
The Uber Cannibal Investing Framework

Boston College (Carroll School of Management)
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***“Pay close attention to the cannibals
– the businesses that are eating themselves
by buying back their stock.”***

-Charlie Munger



The Uber Cannibals: NVR

NVR	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Revenue		\$866	\$900	\$1,075	\$1,186	\$1,505	\$1,943	\$2,268	\$2,560	\$3,061	\$3,683	\$4,320	\$5,262	\$6,134	\$5,129
Net Income		\$10	\$17	\$26	\$29	\$57	\$109	\$158	\$237	\$331	\$420	\$523	\$698	\$587	\$334
Net Cash (Net Debt)	-\$413	-\$225	-\$166	-\$127	-\$202	-\$252	-\$189	-\$36	-\$100	-\$116	-\$26	\$154	-\$286	\$199	\$378
Amount Spent on Buyback		\$16	\$3	\$35	\$46	\$50	\$102	\$54	\$224	\$362	\$460	\$308	\$963	\$287	\$507
Shares Outstanding (in millions)	17.9	15.3	15.2	13.6	11.1	10.4	9.2	8.9	7.5	7.0	6.7	6.6	5.6	5.5	5.1
Net Shares Bought Back		14%	0%	11%	18%	6%	12%	3%	16%	6%	4%	2%	14%	2%	7%
Share Price		\$5.50	\$10	\$13	\$22	\$48	\$48	\$124	\$204	\$327	\$466	\$769	\$702	\$645	\$524
Trailing PE		10.2	9.4	7.6	10.0	9.6	5.3	8.1	8.2	9.1	9.5	11.6	7.8	7.3	6.4

The Uber Cannibals: NVR

NVR	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1H 2022
Revenue	\$3,693	\$2,744	\$3,042	\$2,659	\$3,185	\$4,211	\$4,445	\$5,159	\$5,823	\$6,306	\$7,164	\$7,389	\$7,537	\$8,951	\$5,037
Net Income	\$101	\$192	\$206	\$129	\$181	\$266	\$282	\$383	\$425	\$538	\$797	\$879	\$901	\$1,237	\$859
Net Cash (Net Debt)	\$937	\$1,322	\$1,099	\$477	\$554	\$267	-\$54	-\$175	-\$201	\$70	\$114	\$457	\$1,188	\$983	\$497
Amount Spent on Buyback	\$0	\$0	\$417	\$689	\$227	\$554	\$568	\$431	\$455	\$422	\$846	\$698	\$371	\$1,538	\$1,016
Shares Outstanding (in millions)	5.5	6.0	5.7	5.0	4.9	4.4	4.0	3.9	3.7	3.7	3.6	3.6	3.7	3.4	3.3
Net Shares Bought Back	-8%	-8%	5%	12%	1%	10%	9%	4%	5%	0%	3%	-2%	-2%	7%	5%
Share Price	\$456	\$711	\$691	\$686	\$920	\$1,026	\$1,275	\$1,643	\$1,669	\$3,508	\$2,437	\$3,808	\$4,080	\$5,909	\$4,004
Trailing PE	12.1	20.4	19.4	28.6	25.9	17.4	19.9	18.2	16.1	24.7	12.4	17.2	17.7	18.4	9.7

The Uber Cannibals: NVR

- Shares Outstanding in 1993: **17.9 million**
- Shares Outstanding in 2022: **3.3 million**
- **82%** of shares bought back in 28.5 years
- Zero Dividends; No Stock Splits
- Stock went from \$5.50 to \$4,000 - **727 bagger!**
- Earnings went up **150x**
- **27.1%** Annualized Rate of Return

The Cannibal Returns Formula

The approximate returns formula:

Earnings Growth x (100/share % left) x Multiple Expansion

For NVR: $150 \times 5.5 \times 0.95 = \mathbf{783x}$

The Uber Cannibals: AutoZone

AutoZone	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Revenue	\$3,243	\$4,116	\$4,483	\$4,818	\$5,326	\$5,457	\$5,637	\$5,711	\$5,948	\$6,170	\$6,523	\$6,817
Net Income	\$228	\$245	\$268	\$176	\$428	\$518	\$566	\$571	\$569	\$596	\$642	\$657
Net Cash (Net Debt)	-\$538	-\$882	-\$1,243	-\$1,218	-\$1,188	-\$1,454	-\$1,792	-\$1,787	-\$1,766	-\$1,849	-\$2,060	-\$2,651
Amount Spent on Buyback	\$29	\$235	\$608	\$366	\$699	\$891	\$848	\$427	\$578	\$871	\$849	\$1,300
Shares Outstanding (in millions)	152.1	144.4	121.5	109.4	99.3	88.7	79.6	76.5	71.1	66.0	59.6	50.8
Net Shares Bought Back	-1%	5%	16%	10%	9%	11%	10%	4%	7%	7%	10%	15%
Share Price	\$27	\$24	\$22	\$48	\$72	\$92	\$75	\$95	\$87	\$123	\$137	\$148
Trailing PE	18.2	14.7	11.0	30.8	18.1	16.6	12.0	13.2	11.6	14.5	13.7	12.7

Fiscal year ending 8/30; split-adjusted share price.

