

Simplistic Financial Computations for System Architects.

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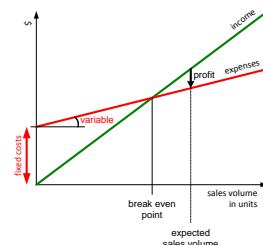
Abstract

This document explains how simple financial estimates can be made by system architects. These simplistic estimates are useful for an architect to perform sanity checks on proposals and to obtain understanding of the financial impact of proposals. Note that architects will never have full fledged financial controller know how and skills. These estimates are zero order models, but real business decisions will have to be founded on more substantial financial proposals.

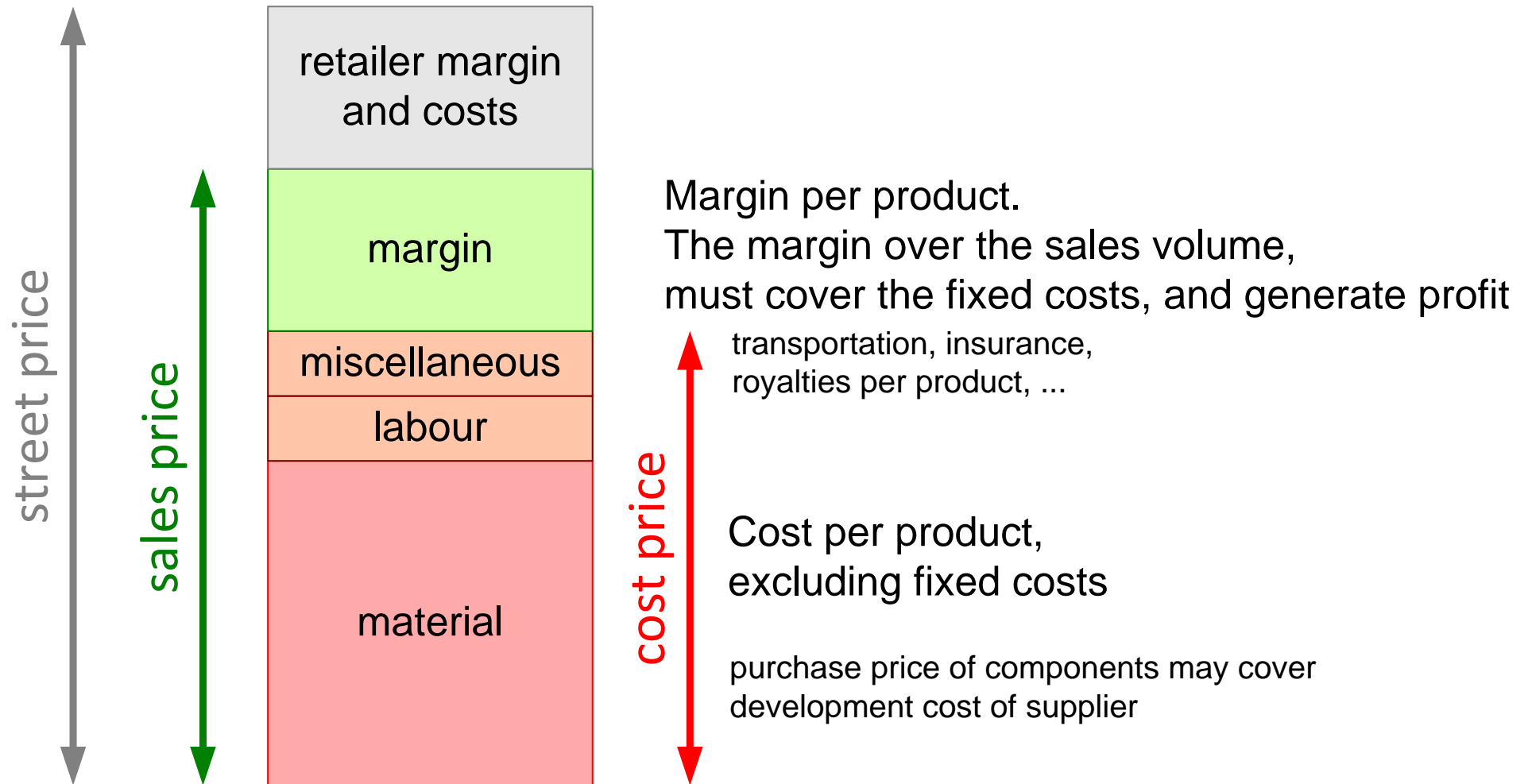
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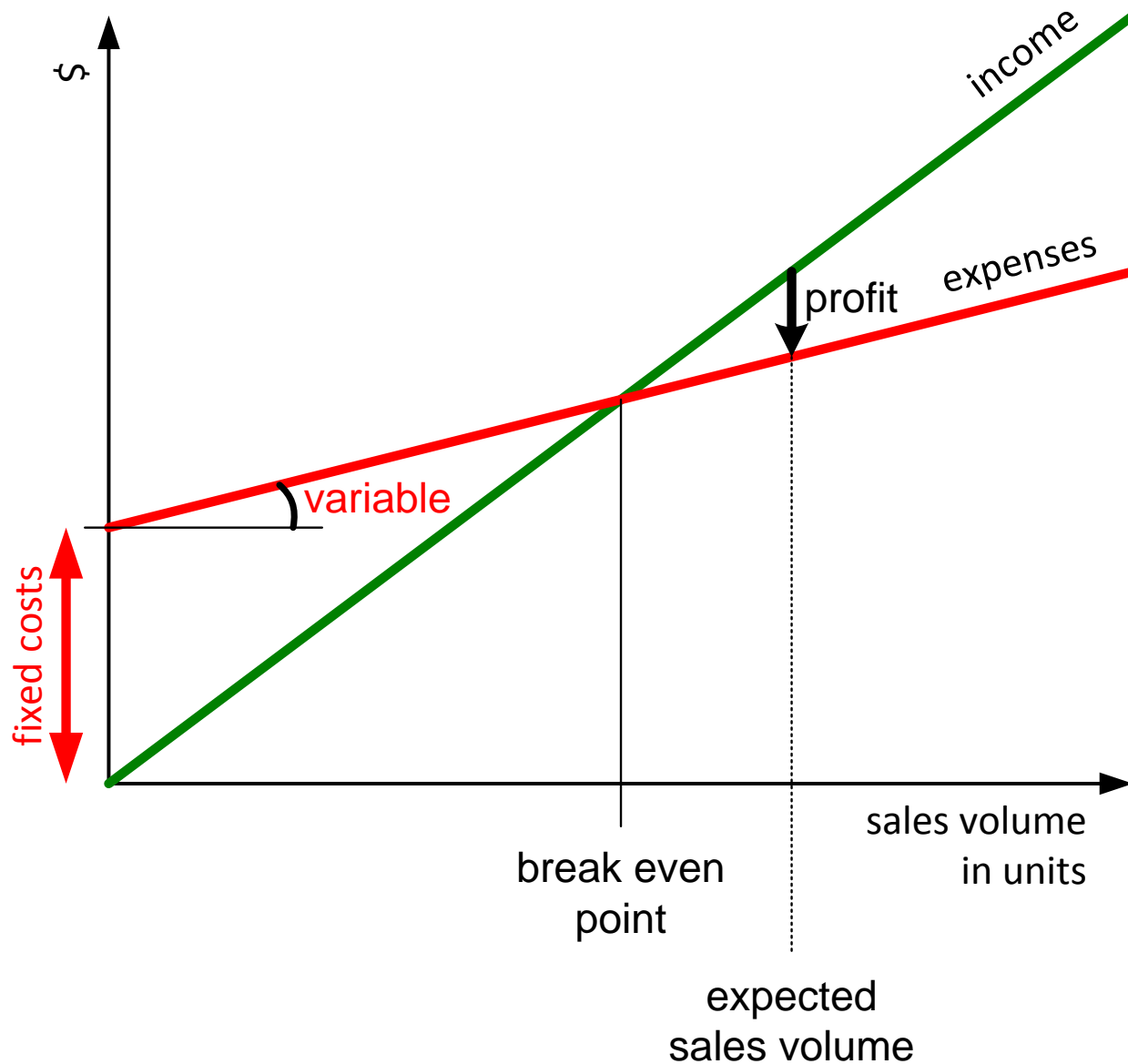
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Product Margin = Sales Price - Cost



