Intelligent Cloning

The Winter 2021 Edition

Thou shalt accept that thou shalt be wrong
at least one-third of the time.

This quote is the third commandment of the Mohnish Pabrai Ten Commandments of Investment Management. Even the world's best investors make plenty of mistakes. That's how you learn and grow as an investor.

In this Edition on Intelligent Cloning we'll start off with an update on the Intelligent Cloning Portfolio. Then we'll have a look at the Mohnish Pabrai Free Lunch Portfolio and the other thirty-one quants. And finally we'll zoom in on "multi-baggers", inspired by the book of Chris Mayer. Enjoy!

The Intelligent Cloning Portfolio

Let me remind you once again that these are not actual fund results, but the table illustrates what the results could have been if we indeed started an investment partnership in 2H '16. The stocks are selected with the view to hold on to these companies for several years, preferably decades, as long as the company remains a good company.

Current positions

When	Company	Price	Return
2H '16	Deere	87 USD	222%
2H '16	Allison Transmission	29 USD	58%
1H '17	Davita	65 USD	77%
1H '17	Verisign	83 USD	158%
2H '17	Monro	47 USD	11%
2H '18	StoneCo	17 USD	400%
2H '18	Veritiv	24 USD	-12%
1H '20	Graftech	12 USD	-19%
1H '20	eBay	30 USD	68%
2H '20	XPEL	15 USD	230%

Closed positions

When	Company	Price	Sold	Return
2H '17	Tegna	13 USD	2H '18	3 %
1H '18	Esterline Corp.	72 USD	2H '18	70 %
1H '18	Sinclair Broadcast	44 USD	2H '19	46 %
1H '19	Liberty Global	22 USD	2H '20	5 %

The Graftech position will be closed when appropriate.

The rationale behind closing the Liberty Global position, which is, I believe, still a great investment opportunity, is simply that I found a better one: XPEL. The company is a global provider of after-market automotive products, including automotive surface and paint protection, headlight protection, and automotive window films, as well as a provider of complementary proprietary software. The idea was "cloned" from Brown Capital, a highly successful investment management firm located in Baltimore, Maryland. Actually, XPEL was already on my radar screen as the result of an investment write-up on MOI Global, by Andy Preikschat, CIO and Portfoliomanager of Edgebrook Partners LP.

Studying the world's best investors, trying to understand what they do and why they do it, and if I feel comfortable with what they do then "just do it" is what I do best. Warren Buffett once said that "The investment business is a business where knowledge cumulates". Cloning is in reality much more difficult than it looks like at first sight. It takes a lot of experience. Building this knowledge base is critical for investors who want to understand the businesses they are cloning. It takes many, many years.

Free Lunch

In December 2017 Mohnish Pabrai published an article in Forbes about The Free Lunch Portfolio, which combines the power of Uber Cannibals, Shameless Cloning and Spinoffs. This Free Lunch Portfolio is a "rule based approach", or an algorithm if you will, that picks a portfolio of 15 stocks to be updated once a year. Please visit his website "chaiwithpabrai.com" to study it.

Although thoroughly back tested, up until today this Free Lunch Portfolio (quant Q1) did not live up to its expectations as of yet. The Free Lunch portfolio was up just 3% in 2020. Since inception on January 1, 2018, on an annualized basis, the Free Lunch Portfolio is up a very modest 1% while the S&P is up 13%.

Mohnish has made three key changes to the Free Lunch Portfolio (Q1):

1. Mohnish will not automatically follow the buy and sell decisions of this algorithm, but he will only make changes if doing so improves the quality of the portfolio.
2. Mohnish has replaced the Spin-Offs bucket with Spawners. Spawners are businesses that persistently add and incubate related and unrelated businesses. These have the potential to be massive growth engines, like Alibaba and Alphabet.
3. There is no requirement anymore to select 5 businesses from each of the three buckets. The number from each bucket will depend on the businesses that the algorithm offers.

In the attachment on Quants, you will find the results of all the 32 quants under investigation. For some of these quants we now have a 3 year track record. We have quant Q10 in pole position in this *Grand Prix du Quants* with a CAGR of 30.3%, closely followed by the quants Q3 and Q9. It's way too early though to draw any meaningful conclusion from these numbers. Please be advised to wait another few years.

