



University of Pittsburgh

What I Wasn't Taught In Engineering School But Wish I Had Learned

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EAT•N

Powering Business Worldwide

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My History

- Fascinated by science since a toddler
- 5th grade decided I wanted to be EE
- Unconventional summer job
- Westinghouse -> Eaton
 - MSEE, Ph.D.
- Office of CTO -> help direct strategy

What I Didn't Learn in School

- Soft skills are more important than I thought!
 - Take initiative, be clear, look for bigger picture and value *all* your colleagues
- Even classes and subjects that I didn't think were important ... were
- Find, and learn from, good mentors
- Thank and acknowledge who helped you

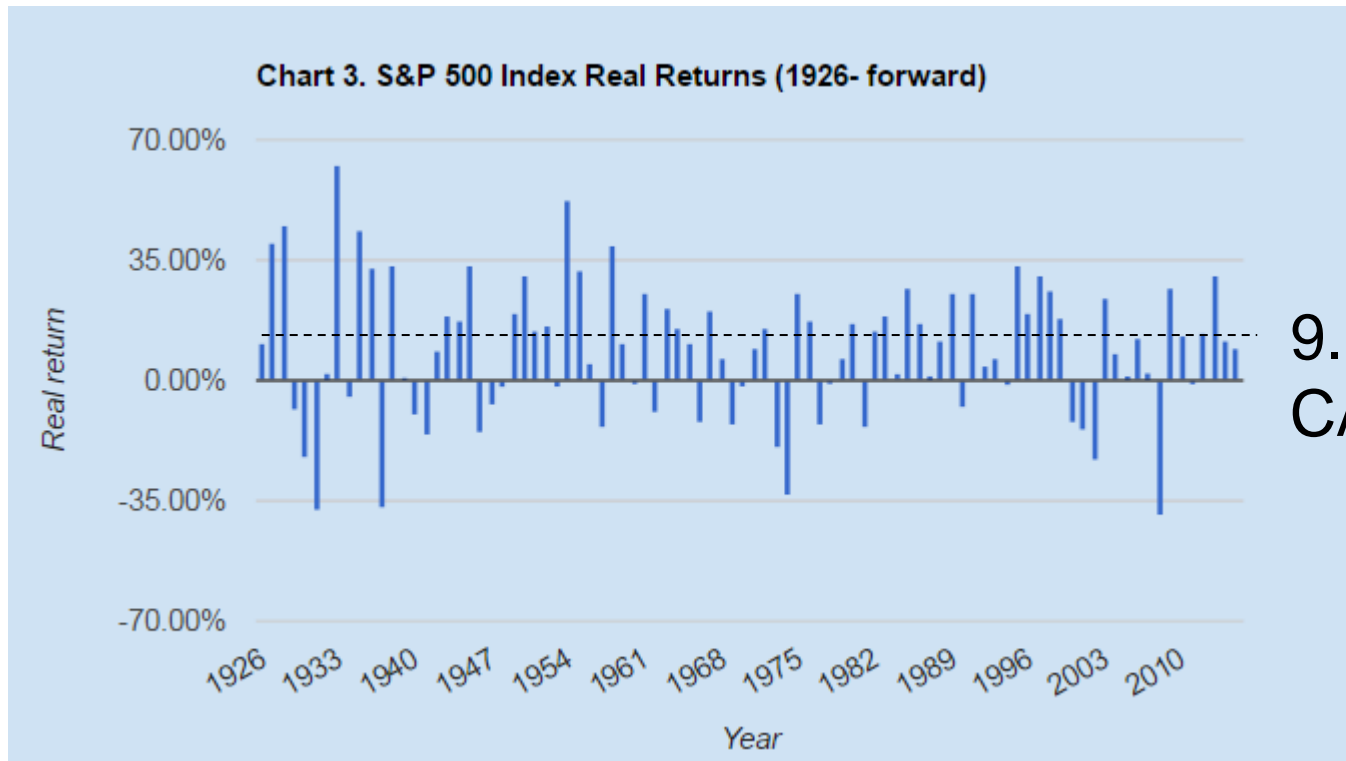
What I Didn't Learn in School

- Looking for a promotion?
 - Identify the job you want and start doing it “on the side”
 - Ask for the job
- Looking for a raise?
 - Become so valuable that the organization couldn't imagine you not being there
 - Ask for the raise

Know Yourself

- Persistence wins
- Look for the “gap” and fill it
- Drive towards the goal – minimize distractions
- Delay gratification – *Power of Waiting*
- Where you spend your time is what you will become – *Power of Focus*

Investing



9.6%
CAGR

Source: https://www.bogleheads.org/wiki/S%26P_500_index

Power of Waiting (to spend...)

- **Student 1**
 - Gets a good job
 - Decides to delay gratification and saves \$200/mo for 10 years (\$24,000)
 - At year 11 starts spending all and doesn't save a penny more for 37 years!
 - Earns **\$1.4M** on investment
- **Student 2**
 - Gets a good job
 - Spends all for 10 years before starting to save
 - Saves \$200/mo for **37** years (\$91,200 or ~4x)
 - Earns **\$0.9M** on investment (or ~2/3 as much)



