
Electronic Design Automation

An Updated Venture Capital Outlook

IEEE EDP 2008, Monterey, CA

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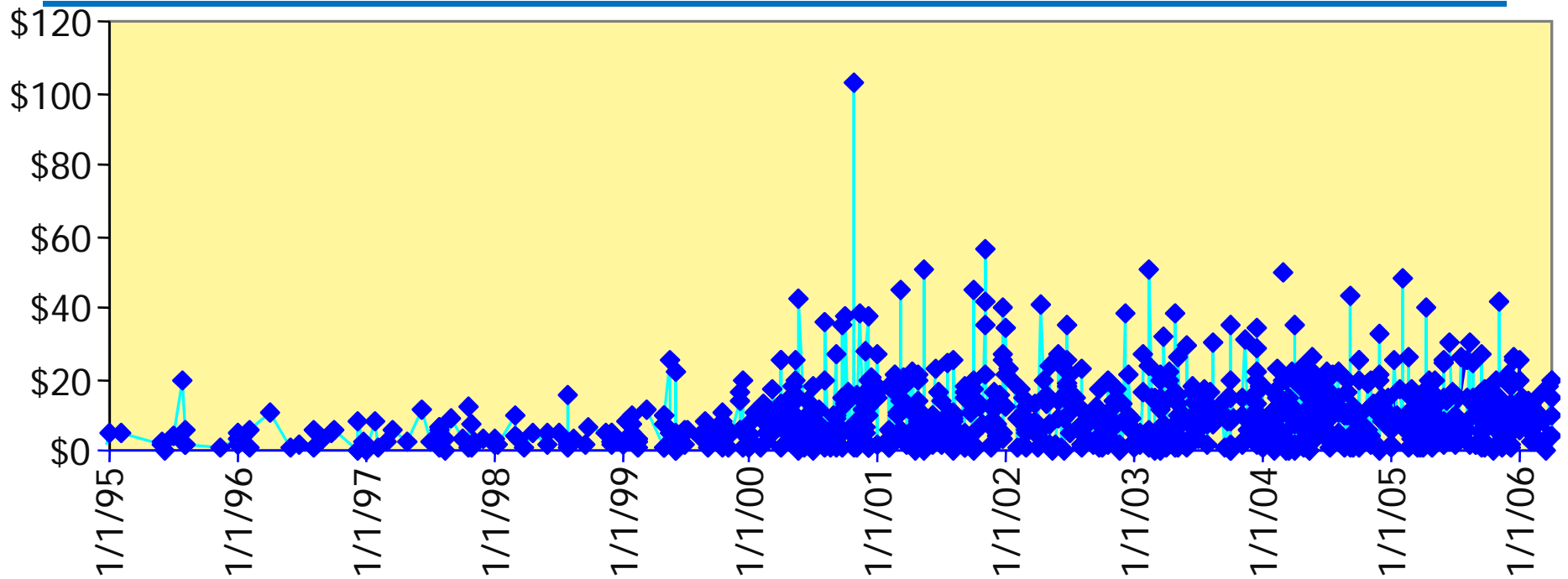
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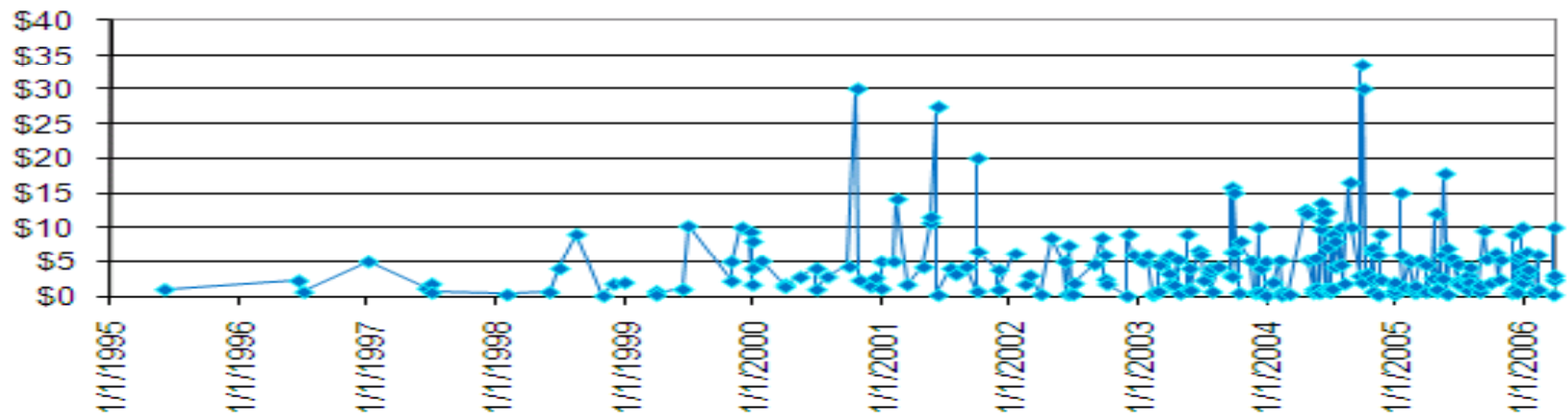
The Message

- **Design Automation**
 - Overinvested?
 - Inferior returns?
- **Will EDA remain a worthy investment sector?**
- **If so, what EDA topics will become most attractive?**
- **What are the implications for the EDA industry?**

