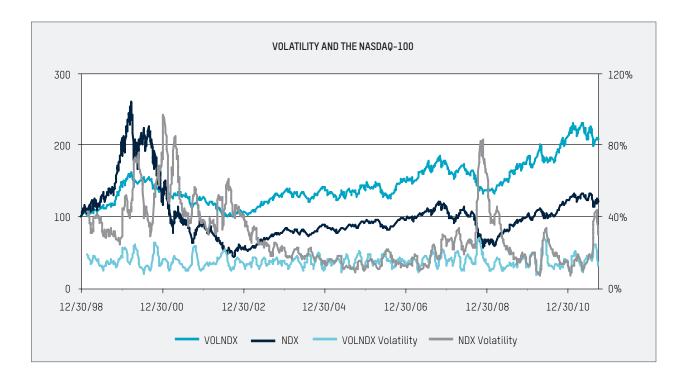
# NASDAQ OMX INDEX RESEARCH

DWS NASDAQ-100 Volatility Target Index (VOLNDX)



Where are your investments?



Volatility has become synonymous with fear and stock market swings. During the first three weeks of August 2011, trailing one month volatility more than doubled in the NASDAQ-100° (NDX°) and the index lost about 15% of its value. Investors have been scrambling to perceived safe havens such as gold, the price of which has increased more than \$340, and treasury yields have been driven to all-time lows. For some, August 2011 has become eerily similar to September 2008 when the Financial Crisis wreaked havoc in the markets.

Of course volatility is not concerned with the direction of the markets, only the magnitude in which they move. But of seven out of the past thirteen years with an average realized volatility greater than 20%, only two calendar years had positive returns. Between 1999 and 2003, a period of extreme volatility, NDX shed 18.8% of its value while volatility averaged around 42% despite a 103% return in 1999 and a 48.5% return in 2003. While volatility can indicate severe upward moves, historically speaking, volatility has indicated market downturns.

NASDAQ  $OMX^{\otimes}$  jointly developed the **DWS NASDAQ-100** Volatility Target Index (VOLNDX) to help reduce volatility's impact on the markets. The methodology was designed to smooth out volatility's impact on the underlying asset and does so by keeping volatility within the index in line with the stated target of 15%. The methodology works by tracking a target allocation of the underlying index versus a risk-free asset (a cash rate) based on trailing 30-day realized volatility. When the actual allocation drifts more than 10%

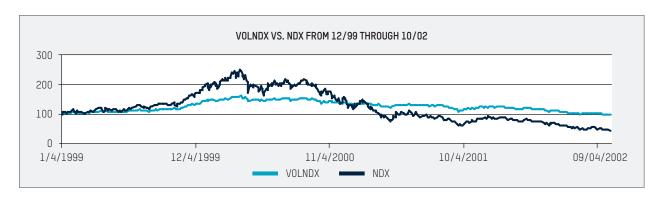
away from the target allocation, the index adjusts itself to match the new target allocation. In periods of high volatility, the index will adjust from holding NDX to holding a cash asset monetized via the three month LIBOR rate. Conversely, in periods of low volatility when the target allocation is below 15%, the Index will begin to leverage up its exposure to the underlying asset.

In practice, VOLNDX and future Volatility Target indexes from NASDAQ OMX will reduce exposure to the underlying asset during periods of high volatility, resulting in a more balanced volatility level for the controlled index and, as a result, significantly improved returns during the high volatility periods.

Between December 30, 1998 and August 18, 2011, VOLNDX's peak volatility was only 28.68% which it hit during the worst of the financial crisis in October 2008. At the same time, NDX had a 30-day realized volatility of 82.21%. A month later, the realized volatility of VOLNDX was down to 15.90% versus 69.42% for NDX. VOLNDX had returns of -2.12% versus -8.62% for NDX during that monthly period.

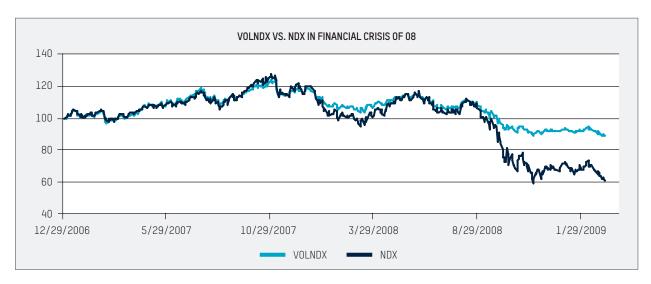
Controlling volatility through a mechanism within an index allows for more stable returns during the most volatile times. The DWS NASDAQ-100 Volatility Target Index adjusts itself through its methodology to avoid the huge spikes in volatility as shown below. The VOLNDX volatility line is relatively smooth versus the choppy line of peaks and values following NDX's volatility.

