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This edition of Forefront deals with the auto industry. It is interesting to see the Detroit 3 exit the passenger car market where they have dominated for so long. It is a travesty to see GM’s Poletown plant close after they displaced 4,000 families in a close-knit community when their internal planners and architects rejected the numerous configurations the City offered for land that was previously assembled by the City which would not have required such displacement. The internal GM staff didn’t want to deviate from their perfect rectangle. I suppose it’s such inflexibility that has put GM in its eroding position over the last 50 years. The future of the Detroit 3 may rest as a Tier 1 supplier to Google, Apple and Microsoft as they may be the next car manufacturers. The Detroit 3 still have much engineering know-how to move a car forward but technology seems the wave of the future. The Detroit 3 still have a lot of knowledge in service, distribution, supply base, etc. which will be valued in the short run.

Autonomous vehicles averaging a useful life of 350,000 miles, cars by subscription and many other technological advances will change the car industry as we know it. I can envision that I may have bought my last car or will have to repurpose my garage. The last bastion of control, driving a car, may soon be supplanted. This spells smaller and fewer cars on the road. It may alleviate the need for parking garages. The autonomous vehicle may be a smaller version of mass transit. Who knows where this industry is going. Changes are happening quick and it is almost certain that the car market will shrink. Oh wait, that is already happening. Makes me laugh when the supporters of the Gordie Howe Bridge envisioned a 46 million North American auto market by 2035. But that is another story nobody wanted to believe. I guess with the American and Canadian plant closings by GM, this cross-border auto traffic will surely decline. ~ Patrick O’Keefe
You may have heard people fretting over the possibility of an inverted yield curve and how this inversion may indicate a coming recession. The yield curve is not a magical crystal ball to see the future. Rather, it represents investor sentiments and expectations. Allow me to explain.

The yield curve represents the relationship between nominal bond yields and maturities. Short-term yields are determined by the Federal Reserve. Long-term yields represent investors’ expectations of average short-term yields over that time, plus a premium for any inflationary risks.

For example, consider a bond investor who wants to buy a 10-year treasury bond. This investor believes the economy is entering a period of expansion and therefore takes inflation into account. Inflation often occurs during an economic expansion as a result of (among other things) greater money supply from the Federal Reserve and higher wages. These factors result in more dollars trying to buy the same amount of goods and services, causing a rise in prices. As inflation occurs during an expansion, the Federal Reserve increases short term rates to deter borrowing and thereby lowering spending (or money supply).

Back to our investor. In calculating a desirable return (or yield) on their 10-year bond during the economic expansion, the investor would want to be compensated for the risks of inflation and increases in the short-term yield. If the 10-year rate did not compensate for these factors, the investor would prefer buying 2-year bonds multiple times over the 10-year period.

But what if our investor expects a recession? In this case, our investor’s concerns over inflation would dissipate and their expectations would shift to the Fed lowering interest rates to near zero in the short to medium terms to help grow the economy out of the recession. As a result, the investor would be willing to accept a relatively lower yield on long-term bonds today, knowing that this yield will be relatively high during the economy’s period of recovery.

In summary, an investor in long-term 10-year bonds always wants to be paid more than what they would receive by investing in short-term bonds over that 10-year period. As an economic expansion loses steam (as they always do), short-term rates continue to rise as the Fed tries to control inflation, but long-term rates stall with the expectation of near-zero short term rates in the coming future. A higher short-term rate than long-term rate results in an inverted yield curve.

As shown in the graph below, this has historically indicated a recession (shown as the light green columns) in the following 12 to 18 months.

Will the yield curve invert anytime soon? Probably not. In January 2019, the Fed cited low inflation and slowing foreign economic growth as reasons enough to end further hikes to short-term interest rates, at least for now. If the predictive power of the yield curve endures, we are unlikely to see a recession begin in 2019.

However, it is important to remember every recession is different. As structural changes within the economy occur, the potential risks also change, meaning that a recession can and probably will take a very different form next time around. It also means that whatever it is that pushes the economy over the edge, most of us won’t see it coming.

Anson Smuts
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The U.S. consumer preference shift from cars to trucks and SUVs has left automotive plants with more passenger car capacity than needed to satisfy demand, while some truck plants are striving for capacity. This shift in consumer preference should be welcomed by the Detroit 3 (FCA, Ford, and GM) since they have struggled to make money selling sedans and have shifted to foreign production of traditional cars, while increasing production of profitable SUVs and trucks. However, it has also led to upheaval as the Detroit 3 have made shifts in production, implemented shift-cuts, announced plant closures, and are conducting layoffs.

