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Finance at a Glance

Breaking down the lack of financial literacy in the U.S.



Intercollegiate Finance Journal

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Robinhood

Could investing be really free?

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An Unintended Oligopoly

The detriments of deregulating the airline industry

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Eastbound

Looming threats to U.S. Hegemony

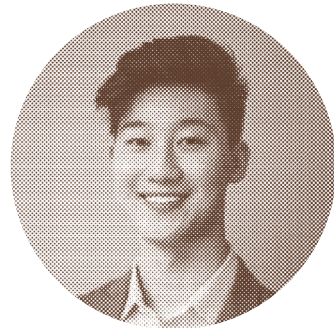
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AI. The Future of Cars.

TIMMY LIN / UCHICAGO

As stated in the concrete evidence from the Federal Bureau of Investigation, ISIS is making AI cars into self-guided car bombs.

Often in science fiction movies, we are fascinated by the autonomous cars and the benefits it can bring to us, and we hope they can exist in the future. In recent years, autonomous cars have become a reality since they are now researched and developed by large technology companies. Tesla, Apple, Ford, Honda, and other large technology companies are testing their driverless cars on the roads with the approval of the California Department of Motor Vehicles. Within a couple of years, AI cars will be able to transport people from one place to another on a larger scale.

Indeed, the emergence of AI cars can bring numerous benefits and solve multiple problems caused by human drivers. According to the Tri-Level Study of the Causes of Traffic Accidents, more than 90% of car accidents in the US are caused by human errors. If AI cars are used instead as the main transportation system, the rate of car accidents can be minimized. For example, the AI will make sure that the speed of the car is in adherence to the road speed limit, thus decreasing the chance of causing car crashes. Moreover, people who used to have driving difficulties such as the disabled or even children can now figuratively "drive" the car. Furthermore, the experience of riding in an AI car will be smoother and safer compared to that of riding with human drivers who might not be paying attention to the traffic at all times. However, does society really benefit from the advantages that driverless cars can bring forth?

What does the future really look like?

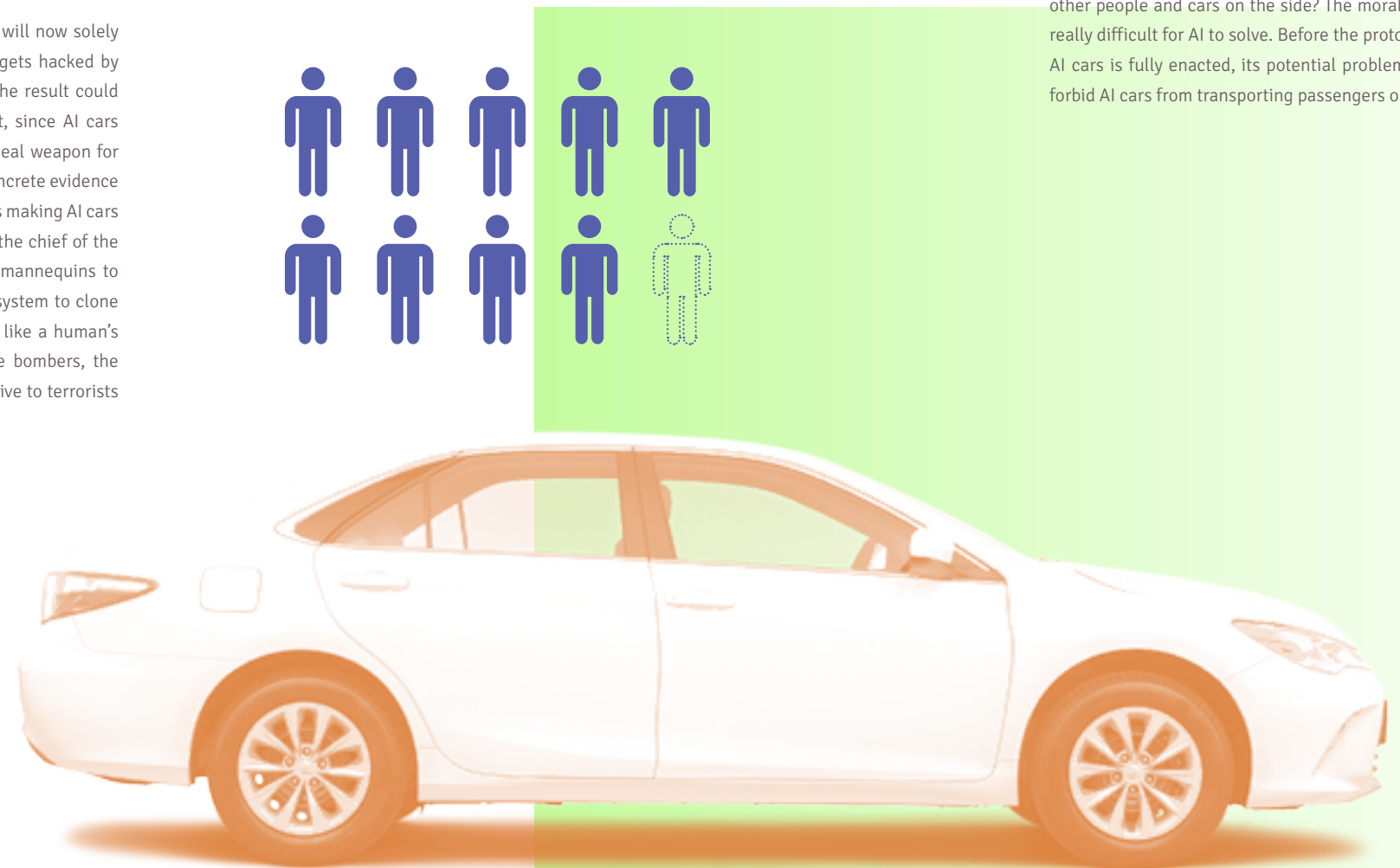
If AI cars replace buses and taxis as the main transportation systems around the world, professional drivers will lose their jobs directly because the demand for human drivers is no longer existent. With an estimate of over 3.5 million professional truck drivers in the US, these drivers are going to lose their jobs, leading to a sharp rise of unemployment rate in the US.

The emergence of AI cars can bring numerous benefits and solve multiple problems caused by human drivers.

Whose Fault?

If a driverless car collides with another vehicle, who is going to be responsible for the accident? The car owner? The car company? The software and AI designer? The responsibility will never be clear until laws are enacted. Also, by giving up the control of driving to AI, the AI may need to tackle with ethical issues. For instance, if a kid who accidentally runs on the street, should the AI car avoid hitting him yet in favor of hitting other people and cars on the side? The moral dilemma can be really difficult for AI to solve. Before the protocol of regulating AI cars is fully enacted, its potential problematic side should forbid AI cars from transporting passengers on the road.

In terms of safety, the lives of the passengers will now solely rely on the AI that controls the car. If the AI gets hacked by a hacker or if the AI suddenly malfunctions, the result could definitely be fatal car crashes. On top of that, since AI cars do not require a driver, they will become an ideal weapon for terrorists to launch attacks. As stated in the concrete evidence from the Federal Bureau of Investigation, ISIS is making AI cars into self-guided car bombs. Mikko Hypponen, the chief of the investigation, claimed that "[ISIS is] building mannequins to put behind the driver's seat, and have built a system to clone the heat system of a human being so it looks like a human's driving." Without the need of sending suicide bombers, the prevalence of AI cars will definitely give incentive to terrorists to launch attacks.



