

ROCKWOOD SPECIALTIES: HIGH-YIELD DEBT ISSUE

In November 2000, Kohlberg, Kravis, and Roberts (KKR) purchased Rockwood Specialties Group, Inc. (Rockwood), a specialty chemicals company, in a \$1.2 billion buyout from Laporte plc, a U.K. conglomerate. Some of the financing used to complete the buyout had been on less-than-desirable terms at that time, and now spurred by the favorable interest-rate environment and a strong volume of debt issuance in the first half of 2003, KKR had begun to contemplate refinancing a significant portion of the buyout debt. In June 2003, Merrill Lynch proposed a \$375 million offer of senior subordinated notes and a \$435 million term loan to refinance the buyout funding. Although KKR was eager to improve Rockwood's financial position, the offering posed some significant challenges. First, it was a first-time issue by the privately held company. Second, while the U.S. economy showed signs of improvement in 2003 following two years of recession, the outlook remained guarded. Third, KKR's motivation for the offering and its complex financial structure complicated the potential credit rating that the issue would receive and therefore, the pricing of the issue. To date, Moody's had been willing to assign a preliminary rating of only Caa to the issue, a rating that Merrill Lynch believed would make it difficult to sell. Nonetheless, KKR was determined to proceed with the issue and see what the market would bear.

KKR's Purchase of Rockwood Specialties

KKR was a key player in the U.S. leveraged-buyout (LBO) market.¹ Since its founding in 1976, it had completed 110 transactions involving more than \$114 billion of total financing. Some of KKR's noteworthy deals included Wometco Companies (the first billion-dollar buyout, in 1984), Beatrice (the first hostile takeover against a *Fortune* 500 company; \$8.7 billion in 1985), and RJR Nabisco (the largest LBO in history—\$31.4 billion in 1988). Traditionally, buyout groups looked for companies with strong, stable cash flows whose operations could be improved. Those features were important in helping to pay down the high buyout debt.

While the cyclical nature of the chemicals industry seemed at odds with the characteristics of an ideal LBO target, private equity firms had bought almost \$20 billion of

¹ George Anders, *Merchants of Debt: KKR and the Mortgaging of American Business* (NY: Basic Books, 1992).

assets from large chemicals corporations over 1999–2000. That amount was about twice the total of the previous 10 years. As industry observers noted, “For 20 years until 2000, the total shareholder returns of publicly traded U.S. chemicals companies have been lower than those of the S&P 500. Meanwhile, chemicals companies owned by LBO firms delivered substantially higher returns than did their traditional counterparts—even when those returns are corrected for the LBO firms’ higher leverage.”² Rockwood’s high and stable operating margins made it an attractive acquisition candidate. Further, it was the second chemicals’ company that KKR had purchased in recent years. KKR also saw an opportunity for efficiency gains by cutting costs and lowering capital expenditures. In November 2000, the business appeared to promise sufficiently strong and stable cash flows to support the high leverage of the acquisition. Few at the time, however, anticipated the challenging economic conditions that would unfold thereafter.

The Specialty Chemicals Industry

Specialty chemicals products comprised adhesives and sealants, catalysts, coatings, electronic chemicals, industrial gases, plastic additives, water-management chemicals, and lubricant additives.³ The American Chemistry Council estimated that industry sales for specialty chemicals were \$107.6 billion in 2002. The key economic drivers in the industry were the level of worldwide industrial production, oil prices, technological innovations, and a trend toward business consolidation. Due to the global economic downturn that began in 2000, the demand for specialty chemicals decreased by almost 1% in 2002 from the previous year. The outlook was improving, however, in early 2003.

About half the output of the chemicals industry went into U.S. manufacturing industries for use as raw materials in the production process. U.S. industrial production strengthened throughout most of 2002, after declining from mid-2000 through the end of 2001. Key sectors that demanded output from the chemicals industry were on the rise in 2003. With mortgage-interest rates near their lowest levels in 30 years, residential-construction markets were expected to remain strong throughout 2003. The electronics industry seemed to be recovering from a severe downturn in 2001 caused by slower economic activity and excess inventory in IT. In early 2003, the Semiconductor Industry Association projected that worldwide sales of semiconductor products would climb by 20% for the year, to almost \$170 billion, led by continuing growth in the demand for cell phones and personal computers.

While the economic outlook for specialty chemicals companies was more promising in 2003, increasing commodity prices threatened to dampen the recovery in industry profits. By the end of 2002, year-to-year comparisons of raw-material costs for specialty chemicals companies had become unfavorable. Owing to the war in Iraq and an unusually cold winter, in the first quarter of 2003, natural-gas prices were at their highest level since the previous peak in early 2001, and had more than doubled over the previous year. Further, the average price of West Texas intermediate crude oil was expected to reach \$29 a barrel in 2003, up from an average of \$26 a barrel in 2001. Likewise, the costs of commodity chemicals used in the production of

² A. Butler, “The Alchemy of LBOs,” *McKinsey Quarterly*, no. 2 (2001): 140–51.

³ *Standard & Poor’s Industry Surveys* 171, no. 14, section 1 (April 3, 2003).

specialty chemicals had also risen. In the first quarter of 2003, the producer price index (PPI) for industrial chemicals was at an all-time high. The rise in commodity prices could adversely affect profits because specialty chemicals companies typically experienced a lag in the timing of increases in raw material costs and their ability to raise prices. This lag was caused by the nature of sales contracts, which did not allow for prices to be changed as frequently as costs did.

Rockwood Specialties Group, Inc.

Rockwood Specialties Group, Inc. was a privately held company, headquartered in Princeton, New Jersey. The management team, put in place by KKR in late 2001, had, on average, more than 23 years of experience in the specialty chemicals industry. The company had three product divisions: Pigment and Performance Additives, Specialty Compounds, and Electronics. No one of its product lines accounted for more than 30% of its net sales (see **Exhibit 1**). Rockwood was number one or number two in many of its product groups. It had achieved this success based on its ability to provide customized products using patent-protected or proprietary technologies and its strong relationships with distributors, end users, and channel partners. The markets in which a number of its business lines operated had significant barriers to entry. These arose from the high switching costs of materials that customers experienced due to the specific nature of the products that Rockwood supplied.

For the year ended December 31, 2002, Rockwood had net sales of \$759.9 million and adjusted EBITDA of \$152.4 million. See **Exhibit 2** for the company's financial performance numbers for 1998 through the first half of 2003. After declining 11% in 2001, revenues grew by 2.3% from 2001 to 2002⁴ compared with a 0.7% decline in revenues experienced by specialty chemicals companies in the Dow Jones Total Market Index over the same period. In the face of the challenging market conditions of the past two years, management had developed a metrics-driven improvement plan that focused on productivity, financial discipline, cash flow, and favorable pricing. Through this plan, Rockwood reduced working capital by \$79.3 million from 2000 to 2002, and decreased capital expenditures as a percentage of sales from 9.7%, in 1998, to 4.1%, in 2002. Further, by reducing headcount by 470 and carefully monitoring manufacturing and SG&A productivity, Rockwood achieved a 4.5% improvement in manufacturing productivity from 2001 to 2002. All of these improvements helped the company maintain profitability in the face of deteriorating economic conditions. By June 2003, the company had further identified \$40 million to \$60 million of specific growth opportunities for operating income that could be achieved in the next three years. After spending a total of \$180 million in capital expenditures between 1998 and 2000, the company's annual capital expenditures going forward were expected to decline to \$35 million to \$40 million to support long-term annual sales of about \$1.5 billion.

