DARDEN
BUSINESS PUBLISHING
UNIVERSITY of VIRGINIA

UVA-F-1339
Version 2.6

CORNING, INC.: ZERO COUPON CONVERTIBLE DEBENTURES DUE NOVEMBER 8, 2015 (A)

On November 8, 2000, Corning announced that it would issue $2.7 billion in zero-coupon convertible debentures priced at $741.923 per $1,000 principal amount. The initial public offering (IPO) price yielded 2% per annum to maturity, compounded semiannually. A summary of terms is given in **Exhibit 1**. Concurrent with the offering, Corning also conducted a separate public offering of 30 million shares of its common stock at $71.25 per share.[1] Neither offering was contingent upon completion of the other. The entire financing would raise around $4.8 billion.

Corning planned to use the proceeds of both offerings to fund its acquisition of Pirelli S.p.A.'s 90% interest in Optical Technologies USA, Pirelli's optical-components and -devices business. The total acquisition consideration was approximately $3.6 billion in cash. The acquisition agreement had been announced on September 27, 2000, and pended regulatory approval. Observers agreed, however, that the acquisition was likely to be completed.

> The issue of the Corning zero-coupon convertibles came to the attention of Julianna Coopers, an investment analyst at the Paradigm Group of mutual funds. The Paradigm Group offered 36 different funds and managed more than $50 billion in assets. Coopers and her group handled Paradigm's Convertible Securities Fund, which sought "high returns through a combination of current income and capital appreciation."

Coopers had been tasked with assessing the new issue of Corning convertibles. That day, she needed to decide whether to recommend purchasing some of the bonds for the Convertible Securities Fund. Her task was to assess the risk of the bond issue, and judge the adequacy of the yield, offering price, and the conversion terms.

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[1] www.ipo.com.

This case was prepared by Jessica Chan, under the supervision of Robert F. Bruner. It was written as a basis for class discussion rather than to illustrate effective or ineffective handling of an administrative situation.

The Company

Corning, Inc., competed in three broadly defined operating segments: Telecommunications, Advanced Materials, and Information Display. The Telecommunications division accounted for roughly 70% of company's revenue. **Exhibit 2** contains a breakdown of sales and net income by operating segment. **Exhibit 3** provides a detailed breakdown of the products within each operating segment.

Corning was the world's largest manufacturer of optical fiber and amplifiers, with a 50% share of the optical fiber market, twice that of its nearest competitor, Lucent. At the time of the offering, the fiber market was in a sold-out state, and Corning had presold the next 18 months of its entire fiber manufacturing capacity.[2] Worldwide demand for fiber grew by 40% in 1999, and management expected the same robust growth rate for 2000. Going forward, industry analysts expected the annual growth rate for fiber to be between 20% and 25% through 2002, although there was some debate about a potential fiber glut.

Within the company's Telecommunications division, its photonics business increased at a triple-digit annual rate. The photonics business manufactured products that enhanced the flexibility and performance of communications networks. Those products boosted, combined, separated, and connected optical signals transmitted over fiber optic networks. Because of strong demand, Corning expanded capacity for photonics six-fold over the next 18 months.[3]

The nontelecommunications businesses of Corning also performed impressively. The company was the number-one supplier of flat-panel glass for LCDs (liquid crystal displays) used in PC screens, televisions, digital cameras, and other devices, and commanded roughly a 60% world market share. Demand for the flat-panel displays grew at around 40% per annum, amid stable pricing. The flat-panel business was expected to reach roughly $500 million in 2000, and to hit $1 billion in a few years.[4] In addition, Corning's biotechnology-related products were experiencing a healthy demand. This segment was expected to grow by 30% to 35% annually, led by DNA-analysis products.[5]

A rich valuation for Corning shares testified to the rosy outlook for the company. Corning's average P/E ratio for the past month had been roughly 94× the estimated 2000 earnings and 75× the estimated 2001 earnings, compared with an average of around 30× for the S&P 500. (**Exhibit 4** contains a history of Corning's share-price performance and its P/E ratios.)

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[2] Gavin Duffy and T. Peter Andrew, *Corning: Charging Ahead at the Speed of Light* (A.G. Edwards report), 6 November 2000.

[3] Timothy Anderson and B. Alexander Henderson, *Corning, Inc.: Initiating Coverage with a Buy* (Salomon Smith Barney report), 20 September 2000.

[4] Anderson and Henderson, *Corning, Inc.*

[5] Anderson and Henderson, *Corning, Inc.*

However, Corning's future was also fraught with risks. The most pressing concerns related to the following:[6]

Dependence on service providers: Service providers required huge investments for network expansion and capacity building. There was a risk that, as investors became more aware of the capital-intensive nature of the business, funding for service providers would dry up, in turn affecting demand for Corning's products.

Potential supply glut in the fiber market: Some industry analysts suggested that excess fiber capacity was beginning to emerge. They argued that if all the fiber in the ground were lit, it would be more than enough to support all bandwidth needs for some time. In contrast, other analysts expressed the view that there was currently not enough equipment to light and connect all the fiber in the ground. Corning did not think that an oversupply was approaching.