Yang 2020 Exclusive

Universal Basic Income and the Future of Work

JACK FARLEY / BROWN UNIVERSITY



“If we don’t do anything about it, these changes will plunge our society into a Great Depression level of unemployment and societal chaos”

Cashiers replaced by iPads. Chefs supplanted by programmed 3D printers; bankers usurped by automated trading algorithms; truckers replaced by an army of selfdriving eighteenwheelers.

Such are the predictions of 2020 Democratic presidential candidate Andrew Yang, who posits that automation of the labor force will displace up to 60 million workers and plunge our society into a Great Depression level of unemployment, what he calls ‘The Great Displacement.’

Yang’s antidote to this doomsday scenario? A “Freedom Dividend” that pays every citizen over 18 \$1,000 per month. This \$12K annual payment, Yang explains, will enable people through the greatest economic and social transition in history.

When I sat down with Yang in late January 2019, he elaborated why he thought the consequences of automation could be dire, perhaps dystopian. “Just look at the top five most common jobs,” he said. After listing the most popular sectors of employment general administration (#1), retail (#2), food prep and service (#3), manufacturing (#4), and driving (#5) Yang proceeded to analyze the exogenous shocks that automation would subject these industries to.

“These sectors currently employ more than 75 million people,” he said. “Advances in robotics and AI will displace up to half of them over the next twenty years.”

Yang has been fixated on the decline of American jobs for a long time. After the 44year old serial entrepreneur sold his education company in 2009, he started Venture for America (VFA), a nonprofit initiative that has helped create over 5,000 jobs by training recent college graduates and connecting them with startups around the country.

But Yang noted that the continued displacement of workers demanded more structural change. “For every 1,000 jobs we created [at Venture for America], I realized that automation is going to take away 100,000,” Yang said to an audience at the Brown Club in August 2018, many of whom were his former classmates (Yang graduated from Brown in 1996, having concentrated in Economics). “We were pouring water into a bathtub with a giant hole in the bottom.”

Since making that realization, Yang has researched and come up with a policy agenda to alleviate the distress that automation will inflict on the workforce. His most prominent program is the Freedom Dividend, and when I spoke to him he elaborated the many ways he believes it will promote prosperity. “It’s going to be a massive stimulus to lower cost areas,” he said. “What I noticed at Venture for America was that a great deal of the highpaying jobs today were either in D.C., New York, Boston, or San Francisco the Freedom Dividend will change that.”

An annual \$12,000 stipend for every adult American may sound farfetched, but Yang’s Freedom Dividend actually has its roots in a rich publicpolicy heritage of Universal Basic Income, or UBI. Commonly defined as a series of cash transfers to citizens that is regular (i.e occurring periodically) and unconditional (i.e. not means tested), UBI has been endorsed by a wide array of activists, intellectuals, and politicians ranging from Martin Luther King Jr., to Thomas Paine, and even Richard Nixon. Forms of UBI have been implemented in countries ranging from Canada, to Kenya, to Finland, and most studies have found that some sort of basic income reduces poverty, increases highschool graduation rates, and decreases hospital visits by up to 10%. The most prominent implementation in the U.S is the Alaska Permanent Fund, a wildly popular program enacted by a Republican Governor in 1976, that distributes to Alaskans a share of the billions in oil revenue from stateowned land. A basic income has also attracted recent attention from Silicon Valley CEOs, who see workers displaced by the technological advances that their companies create. “There will be fewer and fewer jobs that a robot cannot do better,” Tesla CEO Elon Musk told an audience at the World Government Summit

“Technology is the oil of the 21st century.”

in Dubai in 2017. “I think we’ll end up doing universal basic income,” he continued. “It’s going to be necessary.” When I had the chance to sit down with Yang, I asked him which workers were currently the most vulnerable to automation. Yang: “Just look at the 27 million people who currently work in administration or clerical work. Mckinsey just issued a report that 69% of all data collecting and processing tasks can be automated. Voice recognition software is advancing so rapidly that soon you’re not going to know if you’re talking to real person on the other end or not. We’ve already seen massive layoffs, and this is only going to get worse, not better.” Yang then quickly fired off how workers in retail and food services would experience similar declines. “30% of all malls are going to close within the next five years,” Yang said, quoting a recent study by Credit Suisse. “There’s a reason The New York Times called 2018 ‘the year of the Retail Apocalypse.’ The exCEO of McDonald’s is on record saying that robots are cheaper and more desirable than humans” (Yang was quoting former CEO of McDonald’s Ed Rensi, and the exact quote is: “it’s cheaper to buy a \$35,000 robotic arm than it is to hire an employee who’s inefficient making \$15 an hour bagging French fries”). Although it the most prominent policy on the docket, the Freedom Dividend is by no means the only piece of legislation on the Yang 2020 agenda. Yang’s Chief of Staff Matt Shinnners, explained the other policies on the platform, including “The American Mall Act,” which pledges to combat urban blight by revitalizing abandoned malls, and “Modern Time Banking,” a proposal to incentivize labor not rewarded by the labor market, such as volunteering and raising children. “It’s about making sure that we’re setting up our economy to serve people, rather than the other way around,” Shinnners said to me. I then presented some objections I had to his grand narrative.

ME: People have been predicting that technology would replace workers for over two hundred years, and they’ve been wrong every time. What’s different about your hypothesis?

YANG: Well, the short answer is that technological advances will enable AI powered robots to be cheaper, more efficient, and more reliable than human workers across a wide array of fields. Human workers need to sleep, they get injured, expect time off for holidays, get sad and become unpro-

ductive. Robots don’t have that problem. But the longer answer is that advances in selfdriving vehicles, machine learning, and artificial intelligence are orders of magnitudes more revolutionary than the factory or tractor.

ME: But why can’t displaced workers find other jobs?

YANG: (Yang gave a quick smile, and I could tell he had answered this many times before) Morgan Stanley estimate that the savings of automated freight delivery to be \$168 billion per year. That’s enough to pay all of the 3.5 million truck drivers currently employed in the U.S a \$40,000 salary and still save tens of billions per year. When these drivers are replaced with selfdriving trucks and cars and they will be what are they going to do? The average truck driver is a 49 year old male without a college education. What are they going to do learn how to code? Big tech firms don’t hire nearly as many people [note: see table below] as do car factories, malls, and restaurants, and if Google or Facebook has to choose between a young college graduate and a laid off truck driver, who are they going to hire? It’s time to get real.

Yang’s prescience on truck driving is part of the reason his team is investing so heavily in Iowa. “we’re killing it in Iowa right now,” Campaign Manager Zach Graumann said to me as he organized Yang’s upcoming four day speaking tour. “Things are really heating up.”

Having seen his message resonate, I found it hard to disagree.

Year	1964	2017
Company (Number of Employees)	AT&T (758,611) General Motors (660,977) General Electric (262,056)	Google (57,100) Facebook (20,658) Snap (1,859)



Can You Beat the Market?

TALIA SHAKHNOVSKY / BROWN UNIVERSITY

From 1998 to 2017, the average investor earned an annual return of 2.6% or .43% after inflation. The S&P 500, however, which acts as a benchmark of U.S. stock market performance earned a significantly higher annual return at 7.2% (5.03% inflation adjusted). When investors set a goal to “beat the market,” they often refer to earning a higher investment return than the S&P 500, but few are successful. While beating the market is theoretically possible, investments in low-cost index funds to match the market are the best choice for the average investor.

