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Making Business Model Innovation More of a (Data) Science

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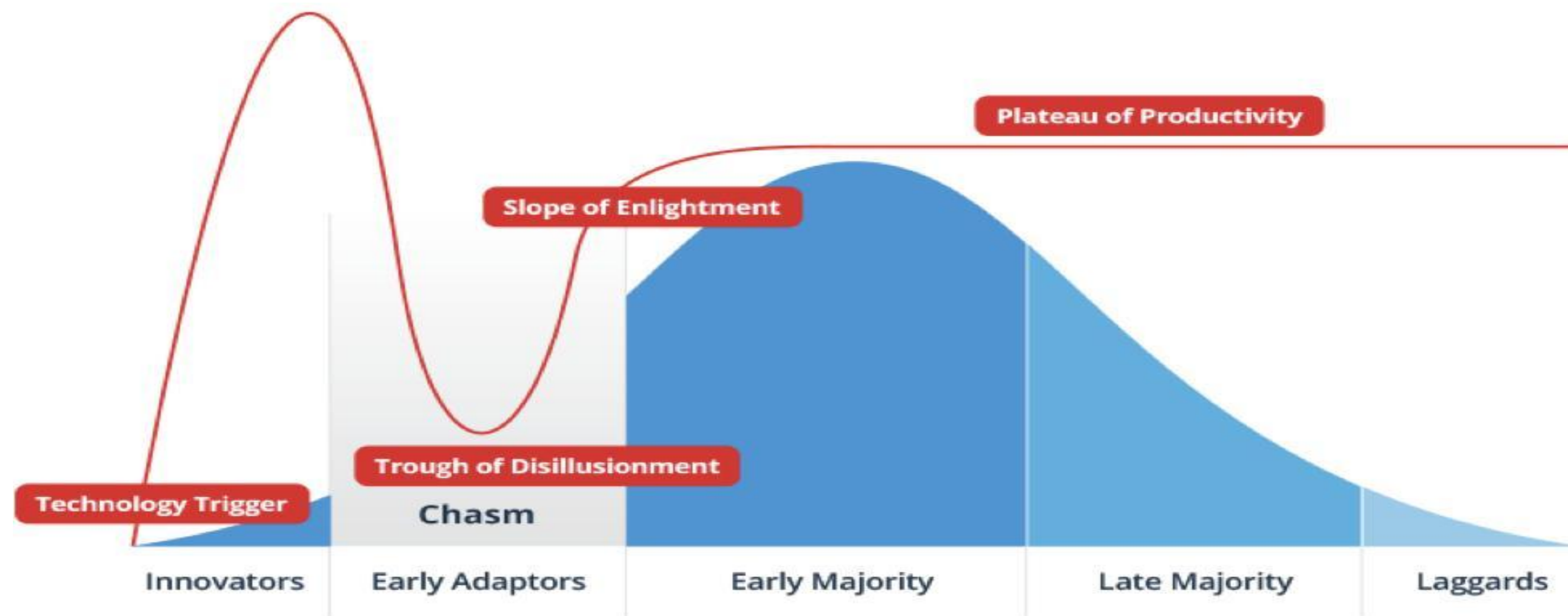


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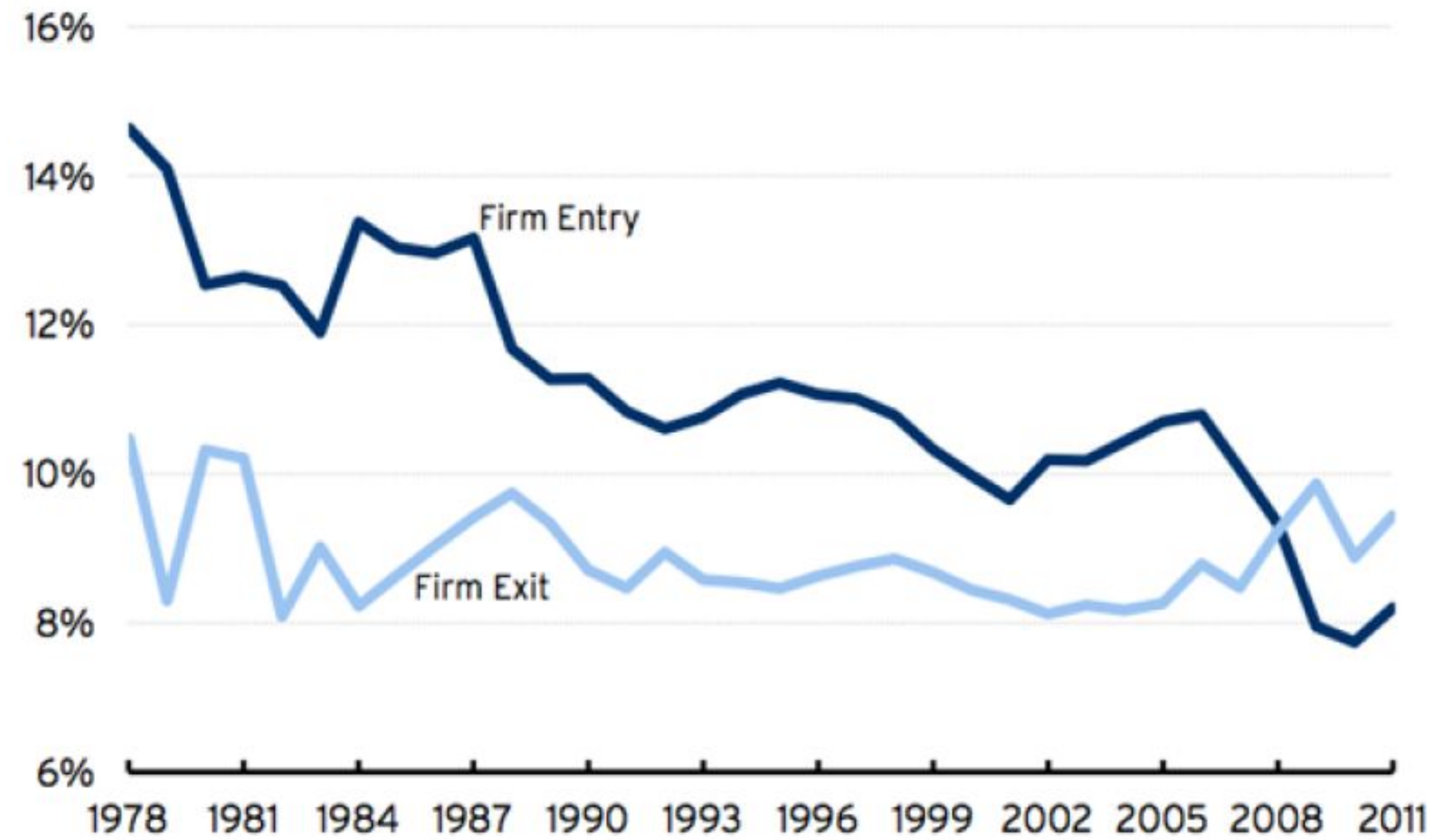
bit.ly/CSC-Strata