The end of major long-haul carriers' fiber build-outs: In the past few years, Corning had benefited as major U.S. long-haul carriers like MCI, Sprint, and AT&T deployed fiber rapidly. Now, after the ramp-ups, build-outs by major U.S. carriers were likely to slow down, just as Corning increased its fiber manufacturing capacity. This meant that Corning would have to shift its reliance to overseas and metro carrier markets. While overseas growth was expected to be strong, foreign-service providers were also smaller and seen as more risky.

Technological change: The market for Corning's products was characterized by rapidly changing technologies, evolving industry standards, and frequent new product introductions. Corning's success would depend heavily on the timely and successful introduction of new products and on its ability to address competing technologies.[7]

Analyzing the Convertible-Bond Offering

After reading the prospectus for the convertible bond offering, Coopers began her analysis by putting together a table of metrics that convertible bond traders traditionally used for evaluating converts. **Exhibit 5** shows the results of her work.

After studying **Exhibit 5**, Coopers decided to value the converts directly. She believed that doing so would be better than relying on the traditional ratios to arrive at an independent judgment. In valuing the converts directly, she relied on the idea that converts were actually hybrid securities composed of a straight bond and one or more embedded options, such as the right to convert the bond to common stock. The value, V, of a convertible bond was therefore just the sum of the straight bond's value and the values of the embedded options:

$$V_{\text{CV Bond}} = V_{\text{Straight Bond}} + V_{\text{Option 1}} + V_{\text{Option 2}} + \ldots + V_{\text{Option n}}$$

[6] Anderson and Henderson, *Corning, Inc.*
[7] Corning prospectus for zero-coupon convertible debentures due November 8, 2015.

By valuing each component directly, she could arrive at an appropriate price for the convert. She began with the straight bond portion, which was easier to value. Straight bonds were usually evaluated on the adequacy of their yield to maturity relative to the risk and maturity of the bond. If Coopers used the offering price of $741.923 and the principal repayment of $1,000, the yield to maturity would come out to 2%.[8] She knew, however, that this did not properly reflect all the elements of the convert, as the price of $741.923 should contain both the value of the bond and the embedded options. Instead, the true value of the straight bond portion could be estimated by using yields on similarly rated corporate bonds. She reviewed Corning's recent ratings (**Exhibit 6**), computed its debt and coverage ratios pro forma for the convertible bond and equity issuances, and compared her results with statistics for different bond-rating categories (**Exhibit 7**). She then put together a sample of straight debt issuances of similarly rated companies (**Exhibit 8**) and proceeded to value the bond portion of the converts.

Valuing the conversion option

Next, Coopers attempted to value the conversion option. "The right to convert is effectively an American call option that allows me to buy Corning shares at $89.062 per share anytime between now and the next 15 years. Right now, the stock is trading at $71.25 per share, so I wouldn't convert at this time. But there is a value to my owning an option to convert when conversion becomes favorable. I can use the Black-Scholes option pricing model to value that option."[9]

> The most important assumption I need to feed into the model is the volatility of Corning stock, since the value of my call option depends to a large extent on the stock price. The more volatile the stock, the more valuable my call option is because the distribution of potential stock prices is wider.

She gathered data on Corning's dividend history (**Exhibit 9**), as well as data on the historical volatilities of Corning, its peer firms, and the main stock indexes (**Exhibit 10**). She also gathered data to compute Corning's implied volatilities by using recently traded Corning options (**Exhibit 11**).

"Another important assumption is the risk-free rate. The Black-Scholes model uses this rate to obtain the present value of the expected payoff[10] from the option." Coopers checked the current yields on U.S. Treasuries (**Exhibit 12**).

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[8] $741.923 today would grow to $1,000 in 15 years, if it earned 2% compounded semiannually.

[9] Strictly speaking, the Black-Scholes model should be used to value only the European options. But because American options were usually held to maturity in order to preserve the time value of the option, they could essentially be thought of as European options. The exception was when a stock underlying an American call option paid a large enough dividend. In that case, an investor might exercise the call option well before maturity in order to obtain the dividend. In such instances, it was not appropriate to use the Black-Scholes model.

[10] The payoff was the difference between the stock price and the exercise price, if the difference was positive. If it was negative, the payoff was zero.

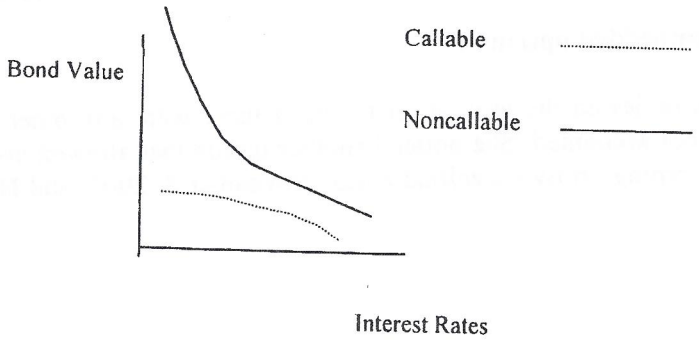
As she entered her assumptions into the model, Coopers reminded herself that after obtaining the value of the conversion option, she would need to adjust for dilution in order to account for the conversion of the bond into shares and for the issuance of new common stock in connection with the company's concurrent stock offering.