My goal is to find just one quant that consistently outperforms with a 15% CAGR and given these 3 year CAGR results I am hopeful that I will succeed. Have you ever thought about the value of a quant that does just that over a 50 year period?

I did some reshuffling in the numbering of the quants. Q17 became Q4, and Q4 shifted one position to Q5, etc. I removed the secret quant Q7, which I am about to address in the next chapter, and I took out the conditional sell order @-20% for Q3 and Q4. Wingardium Leviosa! Here are the 2021 New Year constituents:

Quant	Constituents
Q1	Berkshire Hathaway, Restaurant Brands, Starbucks, Microsoft, Brookfield Asset Management, Alphabet, Chipotle Mexican Grill, Micron Technologies, Alibaba, Seritage Growth Properties, Assured Guaranty, Primerica, Globe Life, Navient, Discover Financial Services.
Q2, Q3	Starbucks, Restaurant Brands, Discover Financial Services, Microsoft, Chipotle Mexican Grill.
Q4	Berkshire Hathaway, Restaurant Brands, Starbucks, Microsoft, Brookfield Asset Management.
Q5 – Q11	Donnelley Financial Solutions, Smart Global Holdings, USANA Health Sciences.

Baggers

A 100 bagger is a stock that returns 100 to 1. That's enough to turn a 10.000 USD investment into a million dollars. Most of them, family owned businesses with a brilliant entrepreneur, took approximately 25 years to become a 100 bagger, although there are exceptions like Monster Beverage that went from 1 to 100 in less than 10 years.

These insights come from the in the investment community well known book, entitled "100 Baggers: Stocks That Return 100-to-1 and How To Find Them", written by Chris Mayer. It's one of these investment classics well worth reading more than just three times. In this book you will find this table, which is actually from Thomas Phelps:

Return	Years to 100 bagger
14%	35 years
20%	25 years
26%	20 years
36%	15 years

It took me several years to digest what this actually means in terms of what to do and what not to do as an investor. There is a lot of value in long term growth!

Chris Mayer found 365 of these 100 baggers during the period of 1962 to 2014, and the study by Thomas Phelps also found 365 of those during the period of 1932 to 1971. In other words, Chris Mayer found on average seven companies a year that ultimately became 100 baggers. Let's assume that there were 4000 listed United States companies by then. Then 7 companies a year equals 0.175%. That's searching for a needle in a haystack! Unfortunately, as far as I know, there isn't an algorithm, or a screen if you will, that can identify these 100 baggers up front. Or is there?

Let's rephrase a little bit what it actually is that we are looking for and leave some room for errors. What I would like to have is an algorithm that's able to come up with a list of 20 to 25 companies with in this list a high degree of potential multi-baggers, like for instance Monster Beverage, Amazon, Apple and Netflix.

Here is the good news. It's there. Now let me first temper the expectations. There is lots of room for caution over here. The algorithm is in the very early stages of its life cycle and lots of things still can go wrong. And at the same time it's fair to say, I believe, that there is also a lot of potential for this algorithm.

I back tested the algorithm based upon the 2005 to 2009 financials, where I first eliminated all the too risky stocks with the Risk Rating Algorithm that I described in the last year Winter Edition on Intelligent Cloning. By the way, I added lots of additional "bankruptcy data patterns" this year to improve that algorithm even further:

Then the algorithm looks for companies with not too much debt and an exceptional high VCE, which stands for the Value Creation Engine, which is actually a for growth adjusted return on capital measure (ROC/ROIC).

And finally, the algorithm looks for companies that fit into a group of industry specific subsectors that suit me well. For instance, I am not interested in banks, insurance companies or financial companies in general, but I am more than interested in credit card companies, stock exchanges or successful FinTech companies. And within these industry specific subsectors you only want the companies that are strong and predictable. What you will find doing all of this is a select group of excellent value creators with multi-bagger potential.

