



The Role of Telecommunications Competition in Economic Change

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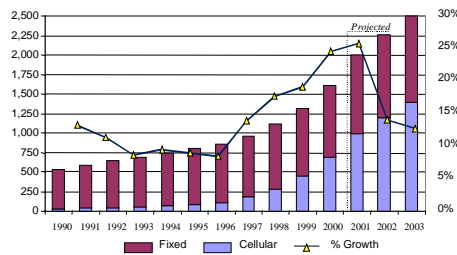
The Good News

Telecoms growth
has been spurred by
two powerful forces:

- Technology
- Liberalisation

... and of course, by
strong economies

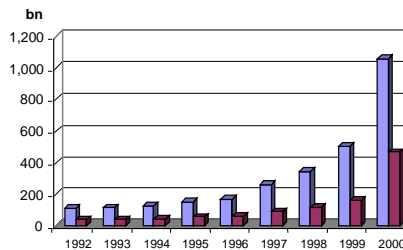
Global Fixed and Mobile Connections (million)



More Good News

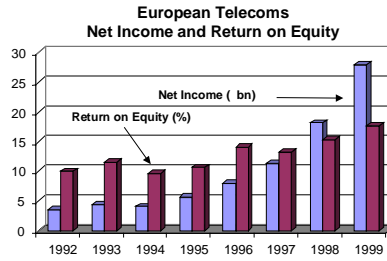
Expanding, profitable,
de-regulating markets
have attracted huge
inflows of investment
capital...

Assets and Equity in European Telecoms



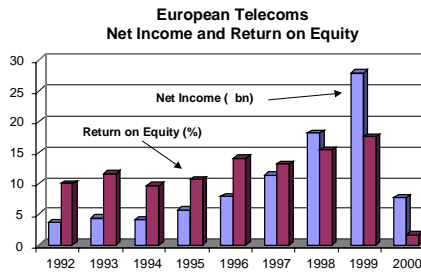
More Good News

Sector liberalisation has also delivered impressive efficiency gains



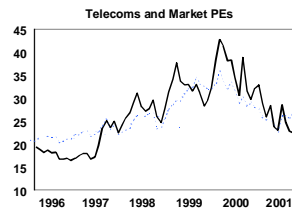
But It's Not All Good News

European returns have been particularly volatile, with returns collapsing in 2000.... and staying low in 2001

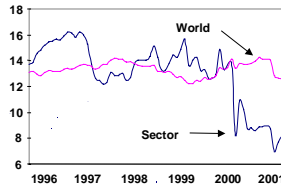


The Global Picture

The picture isn't that encouraging globally....



Returns on Equity (%), Telecoms Sector and World

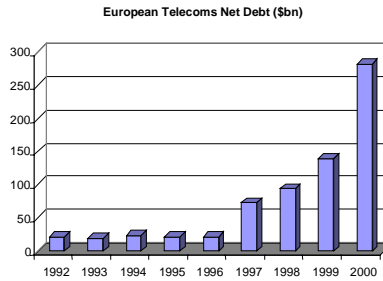


... with returns and ratings falling from 2000

More Bad News

\$120 billion of 3G licence fees, after a period of aggressive M&A activity, have left European balance sheets seriously damaged.

As a result, most large operators have had to scale back their investment plans.



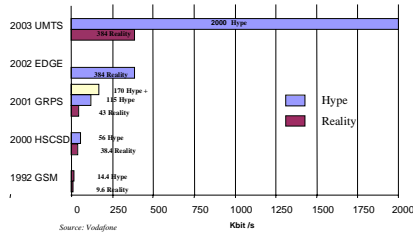
Technology has Disappointed

The promise of new technology has not been matched by the reality.

Greatest Engineering Achievements of 20th Century

1. Electrification
2. Automobile
3. Aeroplane
4. Water supply
5. Electronics
6. Radio and TV
7. Agricultural mechanisation
8. Computers
9. Telephone
10. Air conditioning
11. Highways
12. Spacecraft
13. The Internet
14. Imaging
15. Household appliances
16. Health technologies
17. Petrochemicals
18. Laser and fibre optics
19. Nuclear technology
20. High-performance materials

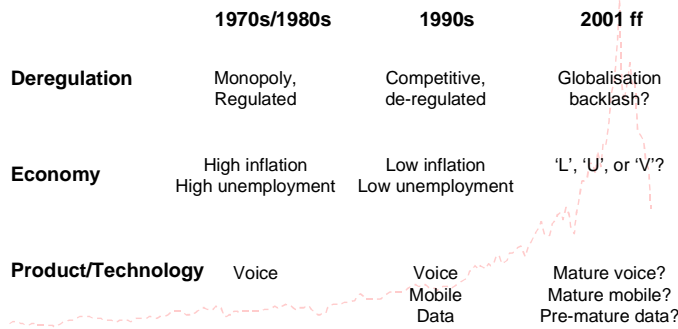
3G Transmission Speeds: Hype vs Reality



Source: Vodafone

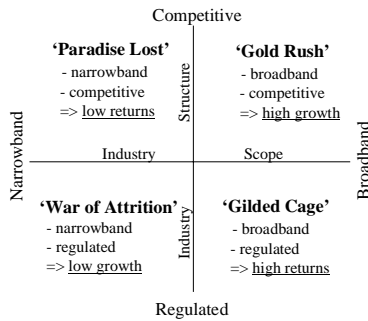
Source: National Academy of Engineering

Thinking in Cycles



Four Future Scenarios

Applying a simple two-dimensional matrix, we propose four highly plausible scenarios.



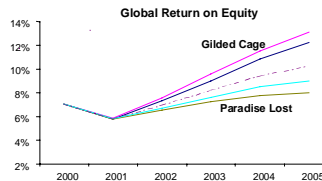
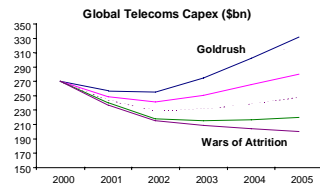
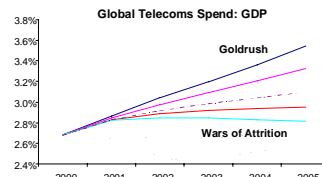
Please refer to important disclosures at the end of this report.

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Global Telecoms Yearbook - Aug/Sept 2001

It's All Down to Technology

Only under the two broadband scenarios, do we see growth resuming and returns recovering.



Please refer to important disclosures at the end of this report.

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Conclusions

- Deregulation has had a strong stimulative effect on sector growth rates and efficiency.
- But, mistakes have been made and value destroyed, particularly in developed countries.
- We view the current sector malaise as temporary: looking ahead, we are optimistic that returns will recover, and that investment and growth rates will resume.

Thank You

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