Innovation: new stuff with enduring value.



Treating innovation as an art is not working.

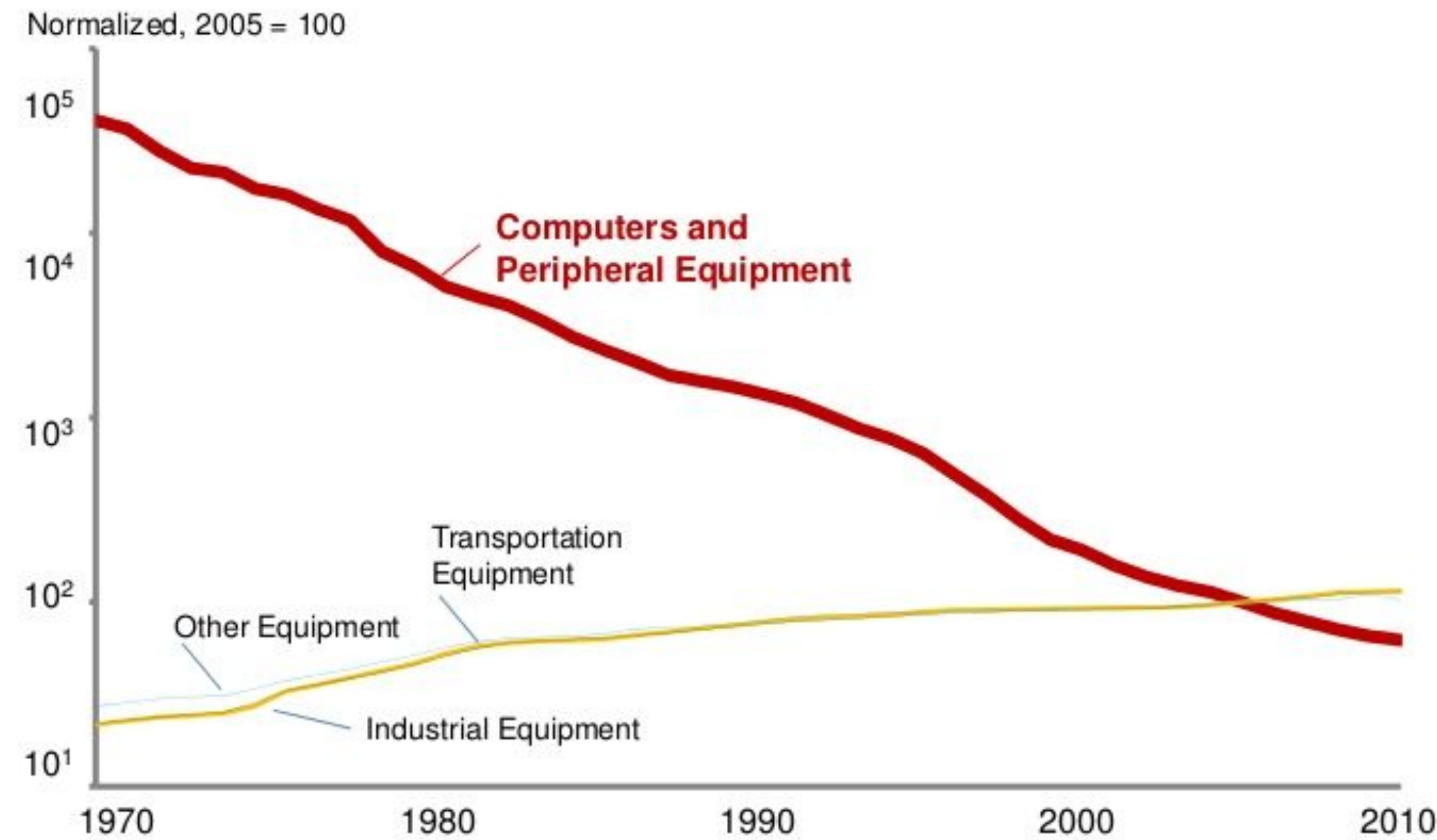
Firm Entry and Exit Rates in the U.S., 1978-2011



Source: U.S. Census Bureau, BDS; authors' calculations

We need a new innovation engine and better fuel.

