

Deutsche Bank Securities Inc.

The HDD market after the recession

**How have we fared and where are we headed?
October 2009**



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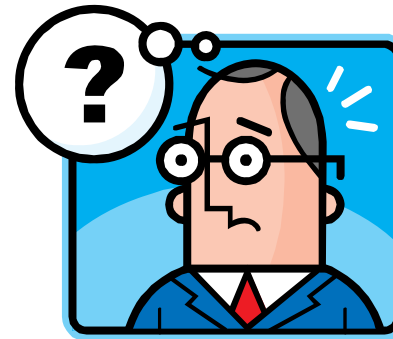
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Deutsche Bank



How have we fared and where are we headed?

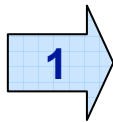
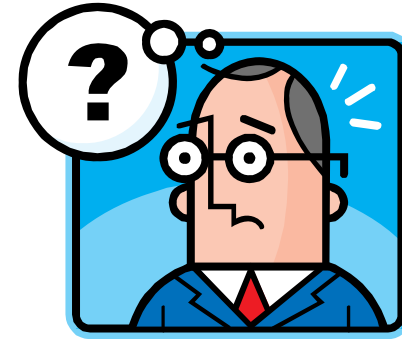
1 → What just happened?



2 → Where are we now?

3 → What does the future hold?

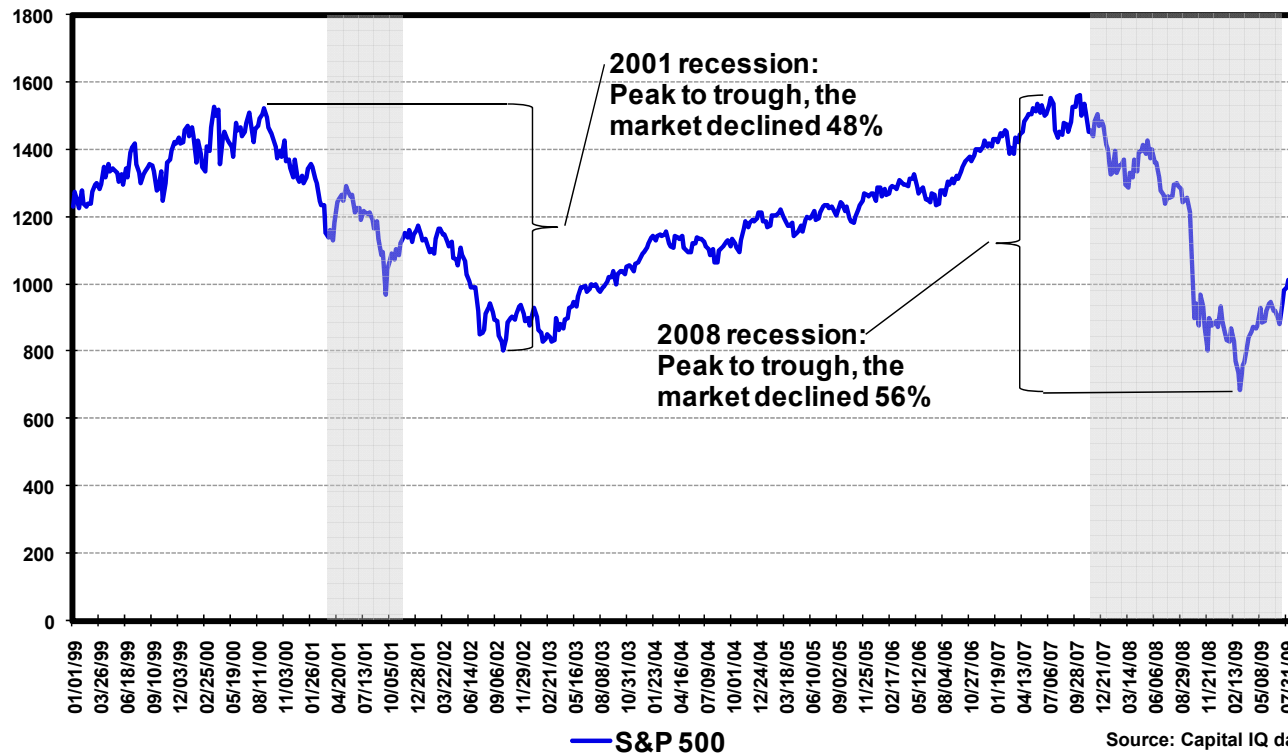




What just happened?

1 → What just happened?

- We just went through a scary recession
 - The stock market lost 56% of its value from peak to trough
 - The speed of the decline was also very rapid – it took just 5 months
 - This compares to the recession following the tech bubble, which was milder (down 48%) and more gradual (declined over 2 ½ years)



