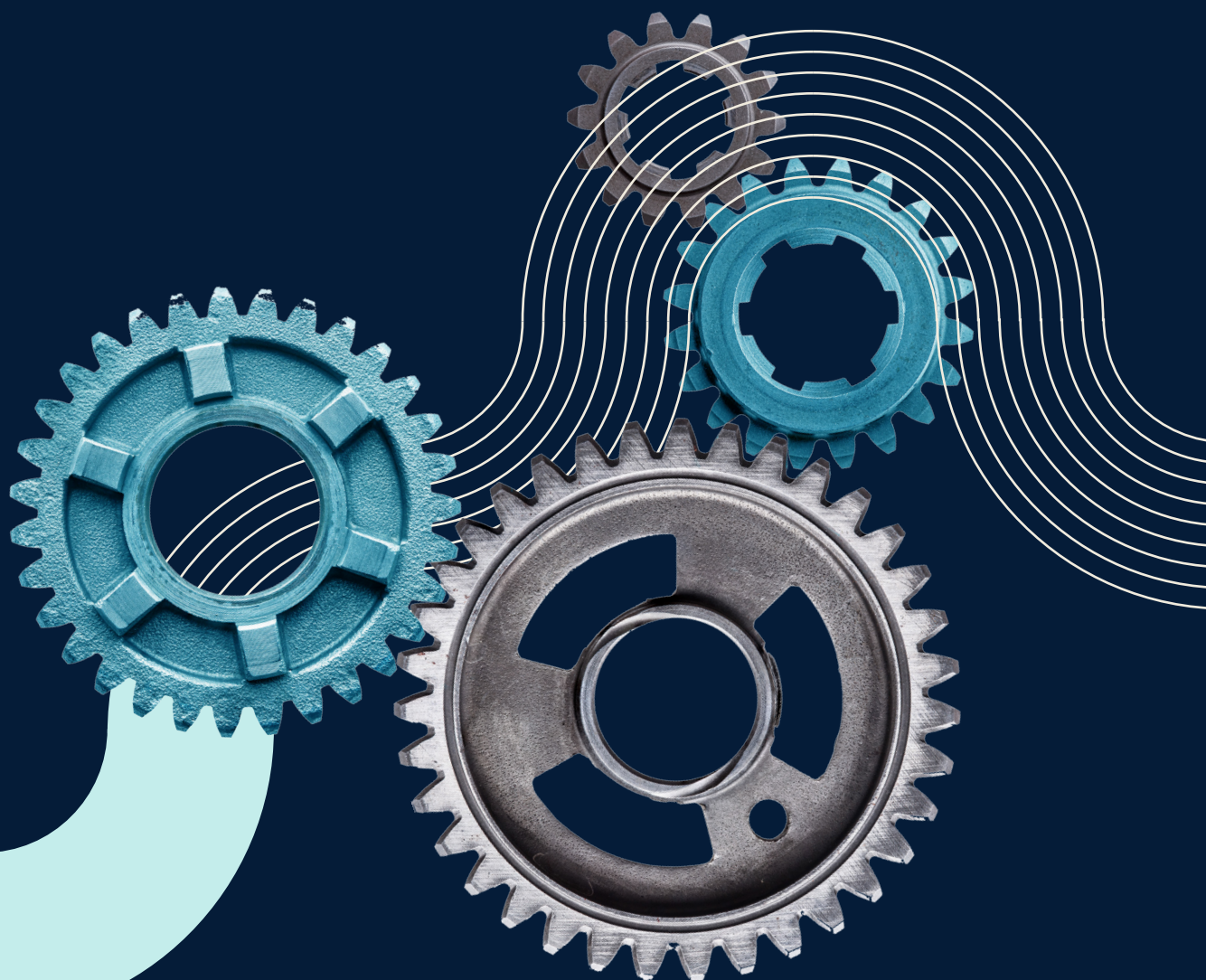


 GLOBAL
M&A Report



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Methodology change disclosure:

We have changed our methodology for recording deal activity. This will apply to this and all future PE- and M&A-related reports. All announced deals will be included in our reporting of total deal activity in addition to completed deals, and announced dates will be used to reflect deal timing in favor of closing dates. We have made this change to reduce the lag time between when deals are negotiated and priced and when they close to provide a more accurate depiction of valuation trends and volume activity. Please note that this methodology change applies only to PE deals and M&A deals and not to venture-related deals, which will continue to use closing dates for recording purposes.

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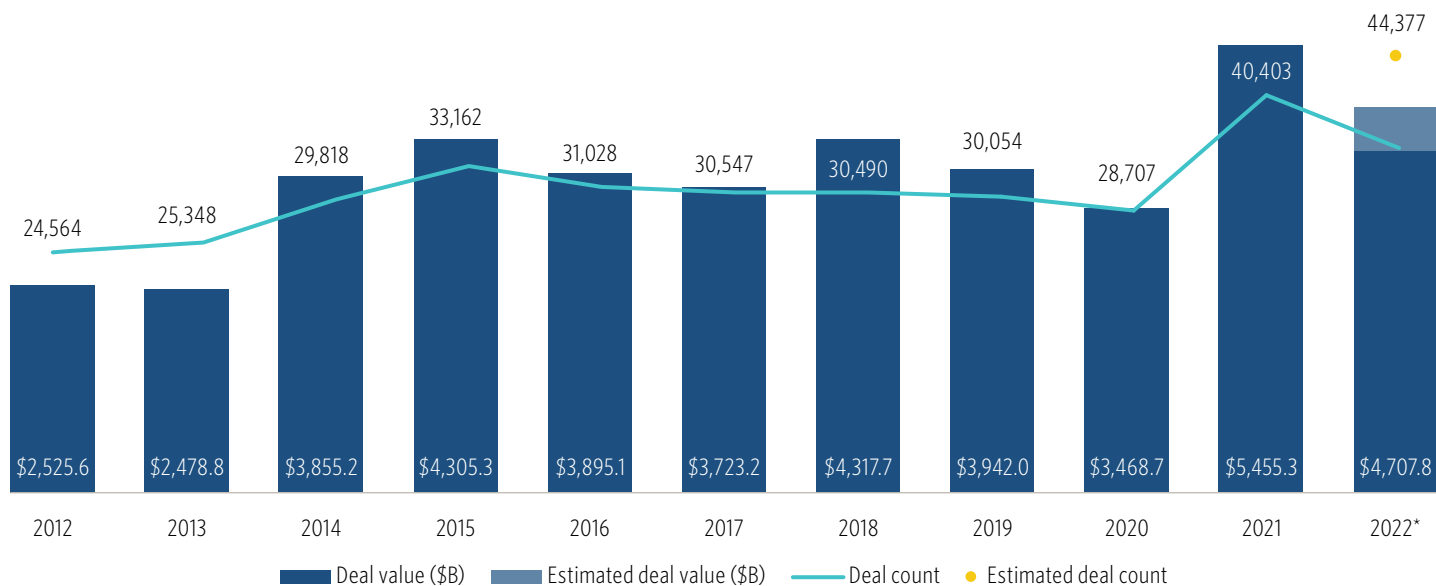
Report designed by **Jenna O'Malley and Joey Schaffer**

Published on January 25, 2023

Click [here](#) for PitchBook's report methodologies.

Overview

M&A activity



Source: PitchBook | Geography: Global
*As of December 31, 2022

Jinny Choi

Analyst, Private Equity

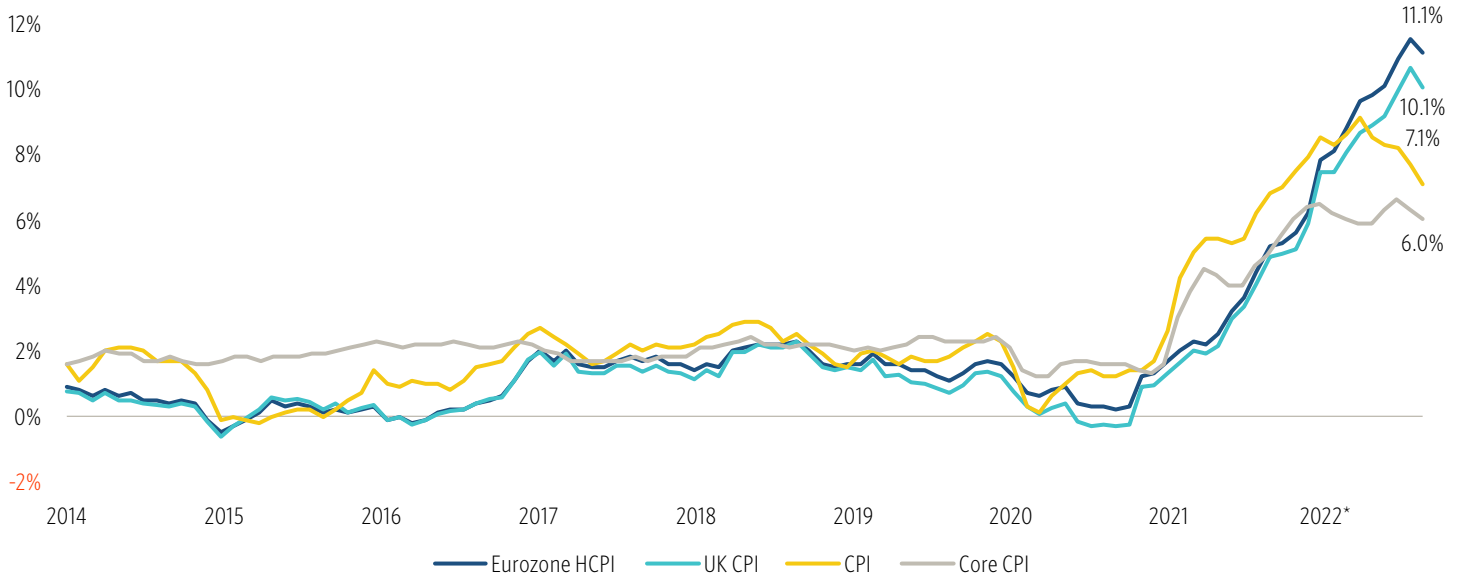
In 2022, global M&A activity remained resilient despite harsh macroeconomic headwinds that persisted throughout the year. Compared with 2021, M&A value declined 13.7% to \$4.7 trillion but was strong relative to historic levels and marked its second-best year. Global M&A broke a new record in 2021 as deal activity rebounded from the COVID-19-induced slowdown and thrived in an environment of more bullish confidence levels, surging fundamentals, and high multiples. While M&A activity appeared poised to continue its frenzy, several macroeconomic developments at the onset of 2022 threw markets off course.