Valuing the redemption option

After valuing the conversion option, Coopers observed that the terms of the bond offering allowed Corning to call (redeem) the bond issue anytime after November 8, 2005. Thus, the redemption provision gave Corning flexibility to repay the bond early. Effectively, the company was long a call on the convert and the bondholder was short a call.

Coopers thought more carefully about the redemption option, and tried to visualize the circumstances in which Corning might redeem the convertible bond. If interest rates declined, bond prices should theoretically go up. But Corning could, by virtue of its redemption option, call in the bonds at prices well below their market value. Coopers thought out loud, "With a noncallable bond, as yields decline, the bond value rises. But with callable bonds, the increase in price tops out, because of the expectation that the issuer will exercise the option to refund the bond with cheaper debt." See **Figure 1**.

Figure 1.



Coopers noted, however, that in the case of most convertible bonds, refunding the bond with cheaper debt almost never made sense because the convertibles usually carried very low coupons. With a low coupon rate, interest rates would have to fall dramatically before it became economically attractive to refund the bond with another, even lower coupon issue or to use interest-generating cash to repay the bond. Instead, redemption provisions had a different

purpose: to permit the issuer to force conversion of the bonds into common stock.[11] Of course, this only occurred when the conversion option was in the money.

> Without being forced to convert to stock by some threat of redemption, I might continue to hold the convertible bond even if the option is in the money.[12] But with this redemption option, Corning could force me to make the conversion. From my standpoint, being forced to do anything is a negative. Therefore, this redemption provision has to reduce the value of the bond.

Valuing redemption provisions was complicated, however, because the likelihood that the firm would call the bond early depended on two key drivers: interest rates and stock prices.[13] Coopers could not simulate those variables by using her Black-Scholes model. Rather, she would have to build a spreadsheet that accurately modeled this complexity. Because Coopers was in a hurry, she asked one of her firm's derivatives experts to help her. He came back an hour later with the following values for the redemption option based on the different volatility assumptions shown in **Table 1**:

Table 1.

Volatility	0.25	0.75	1.25
Redemption-option value (per bond)[14]	$103.18	$284.98	$336.66

Other embedded options

Coopers reviewed the term sheet to see if there were any other embedded options for which she had not accounted. She noticed another option that allowed investors to sell back the debentures to Corning on two specified dates: November 8, 2005, and November 8, 2010. She thought:

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[11] Rapidly growing companies often forced conversion in order to expand their base of equity capital as a foundation for greater debt financing. Creditors usually made lending decisions on the basis of conventional definitions of debt and equity. The conventional definitions might ignore economic reality. An in-the-money convertible bond traded like, and was economically similar to, common equity. From that standpoint, forced conversion to expand the borrowing capacity of the firm was unnecessary window dressing. Nevertheless, very few issuers of convertible bonds permitted them to run their full term as debt.

[12] Investors tended to hold convertible bonds until just before maturity in order to preserve the time value of the option.

[13] It was rational for the issuer to call the bond if the redemption price of the bond was less than either its bond-equivalent value (present value of principal and interest) or its equity-equivalent value (current stock price times the conversion ratio of the bond).

[14] Estimated by using a binomial option pricing model.

> Effectively, this is a put option. In fact, these are actually two put options. But the interrelatedness of the two puts makes this option difficult to value. The existence of the 2010 option depends on whether or not I exercise the 2005 option, and that, in turn, depends on whether redemption is favorable at that point.

Given the complexity of valuing the put options, Coopers again asked the derivatives expert for help. He came back with the estimates shown in **Table 2**:

Table 2.

Volatility	0.25	0.75	1.25
Put-option value (per bond)[15]	$96.9	$166.25	$273.1

Finally, Coopers noticed the change-in-control provision that gave bondholders the right to require Corning to repurchase the converts if the company became the subject of a merger or acquisition. She noted:

> This option is favorable for me because it protects me against the possibility of someone buying the company and loading it up with debt. But Corning is a large firm with a large equity base and a good operating history; I think it is very unlikely that the company would be bought. Therefore, I will assign no value to this option.

A Further Test of Reality

Before she could make her final decision on whether to invest in the Corning bonds, Coopers needed to think carefully about several things. First was Corning's stock-price performance. Its stock currently traded at $71.25, but only a year earlier it traded at less than half that amount. Much of the run-up had to do with what investors saw as a white-hot market for optical-fiber technology. At its current price, Corning's P/E ratio was very high. But then again, Corning's stock had hit $113 earlier in the year.

> Perhaps the conversion option, which effectively allows me to buy stock at $89, is not so bad considering the high that the stock has reached. I have to consider this very carefully. If the share price falls, I will be left holding a bond that has a yield to maturity of only 2%.