While raw materials accounted for approximately 57% of Rockwood's total cost of products sold in 2002, no single raw material represented more than 5% of its total costs of

⁴ The main reasons for the drop in revenue growth in 2001 included the general weakness in the semiconductors and electronics markets, the events of 9/11, the global economic slowdown that began in 2000, the loss of one major customer owing to a disagreement about pricing, and exposure to cyclical markets.

products sold. The diversified nature of its end markets enabled the company to manage pricing pressure somewhat better than other specialty chemicals companies. All of the foregoing seemed to point to improving internal cash-flow-generating capacity.

Overview of the High-Yield Bond Market

Advantages of high-yield debt

It has been noted that the high-yield market “has existed ever since the first bond ratings were published by John Moody in 1909.”⁵ That said, **Exhibit 3** reveals there was relatively little high-yield debt issued before 1980. Thereafter, the market grew rapidly so that by 2003, the market represented approximately \$1 trillion of outstanding securities. Several factors accounted for the growth in the high-yield market. First, it had advantages from an issuer’s perspective that made it an attractive form of financing relative to other forms of debt, particularly bank debt. Second, investors found it to be an attractive security because of its potential for high interest coupons and capital gains. The main drawback of high-yield debt resulted from its highly cyclical nature—it was sensitive to economic conditions so that its costs increased and its issuance was hindered in economic downturns—exactly the point where a firm might most need to obtain external financing.

High-yield debt was often issued by young, less established firms for whom financial flexibility was important. That type of debt had some features well-suited to those firms. First, high-yield debt generally had relatively few covenants compared with bank debt.⁶ The covenants it did contain were generally structured as “incurrence” covenants designed to prevent actions by the company that were undesirable from a creditor point of view rather than a maintenance covenants of the kind of normally associated with senior bank debt. Incurrence covenants, for example, could restrict the ability of the company to incur additional debt or liens, pay liquidating dividends, or sell assets. Maintenance covenants imposed limits on a company’s operations that could be constraining as its business plan evolved.

Second, high-yield debt typically had a longer maturity than bank debt—usually seven to twelve years in length. It was subordinated to the company’s senior debt and was normally unsecured.⁷ Although it bore a higher rate of interest than the company’s senior debt, it was structured to not endanger the interest payments or repayment of the company’s senior debt. High-yield debt was generally repayable in one installment (bullet) typically one to three years after the full repayment of the company’s senior debt. By delaying the repayment of the loan

⁵ Kevin J. Perry and Robert A. Taggart, Jr., “Development of the Junk Bond Market and Its Role in Portfolio Management and Corporate Finance,” in *The High Yield Debt Market*, Edward Altman, ed. (New York: Beard Books, 1998).

⁶ The information in this section comes primarily from “High-Yield Bond Primer” at <http://www.aegishighyieldfund.com/aboutbondfund.html> (accessed 1 August 2005).

⁷ “Subordinated” debt is debt that ranks below all senior issues and thus has a lower claim on company assets. “Secured” issues have a specific legal claim on a company’s assets in the event of default and therefore should experience lower default losses. Senior subordinated bonds rank below bank debt, typically have no specific security, and are backed only by the general creditworthiness of the issuer.

principal until the senior loans were paid in full, a firm could potentially make greater overall use of debt. Unlike bank debt that often required greater near term amortization, however, high-yield debt also had an element of refinancing risk. A company might be able to meet its interest obligations but be unable to amortize the whole principal of the high-yield debt during the term of the financing. Therefore, it was expected that an existing high yield bond would be refinanced, hopefully at lower cost, before its final maturity.

The high potential for refinancing had implications for how high-yield debt was priced in the market. A standard bond market convention was to price bonds at a spread over a treasury security of comparable maturity. This spread was measured in basis points; each basis point was one-hundredth of a percentage point. (In other words, a spread of four percentage points was described as 400 basis points). To facilitate refinancing, high-yield bond issues typically contained provisions to be called after a certain number of years. This meant that an issuer could redeem the bonds prior to their stated maturity by paying a price at least equal to or above face value. The issuer's action to call the bond made the actual redemption date of the bond uncertain. Therefore, bonds spreads were conservatively calculated using the "yield to worst," which was the bond's overall yield calculated to its least favorable call date from the investor's point of view. Yield to worst was the lowest yield that a bondholder would receive at either redemption or maturity.

While high-yield debt provided issuers with some desirable features, institutional investors also found it attractive for several reasons. First, there was the obvious attraction of a high interest coupon that enhanced long-term returns by virtue of compound interest. Second, the high interest payments also helped to diversify an investor's portfolio because the returns on high-yield debt were not highly correlated with investment grade bonds or stocks. High-risk common stocks tended to be non-dividend paying stocks (no cash payments), whereas high-yield debt paid high interest payments (high cash payments). Higher interest payments made fluctuating bond prices less important in the total return of a portfolio by shortening the "duration" of the bond. Duration was a measure of a bond's sensitivity to changes in interest rates. All else being equal, a bond with a high interest coupon had a shorter duration and fluctuated less than a bond with a low interest coupon as interest rates changed over time. Thus, the high interest coupons meant that high-yield bonds had a variability of returns that fell in the middle between stocks and bonds. These performance characteristics were attractive to the group of investors who sought higher returns than were available in a conservative bond portfolio but who did not wish to take on the higher risk of stocks. Third, under favorable market conditions, investors also benefited from the capital gain potential of high-yield bonds. The bonds could appreciate in value for a number of reasons: as the general level of interest rates fell, as a bond's risk level declined due to strengthening of an issuer's financial condition, as economic conditions improved, or if the bond were upgraded to a better credit rating. For all of the foregoing reasons, investor interest in the securities had grown along with issuer interest over time.

To a significant degree, the growth of the high-yield market was also aided by the adoption of Rule 144A by the U.S. Securities and Exchange Commission (SEC), in 1990. Securities issued under Rule 144A did not have to file a public registration statement with the SEC if they were sold to qualified institutional buyers (QIBs). Consequently, Rule 144A allowed privately held small and midsize companies—firms whose debt was more likely to be non-

investment grade—to issue bonds to large institutional buyers rather than raise bank debt. Rule 144A also simplified and expedited the issuance of high-yield debt, enhancing the “speed to market” and the pricing of the issue.⁸

Disadvantages of high-yield debt

The main drawback of high-yield debt was its highly cyclical nature. Credit-rating agencies based ratings, to a significant degree, on companies’ sensitivity to movements in the overall economy. **Exhibit 4** lists the factors that Standard & Poor’s associated with its credit-rating categories. The ability to meet the required payments on high-yield debt was generally dependent on more-favorable economic conditions. This sensitivity is borne out in **Exhibit 5**, where one observes that the default rates on high-yield debt moved inversely with changes in the growth rate of real GDP. Further, the yields on high-yield debt over lower-risk or risk-free instruments, commonly known as the default spread, as well as the volume of issue, reflected the market’s perceptions of the overall degree of credit risk and strength of the economic outlook. Spreads tended to widen in recessions and narrow in expansions. As a result, when economic conditions worsened, it generally became more difficult to float lower-rated issues. **Exhibit 6** shows the industry sectors issuing high-yield debt by various bond-rating categories over 1998–2002. Approximately 96% of high-yield debt was issued in the various BB and B categories versus only 4% in all C-rated categories.

Like equities, the high-yield market could experience pronounced highs and lows (see **Exhibit 3**). Typically, these cycles began when large numbers of new high-yield debt issues were sold during a period of improving economic conditions and relatively low interest rates. Many of the new issues would be poor quality bonds that were unlikely to be sold in a more cautious market. Within several years, problems with the weaker credits typically would begin to surface. As losses mounted, investors sold their bonds, prices fell (further exacerbating the losses), and yields rose. After the defaults ran their course, the above average yields attracted new money into the market, yields would begin to decline, and the cycle began anew.

