



**THE  
MAKING  
OF  
MODERN  
CORPORATE  
FINANCE**

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**A HISTORY OF THE IDEAS  
AND HOW THEY HELP BUILD  
THE WEALTH OF NATIONS**

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## CHAPTER 10

# MARTIN FRIDSON, THE EXTRAORDINARY SUCCESS OF THE HIGH-YIELD BOND MARKET, AND THE LEVERAGING OF CORPORATE AMERICA

In 1970, there was no such thing as a market for publicly traded, *original-issue* high-yield bonds. Yes, there were a good number of “fallen angels”—once blue-chip companies whose fortunes and finances had fallen to the point where the two main credit rating agencies, Moody’s and Standard & Poor’s, no longer viewed their bonds as “investment grade.” But such bonds were no longer considered suitable investments for small, presumably unsophisticated “retail” investors.

In those days, the managements of America’s largest and most admired companies took enormous pride in their nearly debt-free balance sheets and their AA credit ratings. A handful of the bluest of blue-chip companies like General Electric and Kellogg even had AAA credit ratings, the same as that of the U.S. government (until its Treasuries were downgraded by S&P in 2011 to AA+).

In the post-War decades leading up to and including (most of) the 1970s, effective corporate financial management was widely believed to involve *minimal* use of debt. The idea was to work down your debt as quickly as possible, without disrupting your operations. Paying down debt would reassure outside investors of not only your probity, but also your ongoing profitability. By following this financing prescription, companies could avoid the fate of those hapless companies forced to borrow ever larger amounts they couldn’t afford to pay back, and living more or less from bank loan to bank loan. Sound financial management, in other words—or what we have been referring to throughout this book as “old-fashioned” corporate finance—meant minimizing the possibility of financial trouble by maintaining balance sheets funded mostly if not entirely with equity.

With the stirrings of an original-issue, high-yield bond market in the early 1970s, this financing conservatism began to give way. From its initial trickle in 1970, annual issuance of high-yield bonds—or what rear-guard practitioners and journalists quickly dubbed “junk bonds”—had become a \$1 billion stream by 1977. It is now a full-on flood, with over \$400 billion of new issuance in 2020 alone in the U.S., and another \$100 billion in Europe.

## THE NOVEL IDEA OF ORIGINAL-ISSUE JUNK BONDS

By high-yield or junk bonds, we mean bonds whose corporate issuers lack either the size (in terms of annual revenues or assets) or the levels or stability of reported earnings to be assigned by S&P or Moody’s to one of their investment-grade categories—that is, BBB or higher for S&P, and Baa or above for Moody’s. (As an aside, the designation “high yield” was used by rating agency founder John Moody at least as early as 1919, but the myth was created—and never fully dispelled—that the term was a Drexel-coined euphemism designed to put a good face on inherently unsound investments.)

Publicly traded junk bonds were not unknown or even scarce in the early ’70s. At the end of 1970, fully 23 percent of the bond issues rated by Moody’s carried ratings below Baa. But the fact that 90 percent of such non-investment-grade bonds were rated Ba, and thus just one notch below investment grade, reinforces the reality that the vast majority of high-yield issues back then were companies whose debt had been rated BBB or higher when issued, but had been downgraded in response to falling profits (or even losses) or some other sign of increased financial risk.

Today, non-investment or speculative-grade ratings account for nearly half of Moody’s rated universe of corporate bonds, or roughly double the fraction in 1970. What’s more, only 25 percent of today’s speculative-grade issuers fall into the Ba category, with the rest occupying riskier terrain, suggesting that growing numbers of smaller and less profitable companies—and their investors—have become increasingly comfortable operating with higher leverage than ever before. And the vast majority of today’s speculative-grade companies are not fallen angels, but *issuers* of high-yield bonds, companies rated below investment grade from the outset.

For corporate finance theorists as well as practitioners, this has made it impossible to ignore not only the growing acceptance of financial leverage, but also the

recognition of its value, by ever growing numbers of investors and corporate managers. And although this embrace of corporate debt financing may well have surprised even some of the “hard-core” Chicago School folks featured in this book, its import was not lost on Merton Miller, whose 1990 Nobel Prize address—which we revisit at the end of the chapter—was given a one-word title: “Leverage.”

Within the investment-grade universe of public U.S. companies, the 1980s and '90s saw a steady migration, though by no means all voluntary, from the once prestigious and sought-after AAA to A categories to BBB. Triple-A ratings gradually faded from a coveted status symbol and sign of financial prowess to a tell-tale indication of management's failure to maximize value for its shareholders.

In response to this leveraging of an ever-broadening swath of corporate America, widely accepted notions of what constituted a prudent corporate capital structure began to give way. While companies like Amazon and Google continue to use debt sparingly (both companies have bond issues rated AA) and to shun dividend payouts, even once-meteor-like but now maturing growth companies like Microsoft and Apple have been forced to recognize the desirability of using large borrowings to fund stock buybacks. (In Apple's case, the spur for this recognition was activist investor Carl Icahn, whose agitation forced Apple to begin paying out part of its then vast and ever expanding hoard of cash.) More generally, in the new world of modern corporate finance—and at some point in the life cycle of even the best-run and most successful companies—leverage and capital structure have somehow ended up “mattering” to their shareholders.

## **THE ORIGINS OF HIGH YIELD (WITH A PRIMER ON DEBT COVENANTS)**

In the early 1970s, most companies looking for longer-term debt financing and unable to qualify for investment-grade ratings found themselves resorting to the private placement market. Private placement lenders—most of them life insurance companies—insisted on restrictive debt “covenants” they considered necessary to assert their control and protect their principal if things went wrong. Many non-investment-grade issuers would have preferred to avoid the restrictions on their operating and financing flexibility imposed by such covenants. What's more, the inability to sell, and the resulting illiquidity of, private placement bonds also made them nonstarters for many investors.

That's why the opening of a truly public debt market to speculative-grade companies was such a watershed event. It gave corporate issuers without investment-grade size or profitability a way to issue bonds that were *not* subject to so-called *maintenance* covenants, the kind that could put a company into default if, say, its fixed charge coverage ratio (income before taxes and interest divided by interest and principal payments) temporarily dipped below a specified level because of a cyclical decline in its business. Most public bondholders, to be sure, were still protected by *incurrence* covenants, the kind that prohibit corporate issuers from taking actions such as piling more new debt on top of the old that would increase their credit risk beyond prescribed limits.

