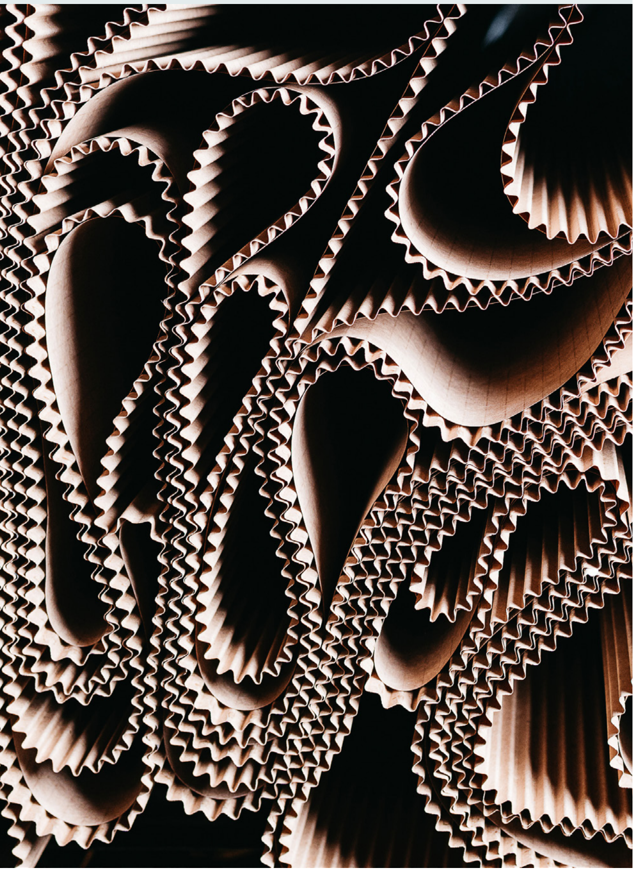
Year-end 2021 | Capital Markets & Investment Banking

Mesirow

Market Update

In this issue



How COVID-19 changed packaging forever

This article is a summary of a more comprehensive white paper, which you can download here.

Introduction: An altered landscape

Like every other sector of the US economy, the packaging industry suffered its share of setbacks during the COVID-19 pandemic. On the whole, however, packaging benefited strongly from changing patterns of consumption that emerged as the nation learned to cope with lockdowns and other restrictions that came with fighting the spread of the disease.[1]

Chart 1 indicates that these trends have been transformative across the board and are expected to remain so even as the pandemic recedes. But growth in some areas happened while other segments stagnated or declined. This points to the fact that in a post-COVID-19 landscape, consumers' expectations and buying habits will be different from what they were before the pandemic upended their lives.

CHART 1: COVID-19 LONGER-TERM DEMAND IMPACT BY END MARKET

Longer-term trends		Key beneficiary packaging substrates
Increased use of e-commerce	>	Flexible mailers and Thermoformed containers
Increased emphasis on hygiene	>	Nonwovens, flexible, rigid
Increased use of delivery services (groceries, pharmacies, restaurants...)	>	Flexible
Increased focus on health and wellness (including medical and healthcare)	>	Rigid, flexible, labels
Increased focus on sustainability (shift from plastic to paper)	>	Kraft paper packaging / foodservice / grocery bags
Increased focus on domestic supply chain and sourcing of various products considered critical or of national security (for example, pharmaceuticals)	>	All packaging

Source: Mesirow.

How COVID-19 changed — and didn't change — consumer purchasing preferences

BACK TO BASICS

Surviving COVID-19 refocused most people's attention on the basics: securing enough of the goods and supplies they would need to maintain an acceptable quality of life. That focus will remain in place after the pandemic is over, and the outlook for packaging will continue to be influenced by it.

Data gathered by J.P. Morgan Research showed that at the height of the lockdowns in 2020, the products consumers bought most were household cleaners and soap, vitamins and supplements, hair color and coffee. Double-digit declines were seen in cosmetics and sun-care products.[2]

Categories in decline, noted a J.P. Morgan analyst, "will find it very hard short-term. They should come back, but discretionary products more closely linked to the economic cycle will be more impacted because they are generally not must-haves."

J.P. Morgan predicts that over the next 12 to 24 months, unemployment will leave many consumers with less money in their pockets and more time to spend at home. That could prompt some of them to look for more affordable options, although loyalty to name brands appears to be holding out against the lure of lower-priced alternatives.