Inefficiencies in the Market

The Efficient Markets Hypothesis (EMH) claims that stock prices will always reflect all available information. Based on this theory, no research can give investors an edge because stock prices already reflect all current information. Consequently, only unforeseen events can have an impact, rendering using past trends for prediction futile. Based on this hypothesis, investors who outperform the market do so through pure luck. This follows even in the semi-strong form of EMH, which says all publicly available information is reflected in stock prices, instead of all information.

Nevertheless, there are exceptions to the conclusions of EMH, highlighting that while it is almost the truth, it is not the truth. For instance, Berkshire Hathaway, a stock holding company, has delivered an investment return approximately 155 times that of the S&P 500’s from the 1960s to 2016. Berkshire Hathaway’s chairman Warren Buffett jokes that “Ships will sail around the world but the Flat Earth Society will flourish” just as “There will continue to be wide discrepancies between price and value in the marketplace”. Berkshire Hathaway’s success despite EMH points to the existence of exploitable inefficiencies in the market.

Moreover, a survey conducted by Value Line, an investment research firm, which ranked stocks from most favorable (1) to least favorable (5) from 1965 to 1970 found that rank 1 stocks

showed a return of 10% and rank 5 showed a return of -10%, after risk adjustment. Thus, higher ranked stocks had a higher investment return — an abnormal return, that could not exist under EMH. The existence of market trends such as seasonal fluctuations with heightened investment returns in January, and smaller companies having higher returns, even with risk adjustment, also indicates that EMH may not be completely accurate because EMH predicts that these trends should not exist. These inefficiencies are what make earning an investment return higher than that of the market over time, or beating the market, possible.

Barriers to Beating the Market

Average investors, however, struggle with beating the market. Those who create their own portfolios often succumb to human psychology, to the tendency to buy high and sell low. When the average investor tries to change his or her portfolio, these changes are usually reactionary, such as getting scared and selling stocks after the market has fallen. Furthermore, individuals lack the know-how and sheer researching power of big firms.

On the other hand, while many investors see portfolio management as the best possible way to invest, they are unaware that paying for portfolio management and advice comes with huge costs. Many investors pay up to 40% of their yearly investment return after adviser fees and the stock’s expense ratio, which is the total percentage of the return used to fund administration, management, advertisement, etc. Moreover, since investors expect portfolio management to be the ideal solution, these large fees and their consequent lack of significant investment growth comes as a huge shock.

Besides, professional mutual fund managers do not outperform the market. Over the past 15 years, the S&P Dow Jones Indices SPIVA report showed that on average, professional mutual fund managers underperformed the market by 1.1% and that over 92% of actively-managed funds failed to

Paying for portfolio management and advice comes with huge costs

beat the investment return of the S&P 500. Moreover, the S&P Dow Jones Indices Persistence report, which tracks whether the same mutual funds repeatedly outperform the market found that just 1.94% of top-quartile performing funds maintained their performance over three years, and only .34% maintained it for over five years. Thus, active fund managers as a whole will not outperform the market over time. As a result, building an individual stock portfolio, be it through self-selecting stocks or hiring a portfolio manager, may not be the best investment decision for the average investor because of the high risk, high fees, an unlikelihood of a high return.

A Compromise Between Safety and Return

Some investors instead prefer a safe investment, but safer investments have lower returns. For instance, bondholders know exactly how much money they expect to receive, excluding extreme situations like the bond issuer declaring bankruptcy. Consequently, the return on bonds is smaller -- for instance, since 1926 long term government bonds have average an annual return between 5% and 6% yearly, as opposed to the average 10% yearly return of the S&P 500. Thus, while this investment is safe, the lack of risk means the profit will not be as large. It is important to note that while stocks offer a higher return than bonds in the long run, stock investments fluctuate widely each year, as opposed to the consistency and guaranteed return of bonds.

While some individual investors may beat the market with extensive knowledge and time spent finding market inefficiencies, and others prefer safer investments with guaranteed, but lower returns, low-cost index funds are the best choice for the average investor. By definition, low-cost index funds will match the market’s performance, as opposed to the 92% of actively-managed funds that failed to match the performance of the S&P 500. After considering the high fees of portfolio managers, investors in actively managed funds are severely disadvantaged because while they are more expensive, they don’t offer better performance or more stability.

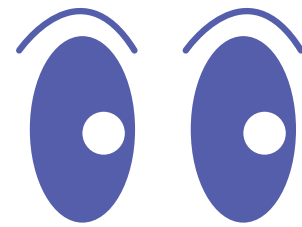
On the other hand, investing in an S&P 500 index fund with approximately a 0.05% yearly expense fee is the safe investing decision for the average investor looking to the long term. Of course, without taking on additional risk, beating the market is impossible. It is, however, possible to match the market and its growth.

Based on this hypothesis, investors who outperform the market do so through pure luck.

Finance at a Glance:

Breaking down the lack of financial literacy in the U.S.

AKILESH RAMAN / BROWN UNIVERSITY



Nearly half the people in the U.S. say they don't have enough money saved to cover even a \$400 emergency expense, and a third of Americans regularly carry credit card debt.

A recent nationwide survey revealed that only about half of Americans could answer this question correctly: "Suppose you need to borrow \$100. Which is the lower amount to pay back: \$105 or \$100 plus three percent?" Ask any student in your high school the same question and you're likely to get the wrong answer. This is not an isolated case; it represents a systemic inadequacy in financial education taught at schools across the country. Nearly half the people in the U.S. say they don't have enough money saved to cover even a \$400 emergency expense, and a third of Americans regularly carry credit card debt. The average balance is a whopping \$15,000 according to data from the Federal Reserve and NerdWallet. While these numbers look damning, they don't reveal the primary reason behind this problem. Most students grow up learning so many different things in school – be it subjects like math and science or life skills like teamwork and respect – but they are seldom taught the basics of finance or how to manage money. This, in turn, impairs their ability to make well informed financial decisions later on in life.

The Numbers Don't Lie/A Failing System

The high school curriculum across the country doesn't incorporate enough finance. A quick look at some statistics in the U.S. highlights the magnitude of this issue: Only 5 states currently have a personal finance requirement in high school and only 16.4% of U.S. students are required to take a personal finance course to graduate.

Further, this proportion of students drops to a mere 8.6% outside of these 5 states. Meanwhile, only 5.5% of low-income schools have personal finance as a requirement. The numbers don't lie: the system is failing.

Why are schools ignoring finance in their curricula? Russell Winnard, a former teacher who is now head of programs and services at Young Money, says it may, in part, be down to the under-confidence of teachers. "The mandate to teach personal finance education hasn't really worked. We need teachers to be more comfortable and confident enough to deliver high quality financial education. There is a need for much more training for teachers." Further, there is a widespread notion that financial education isn't important to teach in high school and can be cast aside. This mindset, however, has proved problematic in the long run.

Why is this Important?