Semiconductors → ~\$1B /



Design Technology Overinvested? → ~\$0.1B / year

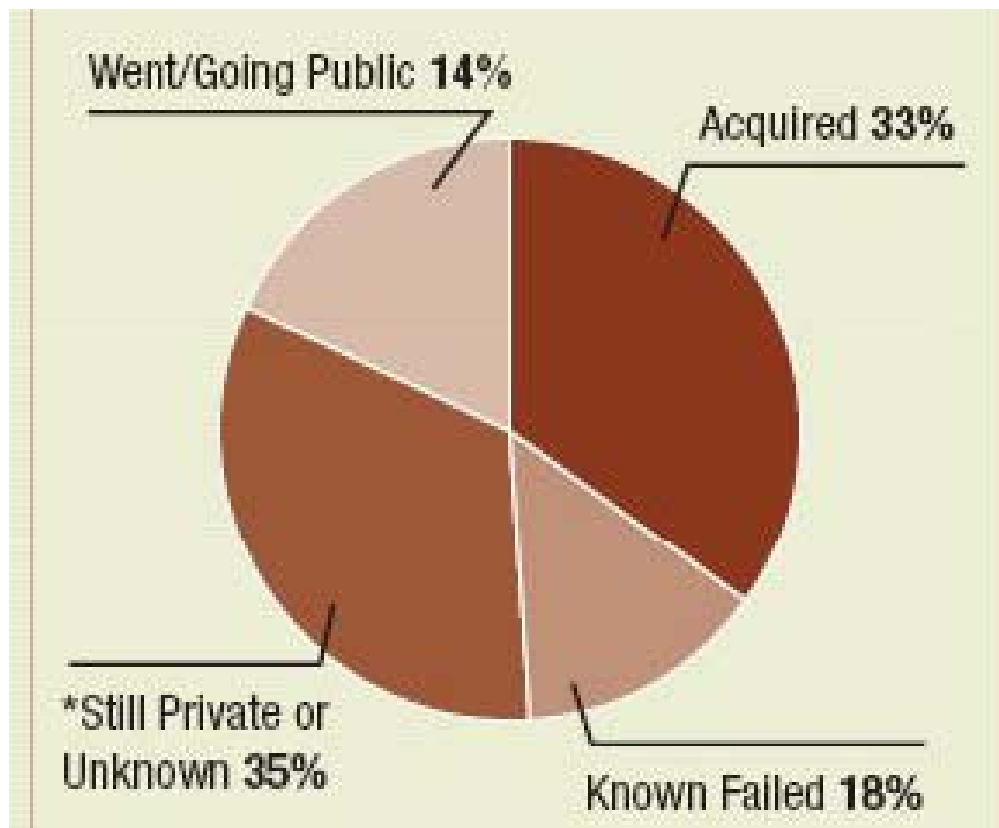


VC Backed Semi Companies Still Successful

Semiconductors still an exciting arena despite NRE costs

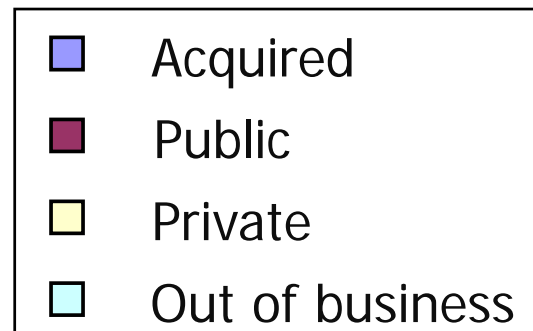
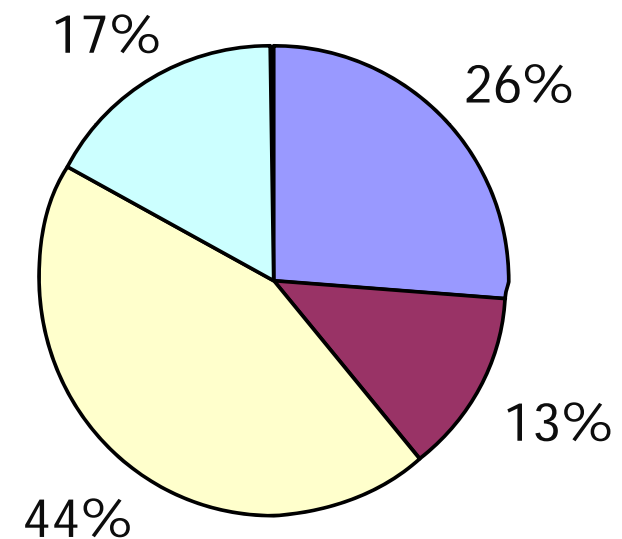
- Unclear whether SoC starts will really disappear

All sectors



Source: NVCA

Semiconductors/EDA



Source: VC databases

The Fabless Start-up Dilemma

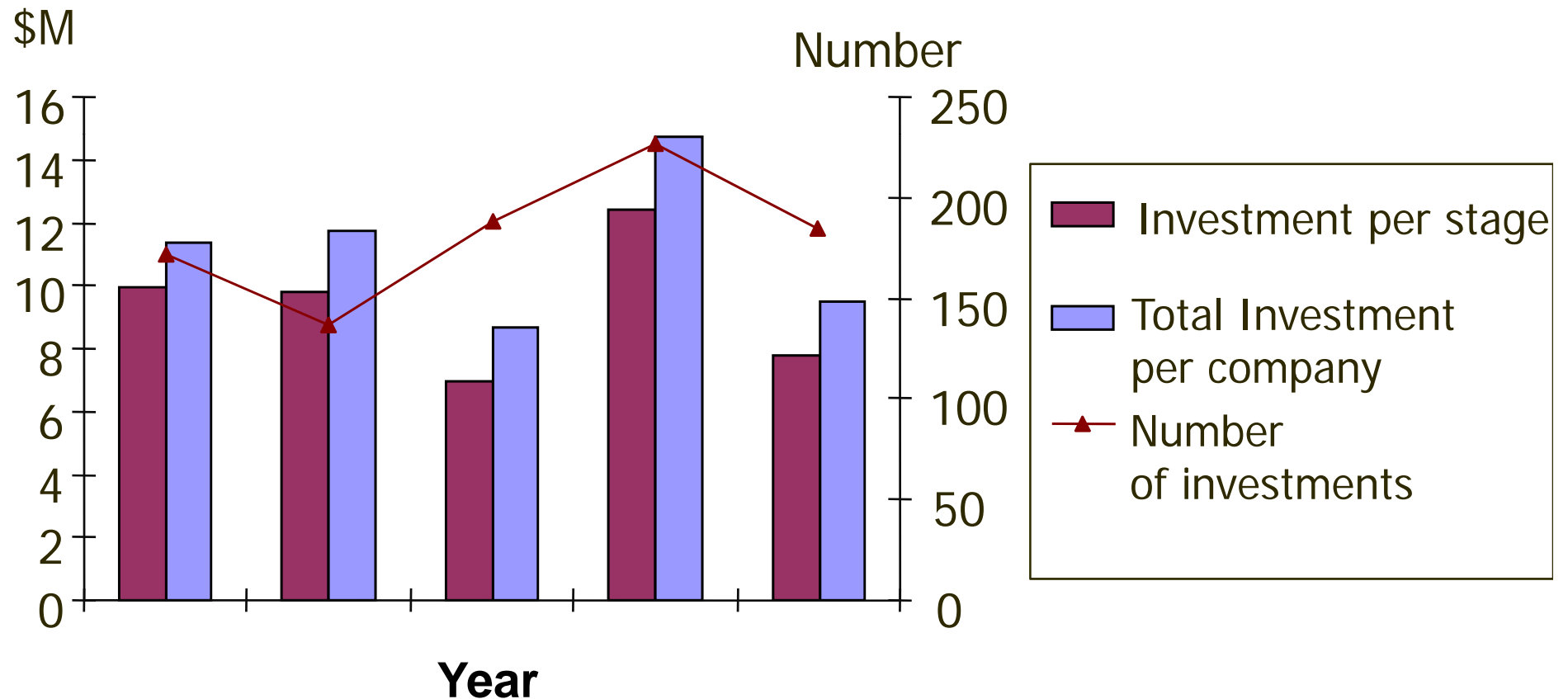
1. Money invested to build fabless SoC venture ~ \$50m+
2. Required average return after investment exit ~ 5X
3. Yearly sales to achieve such valuation ~ \$100m
4. Price per chip in competitive consumer market ~ \$10-20
5. Number of chips that need to be sold 10 million

...would you invest?