Cost of computing coming down exponentially
US Asset Price Index, 1969 – 2010



Source: BEA, Andrew McAfee; Chart created and compiled by Accenture, 2012.
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The solution: computer simulation.



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**Innovation is actually a
scientific problem**

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We have to change the way we think of risk.



Step 1: Replace retrospective models.



Step 2: Build prescriptive models.

$$Rv(Co) = Rv (Cs (Vp (Kp (Co))))$$

Operational Efficiency:
 $Vp(Kp) + Rnd$

What if I found a faster way to scoop the ice?

Buyer Behavior:
 $Cs(Vp) + Rnd$

What if it gets really hot?



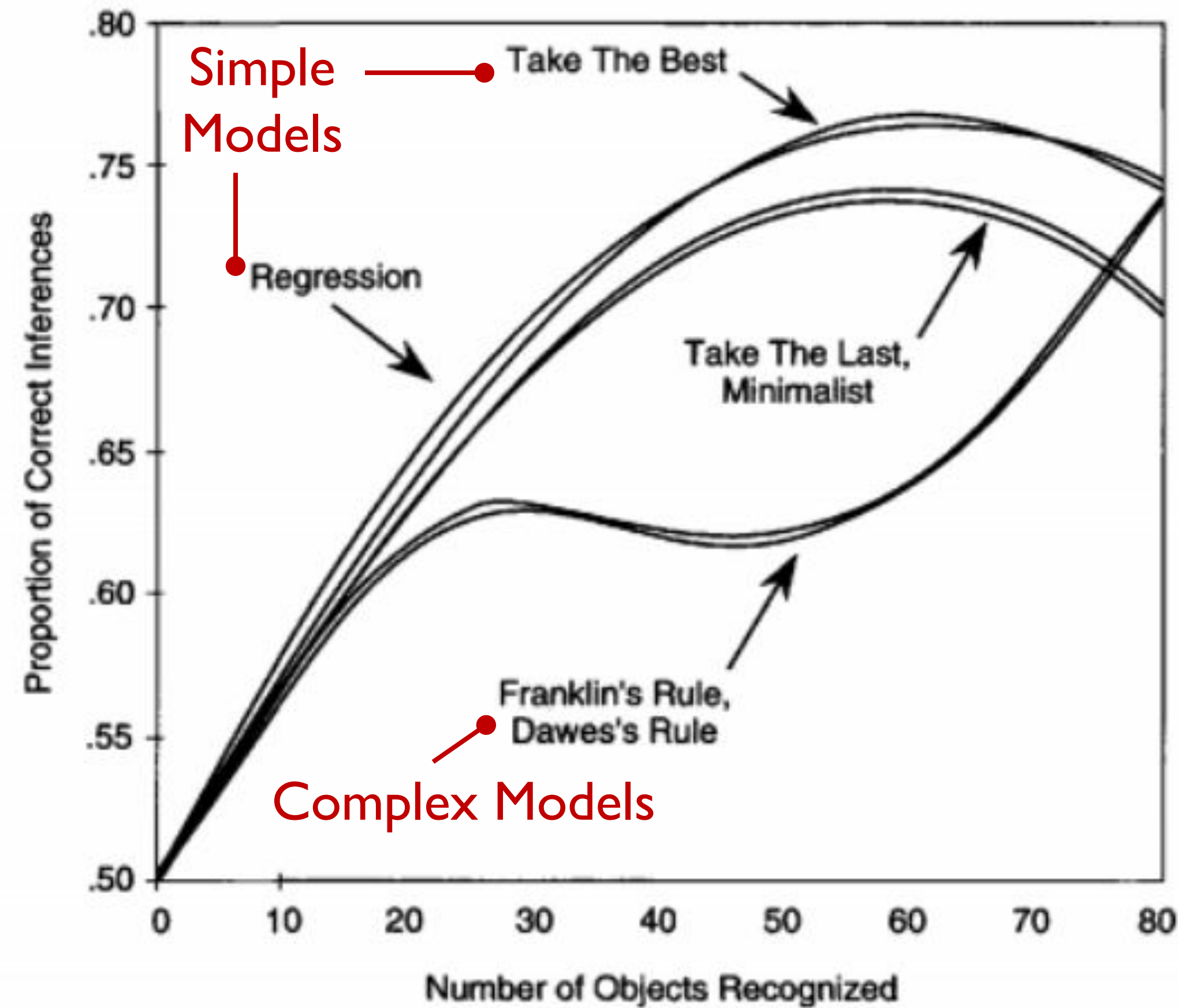
Market Potential:
 $Rv(Cs) + Rnd$

What if customer lines get long?

Partner Efficiency:
 $Kp(Co) + Rnd$

What if my supplier runs low on lemons?

Step 3: Believe in simple.



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Let's use a scientific approach to innovate at Blockbuster

(Circa 1998)