Relative to the earlier period when it was used primarily to finance takeovers, the high-yield market had grown more diverse in terms of its issuers and their motivations to use this financing in recent years. Among corporate issuers, the largest volume of high-yield issues occurred in the telecommunications, media and entertainment, and energy and power industries over 1998–2002 (see **Exhibit 6**). At its peak, in 1998, the total volume of high-yield issues in the United States amounted to \$159.9 billion, a six-fold increase over the volume issued in 1988. High-yield debt represented 20% of the total rated debt issued (high yield plus investment grade) in 1998. New issues of high-yield debt declined to \$72.0 billion in 2002, but the overall size of the high-yield market (new issues plus the outstanding volume of debt) expanded owing to an

⁸ Although Rule 144A was adopted in 1990, it was not widely used for debt issuance until the mid-1990s. Rule 144A issuers could choose to use the “registration rights” to exchange the original issue for an issue could then be publicly traded following registration. During 1997–99, out of 953 high-yield issues under Rule 144A, 98.2% used registration rights and conducted exchange offers. Miles Livingston and Lei Zhou, “The Impact of Rule 144A Debt Offerings upon Bond Yields and Underwriter Fees,” *Financial Management* (Winter 2002).

increase in downgrades of previously investment-grade bonds, or so-called “fallen angels.”⁹ With an improving economic outlook, issue volume reached \$70.5 billion in the first half of June 2003—nearly the same volume as the entire previous year—2003 was on track to be one of the strongest years since 1998.

Refinancing and the \$375 Million Subordinate Notes

Through Rockwood Holdings, KKR paid Laporte plc \$1.23 billion in November 2000. KKR financed the acquisition with \$382 million of equity and \$845 million of debt. The debt was composed of two parts. One part was a \$325 million senior subordinated loan due to mature one year later. In the period that followed the NASDAQ crash of March 2001 and the slowdown in the economy, the bridge loan was extended in maturity until 2011, rather than refinanced with a bond issue as originally envisioned. In return for the term extension, the original interest rate of LIBOR plus 5.375% was increased to LIBOR plus 5.875% in May 2001, with the spread over LIBOR to increase by 0.5% every three months thereafter, not to exceed a total rate of 16% per year. At the end of December 2002, the interest rate on the loan was LIBOR plus 8.875%, or roughly 10.258% versus 9.865% in May 2001. (See **Exhibit 7** for LIBOR rates and bond yields.) Although the six-month LIBOR rate had fallen from 6.68% in November 2000 to 1.12% in June 2003, the escalating feature of the interest-rate spread had offset to a large degree the benefit of the declining LIBOR rates. The other major parts of the original buyout debt were two bank-syndicated term loans: a senior term loan A, due in 2007 (initially, LIBOR plus 2.75%), and a senior term loan B, due in 2008 (initially, LIBOR plus 3.25%).¹⁰

While the company had projected promising operating results, the near-term nature of its capital structure had been a constant concern. Even with the operating improvements of the past few years, the company still had a high degree of financial leverage. As of June 2003, Rockwood’s debt-to-capital ratio was 75%, exceeding the 69% ratio of the original capitalization, in November 2000. Interest expense had been running as high as 60% of the adjusted EBITDA from 2001 to the first half of 2003, resulting in simple coverage ratios below 2.0. In addition, the depreciation of the U.S. dollar against the Euro and British Pound had an increasingly negative impact on the company, which had significant exposure to the European market.¹¹ Motivated to extend the maturity of its debt and lower its interest expense, Rockwood began the process of refinancing its debt in early 2003.

Refinancing its debt would require \$917.9 million, including fees and expenses (see **Exhibit 8**). The funds would be used to pay off the outstanding \$325 million senior subordinated notes, due in 2011, and the outstanding credit facilities. The \$581.6 million senior secured credit

⁹ PIMCO bonds (www.pimco.com). About 22% of the high-yield market was formerly investment-grade debt downgraded in 2002.

¹⁰ S-4, SEC filing. The initial total borrowings under the tranche A and B loans were \$235 million and \$285 million, respectively. The weighted average interest rates in effect for the term loans were 5.71% and 5.24% at December 2001 and December 2002, respectively.

¹¹ The average US\$-to-Euro exchange rate was \$0.9271 per Euro in 2000. The exchange rate reached \$1.0912 at the end of the first quarter of 2003. Because a good portion of the original credit facilities was denominated in Euros, the weak dollar had significantly increased Rockwood’s financial costs of servicing the debt.

facilities represented the outstanding amount of the old term loan A and term loan B as of March 30, 2003, at the then-existing exchange rate. The refinancing would result in a decrease in total debt, a more favorable mix of senior subordinated notes and term loans, and a two-year extension of the maturities on the term loans. The refinancing would also improve the pro forma debt-to-EBITDA ratio, from 5.9 times to 5.2 times.

The refinancing hinged on the successful issue of the \$375 million senior subordinated notes. Rockwood's managers and KKR (its investors) believed that the operating improvements of the past two years and the economic revitalization were sufficient to ensure a favorable outcome. The credit-rating agencies, however, did not concur. In March 2003, Moody's issued a preliminary rating of Caa for the senior subordinated notes (the equivalent of Standard & Poor's CCC), and Merrill Lynch believed this rating posed a significant challenge to executing the offer successfully.

Even among non-investment-grade securities, there were clear distinctions between "high-yield" and "junk" bonds that primarily revolved around the issue of default. Which issuers were likely to default was a fundamental concern of investors, and various tools could be used to gauge the likelihood of default. One well-known benchmark of the potential for default was Altman's Z-Score.¹² Using five financial ratios, this simple diagnostic tool measured the financial health of a company and determined the likelihood of bankruptcy. **Exhibit 9** shows the model updated to reflect changes in the capital markets through 2003. For a privately held company such as Rockwood, the threshold for a high probability of default within six to 12 months was a Z-score below 1.10. The average Z-score of firms with CCC-rated debt (0.95) fell below this threshold, whereas the average Z-score of firms with B-rated debt exceeded it (1.67). Although the model was not perfect, many researchers agreed that it had been historically accurate 70% to 80% of the time. This gave further credence to Merrill's concern about proceeding to market with Moody's preliminary low rating.

Because of the potential problems associated with the low rating, KKR had spent large amounts of time negotiating with the credit agencies for a better rating. After much negotiation, KKR agreed to make two changes to its earlier proposal to augment the equity it had in Rockwood. See **Exhibit 10** for the pro forma ownership structure of Rockwood after the refinancing. The equity contribution would occur in two parts. Rockwood Specialties International, Inc. (one of the parent companies of Rockwood Specialties Group, Inc., controlled by KKR) would issue \$70 million of senior discount notes, or Pay In Kind (PIK) notes, and "downstream" the proceeds to Rockwood Specialties Group.¹³ These notes were non-cash interest-paying notes whose value accreted over time. In this specific case, KKR and its affiliates, the holder of the PIK notes agreed to subordinate the notes to all other debt and agreed not to redeem the notes until the senior subordinated notes matured or were repaid. KKR argued that under these conditions, the claim was effectively equity rather than debt. On Rockwood

¹² Edward Altman, "Quantitative Techniques for the Assessment of Credit Risk," *AFP Exchange* (March–April 2003): 6.

¹³ PIK (payment in kind): Bonds, notes, or preferred stocks that paid interest or dividends in the underlying securities rather than cash. PIKs were used when the issuer had short-term cash-flow difficulty or as a means to relieve investors of reinvestment risk.

International's balance sheet, however, the \$70 million appeared as debt. KKR also purchased an additional \$25 million in common equity for cash. KKR contended that the overall addition of \$95 million in equity would lower Rockwood's leverage and the risk of default. It remained to be seen whether investors would share this view.