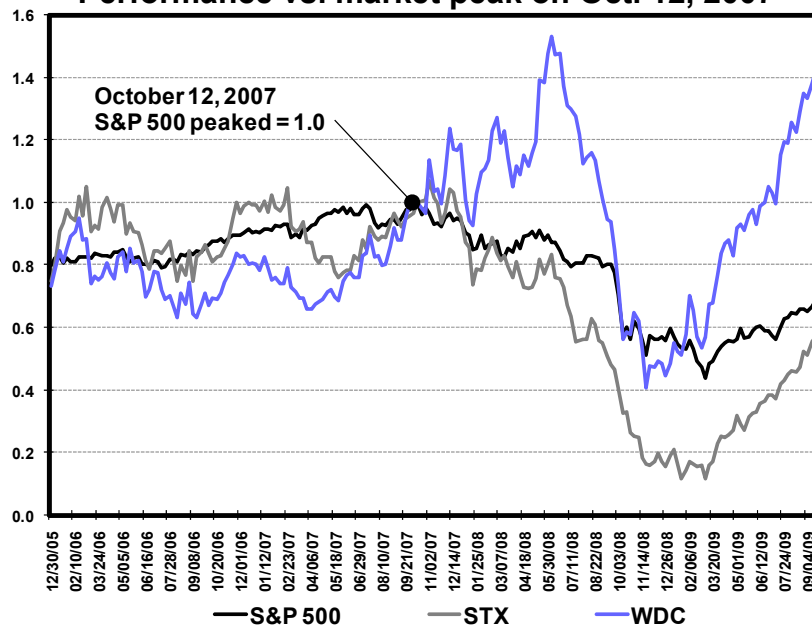
Source: Capital IQ data



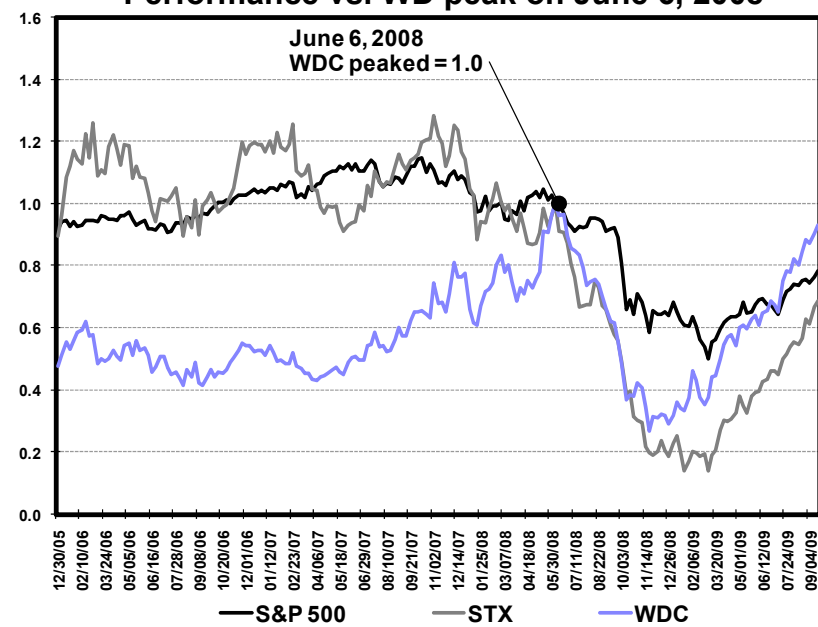
1 What just happened?

- HDD stocks also declined, although results were mixed
 - Compared to the peak of the stock market, Western Digital is actually up (left chart)
 - Seagate and the markets are still down 30-40% versus the peak
 - Western Digital peaked later than the markets. Versus its peak, Western Digital is almost flat.
 - Seagate and the markets have underperformed