She decided to analyze how valuable the firm would need to be in order to put the conversion option in the money. She reviewed the prospectus, which illustrated both the company's actual capitalization at September 30, 2000, and its capitalization as adjusted to give

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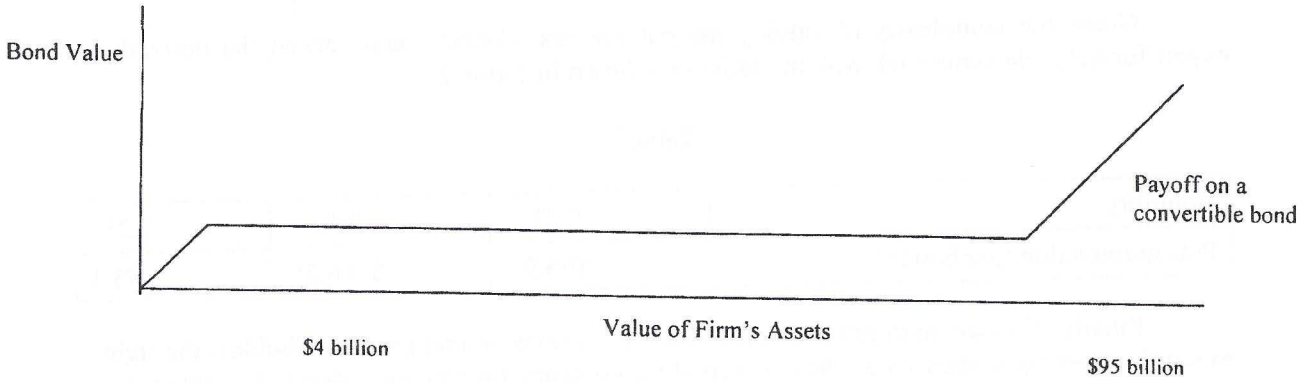
[15] Estimated by using a binomial option-pricing model.

effect to the convertible bond offering and the concurrent offering of common stock (**Exhibit 13**).

Figure 2.



Coopers thought about her analysis:

> The company's total debt is around $4 billion. As long as the total value of its assets does not fall below $4 billion, the convertible bonds are worth at least their aggregate principal amount of $2.71 billion. Now what will the value of the assets need to be in order for the bond to be worth more as equity? Well, my break-even price for equity is the exercise price of $89.0625 per share. There are going to be 988.7 million shares outstanding after the concurrent equity offering. In addition, the company has issued stock options in connection with the recent acquisitions totaling 30 million shares. If all options are exercised, including those embedded in the convertible-bond offering, there will be another 53 million shares all in all.[16] Thus, the total number of shares will be 1.0413 billion. If I multiply this by my break-even price, I get a total equity value of $92.7 billion. Adding the company's existing long-term debt of around $2 billion, my calculations tell me that the market value of Corning's assets must be around $95 billion for my bond to be worth more as equity. As it stands right now, the market value of Corning's assets stands at around $65 billion.

[16] If call options were exercised, shares from the convertible bond offering were calculated as follows: total principal amount of $2,712,546,000 divided by $1,000 principal per debenture = 2,712,546 debentures. Each debenture was convertible into 8.3304 shares, for a total of 22,596,593 shares.

Coopers wondered whether the market value of Corning's assets would reach $95 billion before 2015. She also thought about potential further dilution. Corning had been on an acquisition roll in recent months and might continue to acquire more companies given its current capacity constraints. If so, how would that affect the convertible bonds' holders?

Coopers pondered those questions as she prepared her final report to give to her fund's portfolio manager.

Exhibit 1

CORNING, INC.: ZERO COUPON CONVERTIBLE DEBENTURES DUE NOVEMBER 8, 2015 (A)