The Uber Cannibals: AutoZone

AutoZone	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Revenue	\$7,363	\$8,073	\$8,604	\$9,148	\$9,475	\$10,187	\$10,636	\$10,889	\$11,221	\$11,864	\$12,632	\$14,630	\$16,252
Net Income	\$738	\$849	\$930	\$1,016	\$1,070	\$1,160	\$1,241	\$1,281	\$1,338	\$1,617	\$1,733	\$2,170	\$2,430
Net Cash (Net Debt)	-\$2,810	-\$3,254	-\$3,665	\$4,045	-\$4,225	-\$4,481	-\$4,772	-\$4,818	-\$4,781	-\$5,018	-\$6,635	-\$7,198	-\$6,168
Amount Spent on Buyback	\$1,124	\$1,467	\$1,363	\$1,387	\$1,099	\$1,271	\$1,452	\$1,072	\$1,592	\$2,005	\$931	\$3,378	\$3,758
Shares Outstanding (in millions)	45.1	40.1	37.0	34.3	32.3	30.7	29.1	27.8	25.7	24.0	23.4	21.1	19.1
Net Shares Bought Back	11%	11%	8%	7%	6%	5%	5%	4%	8%	7%	3%	10%	10%
Share Price	\$215	\$301	\$365	\$420	\$539	\$726	\$753	\$529	\$771	\$1,102	\$1,189	\$1,548	\$2,163
Trailing PE	14.3	15.5	15.5	15.1	17.1	20.2	18.5	12.0	13.4	17.4	16.5	16.3	18.5

Fiscal year ending 8/30; split-adjusted share price.

The Uber Cannibals: AutoZone

- Shares Outstanding in 1998: **152.1 million**
- Shares Outstanding in 2022: **19.1 million**
- **87%** of shares bought back in 24 years
- Zero Dividends
- Split-adjusted stock went from \$27 to \$2,160
– **80 bagger!**
- Earnings went up **11x**
- **20%** Annualized Rate of Return
- Approx. Returns Formula: $11 \times 7.7 \times 1 = \mathbf{85x}$

The Uber Cannibals: AutoNation

AutoNation	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Revenue	\$12,665	\$20,112	\$20,599	\$19,989	\$18,702	\$18,711	\$19,045	\$19,253	\$18,627	\$17,347	\$13,376	\$10,666	\$12,461
Net Income	\$500	\$283	\$330	\$232	\$382	\$479	\$434	\$497	\$317	\$279	-\$1,243	\$198	\$227
Net Cash (Net Debt)	-\$1,682	-\$2,836	-\$3,227	-\$2,428	-\$2,778	\$3,393	-\$3,162	-\$2,821	-\$3,732	-\$3,866	-\$2,962	-\$2,314	-\$3,120
Amount Spent on Buyback	\$136	\$1,200	\$189	\$257	\$390	\$575	\$237	\$237	\$1,379	\$646	\$54	\$136	\$524
Shares Outstanding (in millions)	458.1	375.4	348.1	321.7	298.0	269.7	264.3	262.2	206.8	180.4	176.9	171.7	148.4
Net Shares Bought Back	-6%	18%	7%	8%	7%	9%	2%	1%	21%	13%	2%	3%	14%
Share Price	\$13	\$8	\$6	\$12	\$13	\$18	\$19	\$22	\$21	\$16	\$10	\$19	\$28
Trailing PE	31.0	10.3	6.8	13.7	10.9	13.1	14.0	15.0	13.9	11.3		16.6	17.1

Split-adjusted share price; adjusted for spin-offs.

The Uber Cannibals: AutoNation

AutoNation	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1H 2022
Revenue	\$13,832	\$15,668	\$17,518	\$19,109	\$20,862	\$21,609	\$21,535	\$21,413	\$21,336	\$20,390	\$25,844	\$13,622
Net Income	\$281	\$316	\$375	\$419	\$443	\$431	\$435	\$396	\$450	\$382	\$1,373	\$738
Net Cash (Net Debt)	-\$3,459	-\$4,567	-\$4,800	-\$5,150	-\$6,010	-\$6,505	-\$6,441	-\$6,550	-\$5,984	-\$4,617	-\$4,894	-\$4,990
Amount Spent on Buyback	\$583	\$581	\$54	\$485	\$235	\$497	\$435	\$100	\$45	\$382	\$2,303	\$404
Shares Outstanding (in millions)	135.8	120.9	120.9	113.3	110.8	100.7	91.6	90.0	89.3	83.5	62.6	56.0
Net Shares Bought Back	8%	11%	0%	6%	2%	9%	9%	2%	1%	7%	25%	11%
Share Price	\$37	\$40	\$50	\$60	\$60	\$49	\$51	\$36	\$49	\$70	\$117	\$112
Trailing PE	19.0	15.6	16.7	17.5	15.4	12.7	13.4	8.0	10.3	6.6	6.4	4.2

Split-adjusted share price; adjusted for spin-offs.

The Uber Cannibals: AutoNation

- Shares Outstanding in 1998: **458.1 million**
- Shares Outstanding in 2022: **56 million**
- **88%** of shares bought back in 23.5 years
- Zero Dividends
- Split-adjusted stock went from \$13 to \$112 – **8 bagger.**
- Earnings went up **3x**
- **9.4%** Annualized Rate of Return
- Approx. Returns Formula: $3 \times 8.3 \times 0.14 = \mathbf{3.4x}$
- Note: AutoNation is trading at a PE of 4. Maybe 13-17 is more normal.

The Uber Cannibals: H&R Block

H&R Block	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Revenue	\$1,262	\$1,622	\$2,452	\$2,981	\$3,318	\$3,746	\$4,248	\$4,420	\$3,575	\$3,886	\$3,935	\$4,084	\$3,015
Net Income	\$392	\$215	\$252	\$281	\$434	\$580	\$709	\$624	\$490	-\$434	-\$309	\$486	\$479
Net Cash (Net Debt)	\$408	-\$72	-\$782	-\$681	-\$464	-\$3	\$251	\$152	-\$250	-\$1,174	-\$441	\$514	\$690
Amount Spent on Buyback	\$18	\$493	\$51	\$223	\$463	\$318	\$520	\$530	\$260	\$189	\$7	\$106	\$254
Shares Outstanding (in millions)	427.9	390.6	392.1	367.2	362.3	359.3	346.2	331.2	328.5	323.2	326.0	334.1	323.3
Net Shares Bought Back	-3%	9%	0%	6%	1%	1%	4%	4%	1%	2%	-1%	-2%	3%
Share Price	\$11	\$12	\$10	\$14	\$20	\$19	\$23	\$25	\$23	\$23	\$22	\$15	\$18
Trailing PE	26.3	20.4	16.4	18.5	17.4	12.6	11.4	26.9	21.1	19.0	13.7	9.8	13.2

Fiscal year ending 4/30 until 2022 when it changed to 6/30; split-adjusted share price.

