CORNERSTONE RESEARCH

Economic and Financial Consulting and Expert Testimony

Trends in Large Corporate Bankruptcy and Financial Distress

Midyear 2021 Update

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Executive Summary

The COVID-19 pandemic triggered a spike in large corporate bankruptcy filings not seen since the global financial crisis. The number of large corporate bankruptcies in 2020 was second only to 2009's peak, and bankruptcy filings by companies with more than $1 billion in assets were the highest since 2005.

As the economic recovery began to take hold, however, bankruptcies returned to lower levels in the first half of 2021. This pattern was consistent across most industries.

This report examines trends in Chapter 7 and Chapter 11 bankruptcy filings between January 2005 and June 2021. Unless specified otherwise, the bankruptcies analyzed in this report involve public and private companies with over $100 million in assets.[1]

- A total of 155 companies filed for bankruptcy in 2020. This is the second-highest annual number of bankruptcy filings since 2005, only behind the 161 bankruptcy filings in 2009. (page 2)
- Of the 155 bankruptcy filings in 2020, 104 occurred in Q2 and Q3 2020. In contrast, there were only 17 such bankruptcies in Q4 2020. (page 3)
- In 1H 2021, 43 companies filed for bankruptcy, less than half of the number of bankruptcies (89) filed in 1H 2020, but slightly above the 2005–2020 annual average of 79 bankruptcy filings (i.e., 39 per half year). (page 3)
- Bankruptcy filings by private companies constituted 79% of all bankruptcies in 1H 2021, substantially higher than the annual average of 37% for 2005–2020.
- There were 60 "mega bankruptcies" (i.e., those filed by companies with over $1 billion in reported assets) in 2020. More than half (31) of the mega bankruptcies in 2020 were filed in Q2 2020. (page 2)
- Only nine Chapter 11 mega bankruptcies were filed in 1H 2021. This is considerably lower than the 2020 level, although comparable to the 2005–2020 half-year average of 11. Of the mega bankruptcies in 1H 2021, four were filed by companies in the real estate industry. (page 3)
- The largest bankruptcies in 2020 and 1H 2021 were filed by The Hertz Corporation with $25.84 billion in assets at the time of filing, and Seadrill Limited with $7.29 billion in assets at the time of filing, respectively. (page 6)

Figure 1: Key Trends in Bankruptcy Filings
2005–1H 2021

	2005–2020 Annual Average	2020	1H 2021
Chapter 11 Bankruptcy Filings	76	153	43
Chapter 11 Mega Bankruptcies	22	60	9
Chapter 11 Bankruptcy Filings by Public Companies	46	79	9
Chapter 11 Bankruptcy Filings by Private Companies	30	74	34
Chapter 7 Bankruptcy Filings	3	2	0

Source: BankruptcyData

Note: Only Chapter 7 and Chapter 11 bankruptcy filings by companies (both public and private) with over $100 million in reported assets are included. For companies where exact asset values are not known, the lower bound of the estimated range is used. Asset values are not adjusted for inflation. Mega bankruptcies are defined as those for companies with over $1 billion in reported assets at the time of their bankruptcy filing.

Bankruptcy Filings

Number of Bankruptcies

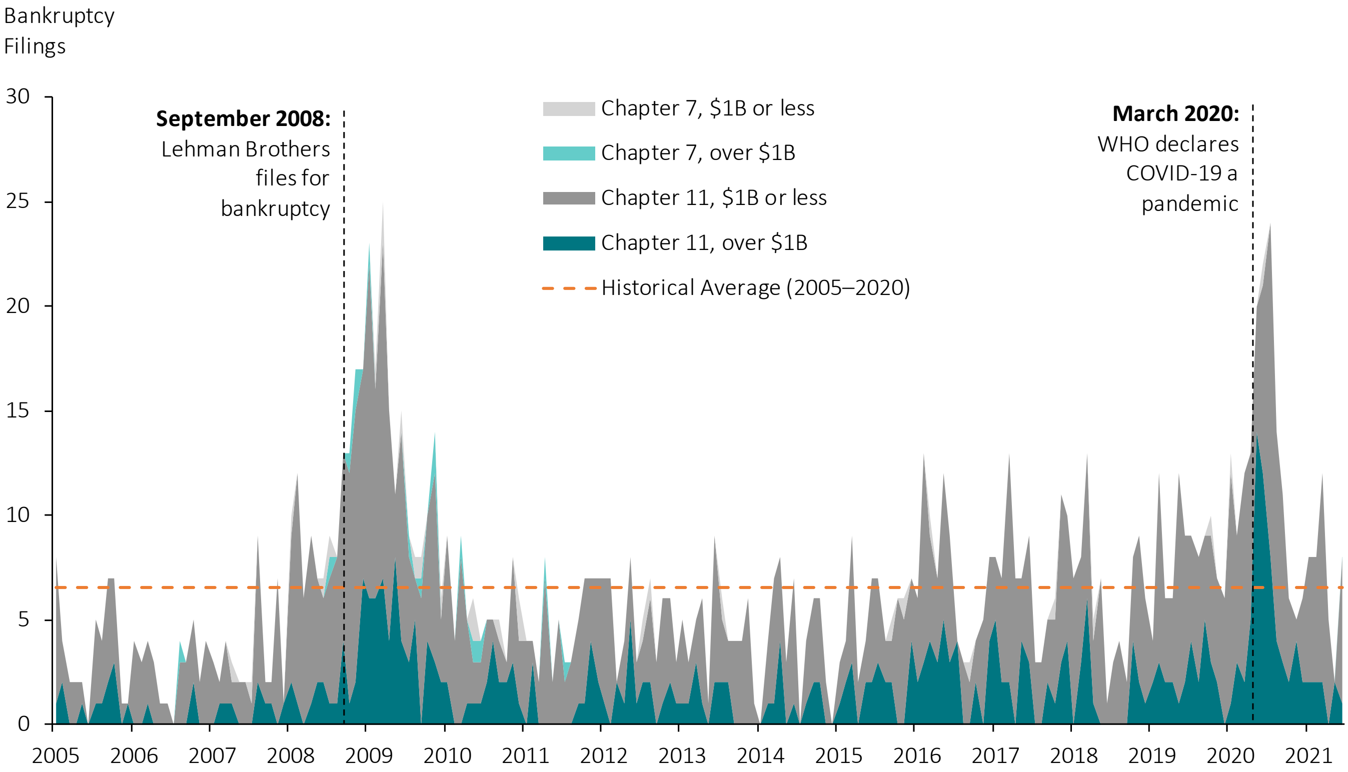
- Bankruptcy filings in 2020 were at historically high levels, comparable to the annual rate of filings observed during the global financial crisis. A total of 155 companies filed for Chapter 7 or Chapter 11 bankruptcy in 2020, compared to 128 and 161 bankruptcy filings in 2008 and 2009, respectively.