Summary of Terms of the Offering

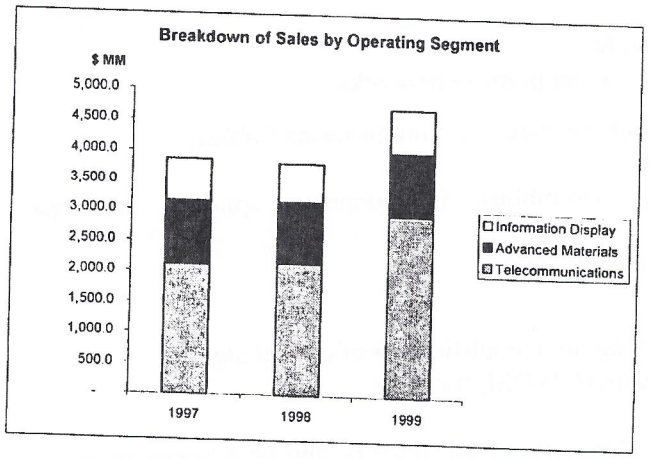
Securities offered	$2,712,546,000 aggregate principal amount at maturity of our zero-coupon convertible debentures due November 8, 2015. The debentures are senior unsecured obligations of Corning.
Offering price	$741.923 per $1,000 principal amount at maturity.
Interest	We will not pay interest on the debentures prior to maturity.
Maturity date	November 8, 2015.
Conversion right	You may convert the debentures into shares of our common stock initially at a conversion rate of 8.3304 shares for each debenture at any time before the close of business on November 8, 2015, unless we have previously redeemed or repurchased the debentures. The initial conversion rate is equivalent to an initial conversion price of approximately $89.0625 per share, which is based on the IPO price of the debentures. The conversion rate may be adjusted in certain circumstances.
Original issue discount	For U.S. federal income tax purposes, we are offering each debenture at an original issue discount equal to the principal amount at maturity of each debenture less the IPO price. You should be aware that, although we will not pay interest on the debentures until maturity, U.S. investors must include original issue discount as the discount accrues in their gross income for U.S. federal income tax purposes prior to the conversion, redemption, sale, or maturity of the debentures (even if such debentures are ultimately not converted, redeemed, sold, or paid at maturity).
Use of proceeds	We plan to use a portion of the net proceeds from this offering and our concurrent common stock offering to fund the Pirelli acquisition. If the Pirelli acquisition is not completed, or if we receive proceeds from those offerings in excess of what we require to fund the Pirelli acquisition, we will use those proceeds for general corporate purposes.
Optional redemption by Corning	We may redeem some or all the debentures at our option at any time on or after November 8, 2005, at a redemption price equal to the IPO price plus the accrued original issue discount through the redemption date.
Repurchase at option of holders	You may require us to repurchase some or all of your debentures on November 8, 2005, and November 8, 2010, at repurchase prices specified in this prospectus supplement.
Repurchase at option of holders upon a change in control	If we are the subject of a change in control, you may require us to repurchase some or all of your debentures at a price equal to the IPO price plus accrued original issue discount through the repurchase date.

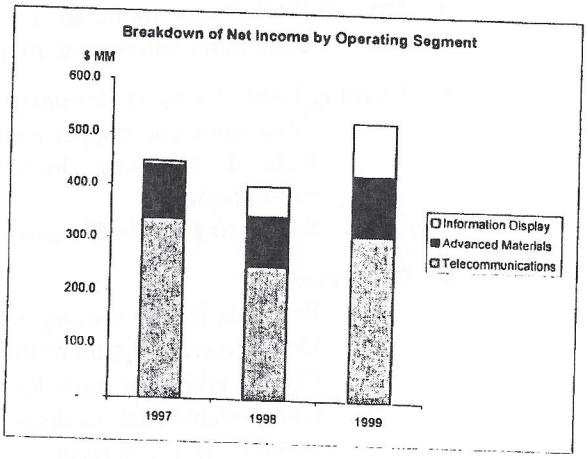
Source: Corning prospectus.
Note: This exhibit has been modified from its original form for instructional purposes.

Exhibit 2

CORNING, INC.: ZERO COUPON CONVERTIBLE DEBENTURES DUE NOVEMBER 8, 2015 (A)

Sales and Net Income Breakdown by Operating Segment





Source Company offering memorandum

Exhibit 3

CORNING, INC.: ZERO COUPON CONVERTIBLE DEBENTURES DUE NOVEMBER 8, 2015 (A)

Products within the Three Major Business Segments

Telecommunications

- Optical fiber (single mode and multimode)
  Long haul, submarine, metro area and premise networks
- Corning Cable Systems (formerly Siecor, Siemens Communications Cables)
  Fiber optic and copper cabling
  Related hardware including: assemblies, interconnects, splicers, and test Equipment
  Submarine, cable TV and private networks
- Photonics
  Products for the routing, switching, and amplification of optical signals
  Dense wave division multiplexing (DWDM) modules
  Optical amplifier modules
  Components such as thin-film filters, multiclad couplers, and fiber bragg gratings
  Optical cross connects
  Pump and transmission lasers

Information Display

- Glass for flat-panel and active matrix liquid crystal displays (AMLCD)
  Flat-panel glass for notebook computer screens, desktop monitors, digital Cameras, PDAs, and automotive navigational displays
- Glass panels and funnels for televisions and CRTs (conventional video components) and
  Projection video lens assemblies

Advanced Materials

- Environmental products
  Component parts for catalytic converters
- Semiconductor materials
  Fused silica lens assemblies used by semiconductor manufacturers in Microlithography techniques for etching transistor lines onto silicon wafers
- Science products
  Various materials used to enhance drug discovery process by enabling high-speed drug testing

Source: Gavin Duffy and T. Peter Andrew, *Corning: Charging Ahead at the Speed of Light* (A.G. Edwards report), 6 November 2000.