The Uber Cannibals: H&R Block

H&R Block	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Revenue	\$2,945	\$2,894	\$2,906	\$3,024	\$3,079	\$3,038	\$3,036	\$3,160	\$3,095	\$2,640	\$3,414	\$3,463
Net Income	\$406	\$266	\$434	\$475	\$474	\$374	\$409	\$613	\$423	-\$8	\$584	\$554
Net Cash (Net Debt)	\$777	\$1,275	\$1,328	\$1,702	\$1,941	-\$595	-\$483	\$49	\$80	-\$1,341	-\$1,005	-\$1,038
Amount Spent on Buyback	\$284	\$181	\$340	\$6	\$10	\$2,018	\$323	\$9	\$190	\$256	\$191	\$563
Shares Outstanding (in millions)	305.4	292.1	272.6	274.2	275.3	220.5	207.2	209.3	202.0	192.5	181.5	159.9
Net Shares Bought Back	6%	4%	7%	-1%	0%	20%	6%	-1%	3%	5%	6%	12%
Share Price	\$17	\$15	\$28	\$28	\$30	\$20	\$25	\$28	\$27	\$17	\$22	\$35
Trailing PE	12.8	11.3	17.6	15.9	17.2	13.2	12.6	9.3	12.6	29.5	7.3	10.8

Fiscal year ending 4/30 until 2022 when it changed to 6/30; split-adjusted share price.

The Uber Cannibals: H&R Block

- Shares Outstanding in 1998: **427.9 million**
- Shares Outstanding in 2022: **159.9 million**
- **63%** of shares bought back in 24 years
- Split-adjusted stock went from \$11 to \$35.
- Earnings went up **1.4x**
- **8.2%** Annualized Rate of Return with reinvested dividends
- Approx. Returns Formula: $1.4 \times 2.7 \times 0.4 = \mathbf{1.6x}$

The Uber Cannibals: Jack in the Box

Jack in the Box	2006	2007	2008	2009	2010	2011	2012	2013
Revenue	\$2,724	\$2,513	\$2,540	\$2,471	\$2,298	\$1,662	\$1,509	\$1,490
Net Income	\$108	\$126	\$119	\$118	\$70	\$81	\$58	\$51
Net Cash (Net Debt)	-\$58	-\$418	-\$471	-\$372	-\$356	-\$457	-\$414	-\$362
Amount Spent on Buyback	\$50	\$479	\$100	\$0	\$97	\$193	\$30	\$140
Shares Outstanding (in millions)	71.5	59.7	56.8	57.3	52.8	44.2	43.9	42.6
Net Shares Bought Back	0%	16%	5%	-1%	8%	16%	1%	3%
Share Price	\$26	\$32	\$22	\$20	\$21	\$20	\$28	\$40
Trailing PE	17.2	21.8	17.1	12.5	24.4	19.7	18.0	20.8

Fiscal year ending 9/30; split-adjust share price.

The Uber Cannibals: Jack in the Box

Jack in the Box	2014	2015	2016	2017	2018	2019	2020	2021	9 months 2022
Revenue	\$1,484	\$1,540	\$1,162	\$1,097	\$870	\$950	\$1,022	\$1,144	\$1,065
Net Income	\$89	\$109	\$124	\$135	\$121	\$94	\$90	\$166	\$70
Net Cash (Net Debt)	-\$497	-\$698	-\$974	-\$1,140	-\$1,067	-\$1,150	-\$2,133	-\$2,179	-\$3,111
Amount Spent on Buyback	\$320	\$317	\$292	\$327	\$339	\$126	\$154	\$200	\$0
Shares Outstanding (in millions)	38.6	35.8	32.4	29.4	25.7	24.4	22.7	21.0	21.1
Net Shares Bought Back	9%	7%	9%	9%	13%	5%	7%	8%	0%
Share Price	\$66	\$80	\$96	\$102	\$84	\$90	\$80	\$100	\$60
Trailing PE	26.3	25.4	28.4	25.3	20.9	22.1	17.7	15.2	10.8

Fiscal year ending 9/30; split-adjusted share price.

The Uber Cannibals: Jack in the Box

- Shares Outstanding in 2006: **71.5 million**
- Shares Outstanding in 2022: **21.1 million**
- **71%** of shares bought back in 16 years
- Split-adjusted stock went from \$26 to \$60
- Earnings were **flat**
- **6.3%** Annualized Rate of Return with reinvested dividends
- Approx. Returns Formula: $1 \times 3.5 \times 0.6 = \mathbf{2.2x}$