Performance vs. market peak on Oct. 12, 2007



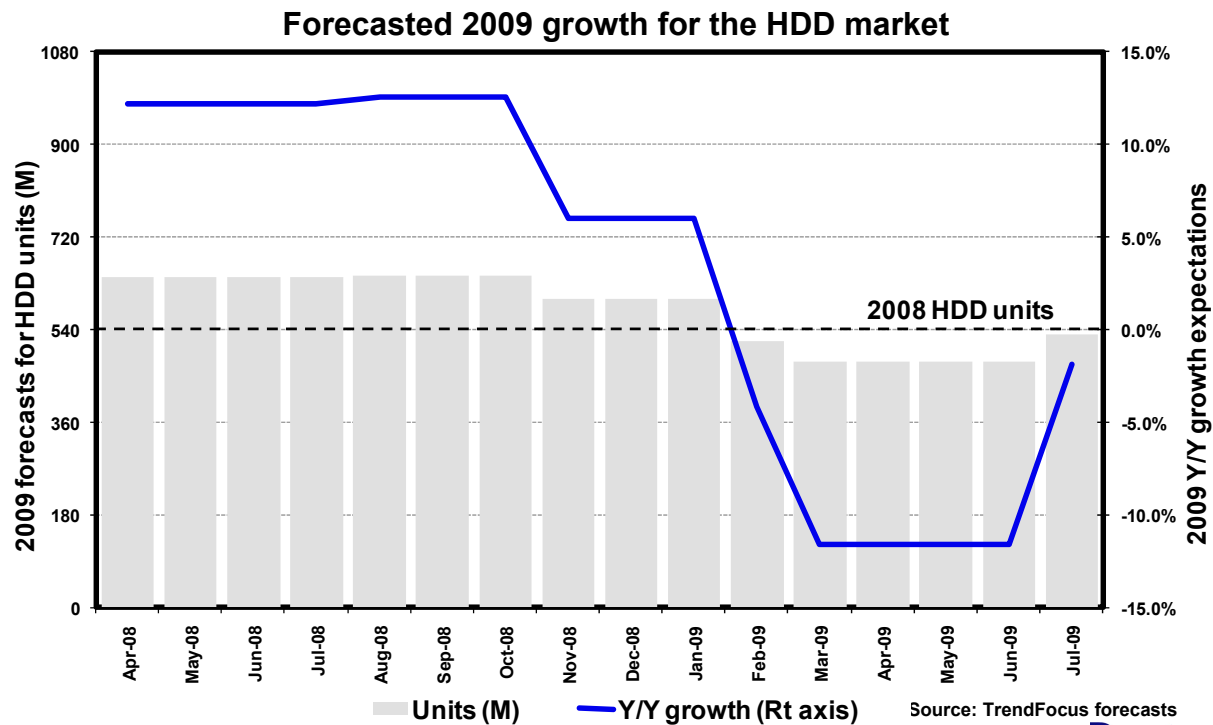
Performance vs. WD peak on June 6, 2008



Source: Capital IQ data

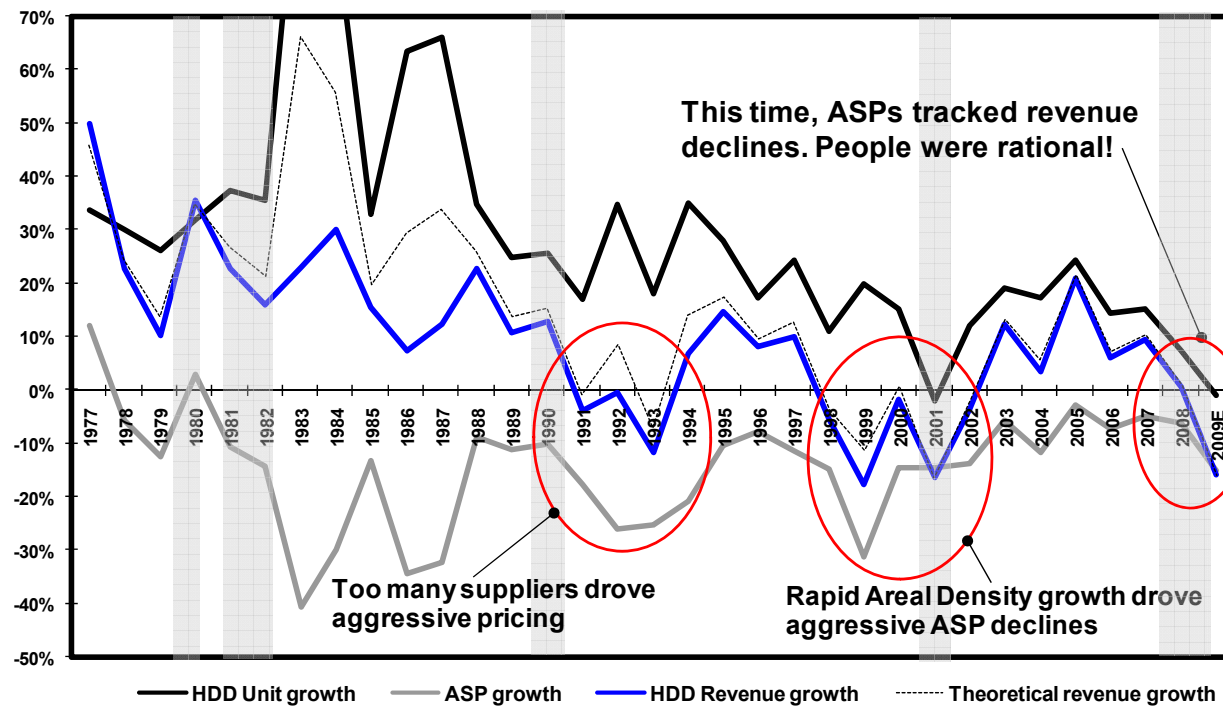
1 What just happened?

- It seemed pretty bad while we were in it
 - Expectations for the HDD market began at 12% growth for 2009, but fell to negative 12% at the height of the recession
- But it didn't turn out that badly for the PC and HDD markets
 - It now looks like HDD growth will be nearly flat or slightly down in 2009



1 → What just happened?

- The HDD market acted rationally
 - Production was cut, instead of aggressive pricing to gain share
 - As a result, ASP declines were largely in line with revenue declines
- This recession was better than the build up to the 2001 recession, when ASPs fell more than revenue despite unit growth
 - This was also better than past periods of aggressive pricing

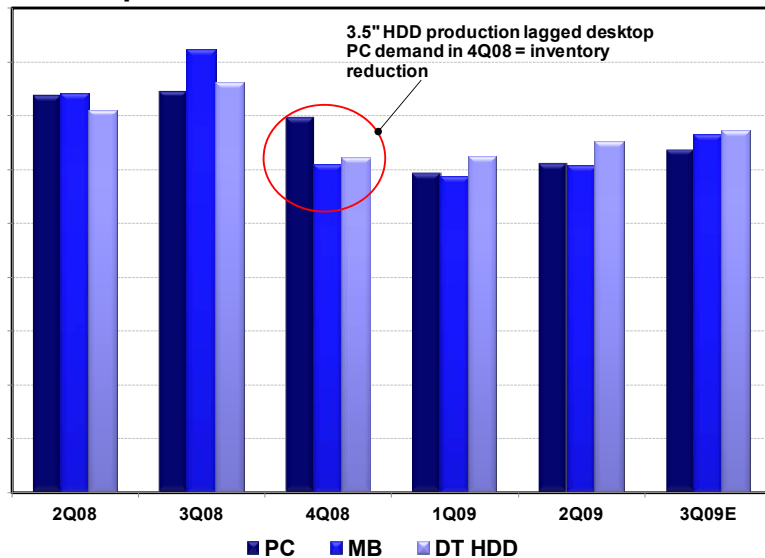


Source: IDC, Disk/Trend, and Deutsche Bank estimates

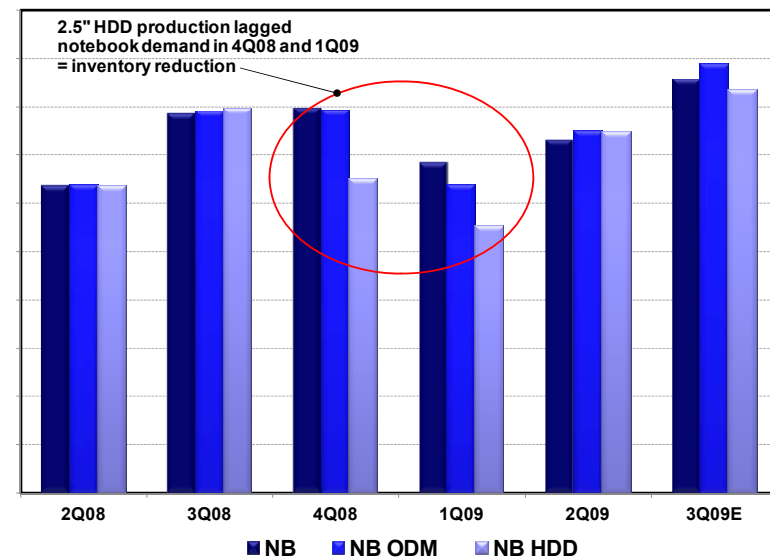
1 What just happened?

