and other public facilities to encourage social distancing, and professional sports leagues canceled or suspended their seasons. Millions of restaurant, retail, and hospitality workers were soon thrown out of work, with a record 3.3 million Americans filing unemployment claims for the week ended March 21.

White House and Congress Overcome Obstacles to Pass Massive Fiscal Stimulus

Administration officials promised a policy response, but whether Washington could muster a forceful fiscal program initially seemed unclear. Investors appeared particularly disappointed that the president failed to include firm details of a fiscal stimulus plan at an address to the nation on March 11. The president did urge Congress to pass legislation cutting payroll taxes, but Democrats in the House appeared cool to the idea, proposing instead relief targeted at lower-income individuals.

Progress toward a compromise plan soon helped markets regain their footing, however. After some tense but relatively brief negotiations, the administration and Congress agreed on a USD 2.2 trillion stimulus package, which the president signed into law on March 27. Roughly three times the size of the financial crisis stimulus package, the CARES Act included USD 350 billion in support for small businesses, along with direct payments to lower- and middle-income families. The bill also expanded unemployment insurance and provided additional funding for providers of health care services, as well as airlines and other targeted industries.

Fed Takes Decisive Action to Ease Strain in Credit Markets

Signs of strain on the financial system also weighed on equity markets, but decisive action by the Federal Reserve appeared to calm investors. The central bank aggressively resumed purchases of Treasury securities and agency mortgage-backed securities (MBS) in an attempt to increase liquidity and promote the normal functioning of financial markets. An initial plan to purchase USD 500 billion in Treasuries and USD 200 billion in agency MBS was later replaced by a Fed pledge to buy these securities "in the amounts needed" (i.e., without limit). Because of tighter financial conditions and a reduced willingness by banks to offer loans, the Fed also rolled out a number of programs and "facilities" intended to support the flow of credit to consumers and businesses.

T. Rowe Price traders noted that glimmers of hope in the battle against the pandemic also seemed to support a partial recovery in markets late in the quarter. Quarantine measures appeared to be "flattening the curve" and slowing the rate of growth in the outbreaks in Italy, Washington State, and other hard-hit regions. Reports also surfaced of progress in developing home testing kits for the virus, as well as some early, if inconclusive, evidence of success with antiviral treatments.

Some Companies and Industries to Be Fundamentally Altered

T. Rowe Price's Group Chief Investment Officer Robert Sharps and other senior investment managers believe that, in time, the crisis conditions will ease and markets will recover. However, investors should think now about how economic and market behavior might be altered once we move beyond the worst of the crisis. While our investment leaders believe economic conditions will improve as we return to some normalcy as the health crisis recedes, some changes will prove permanent. The pandemic will certainly affect the calculus of the U.S. elections, for example, and certain companies and industries will be fundamentally altered.

T.RowePrice®
INVEST WITH CONFIDENCE

QUARTERLY MARKET REVIEW

International Stocks

First Quarter 2020

Equities in developed non-U.S. markets suffered sharp declines in the first quarter, as the coronavirus pandemic led to the shutdown of significant portions of the global economy and ignited concerns of an impending recession.

Within the MSCI EAFE Index, which tracks developed markets in Europe, Australasia, and the Far East, all 11 sectors declined, led by losses in energy, financials, and real estate. Growth stocks in the EAFE index fell 17.41%, but held up better than value shares, which declined 28.08%. Emerging equity markets in aggregate fared slightly worse than developed equity markets. Latin American shares led losses in emerging markets: The MSCI EM Latin America Index returned -45.58%.

European Stocks Fall as the Coronavirus Hits Economic Growth

The MSCI Europe Index lost 24.23%, as investors recognized that the coronavirus would take a significant toll on regional economies. Underscoring the damage, IHS Markit reported a record decline in eurozone business activity in March. Demand for goods and services fell dramatically, supply chain disruptions stymied production, and jobs were cut at the fastest rate since mid-2009. Promises of significant economic stimulus measures helped calm markets, even as governments increased restrictions on population movement and gatherings to combat the spread of the virus.

Central Banks, Governments Approve Stimulus Measures

In March, central banks and governments dug into their arsenals to support the region's economies. The European Central Bank (ECB) approved additional stimulus measures to help the eurozone economy cope with the growing cost of the coronavirus pandemic but kept interest rates unchanged. The ECB has now agreed to spend more than €1.1 trillion to purchase bonds over the next nine months.

In coordinated UK monetary and fiscal policy moves, a 50-basis-point (0.5%)

Total Returns

MSCI Indexes	1Q 2020	Year-to-Date
EAFE (Europe, Australasia, Far East)	-22.72%	-22.72%
All Country World ex-USA	-23.26	-23.26
Europe	-24.23	-24.23
Japan	-16.63	-16.63
All Country Asia ex-Japan	-18.36	-18.36
EM (Emerging Markets)	-23.57	-23.57

Past performance is not a reliable indicator of future performance.