Profit as function of sales volume



Investments, more than R&D



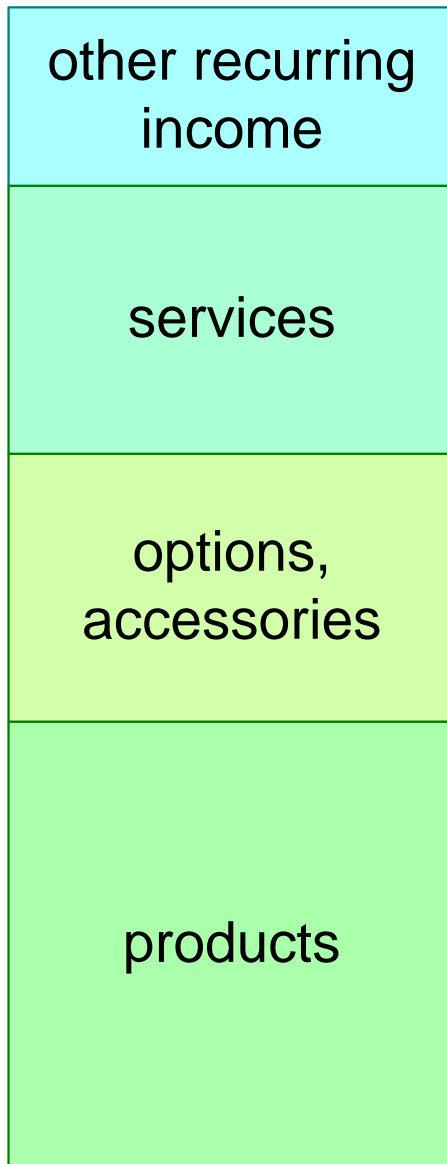
business dependent:
pharmaceuticals industry
sales cost >> R&D cost

strategic choice:
NRE or per product

including:
staff, training, tools, housing
materials, prototypes
overhead
certification

often a standard staffing rate is used
that covers most costs above:
 $R\&D\ investment = Effort * rate$

Income, more than product sales only



$$\sum_{\text{services}} \text{income}_{\text{service}}$$

$$\sum_{\text{options}} \text{sales price}_{\text{option}} * \text{volume}_{\text{option}}$$

