Portfolio 30

Selection	Ticker	Sponsor	N of shares	Acquired price Jan 20 '17	Starting value	Dividends to date (cum)	Latest price Jul 28 '17	Total Return	Value as of Jul 28 '17
Shopify	SHOP	Jim Patterson	19.96	$50.10	$1,000	$0.00	$92.98	85.6%	$1,855.89
Boeing	BA	Bill Gick	6.27	$159.53	$1,000	$2.84	$241.27	53.0%	$1,530.18
Himax Technology	HIMX	Marvin Hoffman	183.49	$5.45	$1,000	$0.00	$8.23	51.0%	$1,510.09
Vectrus Inc	VEC	Bob Jacobs	42.55	$23.50	$1,000	$0.00	$34.61	47.3%	$1,472.77
Juno Therapeutics	JUNO	June Helberg	50.94	$19.63	$1,000	$0.00	$28.78	46.6%	$1,466.12
Paypal	PYPL	Dennis Monteith	23.99	$41.69	$1,000	$0.00	$59.20	42.0%	$1,420.00
Coach	COH	Carlos Gomez	28.32	$35.31	$1,000	$0.68	$48.69	39.8%	$1,398.07
MKS Instruments	MKSI	Diep Chu	16.22	$61.65	$1,000	$0.35	$83.35	35.8%	$1,357.66
Health Insurance Innovation	HIIQ	Frank Castrignano	48.31	$20.70	$1,000	$0.00	$28.05	35.5%	$1,355.07
Applied Materials	AMAT	Jim Blaser	29.55	$33.84	$1,000	$0.20	$45.25	34.3%	$1,343.09
Rockwell Medical	RMTI	Dan Cromie	182.48	$5.48	$1,000	$0.00	$7.16	30.7%	$1,306.57
ICICI Bank Ltd	IBN	Rick Yurick	130.55	$7.66	$1,000	$0.08	$9.27	22.0%	$1,220.37
Banco Macro SA	BMA	Dawn Carmell	13.37	$74.79	$1,000	$0.75	$88.07	18.8%	$1,187.63
Illumina	ILMN	Janet Blaser	6.26	$159.74	$1,000	$0.00	$174.92	9.5%	$1,095.03
Waste Management	WM	Lou Sirianni	14.36	$69.66	$1,000	$0.85	$74.80	8.6%	$1,085.99
Pfizer	PFE	Alleen Fraser	31.48	$31.77	$1,000	$0.64	$33.15	6.4%	$1,063.58
Cdiversified	CODI	Paul Gorman	56.98	$17.55	$1,000	$0.72	$17.40	3.2%	$1,032.48
Civista Bancshares	CIVB	Thomas Rosiek	49.70	$20.12	$1,000	$0.18	$20.52	2.9%	$1,028.83
Valero Energy	VLO	Gary Genga	15.10	$66.24	$1,000	$1.40	$66.69	2.8%	$1,027.93
Quick Logic Corp	QUIK	Terry Badger	709.22	$1.41	$1,000	$0.00	$1.44	2.1%	$1,021.28
Nature's Sunshine	NATR	Cathy Gagliano	78.74	$12.70	$1,000	$0.10	$12.60	0.0%	$1,000.00
Laredo Petroleum	LPI	Frank Gagliano	73.75	$13.56	$1,000	$0.00	$13.04	-3.8%	$961.65
Hormel	HRL	Jeff Fraser	27.57	$36.27	$1,000	$0.34	$34.15	-4.9%	$950.92
Opko Health	OPK	Stephen Curry	115.74	$8.64	$1,000	$0.00	$6.31	-27.0%	$730.32
Babcock Wilcox	BW	Rowland Billy	59.95	$16.68	$1,000	$0.00	$10.46	-37.3%	$627.10
Real Industries Inc	RELY	MaryLynn Vickers	166.67	$6.00	$1,000	$0.00	$2.80	-53.3%	$466.67