...and who will pay for design tools ?

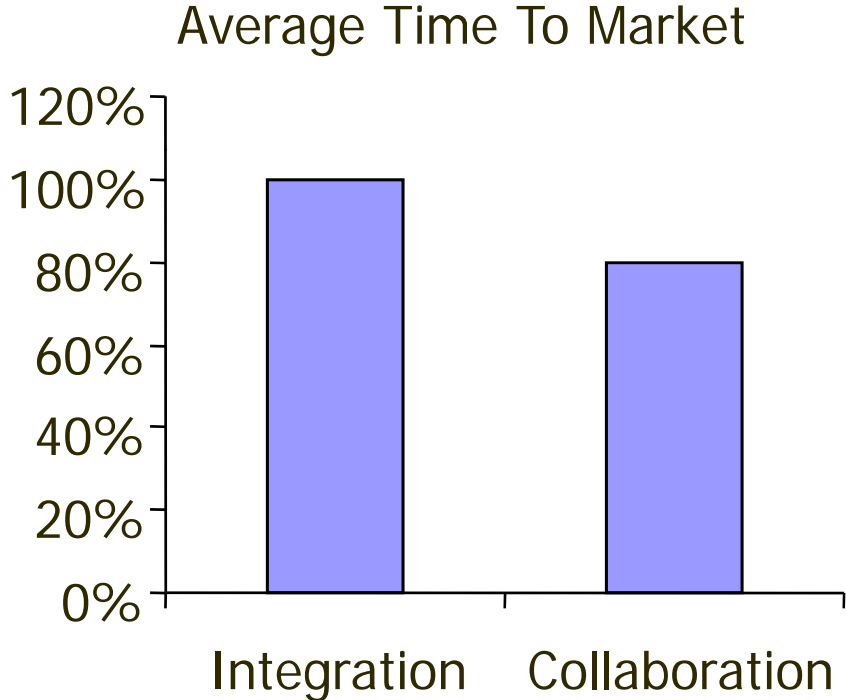
Emerging IC Ventures Still Focus on Efficiency

- **Per-company and per-stage investment not changing much**
 - Companies, spending per company, not changing dramatically