Exhibit 4

CORNING, INC.: ZERO COUPON CONVERTIBLE DEBENTURES DUE NOVEMBER 8, 2015 (A)

Historical Stock Price Information

	1995	1996	1997	1998	1999	2000*
Stock Price						
High	10.4	13.0	21.7	15.0	43.0	113.3
Low	7.1	8.1	11.3	7.8	15.2	74.0
Average	8.8	10.3	15.6	12.1	22.6	34.6
Beta (average)	0.87	0.81	0.95	0.83	1.06	1.53
Corning P/E**						
High	27.69	30.83	31.97	31.69	64.47	169.92
Low	23.67	25.61	20.74	17.84	34.33	77.13
Average	25.22	27.55	27.68	24.09	41.21	114.17
S&P 500 P/E						
High	17.60	21.15	24.82	32.27	35.82	32.37
Low	15.96	16.89	19.32	22.77	28.91	26.20
Average	16.61	19.21	22.34	26.75	32.46	29.52
P/E Premium/(Discount)						
High	57.3%	45.8%	28.8%	-1.8%	80.0%	424.9%
Low	48.3%	51.6%	7.3%	-21.6%	18.8%	194.4%
Average	51.9%	43.4%	23.9%	-9.9%	27.0%	286.8%

52-week hi-lo from November 8, 2000	
High	113.33
Low	27.35
Average	68.16

*Through November 8, 2000
**Based on monthly data

Source of data: Bloomberg Financial Services, S&P's Research Insight Database

Exhibit 5

CORNING, INC.: ZERO COUPON CONVERTIBLE DEBENTURES DUE NOVEMBER 8, 2015 (A)

Convertible Debt Comparables

	Bond Rating	(a) Yield to Maturity	(b) Bond Price (for $1,000 par value)	(c) Conversion Ratio	(d) Conversion Price per Share	Current Stock Price	(e) Conversion Premium per Share	(f) Interest Income per Bond	(g) Dividend Income per Bond	(h) Income Spread per Bond	(i) Premium Payback Period
Corning 2015	A2	2.00%	741.9	8.33	89.06	71.25	25.0%	-	2.00	(2.00)	(74.2)
Baker Hughes (Sr.) (Zero) 2008	A2	Flat	792.5	18.60	42.61	34.38	23.9%	-	8.56	(8 56)	(17.9)
Deere & Co. 5 1/2s 2001	A		3,372.5	91.58	36.83	36.81	0.0%	55.0	80.59	(25.59)	(0.1)
E'town Corp 6 3/4s 2012	A-	0.49%	1,685.0	25.00	67.40	67.38	0.0%	63.4	51.00	12.40	0.0
Hewlett Packard (Zero) 2017	A+	Flat	693.7	15.09	45.97	46.50	-1.1%	-	4.83	(4.83)	1.7
Loews Corp. 3 1/2s 2010	A+	6.35%	822.5	15.38	53.48	34.56	54.7%	35.0	7.69	27.31	10.7
Magna Int'l 5s 2002	A-	6.66%	970.0	13.38	72.49	44.88	61.5%	50.0	15.39	34.61	10.7
Motorola Inc (Zero) 2013	A	Flat	800.0	21.36	37.45	24.94	50.2%	-	3.42	(3.42)	(78.2)
Oak Industries 4 7/8s 2008	A-		4,930.0	64.43	76.52	76.50	0.0%	47.8	15.46	32.34	0.0
Omnicom Group 2 1/4s 2013	A		1,852.5	20.07	92.30	92.25	0.1%	22.5	14.05	8.45	0.1
Potomac Elec Pwr (Sr) 5s 2002	A-		960.0	29.50	32.54	22.88	42.2%	50.0	48.97	1.03	276.7
Times Mirror (Zero) 2017	A-		587.5	14.57	40.32	37.06	8.8%	-	5.83	(5.83)	(8.2)
USF&G Corp (Zero) 2009	A	Flat	865.0	16.64	51.98	51.25	1.4%	-	17.97	(17.97)	(0.7)
Young & Rubicam 3s 2005	A-	2.94%	1,000.3	11.38	87.90	66.88	31.4%	30.0	2.73	27.27	8.8

Definitions of terms:

[a] Return from principal and interest only.

[b] Current quote

[c] Number of shares to be received in exchange for $1,000 par value of bond.

[d] Obtained by dividing the *bond price* by the *conversion ratio*. This is effectively the price that an investor pays for the common stock and is also known as the exercise price.

[e] The premium of the exercise price over the current stock price.

[f] Annual interest income per $1,000 bond.

[g] The annual dividend income that would be received by converting into the underlying common stock. Calculated by multiplying the annual dividend per common share by the conversion ratio.

[h] The difference between interest income and dividend income per bond. In effect this represents the income differential between converting and not converting

[i] Obtained by dividing the dollar conversion premium per share by the income spread per share. The higher the ratio, the less favorable it is to convert.