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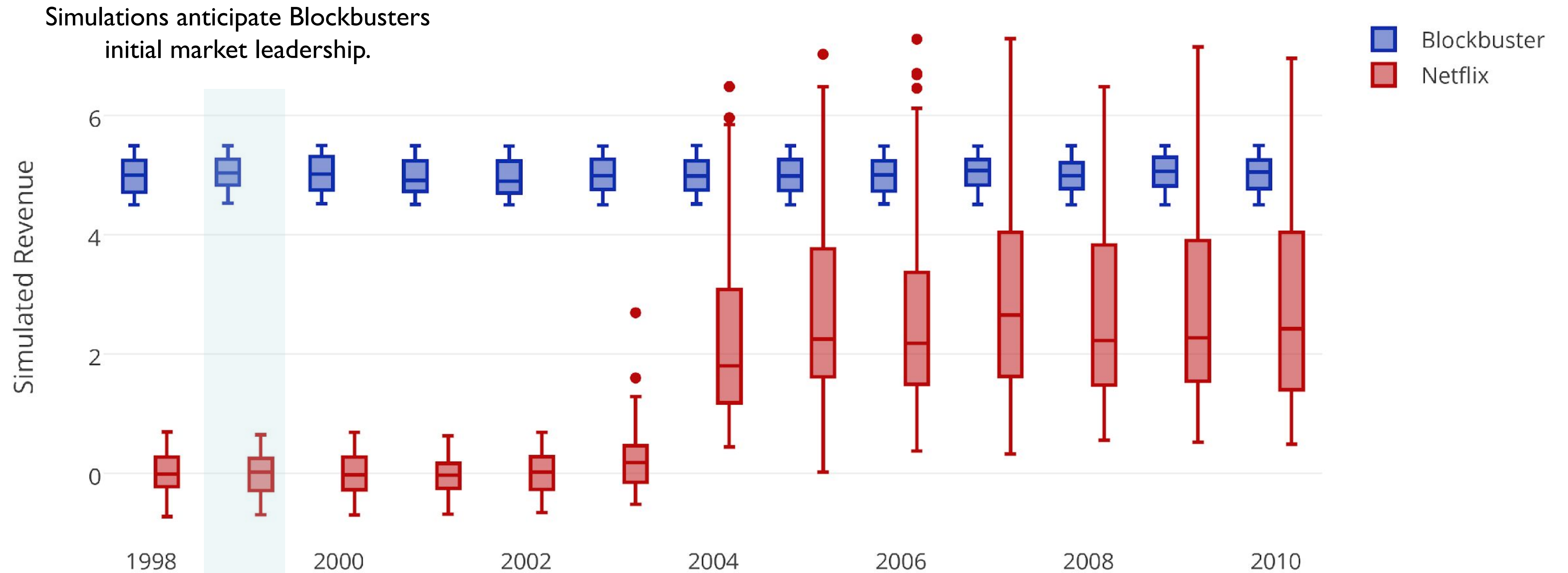
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I built a simple prescriptive model.

Equation	Blockbuster	Netflix
Market Potential	Large revenue gain after a critical mass of customers	Small revenue gain on each customer
Partner Efficiency	Efficiency after partner experience	Efficiency at platform deployment
Operational Efficiency	Minimum resource threshold required to become operational	Minimum resource threshold required to become operational
Buyer Behavior	Mostly new release rentals	Mostly niche rentals
Competition	Profit determines growth and future fitness	

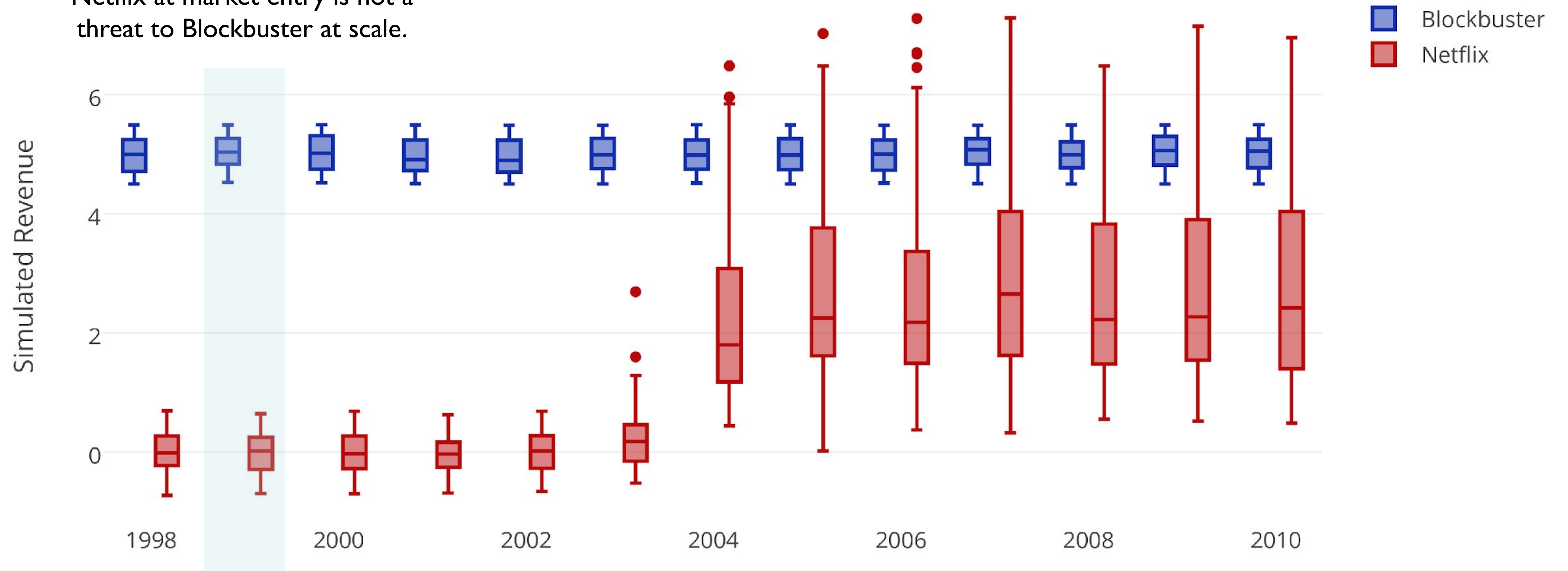
Should we bother with video-by-mail?

1999: Blockbuster is big.