155

Number of bankruptcy filings in 2020 by companies with over $100 million in assets.

- There were 60 mega bankruptcies in 2020, the highest annual number over the 2005–2020 period. The second-highest number of mega bankruptcies (57) was recorded in 2009.
- There were 14, 12, and 8 mega bankruptcies filed in May, June, and July 2020. The previous monthly record during the 2005–2020 period was eight mega bankruptcies in May 2009.
- Although severe, the spike in bankruptcy filings driven by the COVID-19 pandemic was shorter lived than during the global financial crisis. Following the onset of the pandemic, the number of monthly bankruptcy filings was higher than the 2005–2020 average (6.5) for six consecutive months as compared to 14 consecutive months after Lehman Brothers filed for bankruptcy.

Figure 2: Monthly Chapter 7 and Chapter 11 Bankruptcy Filings 2005–1H 2021



Source: BankruptcyData

Note: Only Chapter 7 and Chapter 11 bankruptcy filings by companies (both public and private) with over $100 million in assets are included. For companies where exact asset values are not known, the lower bound of the estimated range is used. Asset values are not adjusted for inflation. Lehman Brothers filed for bankruptcy on September 15, 2008. The World Health Organization (WHO) declared COVID-19 a pandemic on March 11, 2020. Years are labeled at January 1.

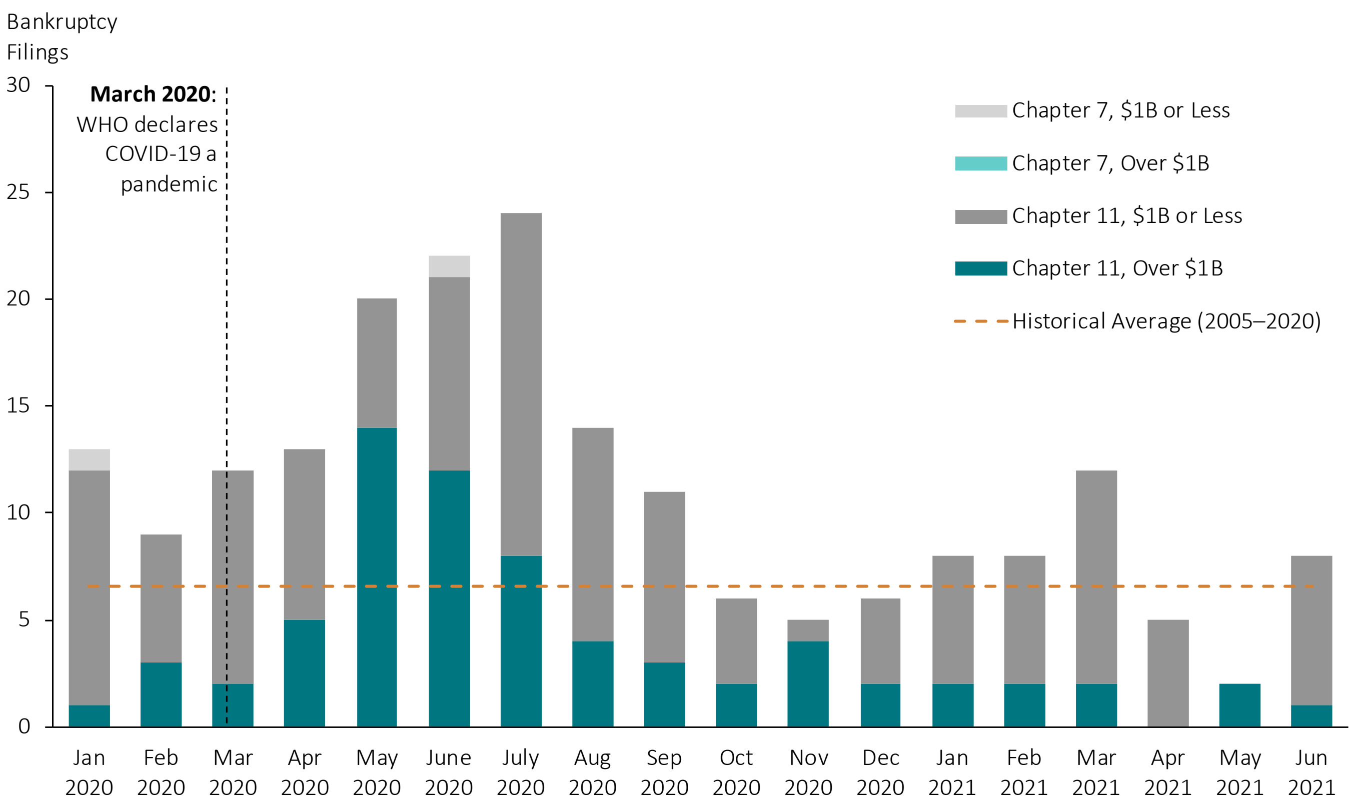
- Pandemic-driven bankruptcies peaked in July 2020 when 24 companies filed for bankruptcy. This is the second-highest number of bankruptcy filings in a single month since 2005, behind only the 25 bankruptcy filings in March 2009.