According to McKinsey & Company, the third phase of the world's response to the pandemic (after initial shock and subsequent response) should be a rebound during which overall packaging demand improves.[3] Although sectors like packaging for food service should recover rapidly, others will need more time. Examples are luxury products, travel and hospitality, which people may avoid returning to right away.

Like J.P. Morgan, McKinsey thinks that some consumers' purchasing behavior could stay soft as businesses emerge only weakly from the crisis and employment levels suffer.

Brands and packaging service providers also should be aware that habits formed by consumers in response to the pandemic could outlast it. Plug and Play, a business development advisory group, notes that older people, vulnerable to the virus and often unable to leave their homes, have embraced e-commerce as their safest option for shopping.[4] But they tend to purchase only the things they need, taking price and value into consideration when they do.

All of this requires packaging strategists to study not only what changed during the pandemic, but what is likely to stay the same once it is over. Basic goods, hygiene and sanitation, e-commerce and sustainability are not going anywhere as catalysts for package development and will only increase in importance as recovery comes full circle.

NEW SET OF PRIORITIES

E-commerce existed before COVID-19, but the enormous surge of use that the channel experienced during the pandemic has turned it into the default shopping option for millions of consumers. According to one estimate, e-commerce penetration as a percentage of retail sales increased in the eight weeks following the lockdowns of March 2020 by as much as it did during the previous 10 years.[5]

HERE TO STAY

The surge, moreover, shows no signs of abating. The Census Bureau of the US Department of Commerce puts the seasonally adjusted value of US retail e-commerce sales at $437.5 billion in the first two quarters of 2021, with e-commerce representing 13.3% of all retail sales in the second quarter. In the second quarter of 2021, e-commerce sales increased almost 10% from the second quarter of 2020, continuing to climb even as shoppers began returning to their regular brick-and-mortar outlets.

This strongly suggests that the rise of e-commerce and its effects on packaging are here to stay.

Nearly all consumer product categories are expected to show continuing increases in online purchasing, particularly OTC medicine, groceries, household supplies and personal care products. Chart 2 presents McKinsey and Mesirow data for the packaging formats that are poised to benefit the most: corrugated shipping boxes, other forms of protective packaging, flexible films, rigid containers, plastic bottles and tubes, metal aerosol cans and jars.

CHART 2: EXPECTED GROWTH % IN CUSTOMERS' PURCHASING CATEGORY ONLINE (BEFORE AND AFTER COVID-19) AND ITS IMPACT ON PACKAGING SUBSTRATES

OTC medicine	+44%	Tubes, bottles, jars and caps / closures
Groceries	+41%	Flexible, rigid plastics and corrugated packaging
Household supplies	+38%	Plastic bottles and metal aerosols
Personal-care products	+38%	Tubes, bottles, jars and caps / closures
Alcohol	+34%	Metal and glass bottles
Furnishings and appliances	+30%	Flexible, rigid plastics and corrugated packaging
Food takeout & delivery	+28%	Food-service packaging (e.g., plastic, paper)
Fitness and wellness	+28%	Corrugated and protective packaging
Vitamins / supplements	+27%	Tubes, bottles, jars and caps / closures
Non-food child products	+25%	Flexible, rigid plastics and corrugated packaging
Snacks	+20%	Flexible films (e.g., oriented polypropylene)
Jewelry	+19%	Folding cartons and paper boxes
Apparel	+19%	Corrugated and microflute packaging and cartons
Skin care and makeup	+18%	Plastics, tubes, glass and jars
Accessories	+18%	Corrugated and microflute packaging and cartons
Footwear	+16%	Corrugated and microflute packaging and cartons
Tobacco	+15%	Cartons
Books / magazines / newspapers	+11%	Corrugated and microflute packaging
Consumer electronics	+10%	Corrugated and protective packaging
Entertainment at home	+4%	Corrugated and protective packaging

Expected Growth %

- Greater than or equal to 30%
- Less than 30%, greater than 15%
- Less than or equal to 15%

Source: McKinsey & Company (August 2020), Mesirow.

These forecasts are clear enough for CPG producers, but packaging service providers must be closely attuned to post-COVID consumer sentiments in order to take advantage of the opportunities that the rise of e-commerce represents. In general, online shoppers are returning to the basics of convenience and value as they focus on the essentials — the everyday items that they once had no other choice but to go the store to get.

They also have embraced new behaviors and lifestyles that breed corresponding changes in packaging, particularly for food. McKinsey identifies some of these as reducing food preparation time; packaging ready-to-eat fresh meals; enabling “portionability” (individual portions sold in larger, multi-serving packages); and improving portability with smaller packs.