The Uber Cannibals: Apple

Apple	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	9 months 2022
Revenue	\$156,508	\$170,910	\$182,795	\$233,715	\$215,639	\$229,234	\$265,595	\$260,174	\$274,515	\$365,817	\$304,182
Net Income	\$41,733	\$37,037	\$39,510	\$53,394	\$45,687	\$48,351	\$59,531	\$55,256	\$57,411	\$94,680	\$79,082
Net Cash (Net Debt)	\$121,251	\$129,801	\$119,944	\$141,338	\$150,553	\$153,215	\$122,617	\$97,851	\$69,552	\$53,994	\$59,617
Amount Spent on Buyback	\$0	\$22,860	\$45,000	\$35,253	\$29,722	\$32,900	\$72,738	\$66,897	\$72,358	\$85,971	\$64,974
Shares Outstanding (in billions)	26.3	25.2	23.5	22.3	21.3	20.5	19.0	17.8	17.0	16.4	16.1
Net Shares Bought Back	-1%	4%	7%	5%	4%	4%	7%	7%	4%	3%	2%
Share Price	\$24	\$17	\$25	\$29	\$28	\$39	\$56	\$55	\$112	\$147	\$138
Trailing PE	15.1	12.1	15.6	12.4	13.7	16.9	19.0	18.4	34.3	26.3	23.7

Fiscal year ending 9/30; split-adjusted share price.

The Uber Cannibals: Apple

- Shares Outstanding in 2012: **26.3 billion**
- Shares Outstanding in 2022: **16.1 billion**
- **39%** of shares bought back in 10 years
- Split-adjusted stock went from \$24 to \$138 – **6 bagger**
- Earnings went up **2.5x**
- **21.5%** Annualized Rate of Return with reinvested dividends
- Approx. Returns Formula: $2.5 \times 1.6 \times 1.6 = \mathbf{6.4x}$

The Uber Cannibals: IBM

IBM	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Revenue	\$64,052	\$71,940	\$75,947	\$78,508	\$81,667	\$87,548	\$88,396	\$83,067	\$81,186	\$89,131	\$96,293	\$91,134	\$91,424	\$98,786	\$103,630
Net Income	\$3,021	\$4,178	\$5,429	\$6,093	\$6,328	\$7,712	\$8,093	\$7,723	\$3,579	\$7,583	\$8,430	\$7,934	\$9,492	\$10,418	\$12,334
Net Cash (Net Debt)	-\$11,564	-\$13,928	-\$14,692	-\$19,373	-\$23,645	-\$22,523	-\$24,854	-\$20,758	-\$20,042	-\$15,985	-\$12,357	-\$8,955	-\$12,026	-\$19,128	-\$21,018
Amount Spent on Buyback	\$10	\$5,526	\$5,005	\$6,251	\$6,283	\$6,645	\$6,073	\$3,906	\$3,087	\$3,232	\$5,418	\$6,506	\$8,084	\$18,783	\$10,563
Shares Outstanding (in millions)	2,350.8	2,191.1	2,031.9	1,916.2	1,831.8	1,784.2	1,762.9	1,723.2	1,722.4	1,694.5	1,645.6	1,574.0	1,506.5	1,385.2	1,339.1
Net Shares Bought Back	-1%	7%	7%	6%	4%	3%	1%	2%	0%	2%	3%	4%	4%	8%	3%
Share Price	\$18	\$22	\$36	\$50	\$88	\$103	\$81	\$116	\$74	\$89	\$94	\$79	\$93	\$103	\$80
Trailing PE	14.6	8.6	14.0	17.4	28.1	23.5	18.9	26.4	25.2	21.4	19.5	15.9	16.0	15.1	9.4

The Uber Cannibals: IBM

IBM	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	9 Months 2022
Revenue	\$95,758	\$99,870	\$106,916	\$102,874	\$98,367	\$92,793	\$81,741	\$79,919	\$79,139	\$79,591	\$57,714	\$55,179	\$57,351	\$43,840
Net Income	\$13,425	\$14,833	\$15,855	\$16,604	\$16,483	\$12,022	\$13,190	\$11,872	\$5,753	\$8,728	\$9,431	\$5,590	\$5,743	-\$1,071
Net Cash (Net Debt)	-\$9,508	-\$15,227	-\$17,514	-\$19,105	-\$22,541	-\$24,499	-\$23,750	-\$25,797	-\$27,773	-\$27,554	-\$59,290	-\$51,300	-\$47,890	-\$44,257
Amount Spent on Buyback	\$7,534	\$15,419	\$15,034	\$12,008	\$13,993	\$13,395	\$4,701	\$3,455	\$4,323	\$4,447	\$1,331	\$0	\$0	\$0
Shares Outstanding (in millions)	1,305.3	1,228.0	1,163.2	1,117.4	1,054.4	990.5	965.7	945.9	922.2	892.5	887.1	892.7	898.1	903.2
Net Shares Bought Back	3%	6%	5%	4%	6%	6%	3%	2%	3%	3%	1%	-1%	-1%	-1%
Share Price	\$125	\$140	\$176	\$183	\$179	\$153	\$131	\$159	\$147	\$109	\$128	\$120	\$134	\$119
Trailing PE	12.9	12.9	14.0	12.4	11.3	8.9	9.1	12.1	11.8	8.4	11.8	24.1	21.0	

The Uber Cannibals: IBM

- Shares Outstanding in 1994: **2.35 billion**
- Shares Outstanding in 2018: **892.5 million**
- **62%** of shares bought back in 24 years
- Split and spin-off adjusted stock went from \$18 to \$109
– **6 bagger**
- Earnings went up **3x**
- **9.5%** Annualized Rate of Return with reinvested dividends
- Approx. Returns Formula: $3 \times 2.6 \times 0.6 =$ **4.5x**
- Zero returns from 2001 – 2022; 21 Years
- **Buffett held from 2011 – 2017; Negative returns**