43

Number of bankruptcy filings in 1H 2021 by companies with over $100 million in assets.

- Starting in October 2020, monthly bankruptcy filings returned to levels more consistent with historical averages.
- In 1H 2021, 43 companies filed for bankruptcy, compared to 89 in 1H 2020 and 49 in 1H 2019.
- Nine of the bankruptcies in 1H 2021 were mega bankruptcies, compared to 37 in 1H 2020 and 12 in 1H 2019.
- All bankruptcies in 1H 2021 were filed under Chapter 11 of the U.S. Bankruptcy Code.

Figure 3: Monthly Chapter 7 and Chapter 11 Bankruptcy Filings (Recent Trends)
2020–1H 2021



Source: BankruptcyData

Note: Only Chapter 7 and Chapter 11 bankruptcy filings by companies (both public and private) with over $100 million in assets are included. For companies where exact asset values are not known, the lower bound of the estimated range is used. Asset values are not adjusted for inflation. The World Health Organization (WHO) declared COVID-19 a pandemic on March 11, 2020.

Bankruptcies by Industry

- The Mining, Oil, and Gas industry experienced 44 bankruptcies in 2020. Bankruptcies in this industry have remained high since the 2014–2016 collapse in oil prices, but the rate of filings was significantly exacerbated by the further collapse of oil prices in March and April 2020.
- The Retail Trade industry had 31 bankruptcies in 2020, as the COVID-19 pandemic created a difficult environment for traditional retailers that faced lockdowns and reduced demand for in-store shopping.
- In 1H 2021, bankruptcy filings across most industries fell dramatically from their mid-2020 pandemic highs.

48%

Percentage of bankruptcies filed in 2020 by Mining, Oil, and Gas as well as Retail Trade companies.

- Since COVID-19 vaccine roll-outs in the U.S. began in December 2020, there have been signs of economic recovery in 1H 2021.[2] Oil prices rose by over 50%.[3] Consumers spent about $81 trillion, 8.8% and 3.4% higher than in 1H 2020 and 1H 2019, respectively.[4]
- Consistent with the recoveries in oil prices and consumer spending, bankruptcies in Mining, Oil, and Gas and Retail Trade combined fell from 75 in 2020 to 11 in 1H 2021.
- Bankruptcies also fell substantially in Transportation, Communications, and Utilities; Services; and Manufacturing—declining from a combined 66 in 2020 to 18 in 1H 2021.
- A notable exception to the trend of substantially declining bankruptcies was Finance, Insurance, and Real Estate, which had 10 bankruptcies in the full year of 2020 and nine in 1H 2021. Five of the nine bankruptcies were filed by real estate investors,[5] driven by the continued struggles of many traditional shopping centers and hotels in the wake of the pandemic.

Figure 4: Heat Map of Bankruptcies by Industry
2005–1H 2021

SIC Industry Division	Average 2005–2020	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 1H
Mining, Oil, and Gas	12.3	3	0	0	5	13	0	3	2	3	9	32	30	14	13	26	44	6
Retail Trade	9.7	4	2	5	22	16	4	10	2	3	5	5	9	13	11	13	31	5
Manufacturing	20.4	18	19	10	32	64	21	11	20	15	12	12	16	16	14	20	26	3
Services	11.6	5	5	4	16	20	14	11	11	12	5	9	10	12	12	15	24	9
Transportation, Communications, and Utilities	10.2	9	4	2	18	11	7	13	13	11	11	1	12	10	9	16	16	6
Finance, Insurance, and Real Estate	10.2	3	2	13	25	31	19	7	12	5	3	4	3	14	6	6	10	9
Wholesale Trade	1.7	1	0	2	0	0	2	0	1	3	1	0	2	5	5	2	3	3
Construction	1.9	0	2	3	8	5	1	2	0	0	1	0	1	4	3	0	1	1
Agriculture, Forestry, and Fishing	0.4	0	0	0	1	1	1	0	0	1	0	0	1	1	0	0	0	1
Number of Bankruptcies	**79**	**43**	**34**	**39**	**128**	**161**	**69**	**57**	**61**	**54**	**47**	**64**	**84**	**89**	**73**	**98**	**155**	**43**

Legend	0–4	5–9	10–19	20–29	30 and above

Source: BankruptcyData

Note: Only Chapter 7 and Chapter 11 bankruptcy filings by companies (both public and private) with over $100 million in assets are included. The Standard Industrial Classification (SIC) Industry Division "Mining" is labeled as "Mining, Oil, and Gas" to reflect the specific industries under the Industry Division. The SIC Industry Division "Transportation, Communications, Electric, Gas, and Sanitary Services" is labeled as "Transportation, Communications, and Utilities." There are no bankruptcies in two SIC Industry Divisions—"Public Administration" and "Nonclassifiable." These two SIC Industry Divisions are therefore not shown. For companies where exact asset values are not known, the lower bound of the estimated range is used. Asset values are not adjusted for inflation.