Index data are for interest only

		This month:		Start value	$26,000		Total	$30,515.30
NASDAQ	5,555.33	6,374.68	14.7%				YTD Return	17.4%
S&P	2,271.31	2,472.10	8.8%					
Dow	19,827.25	21,830.31	10.1%					

Portfolio Number 31

Company Name	Symbol	Member/Sponsor	# of shares	Starting price July 12, '17	Starting value	Dividends to date (cumulative)	Most recent price July 28, '17	% growth (price increase & dividends)	Most recent value
Tal Education	TAL	Jim Patterson	7.28	$ 137.28	$ 1,000.00		$ 152.66	11.2%	$ 1,112.03
JDCom Inc	JD	Diep Chu	24.13	$ 41.44	$ 1,000.00		$ 45.22	9.1%	$ 1,091.22
Hornel	HRL	Stephen Curry	30.66	$ 32.62	$ 1,000.00		$ 34.15	4.7%	$ 1,046.90
Vista Outdoors	VSTO	Rowland Billy	44.84	$ 22.30	$ 1,000.00		$ 23.13	3.7%	$ 1,037.22
Icon	ICLR	Jeff Veneziano	10.02	$ 99.83	$ 1,000.00		$ 102.84	3.0%	$ 1,030.15
Argin	AGX	Rick Yurick	16.00	$ 62.50	$ 1,000.00		$ 64.35	3.0%	$ 1,029.60
Apple	AAPL	Frank Castrignano	6.86	$ 145.74	$ 1,000.00		$ 149.50	2.6%	$ 1,025.80
Quicklogic	QUIK	Terry Badger	709.22	$ 1.41	$ 1,000.00		$ 1.44	2.1%	$ 1,021.28
Fastenal	FAST	Carlos Gomez	23.41	$ 42.72	$ 1,000.00		$ 43.55	1.9%	$ 1,019.43
Cognizant	CTSH	Alleen Fraser	14.68	$ 68.13	$ 1,000.00		$ 69.32	1.7%	$ 1,017.47
SPX Corporation	SPXC	Jim and Laurie Ditzel	36.82	$ 27.16	$ 1,000.00		$ 27.45	1.1%	$ 1,010.68
Costco	COST	Janet Blaser	6.59	$ 151.75	$ 1,000.00		$ 152.89	0.8%	$ 1,007.51
Honda	HMC	Gary Genga	36.36	$ 27.50	$ 1,000.00		$ 27.66	0.6%	$ 1,005.82
Carter's	CRI	Reid O'Connell	11.61	$ 86.11	$ 1,000.00		$ 86.27	0.2%	$ 1,001.86
Albermarle	ALB	Dale Whittington	8.58	$ 116.54	$ 1,000.00		$ 116.50	0.0%	$ 999.66
Veeva	VEEV	Chuck Dittmar	15.63	$ 63.98	$ 1,000.00		$ 63.63	-0.5%	$ 994.53
Analog	ALOG	Bob Jacobs	13.95	$ 71.70	$ 1,000.00		$ 71.15	-0.8%	$ 992.33
Valeant	VRX	Dan Cromie	58.86	$ 16.99	$ 1,000.00		$ 16.84	-0.9%	$ 991.17
Ford	F	Lou Sirianni	87.18	$ 11.47	$ 1,000.00		$ 11.17	-2.6%	$ 973.84
XPO Logistics	XPO	Jim Blaser	15.86	$ 63.06	$ 1,000.00		$ 60.09	-4.7%	$ 952.90
Corning	GLW	Dawn Carmell	32.41	$ 30.85	$ 1,000.00		$ 29.25	-5.2%	$ 948.14
Supernus	SUPN	Bill Gick	22.52	$ 44.40	$ 1,000.00		$ 41.00	-7.7%	$ 923.42
Western Digital	WDC	Brett Templar	10.62	$ 94.13	$ 1,000.00		$ 84.97	-9.7%	$ 902.69
Rockwell Medical	RMTI	Marvin Hoffman	125.94	$ 7.94	$ 1,000.00		$ 7.16	-9.8%	$ 901.76
Bank of the Ozarks	OZRK	Jeff Fraser	21.55	$ 46.40	$ 1,000.00		$ 41.74	-10.0%	$ 899.57
Hudson	HDSN	Paul Gorman	107.53	$ 9.30	$ 1,000.00		$ 7.96	-14.4%	$ 855.91
Inovio Pharma	INO	Dennis Monteith	127.23	$ 7.86	$ 1,000.00		$ 5.52	-29.8%	$ 702.29
Maui Land and Pineapple	MLP	Thomas Rosiek	36.56	$ 27.35	$ 1,000.00		$ 16.85	-38.4%	$ 616.09