All data are in U.S. dollars and represent gross returns, as of March 31, 2020.

This chart is shown for illustrative purposes only and does not represent the performance of any specific security. Investors cannot invest in an index.

Source: MSCI. See Additional Disclosures.

interest rate cut by the Bank of England (BoE) preceded the announcement of a £30 billion spending package in the annual budget to help the economy weather the coronavirus outbreak. Shortly thereafter, at a special meeting, the BoE cut its rate to 0.1% and increased its holdings of UK government and corporate bonds by £200 billion.

T. Rowe Price's Wieladek Believes Sharp Eurozone Recession and V-Shaped Recovery Are Likely

T. Rowe Price International Economist Tomasz Wieladek believes tough eurozone restrictions to combat the coronavirus are likely to cause the sharpest recession since World War II. He calculates that the economy could shrink more than 6% in the first half of the year if the restrictions last until the beginning of May and more than 9% if they last until the end of June. Even so, he believes this deep recession will be followed by a V-shaped economic recovery in the second half of the year, aided by aggressive monetary, fiscal, and employment policy indicatives.

Japanese Equities Fall but Outperform Developed Market Peers

Stocks in Japan continued to lose ground throughout the quarter, weighed down by worries about the country's slowing economy and the potential for further weakness related to the coronavirus. Underscoring the impact of the coronavirus and faltering private consumption, spending, imports, and business confidence, the Japanese government downgraded its overall assessment of economic conditions to "severe" from moderate recovery in February. That came after reports showed Japan's gross domestic product (GDP) shrank at an annualized rate of 6.3% in the fourth quarter, the sharpest slowdown since the second quarter of 2014 and a much deeper contraction than economists had forecast. That fourth-quarter contraction is attributable, in part, to the October 1, 2019, consumption tax increase. Adding to the malaise, Prime Minister Shinzo Abe announced the postponement of the Tokyo Olympic Games until summer 2021. The delay is expected to cause about a 1% contraction in Japan's GDP in the coming fiscal year.

Emerging Markets Fared Slightly Worse Than Developed Markets

Stocks in developing markets underperformed developed markets, as investors sold riskier assets in line with growing fears of the toll the coronavirus could take on economic activity. The MSCI Emerging Markets Index dropped 23.57%, led by declines in Latin America. Brazilian and Mexican stocks fell about 50% and 35%, respectively, and in an effort to support the economy, Brazil's central bank cut its benchmark interest rate in February and March to a record low of 3.75%. In March, Mexico's central bank reduced its benchmark rate by 50 basis points to 6.5% and announced emergency liquidity measures to support the peso, which repeatedly fell to record lows. In emerging Europe, Russian stocks fell about 36% as oil prices plunged due to a collapse in global demand and a price war started by Saudi Arabia following Russia's decision not to cooperate with a proposed OPEC production cut. In South Africa, stocks dropped about 40%. Moody's downgraded its credit rating on South African debt to junk status in late March.

Outlook: Important to Focus on the Longer Term

We are experiencing a truly unique market environment as a result of a global pandemic that has caused massive disruption to economies around the world. While the near-term outlook is highly uncertain, we think it is key to look beyond short-term headlines and remain steadfast in our investment process. With a focus on the longer term, we think strategically leaning into risk when uncertainty is high should help generate significant alpha (excess returns) for our shareholders over time.

T.RowePrice®
INVEST WITH CONFIDENCE

QUARTERLY MARKET REVIEW

Fixed Income Markets

First Quarter 2020

Longer-term Treasury yields fell to record lows during the quarter as the continued spread of the coronavirus led to strong demand for traditionally safer assets such as U.S. government debt. (Bond prices and yields move in opposite directions.)

Treasury Yields Plunge as the Coronavirus Spreads

The Treasury market began to price in the economic effects of the coronavirus in the second half of January, but the rotation away from riskier securities accelerated in March as governments took extraordinary actions to slow the spread of the pandemic. A deflationary plunge in oil prices and aggressive Federal Reserve purchases of Treasury securities placed additional downward pressure on Treasury yields.

After starting the year at 1.92%, the yield of the 10-year Treasury note, which is a benchmark for mortgages and other consumer lending rates, fell to an all-time closing low of 0.54% on March 9 and finished the quarter at 0.70%. The sharp yield drop easily surpassed the previous record low of 1.37% that was reached in July 2016.

Yields of shorter-maturity Treasuries fell more than their longer-term counterparts, leading to a steepening of the yield curve. Treasuries with very short (one- to three-month) maturities briefly yielded less than 0% in intraday trading in March, although they finished the month with positive yields.

The period began with optimism that growth would revive after a sluggish 2019. The U.S. and China signed a preliminary trade deal in January, and economic reports showed the pace of hiring remained strong through February. However, the toll of social distancing efforts on the economy became evident in March as weekly jobless claims climbed to more than 3 million, an all-time high.