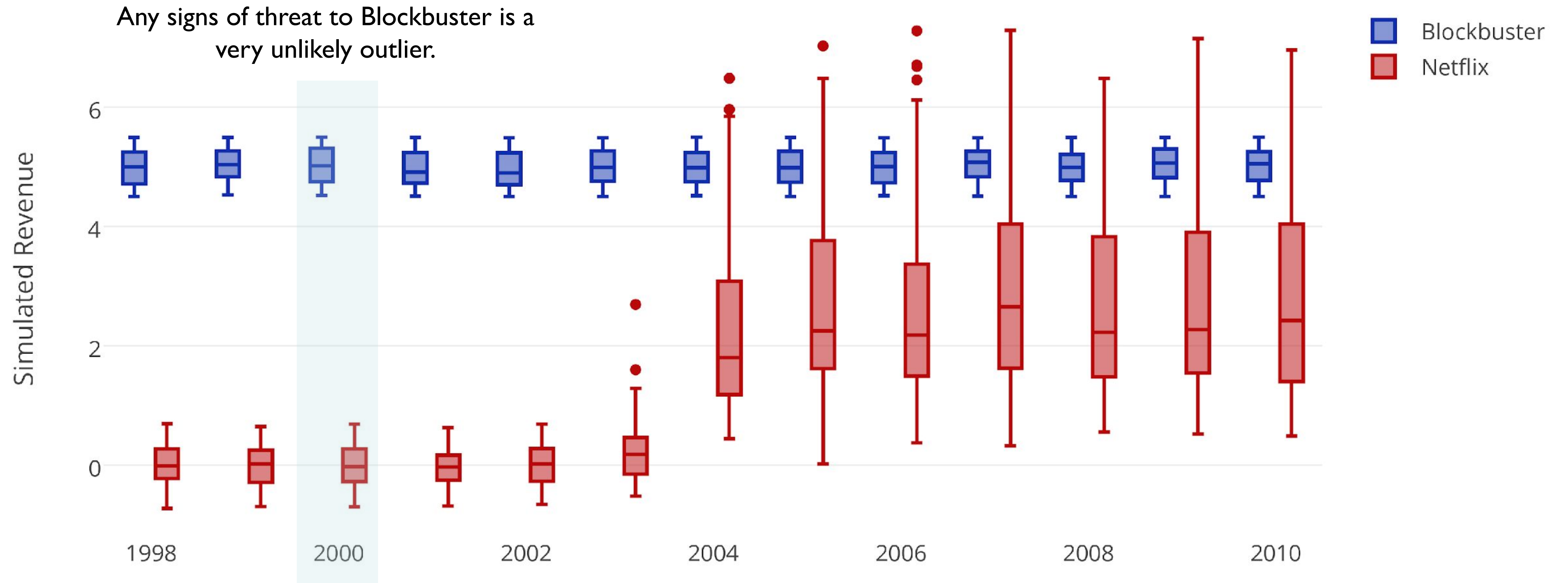


1999: Netflix is small.

Netflix at market entry is not a threat to Blockbuster at scale.

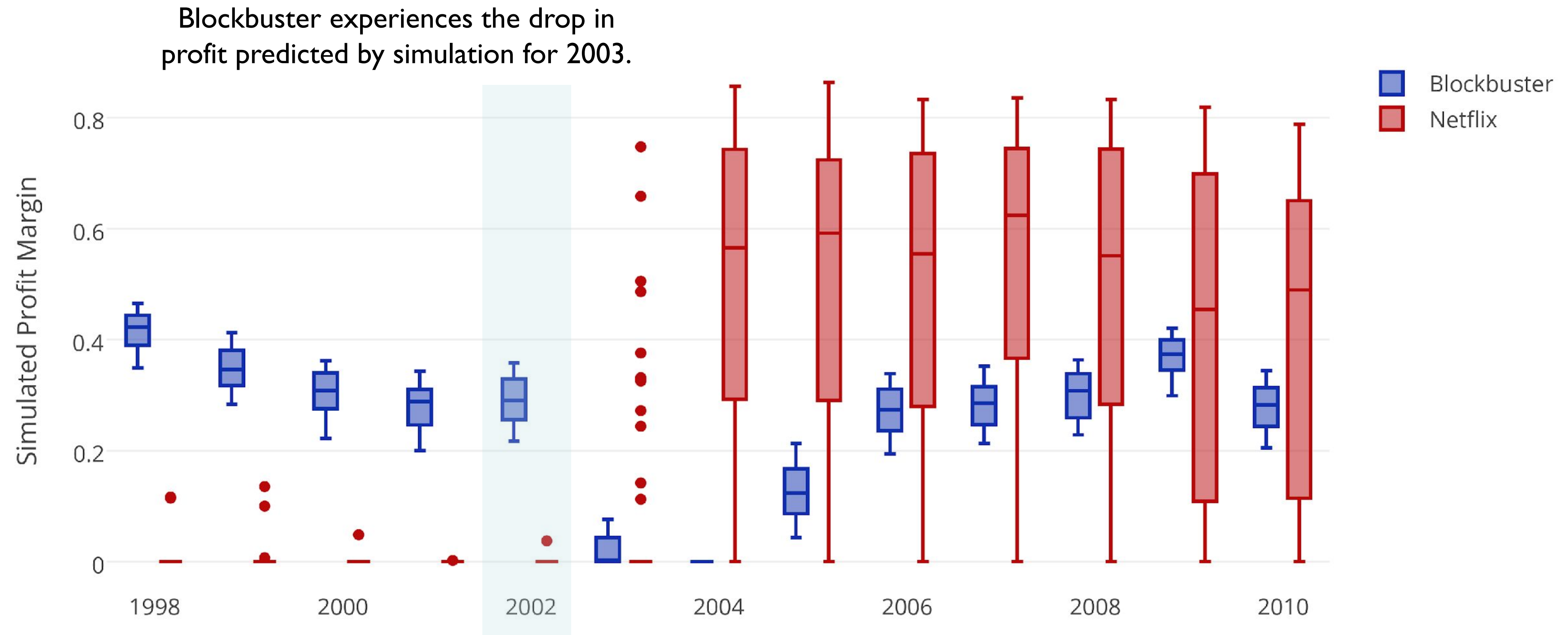


2000: Netflix is not an obvious threat.