Energy Sector Spotlight

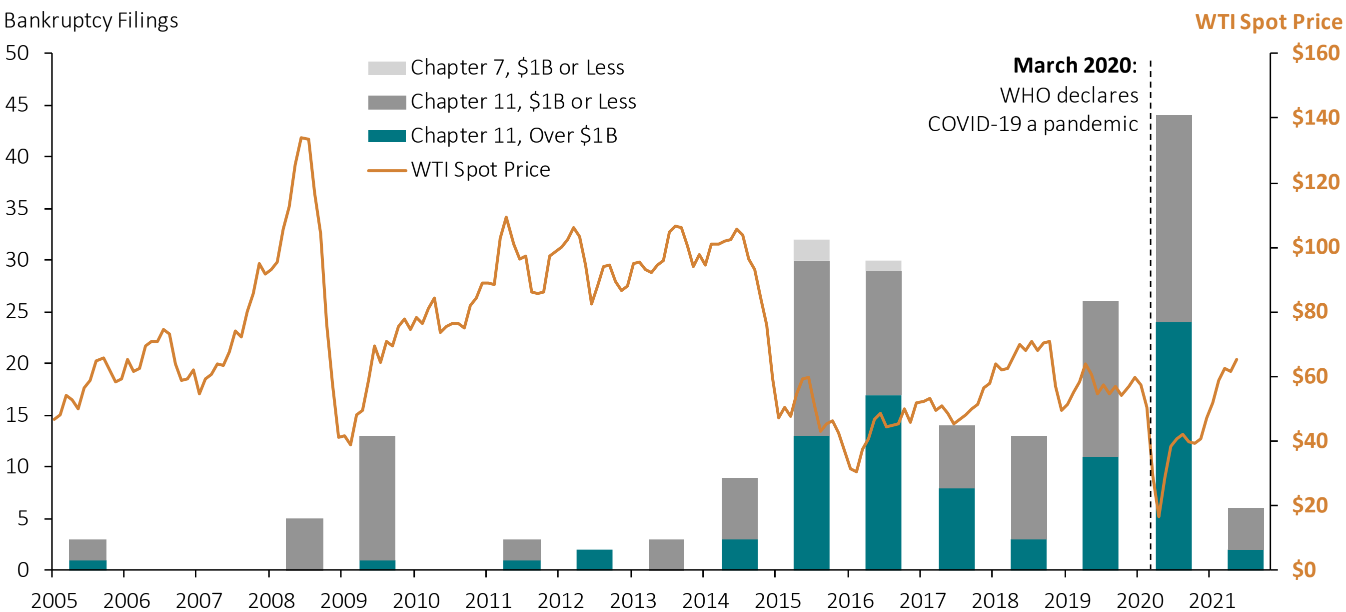
- Bankruptcies in the Mining, Oil, and Gas industry have historically been associated with low oil prices. For example, 62 Mining, Oil, and Gas companies filed for bankruptcy in 2015–2016, after oil prices dropped by over 50% in the seven months preceding January 2015.
- During March and April 2020, West Texas Intermediate (WTI) crude oil spot prices declined by almost 60%. Consistent with the historical relationship, bankruptcies filed by Mining, Oil, and Gas companies increased by nearly 70% from 26 in 2019 to 44 in 2020.
- In January 2021, the WTI crude oil spot price returned to its February 2020 level for the first time since the COVID-19 pandemic began.

69%

Increase in Mining, Oil, and Gas bankruptcy filings from 2019 to 2020.

- Consistent with the rebound in oil prices, there were only six bankruptcies by Mining, Oil, and Gas companies in 1H 2021, compared to 21 and 23 in 1H 2020 and 2H 2020, respectively. Five of the 2020 bankruptcies were coal mining companies.
- While higher oil and commodity prices have granted Mining, Oil, and Gas companies a reprieve, President Biden's pledge to cut U.S. greenhouse gas emissions leaves this industry facing potential large volatility and falling demand.[6] Two coal companies—White Stallion and Lighthouse—declared bankruptcy in late 2020. Bankruptcies in this sector can be complicated by environmental remediation liabilities.
- Extreme weather and fires continue to drive electric utility bankruptcies. While PG&E has exited its 2019 bankruptcy stemming from California fire-related lawsuits, other electric utilities in drought-stricken areas may face similar risks. The February 2021 Texas storm Uri resulted in three large Electric Services bankruptcies, with Brazos being the largest. Nationwide, five large Electric Services companies declared bankruptcy in 1H 2021, compared to three in all of 2020.

Figure 5: Oil Price and Bankruptcy Filings in the Mining, Oil, and Gas Industry
2005–1H 2021



Source: BankruptcyData

Note: Only Chapter 7 and Chapter 11 bankruptcy filings by companies (both public and private) with over $100 million in assets are included. For companies where exact asset values are not known, the lower bound of the estimated range is used. Asset values are not adjusted for inflation. The SIC Industry Division "Mining" is labeled as "Mining, Oil, and Gas" to reflect the specific industries under the Industry Division. Years are labeled at January 1.