Now before I present the results, I just want to share some thoughts on this VCE. In my 2018 annual letter I introduced this Value Creation Engine (VCE) as a new measure for business performance. It is indeed a for growth adjusted return on capital (ROC/ROIC) measure. Also Mark Leonard, President and Chairman of the Board of Constellation Software, is exploring the use of a for growth adjusted ROIC, where he actually adds the organic Net Revenue Growth to the ROIC ("ROIC+OGr"). He believes it's the single best measure of business performance for his company.

Although both of these for growth adjusted ROIC measures are in the same line of thinking, that doesn't necessarily mean that these measures generate the same outcome. In fact, they may differ quite substantially, which I am about to show you. First let's have a look at the different ROIC measures for Constellation Software to illustrate how "slippery" this territory actually is.

	2014	2015	2016	2017
ML ROIC	37%	38%	31%	29%
MY ROIC	30%	36%	43%	45%
MS ROIC	15%	30%	29%	27%
GC ROIC	-	14%	17%	17%
GG ROIC	-	660%	699%	685%

ML ROIC = Mark Leonard ROIC
MY ROIC = My ROIC
MS ROIC = Morningstar ROIC
GC ROIC = GuruFocus.Com Classic NOPAT ROIC
GG ROIC = GuruFocus.Com Joel Greenblatt ROIC

So there are quite some different ROIC flavors out there and you have to decide what works best for you. It's like making a good pizza dough. You can use dry yeast, fresh yeast, sourdough, a combination of those or you can replace them all by using a pilsner.

Here is the comparison between the "ROIC+OGr" and the "VCE":

	2014	2015	2016	2017
ROIC+OGr	40%	35%	32%	33%
VCE	32%	35%	40%	45%

According to the ROIC+OGr the business performance of Constellation Software is slowing down. But according to the VCE the Constellation Software "engine of value creation" is actually accelerating. I would argue that if the free cash flow margin increases from 17% in 2014 to 22% in 2017 and the per share owner earnings, a Warren Buffett measure of "true earnings", is consistently rising, that the business performance of Constellation Software is not on the decline, but on the contrary, it's growing. From 2018 up until today the stock went way up. I'll just stick with this VCE measure.

Here is the top 20 of excellent value creators generated by the algorithm. The TSR is the 10 year Total Stock Return as per 15 November 2020, excluding dividends.

Company	TSR (%)
Netflix Inc	1736
Amazon.com Inc	1719
Apple Inc	883
MercadoLibre Inc	2021
LHC Group Inc	707
Monster Beverage Corp	822
Garmin Ltd	283
Monolithic Power Systems Inc	1883
Nuance Communications Inc	113
Quality Systems Inc / Nextgen Healthcare	-59
Intuitive Surgical Inc	714
CommVault Systems Inc	43
Open Text Corp	273
Chipotle Mexican Grill Inc	400
Blackbaud Inc	81
Infosys Ltd	56
Amedisys Inc	793
PetMed Express Inc	70
Cognizant Technology Solutions	111
Akamai Technologies Inc	87

If somebody would have told me that there was an algorithm out there that could do just that, I would not believe it. But it's there. All these results are 100% auditable, and I am perfectly happy to show the data used and run the algorithm "live" for whoever is interested to witness these outcomes. The algorithm picked these stocks from a list of approximately 4000 stocks trading at the New York Stock Exchange and the NASDAQ by then.

Here are the results if you just bought blindly the top 3, top 5, etc.:

	10 Year CAGR
Top 3	31.5%
Top 5	31.2%
Top 10	27.2%
Top 15	24.2%
Top 20	22.1%

Another, I believe, stunning characteristic is that these TSR and CAGR numbers are the results regardless of any valuation consideration. In fact, if you excluded companies with on first sight hefty valuations you would miss out on two 1000+% results and the end result would have been worse!

If you think about it, you could argue that we first had the Joel Greenblatt Magic Formula approach, trying to balance quality and valuation. Then Tobias Carlyle emphasized to just focus on a very low valuation multiple, The Acquirer's Multiple®, and forget the quality component. And what we have over here is an approach that emphasizes to just focus on very high quality and forget about valuation. Sounds scary though!

I am not advocating buying without a valuation consideration. On the contrary. A value stock is a stock that trades way below its intrinsic value. In other words, you are buying something that's worth more than you are actually paying for. If you are able to identify a **Hyper Value Creator** like Amazon or Netflix that's growing its topline by 25% for the long haul, I would argue that even at a valuation multiple of 40 or more, it's still a deep value stock.