The Uber Cannibals: Sears

Sears	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Revenue	\$49,124	\$53,016	\$50,703	\$46,770	\$43,360	\$42,664	\$41,567	\$39,854	\$36,188	\$31,198	\$25,146	\$22,138	\$16,702
Net Income	\$858	\$1,492	\$826	\$53	\$235	\$133	-\$3,140	-\$930	-\$1,365	-\$1,682	-\$1,129	-\$2,221	-\$383
Net Cash (Net Debt)	\$424	\$291	-\$1,388	-\$1,746	-\$816	-\$1,834	-\$2,746	-\$2,511	-\$3,221	-\$3,526	-\$2,738	-\$3,877	-\$3,950
Amount Spent on Buyback	\$600	\$806	\$2,900	\$678	\$424	\$394	\$183	\$0	\$0	\$0	\$0	\$0	\$0
Shares Outstanding (in millions)	161.9	155.8	133.6	123.4	116.4	110.3	107.3	107.3	107.3	107.0	107.0	107.0	108.0
Net Shares Bought Back		4%	14%	8%	6%	5%	3%	0%	0%	0%	0%	0%	-1%
Share Price	\$79	\$114	\$70	\$26	\$60	\$49	\$29	\$35	\$27	\$29	\$17	\$7	\$2
Trailing PE	24.7	19.7	21.1	17.0	33.0	41.6							

The Uber Cannibals: Sears

- Shares Outstanding in 2005: **162 million**
- Shares Outstanding in 2011: **107 million**
- **34%** of shares bought back in 6 years
- Zero Dividends; No Stock Splits
- Stock went from \$79 to \$29 after adjusting for spin-offs
- Earnings fell **84%**
- **-15.4%** Annualized Rate of Return
- Approx. Returns Formula: $0.16 \times 1.5 \times 0 = 0$
- **Buybacks will not work if the business is in secular decline.**

At NVR, buybacks are religion, but the managers are taking on average 5% of the business every year

NVR	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Revenue		\$866	\$900	\$1,075	\$1,186	\$1,505	\$1,943	\$2,268	\$2,560	\$3,061	\$3,683	\$4,320	\$5,262	\$6,134	\$5,129
Net Income		\$10	\$17	\$26	\$29	\$57	\$109	\$158	\$237	\$331	\$420	\$523	\$698	\$587	\$334
Net Cash (Net Debt)	-\$413	-\$225	-\$166	-\$127	-\$202	-\$252	-\$189	-\$36	-\$100	-\$116	-\$26	\$154	-\$286	\$199	\$378
Amount Spent on Buyback		\$16	\$3	\$35	\$46	\$50	\$102	\$54	\$224	\$362	\$460	\$308	\$963	\$287	\$507
Shares Outstanding (in millions)	17.9	15.3	15.2	13.6	11.1	10.4	9.2	8.9	7.5	7.0	6.7	6.6	5.6	5.5	5.1
Options exercised (shares issued)		0.29	0.24	1.66	0.29	0.56	0.81	0.64	0.42	0.68	0.81	0.53	0.32	0.37	0.40
Shares Repurchased		2.88	0.30	3.30	2.77	1.27	2.02	0.96	1.80	1.13	1.10	0.69	1.27	0.48	0.78
Shares Bought Back		16%	2%	22%	20%	11%	19%	10%	20%	15%	16%	10%	19%	9%	14%
Shares Added Thru Incentive Plan		2%	2%	11%	2%	5%	8%	7%	5%	9%	12%	8%	5%	7%	7%
Net Shares Bought Back		14%	0%	11%	18%	6%	12%	3%	16%	6%	4%	2%	14%	2%	7%
Share Price	\$9.75	\$6	\$10	\$13	\$22	\$48	\$48	\$124	\$204	\$327	\$466	\$769	\$702	\$645	\$524
Trailing PE		10.2	9.4	7.6	10.0	9.6	5.3	8.1	8.2	9.1	9.5	11.6	7.8	7.3	6.4

At NVR, buybacks are religion, but the managers are taking on average 5% of the business every year

NVR	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1H 2022
Revenue	\$3,693	\$2,744	\$3,042	\$2,659	\$3,185	\$4,211	\$4,445	\$5,159	\$5,823	\$6,306	\$7,164	\$7,389	\$7,537	\$8,951	\$5,037
Net Income	\$101	\$192	\$206	\$129	\$181	\$266	\$282	\$383	\$425	\$538	\$797	\$879	\$901	\$1,237	\$859
Net Cash (Net Debt)	\$937	\$1,322	\$1,099	\$477	\$554	\$267	-\$54	-\$175	-\$201	\$70	\$114	\$457	\$1,188	\$983	\$497
Amount Spent on Buyback	\$0	\$0	\$417	\$689	\$227	\$554	\$568	\$431	\$455	\$422	\$846	\$698	\$371	\$1,538	\$1,016
Shares Outstanding (in millions)	5.5	6.0	5.7	5.0	4.9	4.4	4.0	3.9	3.7	3.7	3.6	3.6	3.7	3.4	3.3
Options exercised (shares issued)	0.40	0.42	0.36	0.33	0.22	0.10	0.12	0.13	0.08	0.16	0.19	0.28	0.16	0.07	0.04
Shares Repurchased	-	-	0.64	1.02	0.29	0.58	0.51	0.29	0.28	0.17	0.30	0.22	0.10	0.32	0.21
Shares Bought Back	0%	0%	11%	18%	6%	12%	11%	7%	7%	5%	8%	6%	3%	9%	6%
Shares Added Thru Incentive Plan	8%	8%	6%	6%	4%	2%	3%	3%	2%	4%	5%	8%	4%	2%	1%
Net Shares Bought Back	-8%	-8%	5%	12%	1%	10%	9%	4%	5%	0%	3%	-2%	-2%	7%	5%
Share Price	\$456	\$711	\$691	\$686	\$920	\$1,026	\$1,275	\$1,643	\$1,669	\$3,508	\$2,437	\$3,808	\$4,080	\$5,909	\$4,004
Trailing PE	12.1	20.4	19.4	28.6	25.9	17.4	19.9	18.2	16.1	24.7	12.4	17.2	17.7	18.4	9.7

At NVR, buybacks are religion, but the managers are taking on average 5% of the business

Period	Annualized Share Count Reduction
1994 - 1H 2022	5.8%
1994 - 2005	9.2%
2006 - 2012	1.9%
2013 - 1H 2022	4.2%
2017 - 1H 2022	2.1%

- 1994 - 2005, NVR stock was up **128-fold** or **55.3% annualized**, vs. **727x** or **27.1% annualized** for the full period.
- 2006 - 1H 2022, NVR was up 6x, or 12.5% annualized.
- 2017 - H1 2022, NVR was up 14%, or 3% annualized.