But, again, it was mainly the existence of a liquid resale market for high-yield bonds that appealed to investors concerned about a company's credit risk. Liquid markets gave such investors the option to vote with their feet. And speculative-grade bonds greatly expanded their opportunity to earn higher yields than those available in the traditional investment-grade public bond market, thus providing compensation for the lack of covenant protection.

## THE LEVERAGING OF CORPORATE AMERICA

The emergence of the original-issue high-yield bond market in the 1970s played a key financial role in several major changes in American industry. The breakup of the AT&T Bell system through a 1982 consent decree spawned new telecommunications competitors that issued heavily in the speculative-grade market. High-yield bonds also financed much of the evolution of cable television operators from small regional businesses into national powerhouses that transformed home entertainment. When legalized gambling spread beyond Nevada, high-yield bonds financed much of the construction of both land-based and floating casinos. (Traditional lenders had been wary of the rechristened "gaming industry" because of its historical association with organized crime.) Independent oil and gas producers with new exploration and production technologies represented another large segment of the high-yield market's issuers.

Along with these industry-specific developments, many diversified conglomerates, either voluntarily or under pressure from corporate raiders, divested pieces of their business in order to narrow their operating focus. In many cases,

the operations they shed were purchased by organizers of leveraged buyouts and financed with high-yield debt.

Although few denied that defaults were likely to increase in this new world of higher leverage, the vastly expanded market for public speculative-grade debt gave investors the opportunity to spread that credit risk over a diversified portfolio of speculative-grade issues and, in so doing, earn yields that more than offset the higher expected default losses. These opportunities were also available to individual investors in the form of mutual funds that specialized in lower-quality bonds. And it was the growth of such bond-laden mutual funds during the 1970s that encouraged investment banks to create investment opportunities for the funds by ushering speculative-grade companies into the public market.

### **ENTER MARTY FRIDSON, CICERONE OF THE HIGH-YIELD MARKET—AND THE CONCOMITANT RISE OF MICHAEL MILKEN AND DREXEL**

What might be described as the modern era of high-yield finance commenced right around the time a newly minted MBA named Martin Fridson began his career in finance. Although Marty never heard the phrase “high-yield bond” during his two years at Harvard Business School, the subject of credit ratings had come up in his finance courses. So after graduating from HBS in 1976, Marty did not feel completely out of his depth when he got his first job as a bond trader and market commentator with a boutique investment bank called Mitchell Hutchins. There he began what has turned out to be a lifelong study of credit risk by focusing on the bonds of two less-than-investment-grade issuers, Savannah Electric and Metropolitan Edison. After Mitchell Hutchins was acquired by Paine Webber, Marty became a full-time credit analyst charged with covering what most analysts would find a staggering load of 136 industrial bond issuers.

While Marty was getting his professional start in credit analysis and research, a man named Michael Milken was developing a thriving business in speculative-quality bonds at a second-tier investment bank called Drexel Burnham Lambert. Milken got his start at Drexel’s New York office trading in non-investment-grade fallen angels, a group that included the bonds of the bankrupt Penn Central Transportation Company and distressed real estate investment trusts (REITs). There he developed close relationships with a number of unaffiliated

and highly active investors—among them Carl Lindner, Saul Steinberg, and Laurence Tisch—whose penchant for identifying and raising large amounts of debt financing for corporate takeovers in the late '70s and early '80s branded them (at least in the eyes of the financial establishment and media) as “corporate raiders.” Also part of Milken’s expanding circle were a number of bond mutual fund managers whose main focus was finding profit in heavily discounted, high-yield issues. Milken’s operation quickly proved to be so successful that he was able to persuade Drexel’s management to let him move his entire operation to his native Los Angeles.

En route to this success, Milken encountered one major obstacle that appeared to frustrate his plans to expand his lucrative business in deep-discount fallen angels. During the period 1974–1976, the universe of non-investment-grade public bonds was actually *shrinking* rapidly; indeed, the market contracted by as much as 40 percent during those three years, thanks to a combination of upgrades, defaults, and redemptions. To meet the growing demand on the part of bond mutual funds focused on high-yield opportunities, one of Drexel’s rivals, Lehmann Brothers Kuhn Loeb, underwrote several original-issue high-yield issues. And in response to this competitive threat, Milken and Drexel’s corporate finance chief Fred Joseph decided to enter this new business. By 1978, Drexel had become the leading underwriter of original-issue high-yield bonds.

A major part of Drexel’s approach, and a significant contributor to its success, was Milken’s effectiveness in establishing and then making use of the bank’s network of corporate and investor clients—many of them playing dual roles as issuers and investors in what has often been described as a “daisy chain” of upstart life insurers and savings and loan associations that dared depart from the investing conventions that bound their competitors. The daisy chain label came from Drexel’s practice of encouraging issuers to raise more debt than they needed for their own operations, and then hold the excess for possible investment in other Drexel high-yield deals.

In the case of savings and loans (S&Ls), the temptation to buy less-than-investment-grade corporate bonds was the prospect it held out for escape from what rising interest rates had made an obsolete business model. As many S&Ls discovered in the late '70s, it was hard to maintain the illusion of profitability when funding 30-year mortgages earning 5 percent or 6 percent rates with new money costing 7 percent or more, many of them using so-called brokered CDs. For a good number (though nothing close to a majority) of S&Ls, investment in

high-yield bonds earning high single-digit returns represented a way of “gambling for resurrection.” Making this escape route even more tempting was the (misguided) relaxation of regulations on S&L asset holdings enabled and encouraged by friendly members of Congress (on both sides of the political aisle).

In response to the squeeze between rising borrowing costs and embedded rates on long-term mortgages, many S&Ls had “demutualized” and then been acquired by entrepreneurs using mostly borrowed money. But for new and old owners alike, the ability of so many “underwater” S&Ls to take risks using other people’s money created a moral hazard whose more or less predictable consequences—including nearly 1,000 failed S&Ls and an \$800 billion clean-up bill for U.S. taxpayers—materialized over the next few years.<sup>1</sup>

## THE MAJORS JUMP INTO THE MIX

In 1981, with Milken now enthroned as the “junk bond king,” and his Drexel minions busily arranging new deals (while also quietly working out many that got into trouble), Marty was recruited as a corporate bond analyst at Salomon Brothers. By that time, the revenues being generated by high-yield bond underwriting—the lion’s share by Drexel—had become too large for the “bulge bracket” investment banks to ignore. For the likes of Merrill Lynch, Morgan Stanley, First Boston, and Salomon Brothers, the high-yield business was particularly attractive because the underwriting fees as a percentage of the face amounts were substantially larger than those on investment-grade deals.