If you try to buy them too cheap there is a real chance that Mr. Market will not offer you such a cheap price and you will not be able to buy into this potential 100 bagger. It's almost a devil's dilemma and most certainly counterintuitive, but you really have to pay up to catch a long-term 20+% compounder, knowing that if you are wrong, you will probably suffer big losses.

The United States is, as far as I know, the best producer of these exceptional value creators, or multi-baggers if you will. I also ran the algorithm on the data from China, India, etc. Although the number of outstanding multi-baggers is lower though in other countries, the multi-baggers that showed up in these country specific multi-bagger lists are exciting indeed (see attachment).

If you group Canada, Latin America and the United States together, and label them as the Americas, and if you add the Nordics and the United Kingdom to Europe, Hong Kong to China (that's a tricky statement nowadays) and leave India as it is, what you will get is this percentage distribution of multi-baggers, generated by the algorithm:

If you already run a concentrated portfolio you only have to find one or two new ideas a year. Just run the algorithm once a year and then look for the following characteristics:

- A brilliant entrepreneur as CEO (operator owner)
- Easy expandable business model (franchise)
- Innovation fanatics, like Amazon and Apple
- History of stock market outperformance
- Profitable reinvestment opportunities
- Insider ownership (skin in the game)
- Entrepreneurial company culture
- Durable competitive advantages
- A well written annual report
- A family controlled business
- No or very low dividends
- Customer centricity
- Pricing power

And do try to catch these exceptional value creators early in their competitive life cycle!

Finally I ran the algorithm on the United States data from 2006–2010, 2007–2011 and 2008–2012.

Time frame	Top 3	Top 5	Top 10	Top 15	Top 20
2005–2009	31.5%	31.2%	27.2%	24.2%	22.1%
2006–2010	42.3%	40.3%	35.4%	32.9%	30.0%
2007–2011	42.6%	39.8%	34.5%	30.7%	28.0%
2008–2012	19.5%	20.3%	25.7%	21.7%	20.2%

For instance, if you just bought the top 10 from the 2008–2012 time frame blindly on 18 November 2013 you would have compounded your money with 25.7% annually over a 7 year period.

In the Spring 2019 Edition on Intelligent Cloning I referred to “the secret quant Q7” handed over to me by Professor Albus Percival Wulfric Brian Dumbledore. Well, here you have its back test results.

So what’s next? Here we have this algorithm that produces the United States Top 25 Hyper Value Creators. Are we going to buy all 25 of them? Or just the top 6 based on quality (high VCE). Or are we going to add any valuation considerations after all? Or are we going to buy just one stock, the very best one of the top 25, and if so, how are we going to define “the best”?

This year I just bought XPEL. If you are a member of SumZero, the world’s largest community exclusively for professional investors, you can find the investment thesis over there. What you will find is that I initiated the position on 22 July 2020 @15.5 USD. The stock is up 230%.

Although the back test results are exceptional indeed, there is still a lot of room for cautiousness. I still have to digest all of this and figure out how to put these back test results to good use. But let me share some initial thoughts with you anyhow.

There is this old saying that if something looks too good to be true it probably is. Will there ever will be an algorithm that’s able to beat the 55 year Warren Buffett track record of 20% CAGR? Warren Buffett never used a computer to build his phenomenal track record. The only reason as far as I know why Buffett uses a computer is to play “bridge online”.

At the same time there is no reason to underestimate the power of smart algorithms. On 10 February 1996, Deep Blue, a chess playing computer developed by IBM, won its first game against the Russian chess grandmaster and world champion Garry Kimovich Kasparov. If I had to come up with a rule based approach that outperforms Buffett in the long haul, it would go like this:

1. Every decade you have 5 buying opportunities to buy the top 6 stocks generated by the algorithm, e.g. once every two years. You’re not allowed to buy into the same company twice.
2. If a major crash occurs you are forced to buy into the top 6 stocks by then, bringing down the number of buying opportunities with one.
3. Each stock will stay in the portfolio for at least 10 years, preferably longer.
4. Once a year every stock in the portfolio will be assessed in terms of its VCE. If it deteriorates rapidly, the stock will be removed. No questions asked.