Yr	Age	Saved	Start bal	Interest	YE bal
1	21	\$ 2,400.00	\$ 2,400.00	10.00%	\$ 2,640.00
2	22	\$ 2,400.00	\$ 5,040.00	10.00%	\$ 5,544.00
3	23	\$ 2,400.00	\$ 7,944.00	10.00%	\$ 8,738.40
4	24	\$ 2,400.00	\$ 11,138.40	10.00%	\$ 12,252.24
5	25	\$ 2,400.00	\$ 14,652.24	10.00%	\$ 16,117.46
6	26	\$ 2,400.00	\$ 18,517.46	10.00%	\$ 20,369.21
7	27	\$ 2,400.00	\$ 22,769.21	10.00%	\$ 25,046.13
8	28	\$ 2,400.00	\$ 27,446.13	10.00%	\$ 30,190.74
9	29	\$ 2,400.00	\$ 32,590.74	10.00%	\$ 35,849.82
10	30	\$ 2,400.00	\$ 38,249.82	10.00%	\$ 42,074.80
11	31		\$ 42,074.80	10.00%	\$ 46,282.28
12	32		\$ 46,282.28	10.00%	\$ 50,910.51
13	33		\$ 50,910.51	10.00%	\$ 56,001.56

⋮ ⋮ ⋮ ⋮ ⋮ ⋮ ⋮

41	61		\$ 734,180.13	10.00%	\$ 807,598.14
42	62		\$ 807,598.14	10.00%	\$ 888,357.95
43	63		\$ 888,357.95	10.00%	\$ 977,193.75
44	64		\$ 977,193.75	10.00%	\$ 1,074,913.12
45	65		\$ 1,074,913.12	10.00%	\$ 1,182,404.44
46	66		\$ 1,182,404.44	10.00%	\$ 1,300,644.88
47	67		\$ 1,300,644.88	10.00%	\$ 1,430,709.37
Total Saved:	\$ 24,000.00				
				Earned:	\$ 1,406,709.37

Yr	Age	Saved	Start bal	Interest	YE bal
1					
2	22		\$ -	10.00%	\$ -
3	23		\$ -	10.00%	\$ -
4	24		\$ -	10.00%	\$ -
5	25		\$ -	10.00%	\$ -
6	26		\$ -	10.00%	\$ -
7	27		\$ -	10.00%	\$ -
8	28		\$ -	10.00%	\$ -
9	29		\$ -	10.00%	\$ -
10	30	\$2,400	\$ 2,400.00	10.00%	\$ 2,640.00
11	31	\$2,400	\$ 5,040.00	10.00%	\$ 5,544.00
12	32	\$2,400	\$ 7,944.00	10.00%	\$ 8,738.40
13	33	\$2,400	\$ 11,138.40	10.00%	\$ 12,252.24

41	61	\$2,400	\$ 482,730.64	10.00%	\$ 531,003.71
42	62	\$2,400	\$ 533,403.71	10.00%	\$ 586,744.08
43	63	\$2,400	\$ 589,144.08	10.00%	\$ 648,058.48
44	64	\$2,400	\$ 650,458.48	10.00%	\$ 715,504.33
45	65	\$2,400	\$ 717,904.33	10.00%	\$ 789,694.77
46	66	\$2,400	\$ 792,094.77	10.00%	\$ 871,304.24
47	67	\$2,400	\$ 873,704.24	10.00%	\$ 961,074.67
		\$91,200			
					\$ 869,874.67
		3.8			0.618375541

The “Million Dollar” Car

- Student 1
 - Buys \$20K car
 - Value at retirement = \$0
- Student 2
 - Buys \$10K car
 - Invests remaining \$10K
 - Value at retirement = \$871K



<u>Yr</u>	<u>Age</u>	<u>Saved</u>	<u>Start bal</u>	<u>Interest</u>	<u>YE bal</u>
1	21	\$ 10,000.00	\$ 10,000.00	10.00%	\$ 11,000.00
2	22		\$ 11,000.00	10.00%	\$ 12,100.00
3	23		\$ 12,100.00	10.00%	\$ 13,310.00
4	24		\$ 13,310.00	10.00%	\$ 14,641.00
5	25		\$ 14,641.00	10.00%	\$ 16,105.10
6	26		\$ 16,105.10	10.00%	\$ 17,715.61
7	27		\$ 17,715.61	10.00%	\$ 19,487.17
8	28		\$ 19,487.17	10.00%	\$ 21,435.89
9	29		\$ 21,435.89	10.00%	\$ 23,579.48
10	30		\$ 23,579.48	10.00%	\$ 25,937.42
11	31		\$ 25,937.42	10.00%	\$ 28,531.17
12	32		\$ 28,531.17	10.00%	\$ 31,384.28
13	33		\$ 31,384.28	10.00%	\$ 34,522.71

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41	61		\$ 452,592.56	10.00%	\$ 497,851.81
42	62		\$ 497,851.81	10.00%	\$ 547,636.99
43	63		\$ 547,636.99	10.00%	\$ 602,400.69
44	64		\$ 602,400.69	10.00%	\$ 662,640.76
45	65		\$ 662,640.76	10.00%	\$ 728,904.84
46	66		\$ 728,904.84	10.00%	\$ 801,795.32
47	67		\$ 801,795.32	10.00%	\$ 881,974.85
		\$ 10,000.00			
					\$ 871,974.85

The Power of Focus

- **"You are now, and you do become, what you think about."**
- "Creativity is a natural extension of our enthusiasm."
- "People with goals succeed because they know where they're going."
- "You'll find boredom where there is the absence of a good idea."

“Secret” of Success

- My first rule of success: “Show up”
- Second rule of success: “Show up on time”
- Third rule of success: “Help others”

Make the “Choice” of Success

- “... we must all face the choice between what is *right* and what is *easy*.”

Professor Dumbledore (Harry Potter: The Goblet of Fire)



Thank You

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