Staggering inflation figures across global markets, driven by rising demand, supply chain issues, and labor shortages, led central banks to aggressively raise interest rates in 2022. The US Federal Reserve (the Fed) announced seven interest rate hikes during the year, boosting the federal funds rate to its highest level in 15 years. Europe also moved away from decades of quantitative easing: The Bank of England hiked interest rates to 3.5% in its ninth increase of the year while the European Central Bank raised its rate to 2%.

Global equity markets tumbled during H1 2022 as company valuations were driven down in response to future cash flows being discounted at higher rates and becoming less valuable. At the same time, Russia's invasion of Ukraine heightened market uncertainty and caused several weeks' pause in Q1 dealmaking as investors grappled with the fallout. PE firms also struggled against increased borrowing and leverage costs for potential deals, and the leveraged loan market came to a virtual standstill in H2, further complicating dealmaking.

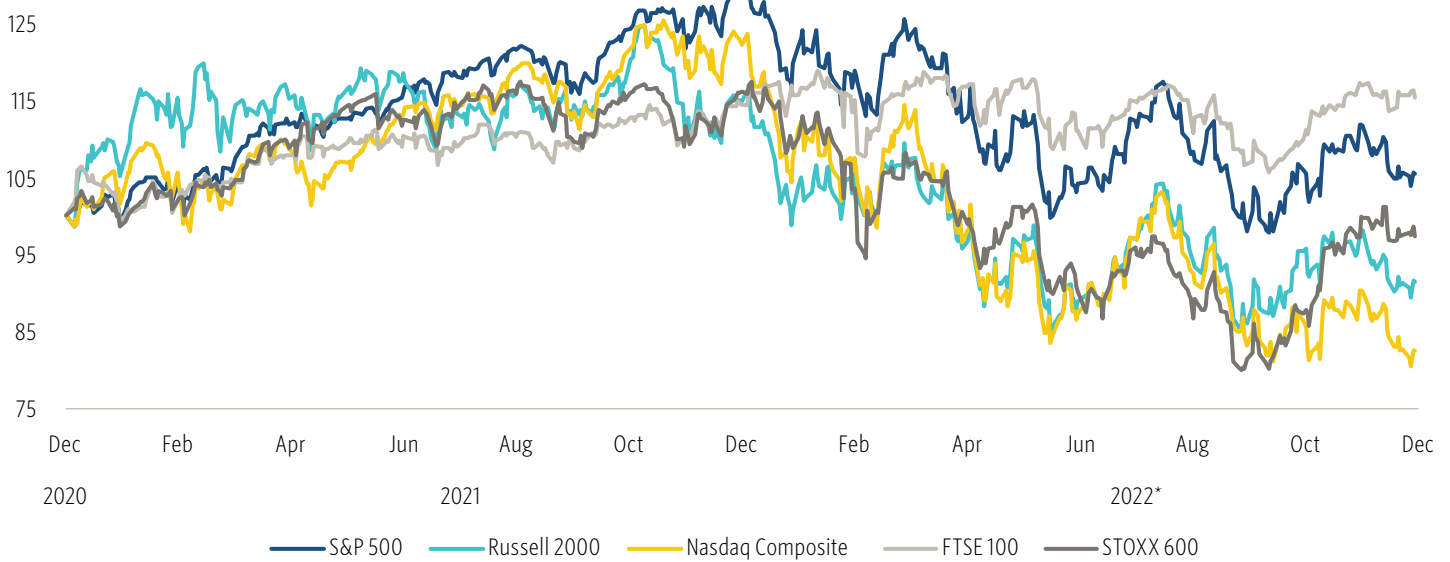
Undaunted, buyers took advantage of cheaper prices, with median deal multiples declining to 8.8x EBITDA from a 14-year high of 11.1x. M&A value was almost 20% higher than pre-pandemic levels for the three years ended 2019. Other factors supported M&A activity. For example, PE firms still have \$1.3 trillion of dry powder globally, enabling sponsors to capitalize on attractive deals spurred by the market downturn that resulted in lower valuations and distressed assets. Sponsors also continued to deploy capital in a challenged financing environment by taking down deal sizes and turning to add-on acquisitions until lending markets become more accommodative to large platform buyouts. Add-ons accounted for a record 71.9% of buyout deals in 2022, given that their smaller size and their ability to rely on their larger acquirer's credit makes them easier to finance.

Headline and core inflation



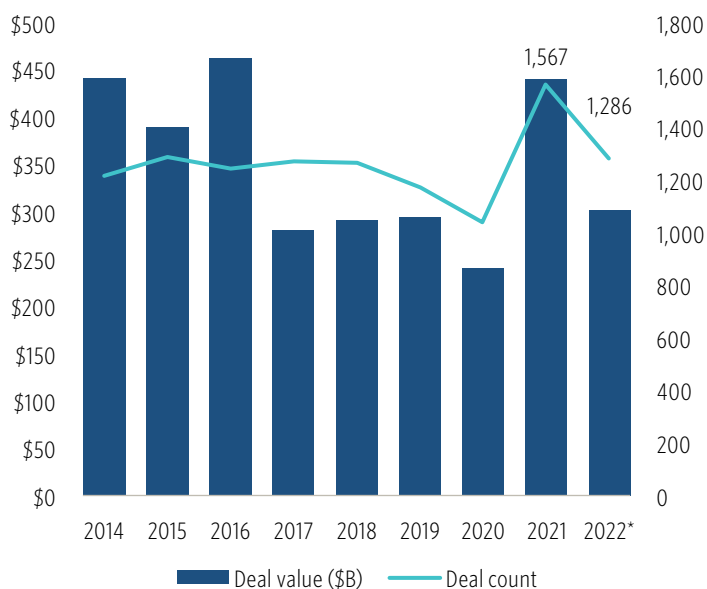
Sources: FRED, US Bureau of Labor Statistics, Office for National Statistics, Eurostat | Geography: US and EU
*As of November 30, 2022

Select stock indexes (rebased to 100 in December 2020)



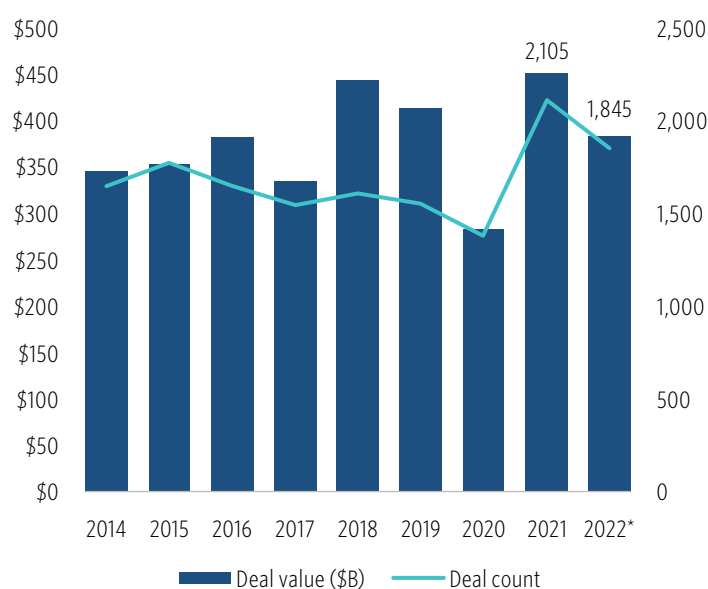
Source: Morningstar | Geography: Global
*As of December 31, 2022

North American M&A activity with non-North American acquirer



Source: PitchBook | Geography: North America
*As of December 31, 2022

European M&A activity with non-European acquirer



Source: PitchBook | Geography: Europe
*As of December 31, 2022

Well-capitalized strategics also continued to chase deals for long-term growth. 12 strategic acquisitions worth more than \$10 billion were announced in 2022, such as Kroger’s planned merger with Albertsons in a deal worth \$24.6 billion. Following regulatory approval, the merger would establish a stronger national footprint for the combined entity and accelerate the grocery chain’s profit growth in a fragmented industry that was hit hard by inflation in 2022. Several energy deals also made the top M&A deal list in 2022 as investors sought opportunities in the energy crisis created by the war in Ukraine.

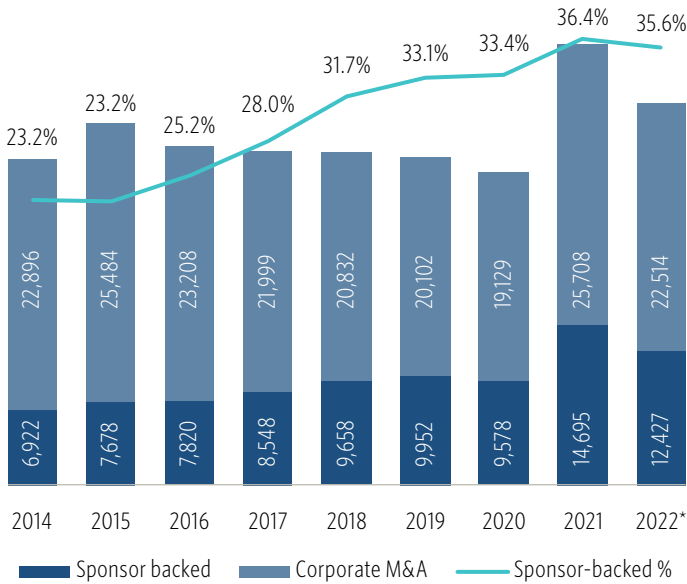
Cross-border M&A also remained robust compared with historic levels.¹ The 20-year high in the US dollar provided strong motivation for US-domiciled acquirers to seek out

targets overseas. Cross-border M&A between Europe and North America has always been active in both directions, and as recently as 2016, it favored the US as a recipient of net flows. 2022 was a different story. M&A involving North American acquirers of European companies totaled \$315.3 billion for the year, or 21.2% of all European M&A value. Meanwhile, European acquisitions of North American companies accounted for 10.1% of North American M&A value. The \$100.8 billion differential in favor of Europe was the largest in 16 years, second only to 2019, when Europe attracted a net M&A flow of \$129.2 billion. Although geopolitical and economic uncertainty remains, cross-border M&A activity is expected to persist as market volatility generates new opportunities and well-capitalized dealmakers look to enhance growth through strategic acquisitions.

1: For further analysis on cross-border M&A, please refer to our recent analyst note [The State of Cross-Border M&A](#).