At uber cannibal Apple, management gets just 1% of the business annually as incentive

Apple	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	9 months 2022
Revenue	\$156,508	\$170,910	\$182,795	\$233,715	\$215,639	\$229,234	\$265,595	\$260,174	\$274,515	\$365,817	\$304,182
Net Income	\$41,733	\$37,037	\$39,510	\$53,394	\$45,687	\$48,351	\$59,531	\$55,256	\$57,411	\$94,680	\$79,082
Net Cash (Net Debt)	\$121,251	\$129,801	\$119,944	\$141,338	\$150,553	\$153,215	\$122,617	\$97,851	\$69,552	\$53,994	\$59,617
Amount Spent on Buyback	\$0	\$22,860	\$45,000	\$35,253	\$29,722	\$32,900	\$72,738	\$66,897	\$72,358	\$85,971	\$64,974
Shares Outstanding (in billions)	26.3	25.2	23.5	22.3	21.3	20.5	19.0	17.8	17.0	16.4	16.1
Options exercised (shares issued)	0.28	0.20	0.24	0.15	0.15	0.15	0.14	0.13	0.12	0.11	0.08
Shares repurchased		1.32	1.95	1.30	1.12	0.99	1.62	1.38	0.92	0.66	0.41
Shares Bought Back	0%	5%	8%	6%	5%	5%	8%	7%	5%	4%	2%
Shares Added Thru Incentive Plan	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	0%
Net Shares Bought Back	-1%	4%	7%	5%	4%	4%	7%	7%	4%	3%	2%
Share Price	\$24	\$17	\$25	\$29	\$28	\$39	\$56	\$55	\$112	\$147	\$138
Trailing PE	15.1	12.1	15.6	12.4	13.7	16.9	19.0	18.4	34.3	26.3	23.7

Fiscal year ending 9/30; split-adjusted share price.

With the rise in PE, Apple is only able to buy back 2-4% annually

Period	Annualized Share Count Reduction
2013 - 1H 2022	4.9%
2013 - 2019	5.5%
2020 - 1H 2022	3.5%

Why did buybacks not work for IBM and Sears?

Need stable/growing business that is profitable. The business cannot be in decline.

The Uber Cannibal Investing Framework

- 1 The business needs to have **stable or growing earnings** for 20+ years. One needs to have a strong view from 2022 to 2042.
- 2 **Cyclicality is OK.** NVR is cyclical, but they typically don't lose much during downturns.
 - a) NVR builds no spec homes. Zero unsold inventory.
 - b) All they lose is their overhead, which they can try to trim.
 - c) They were profitable through the financial crisis 2007 - 2009.

The Uber Cannibal Investing Framework

- 3** There is an interplay between **earnings growth, multiple expansion** and aggregate **amount bought back**.
- a) Remember the returns formula: Earnings Growth x (100/share % left) x Multiple Expansion
 - b) For example, a business where earnings grow 15% a year and 84% of shares are taken out will be a 100 bagger in 20 years with no multiple change.
 - c) If earnings grow 10% a year and 80% of shares are taken out and multiple expands by 50%, it will be a 50 bagger in 20 years.

The Uber Cannibal Investing Framework

- 4 In the end, what matters after 20 years is:
 - a) **What % of shares are gone?**
 - b) What are the typical earnings and growth?
 - c) Is the business still stable/growing?
 - d) What multiple is the market awarding the business?
 - e) The first priority of the business is to invest in its growth if high ROE opportunities exist.

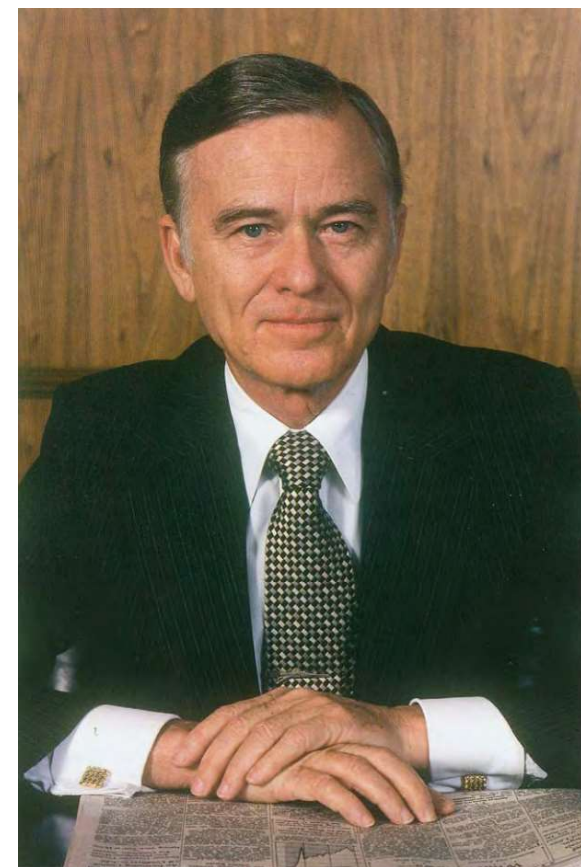
- 5 It is absolutely critical not to invest in cannibals with **questionable futures**:
 - a) Sears
 - b) IBM