Fed Cuts Rates, Rolls Out Stimulus

In response to the rapid contraction in economic activity, the Federal Reserve and nearly all major global central banks took firmly accommodative steps. The Fed cut its short-term lending rate to near zero and announced that it would be purchasing Treasuries, agency mortgage-backed securities, and investment-grade corporate bonds to stimulate the economy and provide liquidity in the fixed income market.

Total Returns

Index	1Q 2020	Year-to-Date
Bloomberg Barclays U.S. Aggregate Bond Index	3.15%	3.15%
J.P. Morgan Global High Yield Index	-14.94	-14.94
Bloomberg Barclays Municipal Bond Index	-0.63	-0.63
Bloomberg Barclays Global Aggregate Ex-U.S. Dollar Bond Index	-2.68	-2.68
J.P. Morgan Emerging Markets Bond Index Global Diversified	-13.38	-13.38
Bloomberg Barclays U.S. Mortgage Backed Securities Index	2.82	2.82

Past performance is not a reliable indicator of future performance.
Figures as of March 31, 2020. This table is shown for illustrative purposes only and does not represent the performance of any specific security.
Sources: RIMES, as of March 31, 2020; Bloomberg Index Services Limited, and J.P. Morgan. See Additional Disclosures.

U.S. Treasury Yields

Maturity	December 31	March 31
3-Month	1.55%	0.11%
6-Month	1.60	0.15
2-Year	1.58	0.23
5-Year	1.69	0.37
10-Year	1.92	0.70
30-Year	2.39	1.35

Source: Federal Reserve Board.

In addition, the Fed indicated it would support bonds backed by student and auto loans as well as other types of asset-backed securities and rolled out programs to improve liquidity in short-term municipal debt as well as the commercial paper market. Fiscal stimulus was also significant as the White House and congressional leaders agreed on and passed into law a USD 2.2 trillion emergency spending package that included direct payments for many Americans, expanded unemployment insurance, and financial support for sectors such as transportation and health care that had been directly impacted by the pandemic.

Outflows, Liquidity Challenge Bond Markets

U.S. investment-grade bonds produced positive returns through February, but, with the notable exception of Treasuries, most fixed income segments faced a much more difficult environment in March. Performance drivers varied somewhat at the sector level, but credit markets generally faced similar challenges:

- Energy-related corporate debt was pressured by a sharp drop in oil prices that resulted from a decrease in demand and Saudi Arabia's early March decision to boost production.
- Rising coronavirus concerns sparked large outflows as investors moved to Treasuries or cash.
- Outflows produced liquidity problems, which were compounded by logistical hurdles as traders struggled to complete deals while rapidly adjusting to working from home.

Illiquidity became most acute in the middle of March, but the aggressive monetary and fiscal response helped improve market operations by month-end.

Mortgage-Backed Securities Outperform

Although they faced elevated volatility, mortgage-backed securities finished the period with positive returns and were the strongest segment after Treasuries in the Bloomberg Barclays U.S. Aggregate Bond Index, benefiting from their high-quality profile and substantial Fed support. Corporate bonds were the weakest performers in the taxable U.S. investment-grade market, pressured by large outflows. A record amount of new corporate issuance late in the period was met with solid demand amid signs of market stabilization. Treasury inflation-protected securities (TIPS) benefited from tumbling yields but faced headwinds as inflation expectations dropped to their lowest level since the global financial crisis in 2008–2009.

Municipal bonds trailed the broader taxable bond market. Munis partially recovered from steep losses as investors took advantage of elevated yields at the end of March. Although most muni segments were negative, performance varied widely in the sector as issuers that appeared to have elevated exposure to coronavirus-related risk, such as hospitals and airports, underperformed.

High Yield Bonds Sink as Investors Look for Safer Options

High yield bonds were hard hit in the risk-averse environment. The below investment-grade segment's relatively large exposure to energy issuers weighed on performance, outflows were near all-time highs, and the sector did not receive any direct support from the Fed.

T. Rowe Price traders also noted that the high yield sector faced fundamental strains as March produced the second-largest number of ratings downgrades in history. High yield credit spreads exceeded 1,000 basis points (10 percentage points) during March for the first time since the global financial crisis as investors demanded higher yields for holding riskier bonds. Floating rate loans held up better than high yield bonds but also suffered significant losses.

Stronger Dollar, Risk-Off Environment Weigh On Global Bond Markets

Non-U.S. developed market bonds produced generally negative returns, as a stronger U.S. dollar and investors' preference for Treasuries and cash weighed on returns. The European Central Bank stepped up its bond-buying program, and central banks in the UK and Japan also took forceful steps in response to the coronavirus pandemic. Amid strong demand for the dollar, the Fed activated swap lines with other major central banks in March to

support the global supply of U.S. dollars and improve liquidity.