$$\text{sales price}_{\text{product}} * \text{volume}_{\text{product}}$$

license fees
pay per movie

content, portal
updates
maintenance

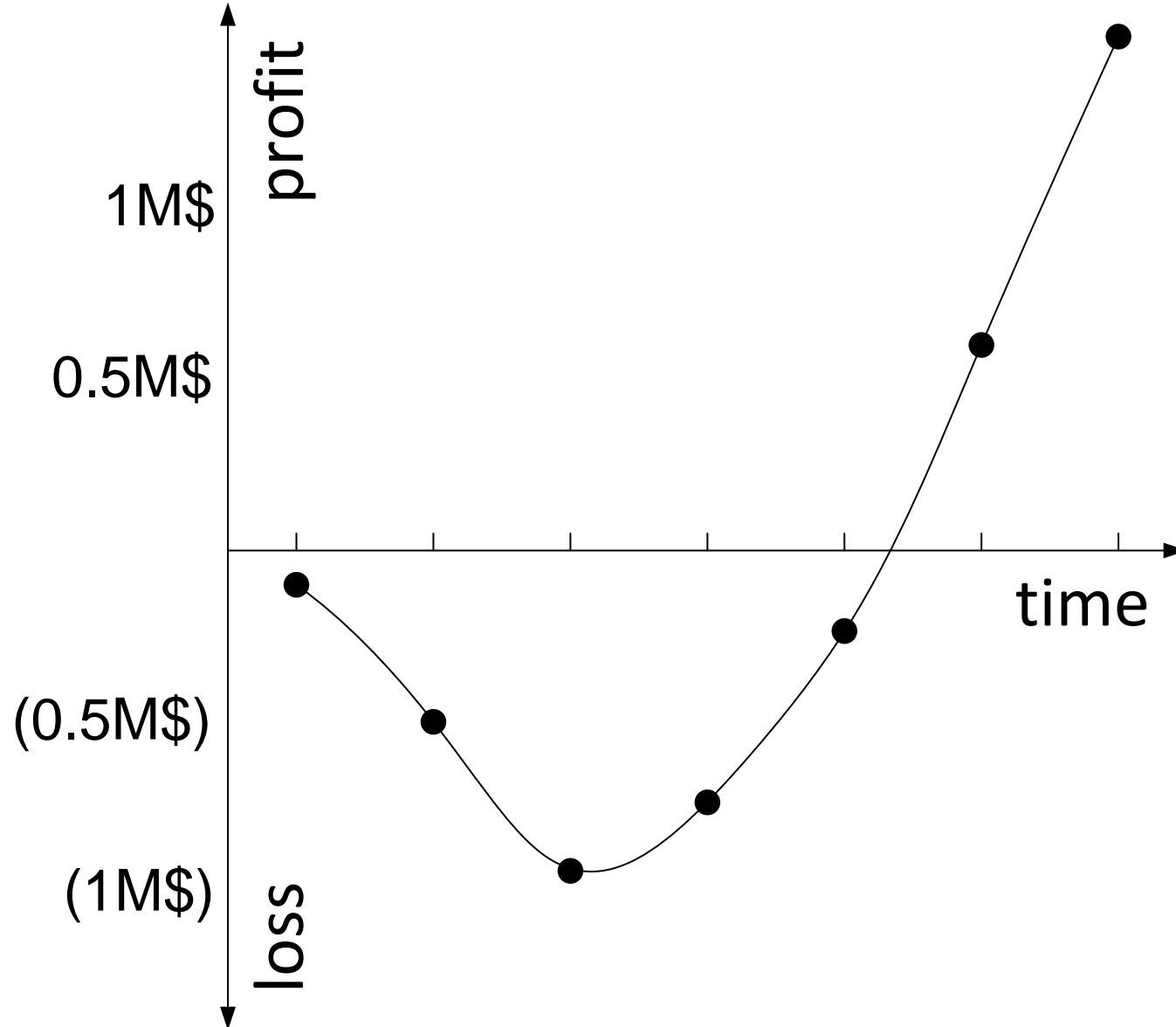
The Time Dimension

	Q1	Q2	Q3	Q4	Q1	Q2	Q3
investments	100k\$	400k\$	500k\$	100k\$	100k\$	60k\$	20k\$
sales volume (units)	-	-	2	10	20	30	30
material & labour costs	-	-	40k\$	200k\$	400k\$	600k\$	600k\$
income	-	-	100k\$	500k\$	1000k\$	1500k\$	1500k\$
quarter profit (loss)	(100k\$)	(400k\$)	(440k\$)	200k\$	500k\$	840k\$	880k\$
cumulative profit	(100k\$)	(500k\$)	(940k\$)	(740k\$)	(240k\$)	600k\$	1480k\$