- Significant cuts were made in the production of hard disk drives in 4Q08 and 1Q09
 - Desktop HDD production was cut significantly in 4Q08
 - Notebook HDD production cuts took longer and spanned both 4Q08 and 1Q09
- Sell out of hard disk drives was higher than sell in
 - PC demand was stronger than production levels
 - As a result, inventory levels were reduced across all channels and remain low today

Desktop PC units vs. motherboard and HDD units



Notebook PC units vs. ODM and HDD units

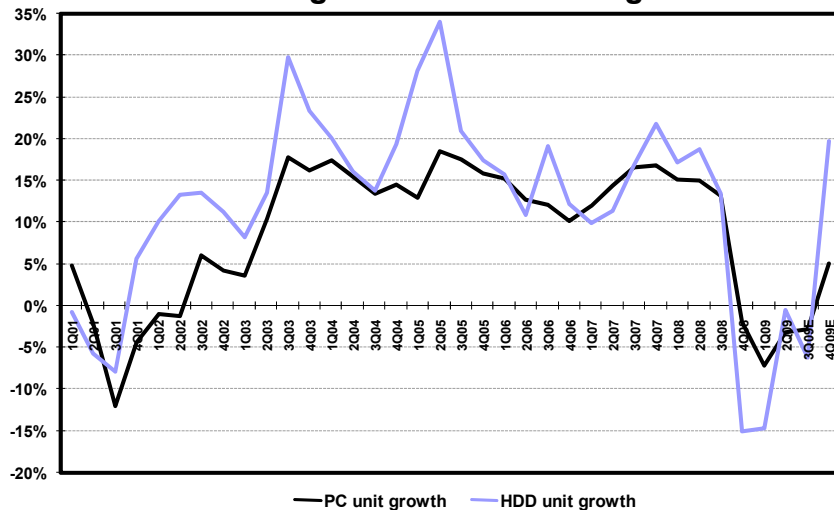


Source: IDC, Deutsche Bank estimates and Company data

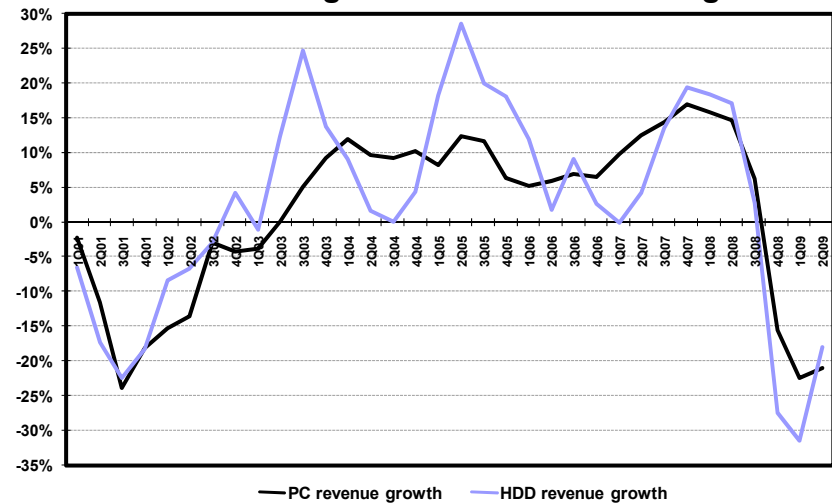
1 What just happened?

- You can also see this when comparing PC and HDD growth
 - PC units declined 2% Y/Y in 4Q08 and 7% Y/Y in 1Q09
 - This compares to HDD units which declined 15% Y/Y in both 4Q08 and 1Q09
 - Revenue also fell, but PC revenue sales declined more severely due to negative mix to netbooks
- HDD unit growth fell further in this recession than in the past recession
 - PC unit growth actually fell less than it did in the 2001 recession

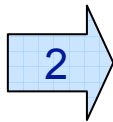
PC Y/Y unit growth vs. HDD unit growth



PC Y/Y revenue growth vs. HDD revenue growth



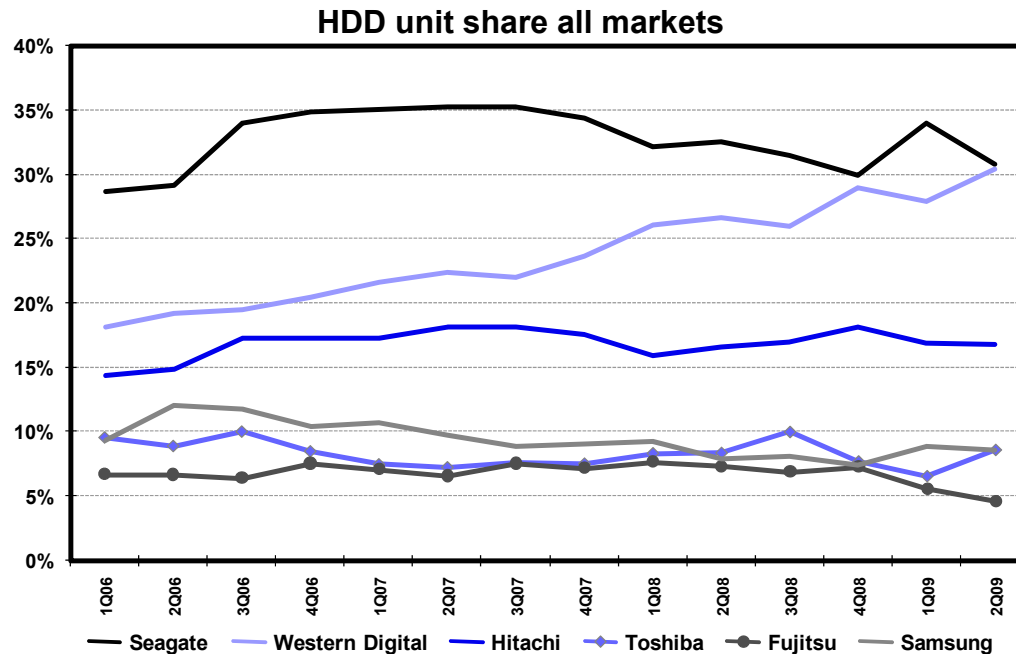
Source: IDC and Deutsche Bank estimates



Where are we now?

