

Some *Facts* About the Tech Bubble in the Late 1990s

(Some of the Slides from a Recent NBER Discussion)

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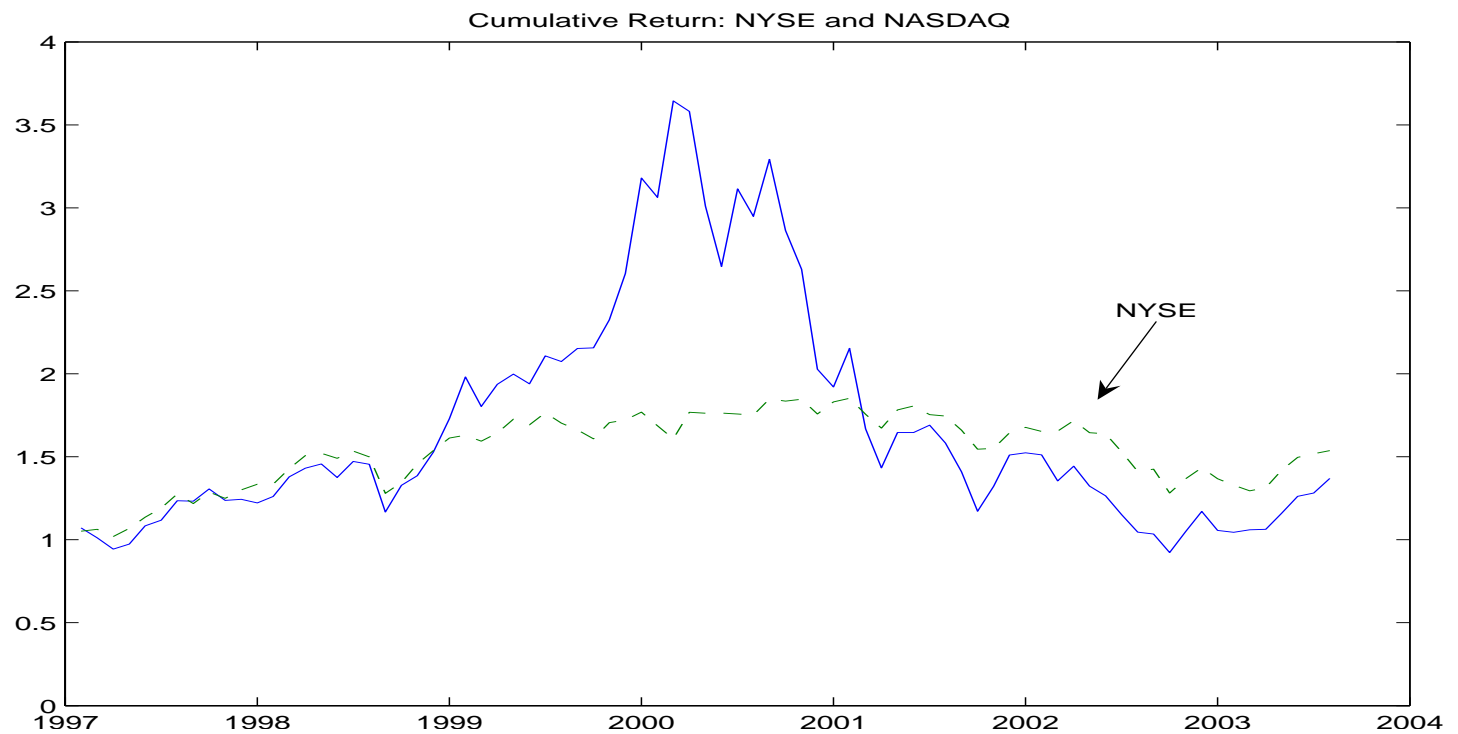
