

The Importance of Relationships

**Sheldon Natenberg
Chicago Trading Co.
440 S. LaSalle St.
Chicago, IL 60605
(312) 863-8004**

All option trading decisions depend on relationships.

How do we define or model the relationship?

How reliable is the relationship?

How great is the mispricing in the marketplace?

Arbitrage Relationships

Put / Call / Parity

$$C - P = (F - X) / (1+r*t)$$

$$C - P = S - [X / (1+r*t)] - D$$

Well defined

Very reliable

Done in big size

Logical Relationships

SPX = 800.00

June 800 straddle = 90

June 850 straddle = 85

**Based on assumptions about
market dynamics**

Not always reliable

Done in limited size

Relationships Based On

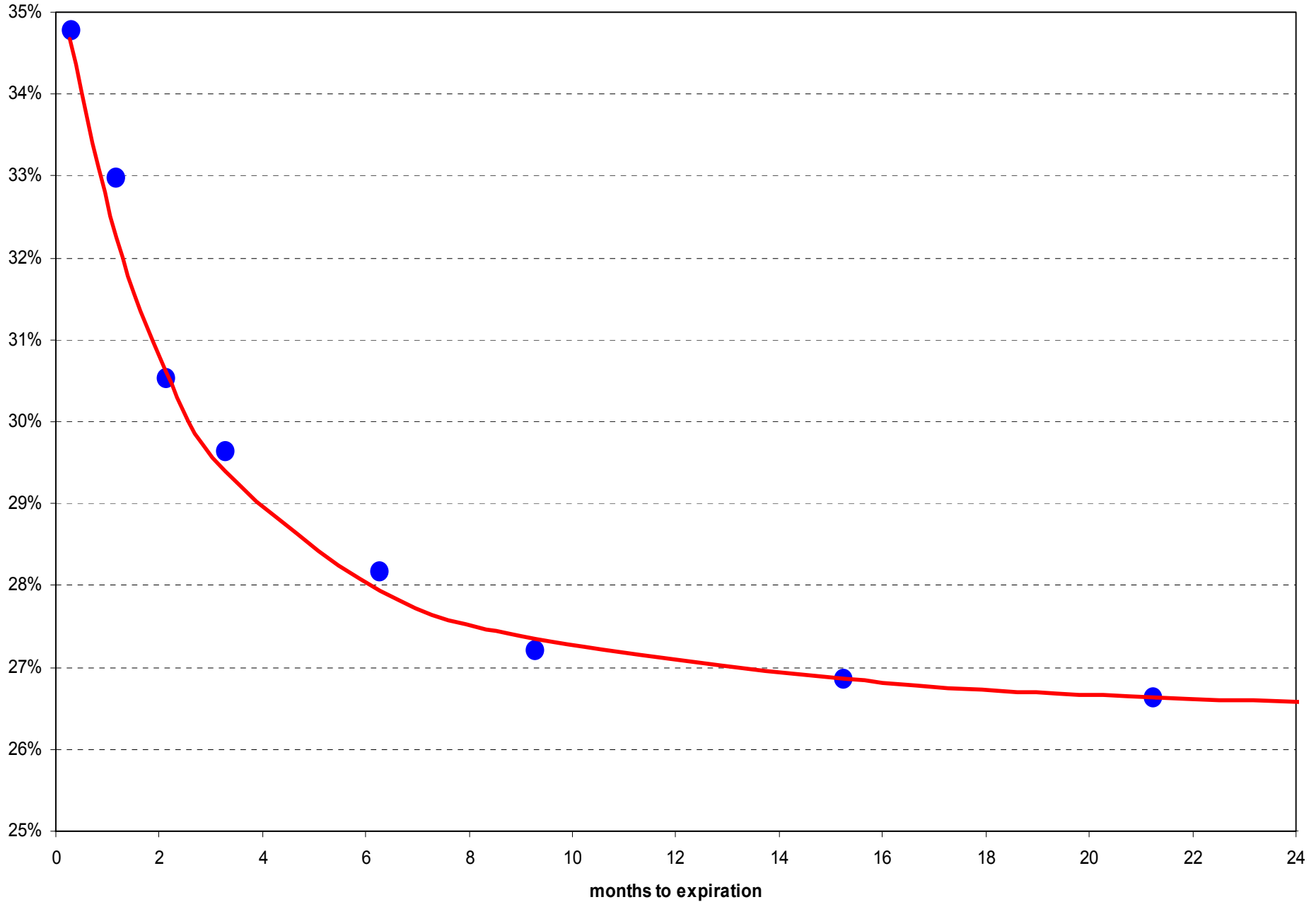
Volatility Term Structure

Skew and Kurtosis

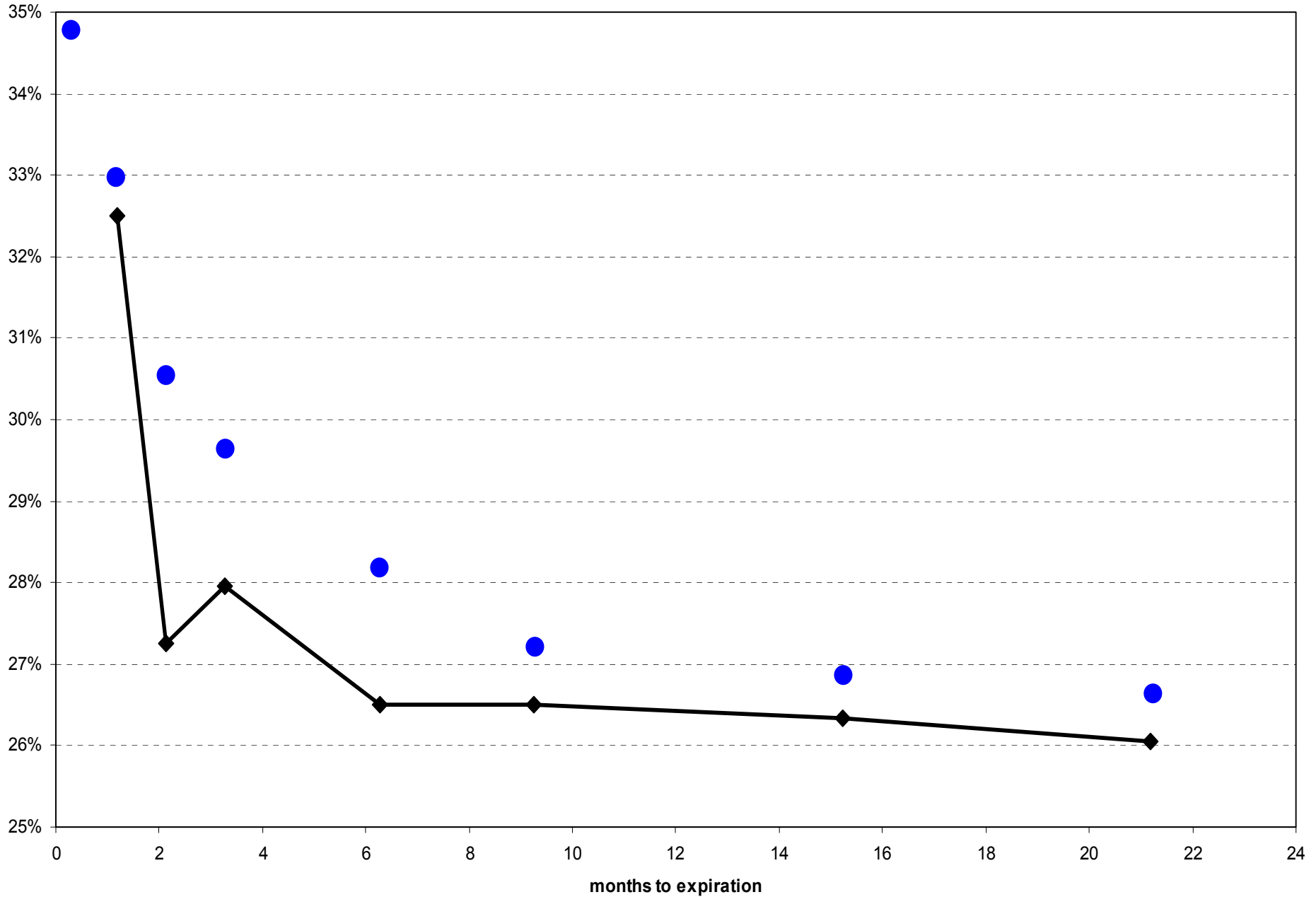
Inter-Market Correlations

A Combination of the Above

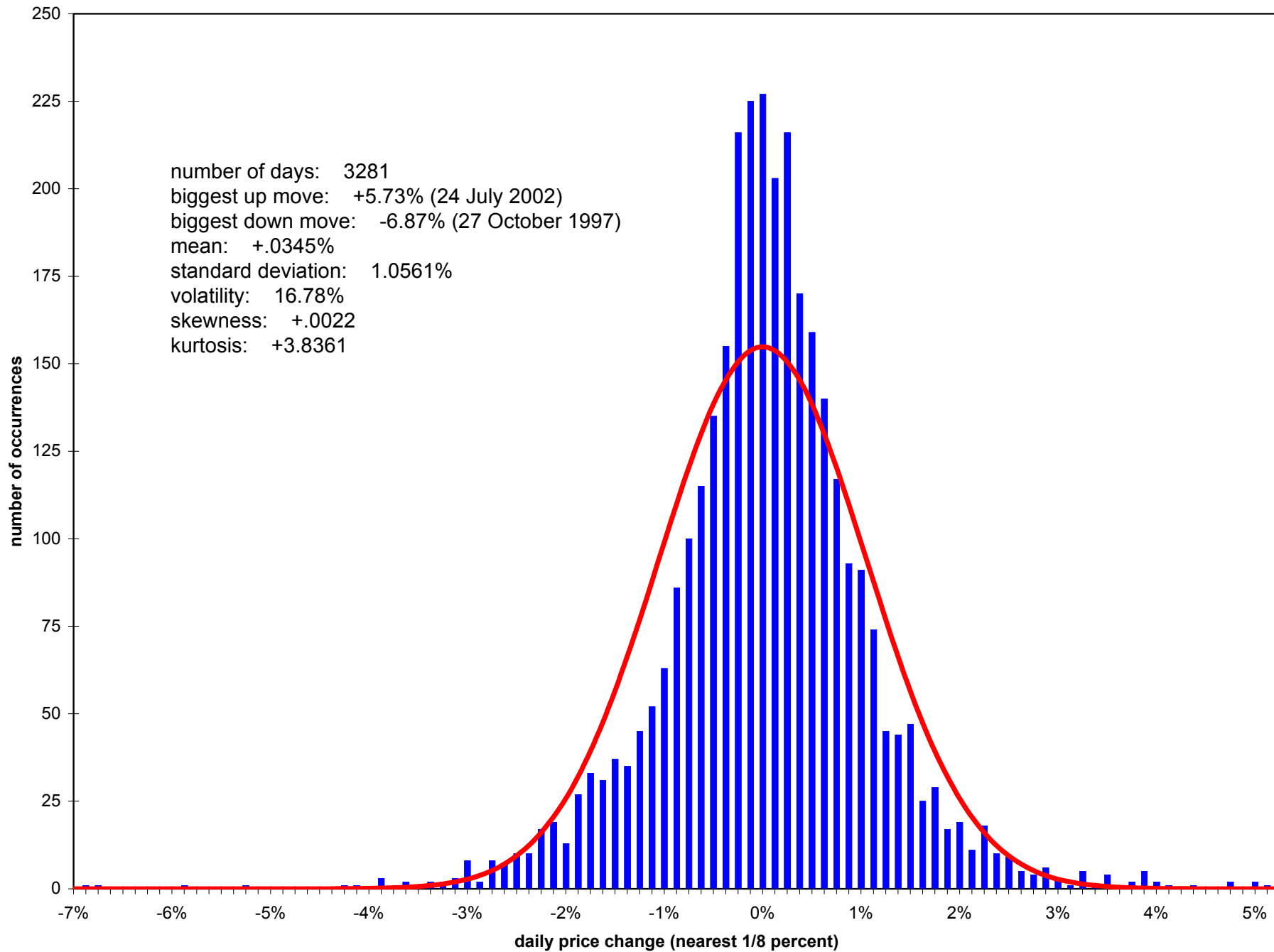
DJX Implied Volatilities vs. Time to Expiration - 12 March 2003