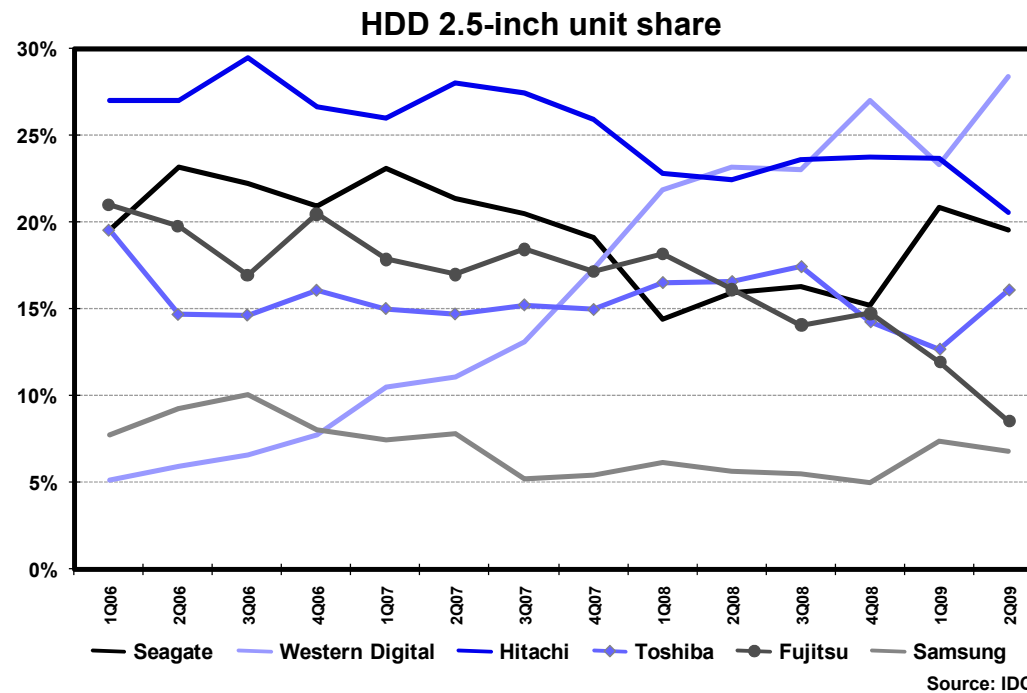
2 → Where are we now?

- Things weren't as bad as we had originally expected
 - HDD units will likely fall only slightly or be flat in 2009 versus 2008
 - However, share did shift and we saw some industry consolidation
- Western Digital continues to be the share gainer
 - With the consolidation of Toshiba and Fujitsu, the combined company saw some share loss
 - Most others maintained share within a few percentage points



2 → Where are we now?

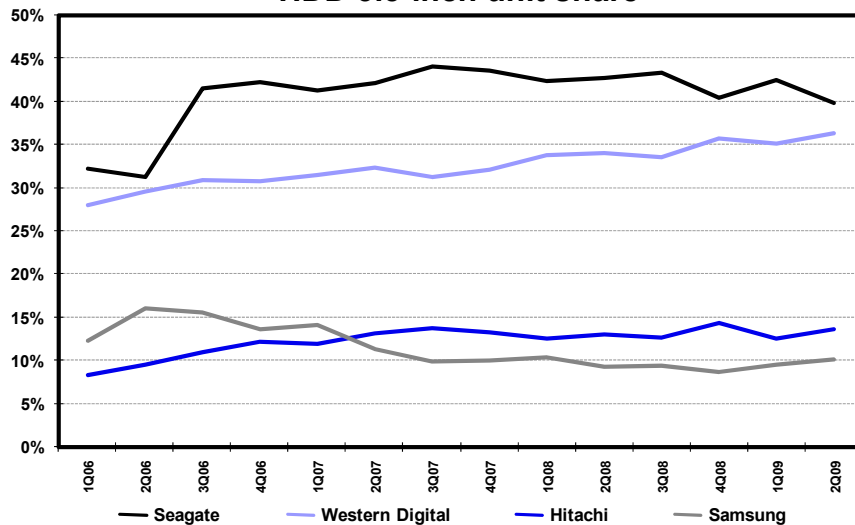
- The 2.5-inch market remains the most contested with all vendors participating
 - Most of the share shifts have happened in this market
 - Western Digital has gained share and is now the market leader
 - Hitachi's share has slowly declined
 - Fujitsu's share has also declined, largely as a result of its acquisition by Toshiba



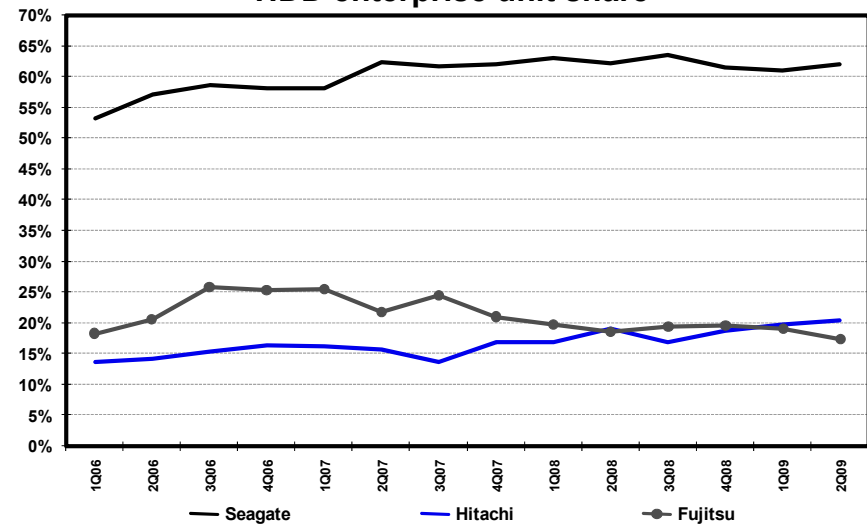
2 Where are we now?