Exhibit 11 contains the proposed terms of the \$375 million senior-subordinated-note offering, with the important exception of the pricing for the offering (i.e., the coupon rate on the new issue). The pricing of a high-yield debt issue was determined by three factors: the fundamentals of the issuing firm, its credit rating, and market conditions. Fundamentals covered the issuer's ability to generate stable cash flows sufficient to service the debt. Credit rating was a single measure of the default risk of the security (issue rating) or the issuing firm (issuer rating). Market conditions included the relative supply and the demand for debt in the market, and recent movements in interest rates and credit spreads. The single most important tool for determining price was an analysis of comparables. Issuers typically preferred to offer new securities at par. Comparable companies that had issued the same class of securities were considered the best guide. For that reason, Merrill Lynch identified several specialty chemicals companies that had recently issued similar notes in order to gauge a reasonable range of pricing options for Rockwood's notes. **Exhibit 12** provides information on selected specialty chemicals companies' high-yield issues.

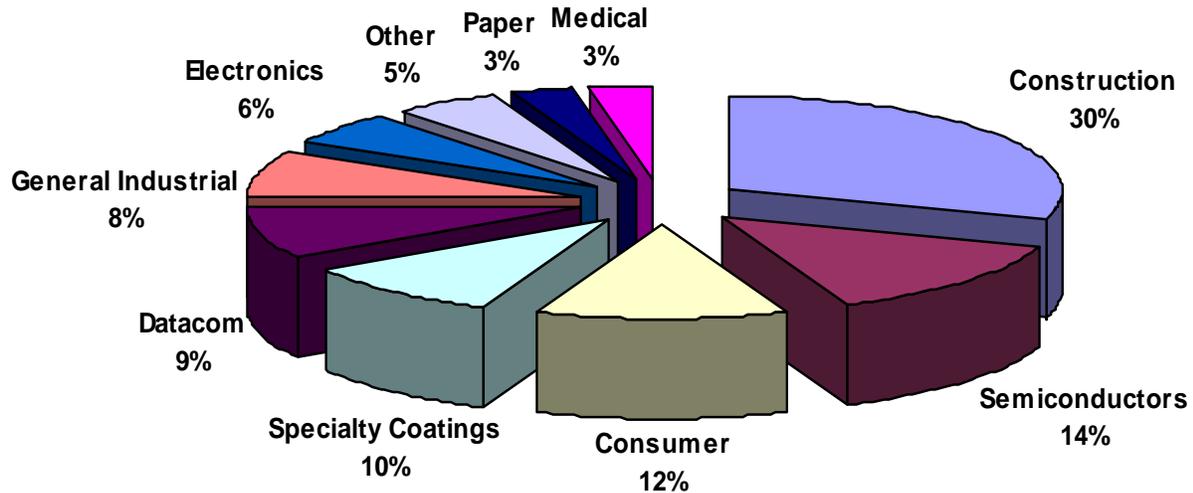
Decision

The first half of 2003 brought an improving but still somewhat uncertain economic outlook. So far, investors had shown a strong appetite for high-yield debt. With this and the additional equity investment behind it, KKR was now hopeful that the market would look favorably upon the offering and that a reasonable rating and yield could be achieved for Rockwood's \$375 million senior subordinated notes.

Exhibit 1

ROCKWOOD SPECIALTIES: HIGH-YIELD DEBT ISSUE

A Breakdown of 2002 Net Sales by End-Use Markets and Product-Group Description



Subproduct Groups	Sales (\$MM)	% of Group	Main Markets
Pigments	\$184.0	24%	Synthetic iron-oxide compounds for use in construction, coatings, and other specialty applications
Timber-treatment chemicals	\$125.8	16%	Wood preservatives and retardants for decking, full form, furniture, construction, and utilities
Clay-based additives	\$72.2	10%	For improving thickness, flow, and suspension properties in coatings, oilfield fluids, plastics, cosmetics
Water-treatment chemicals	\$53.4	8%	Clean, color, and treat water in pools, spas, recreational ponds, and irrigation canals
Specialty compounds	\$168.8	22%	Plastic compounds for voice and data cable, consumer products, auto parts, footwear, and bottle caps
Electronic chemicals	\$83.1	11%	Acids, bases, and solvents to clean and etch wafers, PCBs, and photomask chemicals
Photomasks	\$36.2	5%	Photo-imaging masks used as master images in the manufacture of semiconductors
Wafer reclaim	\$28.0	4%	Silicon-wafer refurbishment services used as test wafers in the manufacture of semiconductors

Exhibit 2

ROCKWOOD SPECIALTIES: HIGH-YIELD DEBT ISSUE

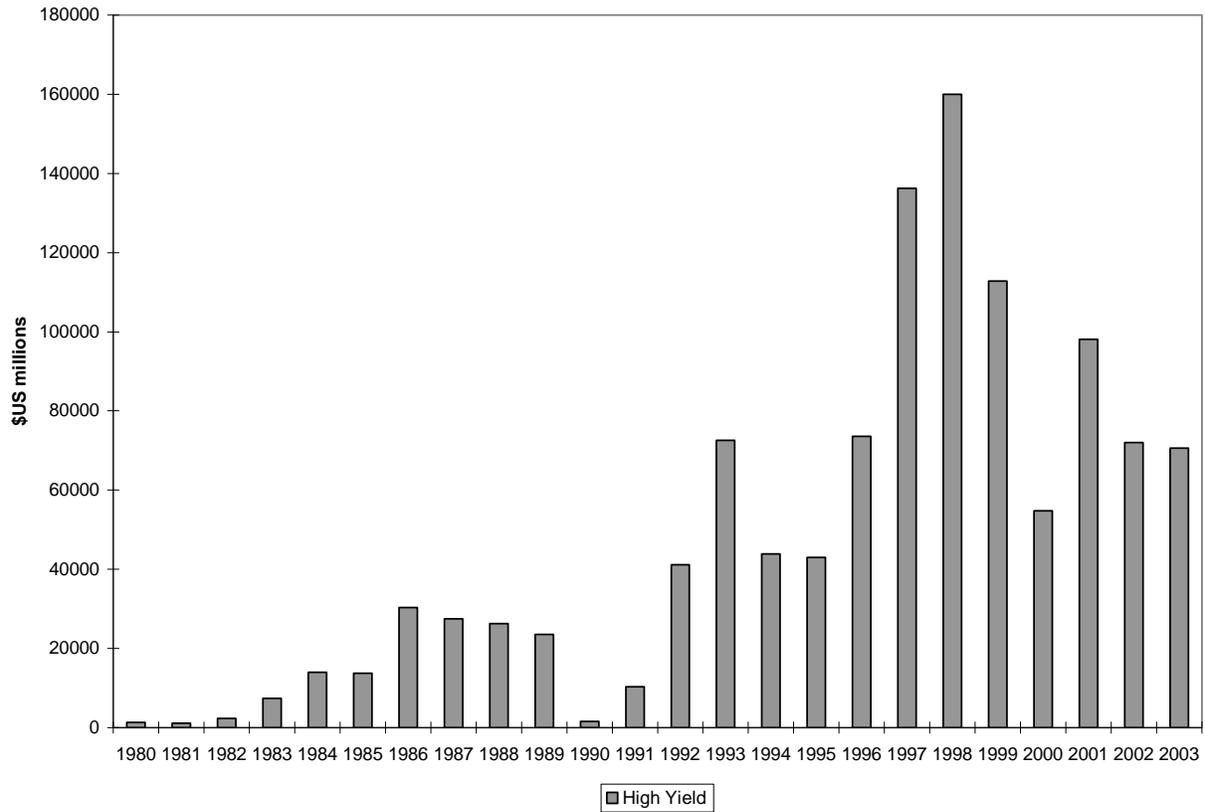
Summary of Financial Performance (1998–June 2003)