Other Post-COVID Impacts

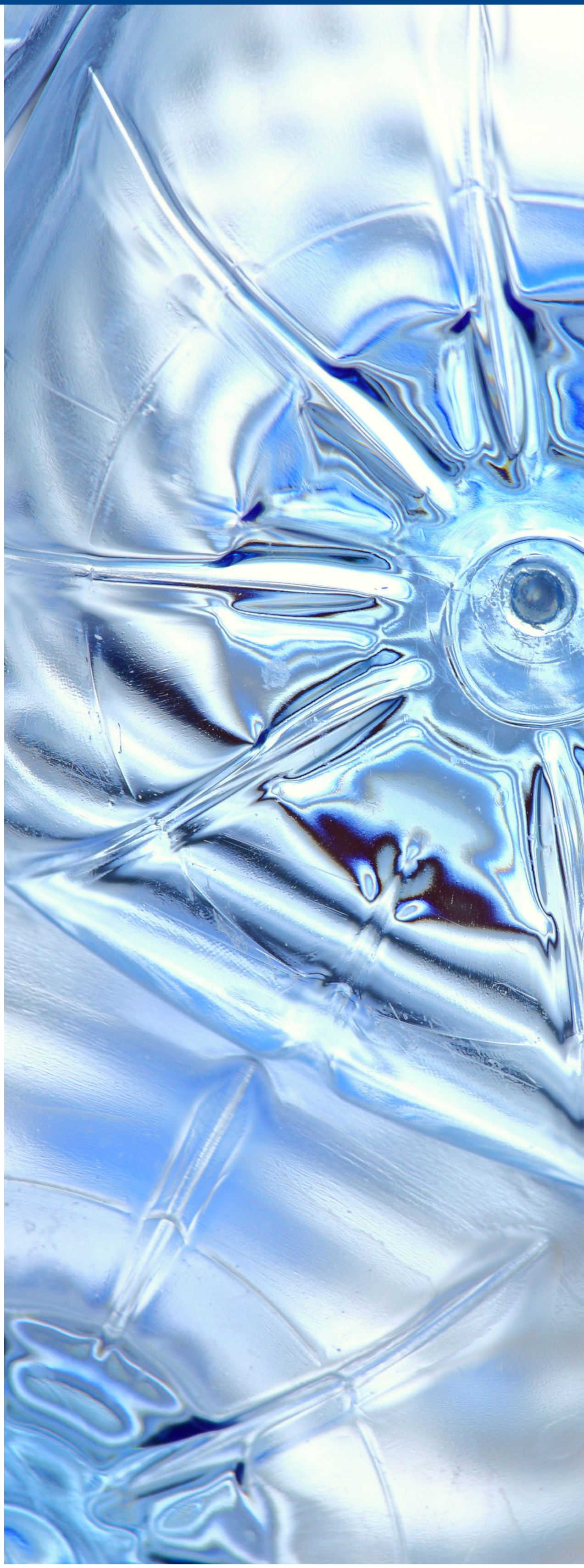
Despite the economic damage it inflicted, the pandemic did not slow down the pace of research and development in the packaging industry. If anything, packaging technologists worked even harder to devise solutions for a consumer marketplace reshaped by the experience of COVID-19. Two examples of this ongoing innovation are digital printing for packaging printing, and the digitalization of the packaging value chain.

Because of its high volumes, packaging used to be mostly off limits to short-run-oriented digital printing systems. But, with changes in patterns of consumption that predate COVID-19, digital presses have come into their own as solutions for the kinds of quick-turnaround, short-run, highly versioned packaging jobs that brands increasingly want their print service providers to deliver.

Supply chain disruptions caused by the pandemic frequently stepped up demand for small batches of packaging and labels on short notice — for instance, to support the emergency production of hand sanitizers and cleaning supplies. As the pandemic recedes, brands will continue to confront fragmented audiences with a broad spectrum of wants and needs. Digital printing, with its automation, variable output and increasing ability to handle heavier stocks in longer runs, will grow in popularity as a preferred packaging solution for the post-COVID world.

McKinsey sees digitalization as an outcome of the pandemic, which exposed a need for more resilience and transparency throughout the packaging value chain. This will lead to greater use of artificial intelligence (AI) for monitoring cost efficiency and productivity and tracking processes in real time. McKinsey also sees integrating technologies such as radio-frequency identification (RFID) tags and near-field communications (NFC) into packaging as means to these ends.