Salomon’s position vis-a-vis the opportunity presented by high yield was initially tentative, given the firm’s relatively recent ascent from scrappy trading-and-sales outfit to the ranks of the top underwriters. Morgan Stanley and First Boston, by contrast, had long enjoyed leading positions in bond underwriting, positions effectively conferred on them by the Glass Steagall legislation requiring them to separate from two of America’s oldest and largest commercial banks. Both firms had developed their now substantial trading-and-sales operations not as profit centers in their own right (at least not at first), but mainly to accommodate their investors’ demands for active secondary markets in the securities they purchased from the banks’ syndicates.

The nightmare scenario for Salomon’s leaders was one in which the firm, by underwriting deals for sketchy “junk” companies that then failed, ended up



inflicting irreparable damage on the franchise that had been painstakingly built up through concerted due diligence on offerings associated with its name.<sup>2</sup> Morgan Stanley had similar reservations about getting into high-yield underwriting and trading—but once convinced of the opportunities, the firm moved decisively to capitalize on them. In 1985, the firm made a splash by hiring the “Michael Milken of the East Coast,” Steve Judelson from L.F. Rothschild, to head its high-yield trading desk. This initiative amounted to a cultural shift for a firm that in those days did not allow alcoholic beverages to be served in its executive dining room. But there were limits to its risk-taking: Morgan Stanley was not about to start underwriting casinos, which were a major segment of the high-yield issuer universe.

When Marty found himself being interviewed for a new job there, the head of Morgan Stanley’s high-yield underwriting told him that the firm’s “sweet spot” was likely to be the highest-rated portion of the speculative-grade universe, rated BB on the Standard & Poor’s scale. But even with such a cautious approach, the prestigious firm’s initial foray into speculative-grade debt raised journalistic eyebrows, effectively compelling the media to comment on the incongruity of a “white shoe” firm sullyng its hands with junk bonds.

The opportunity for Morgan Stanley would come from broadening the high-yield investor base by selling high-yield new issues to the mostly *mainstream* life insurance companies that had long been part of its franchise. The established life insurers also saw an opportunity because they were now being challenged by Drexel-friendly newcomer insurers that were not burdened by legacy portfolios from earlier, lower-interest-rate times. By purchasing high-yield bonds, the newcomers were able to offer higher returns to buyers of products that combined insurance and investment features, which put the incumbents at a serious disadvantage.

Complicating matters for the banks as well as their insurer clients, Drexel was clearly aiming for total domination of the market, which included efforts to block any competitor from leading a deal as large as \$100 million. For insurers whose success was premised on identifying and managing risks, it was unthinkable to become involved in an asset class in which there was only a single market maker. The major life insurers were thus eager to see Morgan Stanley and other premier investment banks get into the high-yield business.

In addition to reputable underwriting and secondary market support, these potential new investors wanted credible research to back up their decisions about the public bonds of speculative-grade issuers. Drexel had a highly regarded

team of company-focused credit analysts headed by Larry Post, who was one of Marty's former Salomon Brothers colleagues. The problem, though, was that Drexel's research on the asset class *sounded* to mainstream life insurers more like promotion than disinterested analysis.

## THE BEGINNINGS OF SERIOUS HIGH-YIELD RESEARCH

In 1983, Morgan Stanley began to address its life insurer clients' demand for credible, independent research on the high-yield asset class by retaining Professor Edward Altman of New York University's Stern School of Business as a consultant. At that point, speculative-grade bonds had attracted little attention from the academy, but Altman had made a reputation for himself in a related area of credit analysis.

In 1968, Altman had introduced a statistical method for calculating default probabilities on corporate bonds that became known as the "Z-score."<sup>3</sup> Working with colleague Scott Nammacher, he provided high-yield investors with an extensive database identifying both the composition and the performance of their holdings, which created the ability to test different investing strategies that varied by the percentage of, say, high-grade junk—BB and B—and very low grade, all the way down to single-C. Nammacher's role in this collaboration was to redirect the focus of Altman's earlier work on the default rates of *all* corporate bonds (from AAA to C) to the more specific question of the expected default rates and eventual losses on *speculative-grade* issues—and their past and expected future rates of return.

As a further step toward raising the quality of its high-yield research, Morgan Stanley hired Marty from Salomon Brothers in 1984 to head its entire Corporate Bond Research Department. Marty was given a specific mandate to produce a research journal focused on high yield that he called *High Performance*. And as he recalls, his boss Robert Platt, then head of Fixed Income Research, urged Marty to avoid the temptation to become an *advocate* for this new asset class, and aim instead to uphold Morgan Stanley's (as well as his own) reputation as a "trusted adviser" with products and services designed to serve the interests of *all* the firm's clients, investors and issuers alike.<sup>4</sup>

Encouraged by the firm's endorsement of objectivity, which was far from the universal stance toward research on Wall Street, Marty began examining a

number of claims about high-yield then being propagated by Drexel and its satellites. What first caught Marty's attention was the tendency of Drexel and others to create the impression that high-yield bonds were not really as risky as Moody's and Standard & Poor's were making them out to be. Although research back then suggested that changes in corporate ratings tended to lag changes in bond prices instead of predicting them,<sup>5</sup> as Drexel was correct in reporting, future research would confirm Marty's own sense that the rating agencies had a reasonably good record of downgrading issuers *in advance* of defaults.

Marty's work also called attention to the accuracy of ratings in general in assessing default risk. For example, if Moody's downgraded an issuer from Baa to Ba, that issuer's one-year probability of defaulting, based on actual defaults during the entire period 1920–2021, increased by roughly a factor of four, from 0.26 percent to 0.99 percent. In this sense, ratings changes conveyed useful, even if not the most timely, information.