FCA was among the first automakers to make a notable portfolio change when it eliminated the Chrysler 200 and Dodge Dart sedans in 2016; assembly lines for both models have been turned into extra capacity for building SUVs and pickup trucks. FCA is running at almost full capacity and recently announced plans to revive the Mack Avenue Engine Plant in Detroit to build a three-row Jeep SUV which could add 400 new jobs and would be the first new automotive assembly line to open in Detroit in over 25 years.

Ford is cutting jobs at Detroit area plants that build transmissions used in cars that Ford is eliminating (i.e., Focus, Fusion, and C-Max), as well as phasing out production on two shifts at assembly plants in Flat Rock (i.e., Ford Mustang and Lincoln Continental) and in Louisville, KY. However, workers displaced by the impending cuts will be offered jobs involving building gearboxes for the Ford F150 and Ranger pickups, as well as assembly of super duty pickups and full-size SUVs. Ford noted that these moves allow it to increase production of its profitable Ford Expedition and Lincoln Navigator SUVs by 20 percent.

GM recently announced five plant closures in North America due to declining car sales. Locally, this includes the Hamtramck Assembly Plant and the Warren Transmission Plant. As a result, GM will eliminate the vehicles built at these plants: Cadillac XTS, Chevrolet Cruze, Volt and Impala, and the Buick LaCrosse. It is unclear as to whether GM will eliminate the Cadillac CT6. This move will result in 14,000 layoffs (about 6,000 hourly and 8,000 salaried workers), and close plants in Michigan, Ohio, Maryland, and Ontario, Canada.

U.S. consumers continue to have a preference for larger vehicles. It seems that lower oil prices have offered little motivation for buyers to make fuel economy a priority and even if gas prices increase, industry experts expect consumers are more likely to switch to more fuel-efficient SUVs than switch back to sedans. Only time will tell if the Detroit 3 entirely abandon U.S. passenger car production, or provide a small percentage of sedans to hopefully satisfy the demand of the American passenger car consumer.
GM recently announced it is cutting 15% of its salaried workforce and shutting down five plants in North America including two in Michigan. The company’s current vision of “Zero Crashes, Zero Emissions, Zero Congestion” includes, among other things, a priority focus on investment in electric vehicles (EVs). GM’s strategy is to use profits from sales of trucks and SUVs to cover the cost of its future technologies.

GM is not alone in its strategic commitment to EV production. Almost every OEM has announced EV initiatives, some with more aggressive goals than others. Most recently, FCA announced a $4.5 billion investment program which includes the first new assembly plant in Detroit in almost 30 years and an initial commitment to four plug-in hybrid Jeeps, with the flexibility to produce fully electric vehicles in the future.

GM, FCA and all the rest of the manufacturers moving towards EVs are banking on the expectation that EVs will account for at least 28% of annual global sales by 2030 and that EVs will eventually become profitable. EVs currently account for only 1% of the market both globally and in the United States and OEM losses range from $7,000 to $10,000 per vehicle.

The lack of profitability is largely attributed to the high cost of batteries which account for about one-third of the total production cost for EVs. EVs are powered by lithium-ion batteries, which contain raw lithium sourced mostly from South America and Australia. The lithium is first shipped to China to assemble battery packs, which are subsequently built into vehicles in the United States. Although the cost of batteries has fallen over the last five years due to process improvements and scale effects, it must continue to decrease in order for EVs to become both viable and profitable while meeting growing demand. According to Bloomberg, the demand for the components of lithium-ion batteries will increase from 0.7 million metric tons in 2018 to over 10 million metric tons in 2030. This increase in demand will drive the development of batteries with far greater capacities, as well as entirely new battery technologies less reliant upon scarce natural resources such as lithium and cobalt. Until these developments occur, the global supply chain associated with producing batteries will continue to burden costs due to increasing demand, as well as shipping and tariffs costs.