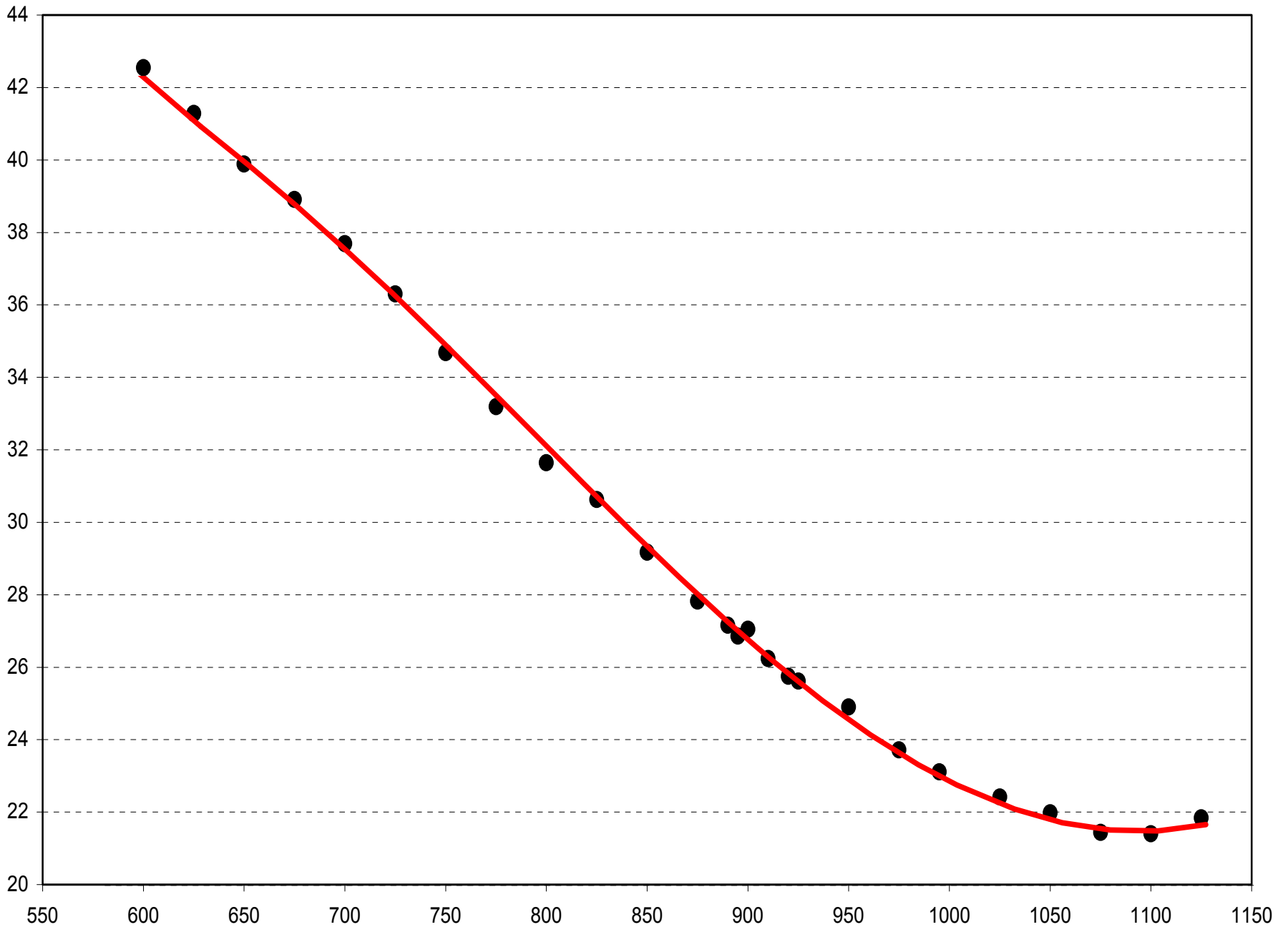
DJX Implied and Forward Volatilities - 12 March 2003