Marty's research also challenged the Drexel-encouraged notion that companies rated speculative-grade when first issuing in the public market were overwhelmingly the *rising stars* of American industry, while top-rated companies were basically "dinosaurs" with only one way to go. Indeed, his research showed that among original-issue high-yield bonds, defaults outnumbered upgrades to investment quality. And in the case of fallen angels, the number of issuers returning to investment grade outnumbered defaults.

Finally, Marty questioned the appropriateness of debt for funding high-growth companies. As academics like Stew Myers (featured in Chapter 5) pointed out in the late '70s (when Milken and Drexel were beginning their ascent), companies whose value consists mainly of growth options tend to be financed primarily with equity for good reasons—not the least of which was to avoid the possibility of financial trouble forcing managements to make shortsighted cutbacks in strategic investment at critical moments in their development.

More generally, Marty's work was widely recognized by industry participants as reinforcing and extending Altman's efforts to bring empirical evidence to bear on prevailing credit research. As just one example, after cautioning credit analysts against overreliance on fixed-charge coverage as a measure of credit risk, he urged them to make greater use of operating cash flow analysis. And using an extension of Nobel laureate Bob Merton's "contingent claims" model of corporate bond valuation developed by Morgan Stanley colleagues,<sup>6</sup> Marty showed how changes in stock prices might be used to assess the credit risk of high-yield issuers.<sup>7</sup>

## HIGH YIELD AND THE MARKET FOR CORPORATE CONTROL

In 1984, the year Marty joined Morgan Stanley, the public controversy surrounding high yield reached a new level when high-yield bonds began to be used to finance hostile takeovers. The functioning of what finance academics began to identify as “the market for corporate control” was seen by the top managements of many highly regarded public companies as a threat to not only their organizations, but *their own reputations and jobs*.

The initial response of large-company CEOs, and the Business Roundtable that represented their (though not necessarily their shareholders’) interests, was to discredit both high-yield finance and the market for corporate control. What’s more, the largest, most reputable investment banks tended to view themselves as *allies*—and in many cases the *hired defenders*—of their besieged corporate clients. After all, the blue-chip corporations had provided mainstream banks like Morgan Stanley and Merrill Lynch with a large and reliable source of M&A and other advisory fees associated with their empire-building acquisitions during the era of conglomeration—as well as the divestitures that often followed when the promised synergies failed to materialize. Along with M&A advisory fees, the investment-grade bond offerings of Business Roundtable stalwarts were another source of fee income that involved comparatively little risk-taking for the most reputable investment banks.

So it’s not hard to see why Wall Street’s premier houses were generally keener on providing takeover defense strategies than advising on and raising funding for hostile takeover bids. And the media reinforced this preference by continuing to project the “morality play” in which greedy corporate raiders busted up community-minded companies, threw loyal employees out of work, and bank-rolled it all with “fake wampum”—a term that political correctness would never countenance today—that was bound to inflict financial ruin on any endowment or pension funds with such holdings in their portfolios. For good measure, corporate CEOs took to railing against the perceived treason of *corporate* pension funds in holding the high-yield bonds used to fund such takeovers, even though the clear duty of pension trustees was to their plan’s beneficiaries and not the companies providing the pensions for their employees.

But it was precisely because so many “hostile” acquirers were *unaffiliated* investors—people who needed to raise their own capital—that a well-functioning high-yield market became necessary. And when Drexel began backing hostile

deals with its “highly confident letters,” written guarantees of funding for acquirers’ bids, the calculus began to shift, creating a dilemma of sorts for “white-shoe” banks like Merrill and Morgan. The top managements of their best corporate clients no longer seemed to be as insulated from the workings of the corporate control market as they were in the 1960s and ’70s. The boldness of Drexel’s claims to have put to rest any misgivings about the raiders being unable to pay for their proposed takeovers suddenly made it difficult, if not impossible, for corporate boards to “just say no,” as they had in the past, to purchase offers representing 40 percent to 50 percent or more over their companies’ prevailing stock prices.

Thanks to the operation of the high-yield debt market, the best, and indeed the only effective, defense against such takeovers was to have satisfied shareholders.

## **OTHER HIGH-YIELD CONTROVERSIES**

By the end of 1986, high-yield bonds accounted for 14 percent of the value of the public U.S. corporate bond market. Around that time, Marty was contacted by the prize-winning financial journalist Connie Bruck, who asked to meet with him to discuss her plan to write a book about the high-yield bond market aimed at a general readership.

In prepping for the meeting, Marty pulled together facts and figures demonstrating the market’s growth and performance, as well as its growing acceptance by mainstream institutional investors. He figured that a well-informed and constructive book by the winner of the 1984 John Hancock Award for excellence in business and financial reporting could only reinforce his efforts at Morgan Stanley to demystify high-yield bonds while helping bring them farther into the investment mainstream.

But as things turned out, Bruck made it clear from the outset of their meeting that what she meant by a book about the high-yield market was an exposé—the more sensational the better—of Drexel Burnham Lambert’s unconventional practices. Where Marty had come ready to discuss the investment risks and merits of speculative-grade bonds, Bruck’s interest was confined largely to the role of Drexel and high-yield bonds in facilitating hostile takeovers—and to the lengths the firm might go to attract and retain its network of clients.

Bruck’s journalistic instincts proved, of course, to be right on the mark, clearly more commercially promising than Marty’s. When released by Simon & Schuster

in 1988, *The Predators' Ball: The Junk-Bond Raiders and the Man Who Staked Them* quickly rose to the top of the business bestseller list. Marty was forced to fall back on the consoling thought that he, unlike Milken (as reported in the book), at least never stooped to offering to pay Bruck *not* to write the book.<sup>8</sup>

## **SHEDDING MORE LIGHT ON HIGH-YIELD DEFAULT RISK**

From the start, Milken and his team encouraged the belief that the yield spread on speculative-grade bonds would always more than cover losses from defaults. In Marty's view, Drexel routinely glossed over the difference between long-run average and annual default rates, sidestepping the question of what would happen during the next downturn, when defaults were bound to—and indeed did—rise to a cyclical peak. When that happened, moreover, Drexel had been disabled by federal prosecution for a variety of controversial practices, including alleged insider trading and “stock parking.” And this meant that the firm's uncanny ability to work out the problems of troubled issuers (more on this shortly) no longer helped keep a lid on defaults and losses.