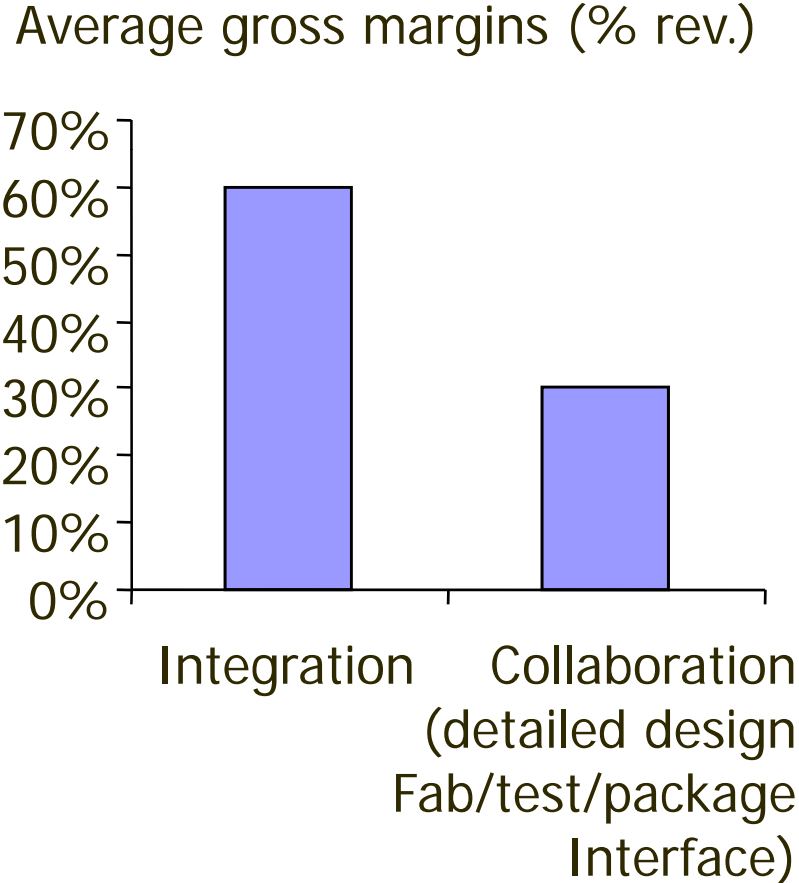


Trade-offs in The Global SoC Venture

The Benefit



The Trade-off



The Message

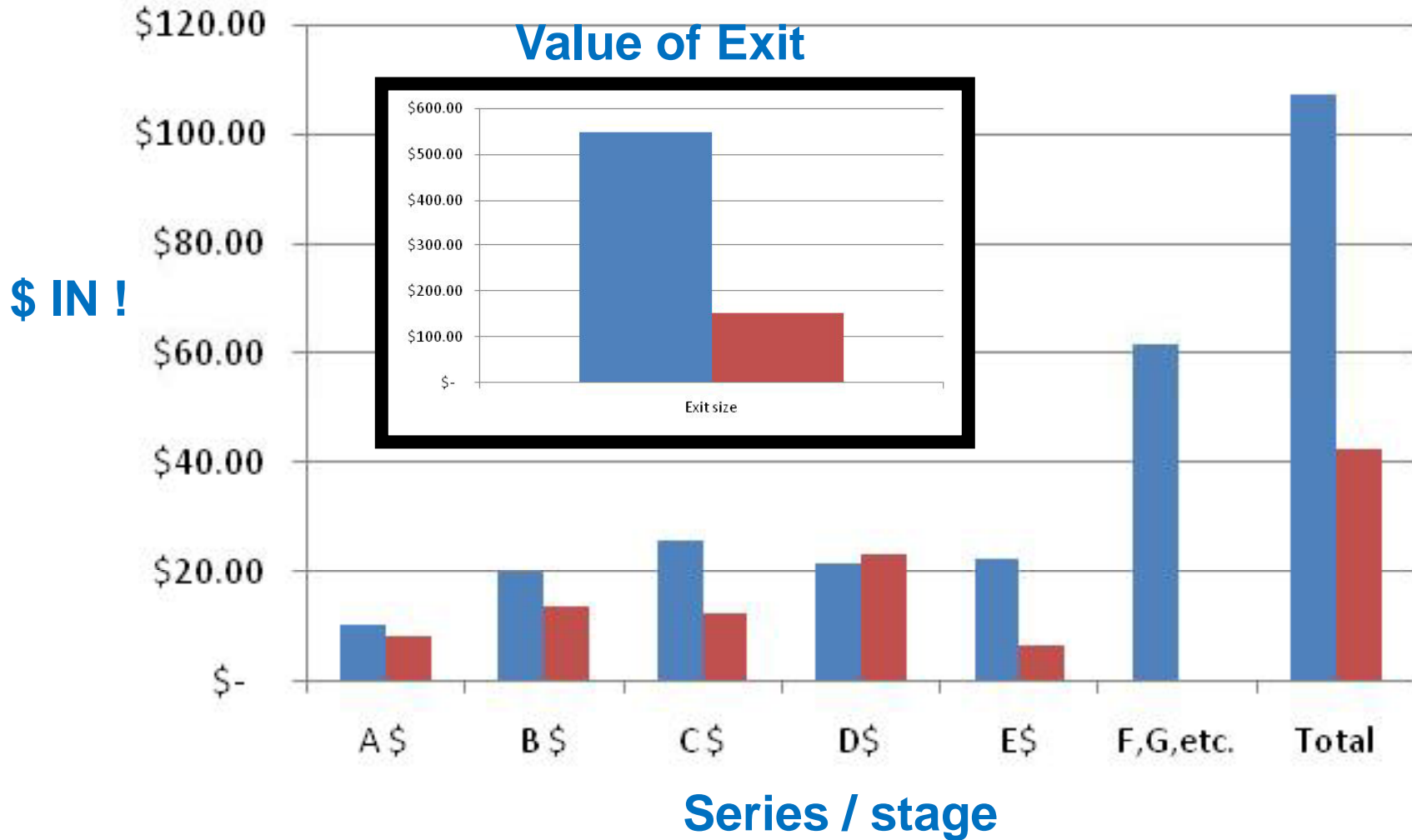
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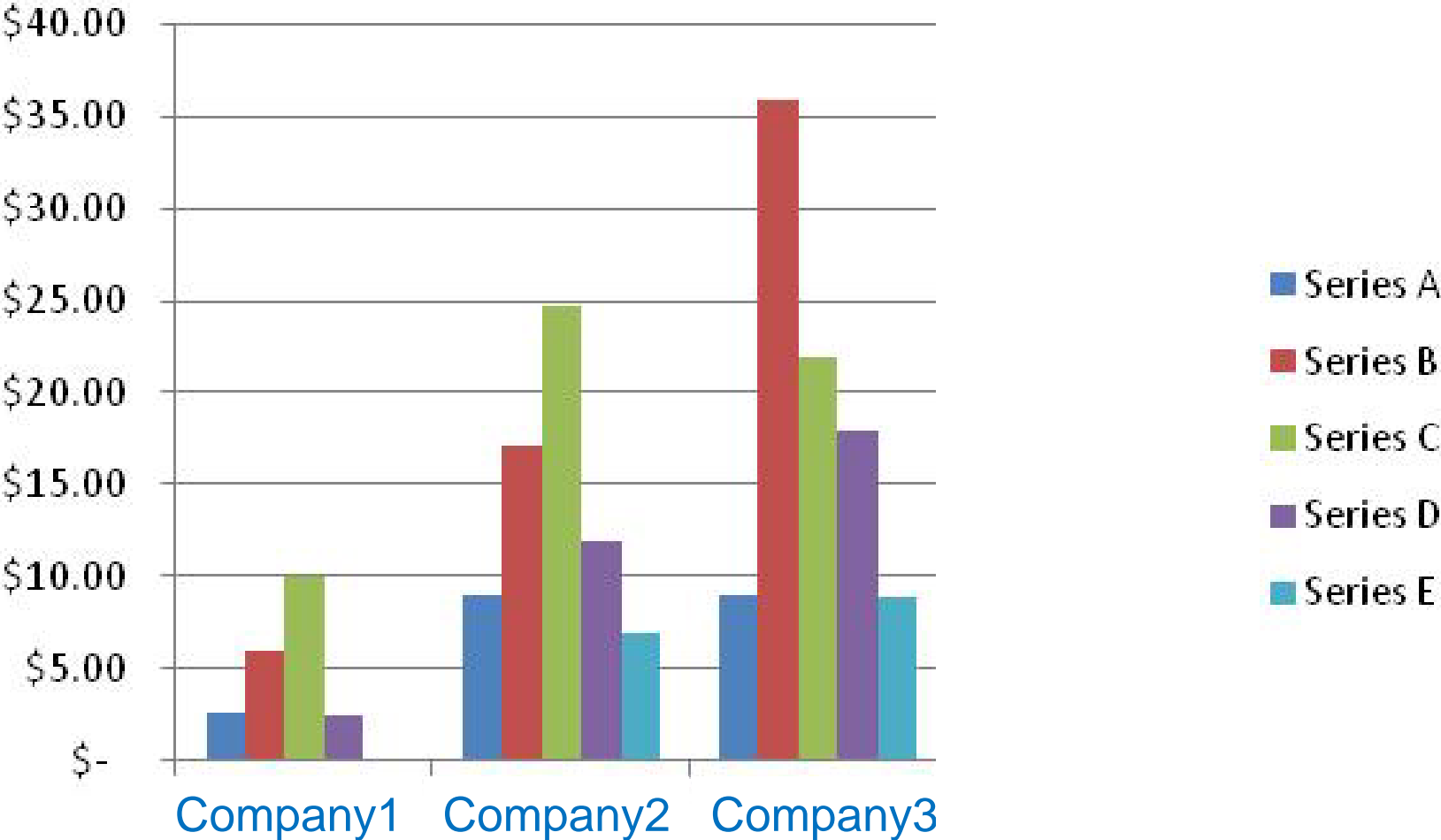
Exits are Everything in Venture Capital