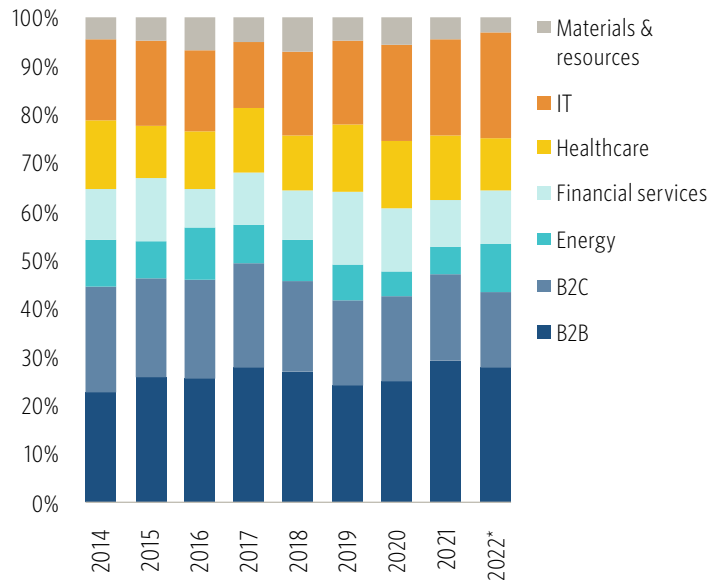
Global deal metrics

M&A count by acquirer type



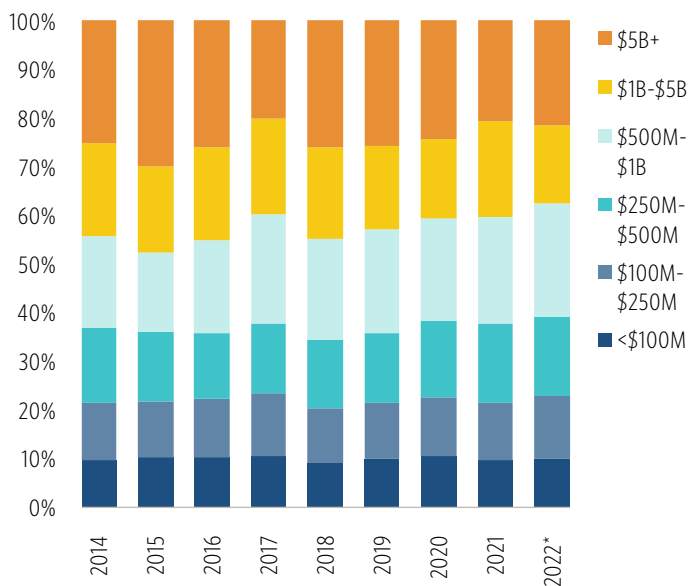
Source: PitchBook | Geography: Global
*As of December 31, 2022

Share of M&A value by sector



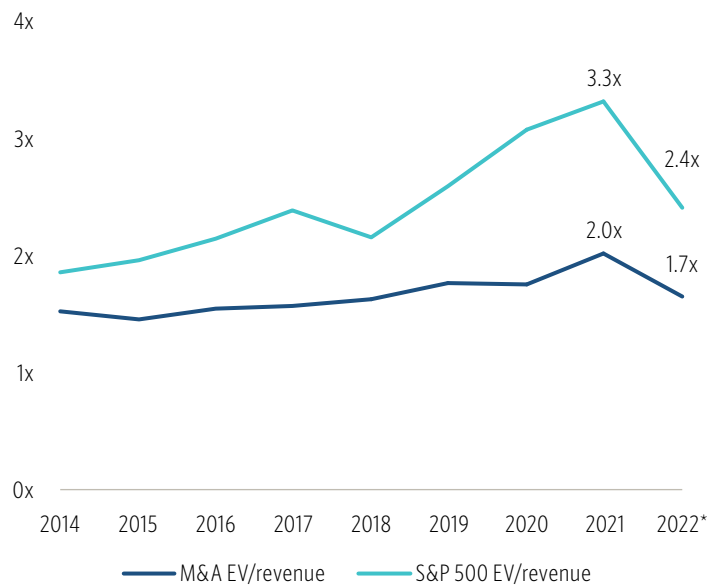
Source: PitchBook | Geography: Global
*As of December 31, 2022

Share of M&A value by size bucket



Source: PitchBook | Geography: Global
*As of December 31, 2022

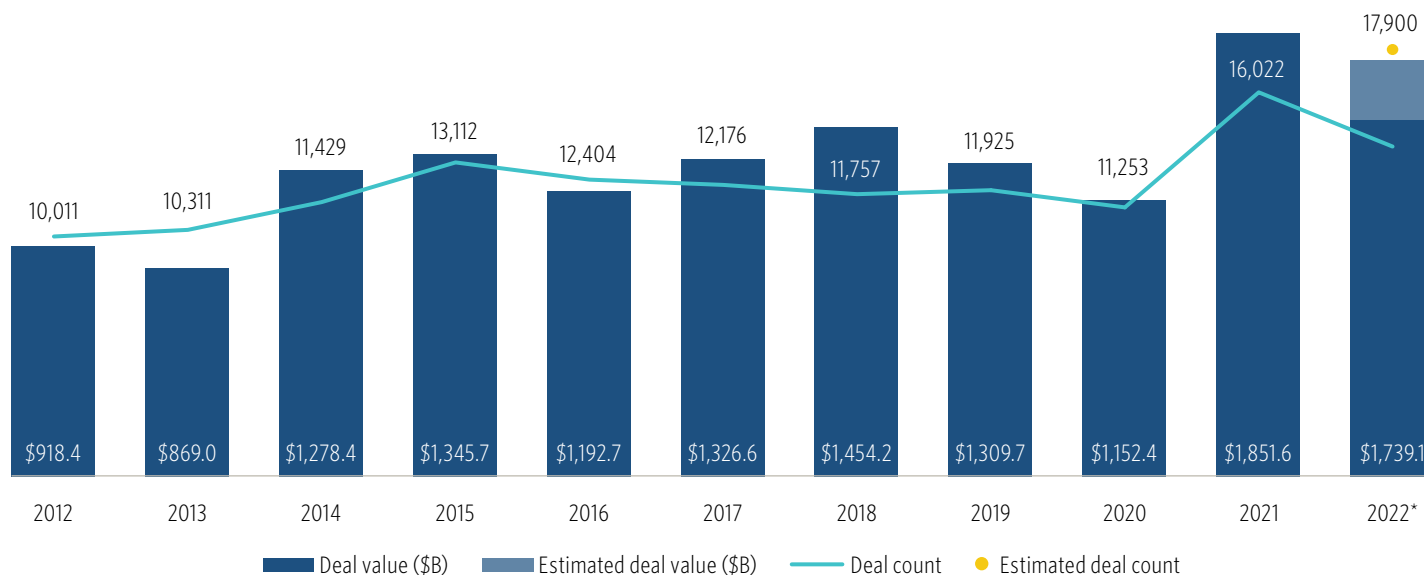
Trading multiples on public companies versus M&A deal multiples



Source: PitchBook | Geography: Global
*As of December 31, 2022

European M&A

European M&A activity



Source: PitchBook | Geography: Europe
*As of December 31, 2022

Nicolas Moura, CFA
Analyst, EMEA Private Capital

In 2022, European M&A remained resilient despite the macroeconomic backdrop, with M&A deal count rising to a record 17,900 deals, up 11.7% YoY from what had already been a record year. On the other hand, European M&A deal value dropped 6.1% YoY, indicating that there were more deals worth slightly less than in 2021. In Europe, 2022 will be remembered as the year Russia invaded Ukraine, which marked the beginning of an energy crisis on the continent as commodities prices soared and inflation rose. This directly led to the largest M&A deal of the year: the German government’s nationalization of Uniper, the country’s largest importer of gas, for \$33.7 billion in Q3 in an attempt to stabilize energy prices. Germany also nationalized SEFE, previously Gazprom Germania, which had been offloaded by the Russian state-owned gas provider earlier in the year. Similarly, the French government fully nationalized EDF in a deal worth \$10.0 billion. The company controls the nuclear power plants in France that are key to diversifying energy supplies away from Russian gas. Indeed, in Europe we saw energy M&A deals increase 34.9% to \$152.5 billion in 2022.

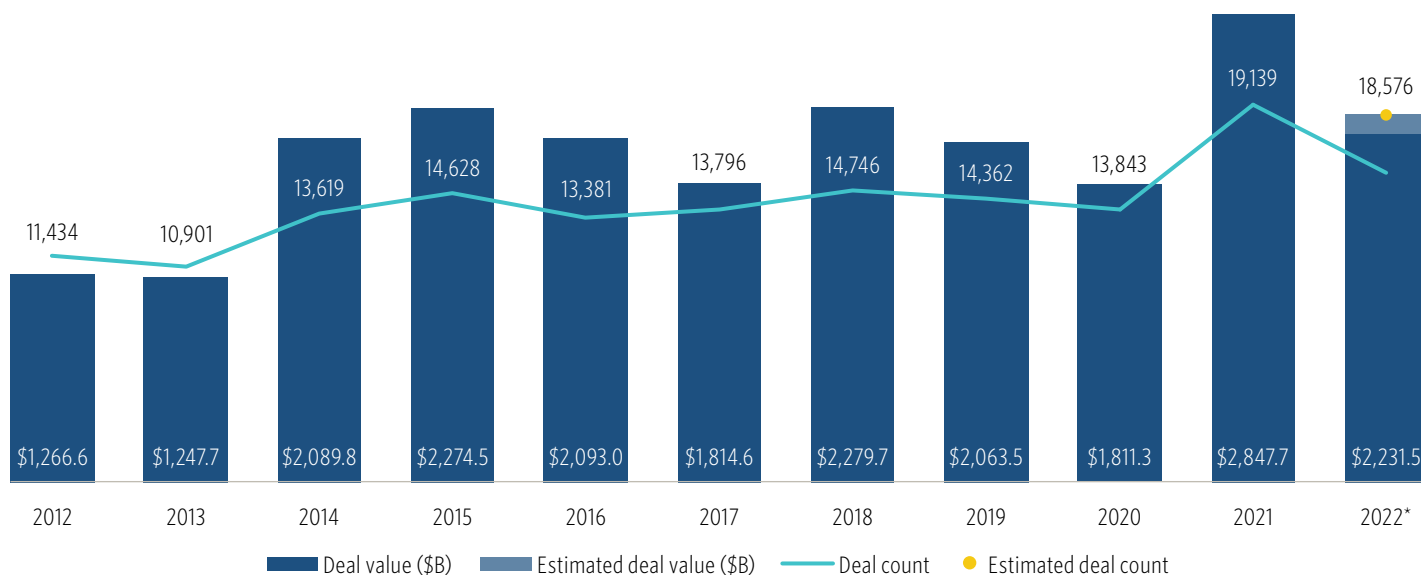
M&A in Europe continued to be boosted by cross-border deal flow, with one in 10 deals involving a North American acquirer. European M&A has been of particular interest to North American PE companies, which seek to diversify their portfolios and take advantage of a strong dollar. Italy’s Atlantia was taken private by a consortium involving Blackstone for \$20.9 billion, Deutsche Telekom sold part of its tower business to a consortium involving DigitalBridge Group for \$9.3 billion, and even Chelsea Football Club was sold to Clearlake Capital Group and Todd Boehly for \$3.2 billion. PE deals accounted for 36.1% of all European M&A deals, an increase of 140 basis points from 2021.