However, there are other risks to consider beyond OEM profitability. The greatest is customer acceptance of EV technology and the willingness to pay more for an EV. This will largely depend upon the pace of battery technology improvements, the expansion of charging infrastructure, availability of tax incentives and the price of gasoline. Anyone following EV manufacturer Tesla in the news can see the roller coaster ride of profitability and financial ups and downs it faces in any given week. OEMs, like GM and FCA, planning to make or continue to make substantial investments in EV technology have a lot at stake given the risks. One thing is for certain, the auto industry better buckle up because it is headed for an electrifying ride into the future.

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Autonomous Vehicles (AVs) have moved from science fiction fantasy to reality on the roads today. Every significant automaker and most suppliers are pursuing AV technology. Some project that driverless technology will add $7 trillion to the global economy. Others are worried it could devastate the auto industry and its associated drive-thrus, taxi drivers, truck drivers, and gas stations. In December 2018, Waymo, the company that emerged from Google’s self-driving-car project, officially started its self-driving car service in Phoenix, AZ. The availability of this program is restricted to a very small group of riders and safety operators. Although small in volume, the importance of this very tightly controlled launch is significant; people are paying for driverless vehicle rides. Waymo also boasts of its current software testing on big rigs. If successful, this technology has the possibility of complete market disruption in the trucking industry.

Global AV sales are projected to go from 0 to 33 million vehicles annually by the year 2040. Current vehicle platforms include mostly “low tech” driver assistance technology such as lane departure warning, blind spot notification, and adaptive cruise control. However, more complex technology is on the way. The OEMs, suppliers, and startups are racing to embrace and refine new technologies such as laser sensors, cameras, data management systems, and compressing of mapping data to take advantage of the evolving market. Small startups are pursuing small-scale driverless shuttle services, while the likes of Uber and Lyft also race to become leaders as mobility providers. Major players are partnering with research institutions to stay on the leading edge. For example, Ford Motor Co. recently announced a four-year partnership with Michigan State University to expand their research and development alliance. The partnership will focus on sensors, lightweight materials, autonomous technology, and mobility.

AVs for the consumer market are still some years in the future. There are significant regulatory, societal, and technical challenges before we can set the car to autopilot. Legislation by State and Local governments has been active but slow to address the impact of these vehicles on the road. According to the National Conference of State Legislatures, 21 individual states have enacted legislation to address autonomous vehicles, while other states continue to work towards new Automated Driving Systems (ADS) rules. Safety guidelines will be a major factor in the acceptance of AVs to the consumer market.

Safe driving will require the AV to understand the difference between a shopping cart and a wheelchair, a bicycle and a motorcycle. The AV must predict how another user will react in a variety of circumstances. This will be perhaps the most important problem to solve before the AV can be sold to the mass market. The first reported fatal crash involving a self-driving vehicle and a pedestrian occurred in 2018. The vehicle, which was in autonomous mode at the time of the crash, hit a woman walking outside of the crosswalk. The incident has served as a grim reminder of the safety risks which must still be addressed.

Fully autonomous driverless fleets are in the experimentation phase now as society attempts to adapt to the risks and rewards of the technology. General Motors’ self-driving car, the Cruze, and DoorDash Inc. plan to provide food deliveries via autonomous vehicles. This program is scheduled to start in March of 2019. Automakers such as Waymo are building their entire business model around AV car technology. Starbucks Corp. plans to expand delivery across the country with UberEATS and Ford has tested pizza delivery with Domino’s Pizza.

It is clear the AV will be a major form of mobility in the future. The timing, impact, and cost are yet to be seen. Buckle your seat belt and enjoy the ride while you still have two hands on the steering wheel.

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IHS Market 2019 Presentation “Adapting to New Challenges” January 15, 2019
Government can confiscate wealth and income through taxes, but even that has limits in a democracy and capitalist system. There are no thriving economies or reasonable standards of life in a socialist society. There are haves and have-nots. The haves have ruling power solely through oppressive elections or military strength. There is no line for immigration into Russia or China and that is also true for a multitude of other countries.

America has provided the promise of hope and opportunity through freedom, democracy, and capitalism. It is why so many immigrants have come here. We take care of our citizens but that cannot be an endless proposition without wealth being created to tax. The more people that are economically sustaining, the broader the tax base. A sudden surge of pressure through unlimited immigration will quickly collapse a system that is already arguably insolvent. This should be a worry for all.