Emerging markets bonds were hampered by slowing economic growth and local currency weakness versus the U.S. dollar, while falling oil prices weighed on energy exporters. Outflows from the asset class reached a record level, and fundamental news was also generally negative. South Africa's currency weakened to a record low after the country lost its last investment-grade credit rating, Mexico's debt was also downgraded, and Ecuador's congress called on the government to suspend debt payments to free up cash to deal with the coronavirus pandemic.

Outlook: Downturn Could Be Sharp but Short

According to T. Rowe Price Chief U.S. Economist Alan Levenson, the unique nature of the current downturn suggests it could be more dramatic but shorter than usual. He notes that recessions typically entail the correction of imbalances, often associated with excessive demand that has undermined private sector finances. In contrast, this contraction is being driven substantially by an enforced pullback in activity in the name of social distancing and virus mitigation. Levenson adds that there is relatively little fuel for downside momentum in the housing market if the labor market correction subsides once the coronavirus is contained. The recent expansion was exceptional in the absence of housing supply outpacing demand, he says.

T.RowePrice®
INVEST WITH CONFIDENCE

QUARTERLY MARKET REVIEW

Global Capital Markets Environment

First Quarter 2020

Stocks in the U.S. plunged in the first quarter. The market started the year on a strong note, with most major U.S. indexes rising to record highs by the middle of February amid hopes that China was having some success in containing the spread of COVID-19, the disease caused by the coronavirus. However, in the closing days of February, investor sentiment turned sharply negative, and stocks fell on the news of spiking cases in other countries, especially Italy, Iran, and South Korea. This raised fears that the coronavirus was spreading much more rapidly than anticipated and that it could turn into a global pandemic—which the World Health Organization declared it was on March 11. The sell-off intensified in March, as the coronavirus spread rapidly in the U.S., prompting government officials to close schools, nonessential businesses, and public facilities. Federal Reserve (Fed) rate cuts and asset purchases initially seemed to have had little effect on stopping the equity market decline. Stocks did pare some losses in the final days of the quarter, however, as the Trump administration and Congress passed into law a massive economic stimulus bill and as the Fed rolled out a variety of programs and "facilities" intended to support the flow of credit to consumers and businesses.

While all indexes were broadly negative, large-cap shares held up better than mid- and small-caps. The S&P 500 Index returned -19.60% versus -29.70% for the S&P MidCap 400 Index and -30.61% for the small-cap Russell 2000 Index. As measured by various Russell indexes, growth stocks significantly outperformed value across all market capitalizations.

In the large-cap universe, as measured by the S&P 500, sector performance was broadly negative. Energy shares displayed the deepest losses as U.S. oil prices fell to about USD 20 per barrel—a level not seen in nearly two decades—due to a rapid deceleration of global economic activity, as well as a price war started by Saudi Arabia following Russia's decision not to go along with a proposed OPEC production cut. Financials shares also posted steep losses, as falling interest rates reduced bank loan profitability and as banks became less willing to issue loans due to tighter financial conditions. Industrials and business services shares also exhibited significant losses, as weakness in airlines stocks, resulting from reduced global travel, weighed on the sector. Consumer discretionary and real estate shares performed in line with the broad index. Higher-yielding utilities stocks held up better than the index but still fell sharply. Consumer staples, health care, and information technology shares all outperformed the broader index but displayed large losses in absolute terms.

Domestic investment-grade bonds produced modest positive returns during the first quarter. The Bloomberg Barclays U.S. Aggregate Bond Index

U.S. Stock Returns

	S&P 500 Index	S&P MidCap 400 Index	Russell 2000 Index
1Q 2020	-19.60%	-29.70%	-30.61%
Year-to-Date	-19.60	-29.70	-30.61

Past performance is not a reliable indicator of future performance.

Sources: RIMES, as of March 31, 2020; Standard & Poor's, LSE Group. See Additional Disclosures.

returned 3.15%. During the quarter, the Fed took drastic measures to try to boost the economy and restore normal market functioning as the coronavirus outbreak intensified in the U.S. The Fed slashed short-term interest rates by 150 basis points (1.50%) in two steps in March, bringing the fed funds target rate back to the 0.00%–0.25% range, where it had been from late 2008 through late 2015. The central bank also ramped up quantitative easing: An initial plan to purchase USD 500 billion in Treasuries and USD 200 billion in agency mortgage-backed securities (MBS) was later replaced by a Fed pledge to purchase these securities "in the amounts needed" to provide much needed market liquidity. As a result of Fed actions and an investor flight to safety, Treasury interest rates fell across all maturities, though short-term rates fell more than long-term yields.

In the investment-grade bond universe, long-term Treasuries were the best performers, with the 10-year Treasury yield dropping from 1.92% at the end of 2019 to 0.70% at the end of March. MBS also posted gains but lagged, in part due to substantial mortgage refinancing activity. Asset-backed securities trailed the broad index with slight negative returns. Corporate bonds were the worst performers in the investment-grade universe, declining in anticipation of weaker corporate profits and a recession. Municipal bonds produced slight negative returns and underperformed taxable bonds. High yield bonds posted significant losses as credit spreads—the yield difference between higher- and lower-quality bonds—widened dramatically as investors shunned higher-risk assets. Plunging oil prices weighed heavily on energy sector bonds, which represent a substantial portion of the below investment-grade bond market.