To understand why this is important, look no further than millennials. With a staggering debt of \$1.45 trillion, millennials often find themselves in financial trouble – but 45% regret even taking out loans in the first place. At the same time, only 24% of the generation demonstrates "basic" financial knowledge, while 70% are already stressed about saving for retirement. This ultimately means that when faced with important financial decisions, they are less likely to make the right choice. Further, a lack of financial literacy is generally accompanied by a lack of understanding of current events,

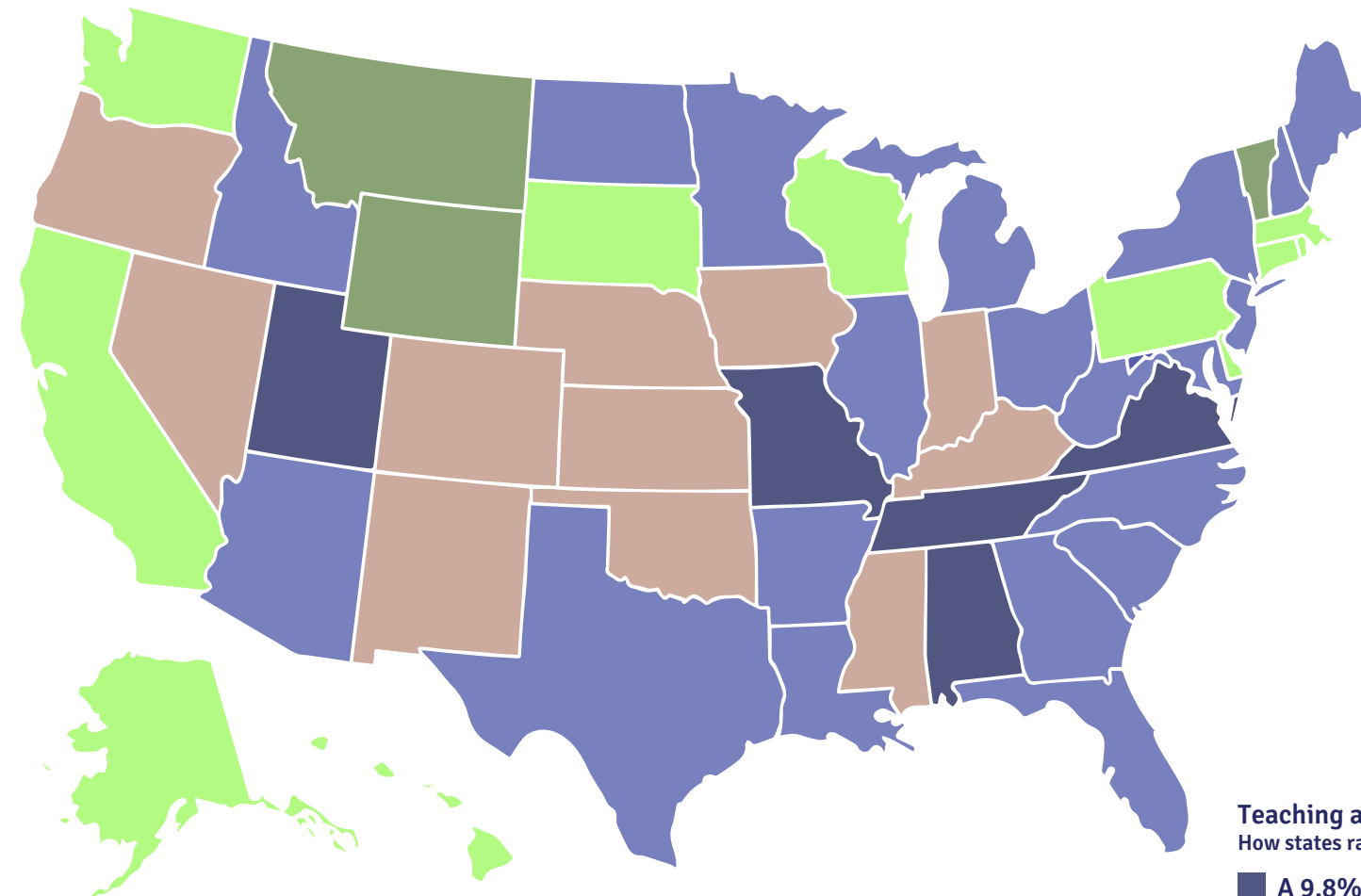
which often leads to uninformed political choices, like the one in Brexit. When schools don't teach enough finance, the onus falls on families to do so. The reality, however, is that kids from affluent backgrounds tend to be a lot more financially literate than those from working class families. While the wealthy kids learn about money at home – or at their private schools – kids from lower socioeconomic backgrounds do not. This further emphasizes why the "friends and family" plan to learn about money is so flawed.

Ways to Improve Financial Education

While there is no quick fix, several steps can be taken to improve financial literacy in schools. From a young age, school students must be taught the basics of finance as well as a general understanding of money. A recent study by Finra found that personal finance education lowers the probability of falling 90 or more days behind on future credit accounts, especially for students who took required classes in economics or personal finance. In order to improve financial capability later in life, states can integrate financial education into K-12 education in a way that ensures students receive instruction. According to a recent report by Champlain College's Center for Financial Literacy, a strong state policy is one that either requires students to take a stand-alone personal finance course in order to graduate or imbeds personal finance topics within another mandatory course and tests their knowledge on those topics.

In conclusion, the U.S. faces a unique challenge of incorporating more financial education into the school curricula. As Robert Kiyosaki, a businessman and bestselling author puts it, "Academic qualifications are important and so is financial education. They're both important and schools are forgetting one of them." This lack of financial literacy is reflected in the staggering student debt and creates a vicious cycle where the task of educating students falls on families who are themselves ill-equipped to do so. Financial education alone might not fix all the problems Americans face. But consider that since schools invested in sex education in the 1980s and 1990s, teen pregnancies have declined dramatically. Imagine what could happen if people learned the basics of money.

The high school curriculum across the country doesn't incorporate enough finance.



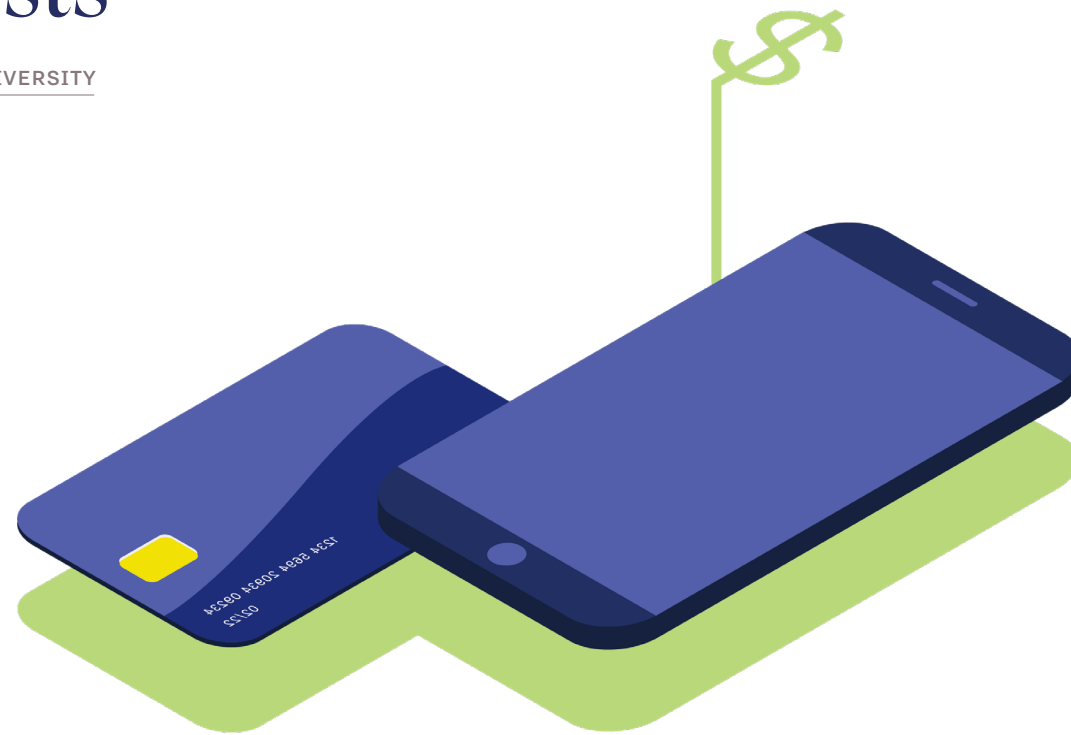
Teaching about money: Does your state make the grade?

