# Intel and Advanced Micro Devices:

Competition in the Market of Consumer Central Processing Units

Moore's Law – The number of transistors on integrated circuit chips (1971-2016)

Our World in Data

Moore's law describes the empirical regularity that the number of transistors on integrated circuits doubles approximately every two years. This advancement is important as other aspects of technological progress – such as processing speed or the price of electronic products – are strongly linked to Moore's law.
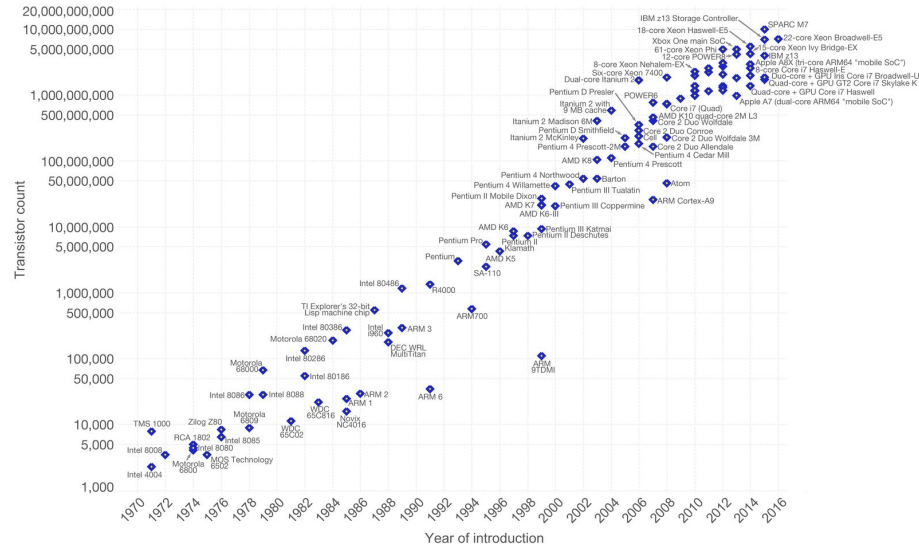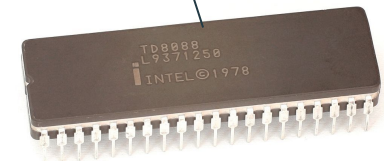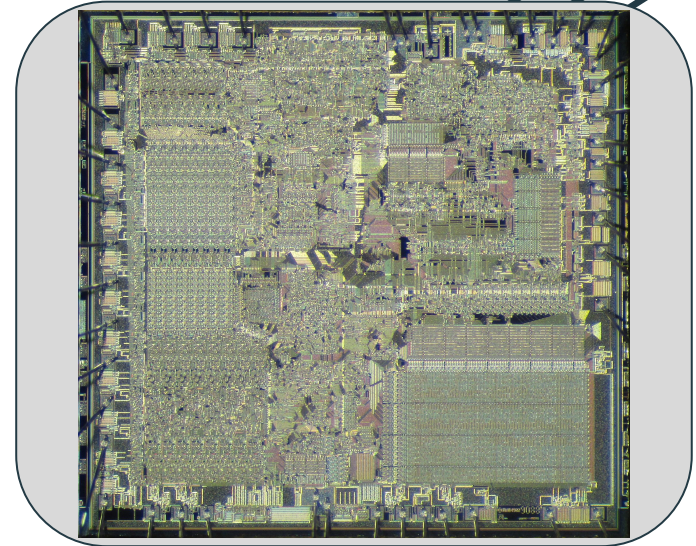
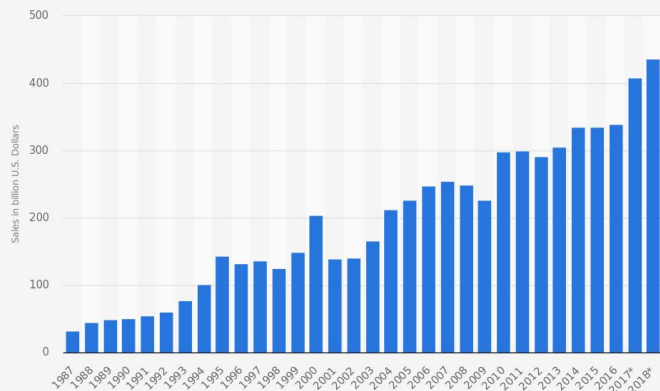**Semiconductor sales revenue worldwide from 1987 to 2018 (in billion U.S. dollars)**

Sources
WSTS; SIA
© Statista 2018

Additional Information:
Worldwide; WSTS; 2017

Intel vs. AMD CPU Market Share

Based on user-submitted benchmarks
to cpubenchmark.net, not a representation of full market