Stocks in developed non-U.S. equity markets declined broadly; returns to U.S. investors were hurt by a stronger U.S. dollar versus many other currencies.

U.S. Bond Returns

	Bloomberg Barclays U.S. Aggregate Bond Index	Bloomberg Barclays Municipal Bond Index	J.P. Morgan Global High Yield Index
1Q 2020	3.15%	-0.63%	-14.94%
Year-to-Date	3.15	-0.63	-14.94

Past performance is not a reliable indicator of future performance.

Sources: RIMES, as of March 31, 2020; Bloomberg Index Services Limited, J.P. Morgan. See Additional Disclosures.

Non-U.S. Stock Returns

	MSCI EAFE Index	MSCI Emerging Markets Index
1Q 2020	-22.72%	-23.57%
Year-to-Date	-22.72	-23.57

Past performance is not a reliable indicator of future performance.

Sources: RIMES, as of March 31, 2020; MSCI. See Additional Disclosures.

The MSCI EAFE Index, which measures the performance of stocks in Europe, Australasia, and the Far East, returned -22.72%. In developed Asia and the Far East, shares were broadly negative in U.S. dollar terms. Australian shares fell more than 33% for the quarter, while Singapore stocks dropped 28%. Shares in Japan and Hong Kong declined roughly 17%.

In developed Europe, shares were widely negative. Austria displayed the worst returns, plunging almost 43%. In Spain and Italy, where the COVID-19 outbreak has been severe, shares fell roughly 30% and 29%, respectively. Equities in core European Union countries Germany and France dropped roughly 27%. On the other hand, Danish shares held up better than any developed country in the world, falling only about 8% for the quarter. The government's relatively early decisions to close institutions and borders with other countries seem to have helped reduce the severity of the outbreak in Denmark.

Stocks in emerging equity markets slightly underperformed equities in developed markets, as currencies in many developing countries weakened versus the U.S. dollar in response to slowing economic growth and risk aversion. The MSCI Emerging Markets Index returned -23.57%. In emerging Europe, Greek shares displayed the largest losses, falling more than 45%. Greek shares were weighed down by the spread of the coronavirus and tensions with neighboring Turkey, which opened its borders and allowed Syrian war refugees to attempt to enter Greece. Turkish shares dropped about 30%. Russian shares also fell sharply—more than 36%—as plunging oil prices pressured the oil-exporting nation.

Emerging Asian markets were also widely negative, though Chinese shares held up best with returns of roughly -10%. China's lockdown efforts to contain the COVID-19 outbreak, which began in China's Hubei province in late 2019, started to ease late in the

Non-U.S. Bond Returns

	Bloomberg Barclays Global Aggregate Ex-U.S. Dollar Bond Index	J.P. Morgan Emerging Markets Bond Index Global Diversified	J.P. Morgan GBI-EM Global Diversified Index
1Q 2020	-2.68%	-13.38%	-15.21%
Year-to-Date	-2.68	-13.38	-15.21

Past performance is not a reliable indicator of future performance.

Sources: RIMES, as of March 31, 2020; Bloomberg Index Services Limited, J.P. Morgan. See Additional Disclosures.

first quarter, which helped equities recover partially from earlier losses. Conversely, Indonesian shares posted some of the worst returns in Asia, falling more than 39%. Indonesia is one of the most heavily populated countries in the world, and its government has been criticized as being slow to respond to the pandemic. In Latin America, all major countries posted losses of at least 30%. Brazilian shares plunged more than 50% amid coronavirus fears, disappointing economic readings, reduced commodity demand, and currency weakness. Colombian shares also were hit hard and fell almost 50%.

Bonds in developed non-U.S. countries produced negative returns in U.S. dollar terms. Longer-term interest rates in many countries declined, which lifted bond prices, but most major currencies fell versus the dollar, reducing returns to U.S. investors. Developed government bonds benefited from demand for high-quality assets for much of the period, but in early March, some of the gains were partially eroded amid volatility and strained liquidity conditions. To improve confidence and support economies, almost all developed governments unveiled fiscal stimulus measures, while central banks responded with significant monetary easing programs.

In the UK, where sterling fell more than 6% against the dollar, the Bank of England cut interest rates twice and restarted bond buying. Elsewhere, the European Central Bank unveiled a EUR 750 billion asset purchase program to support the economy. The euro fell more than 2% against the dollar during the quarter. In Japan, where the yen edged higher versus the dollar, the Bank of Japan (BOJ) did not change its interest rate policies. However, in mid-March, it increased the limits of its asset-purchasing programs and started a new lending facility so that commercial banks could take out one-year loans from the BOJ.