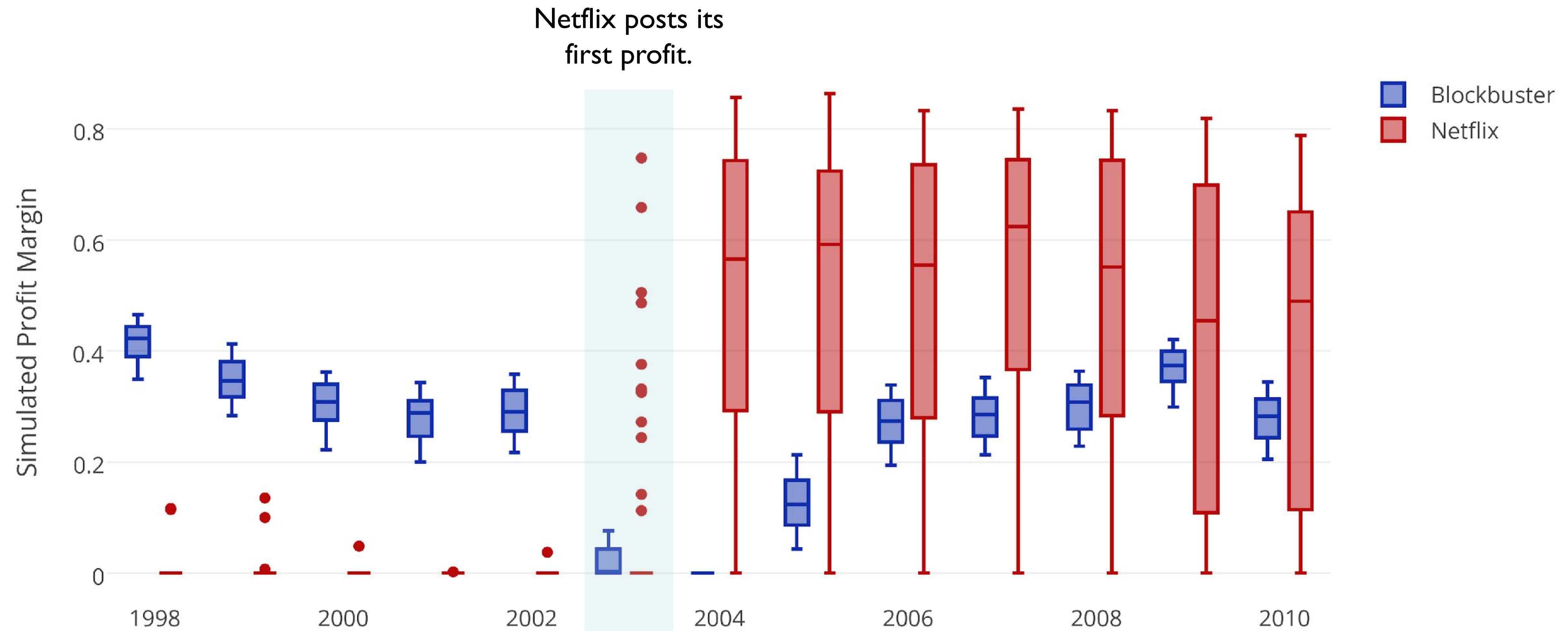


But there is risk ahead.

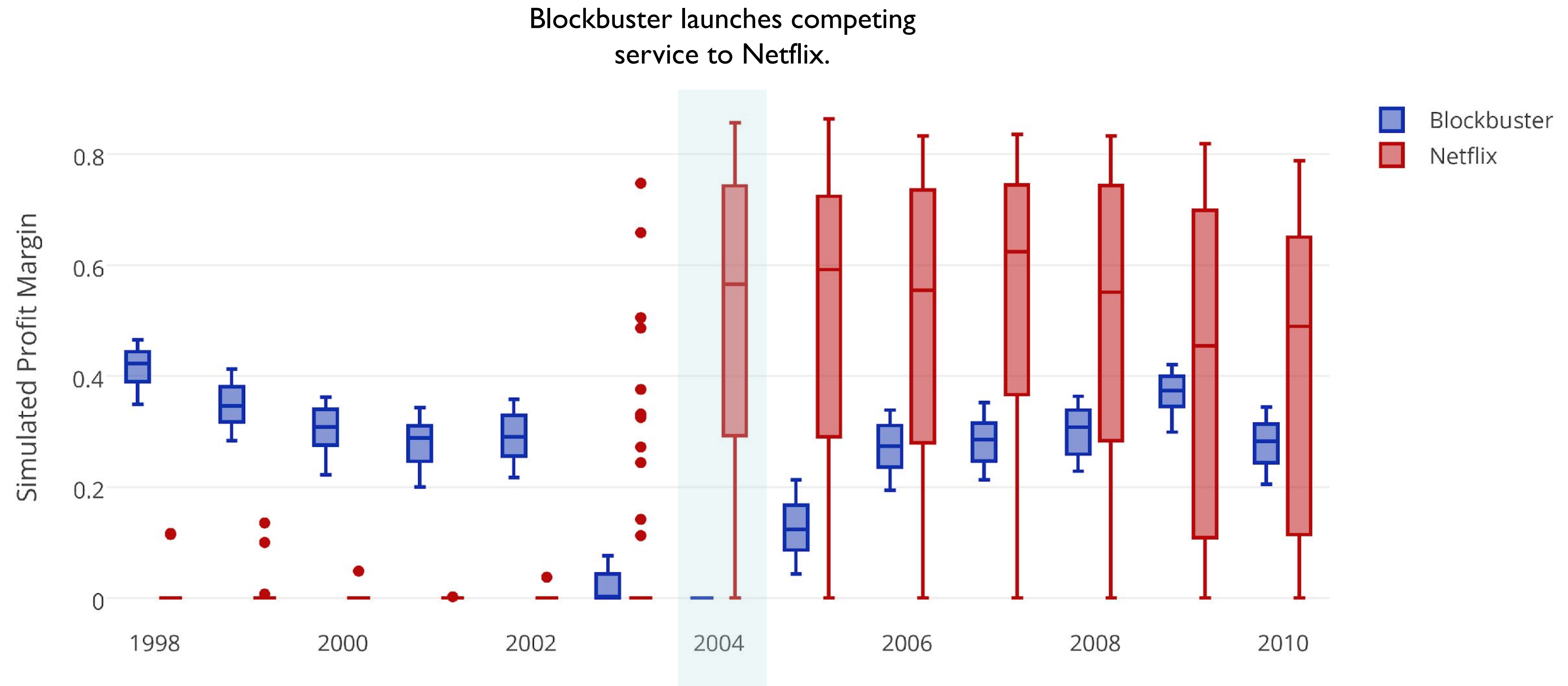
2002: Blockbuster's margins fall.