As always, the proof of the pudding is in the eating. I just might give it a try and learn from it. It’s Dumbledore versus the investing grandmaster Warren Buffett. It’s the Wizard against the Oracle!

So here we are

Recently, Federal Reserve Chairman Jerome Powell said that while the economy has started its long road to recovery, the economy we knew is probably a thing of the past. The pandemic has accelerated existing trends in the economy and society, including the increase use of technology and digitization. The BVP Nasdaq Emerging Cloud Index is up 115% YTD.

There will be companies that will survive and thrive. Others will fail. And new companies will rise on their path to eternal glory. The algorithm comes in handy to identify these next-gen companies, or **Hyper Value Creators** if you will. The real power of this algorithm, as far as I am concerned, is the ability to identify the very best "under the radar screen" high performance small/microcap companies. I would even argue that if you want to identify these Hyper Value Creators early in their competitive life cycle on a global scale without such an algorithm you have a tough and almost hopeless task at hand.

Right now I have the most recent United States Top 25 Hyper Value Creators in front of me. There are many super investor holdings amongst the Top 20. It's so much fun to see for instance a small and relatively unknown company, like XPEL, out of nowhere entering the ranks of these top 25 Hyper Value Creators. Most 100 baggers are very hard to identify upfront, but there is a sliver of baggers where the algorithm actually is able to identify them in a timely manner.

Will this algorithm prove its worth over time? I just don't know. Most "rule based approaches" do not stand the test of time and will only work until they don't. On Wall Street anything can happen. An old bear once told me that a bull market never lasts forever. From 2000 until 2003 the NASDAQ tumbled from 4700 to 1200. Between 1965 and 1982 the DOW went actually nowhere.

At the same time, I believe, it's fair to say that the studies of Thomas Phelps and Chris Mayer show that 100 baggers are amongst us since 1932. My best guess is that as long as the United States will be able to produce Hyper Value Creators like Apple, Netflix and Amazon, this algorithm will be able to produce exceptional results, but most certainly there will be years of underperformance as well.

In order to make money in stocks you need to have the vision to see, the courage to buy and the patience to hold. Patience is the rarest of the three.
– Thomas Phelps.

Stay safe!

Peter

Peter Coenen
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The Value Firm®
28 December 2020

Everybody makes mistakes now and then. If you find any, let me know: peter@thevaluefirm.com. Always do your own research!

Hyper Value Creators / Multi-Baggers

Company	Country	TSR (%)
Constellation Software Inc	Canada	2776
Bodegas Esmeralda SA	Latin America	2584
Simulations Plus Inc	United States	2113
Reply SPA	Europe	2098
Monolithic Power Systems Inc	United States	1947
Netflix Inc	United States	1919
MercadoLibre Inc	Latin America	1871
Tyler Technologies Inc	United States	1770
Amazon.com Inc	United States	1678
Berger Paints India Ltd	India	1651
Shenzhou International Group Holdings Ltd	China/HongKong	1397
Boston Beer Co Inc Class A	United States	1309
Changchun High and New Technology Industries Group Inc	China/HongKong	1273
Kweichow Moutai Co Ltd	China/HongKong	1264
London Stock Exchange Group PLC	United Kingdom	1086
Judges Scientific PLC	United Kingdom	1040
Mastercard Inc A	United States	1037
Grimoldi SA	Latin America	975
Mesa Laboratories Inc	United States	947
Tracsis PLC	United Kingdom	900
Apple Inc	United States	856
Tata Elxsi Ltd	India	854
Amedisys Inc	United States	836
Medistim ASA	Nordics	835
Icon PLC	United Kingdom/Ireland	828
Monster Beverage Corp	United States	814
Ratnamani Metals & Tubes Ltd	India	799
Equinix Inc	United States	774
Lotus Bakeries NV	Europe	767
SimCorp A/S	Nordics	725
Asian Paints Ltd	India	716
Ubisoft Entertainment	Europe	706
HCL Technologies Ltd	India	698
Rightmove PLC	United Kingdom/Ireland	680
The Ultimate Software Group Inc	United States	648
Intuitive Surgical Inc	Unites States	635
CanaDream Corp	Canada	607
Tristel PLC	United Kingdom/Ireland	600
Cohort PLC	United Kingdom/Ireland	596
MRF Ltd	India	595
Hindustan Unilever Ltd	India	592
Powerflute Oyj	Nordics	584
Ansys Inc	United States	580
Bloomage BioTechnology Corp Ltd	China/HongKong	576
Activision Blizzard Inc	United States	557
SinnerSchrader AG	Europe	538
Diasorin SpA	Europe	532
New Oriental Education & Technology Group Inc	United States	509
Eckert & Ziegler Strahlen- und Medizintechnik AG	Europe	507