The UK & Ireland was Europe’s most active region for M&A, accounting for 29.0% of deals, with France & Benelux following with 20.7% of deals. Historically, the UK has had more relaxed M&A rules, especially since it has withdrawn from the European Union (EU). London continues to serve as Europe’s financial hub for the time being, although the recent announcement that the French stock market overtook the UK market in total market capitalization may come as a warning for UK dealmakers.²

2: "London Loses Crown of Biggest European Stock Market to Paris," Bloomberg, Joe Easton, November 14, 2022.

North American M&A

North American M&A activity



Source: PitchBook | Geography: North America
*As of December 31, 2022

Jinny Choi

Analyst, Private Equity

North American M&A stumbled in 2022, ending the year with approximately 18,576 deals for a combined value of \$2.2 trillion. Deal value dropped 21.6% from the record-setting activity seen in 2021, which had been spurred by expanding valuations, strong stock prices, low interest rates, and wide economic recovery since the onset of the pandemic. Since then, numerous headwinds have reversed previously bullish market sentiment and led to the decline in M&A activity. Soaring inflation and aggressive interest rate hikes dampened investor sentiment while geopolitical tension and ongoing supply chain issues amplified market uncertainty. In the US, stock markets experienced sharp losses and pulled potential investors out of the market. Three major indexes saw the biggest annual drop since 2008: S&P 500 finished the year with a 19.4% decline, shedding roughly \$8 trillion in market cap, while the Dow Jones Industrial Average fell by 8.8% and the Nasdaq Composite a whopping 33.1%.

Efforts to curb the worst price pressures in four decades slowed down M&A activity as rising interest rates lowered equity valuations and increased the cost of financing acquisitions. Since hitting a 9.1% YoY increase in June, a 40-year high, the

Consumer Price Index (CPI) showed a year-end rate of 6.5%, signaling cooling inflationary pressures for 2023. Markets rallied after the news in hopes that the Fed will slow down its interest rate hikes, but many economists point to the Fed's continued statements that rates will be kept higher longer than the market expects. Federal funds rates are currently set between 4.25% and 4.5% and are expected to surpass 5% in H1 2023 and stay at those levels throughout the rest of the year. Canada's CPI rose 6.8% annually in November, suggesting another rate hike in January to curb the persistent inflation.

Despite intense market volatility, North American deal count and value remained above the three-year pre-pandemic average (2017 to 2019), demonstrating that 2022's M&A levels are depressed compared with the high-water mark set the year before and that deal activity is correcting to a more sustainable pace in line with historic levels. In 2022, 330 deals of \$1 billion or more were announced or closed as buyers continued to find attractive acquisition targets amid the market downturn. The information technology (IT) and energy sectors thrived in different ways: IT barely had a dip in annual M&A deal value as investors continued to seek growth in tech capabilities, and deal value in energy saw a bump with increased demand in traditional oil & gas as well as continued growth in renewable energy capacity.

B2B

B2B M&A activity by quarter



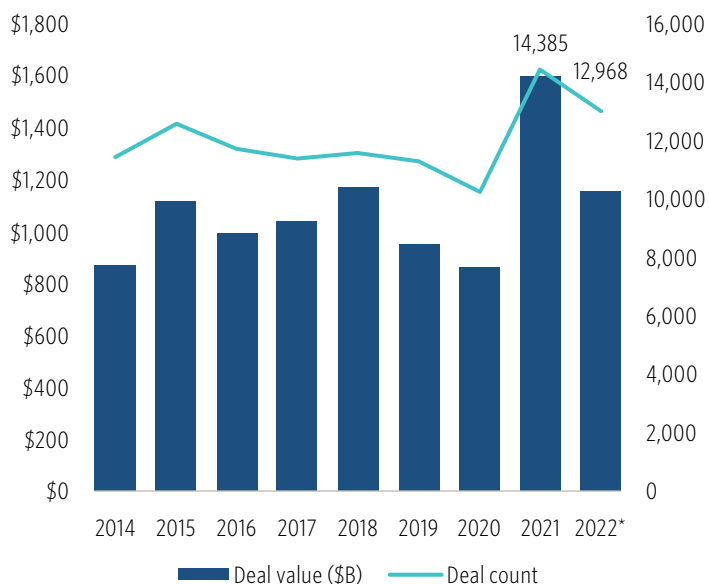
Source: PitchBook | Geography: Global
*As of December 31, 2022

Tim Clarke

Lead Analyst, Private Equity

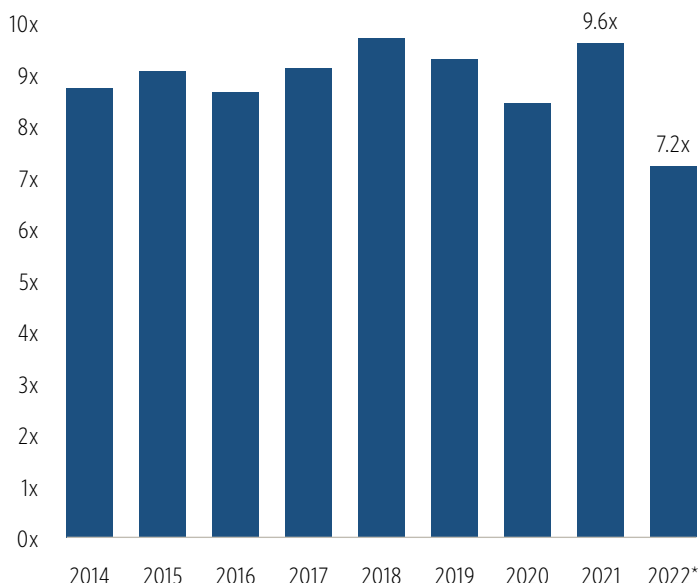
Founder-owned companies abound: The B2B sector rotated back into favor in 2022. Compared with the prior year, B2B gained 1.5% in its share of deal count, more than any other sector. A total of 12,968 deals, or 37.1% of deals across all sectors, were announced or completed in 2022. What attracts corporate and PE buyers alike is the sector’s high proportion of boot-strapped and founder-owned businesses. In 2022, a total of 11,483 of these nonbacked private companies were acquired in the B2B sector, twice as many as any other sector. Given how difficult it is to find willing sellers in the current environment with both corporates and financial sponsors holding out for better prices, these founder-owned B2B companies are highly prized and prospected.

B2B M&A activity



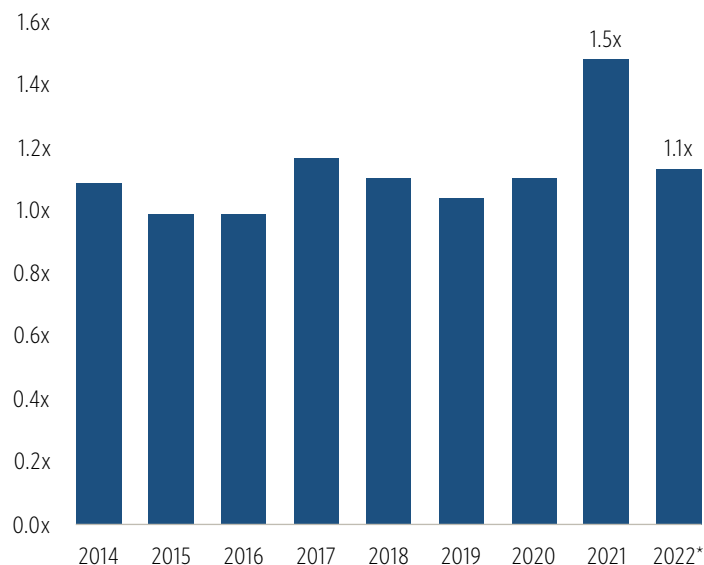
Source: PitchBook | Geography: Global
*As of December 31, 2022

B2B M&A EV/EBITDA multiples



Source: PitchBook | Geography: Global
*As of December 31, 2022

B2B M&A EV/revenue multiples



Source: PitchBook | Geography: Global
*As of December 31, 2022

More companies are going private: Of the top 20 deals in Q4 2022, 11 were buyouts by PE funds, and of those, eight involved a public company that either got taken private in its entirety or sold a piece of itself to a PE buyer. Notable deals include the \$1.3 billion take-private of UserTesting by Thoma Bravo and Sunstone Partners. This customer experience platform provider was public for only a year before it was taken private again by financial sponsors at an EV-to-revenue multiple of 6.1x. In November, Emerson Electric carved out its climate technologies business for purchase by Blackstone for \$14.0 billion, or 12.7x EBITDA and 2.8x net sales. Emerson will retain a 45.0% interest in the new standalone company until Blackstone finds a buyer or arranges an IPO.³

Aerospace & defense stays hot: Geopolitical instability, large increases in government defense budgets, and the recovery in commercial airline travel have all contributed to renewed interest in the aerospace & defense industry. Two notable deals occurred in Q4, including Aerojet Rocketdyne's agreement to be acquired by L3Harris for \$4.7 billion, or 21.7x EBITDA and 2.0x revenue. The deal will give L3Harris a greater footprint in civil space, strategic defense systems, and precision munitions. In November, German defense contractor Rheinmetall announced its acquisition of EXPAL Systems for \$1.2 billion, or 1.4x revenue. EXPAL Systems is another player in the precision munitions space as well as other weapon systems.

3: "Emerson to Sell Majority Stake in Climate Technologies to Blackstone in Transaction Valuing the Business at \$14.0 Billion," Blackstone, October 31, 2022.