2003: Netflix threat grows.

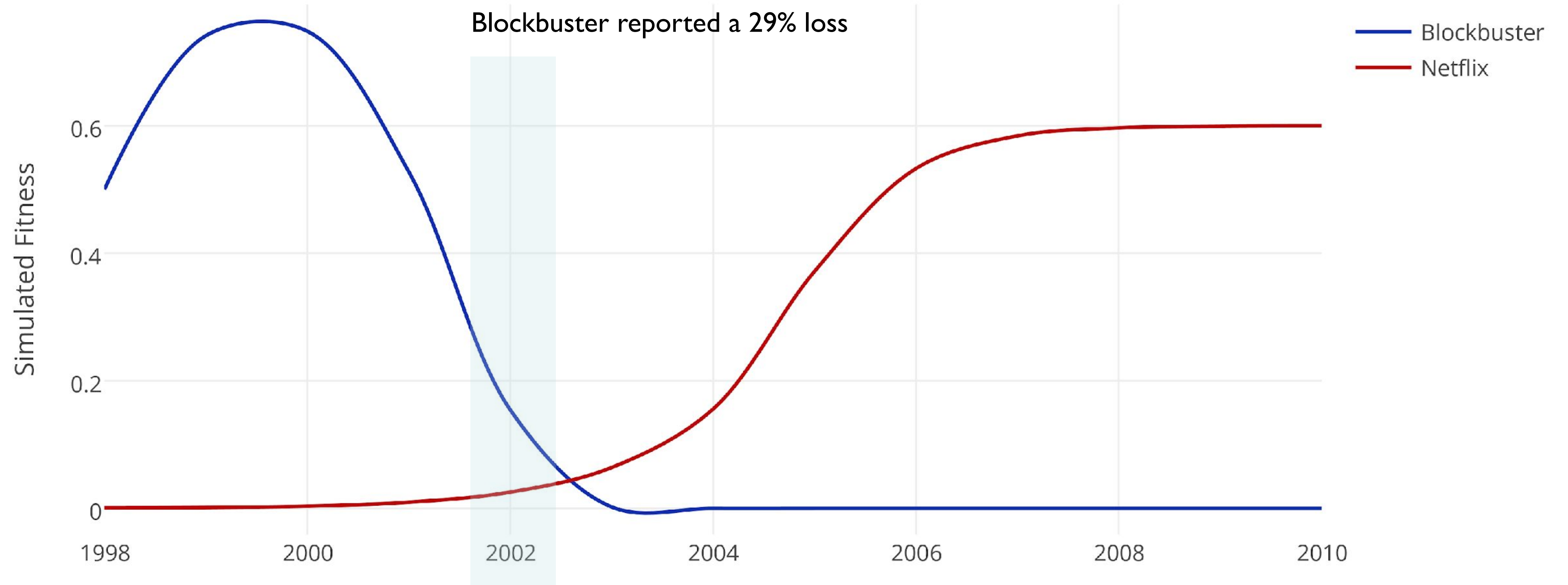


2004: The threat becomes obvious.