Source of data: *Standard and Poor's Bond Guide*, November 2000
All issues cited are convertible bond debentures outstanding in November 2000

Exhibit 6

CORNING, INC.: ZERO COUPON CONVERTIBLE DEBENTURES DUE NOVEMBER 8, 2015 (A)

Credit-Rating History for Selected Corning Offerings

Rating History for Senior Unsecured Debt - Moody's

Rating	Effective
A2	2/2/2000
A3	12/24/1996
A2	1/21/1992
A1	11/29/1982
Aa3	4/26/1982

Rating History for LT Local Issuer Credit - S&P

Rating	Effective
A *-	9/27/2000
A	5/14/1996
A+	3/21/1991
AA-	3/10/1982
AA-	11/9/1973

*- denotes a negative outlook.

Rating Scale Comparison

Moody's	S&P
Aaa	AAA
Aa1	AA+
Aa2	AA
Aa3	AA-
A1	A+
A2	A
A3	A-
Baa1	BBB+
Baa2	BBB
Baa3	BBB-
Ba1	BB+
Ba2	BB
Ba3	BB-
B1	B+
B2	B
B3	B-
Caa1	CCC+
Caa2	CCC+
Caa3	CCC-

Ratings Definitions:

Moody's Investors Service: Long-Term Debt Ratings

A Bonds which are rated A possess many favorable investment attributes and are to be considered as upper medium-grade obligations. Factors giving security to principal and interest are considered adequate, but elements may be present which suggest a susceptibility to impairment sometime in the future.

Standard & Poor's Long-Term Issuer Credit Ratings

A An obligor rated 'A' has STRONG capacity to meet its financial commitments but is somewhat more susceptible to the adverse effects of changes in circumstances and economic conditions than obligors in higher-rated categories.

Source: Bloomberg Financial Services

Exhibit 7

CORNING, INC.: ZERO COUPON CONVERTIBLE DEBENTURES DUE NOVEMBER 8, 2015 (A)

Key Industrial Financial Ratios by Rating Category: Median Three-Year Ratios for 1996–1998

Industrial long-term debt	AAA	AA	A	BBB	BB	B	CCC	Corning Pro-Forma for Convertible Bond and Equity Offerings
Pretax interest coverage (x)	12.9	9.2	7.2	4.1	2.5	1.2	-0.9	5.02
EBITDA interest coverage (x)	18.7	14	10	6.3	3.9	2.3	0.2	8.05
Funds from operations/total debt (%)	89.7	67	49.5	32.2	20.1	10.5	7.4	20.9
Free operating cash flow/total debt (%)	40.5	21.6	17.4	6.3	1	-4	-25.4	-2.1
Return on capital (%)	30.6	25.1	19.6	15.4	12.6	9.2	-8.8	3.67
Operating income/sales (%)	30.9	25.2	17.9	15.8	14.4	11.2	5	14
Long-term debt/capital (%)	21.4	29.3	33.3	40.8	55.3	68.8	71.5	28.2
Total debt/capital (incl. STD) (%)	31.8	37	39.2	46.4	58.5	71.4	79.4	29

Sources: Chinn, Wesley E., *Standard & Poor's Research*, "Adjusted Key U.S. Financial Ratios", July 7, 1999; Casewriter estimates

Exhibit 8

CORNING, INC.: ZERO COUPON CONVERTIBLE DEBENTURES DUE NOVEMBER 8, 2015 (A)

Sample of Comparable Straight Current Coupon Bonds

Issuer	S&P Rating	Maturity	Yield to Maturity
AirTouch Communications	A	2008	7.56%
American Stores	A-	2017	7.99%
Bell Atlantic	A+	2012	7.73%
Coca-Cola Enterprises	A	2017	7.81%
Corning Inc	A	2013	7.50%
Walt Disney Co.	A	2015	7.90%
Enron Oil and Gas	A-	2008	7.70%
IBM	A+	2019	7.65%
Lucent Technologies	A	2028	7.87%
New York Tel. Co.	A+	2013	7.47%
Nordstrom, Inc.	A	2009	8.11%
Southwest Airlines	A-	2027	7.95%
WorldCom Inc.	A-	2010	7.45%
	Mean		7.75%
	Median		7.73%
	Standard Deviation		0.21%

Source: *Standard and Poor's Bond Guide*, October 2000

Exhibit 9

CORNING, INC.: ZERO COUPON CONVERTIBLE DEBENTURES DUE NOVEMBER 8, 2015 (A)

Corning's Dividend History

Payment dates	31-Mar	30-Jun	30-Sep	31-Dec	Full Year
1997	0.06	0.06	0.06	0.06	0.24
1998	0.06	0.06	0.06	0.06	0.24
1999	0.06	0.06	0.06	0.06	0.24
2000	0.06	0.06	0.06		

Source: Bloomberg; *Value Line Investment Survey*

Exhibit 10

CORNING, INC.: ZERO COUPON CONVERTIBLE DEBENTURES DUE NOVEMBER 8, 2015 (A)

Estimates of Historical Volatilities as of November 8, 2000

	1 mo.	3 mos.	6 mos.	1 yr.
Corning	123.56	85.74	77.63	79.67
JDS Uniphase	140.07	90.14	91.56	95.42
Lucent	159.76	100.95	83.01	77.88
Ciena	144.15	102.11	98.64	110.26
Average	**141.89**	**94.74**	**87.71**	**90.81**
Dow Jones Industrial Average	22.36	16.24	16.57	19.93
S&P 500 Index	25.81	17.98	18.63	20.92
Nasdaq 100 Index	66.45	47.72	51.31	51.51