Brands and converters were already experimenting with RFID and NFC for “smart” packaging applications before the pandemic struck. They may be expected to take further steps in this direction as a hedge against the next disruption of the supply chain, whatever form it may take.



Summary: Major packaging industry impacts in a post-COVID world

- Surviving COVID-19 refocused most people's attention on securing enough of the goods and supplies they would need to maintain an acceptable quality of life. That focus on the basics will remain in place after the pandemic is over, and the outlook for packaging will continue to be influenced by it.
- Although packaging sectors like food service should recover rapidly, others — such as luxury products, travel and hospitality — will need more time. Consumer purchasing could stay soft as business and employment take time to recover.
- The enormous surge in the use of e-commerce during the pandemic has turned the channel into the default shopping option for millions of consumers. With no definite end of the pandemic yet in sight, their reliance on e-commerce can only grow.
- The demand for hygiene transparency — assurance that the package will protect both the contents and the end-user of the contents from contamination of all kinds — will continue as an imperative for package producers after the pandemic recedes.
- Sustainability has lost none of its force as a consumer expectation. Going forward, packaging producers must be sure of giving packages the environmental credentials that consumers clearly want them to have. Packaging manufacturers should assume that overseas initiatives for sustainability will gain traction, in one way or another, in their domestic markets.
- Digital printing, with its automation, variable output and increasing ability to handle heavier stocks in longer runs, will become a preferred packaging solution for the post-COVID world.
- Consumers' delight in the "unboxing experience" of e-commerce will remain even as they return to brick-and-mortar retailing.

Market snapshot: Middle market mergers & acquisitions

2021 At a glance

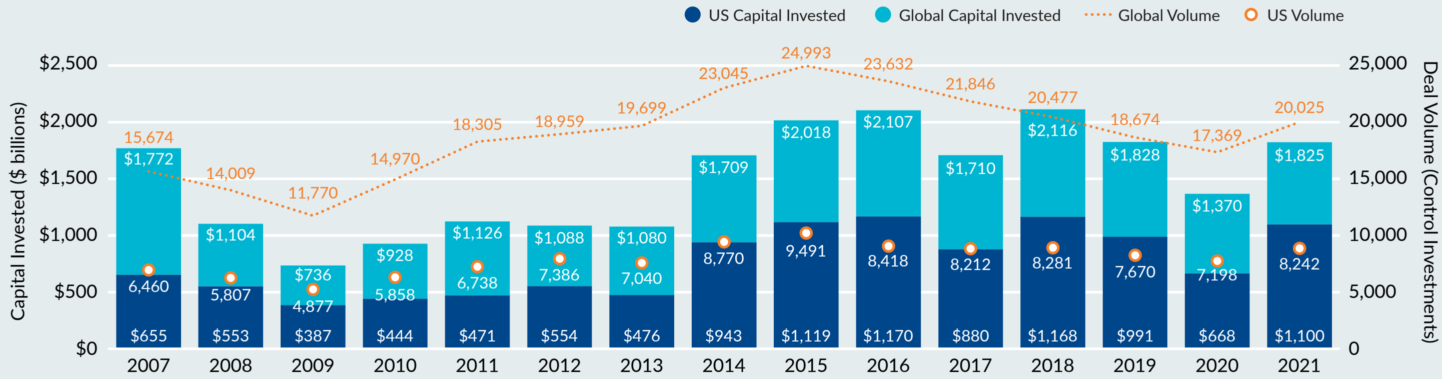
- Lifted uncertainties, elevated cash reserves, low interest rates and pent-up appetites for M&A contributed to a headline year for strategic dealmaking
- Global M&A capital deployment and volume surpassed prior-year levels by 33% and 15%, respectively
  - In total, $1.8 trillion of capital was invested across 20,025 acquisitions
- The US dominated the global market, representing over 60% of the total invested capital and over 40% of the total volume
  - Domestic deal flow reached near-record levels with 8,242 M&A transactions, while invested capital reached $1.1 trillion, exceeding the prior year by 65% – the largest increase since 2014
- TMT, Manufacturing and SaaS were among the leading domestic verticals in terms of capital investment and volume, collectively representing 50% of the US deployed capital and 33% of the US deals
- Similar activity is expected to carry over into 2022 as business leaders look to M&A strategies for transformational growth, innovation and sustainability