Statement of operations data:	Year Ended December 31					6 months
	1998	1999	2000	2001	2002	2003
Net sales:						
Performance Additives	444,089	453,091	452,616	418,397	443,762	232,197
Specialty Compounds	214,101	203,348	207,972	171,690	168,807	90,136
Electronics	157,661	144,528	174,175	152,544	147,347	70,519
Total	815,851	800,967	834,763	742,631	759,916	392,852
Cost of products sold	556,288	556,777	604,101	546,527	542,468	286,839
Gross profit	259,563	244,190	230,662	196,104	217,448	106,013
SG&A	164,727	157,705	171,188	147,530	112,855	57,352
Goodwill impairment charge	—	—	—	—	50,000	—
Restructuring charges	18,231	2,697	3,916	9,156	1,251	1,035
Operating (loss) income	76,605	83,788	55,558	39,418	53,342	47,626
Interest expense, net	-47,683	-40,227	-56,301	-89,321	-88,166	-43,156
Gain on sale of investment	—	—	1,006	—	—	—
Foreign exchange (loss) gain	58	-453	-19,333	9,619	-24,638	-20,216
Loss on receivables sold	—	—	—	-1,177	-1,255	—
(Loss) income before taxes	28,980	43,108	-19,070	-41,461	-60,717	-15,746
Income tax (benefit) provision	22,583	24,727	5,074	628	-5,507	-4,723
Net (loss) income	6,397	18,381	-24,144	-42,089	-55,210	-11,023
Balance sheet data:						
Cash and cash equivalents	154,028	201,158	44,769	93,221	42,896	18,445
Working capital	146,822	146,949	144,362	69,270	67,648	97,519
Property, plant and equipment, net	334,639	337,163	407,466	391,170	406,975	417,811
Total assets	873,951	948,584	1,513,356	1,410,804	1,407,029	1,431,082
Total debt	1,837	53,107	891,601	854,902	876,199	894,671
Shareholders' equity	62,606	26,473	356,661	298,188	278,207	291,941
Cash flow data:						
Net cash from operating activities	80,349	87,747	48,407	113,517	-2,991	3,396
Net cash from investing activities	-67,303	-100,072	-1,171,518	-31,601	-30,450	-25,073
Net cash from financing activities	-8,444	66,027	1,103,003	-33,608	-19,452	-6,306
Effect of exchange rate changes	2,987	-6,572	8,067	144	2,568	3,532
Net change in cash & equivalents	7,589	47,130	-12,041	48,452	-50,325	-24,451
Adjusted EBITDA:						
Performance Additives			97,560	88,075	106,390	52,916
Specialty Compounds			25,622	23,781	26,042	12,474
Electronics			44,139	39,390	35,401	11,783
Corporate costs & eliminations			-9,263	-10,852	-15,441	-6,829
Total			158,058	140,394	152,392	70,344

Exhibit 3

ROCKWOOD SPECIALTIES: HIGH-YIELD DEBT ISSUE

High-Yield Debt Issue Volume from 1980 to June 2003



The sample is restricted to nonconvertible rated debt (high-yield plus investment-grade debt) issued in the U.S. market with a maturity of greater than three years. Issue volume for 2003 represents the first half of the year only.

Source: Securities Data Corporation (SDC) New-Issues database.

Exhibit 4

ROCKWOOD SPECIALTIES: HIGH-YIELD DEBT ISSUE

Definitions of Credit-Rating Categories

Investment-Grade Debt			
S&P	Moody's	Fitch	S&P Definition of Rating
AAA	Aaa	AAA	Extremely strong capacity to meet financial commitments. Highest rating.
AA	Aa	AA	Very strong capacity to meet financial commitments.
A	A	A	Strong capacity to meet financial commitments, but somewhat susceptible to adverse economic conditions and changes in circumstances.
BBB	Baa	BBB	Adequate capacity to meet financial commitments, but more subject to adverse economic conditions.
High-Yield Debt			
BB	Ba	BBB	Less vulnerable in the near term but faces major ongoing uncertainties to adverse business, financial, and economic conditions.
B	B	BB	More vulnerable to adverse business, financial, and economic conditions but currently has the capacity to meet financial commitments.
CCC	Caa	B	Currently vulnerable and dependent on favorable business, financial, and economic conditions to meet financial commitments
CC	Ca		Currently highly vulnerable.
C		C	A bankruptcy petition has been filed or similar action taken but payments or financial commitments are continued
D	C	DDD, DD, D	Payment default on financial commitments.

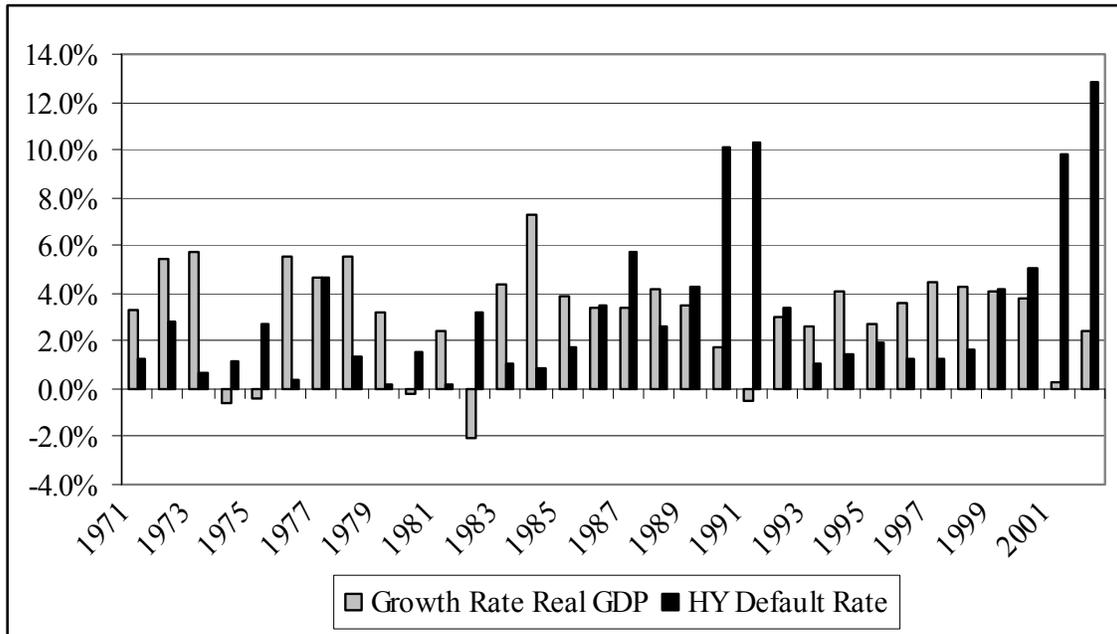
S&P Ratings may be modified by the addition of a plus (+) or minus (-) sign to show relative standing within the major rating categories. Moody's Ratings may be modified by the addition of the number 1 (better) to 3 (worse) to show relative standing within the major rating categories

Source: Standard & Poor's, Inc.

Exhibit 5

ROCKWOOD SPECIALTIES: HIGH-YIELD DEBT ISSUE

Growth Rate in Real GDP versus High-Yield Default Rates, 1971–2002



Sources: Edward Altman, “Market Size and Investment Performance of Defaulted Bonds and Bank Loans: 1987–2002,” *Journal of Applied Corporate Finance* 13, no. 2 (Fall 2003) (straight bonds only); Real GDP data is obtained from Datastream, Inc.