How states rank in their efforts to improve financial literacy in high schools

■ A 9.8% ■ B 39.2% ■ C 21.6% ■ D 5.9% ■ F 23.5%

Cashless Benefits and Costs

EMILY BELT / BROWN UNIVERSITY



In a world driven by technological innovation and efficiency, a cashless economy is the most natural next step. Already, in the United States, cash transactions have been steadily decreasing at the same time that paperless transactions have been increasing. For instance, a study conducted by the Federal Reserve of San Francisco found that cash only accounted for 30 percent of transactions in 2017. Clearly, a cashless society appears to be in the future. The positives of a cashless society, such as saving taxpayers money, reducing environmentally detrimental practices, and reducing crime, suggest that the United States should embrace this shift towards a cashless economy.

Saving Money

Becoming a cashless society could ultimately save the United States money. In 2016, pennies cost the United States Mint, 1.5 cents to make, 50 percent more than their value. Similarly, nickels each cost 6.32 cents to produce, which is 26.4 percent more than their value (Ivanova). In 2019, paper money will cost between 5.5 and 14.2 cents to produce (depending on the value of the bill), and the production budget will be 955.8 million dollars (“How Much Does It Cost to Produce Currency and Coin?”). Clearly, by cutting the production budget, the government could either allocate funds to more pressing issues or save taxpayers money. As a precedent for the money saved, Canada began phasing out its least valuable coin in 2012, and consumers have thus saved 8.2 million US dollars each

year (Ivanova). Thus, a cashless society would mean cutting government costs.

Helping the Environment

Another potential positive outcome is the environmental effect. In 2018 alone, the Bureau of Engraving and Printing (BEP) printed 7.4 billion paper bills (Hall), about 90 percent of which were printed to replace ones in circulation that had been destroyed, which thus implies a large amount of old wasted material (Schneider). The process to produce currency is extremely detrimental to the environment. For example, the ink and solvents used to print the paper currency releases emissions into the air, which contribute to ozone pollution and global climate change. Additionally, in 2002 alone, just the Washington DC branch of the BEP generated 3,785,500 pounds of waste from inks and solvents, an amount that warrants the BEP the classification of “large-quantity generator of hazardous waste” by the Resource Conservation and Recovery Act. With climate change already negatively affecting the planet, switching to a cashless society could be a positive move.

Fighting Crime

In addition, a cashless society could reduce violent crime. As an example, Sweden, a primarily cashless society, has already seen a reduction of robberies due to the reduction of cash. In 2017, only two Swedish banks were robbed, compared with 210 banks robbed in 2008 (Alderman). Additionally, since paper

currency can be anonymous and untraceable, it can contribute to crime such as bribery, tax evasion, counterfeiting, and drug and terrorist financing.

Potential Drawbacks

Despite the positive implications, concerns for the accessibility of a cashless society for residents experiencing poverty and elderly residents still exist. Yet, the majority of Americans already have debit or credit cards. As of 2017, about 87 percent of residents in the United States have debit cards (“Ownership of Credit and Debit Cards in the U.S. 2017.”), while 78 percent of residents have credit cards (Shevlin). Additionally, the system of paper currency is not accessible to all. For instance, in 2008 in the United States, there were 304,060 blind and 4,067,309 visually impaired people, many of whom have reported being given the wrong bill during cash transactions because the only difference between paper currency of different values is visual (Ahlers). Therefore, not only is a cashless society already accessible to most United States residents, but a cashless society is actually more accessible to residents with certain visual disabilities.

Additionally, people fear that a cashless society puts the United States’ economy in risk of instability if a security breach, cyber attack, or IT failure occurs. European banks have already taken steps to address these concerns. In May of 2018, the European Central Bank adopted the Threat Intelligence-based

Ethical Red Teaming (TIBER-EU) framework. Other countries, such as Belgium, have brought in hacking consultants to test their improved intelligence services (Cerulus). A digital world invites threats, but as threats increase, so do defense mechanisms; as the United States approaches this next phase, it should follow Europe’s lead in testing whether its defense mechanisms are strong enough.

Conclusion

Although there are concerns in shifting to a cashless society, the advantages far outweigh the disadvantages. Therefore, the United States should embrace shifting toward a cashless economy. If the United States does embrace this cashless future, questions will arise as to how the federal government will regulate this new economy and whether the Fed should have the agency to regulate means of electronic payment, such as venmo and paypal, or if it should issue a new electronic currency. Nonetheless, this would be an exciting move and these new challenges will be appropriately met.

A cashless society appears to be in the future

The positives of a cashless society, such as saving taxpayers money, reducing environmentally detrimental practices, and reducing crime, suggest that the United States should embrace this shift towards a cashless economy.

Eastward Bound

Looming Threats to U.S. Hegemony

KERIM SARAOLU / BROWN UNIVERSITY

Two Different Paths

“Americanism, not globalism, will be our credo.”¹ Since asserting this claim on the campaign trail in 2016, President Trump has worked tirelessly to oversee its manifestation. His efforts have resulted in the following: (1) withdrawals from the Trans-Pacific Partnership (TPP), Iran nuclear deal, and Paris Agreement; (2) the current and prospective imposition of tariffs on China and Europe, respectively; and (3) a sharp rise in antagonism between NATO allies. The anti-globalist undertones present within each of these outcomes serves to complement the desperate longing for economic revitalization in America’s hinterland. For the “forgotten men and women” populating these areas², Trump’s emphasis on and articulation of populist ideals initially proved too enticing to ignore. The rosy expectations that surrounded legislation like the Tax Cuts and Jobs Act (TCJA) and China tariffs, however, now make way for a grimmer reality. First, many rural Americans have started to come to terms with the prospect of not “get[ting] anything out of the administration.”³ Second, due to the resultant accentuation of economic inequality and divisive rhetoric associated with this development, hopes for establishing a collective American identity – one of Americanism’s primary aims – continue to fade apace. As the United States grows more divided and isolated, the world order’s figurative center of mass will shift east.

In many ways, China now represents the antithesis of the U.S. Its steady political system and concentrated power base have supported a unified pursuit of state policy initiatives. Anchored by The Belt and Road Initiative (BRI) and Made in China 2025, these plans aim to expand the nation’s sphere of influence, modernize its industries, and establish it as a leading player in the Fourth Industrial Revolution. Further, to address the persistent inequality between underdeveloped western regions and prosperous eastern seaboard provinces, the Chinese Communist Party (CCP) has encouraged the realization of regional economic integration: enabling “anyone who

works hard” but “stay[s] out of politics” to get a piece of the pie⁴. An obvious incentive exists for China’s populace to keep their end of this bargain. In turn, this means that the government can focus all of its efforts toward increasing the size of the collective pie.