Largest Bankruptcies by Assets

- The largest bankruptcy filing by assets in 2020 was The Hertz Corporation. Hertz cited the "sudden and dramatic" impact of the COVID-19 pandemic on travel in its bankruptcy announcement.[7] It emerged from bankruptcy in June 2021.[8]
- Of the 20 largest bankruptcies by assets in 2020, 10 were filed by companies in the Mining, Oil, and Gas industry, which suffered from a sharp decline in oil prices in March 2020. The largest bankruptcy in this industry was Chesapeake Energy Corporation, which emerged from bankruptcy in February 2021 with a plan to shift its focus toward natural gas and away from crude oil.[9]
- Three large retailers, Ascena (parent company of Ann Taylor and Lane Bryant), J.C. Penney, and Neiman Marcus, filed for bankruptcy in 2020.
- In addition, a mall owner, CBL & Associates Properties, filed for bankruptcy in 2020 after many of its retail tenants failed (e.g., J.C. Penney and Ascena accounted for $18.5 million of its annual revenue). CBL had already been facing challenges due to the rise of online shopping, and the pandemic exacerbated this trend.[10]
- Bankruptcy filings in 1H 2021 were comparatively smaller than in 2020. The largest bankruptcy filing by assets in 1H 2021 was Seadrill Limited, an offshore drilling contractor that had struggled after the plunge in energy prices in 2020.[11] In May 2021, Seadrill Limited's offshore drill owner and operator affiliate, Seadrill Partners, emerged from bankruptcy. In July 2021, Seadrill Limited filed its plan of reorganization with the bankruptcy court.[12]
- The second and third largest bankruptcies by assets in 1H 2021 were real estate investment trusts (REITs) Washington Prime Group and Hospitality Investors Trust, respectively. Washington Prime Group invests in shopping centers while Hospitality Investors Trust focuses on hotels.[13] Neither bankruptcy would have made the top 20 list of bankruptcies by assets in 2020.

88%

Decline in total assets of the 20 largest bankruptcies in 1H 2021 versus 2020.

- Knotel, the fifth-largest bankruptcy in 1H 2021, is a start-up flexible workspace operator that had previously reached "unicorn" status.[14] It raised Series C funding in August 2019 and was reportedly valued at $1.6 billion in March 2020.[15]
- Traditional retailers continued to face challenges in 1H 2021. Belk Inc., Christopher & Banks, and L'Occitane filed for bankruptcy in 1H 2021.
- Although there were only six bankruptcies by Mining, Oil, and Gas companies in 1H 2021, four of the six were among the 20 largest bankruptcies by assets in 1H 2021.
- The average size of the largest 20 bankruptcies in 1H 2021 was 88% smaller than in 2020. The average asset size of the top 20 largest bankruptcies was $10.3 billion and $1.2 billion for 2020 and 1H 2021, respectively.
- Of companies that filed for bankruptcy in 1H 2021, only Seadrill Limited (largest in 1H 2021) would have been large enough to make the top 20 list in 2020.

Figure 6: Largest 20 Recent Bankruptcies
2020 vs. 1H 2021

	2020			1H 2021		
Rank	**Company**	**Assets** (In billions)	**SIC Industry Division**	**Company**	**Assets** (In billions)	**SIC Industry Division**
1	The Hertz Corporation	$25.84	Services	Seadrill Limited	$7.29	Mining, Oil, and Gas
2	LATAM Airlines Group S.A.	$21.09	Transportation, Communications, and Utilities	Washington Prime Group Inc.	$4.03	Finance, Insurance, and Real Estate
3	Frontier Communications Corporation	$17.43	Transportation, Communications, and Utilities	Hospitality Investors Trust Inc.	$1.70	Finance, Insurance, and Real Estate
4	Chesapeake Energy Corporation	$16.19	Mining, Oil, and Gas	Ferrellgas Partners L.P.	$1.67	Wholesale Trade
5	Ascena Retail Group Inc.	$13.69	Retail Trade	Knotel Inc.	$1.00	Finance, Insurance, and Real Estate
6	Valaris plc	$13.04	Mining, Oil, and Gas	Belk Inc.	$1.00	Retail Trade
7	Intelsat S.A.	$11.65	Transportation, Communications, and Utilities	Brazos Electric Power Cooperative Inc.	$1.00	Transportation, Communications, and Utilities
8	Mallinckrodt plc	$9.58	Manufacturing	Le Jeune Villas Development LLC	$1.00	Finance, Insurance, and Real Estate
9	McDermott International Inc.	$8.75	Mining, Oil, and Gas	Kumtor Gold Company CSJC	$1.00	Mining, Oil, and Gas
10	J.C. Penney Company Inc.	$7.99	Retail Trade	HighPoint Resources Corporation	$0.83	Mining, Oil, and Gas
11	Whiting Petroleum Corporation	$7.64	Mining, Oil, and Gas	EHT US1 Inc.	$0.78	Finance, Insurance, and Real Estate
12	Neiman Marcus Group LTD LLC	$7.55	Retail Trade	Stoneway Capital Ltd.	$0.50	Transportation, Communications, and Utilities
13	Oasis Petroleum Inc.	$7.50	Mining, Oil, and Gas	Automotores Gildemeister SpA.	$0.50	Wholesale Trade
14	Avianca Holdings S.A.	$7.27	Transportation, Communications, and Utilities	Katerra Inc.	$0.50	Construction
15	Noble Corporation plc	$7.26	Mining, Oil, and Gas	Corp Group Banking S.A.	$0.50	Finance, Insurance, and Real Estate
16	Diamond Offshore Drilling Inc.	$5.83	Mining, Oil, and Gas	Sundance Energy Inc.	$0.45	Mining, Oil, and Gas
17	CBL & Associates Properties Inc.	$4.62	Finance, Insurance, and Real Estate	Amsterdam House Continuing Care Retirement Community Inc.	$0.21	Services
18	Denbury Resources Inc.	$4.61	Mining, Oil, and Gas	National Rifle Association of America	$0.20	Services
19	Seadrill Partners LLC	$4.58	Mining, Oil, and Gas	Christopher & Banks Corporation	$0.19	Retail Trade
20	California Resources Corporation	$4.07	Mining, Oil, and Gas	L'Occitane Inc.	$0.16	Retail Trade