As Marty saw it, Drexel's near-exclusive focus on long-run “yield premium versus average default loss” also ignored the reality that high-yield fund managers were generally evaluated not just on their performance over many years, but also of course on their *annual* returns. In a bear market, high-yield returns drop not just because of defaults, but also because yield premiums tend to rise sharply—and bond prices fall—when both perceived credit risk and interest rates go up, as they did at the end of the 1980s. Such risks affect *all*, not just the defaulting, high-yield issues.

Default rate projections by high-yield enthusiasts at Drexel and elsewhere relied heavily on historical data. According to Moody's, default rates had averaged only about 2.7 percent a year during the period from 1970 to 1988. If one also assumed that recoveries on defaulted bonds would average 40 percent of face value, as they had in the past, the implied annual *expected* losses dropped to a mere 1.6 percent (2.7 percent  $\times$  (1.00–0.40)). And with high-yield spreads over seven-to-ten-year Treasurys (based on Merrill Lynch index data) ranging from 2.9 to 5.7 percentage points during the period 1985–1988, high-yield seemed like almost a sure winner for investors with some appetite for credit risk.<sup>9</sup>

Encouraged by this kind of analysis, many high-yield investors seem to have convinced themselves that they truly were getting a free lunch, as sell-side cheerleaders for high yield regularly assured them. According to the accepted narrative, dumb-money nervous Nellies blindly overstated the risk of speculative-grade bonds, perennially causing the bonds to trade below their intrinsic value. And so the warnings then being issued by Modern Portfolio Theory types, Marty among them—that higher returns were likely to be accompanied by higher risks and, eventually, defaults and losses—went largely unheeded.

### A NEW WAY TO IDENTIFY THE RISKS

But then an insurance academic named Irwin Vanderhoof took the novel step of viewing high-yield default risk through an actuarial lens—one that led him to analyze default rates in a way that, though it may seem obvious now, was far from the norm at the time. Vanderhoof calculated the default rates, both historical and projected, on the entire high-yield universe as the *weighted average* of the BB, B, and CCC through C rates. With that portfolio approach, it suddenly made a huge difference that the more default-prone B, CCC, and lower categories' share of the speculative grade universe had increased from 13 percent in 1976, the year preceding the takeoff in high-yield new issuance, to 52 percent in 1989.

And following Vanderhoof's reasoning, many investors may well have predicted the next peak cyclical default rate by reasoning as follows:

- Start with the rating-specific default rates of 1970, when defaults by several issuers under the corporate umbrella of the Penn Central Transportation Company boosted the overall default rate within the then-small universe of speculative grade issuers to almost 8.7 percent.
- Apply those rates to the speculative grade universe's 1989 ratings mix to calculate a weighted average.

The answer one arrives at using this procedure came close to 14 percent. But any analyst who dared project a 14 percent default rate for high-yield bonds at the beginning of 1989 would have been dismissed as a high-yield hater with no understanding of the realities of the asset class. After all, the entrepreneurs who

had engineered the leveraged buyouts of the preceding years had significant fractions of their personal net worth invested in those companies, and such people were unlikely to allow that value to dissipate without a mighty struggle to preserve as much as they could.

But as we shall see, this “naïve” Vanderhoof-style calculation (of 14 percent) wound up being much closer to the mark than the blithe expectation that default rates would never again approach the anomalous 8.7 percent level of 1970.

### **THE ROLE OF HIGH YIELD IN THE S&L CRISIS (AND ITS EXAGGERATION BY THE PRESS)**

In 1988, the year *The Predators’ Ball* was published, failures of U.S. savings and loan institutions reached their peak during the episode that became known as the S&L crisis. This financial calamity furnished yet another opportunity for the financial media to blame the carnage on high-yield finance. The big problem with the popular high-yield S&L story, however, is that more than 1,000 S&Ls failed between 1986 and 1995—and bad real estate investments were far and away the main contributor to those failures.

According to a 1990 *Washington Post* report, only 200 of America’s approximately 3,000 S&Ls had invested in high-yield bonds at all, and most of them allocated comparatively small portions of their assets to the category. During the period 1985–1989, according to one study, the top 50 holders accounted for 95 percent of S&Ls’ total high-yield investments—and a 1989 *New York Times* article reported that S&L holdings of high-yield bonds totaled \$12 billion.<sup>10</sup> Whatever default losses these bonds experienced (between \$1 and \$2 billion) were thus at most a very small fraction of the General Accounting Office’s assessment of the cost of the S&L bailouts at \$160 billion.

But as Marty lamented in a recent article in a publication called *Financial History*,<sup>11</sup> although this information has long been readily accessible to journalists, another publication called *TheStreet* was still (as recently as October 2022) offering this kind of analysis in its potted history of the S&L crisis:

In the 1980s, there was a financial crisis in the United States that stemmed from skyrocketing inflation as well as the rise of high-yield debt instruments, called junk bonds, which resulted in the failure of more than half of the



nation's Savings & Loans institutions . . . Deregulation allowed S&Ls to invest in even riskier instruments that would offer the high yields they needed: Junk bonds became the speculative vehicle of choice for financiers behind S&Ls in the hopes of offsetting the damage caused by fixed-rate mortgages.<sup>12</sup>

The good news, however, is that the terms “high yield” and “junk” do not even appear in the Federal Reserve's history of the S&L crisis, published almost ten years earlier.<sup>13</sup>

### **ANOTHER CAUTIONARY TALE OF MEDIA-INFLAMED CONFUSION**

In 1989, three Harvard Business School finance professors—Paul Asquith, David Mullins, and Eric Wolff—published an analysis of original issue high-yield bonds that became widely known as the “the Harvard study.”<sup>14</sup> The statistical approach and methods of their study differed little from earlier research by Ed Altman, yet somehow managed to create a media sensation by reporting a 34 percent *cumulative* default rate on bonds issued in 1977 and 1978. The authors emphasized that this rate was “substantially higher than reported in earlier studies.”

Among the many problems with the Harvard study was its authors' failure to make clear that the main focus of the earlier studies was *annual* default rates, not *cumulative* default rates. To their credit, both *Fortune* and *Barron's* pointed out this problem, although they were largely alone among the major media in doing so. The 34 percent cumulative default figure that appeared so alarming, as the *Fortune* writer noted,

is about the same as the default figure arrived at last year in a study by New York University professor Edward Altman, long the reigning academic authority on junk. The Harvard study does not contradict the 2.5 percent annual default rate usually cited in discussions of high-yield bonds: The higher figures reflect how many bonds of all those issued in a particular period eventually default, while the lower figure represents the percentage of all junk bonds outstanding that default in a single year.<sup>15</sup>

In short, much ado about nothing!