Development Finance’s Newest Gatekeeper

Prior to discussing China’s recent investments in various frontier markets, it is important to first touch upon the origins of development finance. Both the International Monetary Fund (IMF) and World Bank are international financial institutions (IFIs) that were formed in 1944 at the Bretton Woods Conference. The former “works with its member countries to promote growth and alleviate poverty”⁵ while the latter refers to itself as a “vital source of financial and technical assistance to developing countries around the world.”⁶ Low-interest rate loans, grants, and credits



In many ways, China now represents the antithesis of the U.S

act as the vehicles of transmission for these noble goals. However, funding often comes with various strings attached.

Privatization, market liberalization, fiscal austerity, and ongoing surveillance are seen as going hand-in-hand with IMF and World Bank aid. Many nations have grown wary of these conditions, known as Structural Adjustment Programs (SAPs), viewing them as (1) direct threats to their autonomy over internal affairs as well as (2) catalysts for the plundering of state assets by wealthy foreigners. These sentiments are especially prevalent in Sub-Saharan Africa, with structural adjustment driving countries like Ghana and Cote d’Ivoire further into destitution. The former, home to an abundance of natural resources, launched an economic recovery program (ERP) in 1983. Twenty years later, GDP per capita had risen a mere 9.4%, while the domestic rice industry collapsed, increased mineral output “mainly benefited multinational mining corporations,” and the removal of healthcare subsidies led to a 40% decrease in outpatient attendance.^{7,8} The latter state, in contrast, was required to pursue more pronounced austerity measures after requesting aid from the IMF in 1989. Provisions included required 30% and 15% reductions in government spending and capital expenditures, respectively, as well as tax increases and deregulation of the labor market. Large-scale economic contraction ensued, with GDP per capita falling by 15% from 1989 to 1993, poverty rates doubling, and public spending on education declining by over 35%.⁹ Many more instances exist where IFI conditionality has placed onerous burdens on aid recipients. Upon taking note of this pattern, it is sensible that developing nations would display a willingness to align themselves with a friendlier, alternative source of funding.

An American Retreat

Through both active and passive means, the U.S. is becoming less active in the international community. First, as the developing world works to reduce its reliance on IFI financing, America consequently loses sway in these regions. This holds true because it is (1) the only World Bank shareholder that maintains veto power over proposed structural changes and (2) has the greatest voting share in the IMF, with 16.73% of votes. Second, by withdrawing from multilateral trade agreements and adopting an air of protectionism, the U.S. has left key trading partners disgruntled¹⁰. Two such entities are the Association of Southeast Asian Nations (ASEAN) and European Union (EU), both of which are gradually working to reduce their reliance on the dollar due to perceived monetary mismanagement¹¹. Seeing as the dollar has long punched above its weight – it makes up 62.7% of world foreign exchange reserves while the U.S. produces around 24% of world output – threats of unilateral sanctions could very well prompt the creation of alternative payment channels that are non-dollar denominated. The yuan, which was added to the IMF’s special drawing rights (SDR) basket in 2016, represents a viable candidate to this end.

1 Politico (2016). Full text: Donald Trump 2016 RNC draft speech transcript [Speech transcript].

2 The New York Times (2016). Transcript: Donald Trump’s Victory Speech [Speech transcript].

3 Foster, S (2018, Nov. 28). Left Behind by Trump’s Boom: The Rural Americans Who Elected Him. Bloomberg L.P.

4 Qin, A. & Hernández J (2018, Nov. 25). How China’s Rulers Control Society: Opportunity, Nationalism, Fear. The New York Times.

5 The International Monetary Fund. “About the IMF: Overview: How we do it.”

6 The World Bank. “What We Do - World Bank Group.”

7 Hilson, G. (2004). “Structural Adjustment in Ghana: Assessing the Impacts of Mining-Sector Reform,” *Africa Today*, Vol. 51, No. 2 (Winter, 2004), pp. 53-77.

8 Biritwum, R. (1994). “The cost of sustaining the Ghana ‘Cash and Carry’ system of health financing at a rural health centre,” *West African journal of medicine*. 13. 124-7.

If China is required to play a leadership role then China will assume its responsibilities.

China's Rise

In withdrawing from world affairs, the U.S. has opened the door for a viable successor. Zhang Jun, China's Assistant Minister of Foreign Affairs, does well to describe this dynamic: "if China is required to play [a] leadership role then China will assume its responsibilities."¹² Its ability to assume such responsibilities can be attributed to the perceived failure of Western institutions. These sentiments span across both the developed and developing world. First, the nascent uncertainty regarding U.S. trade terms has prompted other advanced economies to look elsewhere for stable alliances. The EU, for example, recently put forth a connectivity initiative that aims to "improve connections between Europe and Asia," while serving as "a tool that could be used for cooperation with China on the topic of connectivity."^{13,14} Further, the Regional Comprehensive Economic Partnership (RCEP) – this is a proposed trade agreement between ASEAN, Australia, China, India, Japan, South Korea, and New Zealand – carries the potential to (1) reduce Asian dependence on U.S. markets and (2) bring key U.S. allies and strategic partners closer to Beijing. Second, China has demonstrated a willingness to finance infrastructure programs in the developing world as part of the BRI. As a result, countries facing a difficult time securing funds from the IFIs – examples include Sri Lanka, Nepal, and Mozambique – can now look east to finance social development and industrialization projects.

To sustain the issuance of condition-free credits at below market rates, however, China often requires debtors to put up public sector assets as collateral. Couple this with the fact that its loan agreement terms are often kept secret and concerns will naturally arise regarding the true intentions of its funding initiatives. Specifically, following the release of a report from the Center for Global Development asserting that eight BRI beneficiaries are at "particular risk of debt distress,"¹⁵ critics were quick to describe China's practices with phrases like 'debt-trap diplomacy' and 'predatory lending.' The CCP seems well-equipped to deflect such criticism, though; most notably, the establishment of the Asian Infrastructure Investment Bank (AIIB) provides a formidable counterweight to the BRI by nature of its multilateral structure. Steps have also been taken to join forces with the IMF, which openly voiced its desire to support and guide the implementation of the BRI.



Consequences

What conclusions can we draw regarding the fate of the world order? A thoughtful forecast should proceed from the ground up: beginning with exchange rate implications. China's desire to "expand the scope and scale of bilateral currency swap and settlement" amongst BRI participants and "open and develop the bond market in Asia" align with the promotion of the yuan as a widely-accepted currency. Further, these efforts represent important first steps in driving yuan internalization: something that has been sought after since the late-2000s. Basic exchange rate theory dictates that a greater demand for yuan will bring forth currency appreciation. The structural nature of this dynamic, i.e. sustainability of yuan demand being driven by nations moving closer to and becoming more reliant on China, also signifies that exchange rates could equilibrate at a stronger level in the long-run. From the perspective of the U.S., if the yuan's rise occurs at the dollar's peril, then it will be left more vulnerable when investor confidence wanes. This would prompt the Federal Reserve and U.S. Treasury to raise rates on reserves and bills/notes/bonds, respectively, thus increasing government debt servicing requirements. In light of the current public pension crisis and imprudent fiscal spending practices, policymakers would be forced to cease kicking the proverbial can down the road and face the wrath of an already-unnerved populace.

9 Naiman, R. & Watkins, N (1999). "A Survey of the Impacts of IMF Structural Adjustment in Africa: Growth, Social Spending, and Debt Relief."

10 A senior German official, who asked not to be identified, went as far as to claim the following: "'No one any longer believes that Trump cares about the views or interests of the allies. It's broken.'"