Private Equity dealmaking reaches new heights

- 2021 marked a blowout year for US private equity sponsors, as groups deployed over $1 trillion of capital (+50% YoY) across 7,044 transactions (+23% YoY)
- Bandwidth constraints lingered for most of 2021, driven by the collision between expedited tax-reform deals and the postponed COVID backlog
- Technology, healthcare and ESG topped press release headlines
- Add-ons represented the lion's share of dealmaking, followed by buyouts and growth/expansion, ending the year at 59%, 22% and 19%, respectively
- US Capital overhang crept up yet again despite the surge in capital deployment, ending the year at $827 billion
- Median EV/EBITDA multiples increased by almost a full turn, ending the year at 13.7x, up from 12.8x in 2020

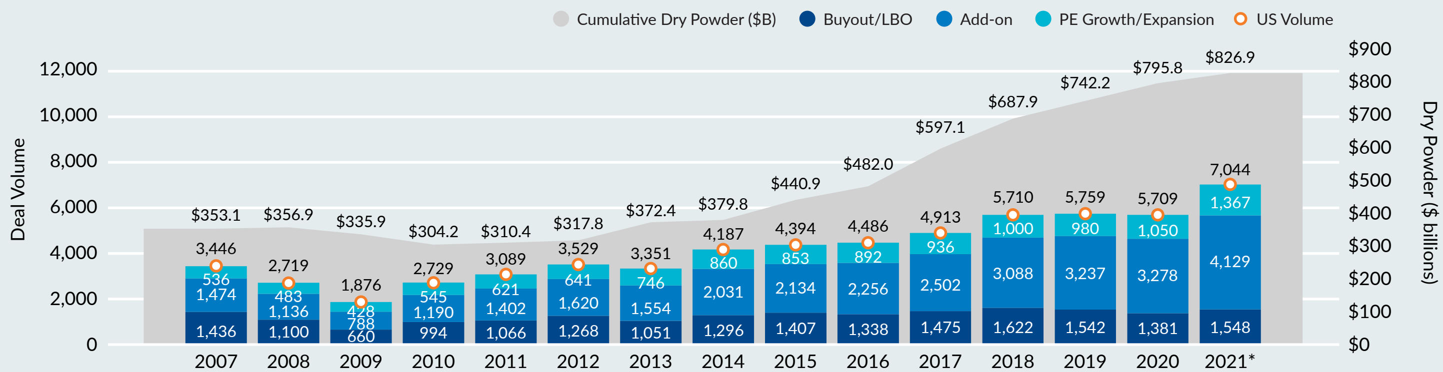
Source: Pitchbook, Press | Note: Data represents corporate strategic M&A control transactions only

CHART 1: **STRATEGIC M&A**



Source: Pitchbook.

CHART 2: **PRIVATE EQUITY DEALS**



Source: Pitchbook. | *As of 12.31.21.

Market snapshot: Municipal bonds

Much of the story of the second half of 2021 has been one of volatility, inflation concerns and supply chain problems. Nevertheless, the outlook for state and local governments remains optimistic thanks in large part due to stimulus from the federal government and the gradually reopening economy throughout much of the country. Ultimately, as has been the case for many months now, the economy continues to follow the path of the virus. For the time being, investors are weighing the headwinds created by the new omicron variant against the more hawkish tone adopted by the Federal Reserve, which has been signaling a greater willingness to raise rates once we move into the new year. Additionally, chance of additional variants prolonging this period of exceptionally low rates appears low. The market is currently pricing in June 2022 as the most likely timing for the first Fed rate hike, with a total of 3 hikes projected for 2022.

Treasuries experienced some volatility in 2021 but will most likely end the year slightly elevated from where they began it, with the 10-year Treasury at 1.48% as of December 7th, versus 0.93% to start the year. This represents a sharp uptick in inflation during 2021 but also indicates a more risk-on approach from investors, who have been moving assets into equities and munis as economic confidence has improved. Indeed, the S&P 500 is up $986.10 (26.65%) YTD as of December 7th, and net muni fund inflows totaled over $54.2 billion YTD as of December 1st. The fund flows story is especially compelling since there has only been one week of outflows since early March, suggesting that investors have a high level of confidence in munis. This confidence and high demand for munis may be part of what has kept rates for municipal borrowers stubbornly low despite inflation pressures. The 10-year AAA MMD, which started the year at 0.72%, has increased 31 bps to just 1.03% as of December 7th. Contrast this with the 55bps cut in Treasuries since the start of the year. MMD/UST ratios, which measure the benefit of tax-exemption, dipped slightly in the first two quarters of the year but have since climbed back to roughly where they began 2021.