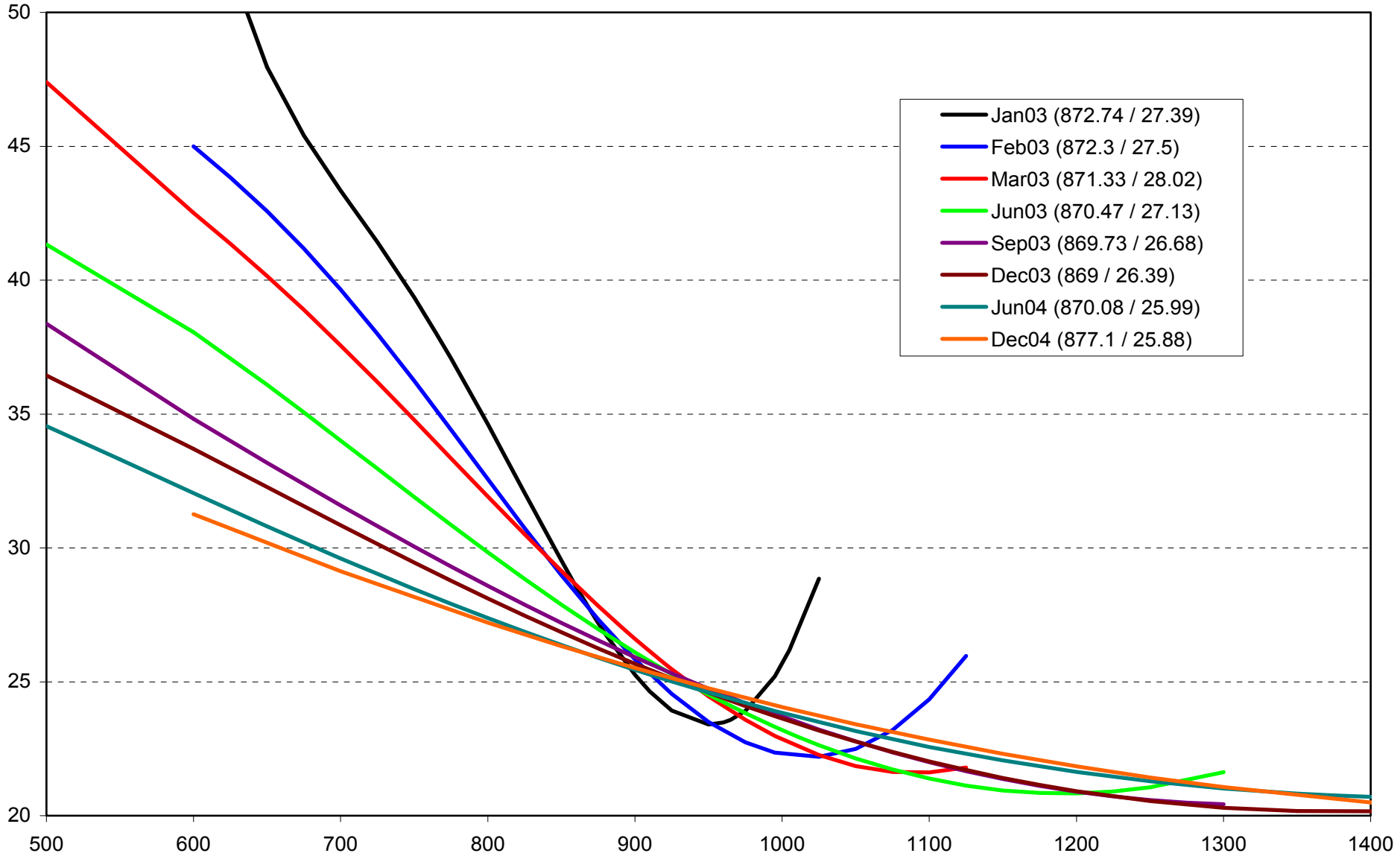
SPX Daily Price Changes: January 1990 - December 2002