Index data are for interest only - this portfolio is not designed to reflect the basis for any of the three indices quoted.

	At Start:	This month:		
				Start value **$ 28,000.00**
NASDAQ	6,261.17	6,374.67	1.81%	
S&P	2,443.25	2,472.10	1.18%	
Dow	21,538.14	21,830.31	1.36%	

Total: **$ 27,111.27**
Portfolio % change since inception **-3.17%**

No dividends at this stage.
This portfolio will close at the June 2018 breakfast meeting.
The winner will receive a free breakfast if present.

Stephen Curry
Coordinator
stephenhcurry@earthlink.net

50 Smartest Companies **The List**

1. Nvidia

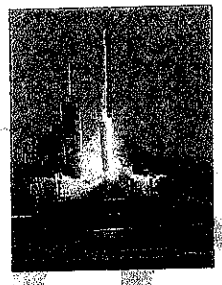
Still improving its chips, originally developed for gaming, to help develop breakthrough technologies like deep learning and autonomous driving.

$3 billion: *spending on R&D to create its new chip*

2. SpaceX

Changing the economics of space travel with its successful landing of rockets to be recycled for multiple trips.

10 percent: *discount being considered for customers who agree to use reused rockets*



3. Amazon

Creating an AI-powered store of the future with Amazon Go while expanding assistant Alexa into phones, cars, and more.

12,000: *number of computer programs that developers have published for Alexa*

4. 23andMe

Vindicated this year when the U.S. FDA granted permission to tell customers whether their DNA puts them at higher risk for some diseases.

1 million plus: *number of customers who have consented to have their genetic information used for scientific research*

5. Alphabet

Continues to dominate research into AI while expanding innovation in smartphone software, virtual reality, and self-driving cars.

40 percent: *amount of energy the company says it saves applying machine-learning algorithms from its DeepMind subsidiary to cooling its data center*

6. iFlytek

Its voice assistant technology is the Siri of China, and its real-time portable translator puts AI to remarkable use, overcoming dialect, slang, and background noise to translate between Chinese and a dozen other languages with surprising accuracy.

70 percent: *iFlytek's share of China's market in voice-based technologies*

7. Kite Pharma

Nearing FDA approval of its experimental immunotherapy that uses a patient's own blood cells to combat cancer.

31 percent: *proportion of study participants who were very sick with lymphoma yet showed no sign of the disease six months after a single treatment with Kite's therapy*

8. Tencent

Turning its insanely popular chat platform WeChat into a virtual operating system featuring mini programs.

50 percent: *proportion of WeChat's 770 million daily users on the service at least 90 minutes a day*

9. Regeneron

Biotech with a strong drug pipeline and track record is treating eye and other diseases, and testing treatments for rheumatoid arthritis, asthma, and pain.

500,000: *number of U.K. volunteers whose genetic data it is helping sequence*

10. Spark Therapeutics

Its blindness treatment could be the first gene therapy approved in the U.S. to treat an inherited disease.

1 in 30,000: *estimated number of individuals affected by the disease, Leber hereditary optic neuropathy*

11. Face++

Pioneering new uses of face recognition technology, from helping to solve fraud to "smile to pay."

106: *maximum points on a person's face that its technology tracks*

12. First Solar

Making advances in cadmium telluride cells; building three of the five largest solar projects in the U.S.

$2.9 billion: *estimated 2017 revenue*

13. Intel

Acquisitions in computer vision and AI show it's serious about adapting to new technology.