## HIGH YIELD'S NEAR-DEATH EXPERIENCE

But however misinformed and misguided, these media attacks on high-yield finance may well have had their desired effect. They coincided with the beginning of the period Marty has dubbed the “Great Debacle”—a period when overpriced and hence overleveraged buyouts, as we saw in Chapter 7, began to fail in droves.

At the beginning of the first LBO wave in the early to mid-1980s, it made sense for LBO sponsors to pay substantial premiums over market value to acquire public companies, sometimes with as little as 10 percent equity. But as the sponsoring firms found themselves able to close deals while putting in ever less of their own equity, the purchase prices (expressed as multiples of operating earnings and cash flow)—and hence the amounts of debt needed to fund the deals—continued to rise throughout the decade. This, as Mike Jensen pointed out, was a prescription for way too many deals.<sup>16</sup>

LBO sponsors and their lenders were at huge risk of default if the economy turned down at some point, which it inevitably would. That point arrived with the 1990–1991 recession. By June 1991, the trailing 12-month default rate on U.S. speculative-grade bonds reported by Moody's had jumped from its cyclical low of 2.1 percent in 1989 to its peak of 12.3 percent, higher than at any point since the depths of the Great Depression in 1933.

The trouble started to show up well before the recession. As early as the second half of 1989, the perception of growing credit risk caused the high-yield index (then known as the Merrill Lynch High Yield Master II) to produce a total return of *negative* 2.9 percent! This was a considerable shock to the now large numbers of high-yield enthusiasts who had serenely assumed that the yield-spread-versus-default-loss cushion would *always* keep their heads above water.

But to understand how high yield default rates ended up exceeding 12 percent, it's important to note that, just as the market was showing signs of weakness, Milken pled guilty to securities and reporting violations—and Drexel filed for bankruptcy. The massive bear market shut down new issuance of high-yield debt for most of 1990. And the LBOs and the original-issue high-yield bonds that financed them appeared completely discredited in the eyes of many market participants.

## THE PRIVATIZATION OF BANKRUPTCY (AND THE REGULATORY UNDOING THEREOF)

Up until that point, highly leveraged companies that got into financial trouble—as their sponsors foresaw many would—had powerful incentives to reorganize quickly, and so stay out of the (then especially) costly U.S. Chapter 11 process, with all its inefficiencies and delays. Throughout much of the 1980s, this “privatization of bankruptcy,” as recognized and hailed by Jensen himself, resulted in remarkably low default rates, even on LBOs leveraged 9 to 1. Before 1989, only three out of some 119 large LBOs (tracked by Steve Kaplan and Jeremy Stein) transacted during the ’80s had defaulted.

One clear contributor to these low default rates was Drexel’s practice of using *exchange offers* of equity for (distressed) debt to avoid disrupting what were still highly solvent and reasonably profitable business operations producing large amounts of (pre-interest) operating cash flow. Milken liked to refer to them as “good businesses” that now found themselves with “the wrong capital structure.” As Harvard Business School’s Stuart Gilson reported finding in his study of exchange offers in the early 1980s, the direct costs associated with default avoidance using exchange offers turned out to be as little as one-tenth of those incurred in formal reorganizations in Chapter 11.<sup>17</sup>

Max Holmes, a former workout specialist at Drexel and later head of D.E. Shaw’s distressed debt group, described the Drexel reorganization process as follows:

In our exchange offers, the group of high-yield investors was small enough—and had enough confidence in Drexel—that we could persuade them to stretch out the maturities of the debt or, in some cases, convert part of their debt into equity. And I think that both the bondholders and the companies themselves were well served by this workout process.

What we were really doing . . . was keeping an overleveraged capital structure from interfering with the operations of a fundamentally profitable company—and we were doing it in the most efficient way possible. At Drexel, people liked to say that the optimal capital structure changes over time. And I think the exchange offers we designed for our distressed issuers were an ideal vehicle for making those changes. It was our job as the workout guys to ensure

that the companies kept operating as if nothing had happened—and that’s pretty much what happened, until the ’90s changed everything.<sup>18</sup>

In the 1990s, and for a variety of reasons that include the ongoing prosecution of Milken and Drexel, the obstacles to reorganizing companies outside of Chapter 11 became insurmountable. As Jensen described the situation,

A private market correction to the overleveraging [of the ’80s] was already well underway [at the start of the ’90s] when new regulatory measures designed to purge our credit markets of “speculative excesses” greatly added to the difficulties in our HLT [highly leveraged transaction] markets. A series of misguided changes in the tax and regulatory codes and in bankruptcy court decisions blocked the normal economic incentives for creditors to come to agreement outside of Chapter 11, thus almost putting an end to out-of-court reorganizations. The consequence was a sharp rise in the number of Chapter 11 filings, and in the associated costs of financial distress.

In 1990 alone, almost \$25 billion of high-yield bonds defaulted and wound up in Chapter 11. The eventual number of defaults and bankruptcies, and the associated losses to investors, greatly exceeded what most market participants then thought possible.

## THE GREAT RESTORATION

In the depths of the Great Debacle, many portfolio managers suspected that the “buy” recommendations of some sell-side analysts were motivated in no small part by the eagerness of their trading desks to unload damaged bonds from their inventories. Restoring the credibility of not only the would-be issuers and their bankers, but also of the supporting research, would play a significant role in the rejuvenation of the high-yield bond market that took place after the regulatory shutdown of high leverage in the early ’90s.

In the middle of 1989—just as the market was going into the tank—Merrill Lynch had persuaded Marty to leave Morgan Stanley to head its High Yield Bond Research Department. When Merrill’s team convened to discuss the future of the business, it was Marty who proved to be the greatest optimist in the group,

projecting that the high-yield underwriting business might one day rebound to annual issuance as high as \$10 billion. (His projections proved way too cautious in light of the \$400 billion of U.S. non-investment grade issuance in 2020.)