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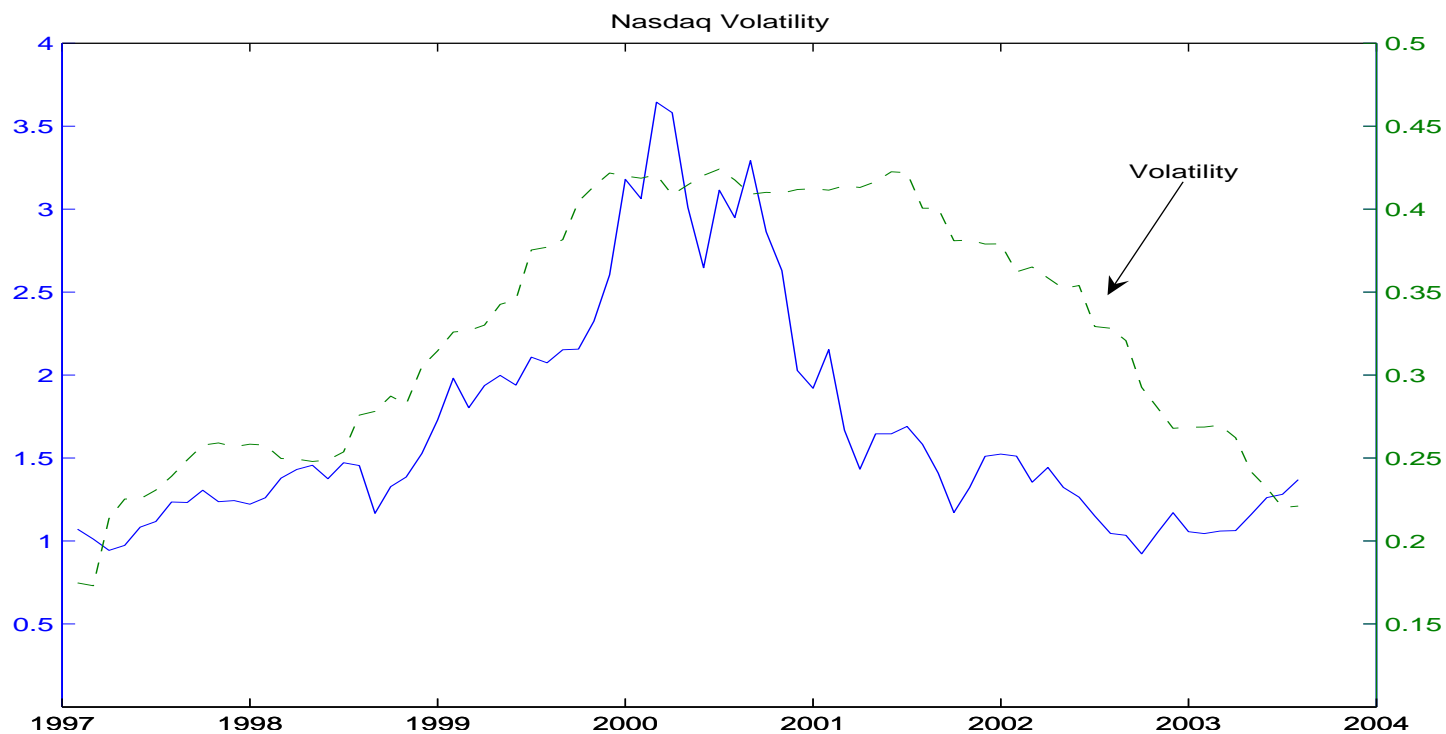
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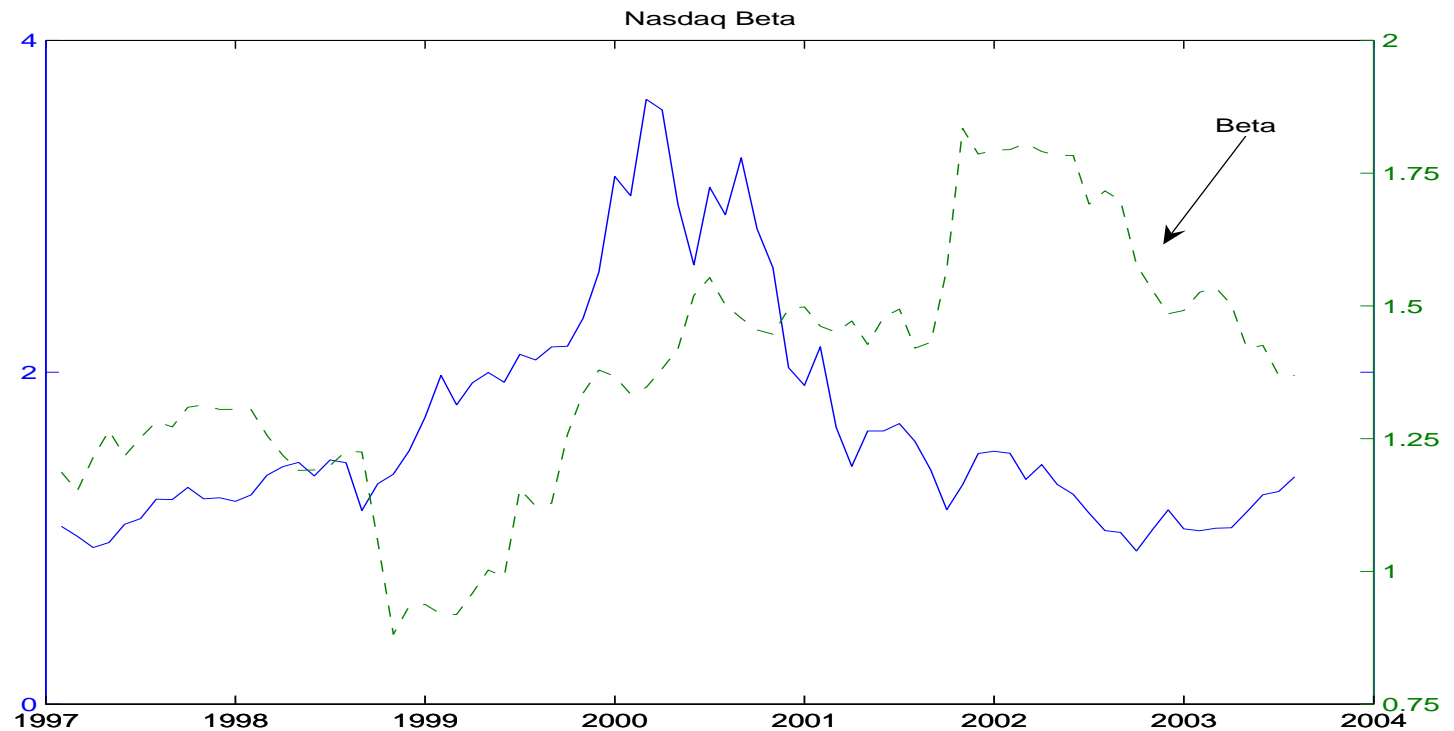