Exhibit 6

ROCKWOOD SPECIALTIES: HIGH-YIELD DEBT ISSUE

Volume of Nonconvertible High-Yield Debt Issued in the U.S. Markets
By Industry and Standard & Poor's Bond-Rating Categories, 1998–2002 (\$US millions)

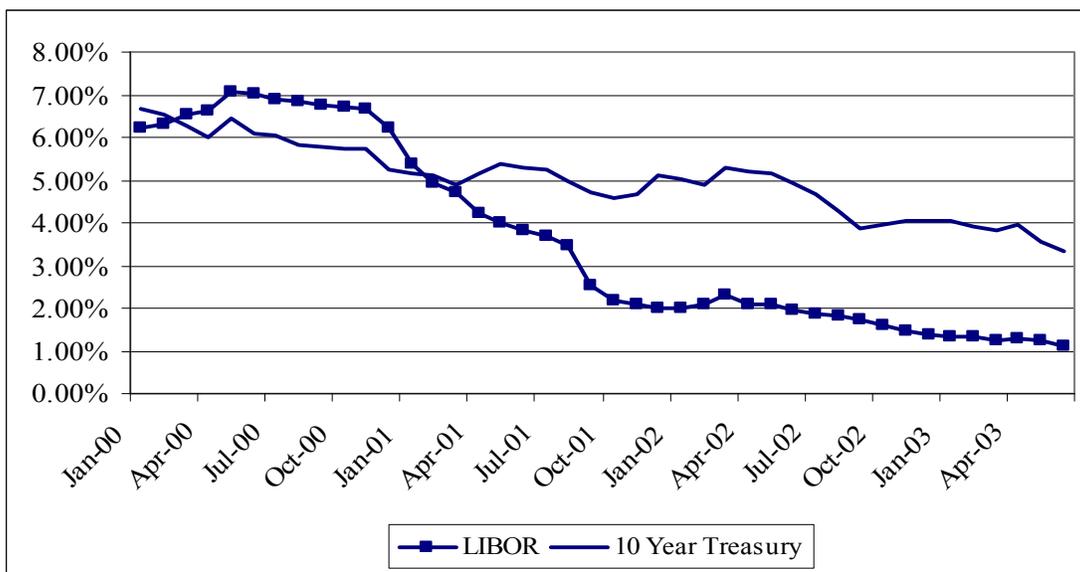
Industry	BB	BB-	B+	B	B-	CCC+	Below CCC+	Total Issued
Telecommunications	\$ 991.5	\$ 4,143.8	\$ 11,720.7	\$ 20,256.9	\$ 13,798.7	\$ 7,120.9	\$ 2,379.1	\$ 60,411.6
Media and Entertainment	1,492.4	5,919.0	17,090.6	15,660.0	13,749.6	1,719.7	172.3	55,803.6
Industrials	5,283.0	4,704.4	6,627.8	10,325.0	8,422.4	415.0	197.5	35,975.1
Healthcare	566.6	1,593.2	2,222.9	1,461.1	6,827.6	420.0	0.0	13,091.4
Materials	8,572.3	5,607.5	6,460.9	10,815.7	6,382.7	239.6	175.0	38,253.7
High Technology	220.0	1,950.0	2,596.7	5,031.1	5,475.8	590.7	0.0	15,864.3
Consumer Products and Services	875.5	3,364.8	1,676.0	5,132.8	4,325.9	100.0	0.0	15,475.0
Government and Agencies	19,602.4	10,076.9	12,415.0	2,687.2	3,467.4	-	0.0	48,248.9
Financials	4,514.3	3,319.8	2,153.9	1,668.7	2,912.4	138.0	18.9	14,726.0
Consumer Staples	3,210.3	1,675.7	2,102.3	3,050.5	2,781.5	-	0.0	12,820.3
Energy and Power	11,829.3	10,611.1	8,007.7	3,885.9	2,680.5	110.0	60.2	37,184.7
Retail	2,543.6	826.2	2,177.3	2,912.1	2,229.5	398.8	0.0	11,087.5
Real Estate	4,332.5	966.6	608.8	1,014.2	605.0	-	0.0	7,527.1
Total by S&P Rating	\$64,033.7	\$54,759.0	\$75,860.6	\$83,901.2	\$73,659.0	\$11,252.7	\$3,003.0	\$366,469.2
Percentage	17.5%	14.9%	20.7%	22.9%	20.1%	3.1%	0.8%	100%

Source: Thomson Financial, Inc., SDC New-Issues database.