IPO superior to M&A even as they require similar in \$



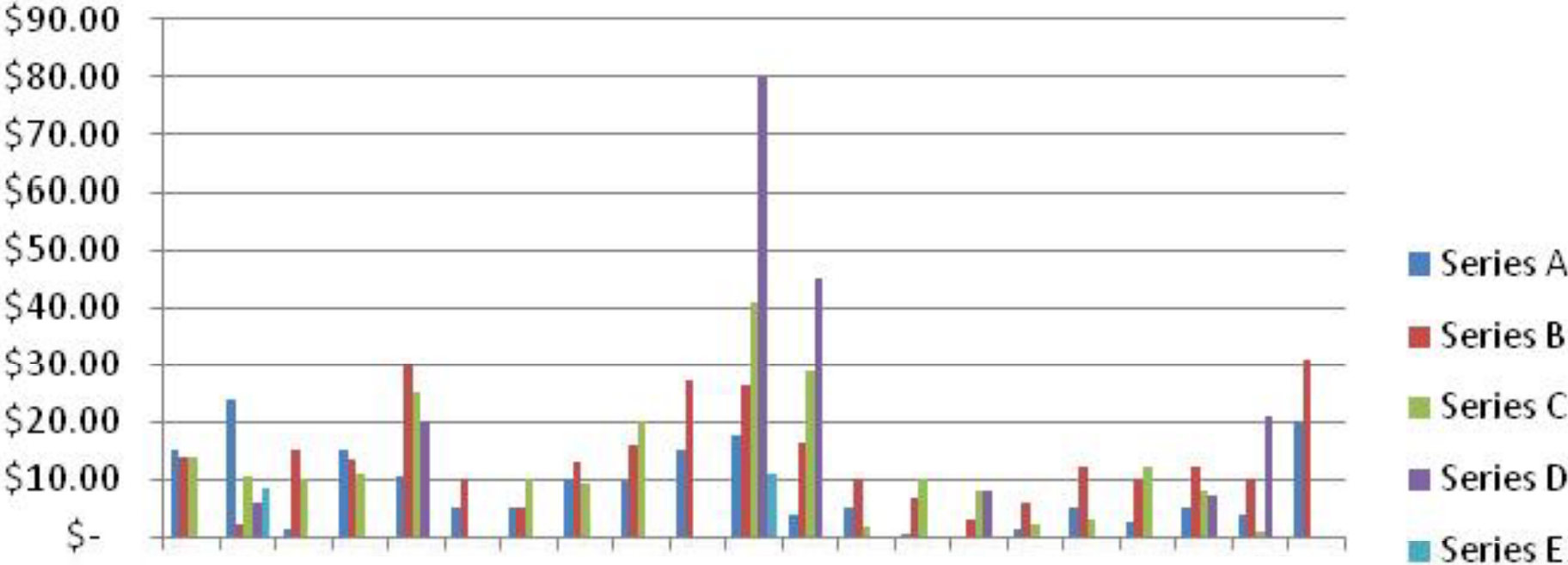
Exits are Everything in Venture Capital

Guess which company makes
chips, tools, boards, boxes



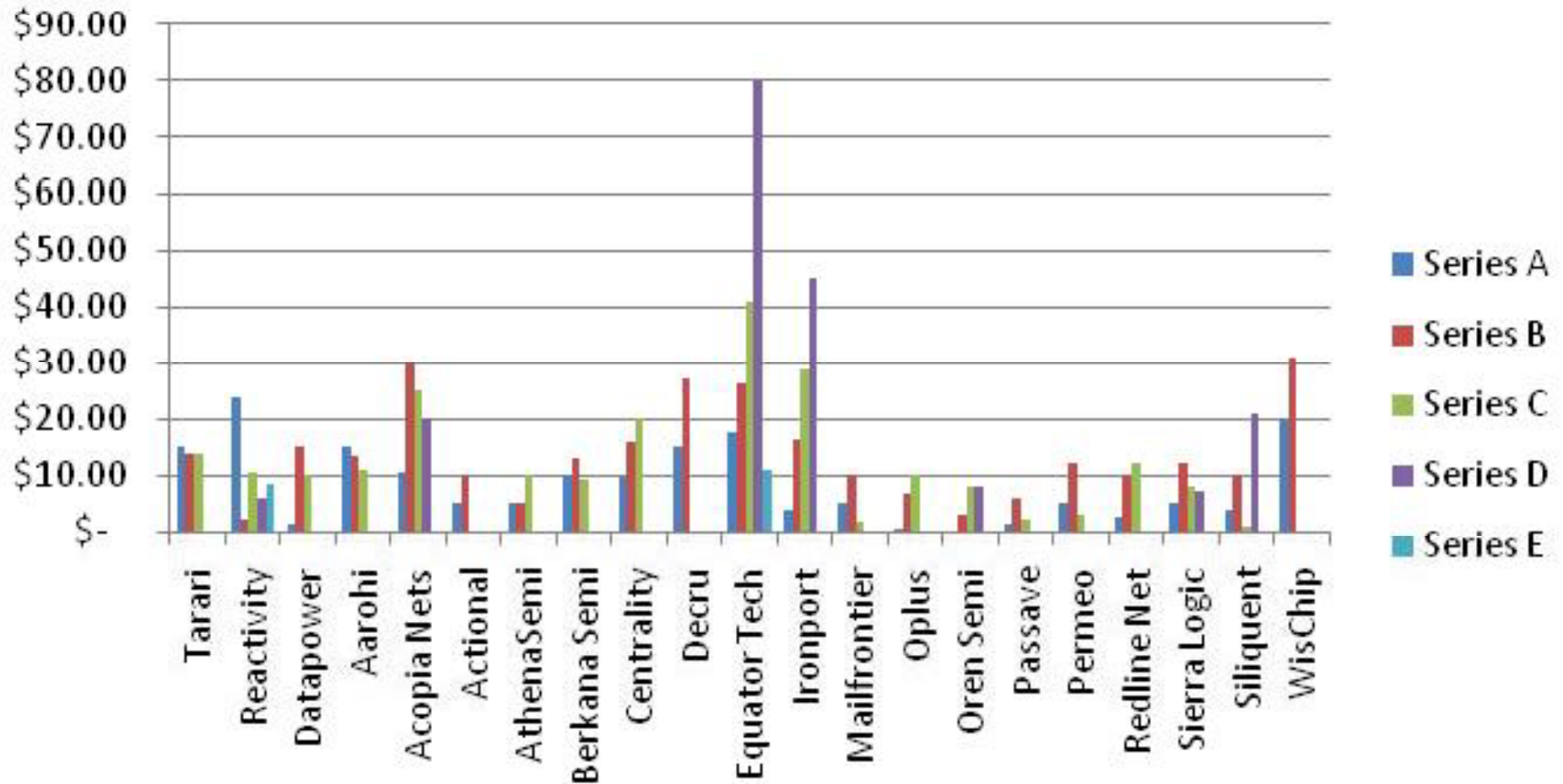
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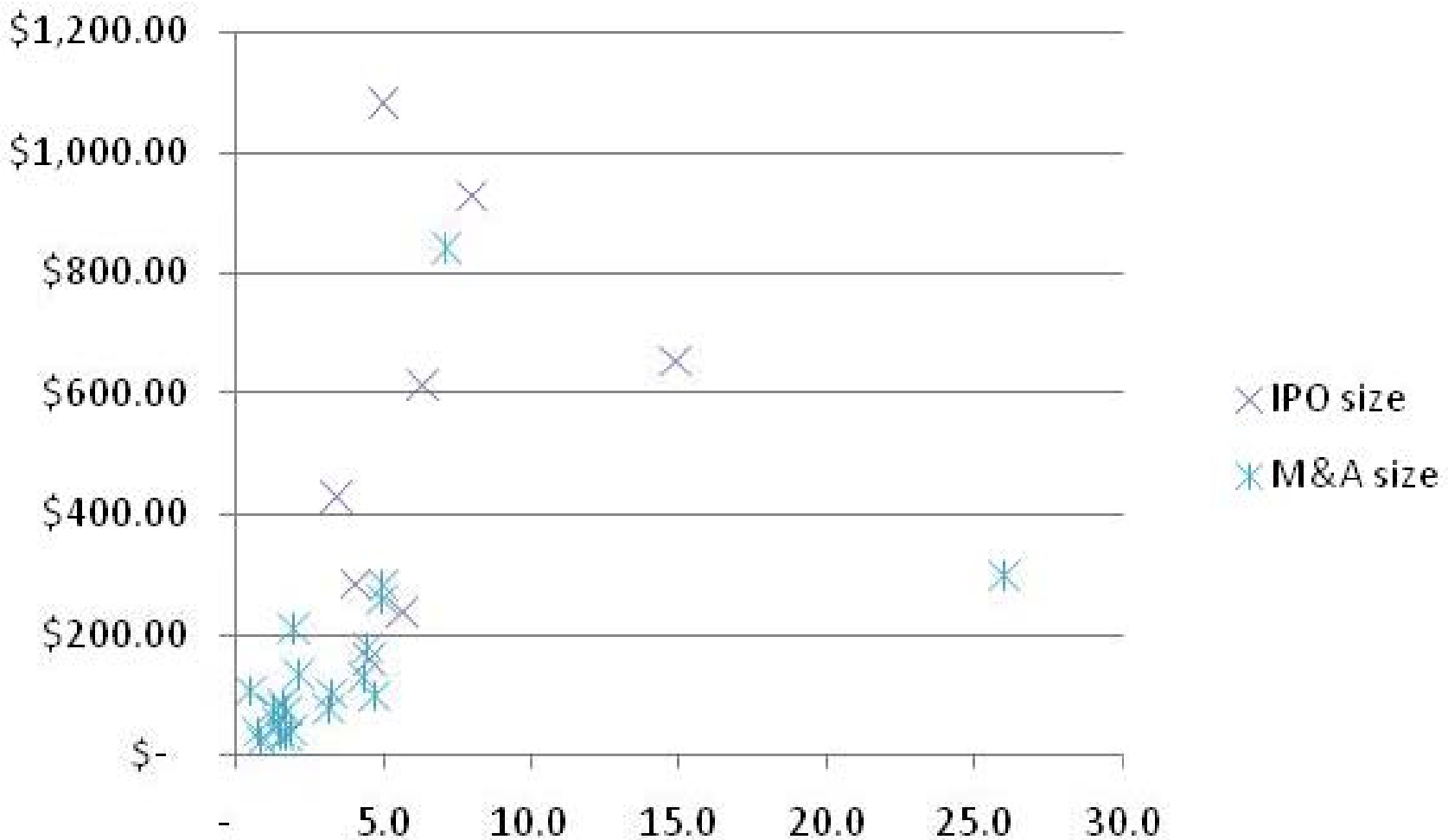
Exits are Everything in Venture Capital