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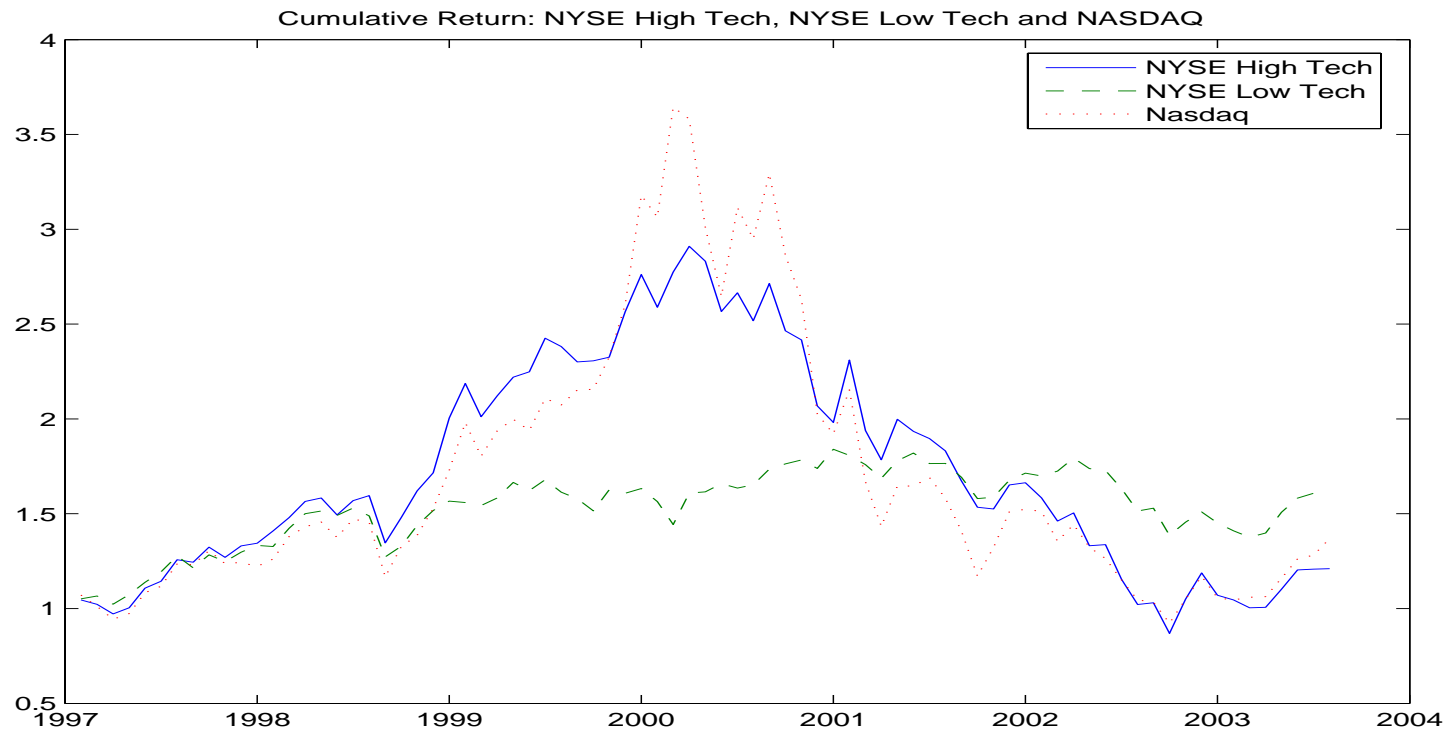
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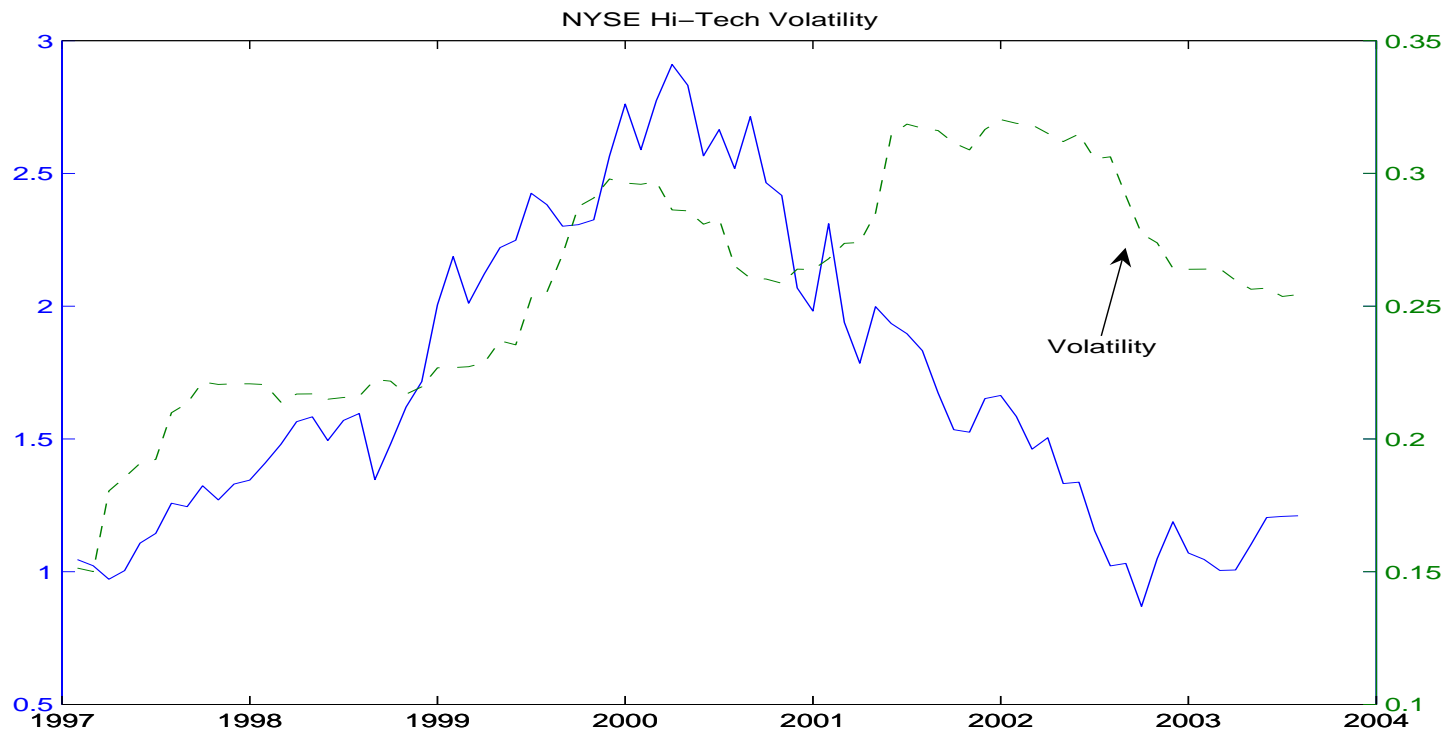
