

The Laboratory Letters

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Abstract

Hello and welcome to the second Laboratory Letters. Here we will look at economic conditions quarterly. I hope to utilize this as both a way to express my opinion, delve deeper into topics that interest me, and also distribute them out into the world for as many (or as few) to hear.

A look into the Economic and Market conditions. In this letter, firstly, we will discuss consumer strength and the inflation rate, what does education really get you in the current world, and lastly what it truly means to be an investor; later we will go over the stock market and my top five picks. Finally, we will end with a quote by James Harris Simons, the founder of Renaissance Technologies.

Thank you!

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1 Consumer Strength and the Inflation Rate

Let us dissect a piece done by [McKinsey](#) about the state of consumer spending in the second quarter of 2024. The start of the article discussed the difference in generational outlooks. 'Younger consumers were more optimistic about the economy (optimism rates for Gen Z and Millennials were 41 percent and 38 percent, respectively) than older consumers (optimism rates for Gen X and Baby Boomers were 29 percent each).' I believe this is because of what each generation splurges on. To compare Gen Z and Baby Boomers, Gen Z splurged on restaurants and dining out, groceries, and APPAREL whereas Baby Boomers splurged on restaurants and dining out, groceries, and TRAVEL. Compared to May 2019 the percentage change in apparel pricing was 6.62% versus 12% for travel according to [nerdwallet](#). This price change difference is quite different compared to each other which might show why they have a difference in views!

Also, I think it's easier to complain about the pricing of travel versus the pricing of apparel. With the price being so much more than apparel (think the average vacation being almost \$2,000 versus a pair of shorts being \$40) each time you make a transaction it is a difference of \$240 on vacation vs \$2.65 on that pair of shorts. The psychology of this is probably why the boomers are more pessimistic. Unfortunately, that trip to Cancun will cost a bit more now than before the pandemic @tedcruz.

As a tangent, this will also hold implications in the election this year because, according to [Data for Progress](#), the economy and inflation are two of the top three issues for voters this year. But that's for another newsletter (perhaps an October Q3 election year newsletter????)

2 Higher Education

I am not interested in the opinions of people who distrust higher education or people's views of higher education based on arbitrary tales. I want to know what the actual median trade-off is for individuals who wish to pursue a degree. According to the Federal Reserve Bank of New York, [there is a huge gap](#) that is only getting wider between those with a college degree and those who only graduated high school. Currently, the median difference is \$24,000 a year difference. At this rate, if you were to take off four years to get a degree, it would only take six years to make up the difference. On top of that wages from there grow faster over the career of the degree-holding individual. So, not only is there a gap at the start, [that gap extends](#) over the career. Right out of college, the difference is around 27 percent at the age of 25 to 60 percent at age 55. A sixty percent difference at the end of your career is completely insane.

Another interesting [study](#) was done on the implementation of higher education on the poverty rate and its effects on GDP growth. This article derives the conclusion that there is a significant impact in the younger age group (25-34) where higher education leads to a reduction in poverty. Another point is that beyond a certain level of higher education development, further reductions in poverty are influenced more by equitable distribution of educational resources rather than just increasing the number of educated individuals. So this is a two-part equation. They also came to the conclusion that 'The population segment with higher education was found to have a significant positive impact on promoting GDP growth. An increase in the proportion of the working-age population segment that had completed higher education was evidently conducive to GDP growth. Popularisation of higher education was also found to play a positive role in the initial stage of economic and social development.'

Now there is no pretending that obtaining a degree is a secret ticket to earning a good wage. There are a lot of great jobs that do not require a degree to participate. Yet if we look at just wages, it makes sense to make the investment. Also as long as you are happy and can put food on the table, then live your life.

3 What It Means To Do Investment Analysis

Doing investment analysis is all about formulating a strategy and backing it up with some form of data. Whether or not it is intangible or concrete data, each individual investor is different. According to [Investopedia](#) there are a few different types of analysis; Top-Down vs. Bottom-Up and Fundamental vs. Technical. Bottom-up works by looking at the individual stocks and their attributes to determine whether it is a good investment. These people do not look at economic conditions or market cycles. This is the opposite of top-down who look at industry sectors, their cycles, and their trends.

But here is the deal if you look into companies and make a decision on if it is a good investment, you do investment analysis. If you like a company and think it is going to go to the moon, then I will count you as an analyst.

4 Stock picks based on pure vibes!

4.1 Amazon Com Inc

Pros: Increasing Research and Development, stable cash and short-term investments

Cons: Decreasing growth, stable net income

What is the X Factor? Amazon will always be Amazon, BUT if they can better utilize their AWS service for the AI world, they could rocket.

Recent news:

[Amazon Web Services](#) (AWS) revenue expanded by 17.2% in Q1 2024, up from 13.2% in Q4 2023. Amazon claims the growth in generative AI has fueled demand for AWS, as customers are excited to try out new features to enhance their experience...

[Amazon.com Inc.](#) hired top executives and other employees from startup Adept AI Labs Inc., a move by the e-commerce and cloud-computing giant to bolster the development of artificial general intelligence...

4.2 Chubb Ltd

Pros: Increasing sales / revenue, higher operating income

Cons: Fluctuating net income

What is the X Factor? Insurance premiums are only going up and the net income of Chubb is only going up. With this I believe it will be a good investment.