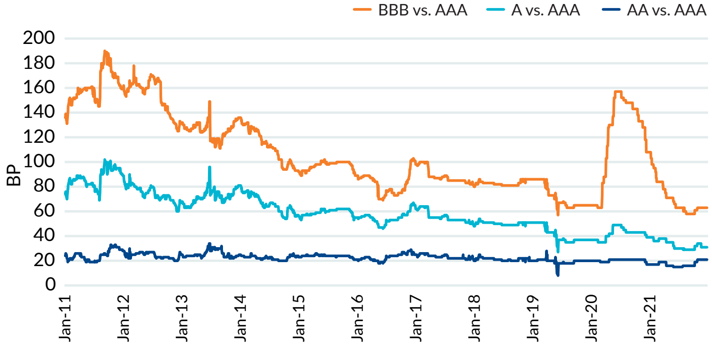
Municipal supply has been relatively healthy for 2021, although it has lagged slightly behind 2020 levels. One possible explanation for this is simply that issuers seeking to take advantage of low rates have largely done so already; additionally, the influx of federal stimulus dollars available to state and local governments may have reduced the need for borrowing for some projects. Total issuance YTD as of the first week of December 2021 stands at about $426.3 billion compared with $443.7 billion for the same point in 2020.

Credit spreads, meanwhile, have returned to their pre-pandemic levels, and are even below where they were to begin 2020 in the short end of the curve. This suggests that, at least from an investor's perspective, the period of greatest default risk for cities and towns (especially those with shakier financial footing) is ending. Politicians will debate how much of this is due to stimulus spending vs economic reopening, but the fact remains that governmental units who have made it this far are likely to remain strong, or at least are no worse off than they were pre-pandemic.

Inflation remains a worry for many market participants that has only grown more acute throughout 2021. As measured by CPI, the annual rate of inflation from October 2020 to October 2021 (the most recent available data) was 6.2%.

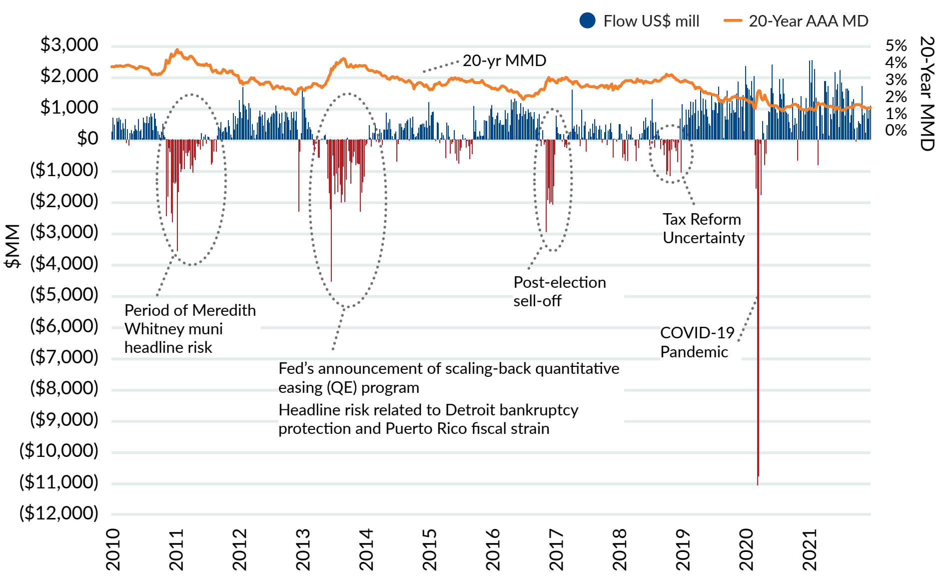
While some of this may be due to temporary supply chain issues or the economy picking up slack as we reopen into a post-pandemic world, a sustained inflation rate of this level would obviously be a cause for concern. Right around 2.00% at the beginning of the year, the 10-year breakeven inflation rate has increased to 2.47% as of December 7th. This is well in excess of the Fed's 2.00% target and is the highest the 10-year breakeven rate has been since 2013, suggesting that there is a growing consensus among market participants that elevated inflation levels may not be as transitory as it was hoped earlier in the pandemic. The Federal Reserve itself seems to have noticed this trend, as it began to taper its bond buying programs at its November meeting and has adopted a more hawkish tone that suggests rate hikes might be in store as soon as summer 2022.

CHART 3: 30-YEAR CREDIT SPREADS



Source: The Municipal Market Monitor (TM3).