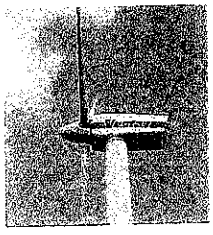
46 percent: *portion of revenues derived from areas beyond PC chips*

14. Quanergy Systems

Its solid-state version of lidar is cheaper and more compact than conventional versions of a technology essential to autonomous driving.

$250: *price of its S3 lidar sensors for autonomous vehicles*

15. Vestas Wind Systems



Overtook General Electric to become the biggest U.S. installer of new wind power last year and is investing in energy storage.

14: *consecutive number of profitable quarters*

16. Apple

Minting money selling its popular mobile phones and laptops while adding impressive names to its AI research team and promising to do more manufacturing in the U.S..

$257 billion: *cash on its balance sheet, more than the entire market value of General Electric*

17. Merck

In a first, the FDA has approved its immunotherapy Keytruda to treat cancers on the basis of the tumor's genetic characteristics, not its location in the body.

$39 billion: *estimated 2017 revenue, buoyed by sales of Keytruda*

18. Carbon

Its novel 3-D-printing process permits fabrication of parts out of a wide variety of plastics.

100,000: *number of pairs of shoes Adidas will print by the end of 2018 using Carbon technology*

19. Desktop Metal

With nearly $100 million from VC firms, GE, Alphabet, and others, this startup is focused on cheap, fast 3-D printing of metal parts.

$120,000: *cost of its first product, to begin shipping in September*

20. Ionis Pharmaceuticals

RNA drug approved for a rare disease, spinal muscular atrophy.

36 plus: *number of RNA-targeted drugs in development*

21. Gamalon

Its technology can write and rewrite its own code, algorithms that will accelerate machine learning.

100 times: *its technology's efficiency advantage over other machine-learning methods*

22. Illumina

After a drop in sales last fall, unveiled a new machine, NovaSeq, that will be capable of sequencing 48 entire human genomes in two and a half days — and could one day push the cost of genome sequencing down to $100.

$850,000: *price of the cheaper of its two NovaSeq models*

23. Facebook

Despite controversies over fake news, live streaming video, and discriminatory advertising, and poor sales of its Oculus VR headset, it continues to work on interesting applications of AI and VR, and its Instagram business is singing.

20: *number of natural-language data sets built into its AI research tool ParlAI*

24. Udacity

Has found a business model for MOOCs by working with corporations to make course material relevant to jobs; now connecting companies to students and graduates, too.

15: *number of "nanodegrees" the company offers in skills for selected jobs*

25. DJI

Ongoing innovation in consumer drones and now expanding into drones for enterprise as well.

50 percent: *estimated North American market share*

26. MercadoLibre

Runs the largest online market in Latin America and is expanding to mobile point-of-sale transactions. Its MercadoPago online payment tool lets users deposit cash into their accounts.

182 million: *number of registered users, a 20 percent increase over the previous year*

27. Microsoft

Its fast-growing cloud business has reduced the software giant's reliance on PC sales. Its expanding team of quantum computing experts is working on commercially viable products to compete with efforts by Google and IBM.

Microsoft

$15 billion: *projected annual revenue for its commercial cloud business*

28. Rigetti Computing

Though a startup, it's got its own fab in the Bay Area and an ambitious approach to quantum computing that combines hardware and software, focusing on design that can be easily commercialized.

$64 million: *venture funding raised by the company in the past year*

29. Kindred AI

Combining strengths of humans and robots into exoskeleton suits in a bid to help people and machines work together.

Immersive teleoperation: *the type of technology the company makes, in which a human controls a robot via a wearable device*

30. Sophia Genetics

Evangelists of data-driven medicine are sorting through DNA sequences with AI algorithms to accelerate diagnosis in oncology, cardiology, and more.

106,000: *number of patients tested to date*

31. Tesla

Autopilot limitations, car maintenance problems, and concerns about its solar strategy and ability to produce enough cars have hurt, but cofounder Elon Musk continues to take big bets. Battery cell production has begun at his giant Nevada "gigafactory."