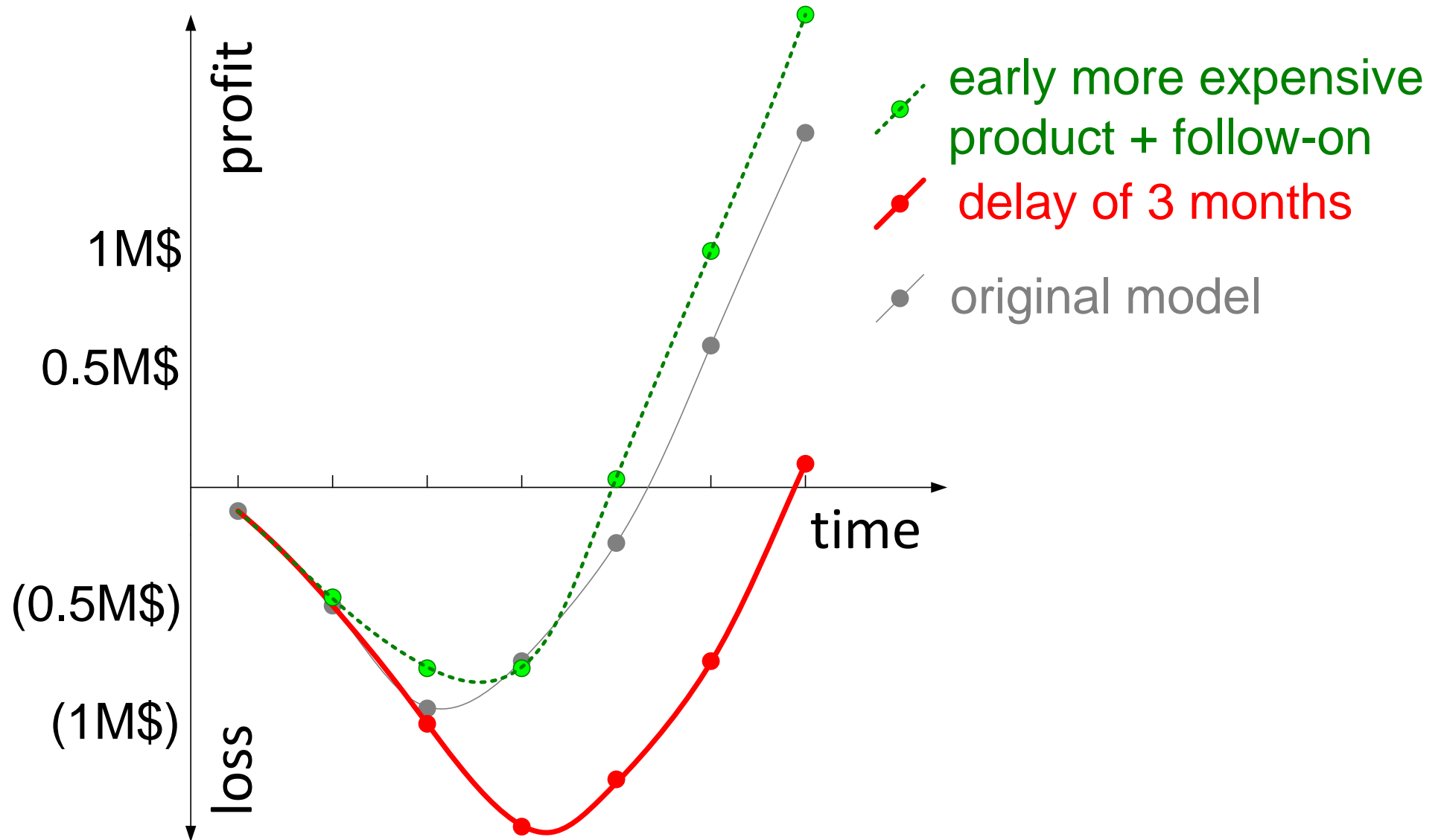
cost price / unit = 20k\$
sales price / unit = 50k\$

*variable cost = sales volume * cost price / unit*
*income = sales volume * sales price / unit*
quarter profit = income - (investments + variable costs)