CHART 4: MUNICIPAL BOND FUND FLOWS AND 20-YEAR MMD



Source: EPFR Global Fund Flows and Allocations Data – All Muni Funds (Retail and Institutional Funds) | As of the weekly reporting date December 1, 2021

TRAILING 16-WEEK DATA

Muni Fund Reporting Date	Weekly Fund Flow ($MM USD)	20-Yr AAA MMD (%)
9.1.2021	$541.72	1.33%
9.8.2021	$779.81	1.34%
9.15.2021	$1,203.87	1.33%
9.22.2021	$1,298.15	1.34%
9.29.2021	$351.49	1.47%
10.6.2021	($61.53)	1.48%
10.13.2021	$375.95	1.49%
10.20.2021	$578.79	1.48%
10.27.2021	$528.97	1.50%
11.3.2021	$491.99	1.46%
11.10.2021	$1,709.85	1.33%
11.17.2021	$780.42	1.36%
11.24.2021	$845.03	1.35%
12.1.2021	$223.39	1.29%
12.8.2021	$1,043.93	1.29%
12.15.2021	**$663.13**	**1.29%**

Market snapshot: Corporate debt and infrastructure finance

Corporate debt finance

The US Treasury curve ended 2021 with a flattening yield curve, a sign of worries over future economic growth due to COVID-19 and inflation and amid a hawkish stance by US Federal Reserve. The 10-year Treasury ended the year at approximately 1.51%, an increase of 60 basis points ("bps") year-over-year from December 2020. In early January 2021, yields on US 10-year Treasuries dropped to their lowest point of the year, 0.93%, before peaking in March of 2021 at approximately 1.74%. The US 30-year Treasury yield finished the year at approximately 1.90%, an increase of 26 bps year-over-year from December 2020. Since the start of 2022, US Treasury yields have increased across the curve. By January 24, 2022, the 10-year and 30-year Treasury yields haves risen 23 and 20 bps, respectively, since the end of 2021.

Investment grade-rated corporate credit spreads were largely unchanged year-over-year, finishing 2021 on average only 7 bps higher from December 2020, as investors were apprehensive making significant moves in the market due to uncertainty surrounding future economic growth. However, high yield corporate credit spreads ended the year at approximately 93 bps higher year-over-year from December 2020, as investors moved into higher quality investments.

At the Federal Open Market Committee meeting in December 2021, the US Federal Reserve decided to double its speed of tapering. The decision would reduce its bond purchases by $20 billion in Treasuries and $10 billion in mortgage-backed securities each month, as the economy had made progress towards the Fed's goals of maximum employment and price stability. At the current rate, the Fed will have discontinued any bond purchasing by March of 2022. Thereafter, it is anticipated by some market experts that the Fed will increase the federal fund rate four times prior to the end of 2022 in attempt to control inflation.

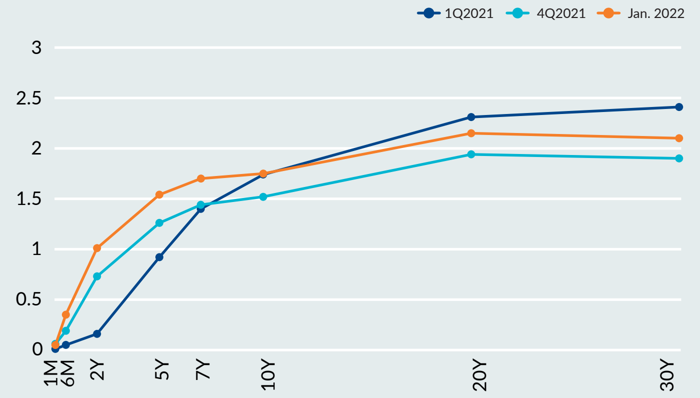
Total corporate bond issuance in 2021 was approximately $2.3 trillion, which is roughly $317.1 billion in volume less than new issuance in 2020, an approximately 13.9% decrease year-over-year. High-yield bond issuance in 2021 was approximately $485.1 billion, a 14.5% increase year-over-year. The high yield segment represents the only year-over-year increase for all nonconvertible bonds.

Infrastructure

In 4Q2021, President Joe Biden signed a $1.2 trillion infrastructure bill into law. The law includes roughly $550 billion in additional spending on top of what the government already planned to spend over the next five years on America's infrastructure. $110 billion will be allocated for roads and bridges, $66 billion will fund upgrades and maintenance of the US passenger rail system, $130 billion will fund power grid and broadband updates, and $105 billion will fund water infrastructure and resilience infrastructure for cybersecurity and climate change. The rest will fund projects and upgrades for public transportation, airports, EV charging stations, and general safety. According to the Coalition for America's Gateways and trade Corridors, the money is needed to ensure safe travel and the transport of produce and goods.