400,000 plus: *number of preorders for its lower-cost Model 3*

32. Oxford Nanopore

Twelve years and $200 million in the making, its inexpensive, portable genetic analyzer has been successfully tested from Antarctica to space and shows promise for on-the-spot diagnostic testing, germ monitoring, and more.

882,000 letters: *record length of a single DNA strand read continuously by one of its machines*

33. Foxconn

Acknowledging the direction of Chinese manufacturing by shifting from low-cost human labor to add extensive robotics to its factories.

60,000: *number of jobs automation eliminated at a single Chinese factory*

34. M-KOPA

Its pay-as-you-go solar power model works well in its African target market, and the company is expanding sales with local communications leader Safaricom.

500,000: *number of homes connected as of this spring*

35. ForAllSecure

Still in startup mode but has garnered attention since last August, when it won the Pentagon's DARPA contest with a bot designed to autonomously spot, test, and fix software security flaws.

14: *number of vulnerabilities one experiment discovered in networking devices*

36. Flipkart

Benefiting from the consolidation of India's competitive e-commerce sector, including $500 million investment from eBay.

$11.6 billion: *company's current valuation, the highest for any Indian e-commerce startup*

37. Bluebird Bio

Leading gene-therapy company focused on engineered T cells that recognize and kill cancer and other conditions. Its treatment for sickle-cell disease appears promising.

66: *percentage increase in stock price over the past year*

38. Adidas

Commercial production at its robot-heavy factory in Ansbach, Germany, to begin this year, producing locally and on demand. A second factory has been announced in Atlanta.

300 million: *number of pairs of shoes Adidas makes each year, largely in Asia*

39. IBM

Exploring new technologies like blockchain and cloud AI while continuing work on important long-term challenges like quantum computing.

400: *number of customers the company has worked with on blockchain applications*

40. General Electric

Moving to incorporate AI into its businesses as it focuses on technological innovation in wind and renewable energy, data-driven services, and other business lines.

60,000: *number of jet engines GE says will be connected to the Internet by 2020*

41. Alibaba

Quickly expanding the artificial intelligence in its Alibaba Cloud platform, including industry-specific products, and launching a global electronic trade platform to build its business with small and medium-size companies around the world.

57 percent: *Alibaba's share of Chinese online commerce*

42. HTC

Despite some executive turnover and a tough year financially, the company has interesting prospects in virtual reality and access to China's enthusiastic VR users.

1,500: *number of pieces of content outside developers have created for its VR system, Vive*

43. Blueprism

Its software helps companies including banks and insurers use AI to do back-office clerical tasks.

189: *number of deals signed by the company in 2016, more than four times its 2015 number*

44. Africa Internet Group

The online platform has consolidated all its consumer Web services—shopping, travel, food delivery, real estate sales, car rentals—under one name, Jumia.

500,000: *number of African companies that use Jumia's platform*

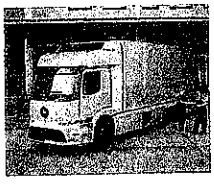
45. Veritas Genetics

Launched by well-regarded researchers and funded with venture capital backed by Chinese and U.S. pharmaceutical companies, it will sequence anyone's genome for just $1,000 and interpret it too. In 2017, started offering to sequence newborns in China.

1,250: *number of conditions, risks, and traits it will tell parents about in their newborns*

46. Daimler

Delivering the first run of its short-haul all-electric truck this year while working on vehicle connectivity and autonomous driving for cars.



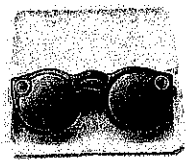
200 kilometers: *range of its lithium-battery-powered eTruck*

47. Salesforce

Looking to push AI-generated tools, such as an algorithm designed to summarize documents, to its massive user base.

20 percent: *market share in customer relationship software*

48. Snap



Though its glasses have not been a runaway hit, it is succeeding with entertainment through its filters and pioneering the use of machine vision and augmented reality for socializing.