- The 3.5-inch and enterprise markets remain more consistent
 - In the 3.5-inch market, Western Digital has gained some share, mostly from Samsung
 - In the enterprise market Seagate has held its dominant position

HDD 3.5-inch unit share



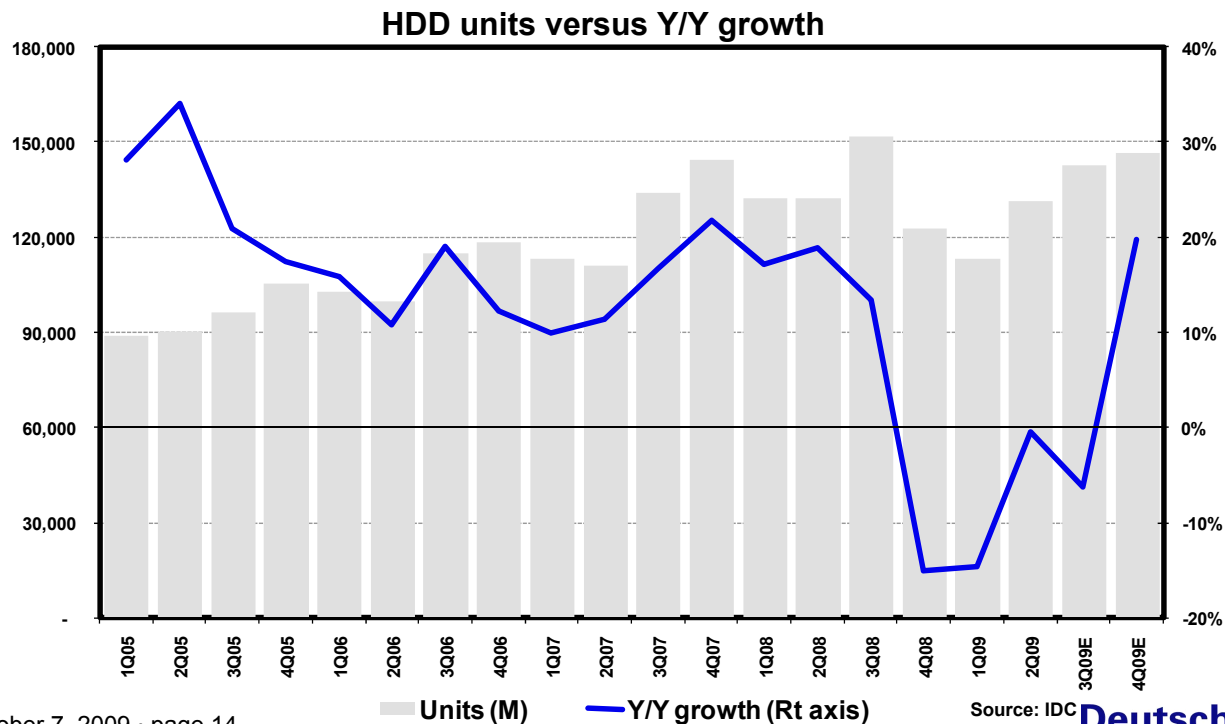
HDD enterprise unit share



Source: IDC

2 Where are we now?

- The end of the year appears to be shaping up to be relatively typical
 - Y/Y growth is recovering, and compares become easier in 4Q09
 - 3Q09 turned out better than people expected
 - Despite the unexpected strength in 2Q09, the September quarter appears to be on track for normal seasonality of up roughly 10% Q/Q
 - 4Q09 will also likely see normal seasonality



2 → Where are we now?

But there are some caveats . . .

- The 4Q outlook will depend on Holiday sales, which are still uncertain
- The economy is still weak
 - US – While the US appears to have stabilized, economic data remains mixed
 - Europe – Europe looks like it is nearing a bottom, but will likely be weak until 2010
 - Asia – Strength in Asia from government stimulus plans has likely run its course





What does the future hold?



3 → What does the future hold?

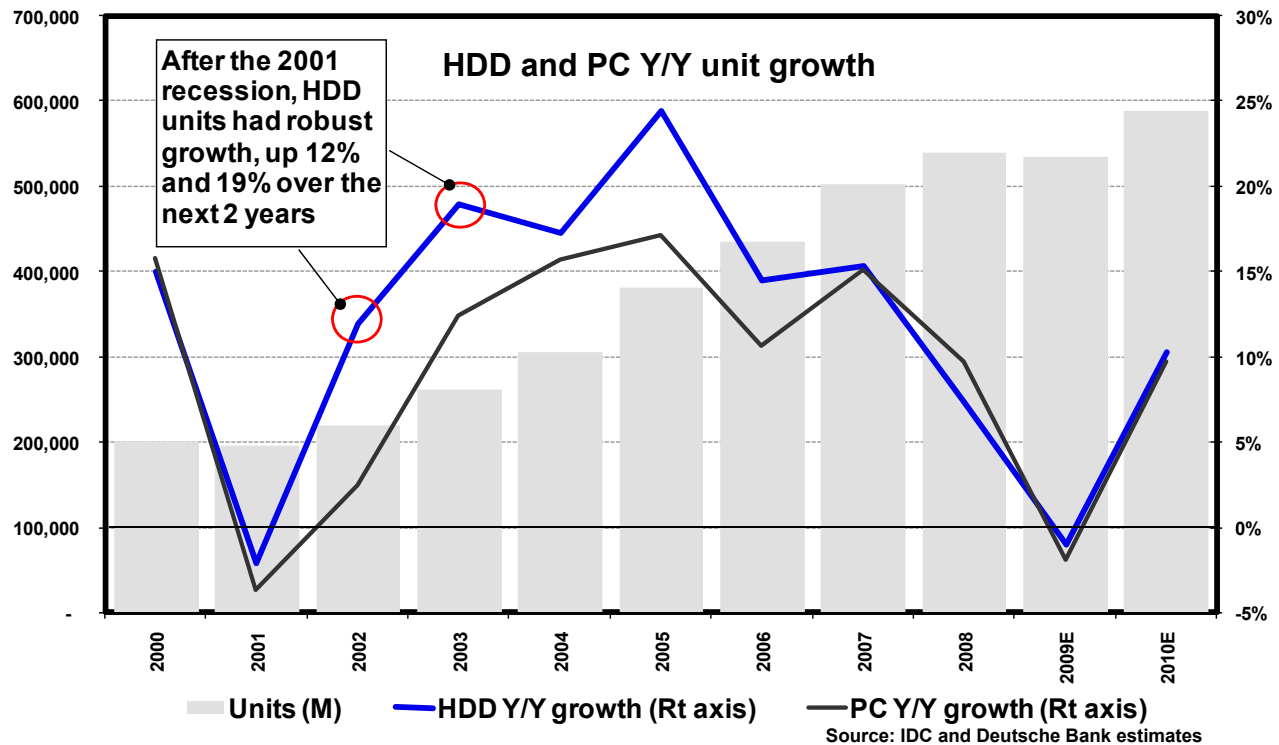
There are still many questions out there . . .