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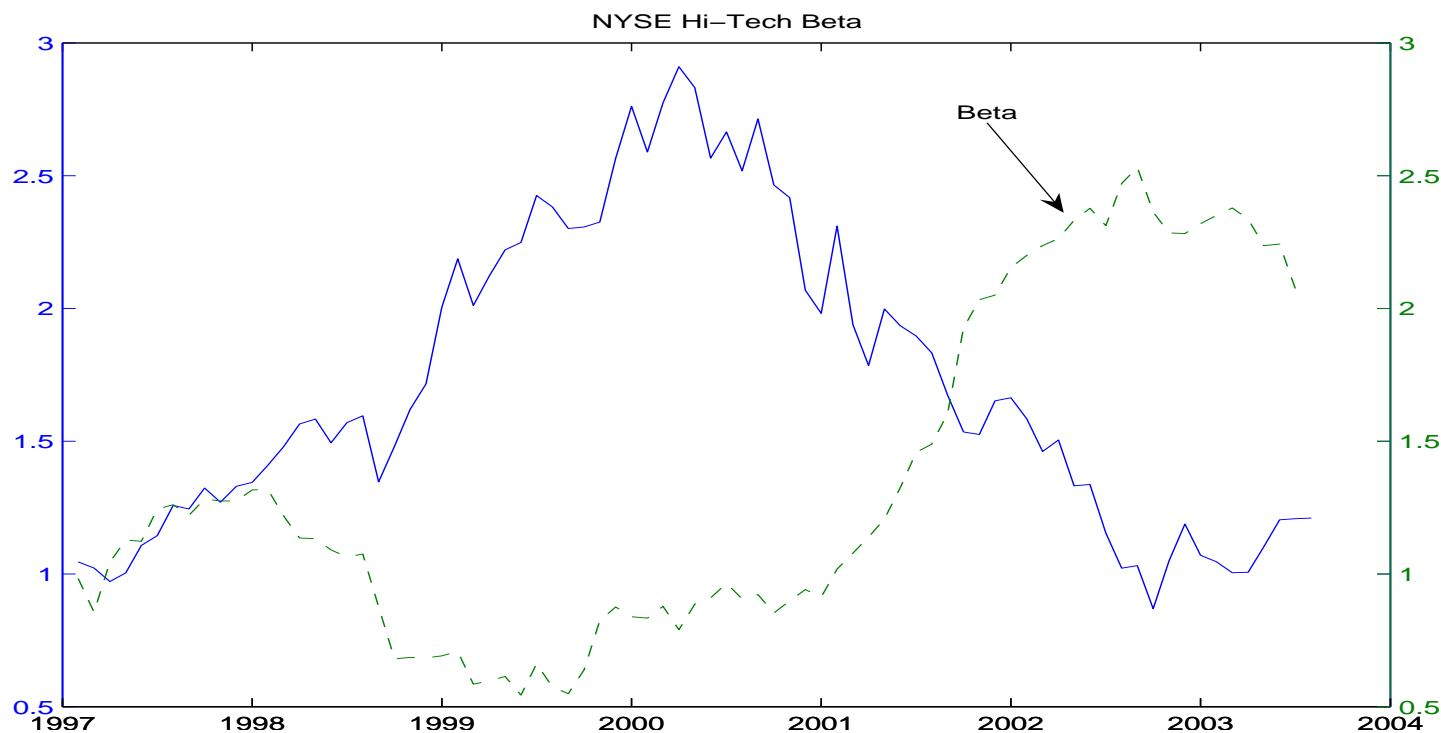
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- NYSE Hi-Tech Beta has the same properties of Nasdaq Beta.