3 billion: *number of snaps users create each day*

49. Ant Financial

Its Alipay business, dominant in China, is eyeing new markets, including India and Korea. Meanwhile, it's exploring AI as a means of underwriting loans, and blockchain as a method of improving security in back-office operations.

450 million: *number of annual active users*

50. Baidu

Despite the high-profile loss this year of its well-regarded head of AI, Andrew Ng, the company is doing important work in the field, including leading China's new national deep-learning lab.

1,700: *number of employees dedicated to working on AI*

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The digital economy has transformed the way we communicate with each other; the way we consume information, products, and services; the way we entertain ourselves. It's revolutionized seemingly non-digital industries—think of how different financial services, for instance, are today from what they were two decades ago—and investors expect it to soon transform others, which is why Tesla Motors is worth more than General Motors despite making a tiny fraction as many cars as GM makes and earning a tiny fraction of the revenue.

50 Smartest Companies

It Pays to Be Smart **By David Rotman**

Superstar companies are dominating the economy by exploiting a growing gap in digital competencies.

Our economy is increasingly ruled by a few dominant firms. We see them everywhere, from established giants Amazon, Facebook, Google, Apple, and Walmart to fast-growing newcomers like Airbnb, Tesla, and Uber. There have always been large companies and outright monopolies, but there's something distinctive about this new generation of what some economists call superstar companies. They appear across a broad range of business sectors and have gained their power at least in part by adeptly anticipating and using digital technologies that foster conditions where a few winners essentially take all.

Our annual list of the 50 Smartest Companies includes many of these firms, but it's not merely a list of today's biggest or most profitable players. It highlights technologically innovative companies whose business models allow them to exploit these advances. The list is our best guess as to which firms will be the dominant companies of the future. Amazon and Facebook and Google are on it, but so are plenty of newcomers. Though they might be unfamiliar to you today, we believe they have an inside track to take advantage of the technologies, such as artificial intelligence, that will define business in the coming years.

Being smart about innovation won't guarantee that these firms become superstars. But it does, at least, give them the potential to create and dominate new markets in an increasingly competitive business environment.

The emergence of superstar companies has, in many ways, helped to define our era. Digital giants, in particular, have cleverly leveraged the Internet, so-called network effects, and big data to become hugely profitable while providing indispensable services—like free Web search and easy online shopping—and devices that have changed our lives (see "Why Tesla Is Worth More Than GM," page 28).

But Internet companies aren't the only ones to become superstars. According to recent research by economists at Harvard and MIT, the share of sales by superstar companies—which the authors define as the four largest firms in a given industry—has gone up sharply in all the sectors they looked at, from transportation to services to finance. The trend toward superstar firms is accelerating, says Lawrence Katz, a Harvard economist and coauthor of the study. It has become more uniform across industries and developed economies during the past decade or so. These companies' dominance is particularly strong in markets undergoing rapid technological change. Katz says that's probably because of the wide disparity in how well companies take advantage of new advances. In other words, you have to be the smartest company in your field or you might as well not bother.

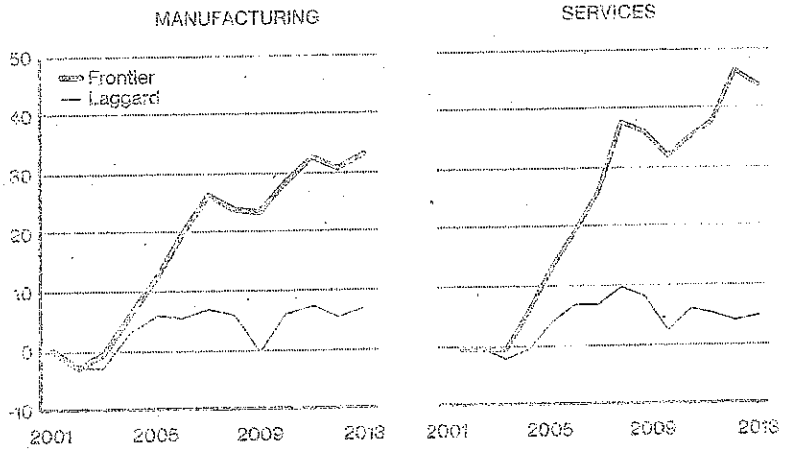
In itself, that might not be bad. But the authors identified a deeply troubling result of an economy where just a few top-tier companies dominate. One of the economic truths of much of the 20th century was that the portion of the country's overall income that went to labor was constant; as the economy grew, workers got a proportionate share of that growing pie. But labor's share of the national income has been shrinking over the past few decades. This is true in many countries, and the decline speeded up in the United States in the 2000s.