CHART 5: TREASURY CURVE SNAPSHOTS AT THE END OF 1Q2021, 4Q2021 AND JANUARY 2022

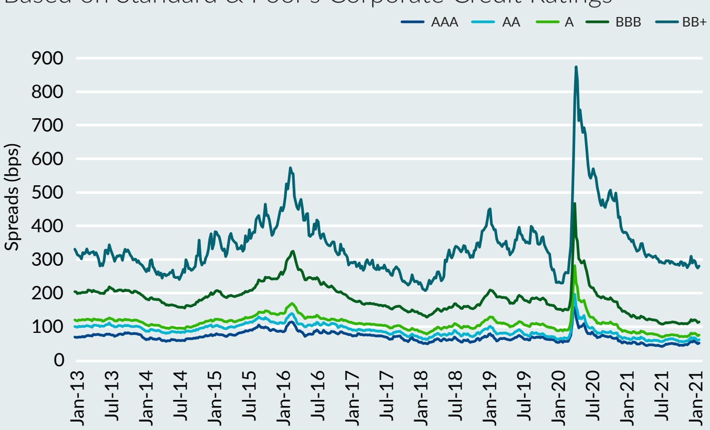
Based on Standard & Poor's Corporate Credit Ratings



1. January 24, 2022 | Source: US Department of the Treasury.

CHART 6: HISTORICAL CORPORATE BOND SPREADS TO 10-YEAR US TREASURIES

Based on Standard & Poor's Corporate Credit Ratings



Source: S&P Global Fixed Income Research.

Mesirow featured deals

SELL-SIDE ADVISOR

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M&A Sell-side advisor to Farmers Hen House

Mesirow acted as the exclusive financial advisor to Farmers Hen House Group, Inc. ("Farmers Hen House" or the "Company") on its recapitalization with Pasture Brands Holdings, LLC ("Pasture Brands"), an affiliate of Benford Capital Partners ("BCP"), a Chicago-based middle market private equity firm focused on leveraged buyouts and recapitalizations. Headquartered in Kalona, Iowa, Farmers Hen House is a leading provider of farm-to-table, premium branded and private label specialty eggs, supplying retail customers with organic, free-range and pasture-raised eggs sustainably sourced from local farmers. The Company was founded in 1997 with the goal of providing local Amish and Mennonite farmers the means to supply local retailers with organic eggs and has since established itself as a premium shell egg brand and a critical partner to its growers and retail customers. As one of the only major suppliers of a full range of premium, specialty eggs, Farmers Hen House will grow BCP's portfolio within the packaged food and agricultural products sectors.

City of Houston

$308,665,000

Public Improvement Bonds
Series 2021A and
Series 2021B (Taxable),
C/OS Series 2021C

SENIOR MANAGER

Senior Manager for The City of Houston's Public Improvement Bonds, Series 2021A, Series 2021B (taxable), and Certificates of Obligation, Series 2021C (collectively "The Series 2021 Bonds")

The pricing process produced impressive results. During pre-pricing, Mesirow marketed various structures to help augment the plan of finance. During pricing, Mesirow was able to stimulate participation from a diverse group of investors across all the maturities offered. Our team received strong institutional demand for all of the various coupons and most maturities were highly oversubscribed. Well-known names such as Blackrock Advisors, Wells Fargo and Goldman Sachs participated in the financing, as well as some mid-tier and smaller buyers such as Northern Trust, Northland Securities, First Republic, and Appleton Partners — many of whom were first-time investors for the City of Houston credit. Even in a fixed-income market that exhibited a relatively delicate tone, Mesirow's underwriters and sales force were able to improve rates up to 8 bps for some maturities between pre-marketing and final pricing. In the final analysis, the tax-exempt Series 2021A Bonds attained a true interest cost of 1.663% and the taxable refunding attained approximately $12.3 million in net present value savings.

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About Mesirow

Mesirow is an independent, employee-owned financial services firm founded in 1937. Headquartered in Chicago, with offices around the world, we serve clients through a personal, custom approach to reaching financial goals and acting as a force for social good. With capabilities spanning Global Investment Management, Capital Markets & Investment Banking, and Advisory Services, we invest in what matters: our clients, our communities and our culture. To learn more, visit mesirow.com and follow us on LinkedIn.

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