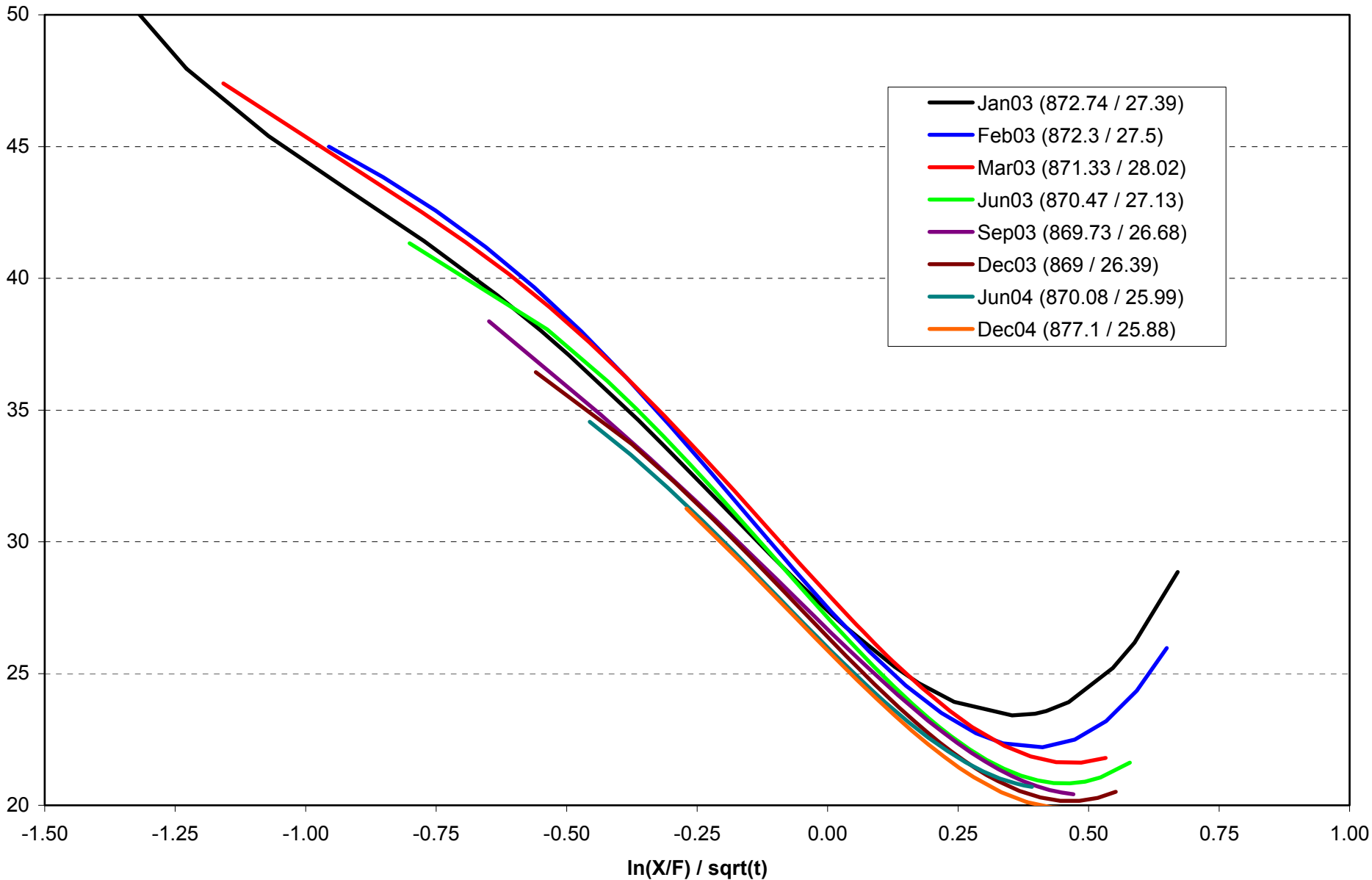
SPX March 03 Implied Volatilities - 28 December 2002 (SPX = 875.40)