The trend puzzles economists. Some suggest it reflects the rise of cheap robots that can do the jobs of human workers, but the data isn't con-

vincing. Instead, Katz and his coauthors blame the emergence of the superstar companies. As these companies grow and become more efficient and more adept at using digital technologies, they need fewer workers relative to their soaring revenues. The fact that these labor-frugal firms have so much of the market share in their sectors means labor gets a smaller portion of the nation's overall income.

Compounding the problem is that superstar companies, which desire the best possible talent, tend to pay much better than anyone else. This dynamic is deepening the divide between the country's economic winners and losers. Nicholas Bloom, an economist at Stanford, and his colleagues have shown that about one-third of the growth in U.S. income inequality since 1980 can be explained by the disparity between the pay premiums of a few elite companies and the salaries most workers earn. Fewer and fewer people—mostly a select group of highly trained professionals—are enjoying the vast profits generated by these top companies.

THE WIDENING GAP BETWEEN FRONTIER FIRMS AND LAGGARDS CAN BE SEEN IN THE PERCENTAGE INCREASES IN LABOR PRODUCTIVITY SINCE 2001



Frontier firms are the 5 percent of companies with the highest productivity within each industry; laggards are the rest of the industry. Data is from 24 OECD countries.

It is "certainly a big part of the [economic] anxiety" that is plaguing the country, Katz believes.

The rise of the superstar companies also might help explain another disturbing economic trend. Despite the proliferation of impressive new advances in software, digital devices, and artificial intelligence over the last decade and the great profits generated by Silicon Valley, economic growth in the United States and other developed countries has been sluggish (see "Dear Silicon Valley: Forget Flying Cars, Give Us Economic Growth," July/August 2016). In particular, an economic measure called total factor productivity, which is meant to reflect innovation, has been dismal (see "Tech Slowdown Threatens the American Dream," May/June 2016). How can overall growth be so lackluster while the high-tech sector is booming?

Economists with the Organization for Economic Cooperation and Development think they have found the answer. It turns out that productivity at the top companies in various sectors—what the OECD economists call the frontier firms—is growing robustly. These are the companies making the best use of the Internet, software, and other technologies to streamline their operations and create new market opportunities. But most companies aren't actually harnessing new technologies very effectively. And the relatively poor productivity of these laggards, says OECD economist Dan Andrews, is dragging down the overall economy. "Technologies are increasingly complex, and many firms may lack the competencies to adapt," suggests Andrews, coauthor of the OECD study, which looked at the United States and 23 other developed countries.

In some ways the OECD findings are encouraging, because they demonstrate that recent innovations do—in the hands of top companies—have the potential to strongly improve productivity. But surprisingly, says Andrews, the laggards seem to be making little progress toward catching up; new ideas and business practices aren't trickling down as rapidly as they should. The reason isn't entirely clear, he says. But it seems that the economy is less dynamic and efficient at "dispersing" new technologies than we might think.

Such findings help drive home the importance of the 50 Smartest Companies list. Be assured, there are no laggards on it. But the research by Andrews and others also shows why we need a better business climate—one that allows more startups and fresh ideas to thrive. Today's giant companies are pulling ahead, and a dwindling number of individuals are reaping the financial rewards. There is nothing inevitable about that trend. The advent of complex technologies such as artificial intelligence, which will be critical to future business success and are tricky to understand and master, could widen the gap further. They could also provide ample opportunities for new companies to create markets that don't even exist today. We do need companies to aggressively push the frontiers of innovation. Still, as we celebrate our 50 Smartest Companies, it is worth keeping in mind the importance of distributing know-how, and the wealth it produces, more broadly.