#### **VOLNDX VS. NDX WITHIN TECH BUBBLE**



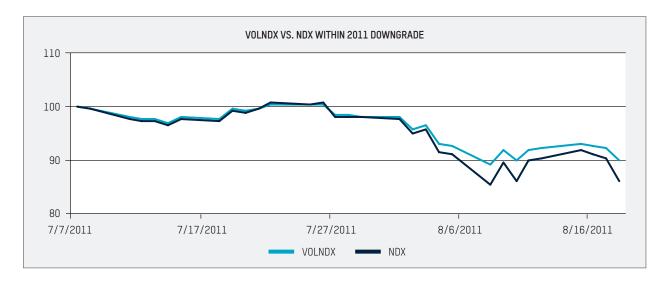
VOLNDX did not participate in the large returns of NDX during 1999. Despite the gains, volatility remained high at an average of 33% of the rolling 30 day average. But when the market turned on March 20, 2000, VOLNDX was well positioned with only a 35% allocation to NDX. When the ensuing downturn struck, VOLNDX held on and remained nearly positive all the way through the market bottom on October 10, 2002.

### **VOLNDX VS. NDX WITHIN 2008 FINANCIAL CRISIS**



December 31, 2007 marked a high point for the NASDAQ-100 Index. VOLNDX and NDX performed similarly as VOLNDX was over 60% invested in the NDX for much of 2008. On September 15, 2008 when the markets opened to find a bankrupt Lehman, VOLNDX was at a 63% equity allocation. In the following weeks as the market lost significant value, VOLNDX shifted down to an allocation in the 20% range. As a result, between December 29, 2006 and March 9, 2009, VOLNDX only lost 11% of its value versus 40% for NDX.

#### **VOLNDX VS. NDX WITHIN 2011 DOWNGRADE**



VOLNDX had been tracking along with NDX leading up to the downgrade event due to relatively low volatility in the market place. When volatility spiked beginning August 1, VOLNDX had been transitioning from equity to cash and its realized volatility has been relatively muted compared to NDX. The performance between VOLNDX and NDX has been similar during this debt-crisis as NDX due to the persistent volatility despite an increase in NDX's value of 10.5% from the recent bottom of 2038.22 on 8/19/2011. Volatility from 8/19/2011 averaged out at near 40% despite the 10% gain in the index. VOLNDX has not participated in those returns as it has been more allocated to cash.

## ANNUALIZED RETURNS AND VOLATILITY FROM 1999 TO 2011

	ANNUALIZED RETURNS			AVERAGE VOLATILITY	
YEAR	VOLNDX	NDX	DIFFERENCE	VOLNDX	NDX
1999	50.32%	103.41%	53.09%	15.95%	35.25%
2000	-10.24%	-36.43%	-26.19%	16.22%	57.50%
2001	-8.03%	-30.77%	-22.74%	14.44%	49.84%
2002	-14.92%	-38.94%	-24.02%	15.28%	43.20%
2003	27.24%	48.50%	21.27%	14.88%	24.59%
2004	7.12%	10.46%	3.34%	15.44%	18.30%
2005	-3.65%	1.32%	4.97%	15.42%	13.78%
2006	7.71%	6.79%	-0.92%	15.56%	15.18%
2007	17.31%	19.93%	2.62%	16.45%	19.17%
2008	-21.36%	-42.98%	-21.62%	16.80%	39.24%
2009	31.79%	54.85%	23.06%	14.35%	23.70%
2010	16.15%	19.22%	3.07%	15.06%	17.91%
2011	-0.44%	1.61%	2.05%	17.09%	19.28%

<sup>\*</sup>Average volatility calculated as average of rolling 30 day volatility

NDX has outperformed VOLNDX in seven of the past 13 years, but the bear market years (2000 to 2002 and 2008) have impacted NDX's returns so greatly that VOLNDX over the entire period of 12.4 years has an average annual return of 5.79% versus 1.09% for NDX. In times of high returns and high volatility such as 1999, VOLNDX is likely to underperform; in times of low returns and high volatility such as 2000 through 2002 and 2008, VOLNDX is likely to significantly outperform; and in times of relative stability such as 2004 through 2007, the indexes are likely to perform similarly.

NOTE: All data as of 9/27/2011.

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#### More Information

Learn more about the VOLNDX methodology and other NASDAQ OMX Indexes at www.nasdaqomx.com/indexes. We welcome any questions or feedback at globalindexes@nasdagomx.com.