Emerging markets bonds were broadly negative. U.S. dollar-denominated bonds slightly outperformed local currency bonds in emerging markets amid broad dollar strength. Most developing market currencies declined during the quarter, especially the Brazilian real, South African rand, and Russian ruble.

Any specific securities identified and described are for informational purposes only and do not represent recommendations.

Additional Disclosures

T.RowePrice®
INVEST WITH CONFIDENCE

QUARTERLY MARKET REVIEW

Emerging Markets Stocks

First Quarter 2020

Emerging markets stocks slumped in the first quarter as the coronavirus outbreak raised fears of a global pandemic dealing lasting damage to the world economy. In response, governments worldwide intensified restrictions on people and businesses to combat the outbreak while central banks slashed interest rates and rolled out unprecedented stimulus measures to protect their economies. The International Monetary Fund forecast a recession this year at least as bad as the 2008 financial crisis but predicted a recovery in 2021 if countries focused on containment. The MSCI Emerging Markets Index fell almost 24% for the quarter ended in March, its worst performance since 2008. All 11 sectors in the index fell, led by a nearly 40% drop in energy stocks. Health care stocks fared the best with a roughly 8% decline.

Chinese Shares Decline Amid Rocky Recovery; Indian Stocks Drop as Government Imposes Lockdown

Chinese U.S. dollar-denominated shares and yuan-denominated A shares each fell about 10%. China's official manufacturing purchasing managers' index surged in March from a record low in February, signaling improved sentiment following a nearly two month-long lockdown across most of the country. Still, many analysts forecast China's economy will shrink year over year in the first quarter in what would be its first contraction since 1976.

Indian stocks fell about 31% as the coronavirus removed any hope of recovery for the economy, which recorded its third straight quarter of slowing growth in February before infections surged. In March, India's government unveiled a USD 22.6 billion stimulus plan and delivered an emergency interest rate cut as policymakers sought to cushion the economy from a three-week nationwide lockdown.

Southeast Asian stocks recorded double-digit losses, ranging from a roughly 19% decline in Malaysian stocks to an approximately 39% loss in Indonesian stocks as the spreading virus and China's slowdown rippled across the region. Indonesia unveiled three emergency stimulus packages over the quarter, and its finance minister warned that the country's economic growth could fall to zero if the outbreak worsened. Philippine stocks shed

Total Returns

MSCI Index	1Q 2020	Year-to-Date
Emerging Markets (EM)	-23.57%	-23.57%
EM Asia	-18.07	-18.07
EM Europe, Middle East, and Africa (EMEA)	-33.89	-33.89
EM Latin America	-45.58	-45.58

Past performance is not a reliable indicator of future performance.

All data are in U.S. dollars as of March 31, 2020.

This table is shown for illustrative purposes only and does not represent the performance of any specific security. Investors cannot invest directly in an index.

Source: MSCI. See Additional Disclosures.

roughly 32% after the country became the first country to shut its financial markets to combat the pandemic. Central banks in Indonesia, the Philippines, Thailand, and Malaysia cut their benchmark interest rates.

Brazilian Stocks Slump as Analysts Forecast Recession; Andean Markets Retreat on Commodity Downturn

Brazilian stocks fell about 50%. Brazil's central bank cut its benchmark interest rate in February and March down to a record low 3.75% in an effort to shield the economy, which many analysts see falling back into recession this year after enduring its worst recession on record in 2015–2016.

Mexican stocks shed roughly 35%. In March, the country's central bank reduced its benchmark rate by 50 basis points (.5%) to 6.5% in an unscheduled decision and announced emergency liquidity measures to support the peso, which repeatedly fell to record lows. For the quarter, the peso sank roughly 20% and ranked among the worst-performing emerging markets currencies.

Andean stock markets recorded steep double-digit losses, led by a nearly 50% drop in Colombian stocks, as the global pandemic depressed commodity prices and weighed on the region's resource-driven economies. In March, central banks in Peru and Colombia cut their benchmark borrowing rates once, while Chile's central bank delivered two rate cuts. Many analysts expect most Latin American economies will fall into a steep recession this year.

Russian Stocks Sink as Oil Prices Collapse; South African Stocks Drop Ahead of Moody's Downgrade

Russian stocks shed about 36% as oil prices plunged after an oil price war between Saudi Arabia and Russia erupted in early March, followed by a collapse in global demand that resulted in unprecedented oil supplies flooding the market. Futures for Brent and West Texas Intermediate fell more than 66% for the three months ended March, the biggest quarterly percentage drop on record for both.

Turkish stocks retreated 30%. Turkey's central bank cut its benchmark rate every month during the quarter despite double-digit inflation, leaving it at 9.75% after an emergency meeting in March. The latest rate cut pushed Turkey's real interest rate deeper into negative territory to among the world's lowest, which reduces the premium earned by investors for holding Turkish assets.