The Uber Cannibal Investing Framework

- 6 Some great **cannibal candidates**: ADP, ITW, Berkshire Hathaway, Microsoft, Alphabet, Amazon, Tencent, etc.
- a) They all need to prioritize internal growth at high ROE over buybacks
 - b) Only buy back if no good organic or inorganic growth opportunities at high ROE
 - c) Increase/decrease buybacks based on multiple. Need gifted management for this (Buffett)

Henry Singleton: The King of Buybacks

- Henry Singleton was a masterful capital allocator.
 - Issued shares aggressively for acquisitions when Teledyne stock was flying high.
 - Bought back shares aggressively when Teledyne stock was in the doldrums.
- From 1965-1970, Singleton acquired 130 companies with Teledyne stock when it traded between 40x - 70x earnings.
 - **Shares outstanding quadrupled** during this period.



Henry Singleton: The King of Buybacks

- As the 1970 bear market set in, Teledyne's stock nosedived; its **P/E fell below 10**.
 - Using Teledyne stock to grow became too expensive.
 - Buying Teledyne stock instead became a no-brainer.
 - **Henry used debt to turbocharge the buyback engine.**
- From 1972-1984, Henry **bought back over 90% of Teledyne's shares**.
 - In 1970, EPS was \$1.64.
 - In 1985, EPS was over \$45.
 - Teledyne stock was up **40x in this period**.
 - Henry ultimately paid off the debt used for buybacks.

Tim Cook vs. Henry Singleton

- Apple tripled earnings in the last 10 years.
- Teledyne tripled earnings in 12 years (1972-84)

Tim 1 Henry 0

- Apple bought back 39% of shares in 10 years.
- Teledyne bought back 90% of shares in 12 years.

No contest. Henry wins.

- Apple up 6x in 10 years.
- Teledyne up 40x in 12 years.

Henry leaves Tim in the dust.

Tim Cook vs. Henry Singleton

- Furious pace of buybacks was key.
- Henry took on lots of debt that he later paid back.
- Henry bought back well above annual earnings.

Key Factors in Great Cannibal Returns

- How fast are the shares being retired? How quickly can we get to 80% shares gone?
 - This is 5x with no earnings growth or PE multiple change.
 - **Rate of share count reduction is important.**
- How much can earnings grow in this period?
 - Earnings growth is key to multiplying the 5x.
- Can we buy back lots of stock at low multiples and end up with **higher multiple** and much **higher earnings**?
 - Utopia! We are in the promised land!

Henry Singleton & Warren Buffett

- **Great operators and great capital allocators.**
- **Rare to have CEOs who know when to do buybacks, when to pause, and when to issue shares.**
- **Even if it is a great business, it is not great to buy back at fancy multiples.**

The Magic of Buybacks

Shares Bought Back	Return Without a Change in Earnings or PE Multiple
50%	2x
67%	3x
80%	5x
90%	10x
95%	20x
98%	50x
99%	100x

- It only starts becoming **magical after 80%**.
- Robust earnings growth and multiple expansion delivers huge home runs.

The Starting Point – Cannibals to Choose From

No.	Name	10yr Share Reduction		Name	
1	MBIA Inc	72%	41	Visteon Corp	46%
2	Navient Corp	66%	42	Lowe's Cos Inc	46%
3	Bed Bath & Beyond Inc	65%	43	Oracle Corp	46%
4	Assured Guaranty Ltd	63%	44	Discover Financial Services	46%
5	Dillard's Inc	62%	45	H&R Block Inc	45%
6	White Mountains Insurance Group Ltd	60%	46	Corning Inc	45%
7	Sleep Number Corp	60%	47	SLM Corp	45%
8	Daqo New Energy Corp	58%	48	HP Inc	45%
9	American International Group Inc	57%	49	Credit Acceptance Corp	45%
10	Herbalife Nutrition Ltd	56%	50	Wendy's Co/The	45%
11	Caesarstone Ltd	56%	51	Lear Corp	45%
12	Big Lots Inc	55%	52	GameStop Corp	45%
13	FMC Corp	55%	53	Allstate Corp/The	44%
14	Metalink Ltd	55%	54	DBM Global Inc	44%
15	World Acceptance Corp	54%	55	Genesco Inc	44%
16	Jewett-Cameron Trading Co Ltd	54%	56	Children's Place Inc/The	44%
17	AutoNation Inc	54%	57	RH	43%
18	eBay Inc	54%	58	Kforce Inc	43%
19	Allison Transmission Holdings Inc	54%	59	NIKE Inc	43%
20	Jack in the Box Inc	53%	60	Signet Jewelers Ltd	43%
21	Xerox Holdings Corp	52%	61	National Bank Holdings Corp	43%
22	Paragon Technologies Inc	52%	62	AMC Networks Inc	42%
23	First Financial Northwest Inc	51%	63	Citi Trends Inc	42%
24	Dollar Tree Inc	51%	64	LyondellBasell Industries NV	42%
25	CNO Financial Group Inc	50%	65	Travel + Leisure Co	42%
26	Ameriprise Financial Inc	50%	66	AMB Financial Corp	41%
27	Global Indemnity Group LLC	50%	67	Home Federal Bancorp Inc of Louisiana	41%
28	Hibbett Inc	50%	68	Brinker International Inc	41%
29	Trinity Industries Inc	49%	69	Visa Inc	41%
30	AutoZone Inc	48%	70	Washington Federal Inc	40%
31	Alcoa Corp	48%	71	Star Group LP	40%
32	DaVita Inc	48%	72	NetApp Inc	40%
33	Avita Medical Inc	48%	73	Primerica Inc	39%
34	O'Reilly Automotive Inc	47%	74	Biogen Inc	39%
35	Motorola Solutions Inc	47%	75	Lincoln National Corp	39%
36	Seagate Technology Holdings PLC	47%	76	Arrow Electronics Inc	39%
37	Kohl's Corp	47%	77	Benchmark Electronics Inc	39%
38	Avis Budget Group Inc	47%	78	Allscripts Healthcare Solutions Inc	39%
39	Murphy USA Inc	47%	79	Surge Components Inc	39%
40	Itex Corp	47%	80	Juniper Networks Inc	39%
			81	Sally Beauty Holdings Inc	39%
			82	Travelers Cos Inc/The	39%
			83	Northrop Grumman Corp	38%
			84	McKesson Corp	38%