Some of the United States top performers did not show up in the Top 20 List, probably as the result of a different selection of the industry specific subsectors. That's still a bug I am working on, but it's a nice bug to have. The TSR (%) is the 10 year Total Stock Return as per 3 november 2020.

QUANTS

		2018	2019	2020	2021	2022	2023	2024	2025	2026	CAGR
Q1	The Mohnish Pabrai Free Lunch Portfolio (FLP).	-17.0%	21.7%	3.0%							1.3%
Q2	The conservative version of the FLP.	-9.7%	28.4%	15.4%							10.2%
Q3	The conservative version of the FLP. Sell at +40%.	21.7%	35.2%	20.3%							25.6%
Q4	The FLP. Spawners only. Sell at +40%.	-	-	-							-
Q5	The US new year quant. Sell at –20% or +40%.	40.0%	40.0%	-20.0%							16.2%
Q6	The US new year quant. Sell at –20% or +50%	50.0%	35.6%	-20.0%							17.6%
Q7	The US new year quant. Sell at –20% or +60%.	60.0%	42.3%	-20.0%							22.1%
Q8	The US new year quant. Sell at +40%.	40.0%	40.0%	-2.8%							24.0%
Q9	The US new year quant. Sell at +50%.	50.0%	35.6%	-2.8%							25.5%
Q10	The US new year quant. Sell at +60%.	60.0%	42.3%	-2.8%							30.3%
Q11	The US new year quant. No conditional selling.	18.4%	27.5%	-2.8%							13.6%
Q12	The US midyear quant. Sell at –20% or +40%.	-	-	-							-
Q13	The US midyear quant. Sell at –20% or +50%.	-	-	-							-
Q14	The US midyear quant. Sell at –20% or +60%	-	-	-							-
Q15	The US midyear quant. Sell at +40%.	-	-	-							-
Q16	The US midyear quant. Sell at +50%.	-	-	-							-
Q17	The US midyear quant. Sell at +60%	-	-	-							-
Q18	The US midyear quant. No conditional selling	-	-	-							-
Q19	The China midyear quant. Sell at –20% or +40%.	-	-	-							-
Q20	The China midyear quant. Sell at –20% or +50%.	-	-	-							-
Q21	The China midyear quant. Sell at –20% or +60%.	-	-	-							-
Q22	The China midyear quant. Sell at +40%.	-	-	-							-
Q23	The China midyear quant. Sell at +50%.	-	-	-							-
Q24	The China midyear quant. Sell at +60%.	-	-	-							-
Q25	The China midyear quant, No conditional selling.	-	-	-							-
Q26	The India midyear quant. Sell at –20% 0r +40%.	-	-	20.0%							20.0%
Q27	The India midyear quant. Sell at –20% or +50%.	-	-	18.6%							18.6%
Q28	The India midyear quant. Sell at –20% or +60%.	-	-	21.9%							21.9%
Q29	The India midyear quant. Sell at +40%.	-	-	21.1%							21.1%
Q30	The India midyear quant. Sell at +50%.	-	-	19.6%							19.6%
Q31	The India midyear quant. Sell at +60%.	-	-	22.9%							22.9%
Q32	The India midyear quant. No conditional selling.	-	-	9.5%							9.5%

Latest update: 26 December 2020. If you find any errors, please let me know: peter@thevaluefirm.com. A "red year", like 2020, is a "market crash > 20%" year.
Please be advised to wait a few years before drawing any meaningful conclusion from these numbers. Thank you.

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