While \$ invested can be low, exits can also be low



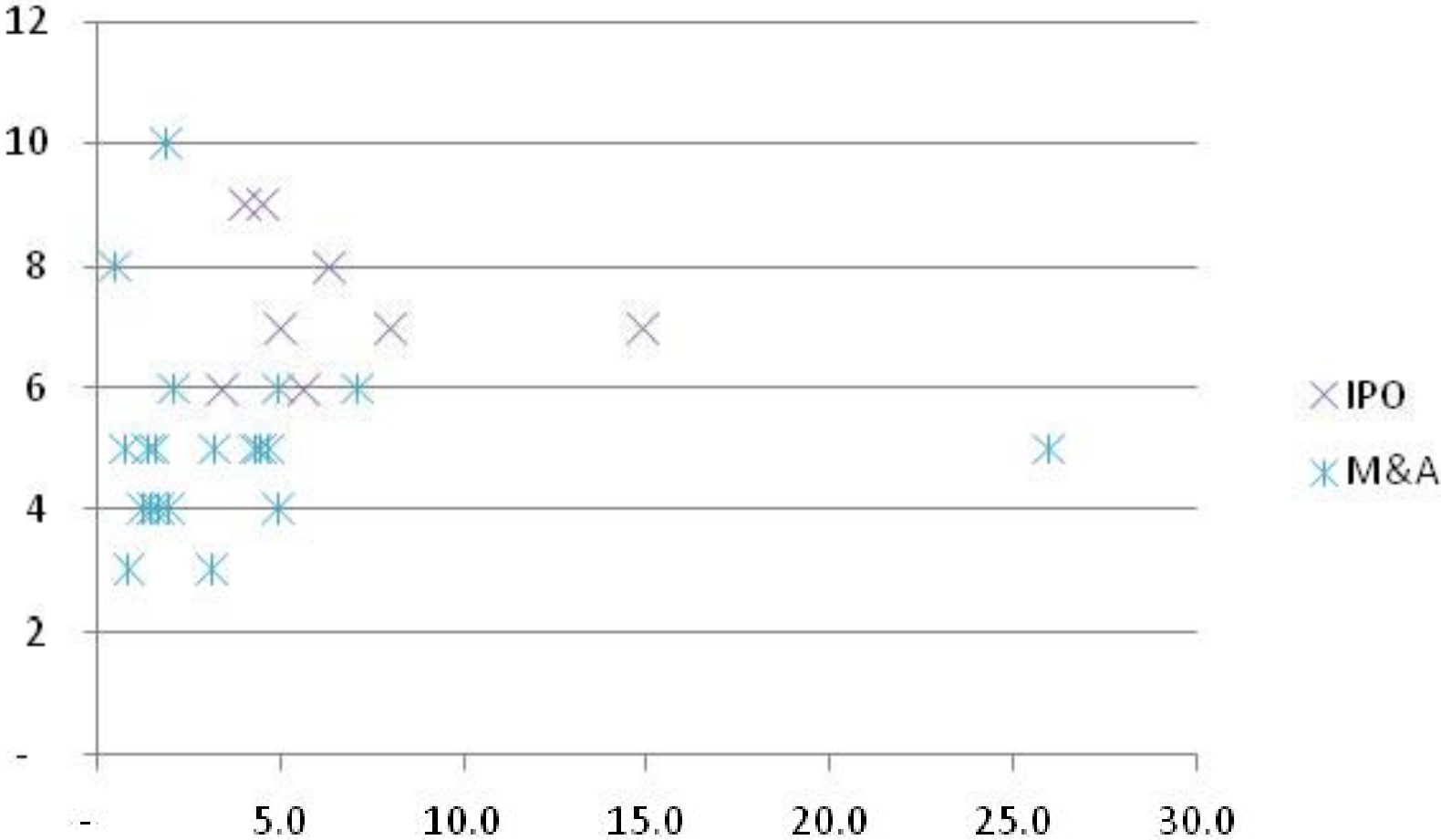
No, Exit *Multiples* are Really Everything in VC