South African stocks sank roughly 40%. Moody's downgraded its credit rating on South African debt to junk status in March, depriving the country of its last investment-grade rating by a major ratings agency. The downgrade will likely trigger large investor outflows, raise domestic borrowing costs and further depress the rand, which hit a record low against the dollar at quarter-end.

Emerging Markets Stocks Offer Compelling Long-Term Value

Emerging markets stocks can add value to a portfolio over the long term, according to investment professionals at T. Rowe Price's Multi-Asset Division. Emerging markets offer geographic diversification without some of the structural headwinds faced by developed markets stocks. For instance, near-zero or negative interest rates have weighed on profitability for financials stocks in Europe and Japan. However, still positive interest rates and increasing consumer penetration mean that financial stocks in many emerging markets have stronger revenue growth potential than their developed market peers. Emerging markets offer greater exposure to high-growth technology areas such as cloud software, social media, and online retail, compared with developed markets, where mobile internet use is less widespread. Though recent underperformance has raised questions about the value of an emerging markets stocks allocation, the sell-off has resulted in compelling valuations relative to their developed market peers. In summary, we believe that emerging markets stocks offer diversification benefits, growth companies on the right side of change, and attractive valuations compared with other asset classes.

T.RowePrice®
INVEST WITH CONFIDENCE

QUARTERLY MARKET REVIEW

U.S. Municipal Market

First Quarter 2020

Tax-free municipal bonds posted negative returns over the first quarter of 2020, as substantial industrywide outflows and liquidity challenges during March erased earlier gains for the asset class. The Bloomberg Barclays Municipal Bond Index returned -0.63% for the three months ended March 31. The broad municipal index underperformed the Bloomberg Barclays U.S. Treasury Index, which returned 8.20%, as well as the Bloomberg Barclays U.S. Aggregate Bond Index, which returned 3.15%. Investment-grade municipal bonds fared better than high yield municipals, which experienced the most severe liquidity strains.

Economy and Interest Rates

At the beginning of the quarter, Federal Reserve (Fed) officials signaled little likelihood of interest rate adjustments in 2020. As anticipated, the Fed's rate-setting committee elected to leave its policy rate unchanged at its January meeting. However, market participants' expectations for a rate cut later in the year increased amid fears of a global recession stemming from the spread of the coronavirus. These fears, as well as heightened geopolitical tensions between the U.S. and Iran, spurred strong demand for safe-haven assets early in the quarter.

As the spread of the coronavirus in the U.S. accelerated, resulting in extensive social distancing measures and business closures, both the federal government and the central bank enacted sweeping policies in an attempt to stave off a deep recession. To provide relief to the U.S. economy, Congress passed a record USD 2.2 trillion fiscal stimulus package, which was signed into law by President Donald Trump. Fed officials made two emergency interest rate cuts, ultimately slashing the federal funds rate to a target range of 0.00% to 0.25%. In addition, the Fed implemented vast quantitative easing measures that allow for unlimited purchases of Treasuries across the maturity spectrum and established several facilities to alleviate liquidity problems in fixed income markets and support commercial and consumer lending.

The Fed's aggressive purchases and intense demand for the perceived safety of U.S. government debt pushed Treasury yields broadly lower. After starting the year at 1.92%, the yield on the 10-year Treasury note, which is a benchmark for mortgages and other consumer lending rates, fell to an all-time closing low of 0.54% on March 9, easily surpassing the previous record low of 1.37% in July 2016. The 10-year Treasury yield finished the quarter at 0.70%.

Municipal yields followed Treasury yields downward through February, with 10- and 30-year municipal yields sliding to record lows. However, municipal yields significantly decoupled from Treasury yields in March, as technical dislocations in the short-term segment of the market caused tax-exempt yields to snap higher across the rest of the yield curve. After largely retracing earlier moves, most high-quality municipal yields finished March modestly lower compared with the start of the quarter. Short-term yields, however, slightly increased. By the end of March, investment-grade muni yields were notably higher than those for Treasuries of equivalent maturities, which is typically an indication of relative value for many fixed income investors on an after-tax basis.

As an illustration of their relative attractiveness, on March 31, 2020, the yield for a 30-year tax-free general obligation (GO) bond rated AAA was 1.99%—approximately 147% of the 1.35% pretax yield offered by a 30-year Treasury bond. Including the 3.8% net investment income tax that took effect in 2013 as part of the Affordable Care Act, the top marginal federal tax rate (after the 2017 tax reform legislation) stood at 40.8%. An investor in this tax bracket would need to invest in a taxable bond of similar credit quality and maturity yielding about 3.36% to receive the same after-tax income as that generated by the municipal bond. (To calculate a municipal bond's taxable-equivalent yield, divide the yield by the quantity of 1.00 minus your federal tax bracket expressed as a decimal—in this case, 1.00 – 0.408, or 0.592.)