B2C

B2C M&A activity by quarter



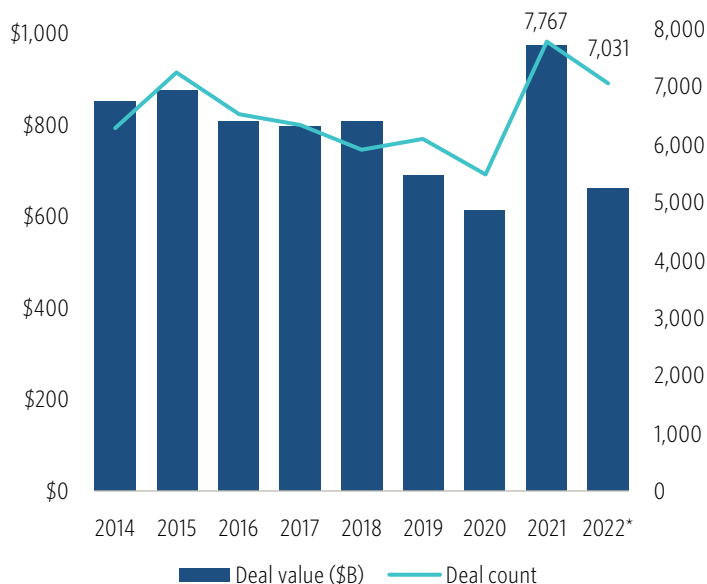
Source: PitchBook | Geography: Global
*As of December 31, 2022

Kyle Walters

Associate Analyst, Private Equity

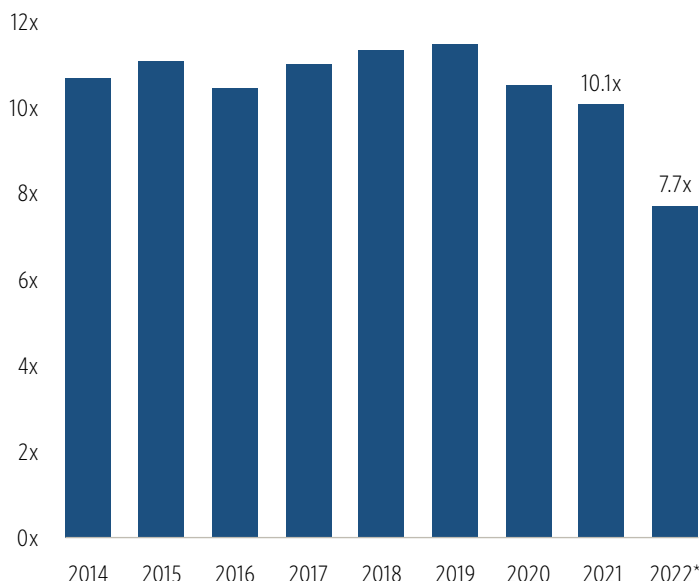
Deal count remained above historical trends, while deal value saw a big drop from the record-setting 2021: In 2022, 7,031 B2C M&A deals closed or were announced with a combined value of \$657.8 billion, marking YoY decreases of 9.5% and 31.9%, respectively. After M&A value and count soared to record figures in 2021, M&A activity in 2022 reverted back toward the mean as consumers faced a set of headwinds that lowered demand for the industry. The median deal size lowered to \$20.6 million, though it was still the second-highest median on record, trailing 2021's median deal size of \$23.2 million. Over the past couple of years, consumers have accelerated their spending on goods and services in spaces such as leisure, retail, and hospitality, which boosted B2C M&A, especially when combined with a zero-interest-rate environment, excess liquidity, and government stimuli that have previously buoyed M&A activity in the space. This shifted in 2022 despite consumer spending levels remaining

B2C M&A activity



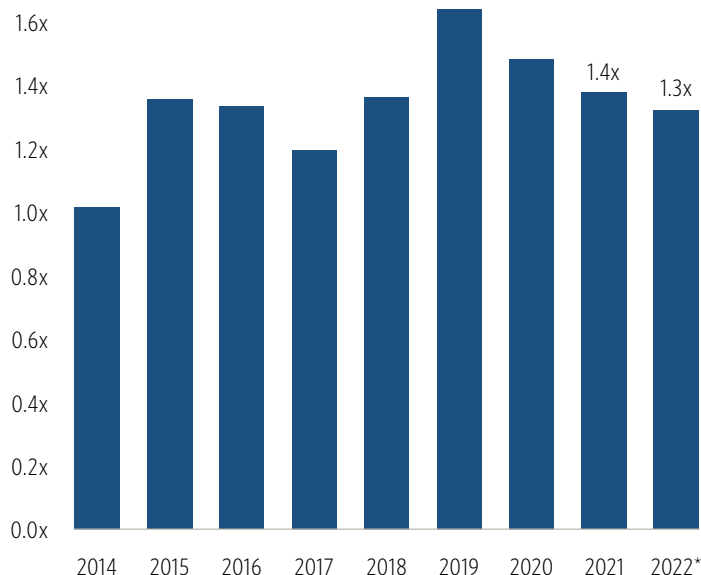
Source: PitchBook | Geography: Global
*As of December 31, 2022

B2C M&A EV/EBITDA multiples



Source: PitchBook | Geography: Global
*As of December 31, 2022

B2C M&A EV/revenue multiples



Source: PitchBook | Geography: Global
*As of December 31, 2022

elevated. Credit card debt climbed while the personal savings rate lowered, forcing consumers to act more rationally than they had in the past. As a recession looms and consumers are forced to hunker down and change their spending habits, the impact on the space will be worth watching in 2023.

Corporate divestitures made waves in the B2C space in

2022: Consumer behavior changed drastically in 2022 from what was seen in the boom of 2021, leading corporations to adjust their business strategies. Carveouts were a big theme of portfolio revamps: Corporates aimed to deleverage or exit noncore assets as headwinds forced them to re-evaluate,

seeking to increase efficiency and cut costs. This opened the door for PE firms and corporations alike. For instance, Tropicana, Naked, and other North American juice brands that were subsidiaries of PepsiCo were carved out to French PE firm PAI Partners for \$3.3 billion in Q1. The deal allows PepsiCo to strengthen its balance sheet and make organic investments in its business and PAI to introduce plans of product innovation and expansion.⁴ In October, Seattle's Best Coffee was divested by Starbucks to Nestlé for \$7.2 billion. The sale allows Starbucks to focus on its core business and Nestlé to focus on driving sustained growth in the coffee category.

4: "PepsiCo Divestment of Tropicana, Naked Juice Reflects Evolving Focus on Zero-Calorie Beverages, Water," FoodNavigator-USA, Elizabeth Crawford, August 3, 2021.

A WORD FROM LIBERTY GTS

Six reasons to be cheerful in 2023

As M&A insurers, we ended 2022 in a much quieter place than we began. With many PE firms holding back their dry powder and rethinking their financing models to take account of global inflation, the pause in deal volume has given me some time to consider what we can expect from 2023.

Perhaps I am naturally optimistic, but I see a surprising number of good reasons for some (albeit subdued) confidence about the coming year. Let's look ahead to my six reasons for new year cheer:

Our core clients will continue to transact

The stronger PE firms, and those who have proven track records, are likely to continue to transact in the year ahead, albeit selectively and with discretion. For Liberty GTS, these are our heartland clients, and we expect to continue to help them participate in these types of deals throughout 2023.

Due diligence will improve

Meanwhile, some of the weaker and less well-capitalized PE firms will see enforced pauses on their activity, and this will bring down overall deal volumes. As a result, competitive tension will undoubtedly reduce, and the pressure to complete deals within unrealistically short timeframes will also reduce. For the transaction teams this brings a beneficial environment in which, for the first time in more than three years, they will be able to focus properly on due diligence—conducting it in person where necessary—taking time to understand all the financials, contracts, and quirks behind each deal target.

So, cheerily, the deals that do go through are likely to be well thought through and properly checked, which may ultimately result in fewer claims coming through to us.

Reduced multiples will shrink claim sizes

M&A pricing will certainly be under pressure in 2023. As financing sources shrink and interest rates rise, PE firms will struggle to borrow at previous levels, which will bring an enforced drop in offer levels. 10x multiples look set to become more like 5x multiples, and this is a straight six (to use a



Rowan Bamford

President, Liberty GTS

Rowan is President of the Liberty Global Transactions Solutions (GTS) M&A insurance team, a position he has held since 2015. This global M&A insurance unit of Liberty Mutual offers transactional risk insurance products, such as representations and warranties insurance, tax liability insurance, and contingent legal risk insurance. Under Rowan's leadership, the book of business has increased an average of 67% year-on-year in gross written premium and he now oversees a team of more than 80 specialists spread across 10 countries.

Prior to joining GTS (where he originally worked for Liberty's subsidiary Ironshore), Rowan managed AIG's EMEA M&A book. He also spent three years as a senior underwriter at Ironshore. Before joining the insurance market, Rowan spent eight years in the corporate department at the international law firm Dentons. Rowan specialized in private M&A work in the financial services sector and spent time on secondment to an investment bank and a Lloyd's syndicate.

cricketing analogy) for us as insurers. The smaller the multiple, the smaller the exposure we take as insurers, which in turn means we'll be able to live up to our service promises to pay our claims on time and to value—a win for everyone involved.

Buyers and sellers are now on the same page

It is no longer news to anyone that the global economy is in a downturn, which has a positive side for insurers as well. For much of the last year, we have feared insurance claims based on a mismatch of expectations between buyers and sellers. Buyers lifting the lid to a nasty surprise when they look at the detail of what they have bought brings nobody any joy. But—for the animal lovers among you—if you buy a dog that you already know has fleas and perhaps a touch of mange, you buy it more cheaply, prepared to take time to clean it up and see the benefits of a loving brush and polish. Then you're much less likely to regret your purchase and make a claim on the basis the dog was sold to you under false pretenses.

Tax is an area of opportunity

We also see new opportunities in the changed economic landscape. As governments look to raise money through higher taxes, there will be an increased need for my tax specialist colleagues. Many companies will look to reorganize themselves for tax purposes—which may lead to M&A outcomes, or to reorganize the tax provision that sits on their accounts currently. Tax insurance products that can crystallize the cost of an expected tax liability that might increase over the coming year will suddenly look highly attractive. Expect growth in this field next year.

The types of deals will be different

2023 will not be the year of the big retail or service industry deal—unless there is distress involved. Instead, we expect to see recession-proof infrastructure assets (such as road networks and water companies) being bought and sold alongside renewable energy infrastructure. These are bigger deals that play to Liberty GTS's strengths.

2023 may be a tough year, but I take comfort from the fact that not every part of a changed economic circumstance is bad news. And on that note, thank you for your support in 2022, and Happy New Year for 2023!