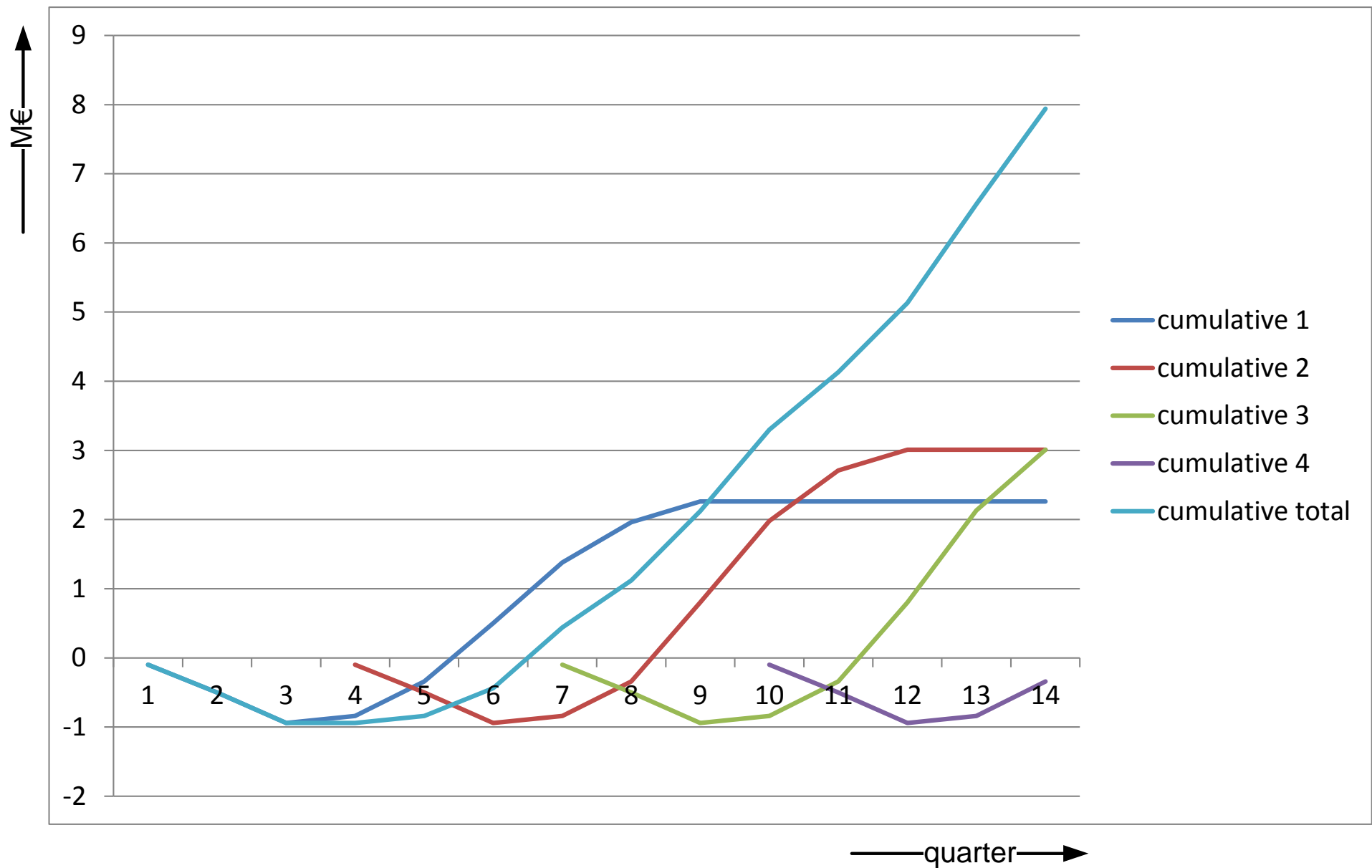
The "Hockey" Stick



What if ...?



Stacking Multiple Developments



Fashionable financial yardsticks

Return On Investments (ROI)

Net Present Value

Return On Net Assets (RONA) leasing reduces assets, improves RONA

turnover / fte outsourcing reduces headcount, improves this ratio

market ranking (share, growth) "only numbers 1, 2 and 3 will be profitable"

R&D investment / sales in high tech segments 10% or more

cash-flow fast growing companies combine profits with negative cash-flow,
risk of bankruptcy