Can get very high multiples without an IPO
-→ EDA can provide investment opportunities



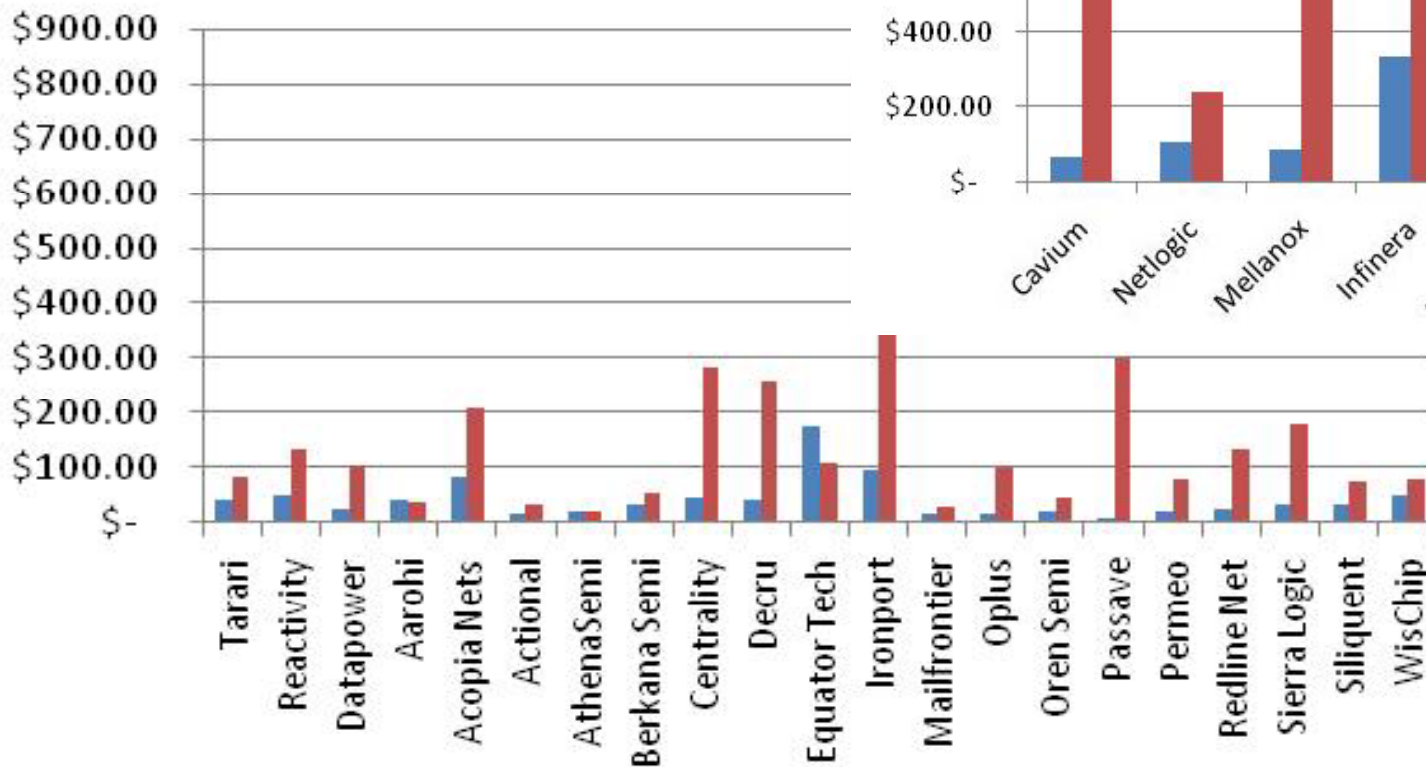
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Can get very high multiples without an IPO
→ AND IPOs take longer to happen

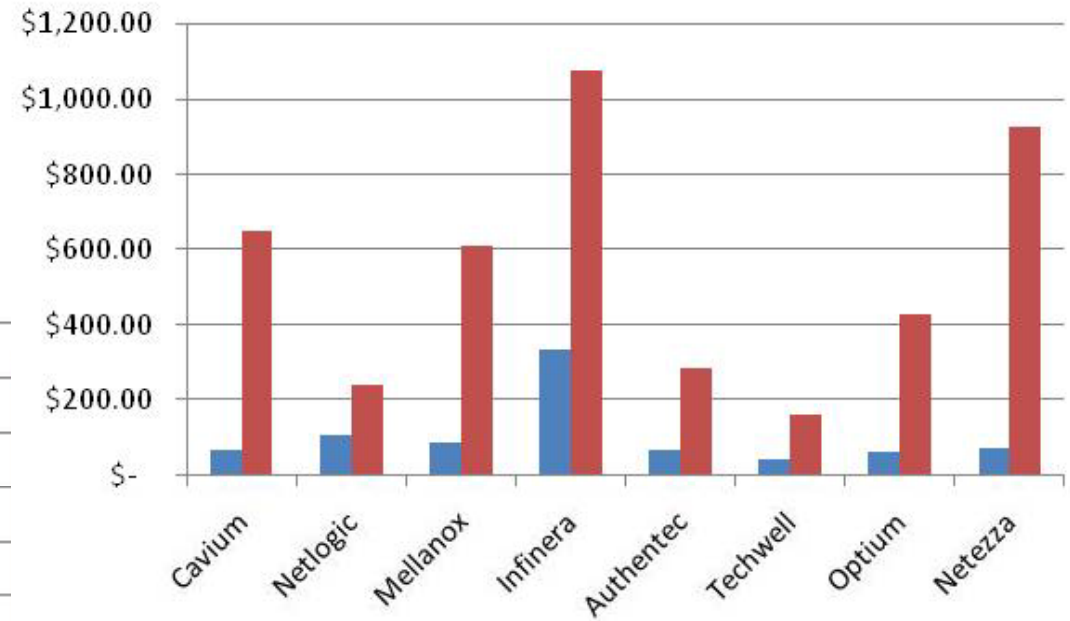


No, Exit *Multiples* are Really Everything in VC

M&A multiples...



IPO multiples...