The Starting Point – Cannibals to Choose From

No.	Name	10yr Share Reduction	No.	Name	10yr Share Reduction
85	Abercrombie & Fitch Co	38%	125	Bank of New York Mellon Corp/The	34%
86	Alpha Pro Tech Ltd	38%	126	Union Pacific Corp	33%
87	Dick's Sporting Goods Inc	38%	127	Hyatt Hotels Corp	33%
88	Louisiana-Pacific Corp	38%	128	Best Buy Co Inc	33%
89	Domino's Pizza Inc	37%	129	Harley-Davidson Inc	33%
90	Loews Corp	37%	130	Urban Outfitters Inc	33%
91	Check Point Software Technologies Ltd	37%	131	QUALCOMM Inc	33%
92	BankFinancial Corp	37%	132	ManpowerGroup Inc	33%
93	Greenhill & Co Inc	37%	133	Provident Financial Holdings Inc	33%
94	Yum! Brands Inc	37%	134	Avnet Inc	33%
95	Atlantius Holdings Corp	37%	135	Citrix Systems Inc	33%
96	Assurant Inc	37%	136	Home Depot Inc/The	33%
97	Nicholas Financial Inc	37%	137	Flex Ltd	33%
98	Apple Inc	37%	138	InterDigital Inc	33%
99	Synchrony Financial	37%	139	Axis Capital Holdings Ltd	32%
100	Paramount Global	37%	140	IF Bancorp Inc	32%
101	CF Industries Holdings Inc	37%	141	Citigroup Inc	32%
102	Western Union Co/The	36%	142	America's Car-Mart Inc/TX	32%
103	Terex Corp	36%	143	Tri Pointe Homes Inc	32%
104	St Joe Co/The	36%	144	Altisource Portfolio Solutions SA	32%
105	Foot Locker Inc	36%	145	MSCI Inc	32%
106	Westell Technologies Inc	36%	146	Dollar General Corp	32%
107	Teradata Corp	36%	147	Zumiez Inc	32%
108	PAM Transportation Services Inc	36%	148	Waters Corp	32%
109	Illinois Tool Works Inc	35%	149	Applied Materials Inc	32%
110	Kroger Co/The	35%	150	Wolverine Resources Corp	32%
111	Denny's Corp	35%	151	Goldman Sachs Group Inc/The	31%
112	Zovio Inc	35%	152	Activision Blizzard Inc	31%
113	USANA Health Sciences Inc	35%	153	Kirkland's Inc	31%
114	Crocs Inc	35%	154	Conrad Industries Inc	31%
115	PulteGroup Inc	35%	155	Celanese Corp	31%
116	American Express Co	35%	156	Quanta Services Inc	31%
117	Security National Financial Corp	35%	157	Unum Group	31%
118	Qurate Retail Inc	34%	158	NVR Inc	31%
119	Ubiquiti Inc	34%	159	VeriSign Inc	31%
120	Graham Holdings Co	34%	160	Masco Corp	31%
121	Globe Life Inc	34%	161	Adtalem Global Education Inc	30%
122	Aon PLC	34%	162	Smith & Wesson Brands Inc	30%
123	Comerica Inc	34%	163	HCA Healthcare Inc	30%
124	Central Pacific Financial Corp	34%	164	Phillips 66	30%
			165	Aflac Inc	30%
			166	Guess? Inc	30%
			167	CSX Corp	30%

The Starting Point – Cannibals to Choose From

No.	Name	5yr Share Reduction
1	eBay Inc	45%
2	Allscripts Healthcare Solutions Inc	36%
3	Jack in the Box Inc	35%
4	Terex Corp	34%
5	AutoZone Inc	31%
6	Ameriprise Financial Inc	28%
7	O'Reilly Automotive Inc	28%
8	Domino's Pizza Inc	25%
9	QUALCOMM Inc	24%
10	Arrow Electronics Inc	23%
11	Bank of New York Mellon Corp/The	23%
12	Apple Inc	23%
13	H&R Block Inc	23%
14	Lowe's Cos Inc	23%
15	Check Point Software Technologies Ltd	22%
16	Union Pacific Corp	22%
17	CSX Corp	21%
18	Citrix Systems Inc	20%
19	Yum! Brands Inc	19%
20	NetApp Inc	18%
21	Teradata Corp	18%
22	Visa Inc	18%
23	Applied Materials Inc	17%
24	Juniper Networks Inc	16%
25	Goldman Sachs Group Inc/The	15%
26	Home Depot Inc/The	14%
27	Wendy's Co/The	12%
28	Northrop Grumman Corp	11%
29	InterDigital Inc	11%
30	Illinois Tool Works Inc	10%
31	MSCI Inc	10%

Thank You

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