Source: BankruptcyData

Note: All companies in this table filed for Chapter 11 bankruptcy. The SIC Industry Division "Mining" is labeled as "Mining, Oil, and Gas" to reflect the specific industries under the Industry Division. The SIC Industry Division "Transportation, Communications, Electric, Gas, and Sanitary Services" is labeled as "Transportation, Communications, and Utilities." For companies where exact asset values are not known, the lower bound of the estimated range is used. Asset values are not adjusted for inflation.

Bankruptcy Venues

- Consistent with prior years, the most common venue for bankruptcy filings was Delaware, with 57 of the 155 bankruptcy filings (37%) in 2020, and 17 of the 43 bankruptcy filings (40%) in 1H 2021.
- The second-largest venue was the Southern District of Texas, which in 2020, for the first time, accounted for more than 25% of bankruptcies filed. This trend continued in 1H 2021 with 28% of bankruptcies filed in the Southern District of Texas.
- Of the 47 bankruptcies filed in the Southern District of Texas in 2020, 32 (68%) were by companies in the Mining, Oil, and Gas industry. Only three Mining, Oil, and Gas companies filed for bankruptcy in the Southern District of Texas in 1H 2021.
- In 1H 2021, four of the 12 bankruptcies in the Southern District of Texas were filed by Electric Services companies.[16] Of those four, three were associated with the substantial increase in cost of wholesale power during Winter Storm Uri.
- The Southern District of Texas employs a "two-judge system," which has reportedly "created a sense of predictability" and is attractive to bankruptcy practitioners and their clients.[17] Non-energy companies that sought Chapter 11 relief in the Southern District of Texas since 2020 include retailers J.C. Penney, Neiman Marcus, and Tailored Brands as well as REITs CBL & Associates Properties and Washington Prime Group.
- The third most common bankruptcy venue in 2020 was the Southern District of New York with 21 filings. In 1H 2021, the number of filings in this venue declined to three, representing only 7% of total bankruptcy filings.
- These top three venues (Delaware, Southern District of Texas, and Southern District of New York) accounted for 81% of bankruptcies in 2020 and 74% in 1H 2021.

74%

Combined percentage of 1H 2021 bankruptcy filings in Delaware, Southern District of Texas, and Southern District of New York.

Figure 7: Heat Map of Bankruptcies by Venue
2005–1H 2021

Court	Average 2005–2020	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 1H
Delaware	34	10	14	19	54	67	25	33	21	34	25	33	39	30	37	39	57	17
Texas - Southern	7	1	0	1	4	4	0	2	1	1	2	5	13	14	9	14	47	12
New York - Southern	15	10	11	4	20	28	22	10	22	9	10	5	14	18	11	18	21	3
Virginia - Eastern	2	0	1	1	3	0	2	0	1	0	1	3	2	2	2	1	6	1
Georgia - Northern	1	2	0	1	6	2	0	1	1	0	0	0	0	1	0	2	1	0
Texas - Northern	2	0	1	1	2	5	0	0	2	0	1	2	2	3	2	3	1	3
California - Central	2	0	0	3	5	8	3	0	2	0	0	1	0	0	1	2	0	1
Other	17	20	7	9	34	47	17	11	11	10	8	15	14	21	11	19	22	6
Number of Bankruptcies	**79**	**43**	**34**	**39**	**128**	**161**	**69**	**57**	**61**	**54**	**47**	**64**	**84**	**89**	**73**	**98**	**155**	**43**

Legend	< 5	5–10	11–20	21–50	Over 50

Source: BankruptcyData

Note: Only Chapter 7 and Chapter 11 bankruptcy filings by companies (both public and private) with over $100 million in reported assets are included. For companies where exact asset values are not known, the lower bound of the estimated range is used. Asset values are not adjusted for inflation. "Other" includes courts with fewer than five bankruptcies in all years during the time period.