Municipal Market News

After 60 consecutive weeks of net inflows, municipal bond funds industrywide experienced sudden and substantial outflows beginning in late February, erasing the positive technical conditions that had aided the asset class since early 2019. With many investors reallocating to cash, Treasuries, or equities, municipal asset managers sold large amounts of highly rated, short-term securities to fulfill client redemptions. The large-scale selling caused severe technical imbalances in the short-maturity segment of the market, sparking pricing pressure for bonds across the rest of the municipal market.

As outflows intensified during March, passively managed and leveraged peers were forced to indiscriminately sell bonds of various maturities, further stressing the tax-exempt market. However, the Fed intervened to help dealers enable purchases of high-quality municipals with short maturities, which aided market functioning and led to a partial recovery across the asset class.

Quarterly municipal issuance totaled approximately USD 89.5 billion, according to *The Bond Buyer*. The overall supply figure represented a 13% increase from the first quarter of 2019. However, new issuance virtually ceased the last several weeks in March—when issuance decreased by 40% from the same period a year earlier.

Due to the unprecedented slowdown in economic activity, some investors grew concerned about the potential for credit problems within the tax-exempt market. Although the number of rating downgrades is likely to grow in the coming months, it is worth noting that most municipal issuers have been fiscally responsible. Over 60% of issuers, as represented by the Bloomberg Barclays Municipal Bond Index, were AAA or AA rated as of March 31, and many have bolstered their reserves in recent years.

While we believe that fundamental credit conditions within the market are generally sound, we have longer-term concerns about immense pension and other post-employment benefit liabilities facing many GO issuers. Moreover, the recent downturn in equity, oil, and credit markets is likely to devalue public pension fund assets and could place additional strains on fiscally challenged state and local governments. Consistent with this view, we continue to favor bonds backed by dedicated revenues, particularly in the health care and transportation sectors, over GOs as we consider revenue bonds to be largely insulated from retirement funding challenges.

Performance was mixed across the major sectors of the municipal market. GO bonds posted slightly positive results and outperformed revenue bonds, which recorded negative returns. Among revenue subsectors, water and sewer bonds led performance with modestly positive returns. Revenue segments most impacted by coronavirus-related risks—namely, the corporate-backed industrial revenue subsector and, to a lesser extent, the leasing, transportation, and health care subsectors—lagged the index.

In the investment-grade universe, high-quality bonds produced positive returns, while those with the lowest ratings posted losses. Bonds from challenged issuers, such as Illinois and New Jersey, underperformed the broader index by a wide margin. High yield municipals, including tobacco-securitized debt and Puerto Rico bonds, sharply sold off. In general, short-maturity issues fared better than their longer-term counterparts.

Outlook

The spread of the coronavirus and fears about the economic disruptions it has caused have provoked a strong reaction in global markets—stock indexes have tumbled, and volatility in longer-term Treasury and municipal yields has increased markedly. The muni market has not been immune from the headwinds created by this environment, but we believe that municipal bonds, overall, remain a high-quality market and offer good opportunities for long-term investors.

Although the coming months may pose further challenges, the muni market could benefit as investors look for a lower-risk alternative to the turmoil in the equity market. Moreover, as valuations have become more attractive, we could see renewed demand for tax-free income. In our view, some issuers and sectors will hold up better than others in a volatile environment, making our disciplined, bottom-up investment approach more important than ever.

Ultimately, we believe T. Rowe Price's independent credit research is our greatest strength and will remain an asset for our investors as we navigate the current market environment. As always, we focus on finding attractively valued bonds issued by municipalities with good long-term fundamentals—an investment strategy that we believe will continue to serve our investors well.

INVEST WITH CONFIDENCE®

T. Rowe Price focuses on delivering investment management excellence that investors can rely on—now and over the long term.

To learn more, please visit troweprice.com.

T.RowePrice®

Important Information

This material is provided for informational purposes only and is not intended to be investment advice or a recommendation to take any particular investment action.

The views contained herein are as of the date written and are subject to change without notice; these views may differ from those of other T. Rowe Price associates.

This information is not intended to reflect a current or past recommendation, investment advice of any kind, or a solicitation of an offer to buy or sell any securities or investment services. The opinions and commentary provided do not take into account the investment objectives or financial situation of any particular investor or class of investor. Investors will need to consider their own circumstances before making an investment decision.

Information contained herein is based upon sources we consider to be reliable; we do not, however, guarantee its accuracy.

Past performance is not a reliable indicator of future performance. All investments are subject to market risk, including the possible loss of principal. International investments can be riskier than U.S. investments due to the adverse effects of currency exchange rates, differences in market structure and liquidity, as well as specific country, regional, and economic developments. These risks are generally greater for investments in emerging markets. Diversification cannot assure a profit or protect against loss in a declining market. All charts and tables are shown for illustrative purposes only.

T. Rowe Price Investment Services, Inc., distributor, and T. Rowe Price Associates, Inc., investment advisor.

Articles: 202004-1134957; 202004-1134952; 202004-1134944; 202004-1134947; 202004-1134939; 202004-1134960

ID0003153 (04/2020)
201905-847957