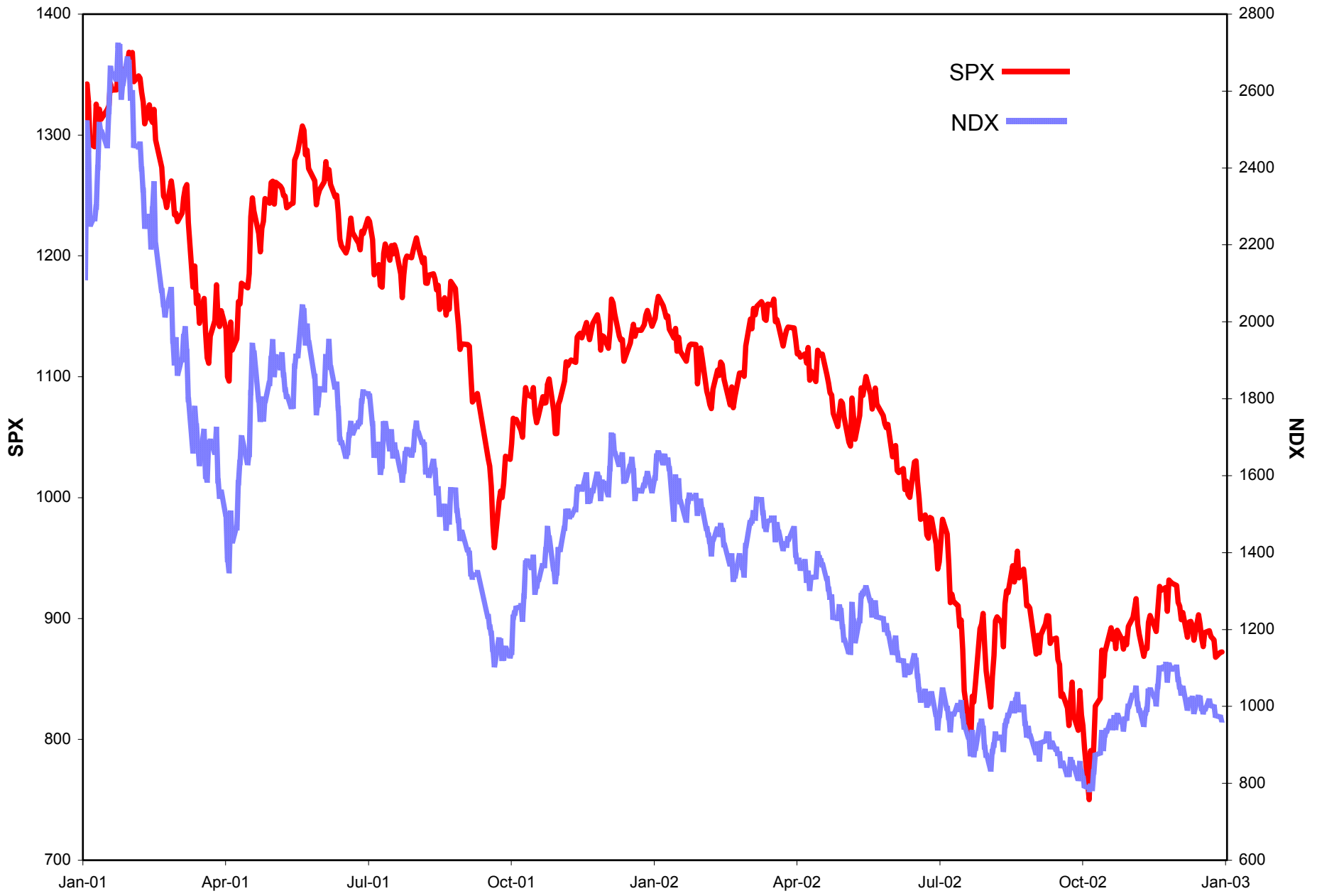


SPX Implied Volatilities - 28 December 2002 (SPX = 875.40)

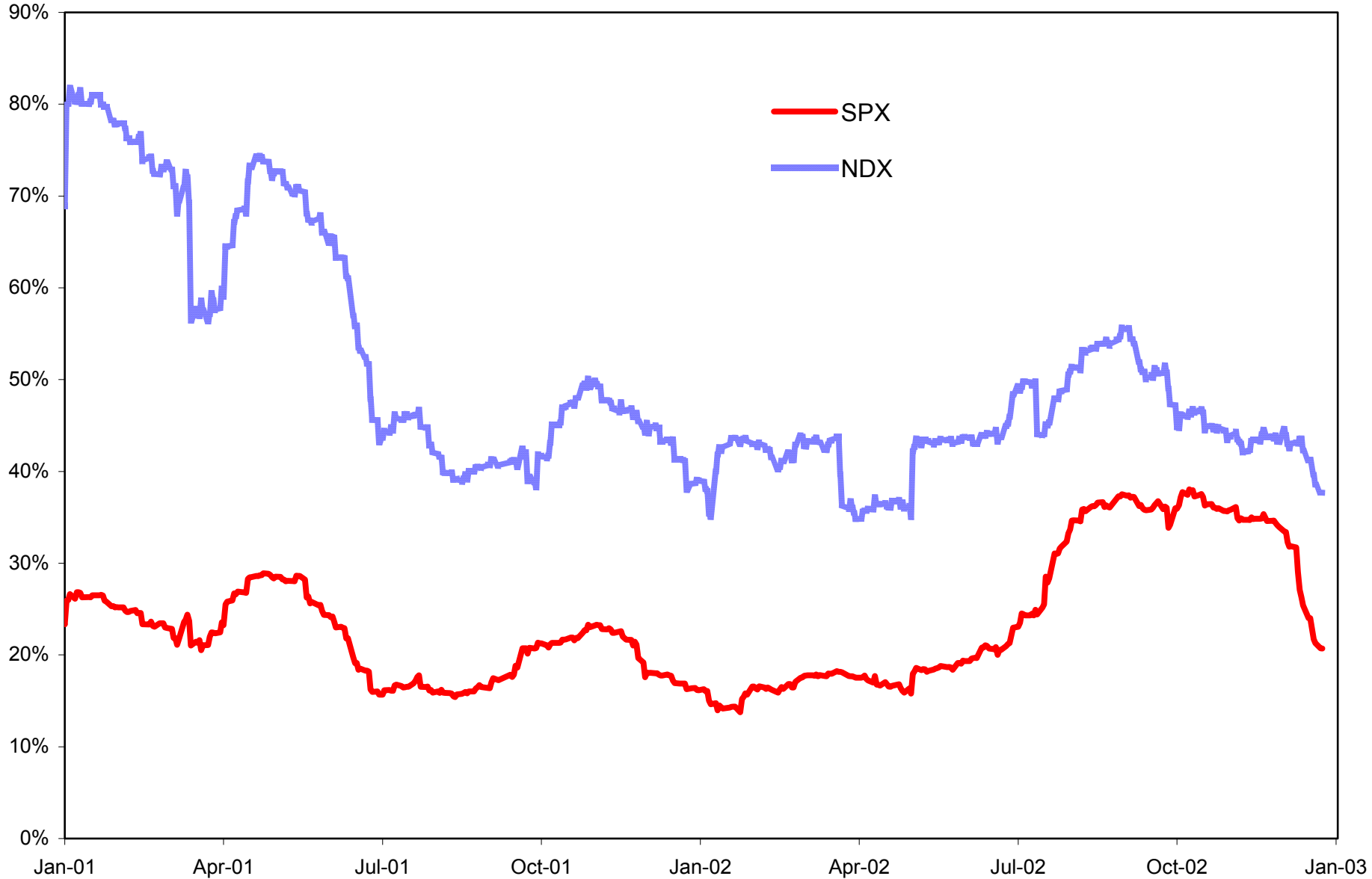


SPX Implied Volatilities - 28 December 2002 (SPX = 875.40)