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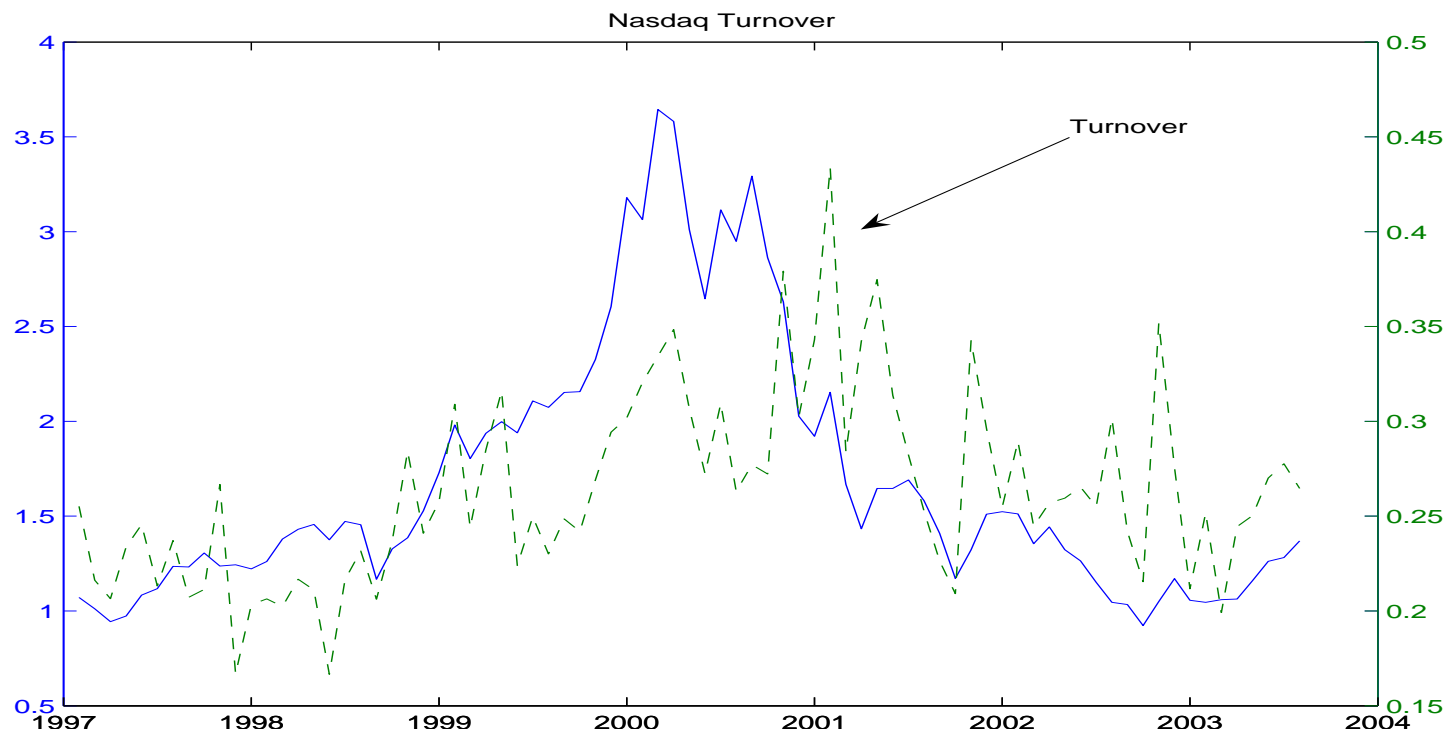
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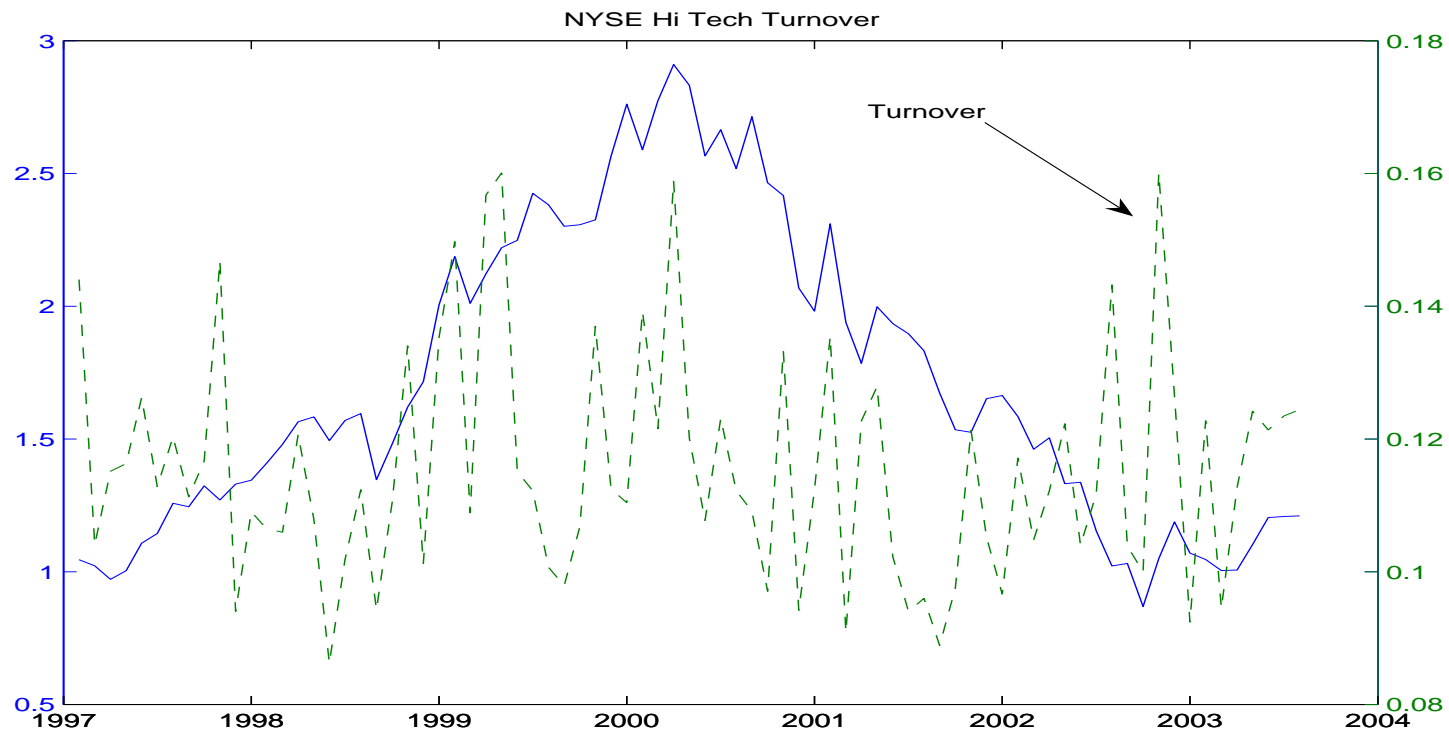
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