Energy

Energy M&A activity by quarter



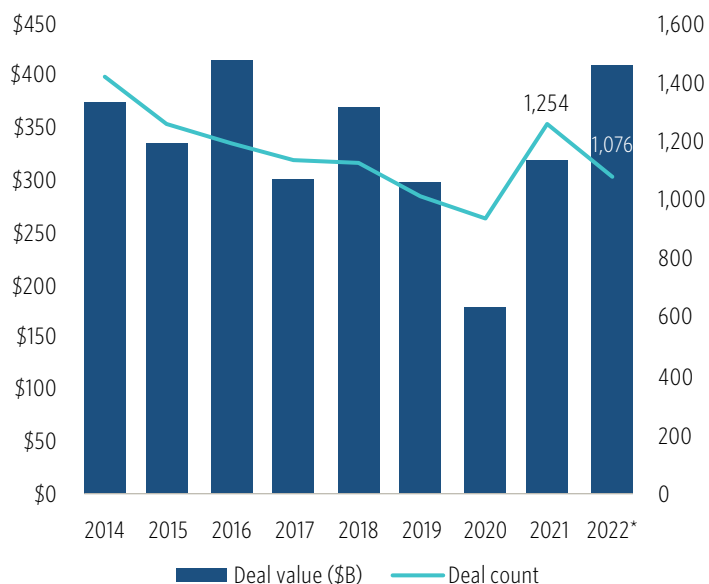
Source: PitchBook | Geography: Global
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Kyle Walters

Associate Analyst, Private Equity

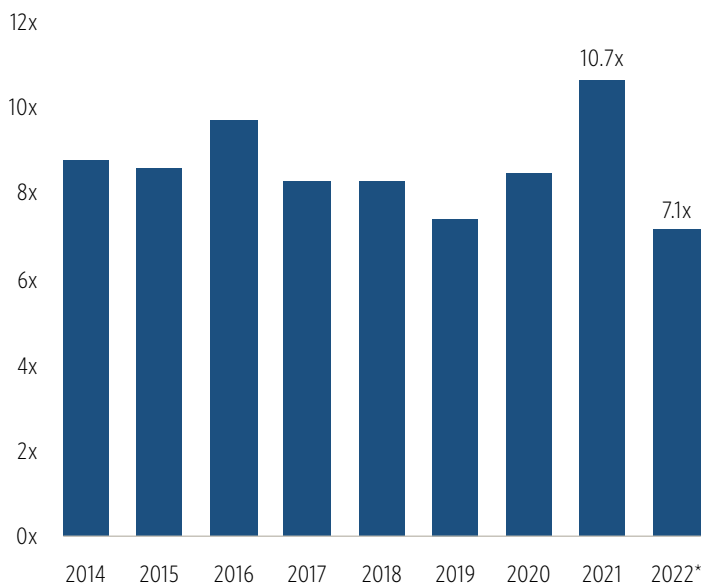
Energy M&A activity was massively affected by Russia's invasion of Ukraine: While the energy sector saw a decline in M&A activity, continuing the trend seen in the space in the years prior to 2021, deal value skyrocketed to levels that have not been seen since 2016. In 2022, the sector saw 1,076 deals close or be announced for a combined value of \$407.7 billion. This increase in value can be attributed to companies looking to capitalize on higher prices and higher demand amid the energy crisis caused by the war in Ukraine. This comes as tensions in the EU remain high while it experiences a winter with limited gas supplies from Russia.

Energy M&A activity



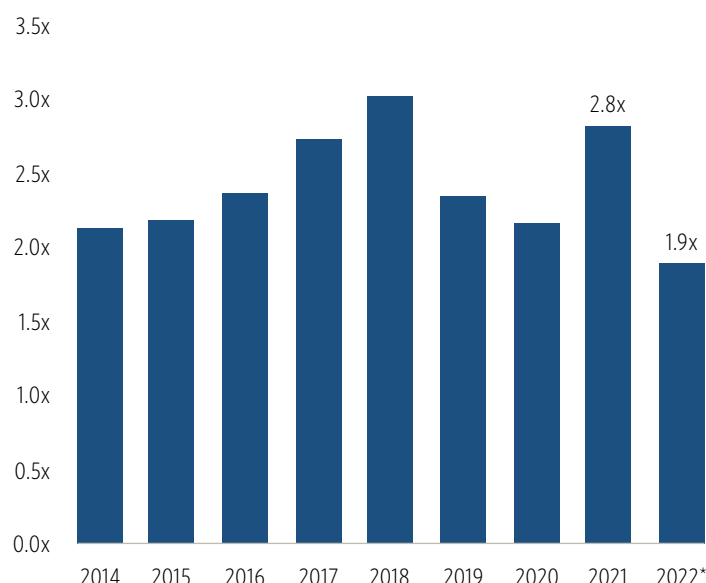
Source: PitchBook | Geography: Global
*As of December 31, 2022

Energy M&A EV/EBITDA multiples



Source: PitchBook | Geography: Global
*As of December 31, 2022

Energy M&A EV/revenue multiples



Source: PitchBook | Geography: Global
*As of December 31, 2022

Oil & gas M&A activity remained strong in 2022 as corporations and countries looked to address energy needs:

Many countries in the EU have relied on Russian-supplied oil & gas for decades, and for some EU countries, that dependence has even increased since moving to end coal, nuclear, and gas production at home. Several of the largest deals in the energy space in 2022 were a result of the war in Ukraine, made in an effort to speed up energy independence and stabilize the energy market ahead of the cold winter anticipated for many EU countries. In August, PKN ORLEN announced it had closed on its acquisition of Grupa LOTOS for \$10.1 billion, with the goal of increasing Poland's energy independence and ensuring stable fuel prices for all customers.

Despite taking a back seat to oil & gas, clean energy continued to accelerate its deal activity: Throughout 2022, Europe's dependence on Russian gas illustrated the importance of securing energy production for countries around the world, with many of them taking renewable sources into heavy consideration. The renewables space saw several multi-billion-dollar deals take place in 2022, showing the desire and demand for alternative energy resources despite reliance on oil and natural gas. For example, Australian company Squadron Energy acquired CWP Renewables for more than 4 billion Australian dollars (\$2.7 billion) to help scale Squadron to meet the demand for green energy in eastern Australia.⁵

⁵: "Australian Billionaire Forrest Snags CWP Renewables for Over \$2.7 Bln," Reuters, Scott Murdoch and Sonali Paul, December 6, 2022.

Financial services

Financial services M&A activity by quarter



Source: PitchBook | Geography: Global
*As of December 31, 2022

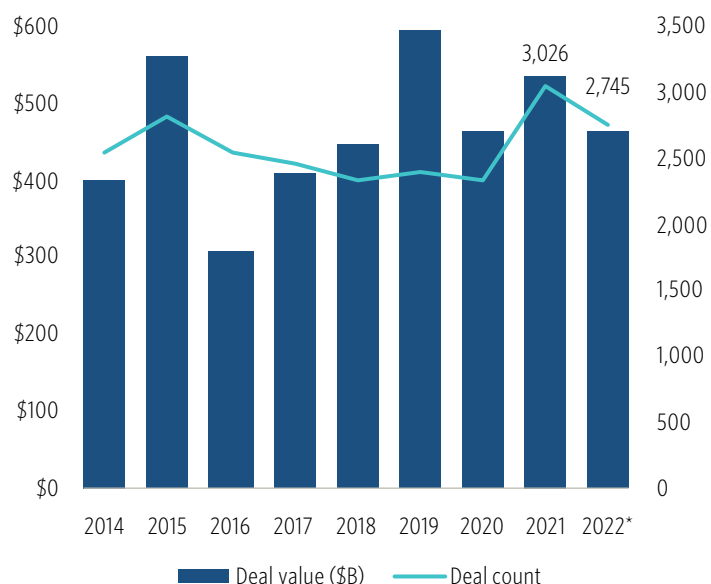
Tim Clarke

Lead Analyst, Private Equity

M&A continues in a rising-interest-rate environment:

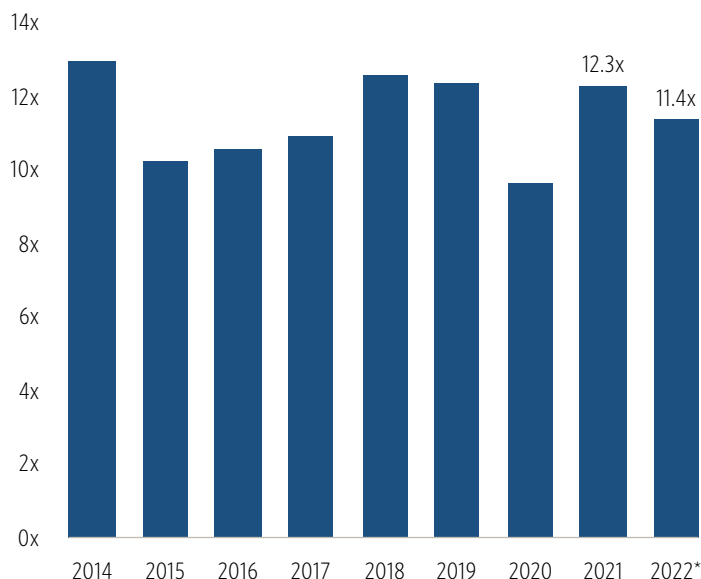
In 2022, 2,745 financial services deals were announced or completed for a combined value of \$459.7 billion. The sector did not have as steep of a runup as other sectors did in 2021, and as such its fall was less severe in 2022. The financial sector’s share of total deal value ticked up to 11.0%, recovering from a five-year low of 9.7% in 2021. The sector is also characterized by smaller deal sizes due to industry consolidation and a higher ratio of PE add-ons (81.8% versus 71.9% PE average). During a cycle of rising interest rates, certain financial businesses, such as banking, perform well due to widening spreads, while others, such as asset management and insurance, are stressed due to lower returns from long-duration assets.

Financial services M&A activity



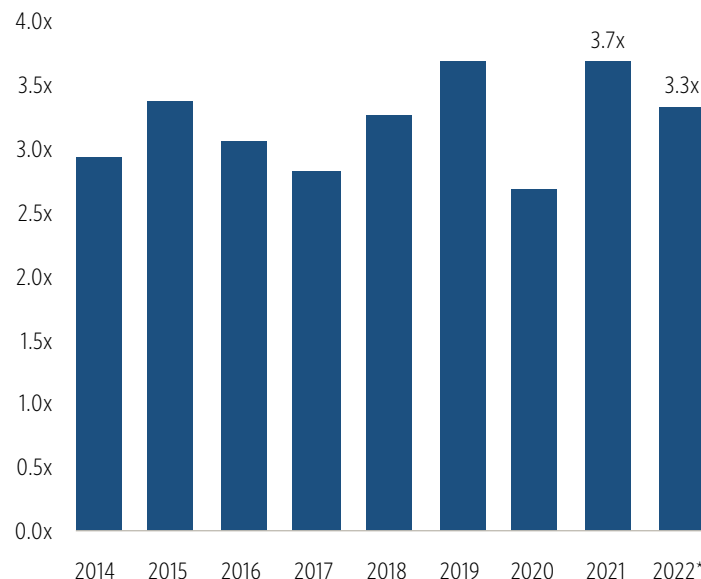
Source: PitchBook | Geography: Global
*As of December 31, 2022

Financial services M&A EV/EBITDA multiples



Source: PitchBook | Geography: Global
*As of December 31, 2022

Financial services M&A EV/revenue multiples



Source: PitchBook | Geography: Global
*As of December 31, 2022

Banking stays active: In Q4, HSBC announced the sale of its Canadian business to Royal Bank of Canada (RBC) for \$10.0 billion, or 2.8x attributable net asset value. The deal follows a strategic review by HSBC to exit the Canadian market. Meanwhile, RBC picks up a premier international banking franchise that it can scale given its position as Canada's largest bank. In December, New York Community Bancorp completed its acquisition of Michigan-based Flagstar Bank for \$2.6 billion, or 0.8x book value. The deal, which took 20 months to clear regulatory scrutiny, expands New York Community Bancorp's geographic footprint and product offering by way of Flagstar's mortgage lending business, which operates in all 50 states.

