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Nasdaq Blues and Clues—Part II

Expectations Analysis for the Nasdaq 100

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- **Since the end of November, earnings estimates (based on our internal estimates) for the Nasdaq 100 in 2001 have been trimmed an additional 6%, following a substantial 8% decline from March 2000 and November 2000.**
- **Expectations for future earnings growth rates have dropped to 16.1% currently, well below the 18.5% rate implied by the November composite and the over-21% rate in March 2000. This is by far the most important driver of value. We estimate that over 50% of the Nasdaq's three- and 12-month decline stems from this moderation.**
- **We figure that the discount rate has increased about 25 basis points, to roughly 14.5%, since the end of November. Given the general concerns about the sector, it is no surprise that investors require a higher return to participate in it.**

Executive Summary

The Nasdaq's 20%-plus tumble since the end of November and near 60% plunge over the past 12 months has left many investors wondering what happened and, more importantly, has sparked animated debates about the future. We believe our proprietary valuation work offers unique insight into current market expectations and the revisions in those expectations over the past three and 12 months. Further, our tools provide investors with the necessary calibration and sensitivity analysis to make forward-looking investment decisions.

- Value is driven by the future cash flows discounted to a present value at an appropriate discount rate. We can segregate cash flow forecasts into three pieces: a base level of earnings, future growth in earnings, and reinvestment needs. Given that the Nasdaq 100 is largely comprised of capital efficient, knowledge-based companies, capital efficiency plays a very limited role in the sharp revisions in expectations. However, base earnings, as well as anticipated earnings growth and discount rates, are all worthy of discussion.

Figure 1
Nasdaq 100 Nosebleed: Lower Estimates, Lower Growth Expectations, Higher Required Rate of Return

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	March 31, 2000	November 30, 2000	March 2, 2001
Income Statement Data:			
Fiscal Year (Income statement date):	2001	2001	2001
EBITA - NASDAQ Proxy	137,764.3	114,743.1	108,079.2
Business Model Value Creation:			
EBITA growth rate:	**21.1**	**18.5**	**16.1**
Pretax ROIIC	**150.0**	**150.0**	**150.0**
Note: Aftertax ROIIC	97.5	97.5	97.5
Discounting Mechanism (Investment Neighborhood):			
Required Rate of Return (cost of capital):	*12.66*	*14.25*	*14.50*
Value horizon years (from balance sheet date to CAP):	19.0	20.0	20.0
C.A.P. (Duration of value creation):	*Dec-2019*	*Dec-2020*	*Dec-2020*
Valuation:			
CSFB Value-Equation Share Price Estimate:	4395	2518	1873
Price Date:	31-Mar-00	30-Nov-00	2-Mar-01
NASDAQ 100 Price	4398	2507	1881
Diff (%)	0%	0%	0%
	Decline	*-43%*	*-25%*
NASDAQ Composite	4573	2598	2118
	Decline	*-43%*	*-18%*

Source: CSFB analysis.

Our analysis shows the following (see Figure 1):

- Since the end of November, analysts have cut 2001 earnings estimates (based on our internal estimates) about 6%. Earnings reductions account for less than 25% of the Nasdaq's fall, by our calculation, over the past three and 12 months.
- Expectations for future earnings growth rates have dropped fairly precipitously. In March 2000, the expected growth rate stood at just over 21%, by November 2000, that number was about 18.5%. Over the past three months, the earnings growth rate has come down further, and is now about 16.1%. For the Nasdaq, earnings growth is, by far, the most important driver of value. We estimate that over 50% of the Nasdaq's decline is the result of this reduction. Since most companies in the index are so-called New Economy companies, and hence capital efficient, they are extremely sensitive to growth.
- We figure that the discount rate is now roughly 14.5%, up from 14.25% in November and about 12.7% in March 2000. The higher rate of return reflects continued investor concern about the sector. This increase is the final 25% of the index's drop.

Bulls and Bears

Investors continue to passionately debate over whether or not the market's correction is overdone. We believe that the expectations approach frames the discussion in a very useful way.

The bull case is that better economic growth and/or firmer IT spending fuels an increase in long-term earnings growth rate assumptions. Relatively modest increases in the expected growth for the Nasdaq 100 would lead to sharp appreciation.

The bear case notes that earnings estimates and growth rates remain too high, and may be subject to further, substantial, downward revision.

Sensitivity Analysis

In order to quantify the impact of these varying views, we provide some sensitivity analysis:

- A future 10% change in aggregate composite earnings equals a change in the index of about 9%.
- A one percentage point (100 basis point) change in the expected growth rate equates to a delta in the index of about 10%.
- A 50 basis point change in the discount rate represents a shift in the index value of about 7%.

Figure 2
Sensitivity Analysis

CREDIT SUISSE FIRST BOSTON	Estimated Market Fit	Sensitivity to Growth Rate			
	March 2, 2001	March 2, 2001	March 2, 2001	March 2, 2001	March 2, 2001
Income Statement Data:					
Fiscal Year (Income statement date):	2001	2001	2001	2001	2001
EBITA - NASDAQ Proxy	108,079.2	108,079.2	108,079.2	108,079.2	108,079.2
Business Model Value Creation:					
EBITA growth rate:	16.1	12.0	14.0	18.0	20.0
Pretax ROIIC	150.0	150.0	150.0	150.0	150.0
Note: Aftertax ROIIC	97.5	97.5	97.5	97.5	97.5
Discounting Mechanism (Investment Neighborhood):					
Required Rate of Return (cost of capital):	*14.50*	*14.50*	*14.50*	*14.50*	*14.50*
Value horizon years (from balance sheet date to CAP):	20.0	20.0	20.0	20.0	20.0
C.A.P. (Duration of value creation):	*Dec-2020*	*Dec-2020*	*Dec-2020*	*Dec-2020*	*Dec-2020*
Valuation:					
CSFB Value-Equation Share Price Estimate:	1873	1301	1544	2254	2765
Price Date:	2-Mar-01	2-Mar-01	2-Mar-01	2-Mar-01	2-Mar-01
NASDAQ 100 Price	1881	1881	1881	1881	1881
Diff (%)	0%	-31%	-18%	20%	47%

Source: CSFB analysis.

Some additional sensitivity analysis is shown in Figure 2. In times of turmoil, it is important to go back to basics. Our analysis provides a clear look at the market's current expectations for the Nasdaq, and shows where the points of sensitivity lie. While this is an aggregate view, it provides an important context for understanding past performance and anticipating the impact of future revisions in expectations.

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AUCKLAND	64 9 302 5500	MEXICO	52 5 283 89 00	SINGAPORE	65 212 2000
BALTIMORE	1 410 223 3000	MILAN	39 02 7702 1	SYDNEY	61 2 8205 4400
BEIJING	86 10 6410 6611	MOSCOW	7 501 967 8200	TAIPEI	886 2 2715 6388
BOSTON	1 617 556 5500	MUMBAI	91 22 230 6333	TOKYO	81 3 5404 9000
BUDAPEST	36 1 202 2188	NEW YORK	1 212 325 2000	TORONTO	1 416 352 4500
BUENOS AIRES	54 11 4394 3100	PALO ALTO	1 650 614 5000	VIENNA	43 1 512 3023
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