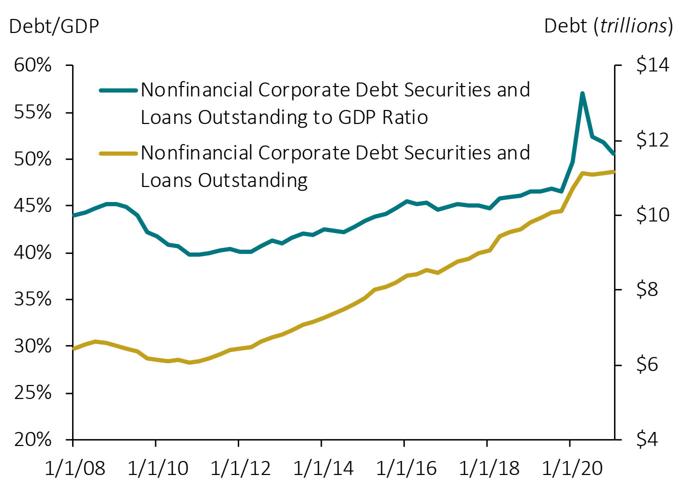
Market Indicators

- Despite the decline in the number of bankruptcies in 1H 2021, some market commentators have expressed concerns about high corporate debt levels in the U.S.[18]
- U.S. nonfinancial corporate debt outstanding stands at $11.2 trillion as of Q1 2021, 10.5% higher than at year end 2019. U.S. nonfinancial corporate debt has grown at an average annual rate of 4.4% since 2008.
- The U.S. nonfinancial corporate debt to GDP ratio increased sharply from 46.5% in Q4 2019 to 57.1% in Q2 2020, substantially driven by a 9.5% decline in quarterly GDP in Q2 2020, but it has since recovered to 50.6% as of Q1 2021 due to the corresponding recovery in GDP.
- Shortly after the onset of the COVID-19 pandemic in March 2020, both high-yield and investment-grade spreads relative to Treasury yields increased sharply and peaked on March 23, 2020, at levels that were 205% and 297% higher than their respective levels at the beginning of the year.[19]
- Debt markets recovered after various monetary and fiscal policy responses by the U.S. government (e.g., near-zero federal funds rate, aggressive bond purchasing by the Federal Reserve, and stimulus packages including the CARES Act).[20]
- Issuance of investment-grade and high-yield bonds, as well as equity, accelerated following the government response in early 2020. By the end of June 2020, issuance was 30% above historical levels.[21]
- Near the end of June 2021, the investment-grade and high-yield spreads reached 0.86% and 3.03%, respectively, the lowest levels in the past five years.
- Although borrowing costs are currently low by historical standards, a potential future increase in borrowing costs would generally raise companies' interest expenses and may affect their ability to refinance existing debt. For companies that borrowed heavily to weather the COVID-19 pandemic, such a development could be particularly concerning, especially if borrowing costs rise before those companies have fully recovered from the pandemic.

50.6%

Ratio of nonfinancial corporate debt securities and loans outstanding to GDP in the U.S. as of March 2021.

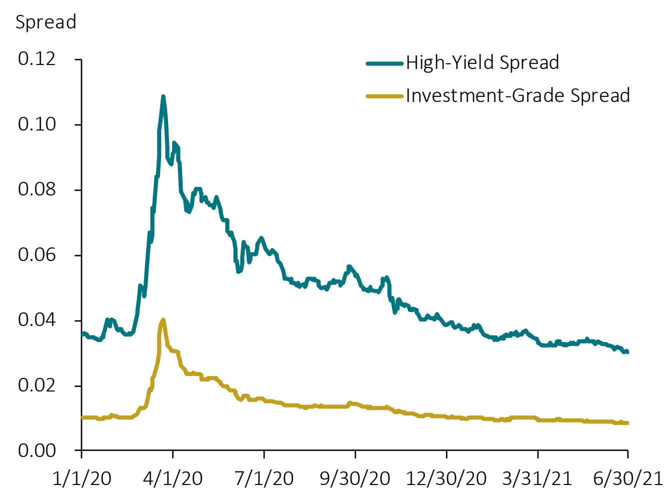
Figure 8: Nonfinancial Corporate Debt Securities and Loans Outstanding
January 2008–March 2021



Source: FRED Economic Data

Note: GDP levels and nonfinancial corporate debt securities and loans outstanding are reported on a quarterly basis and are seasonally adjusted.

Figure 9: High-Yield and Investment-Grade Spreads
January 2020–June 2021



Source: FRED Economic Data

Note: ICE BofA US High Yield Index Option-Adjusted Spread is used as the high-yield spread, and ICE BofA US Corporate Index Option-Adjusted Spread is used as the investment-grade spread.

Research Sample

The research sample in this report uses BankruptcyData to identify Chapter 7 and Chapter 11 bankruptcies filed by public and private companies with over $100 million in assets.

The sample contains 1,299 such bankruptcies from January 1, 2005, through June 30, 2021.

BankruptcyData incorrectly records the asset size of Emergent Capital Inc. as $17.5 billion. This number is corrected to $175 million based on Emergent Capital Inc.'s bankruptcy petition form.

Mega bankruptcies are defined as Chapter 7 or Chapter 11 bankruptcies filed by companies with over $1 billion in reported assets. The sample contains 377 mega bankruptcies from January 1, 2005, through June 30, 2021.

Asset values at the time of bankruptcy filings are used to measure bankruptcy size, due to the higher prevalence of missing information on liabilities in BankruptcyData. For companies with subsidiaries, separate bankruptcy filings by subsidiaries do not count toward the total number of bankruptcies.

Endnotes

[1] This report relies on data obtained from BankruptcyData on July 6, 2021. It focuses on asset values at the time of bankruptcy filings, due to the higher prevalence of missing information on liabilities in BankruptcyData.

[2] "Tracking America's Recovery," *CNN Business*, https://www.cnn.com/business/us-economic-recovery-coronavirus, accessed 8/6/21.