SPX / NDX 50-day Historical Volatilities: January 2001 to December 2002

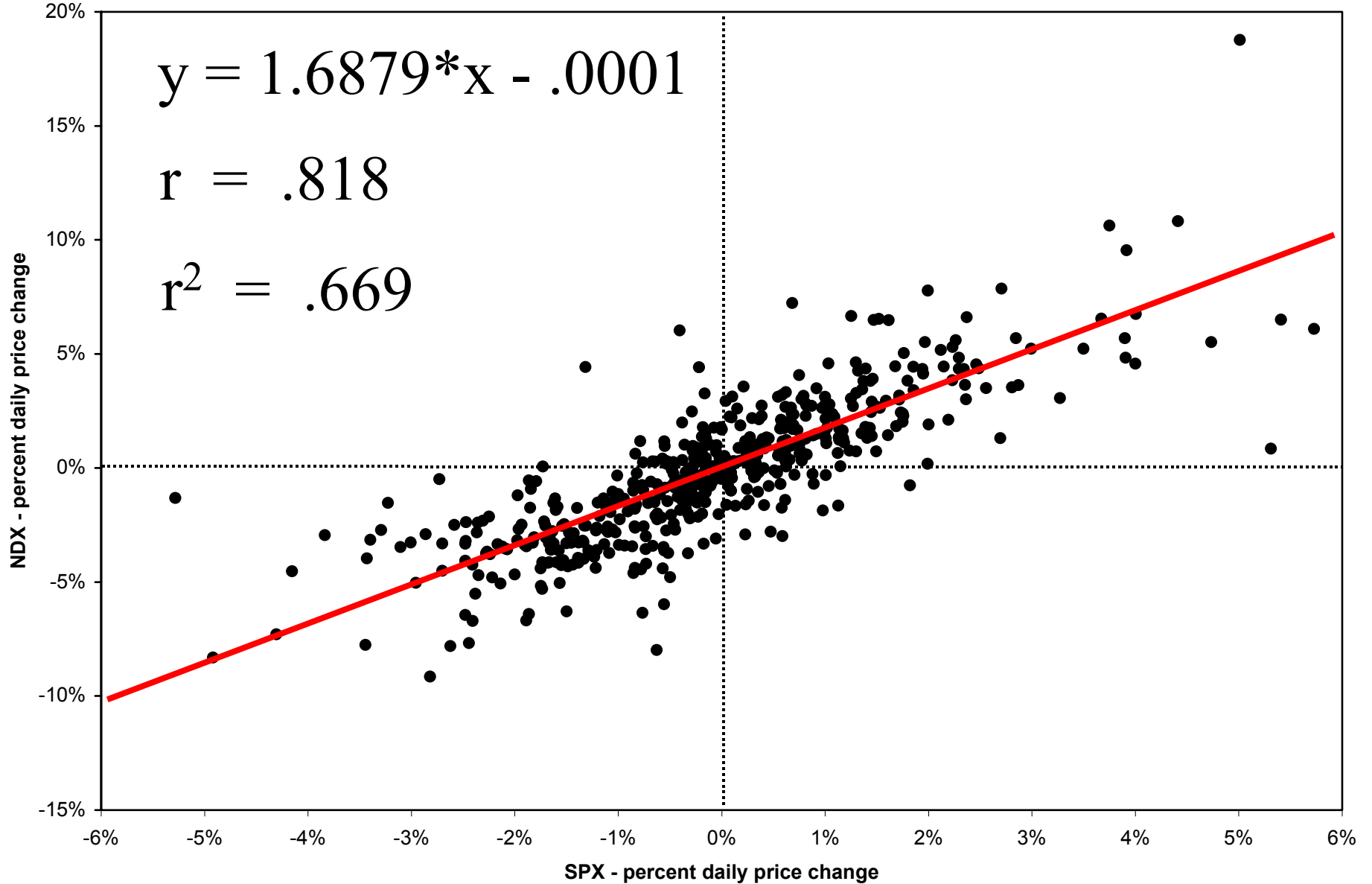


SPX vs. NDX Correlation: 2001 - 2002

$$y = 1.6879 * x - .0001$$

$$r = .818$$

$$r^2 = .669$$



MNX / SPX Volatility Ratios