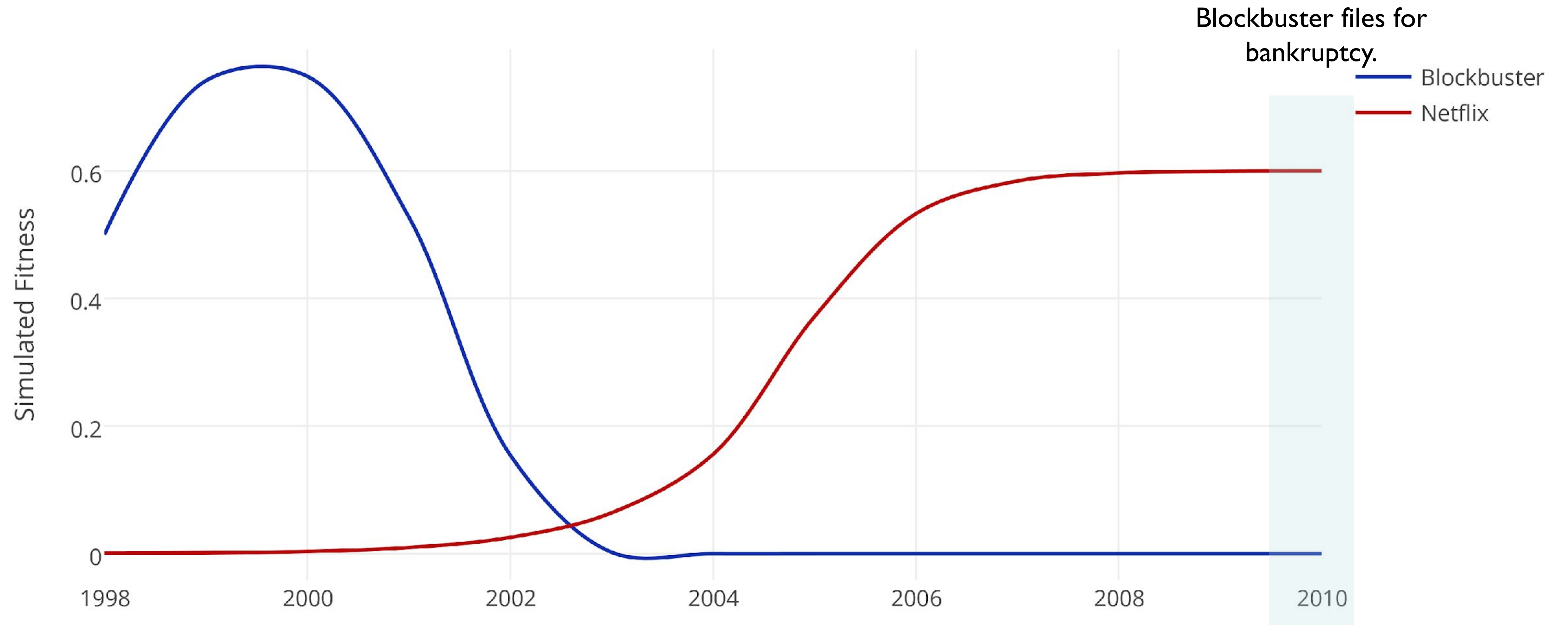


Video-by-mail threat will be fatal.

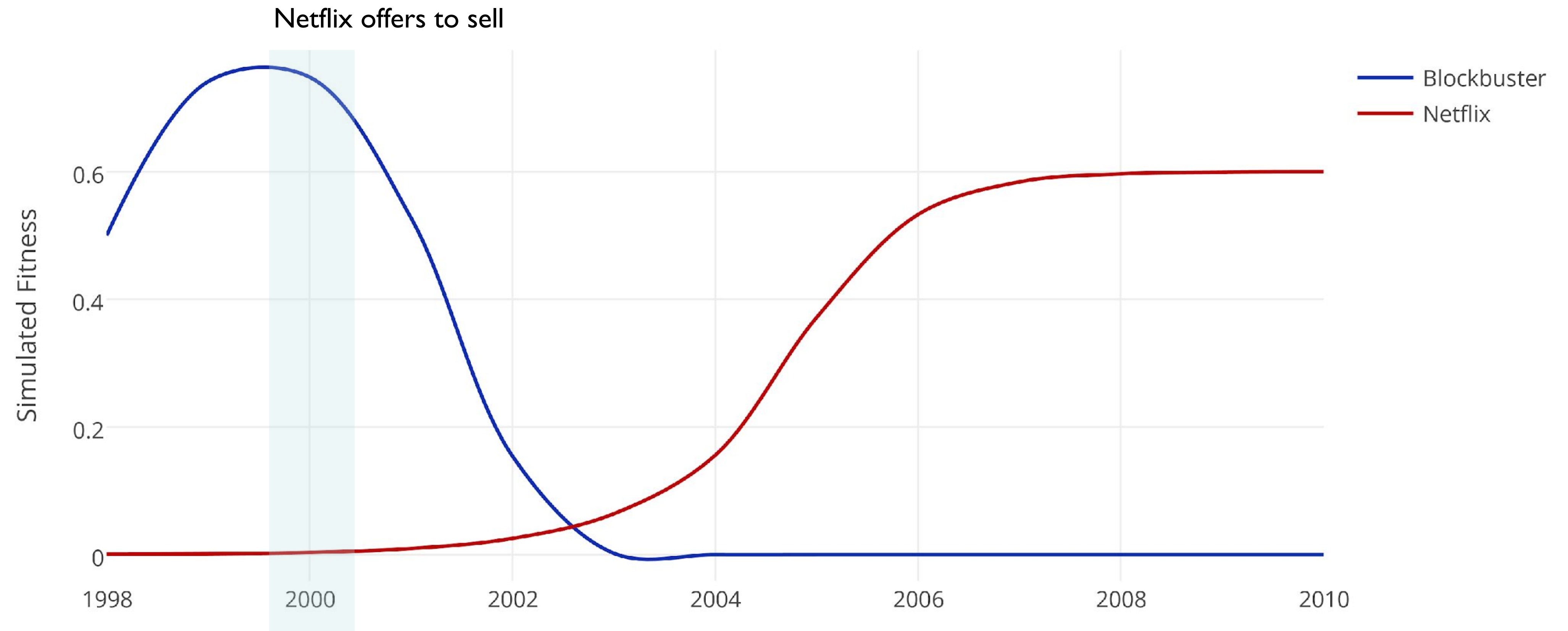
2005: Blockbuster begins reducing stores.



2010: Blockbuster is bankrupt.



We've found a meaningful innovation.



**That's business model
innovation as a (data) science.**

The innovation machine is hungry!



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