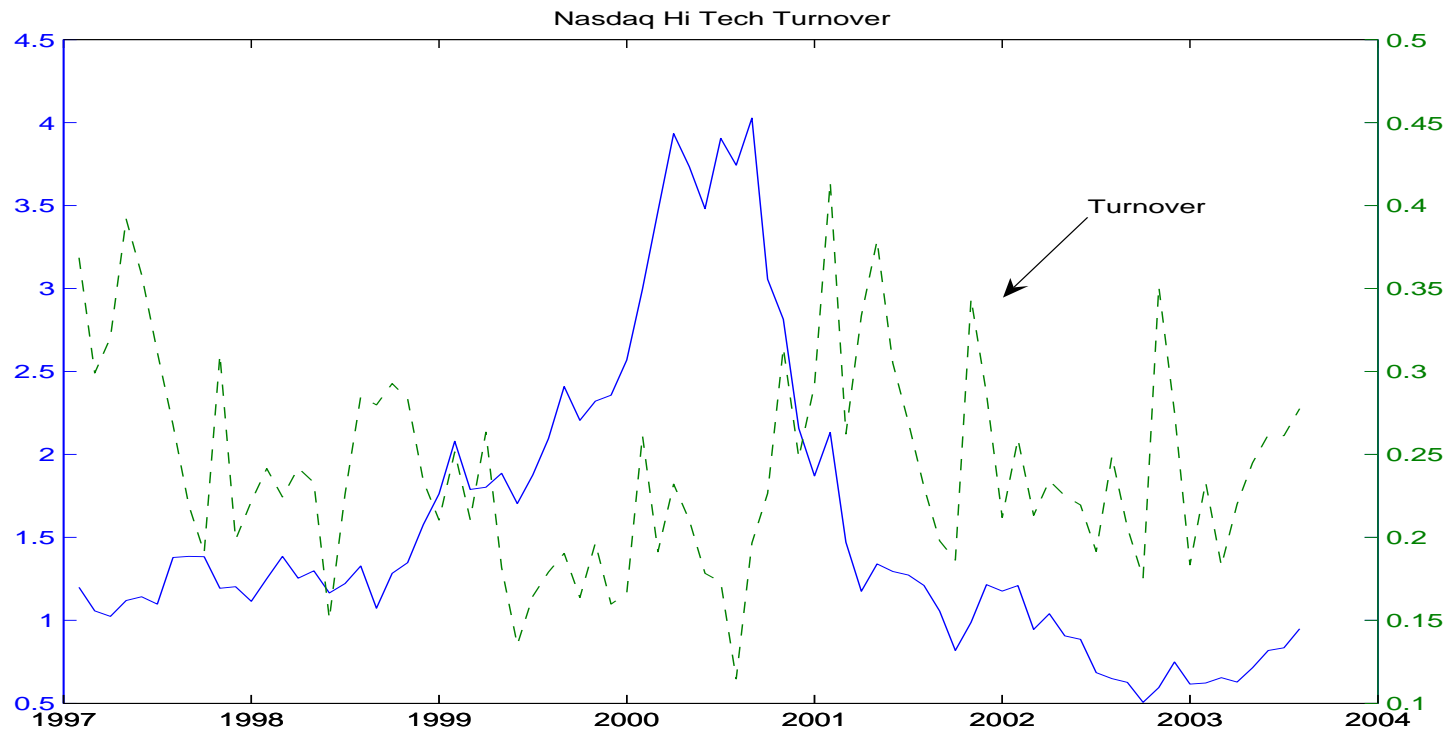
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 - * *But it peaked well after the "bubble" burst.*
- NYSE Hi Tech Stocks' Turnover did not move at all
- Nasdaq Hi Tech Stocks' Turnover went down.