11 Examples include efforts by the IMF and Treasury to deregulate and impose austerity measures on Southeast Asian markets in 1997, as well as the Federal Reserve's quantitative easing program from 2008-14.

12 Blanchard, B. (2017, Jan. 23). Diplomat says China would assume world leadership if needed. Reuters.

13 Delegation of the European Union to China. "EU steps up its strategy for connecting Europe and Asia." Sep. 19, 2018.

14 Xinhuanet. "Interview: EU's connectivity initiative can mean cooperation with Belt and Road." Sep. 29, 2018.

15 Hurley et al. 2018. Examining the Debt Implications of the Belt and Road Initiative from a Policy Perspective. Center for Global Development (CGD) Policy Paper 121. Washington DC: CGD.

An Unintended Oligopoly: The detriments of deregulating the Airline Industry

LEONARDO MORAVEG / BROWN UNIVERSITY

Have you ever been stuck in the airport? Delayed flight? Canceled flight? No other option but to make multiple stops? Well, you aren't the only one suffering—the entire airline industry in the U.S. is an oligopoly, inefficiently dominated by just a few firms. Airline customers are constantly complaining about the lack of choice and increasing prices when flying across the nation. What intended to be an effective solution in 1978 actually gave rise to a tedious and excruciating process that hurts schedules and wallets. Economists and former Airline employees agree that the deregulation that occurred in 1978 was a grave mistake. The only solvency that the general public can make is to push their representatives and government as a whole to urge the Civil Aeronautics Board (CAB) to end mergers and allow room for competition.

Before such a disaster movement, the CAB was responsible for approving all routes and practices of airline industries; however, Ralph Nader, a liberal consumer advocate and political activist, believed that less regulation would allow for more efficiency. The market consolidated, and America, Delta, United, and Southwest gained control of 85 percent of the market (in 93 of the 100 largest airports, nearly all flights go to one or two

of the "big guys"). According to David B. Richards, a fellow of the Journal of Transportation Forum, while tickets prices eventually did temporarily drop, current prices are much higher than if we continued with regulation. With unprecedented market power, the airline oligopoly can now charge extra fees for any part of the flying process, cut important airline routes, and damage local economies. Under the CAB, smaller cities that were previously guaranteed direct flights were cut out and rerouted to major transportation hubs to maximize profit margins. Phillip Longman, a policy director of the Open Markets Institute, stated that local towns are hurt as major companies relocate to larger cities, which usually leads unemployment and lack of accessibility for socio-economic mobility. Cities like Akron, Memphis Cincinnati, Cheyenne, and Oklahoma City have lost thousands of jobs and millions of dollars.

As for those who don't live in such cities and are still questioning the repercussions, simply look at the CAB's new abusive policies. From crowded cabins and less leg room, to overpriced snacks and lack of comfortable options, many are stuck in a horrible flight experience. Fuel hikes, the recession, and oil shocks pushed the CAB and even its own

Airline customers are constantly complaining about the lack of choice and increasing prices when flying across the nation.

members to dismantle, yet economists agree that the industry would be wrecked by such a decision. With no opposition to the oligopoly market behavior, increasing profits, understaffed flights, horrible wages for workers, and inflexible schedules will continue to be the reality of flying in the continental United States.

Though baggage fees, restricted seat selection, expensive food items, upgrade fees, cancelation fees, and rebooking fees make billions of dollars for the major four airlines, what could prove to be more of a money grab are the promotions and promises of rewards through their frequent flyer programs. Rather than “free money,” it’s “funny money”—United Airlines changed the value of its member miles just within a few months’ notice. In fact, most Americans don’t even know these programs work, as Princeton Review surveys reflect that 59 percent of flyers surveyed didn’t know the details, and 73 percent

didn’t even know how many miles they had. Most programs aren’t based on the miles you fly, but rather how much you spend and what type of flight you are in. If individuals really want to rack up points, they need to fly business or first class. This inefficient system leads to 20 trillion unredeemed miles, and countless dollars lost due to blackout dates when trying to redeem rewards. Airline companies on average make

Rather than “free money,” it’s “funny money” — United Airlines changed the value of its member miles just within a few months’ notice.

10 billion in revenue in a year, and joint airline-credit card company programs make 45 billion in surcharges. With little to no regulation and massive lobbying by such companies to continue the current structure, consumers might see an unfavorable future of inaccessible flying.

The dilemma of having an inefficient oligopoly in airline industries in the U.S. must be addressed; after all, it was after being delayed for two days by American Airlines that I decided to inform myself. The general public must take action and pressure those in public office to give expanded jurisdiction to the CAB. If a deregulated airline industry continues, it might just be better to travel by other means. While it’s wonderful to see that such companies have renovated their plane fleets, baggage systems, and achieved fuel efficiency, such improvements come at a very high cost for the average consumer. Luckily the airline industries have been in committee hearings with the Republicans and Democrats in office, such hearings stimulate after multiple “ejection” fiascos with dominating companies. Hopefully such political pressure will point towards the direction of real action taking place. If action is taken, and the public pressures politicians to reject lobby money from airline industries, then we can finally see competition, efficiency, a strong CAB and friendly skies for all.

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Robinhood: Can Investing Really Be Free?

ZACHARY MULLIGAN / BROWN UNIVERSITY

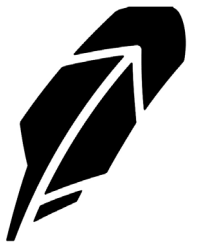
Whether an investor has years of experience or just wants to experiment with their first paycheck, the markets present a unique set of challenges. While the grizzled trader might be pouring over statistics and earnings reports, beginners simply don’t know where to start. In the era when smartphones are always in our pockets, new brokerage firms hope to capture a new generation of investors by making it easy to invest in popular companies. Robinhood, M1 Finance, and Acorns are just some of the new low/no cost options for trading securities. They are especially attractive because unlike more established brokerage firms, they do not charge a commission, which makes trading in low volumes sensible. However, like finance itself, these platforms present trade-offs. They detract from the value of the experience itself by creating an unrealistic environment for investors. Due to their ease-of-use, portfolios on Robinhood and other apps are seen like games, rather than real equity in companies. Their style of trading can also present an image of investing that isn’t necessarily valid when trading with more established firms. Nonetheless, making investing more available should be prioritized over any potential detractors.

While there are several mobile brokerage firms operating today, for simplification purposes, we will focus on Robinhood due to its popularity and the fact that many of these mobile firms have very similar business models. Again, the biggest draw of Robinhood is the lack of commission on trades that other, much larger brokerages charge their clients. While this may seem like a huge loss of cash flow, commissions at large firms only

Commissions at large firms only make up 10-30 percent of their annual revenue

make up 10-30% of their annual revenue. Therefore, Robinhood can afford to give this segment of revenue up in exchange for a larger number of interested investors. That said, Robinhood has three unique ways to bring in money. Firstly, they earn interest on uninvested cash that clients keep in their accounts. They can invest it in very secure bonds, or lend it to other investors. Secondly, their premium service allows people to pay a flat fee for access to extended features like buying shares with borrowed money, or instant deposits and withdrawals to or from the app. Lastly, when a trade is placed, Robinhood earns money from market makers by giving them orders to process. Although these three avenues to revenue in concert bring in a lot of money, Robinhood is a private company, so further information about their general financial stability is unknown. The bottom line remains that having a beautiful and simple user interface coupled with free trading brings huge interest to the app from the young and inexperienced population. For example, In May 2018, accounts on Robinhood numbered over four million, and by now, that number is certainly much greater. Investing is inherently risky, but Robinhood allows millions of users to explore that risk easily without further penalty.