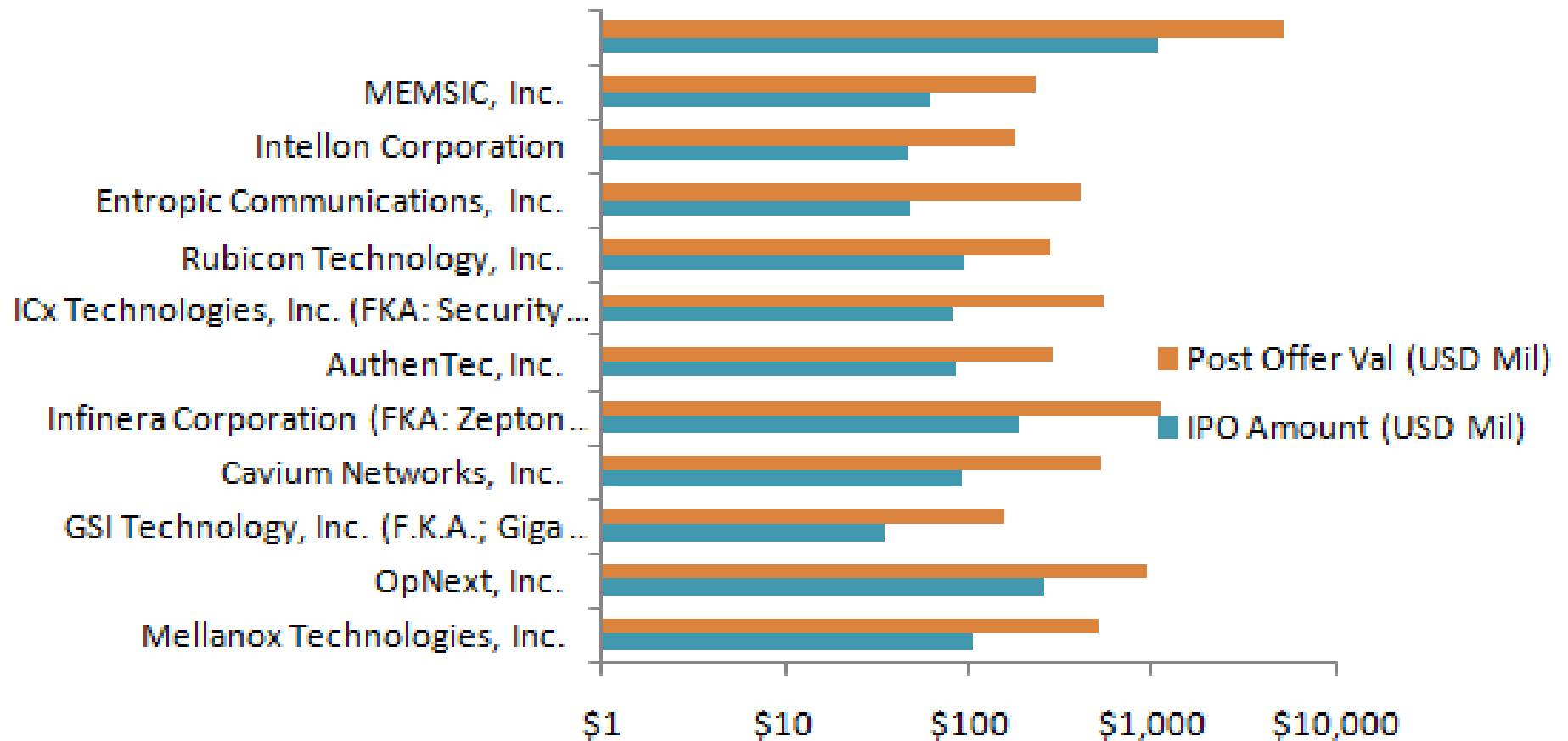


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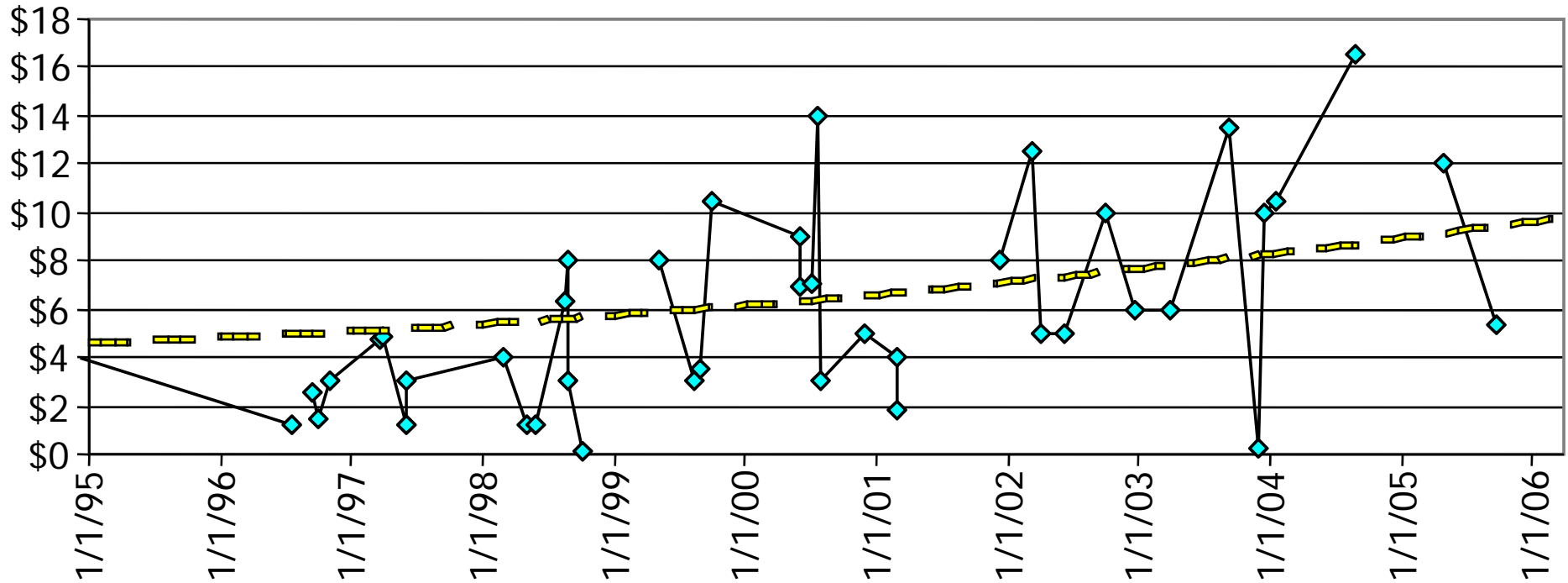
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- When was the last EDA IPO ?
 - *11 Semi IPOs in 2007*
 - *Mergers: Aprio, ClearShape, Chip Estimate, Simplicity, Savio...*



Emerging EDA Investment Sectors

High-level / System-level Design



- **Other topics?**

- *Most mergers in DFM, AMS, ESL*
- *Solar, MEMS, nanotech DA next ?*

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DISCUSSION