Marty urged his team to follow the rule they'd all been indoctrinated with since fourth grade: *show your work!* The goal was complete transparency, proceeding step by step to the conclusion that the bond being analyzed was attractively priced. This way, the worst response from a buy-sider would be something like, "Though I disagree with some of your assumptions, your conclusion follows from them, and so your analysis looks like a genuine attempt to get to the right answer." That principle informed Marty's own work. With data becoming more widely disseminated, the point was to enable anyone who wished to replicate the work and determine its validity for themselves. The curtain had come down on the era of Wall Street strategists whose conclusions had to be accepted solely on the basis that everyone "knew" them to be geniuses.

Remaining faithful to Robert Platt's injunction to be an analyst and not an advocate, Marty also politely declined a suggestion from junk bond king Milken, after he resigned from Drexel, that Marty assume Milken's mantle in spreading the high-yield gospel. Marty replied that, however flattering he found Milken's suggestion, his service and value to his employer Merrill Lynch depended not on proselytizing, but on producing objective research that helped high-yield investors maintain and even boost their risk-adjusted returns. Marty viewed his research as part of a larger collective effort to increase the "information content" of high-yield prices and, along with it, the efficiency of the market in which they traded.

Taking full advantage of greater data availability, Marty tackled a variety of analytical issues, sometimes in collaboration with colleagues like Christopher Garman, Jón Jónsson, and Michael Cherry. Among his most notable insights was that senior bonds could carry larger risk premiums (spreads over Treasuries) than like-rated subordinated bonds if the subordinated bonds were obligations of higher-rated, and presumably more creditworthy, *corporate issuers*. It was not unreasonable to expect such issuers' lower default probabilities to more than offset the more senior bonds' higher expected recoveries in the event of default.

In another research initiative, Marty debunked the popular industry claim, by Drexel and others, that bonds systematically became underpriced when downgraded from investment grade to speculative grade. His price data showed that the values of such fallen angels were equally likely to continue falling as to rebound from the supposedly "oversold" levels resulting from forced selling by

managers of investment-grade portfolios. Consistent with this finding, some of the largest pension plan sponsors told Marty that their investment rules gave them flexibility in timing their liquidations of fallen angels to avoid fire sales.

Another phenomenon that got Marty's attention was the stock and bond price changes accompanying "leveraging events"—say, large one-time distributions to shareholders—that led predictably to surges in stock prices (or returns) and plunges in the prices of existing bonds. Having identified this phenomenon, Marty devoted considerable effort to keeping bondholders informed about possible leveraging events that could inflict significant losses on their portfolios.

### **FURTHER VINDICATION BY THE ACADEMY**

But as Marty himself has pointed out, probably the most important and credible piece of high-yield research—one that, with the 1980s "junk"-fueled takeover wars now over, likely did the most to help the high-yield market enter the mainstream of institutional investing—was a study published in the *Journal of Finance* in 1991 by Wharton School professors Marshall Keim, Donald Blume, and Sandeep Patel called "Volatility and Returns of Low-Grade Bonds."<sup>19</sup> The study analyzed the risks and returns of long-term speculative-grade bonds for the period 1977–1989 and found not only higher returns but also *lower* volatility for high-yield bonds relative to investment-grade bonds.

One effect of the Wharton study was to discredit the claims of the "Harvard study" that high-yield bonds become more default-prone as they age. But an even more important finding—and it's one that the finance scholars celebrated in this book would have predicted—was that speculative-grade bonds were neither systematically overpriced nor underpriced. Despite its lower volatility, high-yield investing clearly carries greater credit risk as reflected in the higher default rates and losses. The higher yields and eventual returns represent the expected compensation—neither too much nor too little—for bearing such risk.

And this is just what one would expect in a vigorous, highly competitive—and what we have been identifying as an *efficient*—market, a market that, in promising and providing higher returns for larger credit risks, would succeed in attracting legions of new investors. By providing investors with "fair," though not outsized or "abnormal" (of the kind sometimes claimed by Drexel and other enthusiasts), rates of returns, the high-yield market would ensure that corporate *issuers*

would also perceive it as providing them with a fair deal and economic source of capital—at least when set against their main alternatives of private placements—and so keep returning year after year.

## THE GREAT HIGH-YIELD REBOUND AND EXPANSION

After the Great Debacle of 1989–1990 and during the several-year hiatus of LBOs and other highly leveraged transactions that followed, access to high-yield financing expanded to a wider range of companies that were simply seeking funding for continuing and expanding their operations. In the decade from 1989 to 1999, the amount of U.S. high-yield bonds outstanding nearly doubled to \$274 billion, of which over 90 percent was original-issue paper. In some quarters, the impression lingered that “junk” companies were all failing remnants of one-time blue chips, but the reality was that highly leveraged but clearly healthy—and even a good number of rapidly growing—companies began to account for a substantial portion of the total.

At the end of 1999, the largest industry within the ICE BofA US High Yield Index was telecommunications, whose issues then accounted for some 20 percent of total face value. Sensing that the growth of the industry had become too rapid, especially for debt-heavy financing, Marty began to warn investors that it was natural to expect a shakeout in the telecom industry.

While venture capitalists are accustomed to high failure rates offset by one or two big winners, high-yield bond investors have limited upside, and tend to look to an issuer’s asset values to provide downside protection in the event of bankruptcy. But when the dotcom bubble burst in 2001, such protection did not materialize for the early-stage telecoms of the 1990s. Many of these enterprises were little more than “business plan” companies with no tangible assets or operating cash flows—just plans for constructing telecommunications networks and eventually obtaining customers. And in Marty’s view, such growth companies had been able to raise capital in the high-yield market only because of the same “Fed-spurred” investment boom that was also encouraging and enabling dubious dot.coms to go public.

This “game” continued for several years before culminating in a high-yield “TMT” (telecom/media/technology) bust that paralleled the dot.com crash in the stock market. In 2001, telecom and broadcasting recorded the highest default

rates among 35 industries tracked by Moody's. During the period 2001–2003, the US High Yield Telecom Index produced an annualized return of *negative* 25.1 percent, as compared to the positive 3.7 percent eked out by the rest of the High Yield Index. And telecom continues to hold the record for the lowest recovery rate (based on prices immediately after default) of the 35 industries for the entire 1983–2021 period.<sup>20</sup>



But the high-yield market would once again emerge from the wreckage to reach new heights. In the decade from 1999 to 2009, the face value of U.S. original-issue high-yield bonds once again more than doubled, to \$618 billion. At the same time, the new issuers were joined by a growing host of newly fallen angels. Thanks to the Global Financial Crisis and Great Recession, and the large number of downgradings that came with them, the \$618 billion of original-issue high-yield issuers now represented only 75 percent of the total high-yield outstandings, down from over 90 percent ten years earlier.