- Will the release of Windows 7 stimulate demand?
- Will we see a PC refresh cycle?
- Will the HDD industry remain rational or will aggressive pricing return?
- What will the impact of NAND flash be on the market?
- How will the industry deal with the transition to patterned media?



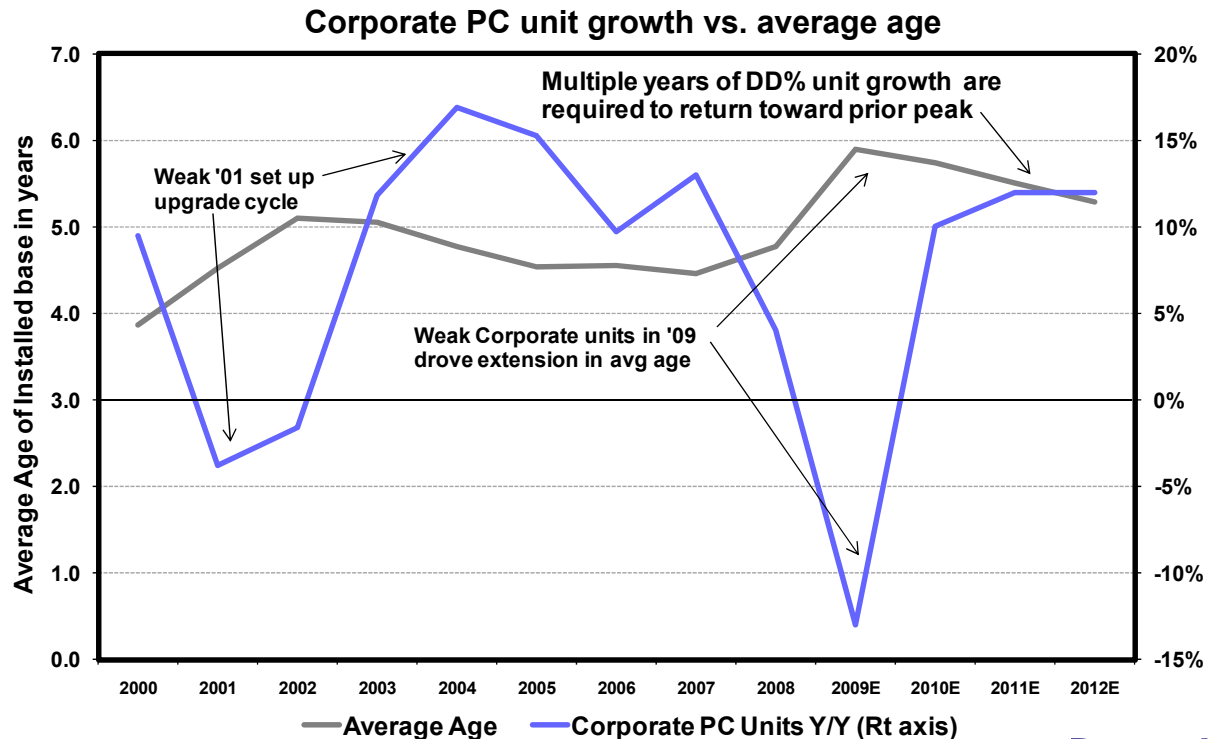
3 What does the future hold?

- Past recessions led to multiple years of double-digit HDD growth
 - After the 2001 recession, HDD units grew 12% and 19% over the next two years
 - We are likely to see the same thing after this recession
 - PCs have become indispensable because we do everything on them (socialize, work, shop, etc.)
 - In addition, ASPs remain very low



3 What does the future hold?

- In addition, the average age of corporate PCs has been extending
 - Businesses have cut back on capital spending and let their PCs age
 - Average corporate PCs are now nearly 6 years old
 - This is unlikely to continue, as PCs are a major driver of productivity
 - We saw the same cycle in 2001, which resulted in multiple years of double-digit PC growth



3 → What does the future hold?

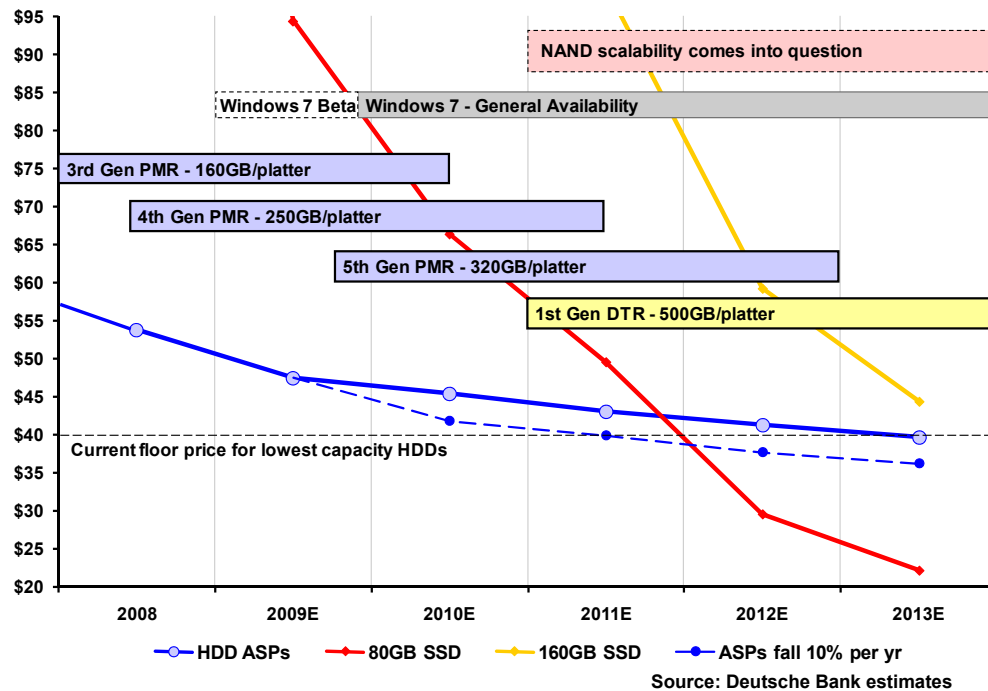
How the industry will react to this is still uncertain . . .