D. ANDREWS, C.CRISCUOLO, AND P.N. GAL (2016) "THE BEST VERSUS THE REST"

Why I Chose Hudson Techologies

At the Rochester chapter's latest meeting, John Bajkowski, President of AAII National, gave a presentation whose subject was "Finding a Stock Winner: Screening". One approach mentioned in passing was the CANSLIM approach developed by William O'Neill, founder and publisher of Investor's Business Daily. To participate in our 31st Breakfast Club portfolio, beginning with the end of June, we reviewed the latest (May 31) screen results provided by AAII's rendering of CANSLIM.

Before founding IBD, O'Neill worked on Wall Street. As a young analyst (after military service) O'Neill made a study of the 600 stocks showing the greatest price appreciation since 1950. He was searching for the common characteristics these stocks possessed. Completing the study, O'Neill found seven shared traits which he captured in the acronym CANSLIM. Here they are.

- **C -- Current earnings.** Current earnings should be up at least 25% quarter to quarter. Dell Conputer's earnings grew 74% and 108% in the two quarters prior to its 27 month growth of 1780%.
- **A -- Annual earnings,** should be up 25% or more in each of the previous three years. Annual returns on equity should be 17% or more
- **N -- New product,** or **New** management, or **New** highs. Something new, usually a product that is clearly superior to competing options, OR, an entirely new product that induces a whole new demand, eg. Apple's IPod.
- **S -- Supply and Demand** for the stock. Float of less than 25 million shares. The number of shares outstanding is a measure of supply. Companies with fewer shares outstanding make larger price gains. Companies buying back their stock in the open market and companies showing stock ownership by management are preferred.
- **L -- Leader or laggard.** You want "the leading stock in a leading industry". Use the **Relative Price Strength Rating** (RPSR) of the stock, conveniently offered by IBD. Relative Strength is a percentile ranking of the stock plotted against an overall market index. Ranking must be greater than 80.
- **I -- Institutional sponsorship,** refers to the ownership of the stock by mutual funds. A few, but not too many. More than three funds is suggested. It is the accumulation of the stock by funds that will drive the price upwards.
- **M -- Market Direction.** It is best to buy when the market is trending upwards.

CANSLIM criteria are severe, and many times very few companies will qualify. We referred to the May 2017 screening, in which only six stocks qualified out of 6,000+ surveyed. Hudson Technologies was one of the six. (How severe? For much of 2008, no companies passed on a monthly screening.)

Hudson Technologies is a company whose products and services involve refrigeration. Company revenues have doubled from 2014 to 2016, and earnings have doubled in just the past year's time 2015 to 2016. The company is small, with fewer than 200 employees. It is listed on NASDAQ. The number of outstanding shares is slightly higher than the CANSLIM target of 25 million, but not by much. Company officers own 13% of the outstanding common stock. Hudson is a niche company in a highly regulated field. Refrigerants are considered to be greenhouse gases that are believed to contribute to global warming and climate change. The company claims to offer "innovative" solutions to the problems of refrigeration, with sources of acceptable refrigerant supply, monitoring processes and consulting services. As best as it is possible to determine, these "innovative solutions" will have to qualify as the "NEW" of CANSLIM.

NEW is the biggest challenge to the approach. Everything "NEW" is not necessarily successful. Due diligence calls for an assessment of whatever "NEW" the company offers. This requires some expertise most analysts – let alone individual investors – simply do not possess. This shortcoming also explains the fact that many companies passing the CANSLIM screen do not exhibit the outstanding performance O'Neill found in his original 600 companies. Since O'Neill's study was retrospective, he already knew what the successful "NEW" was.

To protect myself from making a poor CANSLIM choice, I passed the company through other "guru" screens, and was happy to find that Peter Lynch, Ken Fisher and Marty Zweig would like Hudson, as would Momentum screens and the Motley Fool Small Cap selection screen. Now we'll just have to wait until June 2018 to see how successful we all are.