Updated 26th of April 2018
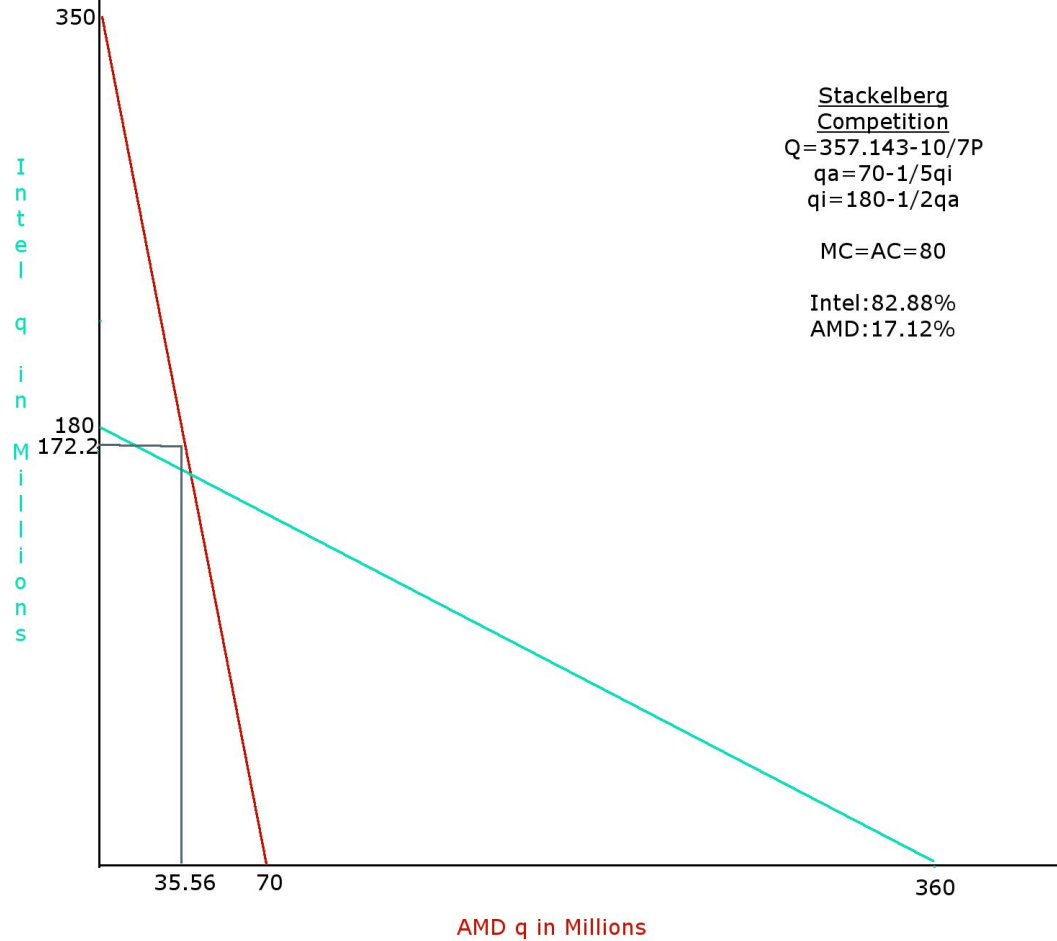
Intel vs. AMD stock price
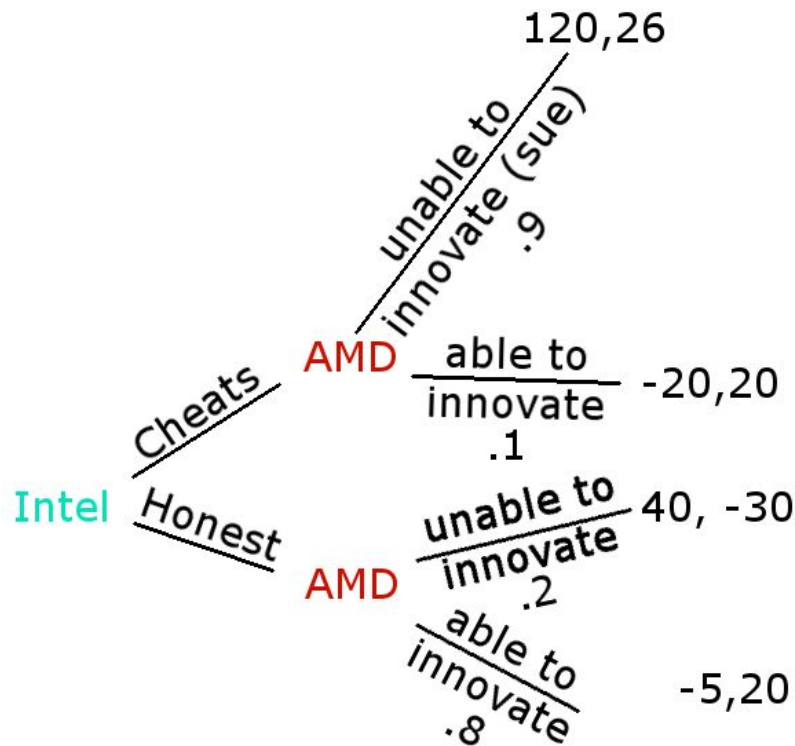
| MC 2005:$93.27B 2018:$255B | MC 2005:$5B 2018:$12.07B |

Stackelberg
Competition
$Q = 357.143 - 10/7P$
$qa = 70 - 1/5qi$
$qi = 180 - 1/2qa$

$MC = AC = 80$

Intel: 82.88%
AMD: 17.12%

120,26

unable to innovate (sue)
.9

X=Intel Payoff
Y=AMD Payoff

Cheats

AMD

able to innovate
.1

-20,20

Intel

Honest

unable to innovate
.2

40, -30

AMD

able to innovate
.8

-5,20

Intel Cheats: 106=120*.9-20*.1
Intel Honest: 4=40*.2-5*.8

Intel will always cheat

		AMD		
		No Rebate	Low Rebate	High Rebate
INTEL	Low Rebate	X*.75, Y	X,Y/2	X*2, Y
	High Rebate	X,Y	X,Z	X, Y-500

Z:
if(Y=positive) -> Y*0.75
if(Y=negative) -> Y*1.5

Diminished Gains,
Riskier Loses

PC Manufacturers

Intel		Don't take Rebates	Collude not to take rebates	Take Rebates
	Normal Rebates	0,-100	0,-5	20,20
	Consequential Rebates	0,-250	-50,2	1000, 5