Why Did the "Bubble" Burst?

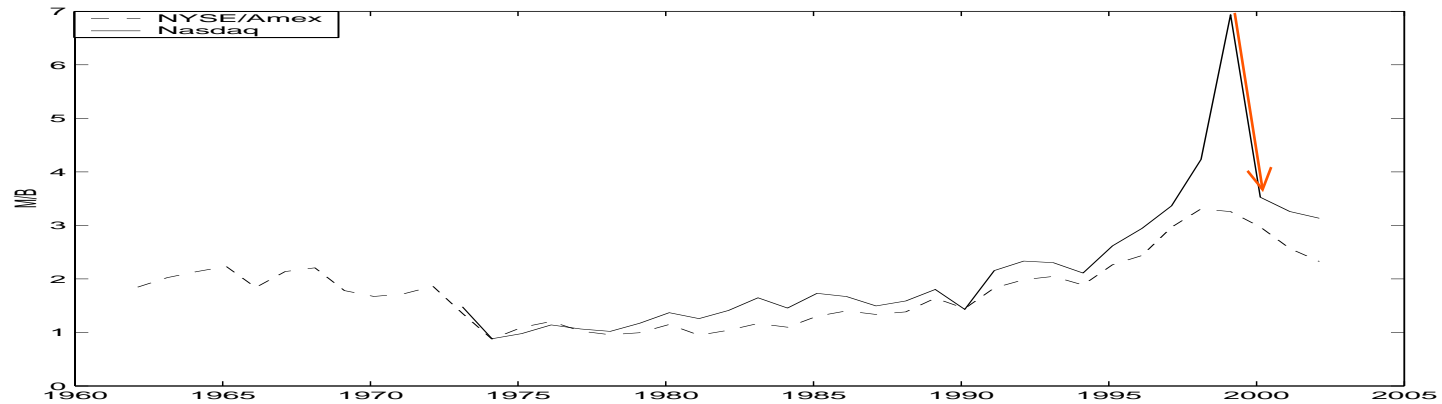
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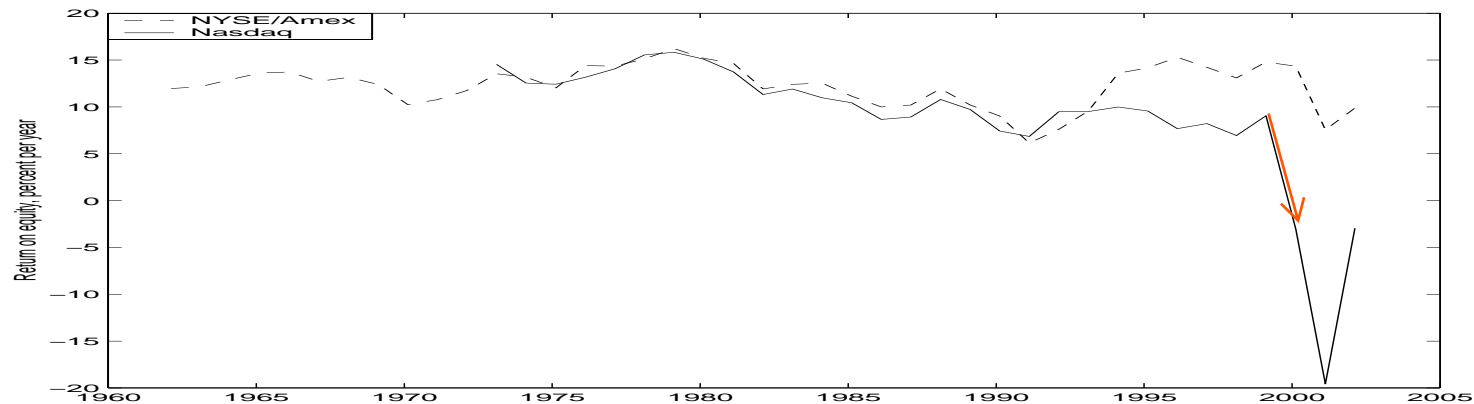
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- Nasdaq's Profitability plummeted in 2000.