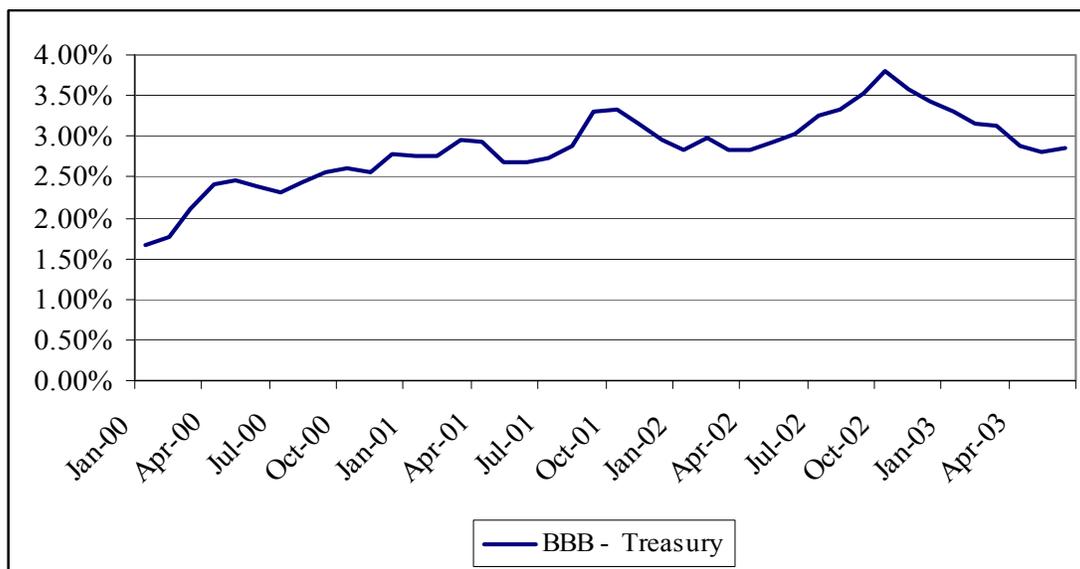
Exhibit 7

ROCKWOOD SPECIALTIES: HIGH-YIELD DEBT ISSUE

Movements in Interest Rates, Spreads, and Term Structure



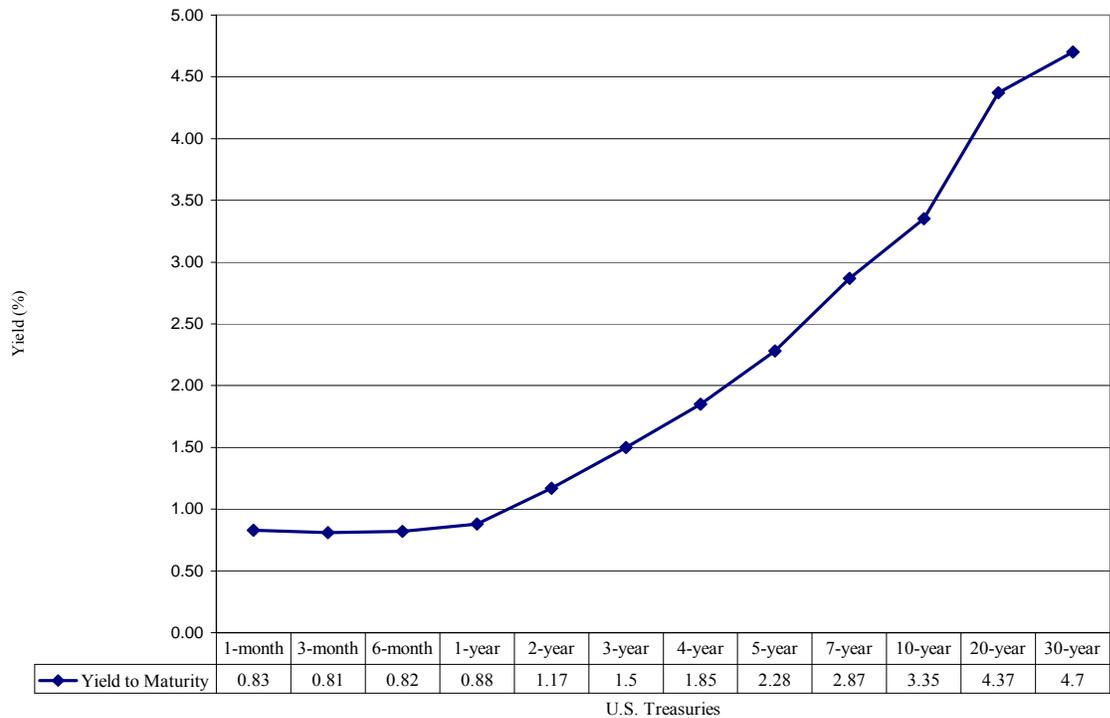
Interest Rate Yields, January 2000—June 2003



Default Spread, January 2000—June 2003

The default spread is the difference between BBB-rated yield and the 10-year U.S. Treasury yield.

Exhibit 7 (continued)



Term Structure of Interest Rates—week of June 23, 2003

Source: U.S. Federal Reserve

Exhibit 8

ROCKWOOD SPECIALTIES: HIGH-YIELD DEBT ISSUE

Sources and Uses of Fund for Refinancing: March 31, 2003

Sources:	(in millions)
Cash	\$12.9
Senior Credit Facilities	\$435.0
Senior Subordinated Notes	\$375.0
Equity Contribution	\$95.0
Total sources	\$917.9
Uses:	
Refinancing: Senior Secured Credit Facilities	\$581.6
Refinancing: Senior Subordinated Loans	\$325.0
Fees and Expenses	\$11.3
Total uses	\$917.9

Actual and Pro Forma Capital Structure and Credit Statistics

	<u>Actual</u>	<u>Pro Forma</u>	<u>Change</u>
Cash and Equivalents	\$24.3	\$11.4	-\$12.9
Revolving Credit Facility	\$30.4	\$0.0	-\$30.4
Senior Term Loan A	\$259.9	\$100.0	-\$159.9
Senior Term Loan B	\$291.3	\$335.0	\$43.7
Total Senior Debt	\$581.6	\$435.0	-\$146.6
Senior Subordinated Notes	\$325.0	\$375.0	\$50.0
Total Debt	\$906.6	\$810.0	-\$96.6
Common Equity from Proceeds of Sr. Discount Notes	\$0.0	\$70.0	\$70.0
Common Equity from Proceeds of PIK Notes	\$100.0	\$100.0	\$0.0
New Common Equity from KKR	\$0.0	\$25.0	\$25.0
Existing Common Equity from KKR and Managemer	\$287.7	\$287.7	\$0.0
Total Equity	\$387.7	\$482.7	\$95.0
Total Contributed Capital	\$1,294.3	\$1,292.7	-\$1.6
LTM Proforma Revenues	\$776.3	\$776.3	
LTM Proforma Adjusted EBITDA	\$152.5	\$152.5	
Adjusted EBITDA / Cash Interest	2.10x	2.00x	
Total Net Debt / Adjusted EBITDA	5.90x	5.20x	

Source: Merrill Lynch memorandum.

Exhibit 9

ROCKWOOD SPECIALTIES: HIGH-YIELD DEBT ISSUE

Altman’s Z-Score for Predicting Default¹

Z-Score gives probability that firms will default within six to twelve months

Model	Formula	Application
Z (basic)	$1.2 x_1 + 1.4 x_2 + 3.3 x_3 + 0.6 x_4 + 1.0 x_5$	manufacturing, publicly traded
Z'	$0.717 x_1 + 0.847 x_2 + 3.107 x_3 + 1.420 x_4 + 0.998 x_5$	manufacturing, privately held
Z''	$6.56 x_1 + 3.26 x_2 + 6.72 x_3 + 1.05 x_4$	nonmanufacturing, emerging markets

Average Z-Scores by S&P Bond Rating, 1995–99

Rating	Average Annual # of Firms	Average Z-Score	Standard Deviation
AAA	11	5.02	1.50
AA	46	4.30	1.81
A	131	3.60	2.26
BBB	107	2.78	1.50
BB	50	2.45	1.62
B	90	1.67	1.22
CCC	10	0.95	1.10

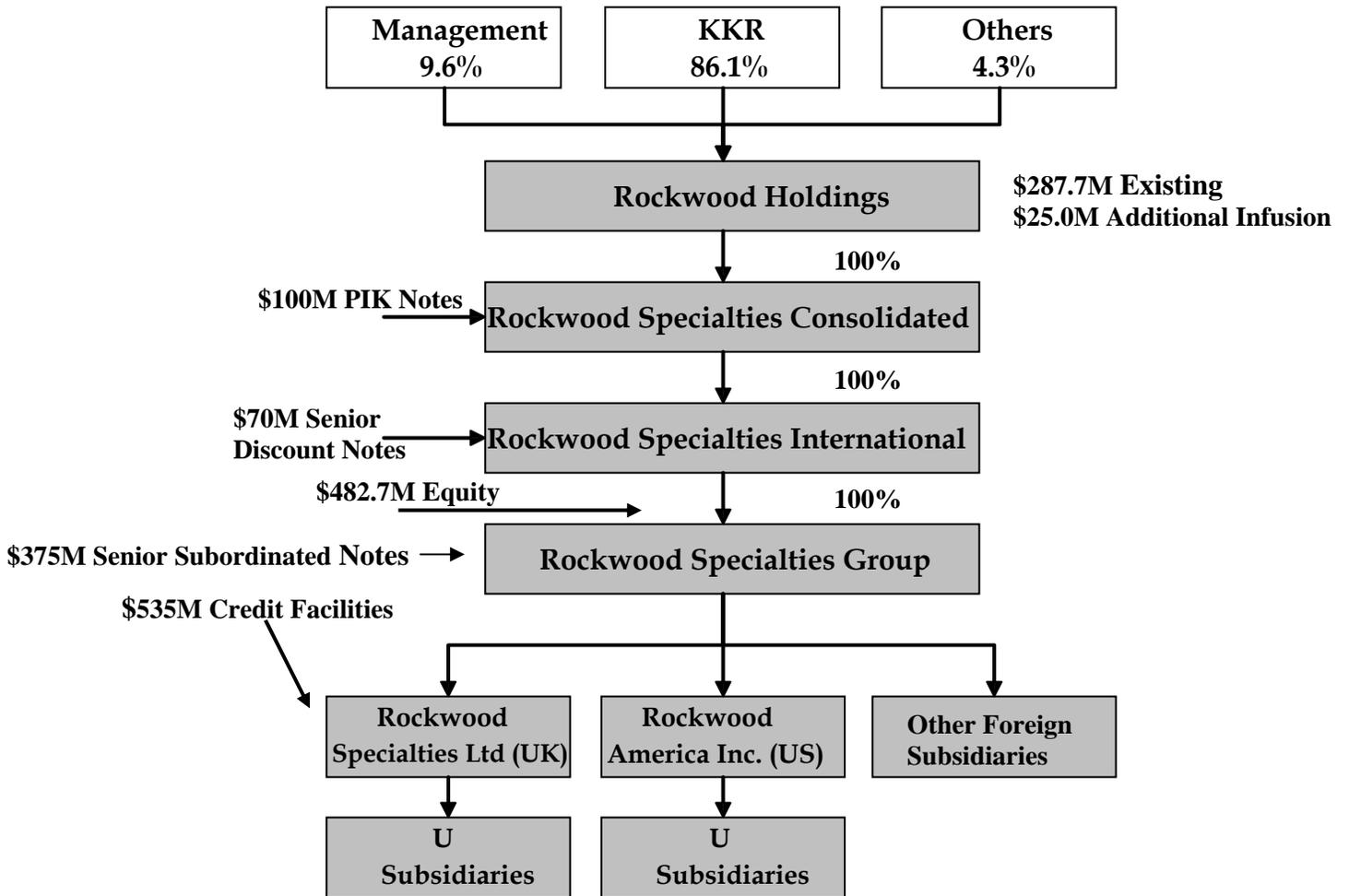
	High Probability of Default	“Grey Area”	Low Probability of Default
Publicly Traded Firm	$Z < 1.81$	1.81 – 2.99	$Z > 2.99$
Privately Held Firm	$Z < 1.10$	1.10 – 2.61	$Z > 2.61$