- There is plenty of pent-up demand to drive healthy growth for everyone
- Production capacity remains low right now
- Industry consolidation is also a positive, as we now have just 5 vendors
- The structure of the industry looks healthy

There is no reason for irrational behavior. Everyone can benefit.

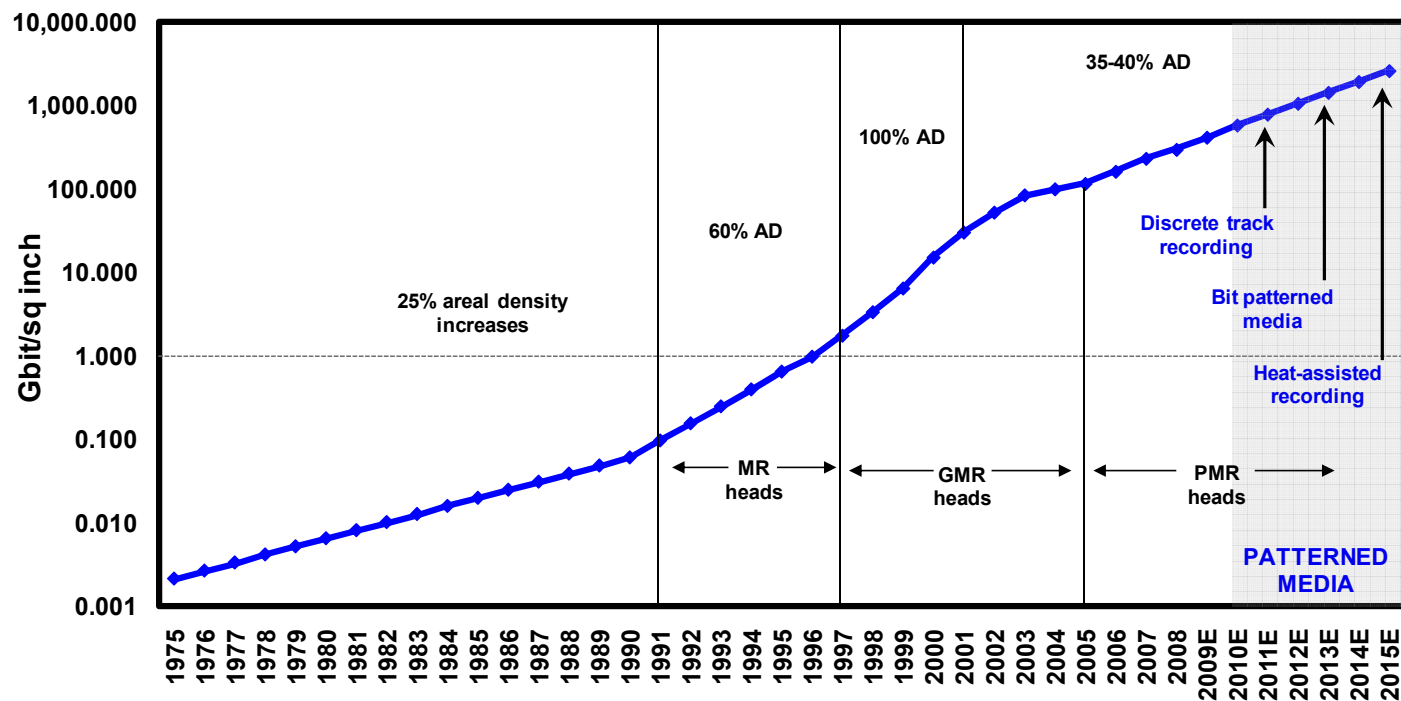
3 What does the future hold?

- NAND is unlikely to make a significant dent in the HDD market over the next 3-5 years
 - The enterprise segment may see some cannibalization
 - But the potential for SSDs in the more significant notebook market is limited
 - Dollar-per-GB costs remain too high for the foreseeable future
- Demand for capacity is too great. HDDs have a long life ahead.



3 What does the future hold?

- Technology transitions will require further capital investment and likely result in changes in the industry
 - Every major technology transition has resulted in changes in the industry
 - The current installed base of equipment is not enough to support patterned media
 - Further capital expenditures will be needed to support this transition





The next few years should offer continued growth but increased technology challenges.

Everyone can benefit if the industry focuses on profitability and not share.



Thank you

Appendix 1

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Additional Information Available upon Request

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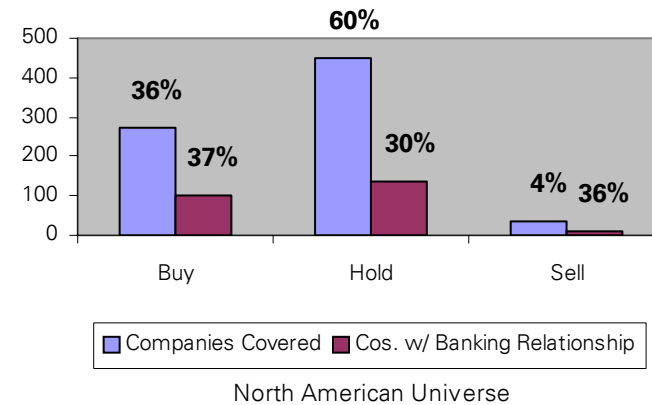
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