[3] U.S. Energy Information Administration, "Crude Oil Prices: West Texas Intermediate (WTI) – Cushing, Oklahoma (DCOILWTICO)," Federal Reserve Bank of St. Louis, https://fred.stlouisfed.org/series/DCOILWTICO, accessed 8/6/21.

[4] "Consumer Spending Is Primed to Fuel Summer Growth," *Wall Street Journal*, June 25, 2021, https://www.wsj.com/articles/consumer-spending-personal-income-inflation-may-2021-11624563378; U.S. Bureau of Economic Analysis, "Real Personal Consumption Expenditures (PCEC96)," Federal Reserve Bank of St. Louis, https://fred.stlouisfed.org/series/PCEC96, accessed 8/6/21.

[5] These five real estate companies are EHT US1 Inc., Knotel Inc., Plamex Investment LLC, Hospitality Investors Trust Inc., and Washington Prime Group Inc.

[6] "A Proclamation on Earth Day, 2021," The White House Briefing Room, April 22, 2021, https://www.whitehouse.gov/briefing-room/presidential-actions/2021/04/22/a-proclamation-on-earth-day-2021/.

[7] "Hertz Global Holdings Takes Action to Strengthen Capital Structure Following Impact of Global Coronavirus Crisis," Press Release, May 22, 2020, https://ir.hertz.com/2020-05-22-Hertz-Global-Holdings-Takes-Action-To-Strengthen-Capital-Structure-Following-Impact-Of-Global-Coronavirus-Crisis.

[8] "Hertz Exits Chapter 11 as a Much Stronger Company," Press Release, June 30, 2021, https://newsroom.hertz.com/2021-06-30-Hertz-Exits-Chapter-11-As-A-Much-Stronger-Company.

[9] "Chesapeake Energy Emerges from Bankruptcy and Shifts Back to Natural Gas," *Reuters*, February 9, 2021, https://www.reuters.com/business/energy/chesapeake-energy-emerges-bankruptcy-shifts-back-natural-gas-2021-02-09/.

[10] "US Mall Owner CBL Files for Bankruptcy," *Financial Times*, November 2, 2020, https://www.ft.com/content/251b7c9c-fb58-49b6-a1b8-aeb71df163f0.

[11] "Restructuring," *Seadrill.com*, https://www.seadrill.com/restructuring/, accessed 8/19/21.

[12] "Seadrill Limited (SDRL) – Agreement with Stakeholders to Raise $350 Million and Reduce Liabilities by Approximately $5 Billion," Press Release, July 24, 2021, https://www.seadrill.com/investors/news/detail/?id=614574A9D4E55005

[13] "Who We Are," Washington Prime Group, https://washingtonprime.com/company/who-we-are/default.aspx, accessed 8/16/21; "Investment Strategy," Hospitality Investors Trust, http://www.hitreit.com/investment-strategy.html, accessed 8/16/21.

[14] The term "unicorn" refers to a start-up company that is valued at over $1 billion.

[15] "A Look at How Proptech Startup Knotel Went from a $1.6B Valuation to Filing for Bankruptcy," *TechCrunch*, February 5, 2021, https://techcrunch.com/2021/02/05/a-look-at-how-proptech-startup-knotel-went-from-a-1-6b-valuation-to-filing-for-bankruptcy/.

[16] "Electric Services" is an industry under the division "Transportation, Communications, Electric, Gas and Sanitary Service" according to Standard Industrial Classification.

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About the Authors

Allie Schwartz is a vice president in the New York office of Cornerstone Research. She specializes in the valuation of securities and financial derivatives in the context of securities litigation, bankruptcy, and regulatory disputes. She also works extensively on issues affecting financial institutions, such as addressing allegations of anticompetitive behavior, insider and disruptive trading, hedging and risk management, and issues in consumer finance. Dr. Schwartz has more than a decade of experience supporting experts through multiple stages of litigation, such as deposition, domestic and international arbitration, and trial. She has also provided support on a variety of regulatory inquiries, including analyzing complex data and presenting findings to enforcement staff.

Joseph B. "J.B." Doyle is a principal in the Boston office of Cornerstone Research. He consults on litigation and regulatory matters related to financial institutions and securities. In these areas, he has extensive experience with advanced statistical modeling and large datasets. Dr. Doyle has presented to regulators, and works with clients in all stages of commercial litigation, including class certification, affirmative and rebuttal reports, depositions, arbitration, and trial.

Nick Yavorsky is a principal in the Los Angeles office of Cornerstone Research. He focuses on complex securities, financial institutions, and corporate transaction disputes. He provides accounting, valuation, and damages analyses to clients through all phases of litigation. His experience spans a range of topics, such as the financial crisis, failed financial institutions, financial accounting restatements, bankruptcy, due diligence, and public stock offerings.

Xingyi Chen is an associate in the Boston office of Cornerstone Research. She provides economic and financial analysis and expert support in high-stakes commercial litigation on a variety of topics, including securities, valuation, market microstructure, antitrust, and market manipulation.

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Please direct any questions to:

Allie Schwartz
212.605.5439
aschwartz@cornerstone.com

Boston
617.927.3000

Chicago
312.345.7300

London
+44.20.3655.0900

Los Angeles
213.553.2500

New York
212.605.5000

San Francisco
415.229.8100

Silicon Valley
650.853.1660

Washington
202.912.8900

www.cornerstone.com