Big divestitures occur in insurance: Insurance produced more mega-deals as owners swapped places to shore up balance sheets or place bets on new markets. Aegon opted to sell its Dutch pension and life insurance operations to domestic rival ASR Nederland in a deal valued at \$4.9 billion. The deal allows Aegon to release capital from mature businesses and reposition for growth in its US Transamerica unit and in the UK. In November, Swiss InsurEvolution divested its private placement life insurance unit for \$2.6 billion to Octium Group, a privately held insurer based in Ireland. Octium sees the deal as strengthening its European footprint and supporting development globally.

Healthcare

Healthcare M&A activity by quarter

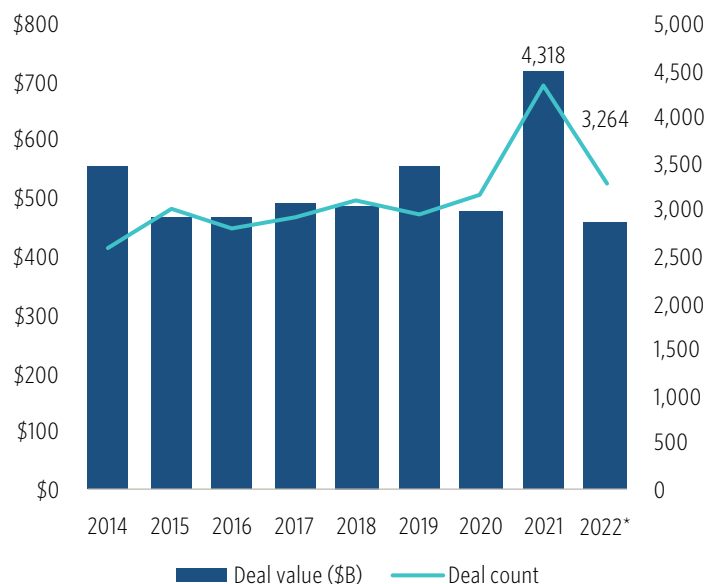


Source: PitchBook | Geography: Global
*As of December 31, 2022

Aaron DeGagne, CFA
Analyst, Emerging Technology

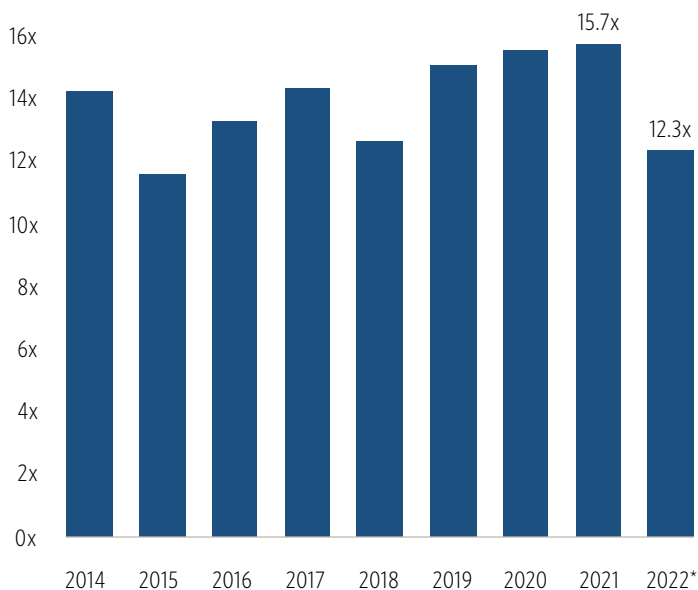
Healthcare deal value ticked up in Q4 but remained below its 2021 heyday: For 2022, healthcare accounted for 11.0% of global M&A deal value and 9.3% of deal count, down from 13.0% and 10.7%, respectively. In an environment where Big Tech companies are cutting back, Oracle stood out with its \$28.0 billion purchase of Cerner, a cloud-based leader in electronic health records. We would be surprised to see additional major healthcare deals from Big Tech, as the macroeconomic environment has further deteriorated and tech companies are cutting back. Though there has been a pause in major deal flow in medtech, generally an industry with high deal activity, the largest companies have the balance sheets to make moves if valuations remain low, as shown by Johnson & Johnson’s recent acquisition of Abiomed. But given that caution is the key word coming out of the C-suite, mega-deals may be hard to come by.

Healthcare M&A activity



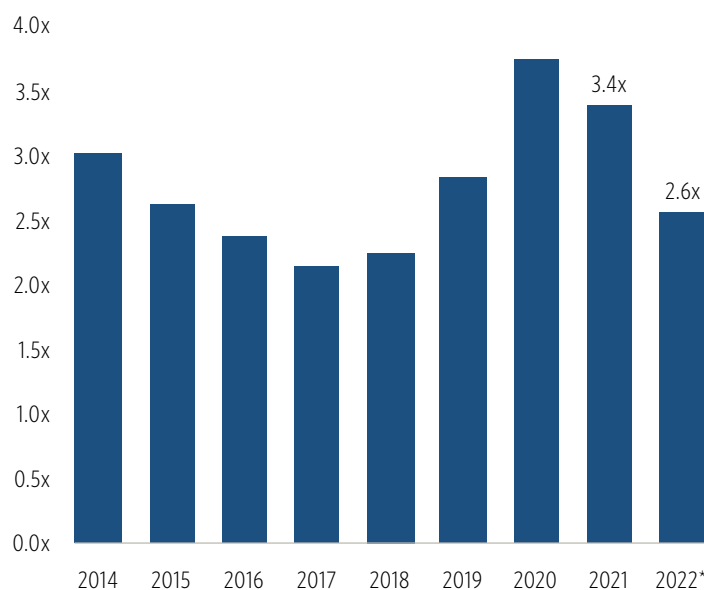
Source: PitchBook | Geography: Global
*As of December 31, 2022

Healthcare M&A EV/EBITDA multiples



Source: PitchBook | Geography: Global
*As of December 31, 2022

Healthcare M&A EV/revenue multiples



Source: PitchBook | Geography: Global
*As of December 31, 2022

The biotech buying spree was a bright spot despite deal flow trending down:

Several major biotech deals occurred in the last few months of 2022, including Amgen's acquisitions of ChemoCentryx (\$3.7 billion) and Horizon Therapeutics (\$26.4 billion) and Pfizer's \$11.6 billion buyout of Biohaven. Large biotech companies hold plenty of cash, and with valuations down across the sector, we could see greater activity in 2023. Biotech M&A tends to remain elevated even in times of economic uncertainty; several major biotech deals occurred in the depths of the financial crisis in 2008. With increasing interest in Alzheimer's treatments—along with high-profile stumbles such as Biogen's Aduhelm—Alnylam and Karuna Therapeutics could be targets.

Diagnostic giants prepared for the rise of specialty oncology testing:

Thermo Fisher recently completed its \$2.8 billion acquisition of UK diagnostics company The Binding Site. Thermo Fisher's interest in adding Binding Site's flagship tests for detection and monitoring of multiple melanomas could be an indication of interest among major diagnostics companies (including Abbott, Roche, BD, and Siemens) in expanding their portfolios of tests for cancer screening and treatment selection. Other life science firms, such as Agilent, Labcorp, and Quest, could also have interest in expanding their oncology offerings. However, there may be antitrust risks involved with combining oncology tests and related diagnostic equipment. Illumina is continuing to pursue its challenged acquisition of multicancer testing company Grail and received contrasting decisions from US and EU regulators.

IT

IT M&A activity by quarter



Source: PitchBook | Geography: Global
*As of December 31, 2022

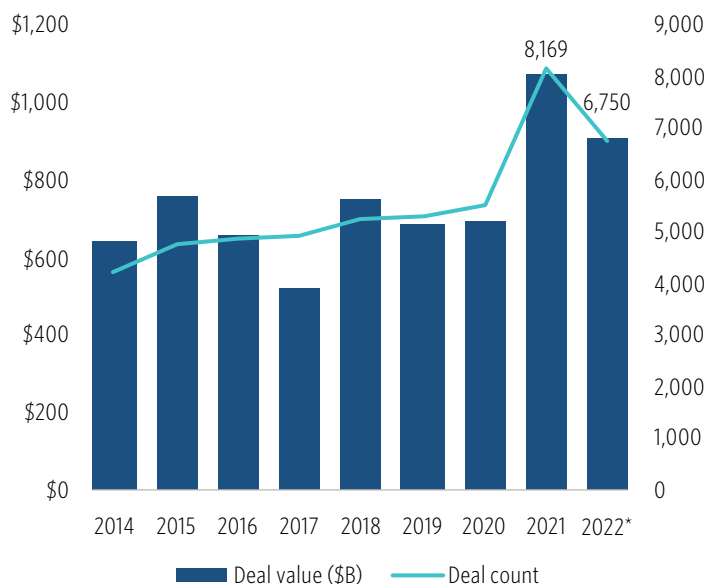
Jinny Choi

Analyst, Private Equity

Tech demonstrates its strength in its second-best year:

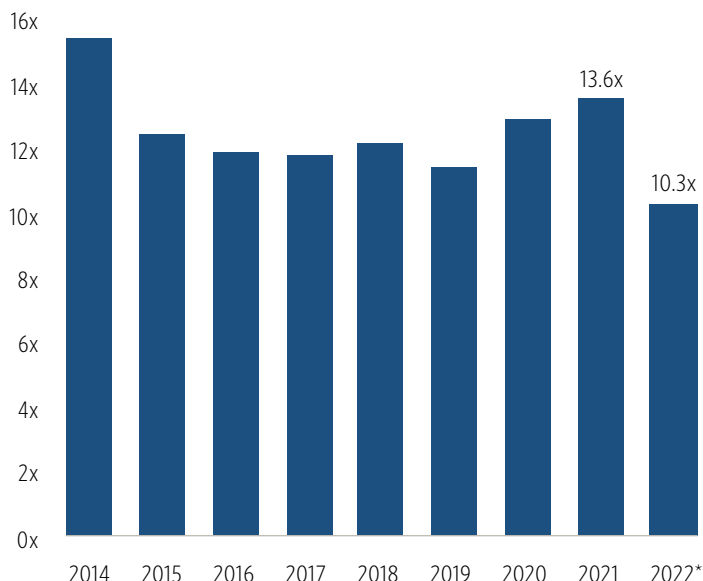
IT dealmaking was resilient despite intense market volatility, with 6,750 deals at a cumulative value of \$902.8 billion by the end of 2022, resulting in the sector's second-best year in both deal count and value. M&A activity closely followed the record set the year before, experiencing a drop of about 16% to 17% from 2021's levels for deal count and value. Continued trends of increasing digitalization and technological growth supported capital flow into the sector, with IT accounting for 21.6% of global M&A values in 2022. While the first half of 2022 continued the fast pace of tech M&A, dealmaking fell in H2 as buyers and sellers struggled with adjusting valuations, corporate restructuring in major tech companies, and broad inflationary pressures. Mega-deals (\$1 billion or more) slowed down toward the end of the year, with 10 mega-deals announced in Q4 for less than \$30 billion in aggregate compared with 19 deals for more than \$184 billion