¹ Edward Altman, “Quantitative Techniques for the Assessment of Credit Risk,” *AFP Exchange* (March–April 2003): 6. Each variable is defined as follows: X_1 = working capital/total assets, where working capital = current assets – current liabilities. X_2 = retained earnings/total assets. X_3 = EBIT/total assets. X_4 = market value of equity/book value of total liabilities. For the Model Z', book value of equity is used instead. X_5 = sales/total assets.

Exhibit 10

ROCKWOOD SPECIALTIES: HIGH-YIELD DEBT ISSUE

Pro Forma Ownership Structure of Rockwood after the Refinancing



Source: Merrill Lynch memorandum

Exhibit 11

ROCKWOOD SPECIALTIES: HIGH-YIELD DEBT ISSUE

Proposed Terms of the \$375 Million Senior-Subordinated-Notes Offering

Issuer	Rockwood Specialties Group, Inc.
Notes offered	Senior Subordinated Notes
Amount	\$375 million
Maturity	Due 5/15/2011 (8 years)
Call feature ¹	May redeem all or a portion of the exchange notes at any time on or after 5/15/2007 at the redemption prices described in prospectus, plus accrued and unpaid interest
Use of proceeds	Retirement of the existing senior subordinated loan facility and senior credit facilities
Security	None
Law	Issued under Rule 144A
Guarantees	Certain of Rockwood's domestic subsidiaries guarantee the exchange notes on a senior subordinated basis.
Ranking	The Notes will be unsecured senior subordinated obligations and will rank (a) equally with all of our and our guarantors' senior subordinated debt; (b) subordinate to all of our and our guarantors' senior debt, including any guarantees by the guarantors of our new senior secured credit facilities; and (c) senior to all of our and our guarantors' subordinated debt.
Equity clawback ²	35% if at least 65% of the aggregate principal amount of the Notes originally issued remains outstanding after such redemption and the redemption is made within 90 days of such offering.
Change of control	101%

Notes:

¹ Redemption price: 105.313% (5/15/2007), 103.542% (5/15/2008), 101.771% (5/15/2009), 100% (5/15/2010 and thereafter).

² Equity clawback: This gives the issuer the option to redeem up to 35% of the notes on or before May 15, 2006 at a redemption price of 110.625%, plus accrued and unpaid interest, with the proceeds from the equity offering under two conditions: (a) at least 65% of the notes should remain outstanding immediately after the occurrence of each such redemption, and (b) each such redemption should occur within 90 days of the date of closing of such equity offering.

Source: SEC filing, S-4.

Exhibit 12

ROCKWOOD SPECIALTIES: HIGH-YIELD DEBT ISSUE

Selected Specialty Chemicals Companies' High-Yield Issues

Company Name	Noveon PMD Group	Macdermid Inc.	Resolution Performance Products	Sovergin Specialty Chemical	OMG Group Inc.	Rockwood Specialties Group
Issue date	2/23/2001	6/15/2001	11/14/2000	3/24/2000	12/7/2001	7/15/2003
Maturity	2/28/2011	6/15/2011	11/15/2010	3/15/2010	12/15/2011	7/15/2011
Principal amount	\$275.0	\$301.5	\$328.0	\$150.0	\$400.0	\$375.0
Coupon rate	11.000%	9.125%	13.500%	11.875%	9.250%	
Rating	B3/B	Ba3/BB-	Caa1/B-	Caa1/B-	Caa2/B-	
Issuer call option	NC-5	NC-5	NC-5	NC-5	NC-5	NC-4
Spread at issue (bp)	589	400	NA	587	419	
Bid price (as of 6/23/03)	109.625	109.625	102.125	94.000	96.625	
Yield to maturity (as of issue date)	9.490%	7.726%	13.112%	12.962%	9.785%	
Yield to maturity (as of 6/23/03)	9.219%	7.499%	13.036%	13.239%	9.845%	
Yield to worst (as of 6/23/03)	8.759%	6.939%	12.931%	13.240%	9.846%	
Yield-to-worst date	3/15/2007	7/15/2006	11/15/2008	3/15/2010	12/15/2011	
Relevant Treasury yield	1.839%	1.594%	2.382%	2.677%	3.065%	
YTW spread to Treasury yield	692	535	1055	1056	678	
Revenue (LTM, 3/31/03)	\$1,092.2	\$693.1	\$751.0	\$364.2	\$5,070.2	\$776.3
EBITDA (LTM, 3/31/03)	\$214.6	\$117.0	\$70.0	\$35.2	\$70.0	\$152.5
EBITDA margin	19.6%	16.9%	9.3%	9.7%	1.4%	19.6%
Interest expense	\$74.3	\$34.5	\$76.0	\$25.4	\$81.3	\$76.3
Capital expenditure	\$63.9	\$7.1	\$47.0	\$26.9	\$75.0	\$31.8
Capex/revenue	4.1%	1.0%	6.3%	7.4%	1.5%	4.1%
Senior debt	\$590.8	\$19.5	\$288.0	\$77.4	\$791.5	\$876.2
Total debt	\$865.8	\$321.0	\$621.0	\$226.7	\$1,191.5	\$906.6
Total debt & preferred equity	\$1,021.8	\$321.0	\$621.0	\$226.7	\$1,191.5	\$906.6
Book equity, common	\$505.2	\$232.6	(\$57.0)	\$25.8	\$471.6	\$278.2
Book capitalization	\$1,527.0	\$553.6	\$564.0	\$252.5	\$1,663.1	\$1,184.8
Market value of equity (6/23/03)	NMF	\$859.6	NMF	NMF	\$425.6	NMF
EBITDA/interest	2.9x	3.4x	0.9x	1.4x	0.9x	2.0x
(EBITDA—capex)/interest	2.0x	3.2x	0.3x	0.3x	NMF	1.6x
Senior debt/EBITDA	2.8x	0.2x	4.1x	2.2x	11.3x	5.7x
Total debt/EBITDA	4.0x	2.7x	8.9x	6.4x	17.0x	5.9x
Total debt/book capitalization	56.7%	58.0%	NMF	89.8%	71.6%	76.5%
Total debt/market capitalization	NMF	27.2%	NMF	NMF	73.7%	NMF

Source: Merrill Lynch memorandum. All issues are high-yield senior subordinated notes with maturity of either 2010 or 2011 and issued by specialty chemicals company.