Source: Bloomberg Financial Services

Exhibit 11

CORNING, INC.: ZERO COUPON CONVERTIBLE DEBENTURES DUE NOVEMBER 8, 2015 (A)

Premiums for Corning Options on the Chicago Board Options Exchange:
Closing Prices as of November 7, 2000

Option & NY Close	Strike Price	Calls: Last Nov	Calls: Last May	Puts: Last Nov	Puts: Last May
$ 68.50	$ 70.00	$ 3.25	no option	4.75	no option
68.50	70.00	no option	15.50	no option	14.50
68.50	80.00	0.75	no option	12.63	no option
68.50	83.38	0.44	no option	16.13	no option
Days to maturity		17	193	17	193

Source: *The Wall Street Journal*, November 8, 2000

Exhibit 12

CORNING, INC.: ZERO COUPON CONVERTIBLE DEBENTURES DUE NOVEMBER 8, 2015 (A)

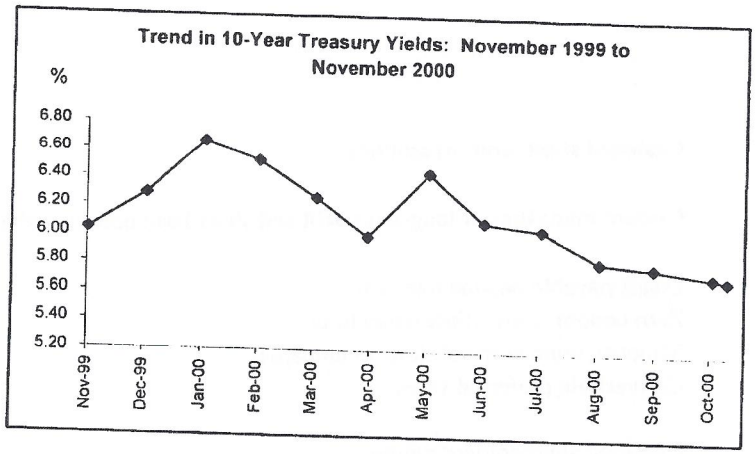
Capital Market Conditions around November 8, 2000

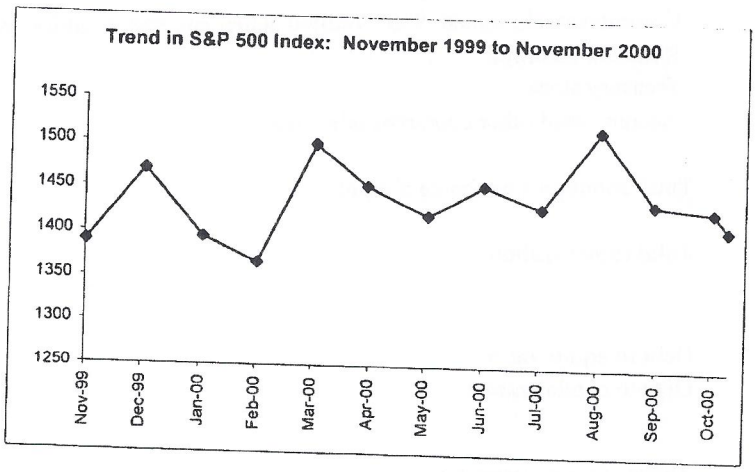
Yields on U.S. Treasuries

3-month	6.34%
1-year	6.14%
3-year	5.79%
5-year	5.68%
7-year	5.78%
10-year	5.70%
30-year	5.76%

Yields on Corporates, by Rating

Aaa	7.53%
Baa	8.35%





Source: Bloomberg Financial Services; Federal Reserve Board Releases

Exhibit 13

CORNING, INC.: ZERO COUPON CONVERTIBLE DEBENTURES DUE NOVEMBER 8, 2015 (A)

Actual and Pro Forma Balance Sheet

	September 30, 2000	
	Actual	As Adjusted
	(In millions)	
Cash and short term investments	1,237.5	5,286.9
Current maturities of long-term debt and short-term notes payable	111.4	111.4
Loans payable beyond one year	1,946.3	1,946.3
Zero coupon convertible debentures	-	2,012.5
Minority interest in subsidiary companies	138.7	138.7
Convertible preferred stock	8.9	8.9
Common shareholders' equity		
Common stock, issued: 958.7 million actual and 988.7 million as a	6,600.0	8,678.0
Retained earnings	2,113.7	2,113.7
Treasury stock	(746.9)	(746.9)
Accumulated other comprehensive loss	(114.6)	(114.6)
Total common shareholders' equity	7,852.2	9,930.2
Total capitalization	9,946.1	14,036.6
Debt to equity ratio	26.2%	41.0%
Debt to capitalization	20.8%	29.1%

Source: Corning prospectus