Nevertheless, in the decade that followed the GFC, the high-yield market showed remarkable resilience, with original-issue outstandings growing by almost 80 percent, to \$1.1 trillion by June 2019. At that point they once again represented over 90 percent of the high-yield total, by then over \$1.2 trillion. And at last count, these figures were 93 percent and \$1.3 trillion.<sup>21</sup>

### **THE FIRST 40 YEARS OF HIGH-YIELD BOND ISSUANCE: A LOOK BACK AT THE MARKET'S ACCOMPLISHMENTS AND PROSPECTS**

As Merton Miller wrote in 1988 when revisiting “The Modigliani-Miller Propositions After Thirty Years,”

The significant innovation in recent years—and it is still a puzzle why it took so long—has been in the showing that, contrary to the conventional wisdom, junk bonds could in fact be issued and marketed successfully by design, and not just as “fallen angels.”<sup>22</sup>



And the main aim and undertaking of Miller's Nobel Prize speech two years later was to dispel "the anti-leverage hysteria" that had "destroyed the liquidity of the high-yield bond market."<sup>23</sup>

Although he did not mention Michael Milken's role (in either the article or the speech) in the development of the original-issue high-yield bond market, Miller proved on several occasions more than willing both to appear in public debate with, and praise the accomplishments of, this convicted felon—a man he once described as "the victim of excess prosecutorial zeal," and whose social role in funding corporate growth and improving efficiency "would eventually be recognized."<sup>24</sup>

But having relied on Marty as our guide up to this point, let's now note his response when invited to respond to questions like the following:

### **WHAT DID MILKEN AND DREXEL GET RIGHT?**

First, the idea that a company's value-maximizing capital structure is likely to vary over time, with changes in market conditions that were either favorable (or unfavorable) to corporate debt financing. (In fact, Milken coauthored a paper with one of his professors at Wharton on this subject.)

But his most important innovation—the notion that there could in fact be a market for new public issues of noninvestment grade bonds—wasn't Milken's. He had had no experience in investment banking before joining forces with Fred Joseph at Drexel. And Lehman Brothers Kuhn Loeb had been underwriting public high-yield issues before Drexel got in the game.

Nevertheless, Milken was the first to see the case for and insist that the trading and selling of high-yield bonds be housed in a separate department, as opposed to operating as a segment within the fixed-income desk. Trafficking in investment-grade bonds was pretty straightforward—largely a matter of interest rates, ratings, and spread-based arbitrage. By contrast, high-yield traders and salespeople had to be prepared to immerse themselves in and master the financial and operating intricacies of the corporate issuers. In other words, they really had to understand corporate finance and how the company was expected to make money, both in the near term and in the future. The bonds of companies with the same rating, capital structure priority, and maturity often had risk

premium differentials of hundreds of basis points. Milken and his team made huge profits for Drexel from developing a clear sense of the economic basis for such differences, and how long they were likely to remain.

## WHAT DID MILKEN GET WRONG?

Drexel's worst offense, in Marty's view, was to continue to flog the findings of a study by economist Braddock Hickman that purported to show that high-yield bonds were systematically undervalued.<sup>25</sup> The Hickman study presented the simple finding that speculative-grade bonds returned more net of default losses than investment-grade bonds, with no attempt to determine if the return differential was large enough to compensate investors for the larger credit risk. As Marty saw it, the Drexel crowd skated over the fact that the return premium existed only if the sample included bonds that the Hickman study referred to as "irregulars"—those created in distressed exchanges. This meant that the results they were touting were not relevant for or applicable to newly issued noninvestment grade bonds (without an implied reorganizer like Drexel backing them). What's more, Hickman took charge of the study at a comparatively late stage, and presented noninvestment grade bonds in a more favorable light than the originator of the study, Harold Fraine.

Perhaps equally troubling to Marty (though less so to this writer), Milken's efforts to present his own commercial activity as a social calling or form of public service, however justified it may turn out to have been in terms of its actual economic effects, was almost certain to put most people off. Whether Milken truly views himself as guided by a higher social purpose is largely irrelevant to Marty's more immediate concern: "Is the bond you're showing me, or the asset class you're trying to attract me to, likely to be a good investment?" As Marty once told me, "Maybe Milken really did go into finance because seeing the Watts riots in LA firsthand led him to conclude that the most reliable way to lift Black people out of poverty is to 'democratize' capital. But I was taught in college to avoid the goddess of true motives."

Marty also claims to have been put off by Milken and Drexel's failure to respond to an op-ed by prominent economist Herb Stein, formerly chief of Richard Nixon's Council of Economic Advisers, challenging the logic underlying Milken's claims. Stein's argument went roughly as follows: assuming that the

total of investor capital is a largely fixed commodity, the fact that more of it is devoted to Drexel-funded enterprises, no matter how productive, must inevitably mean that less capital is available for all others. A nation's GNP, which Stein—like most of his macro brethren—appears to believe captures everything worth knowing about the social benefits of a nation's commercial activity, must therefore remain largely *fixed*, almost wholly unaffected by all of Milken's efforts, however exceptional.

But since Milken for whatever reason didn't care to respond to Stein, I'm going to take a shot at it here. As should become clear in the next two chapters of this book—one on the enormous problems with Chinese corporate governance and public finance, the other on problems with GNP as a gauge of national economic performance and much macro thinking in general—it ought to matter hugely whether capital is being employed productively or not. The hands that capital ends up in, and under what conditions and constraints and for what purposes, should also be expected to have potentially large effects on a nation's general economic and social well-being. To assume otherwise is to assume away all the problems that corporate finance theorists (Jensen first and foremost) and practitioners (above all, Milken) have devoted their careers to thinking (and in Milken's case, doing something) about.



Productivity gains matter. Contrary to the logic of Herb Stein and many other macroeconomists, productivity increases don't just fall from trees. The financial system has to be designed—and in some cases, actually evolve—to keep giving rise to ever more productivity. Such a system, as we have been suggesting throughout these pages, appears to be the *most* (and may well be the *only*) reliable basis for economic and social progress.