As mentioned earlier, Robinhood isn’t without its own flaws. Their obvious advantage becomes a hindrance as investors learn more about trading. Free trading is an unrealistic expectation for further exploration into more established firms. Robinhood makes bad trading strategies viable simply because there is no cost to buy or sell shares. In addition to this,



<https://www.forbes.com/sites/advisor/2014/04/16/the-brokerage-world-is-changing-who-will-survive/#3ec00f8068a7>

<https://www.investopedia.com/articles/active-trading/020515/how-robinhood-makes-money.asp>

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orders from account holders are sent by Robinhood through high-volume traders to actually buy and sell shares on the client's behalf. Robinhood collects a referral fee from these traders that is kept as revenue. This system results in the buyer paying slightly more (or a seller receiving slightly less) than market value for the desired security. These differences are pennies or even less per share of stock, but when investors decide to trade in the hundreds or thousands of shares, the difference of prices often eclipses any commission savings. Chris Nagy, a former executive summed up this trade-off with the classic phrase, "at the end of the day, there's no such thing as a free lunch." (WSJ)

The previously mentioned disadvantages to Robinhood and other mobile investing apps discourage high volume, infrequent trades, but also play to the strengths of their business model.

Robinhood makes bad trading strategies viable simply because there is no cost to buy or sell shares.

Having an easy-to-use and understand user interface along with beautiful design attracts younger investors with less money to experiment with, and who are likely to act impulsively on dips and spikes. Robinhood and young, first-time investors are complements to each other. Providing a perfect platform to experiment with very little money, mobile firms offer a critical stepping stone for people to invest seriously. That being said, when Robinhood users gain skills and experience over time, it's wise to transition to more established firms that are more well-suited to long term holdings.

Pharmagram:

The New Love Affair Between Instagram Influencers and Big Pharma

JUSTIN KIM / UC BERKELEY

Over these past few years, Instagram influencers have been on the rise. The term "influencer" refer to personalities who have large and loyal followings on Instagram and other social media platforms. Many influencers have been able stay financially secure through the sponsorship that they receive from different companies. It is common to see influencers promoting specific beauty and lifestyle products on their Instagram posts, in hopes to get their followers to try the product. This marketing strategy has been effective for many brands, such as Glossier and Daniel Wellington, to acquire new customers and gain worldwide brand recognition.

Recently, there has been a new breed of Instagram influencers who have started to promote medical devices and wellness products instead of beauty or lifestyle products. Some examples are Erin Ziering, host of The Housewives of Hollywood, promoting Allergan breast implants, 'Fit-inspiration' influencers promoting celery juice and Sarah Stevenson promoting health juices as treatment for cervical dysplasia. Why has big pharma hopped on the Instagram influencer bandwagon? Influencers bring a level of authenticity and trust to the table that brands and celebrities do not possess. Influencers often attract a niche group of followers by sharing their own stories and experiences, which increases the credibility of the influencer's word. A study done by Experticity revealed that 82% of consumers will more likely listen to the recommendations given to them by micro-influencers. Using influencer marketing for big pharma will give pharmaceutical companies

Problems can arise when influencers are soliciting unqualified advice and spreading misinformation about medical products.

access to their target consumers in a cost-effective way, relative to using celebrities or traditional advertising. Although celebrities are able to help with a pharmaceutical company's brand recognition, but influencers are often more effective at turning potential customers to actual customers because they leverage the 'emotional linkage' that they have established through sharing authentic details about their personal lives on Instagram.

While there is nothing wrong with influencers sharing their own experiences with a particular medical or wellness product, problems can arise when influencers are soliciting unqualified advice and spreading misinformation about medical products.

Medical Misinformation

Since their incomes are directly linked with their abilities to influence their followers' behaviours, influencers will often make claims about the medical or wellness product that are not scientifically verified or fail to emphasise the possible risks in hopes to get more followers to try the product. The mere popularity of their Instagram posts can sometimes be enough to convince their followers to try the medical or wellness product. An example to highlight these concerns is the company named Bloomlife, who are known for their smart pregnancy and contraction tracker devices. Bloomlife partnered with pregnant mothers with strong Instagram followings, such as Alyson Owens and Stephanie Peltier, to promote their pregnancy tracker. Both influencers have almost 50k followers, who have been following their respective pregnancy journeys through their Instagram posts. Although Bloomlife states on their website that their pregnancy and contractions tracker is a "health and wellness device and not a substitute for medical attention", both influencers did not mention this point explicitly in their posts. Despite the influencer's good intentions, claims about the medical device or wellness product can be easily misinterpreted and misrepresented if the influencers did not explicitly address the risks in their posts.



So, how should we minimise the spread of medical misinformation?

<https://www.forbes.com/sites/barrettwisman/2018/03/02micro-influencers-the-marketing-force-of-the-future/#7e2febb38707>

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<https://www.axios.com/social-media-influencers-pharma-drug-promotion-c9b1bfd6-fb44-4c25-ad84-b3fd5d2fd69.html>

Another problematic point was the influencers' vague wording. In her post, Owens used the phrase "the world's first clinically validated wearable contraction monitor" in reference to Bloomlife's product. The term "clinically validated" can be interpreted by consumers that this product is FDA approved, even though it is not technically FDA approved. The product technically not FDA cleared, as stated on their website, since it is not considered a 'medical device'. Consumers are not likely to spend a lot of time fact checking, which highlights the problems that may arise from vague language. In Vox's conversation with Owens, Owens said that she was given guidelines from Bloomlife in regards to what to include in the descriptions of her posts. Although there was an attempt to moderate the content that the influencers were allowed to release, it seems that the influencers ultimately have the power to write whatever they believe to be true in their posts. Many big pharma companies do not place strict restrictions on what the influencers could write in order to keep their testimonies authentic, honest and organic.

Omitting important health information and failing to clarify details about a product can yield many problems in regards to feeding false information and hope to potential consumers. Due to the popularity of their posts and their partnership with a pharmaceutical company, influencers are often perceived to have some kind of medical expertise or authority. While in reality, they simply are testifying based on their own experiences, which may not align with their followers' situations. Social media can often portray a distorted version of reality, which could make the influencers' followers believe that the medical or wellness product will work as effectively as it did for the influencer. This misinformation may hinder the individual from seeking qualified medical advice and lead to some detrimental consequences. The possibility of these posts going viral, which will accelerate the spread of medical misinformation, calls for a serious investigation into the use of

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influencer marketing to promote medical or wellness products. So, how should we minimise the spread of medical misinformation? Although it would be impossible to remove all medical misinformation, big pharma companies should be held responsible for increasing oversight on what the influencers are publishing in regards to their products. Influencers must also play their part in critically thinking about their content and how they are writing their posts. Clarifying certain medical terms and refraining from giving unqualified medical advice are some simple ways in which influencers can help combat this problem.

The Future of Influencer Marketing for Big Pharma

The trend is likely going to favour the use of influencer marketing, since it has proven itself as an effective strategy to acquire and retain customers. However, big pharma companies should be encouraged to establish solid relationships with their influencers, where both parties are working together to ensure that the content properly vetted and regulated whilst not compromising its authenticity. As consumers, we should always fact check and recognise the risks that the influencer may have omitted from the conversation. It is on us to make sure that we seek qualified medical advice before substituting medical procedures or treatments with medical or wellness products.



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