IT M&A activity



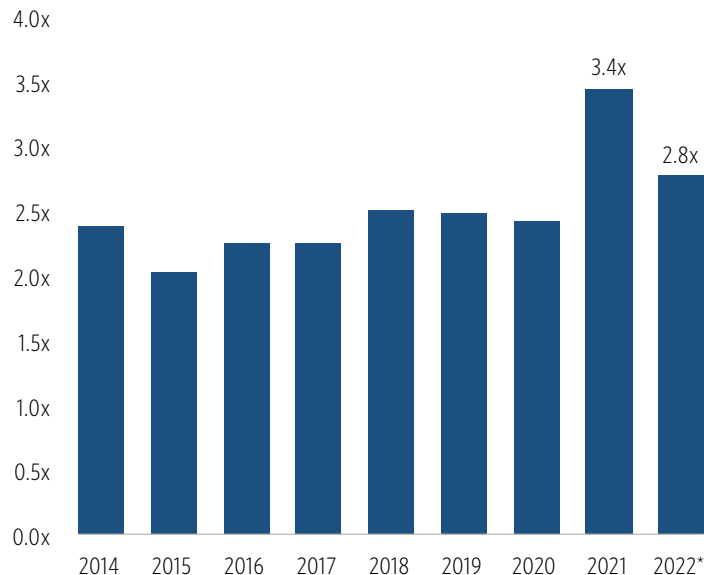
Source: PitchBook | Geography: Global
*As of December 31, 2022

IT M&A EV/EBITDA multiples



Source: PitchBook | Geography: Global
*As of December 31, 2022

IT M&A EV/revenue multiples



Source: PitchBook | Geography: Global
*As of December 31, 2022

in Q2. Mega-deals are expected to continue to decrease as rising interest rates and difficulty financing deals discourage investors from pursuing the large acquisitions and huge take-privates that had previously buoyed M&A activity. Instead, IT M&A will be held up by PE firms picking up deals from the expanding universe of heavily discounted public companies. Since the boom in tech deSPAC and IPO markets of the past two years, 644 new listings trade below \$1 billion in market cap at an average discount of 76.5% below their initial listing prices, making them attractive M&A targets.

Antitrust regulation continues to gain steam: Government agencies across the globe have been aggressive in their antitrust enforcement in various industries, with IT tending to face much of the attention due to active consolidation

plays in the sector. Under the Biden administration, the US Federal Trade Commission and Department of Justice have filed multiple lawsuits against major tech companies since 2020. President Biden also signed a bill at the end of 2022 to raise filing fees on large M&A deals with the additional revenue earmarked to strengthen antitrust enforcement.⁶ The provision is thought to target fees that would be brought in from Big Tech companies pursuing a string of acquisitions and would be used to fund the antitrust agencies that would combat those same corporations.⁷ The EU has been targeting Big Tech as well. The Digital Markets Act, which lays out newly imposed restrictions for tech giants to create a more contestable digital market, was signed into law in September.

6: "HSR Update: Revised US Merger Filing Fees Will Fund Increased Antitrust Enforcement, with New Disclosure Requirements for 'Foreign Subsidies,'" Milbank, January 10, 2023.

7: "House Passes Bill to Raise DOJ, FTC Merger Fees," Axios, Ashley Gold, September 29, 2022.

Materials & resources

Materials and resources M&A activity by quarter



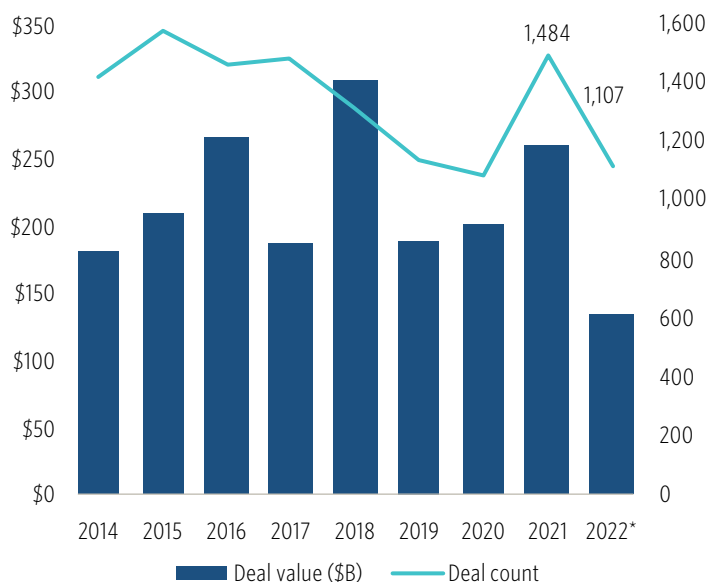
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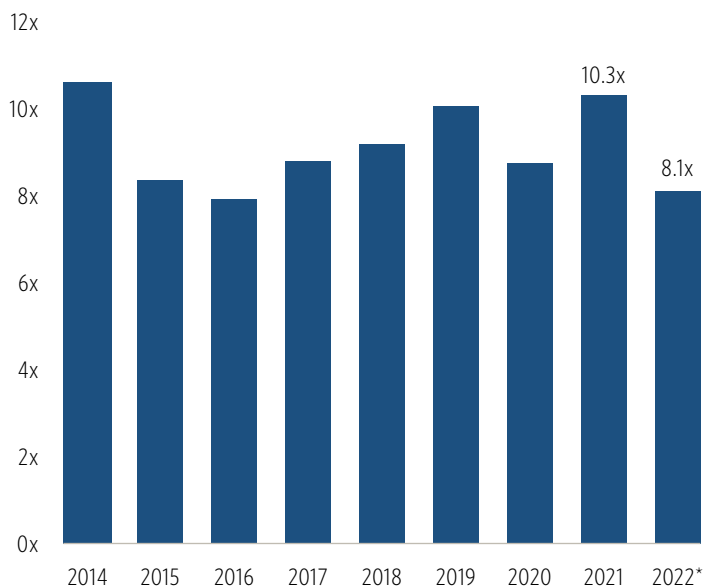
M&A activity declines to nine-year low: The materials & resources sector continues to rotate out of favor with corporate and financial sponsor buyers. After a brief reprieve that saw deal value surge by 29.1% in 2021 on the back of widespread strength in commodities, the sector has fallen back to its lowest dollar volumes since 2013 as investors steer clear of more cyclical businesses ahead of a likely recession. Firms in the space are also facing growing environmental, social & governance (ESG)-related scrutiny as the push for net-zero emissions continues.

Materials and resources M&A activity



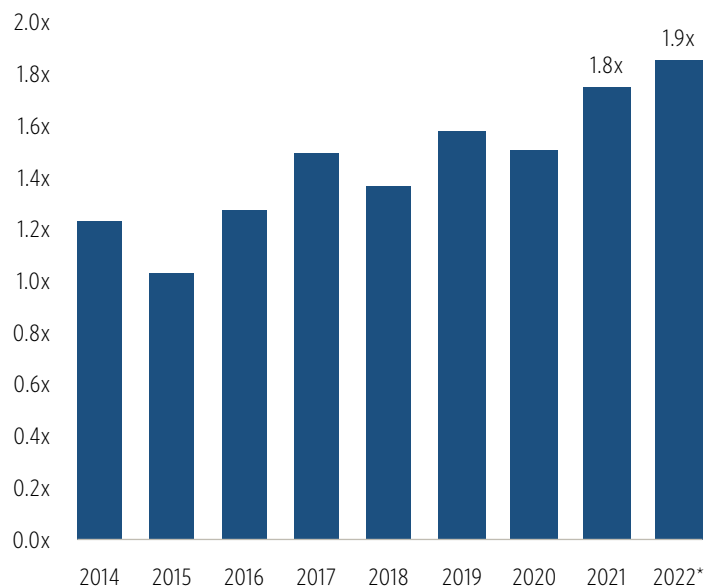
Source: PitchBook | Geography: Global
*As of December 31, 2022

Materials and resources M&A EV/EBITDA multiples



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Materials and resources M&A EV/revenue multiples



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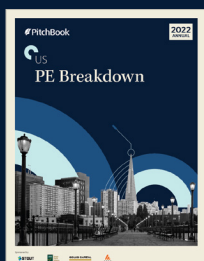
Mining & minerals is cleaning up its act: In Q4 2022, mining & minerals featured most of the big deals in the sector. Two of the largest involve commodities that are in some way tied to a lower carbon footprint. In November, OZ Minerals, a leading copper producer, agreed to be acquired by the Australian mining giant BHP. At \$6.2 billion, it is BHP's biggest deal in 10 years and reflects the company's intended transition to "future-facing" metals, such as copper, that are used in the production of electric vehicles and other clean technologies. Another copper producer, South Korea-based LS MnM, was fully merged into LS Holdings of Japan, its largest minority shareholder; LS Holdings acquired all remaining shares of LS MnM it did not already own. The \$664.1 million deal valued the company at \$1.3 billion.

Containers & packaging is also active: The containers & packaging sector is also seeing live bids for ESG-friendly concepts. In November, Liquibox reached a deal to be acquired by Sealed Air for \$1.1 billion, or 3.2x revenue. Liquibox has devised a recyclable replacement for metallic laminated bags, which Sealed Air will utilize to expand its presence in various beverage sectors and e-commerce-ready solutions. In another beverage-related transaction, Verallia acquired Allied Glass Containers for \$357.0 million, or 1.9x revenue. Allied is a leading producer of premium glass packaging for spirits in the UK market. Verallia plans to combine the company with its Cryovac Fluids & Liquids business to accelerate growth in sustainable packaging solutions.⁸

8: "SEE to Acquire Liquibox," Business Wire, November 1, 2022.

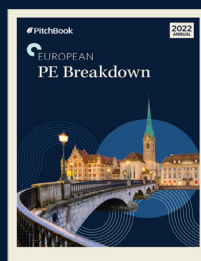
Additional research

Private markets



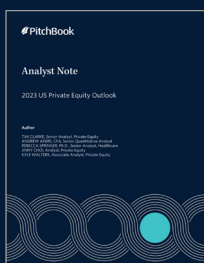
2022 Annual US PE Breakdown

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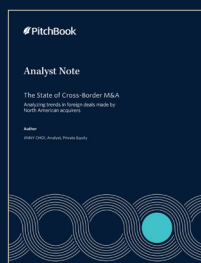
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