Recent news:

[On May 15](#), Berkshire Hathaway Inc., which has been recently stingy about spending investment dollars and had divested long-held positions in Johnson & Johnson and Proctor & Gamble during 2023, revealed in an SEC filing that it has amassed a 6.40% stake...

[Chubb \(CB\) has been one](#) of the most searched-for stocks on Zacks.com lately. So, you might want to look at some of the facts that could shape the stock's performance in the near term...

4.3 Citi Group

Pros: Passed the stress test with flying colors, a huge increase in interest income

Cons: lowering net income, increasing total debt

What is the X Factor? Highest price to earnings per share of large banks, low price to book value per share

Recent news:

[The largest U.S. banks](#) said on Friday evening that they would increase payouts to investors in moves that were generally expected after lenders sailed through the Federal Reserve's stress tests this week—but the firms' capital plans remain closely watched each year...

[Citigroup Inc. is announcing](#) the redemption, in whole, constituting \$1,500,000,000 of its 4.140% Fixed Rate / Floating Rate Notes due 2025 (the "fixed rate / floating rate notes") (ISIN: US172967NQ03), and the redemption, in whole...

4.4 Eli Lilly & Co

Pros: Great sales and revenue, huge interest expense growth

Cons: lowering pretax income, decreasing earnings per share

What is the X Factor? Pharmaceutical companies are going to make a killing in the next couple of years

Recent news:

[Pharmaceutical giant Eli Lilly](#) is having a great year. Shares are up over 50% through the first half of the year on the heels of emerging blockbusters in the diabetes and obesity-care markets...

[Eli Lilly and Company](#) announced a collaboration with OpenAI that will allow Lilly to leverage OpenAI's generative AI to invent novel antimicrobials to treat drug-resistant pathogens. Antimicrobial resistance (AMR) is one of the top public health and development threats across the global health landscape...

4.5 Palantir Technologies Inc.

Pros: Increasing revenue, finally positive net income, growing cash & short-term investments

Cons: increasing short-term debt

What is the X Factor? Their transition from military data to civilian data might be worthwhile because if it is already proven to work it might be extremely worthwhile

Recent news:

[As a company focused](#) on data analytics, Palantir is in a strong position to make the most of AI...

[Palantir Technologies Inc.](#) has recently been on Zacks.com's list of the most searched stocks. Therefore, you might want to consider some of the key factors that could influence the stock's performance in the near future...

5 Working on a stock portfolio

As discussed below are the investments made into a paper account; now we will look at their returns and see if they would have beaten the market or if they were lemons.

Stock	Weight %	Start price	End price	Change %	Dividend Value
1. AirbnbInc	10.00%	166.43	151.63	-8.89%	0
2. Berkshire Hathaway Inc	10.00%	421.49	406.8	-3.49%	0
3. Caterpillar Inc	10.00%	367.48	333.1	-9.36%	3.54
4. Microsoft Corporation	10.00%	423.95	446.95	5.43%	1.77
5. Micron Technology Inc	10.00%	119.2	131.53	10.34%	0.96
6. NioCorp Developments Ltd.	10.00%	2.75	1.73	-37.09%	0
7. NRG Energy Inc.	10.00%	67.6	77.86	15.18%	6.03
8. NVIDIA Corporation	10.00%	90.3	123.54	36.81%	0.11
9. Novo Nordisk A/S	10.00%	129.11	142.74	10.56%	7.20
10. Royal Caribbean Cruises Ltd	10.00%	140.11	159.43	13.79%	5.57
SNP 500	100.00%	523.83	544.22	3.89%	33.58

Portfolio:	Quarterly Returns: 3.58%	Yearly Returns: 3.58%
SNP 500:	Quarterly Returns: 4.23%	Yearly Returns: 4.23%
Difference: -0.65% Compared to SNP. Womp Womp :(

Retrospective: I shouldn't have included NioCorp in the portfolio, that is a multi-year play that will not show returns for a while. I should have had something better in the portfolio.

The new portfolio will be:

AirbnbInc	to	Amazon Com Inc
Berkshire Hathaway Inc	to	Chubb Ltd
Caterpillar Inc	to	Citi Group
NioCorp Developments Ltd.	to	Eli Lilly & Co
NVIDIA Corporation	to	Palantir Technologies Inc.

Final portfolio for the quarter:

1. Amazon Com Inc
2. Chubb Ltd
3. Citi Group
4. Eli Lilly & Co
5. Microsoft Corporation
6. Micron Technology Inc
7. NRG Energy Inc.
8. Novo Nordisk A/S
9. Palantir Technologies Inc.
10. Royal Caribbean Cruises Ltd

6 James Harris Simons

Finally, to wrap up this newsletter let's look at a quote by James Harris Simons:

Success in investing is not about being right all the time. It's about minimizing losses and maximizing gains.

I believe that this is the biggest lesson in all of investment, if we keep our winners and sell our losers we will be better in the long run. This directly plays into the Sunk Cost Fallacy where someone would benefit from selling but because they have already lost so much money on the investment 'might as well diamond hands'. Rest in peace Jim Simmons, the man who got me into Econometrics and data science, truly the man who solved the markets.

7 Disclaimer

The information provided in this newsletter, including all text, analyses, reports, forecasts, and charts, is for informational purposes only and does not constitute financial, investment, or other professional advice. It is not intended to be a comprehensive study nor to provide specific advice for any individual or entity's particular situation. Readers should not act upon the information contained in this newsletter without seeking professional advice from a qualified financial advisor or investment professional.

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