Nasdaq and NYSE/Amex M/B ratios



Nasdaq and NYSE/Amex profitability



(Source: Pastor and Veronesi "Was There a Nasdaq Bubble in the Late 1990s?" *JFE*, 2006)

Was it a Bubble?

- It is possible that prices exceeded fundamentals in the late 1990s for tech stocks.
- However, an explanation based on short sales constraints may find it hard to explain why *exactly* the same pattern of return, volatility and "risk" occurred in NYSE Hi Tech stocks.
 - Short sales constraints are much less binding for NYSE stocks.
- Short sales constraints though may have played a role in Nasdaq
 - The "bubble" was stronger in Nasdaq
 - Trading seemed more active in Nasdaq during the "bubble" period (but it peaked later).

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– This story explains all of the facts discussed earlier.

1. High uncertainty about long term growth + low risk aversion imply (very) high prices.
2. High uncertainty implies a high return volatility and a high beta.
3. High uncertainty implies a strong reaction of prices to bad news in profitability (and hence price drop)
4. High uncertainty + differences of opinion implies a high trading volume.

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– Moreover, it explains other facts about the late 1990s

1. High uncertainty increases option value of new ventures and thus increase incentive to go public

⇒ IPO wave of tech stocks at the end of the 1990s

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 - This model implies all of the stylized facts discussed earlier.