Prosperity always brings with it innovation and a higher standard of living. It is not accidental that our middle class has eroded as government spending has spiraled out of control. Politicians are now faced with priorities like border control or more social programs. They are confused, at best, about which one is needed. Unfortunately, this debate will face with priorities like border control or more social programs. They are confused, at best, about which one is needed. Unfortunately, this debate will

One of the alarming trends in consumer banking is the financial illiteracy of the U.S. Worker. Seventy-eight percent of full-time workers are paycheck to paycheck. Fifty-eight percent of all U.S. workers say they are in debt over their heads. Twenty-five percent of adults have no retirement savings. Forty percent don’t think their investments are on track and sixty percent with self-directed investments have no comfort in managing their affairs. The digital revolution is trying to impact trust and amount of time to transact, two key ingredients in converting users. There has been a big shift in consumers’ acceptance of technology companies because they are intertwined in their life. Seventy-three percent of millennials would be willing to buy financial products offered by Google, Apple, or other tech companies. Even those aged 35-54 have sixty-one percent acceptance of these tech companies to satisfy their banking needs. More than half of the U.S. population would be comfortable buying financial products from a tech company like Amazon or Google. The days of having one trusted relationship with a traditional bank will be replaced with a centralized digitally enabled financial services platform. PayPal has over 250 million users. Cryptocurrencies like Revolut, Robinhood, Coinbase, and Square may be the wave of the future.

In conclusion, the tech companies are well positioned to tap into the consumer banking market. The question and the ability to monitor bank balances timely. Generally, digital services are 5% of the cost of human interaction. A majority of As this market grows, customers who seek FinTech solutions will find these nontraditional banks attractive.

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Federal Government is putting marijuana & cashing their tax base.

By Matthew Rizzo

The marijuana industry is experiencing profitability issues due to many factors that will no doubt also affect businesses in Michigan. Federal income taxes are higher for businesses in the marijuana industry due to section 280E of the U.S. Code disallowing certain business deductions and credits. Section 280E does allow “effective cost of goods sold” deduction, but includes a “proper share of allocable indirect costs.” Code sections 471 and 263A provide guidelines for allowable cost of goods sold (“COGS”) deductions, but many expenses sit in the grey area between COGS and indirect expenses that may or may not be “allocable” depending on the type of business i.e., grower, processor, or dispensary. Even if a marijuana business is able to allocate some but not all indirect expenses to COGS, the impact on the bottom line could still cause an otherwise profitable business to be unprofitable. The table below is a theoretical example of the impact of the federal tax rules under section 280E in relation to a “normally” taxed business.

So, what does this all mean?

First, if competition continues entering the market and the income tax situation is not fixed, the resulting abundant supply and price compression (as seen in Colorado) will leave most small to mid-size marijuana operations fighting for life against well-funded companies who can afford to fund losses until they grab enough market share to overcome federal income taxes in their cost structure. Second, Michigan is going to have difficulties mirroring Colorado’s marijuana tax revenues despite even the most aggressive estimates. This is mostly due to 60+ municipalities opting out (i.e.: Troy, Washington Twp., Northville, Grosse Pointe), which prevents marijuana-based businesses from setting up shop in their respective areas. Municipalities that are opting in have limitations on the number of marijuana businesses that can open within their borders at their sole discretion. Colorado, due to the same issue, has recently experienced a plateauing of tax revenues as marijuana tax collections are only projected to grow by 8% down from 27%. Colorado’s marijuana tax collections equate to a nominal 1.5% of the Colorado net tax collections as of year-end 2017. Early Michigan estimates have also validated a small impact on overall tax revenues for the State.

With the federal tax rules inhibiting business’ profitability and Michigan municipalities opting out of marijuana participation, Michigan will most likely see a minimum impact to their tax revenues similar to Colorado with all of these barriers working against the growth and prosperity of the industry.

**For easy comparison, assumed to be in the same tax bracket**

<table>
<thead>
<tr>
<th></th>
<th>BUSINESS TAXED UNDER 280E</th>
<th>BUSINESS TAXED NORMALLY</th>
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<tr>
<td>Sale Price</td>
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<td>Cost of Goods Sold</td>
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<tr>
<td>Gross Margin</td>
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</tr>
<tr>
<td>Unallocable Expenses</td>
<td>(1.50)</td>
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</tr>
<tr>
<td>Net Profit Before Taxes</td>
<td>0.50</td>
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</tr>
<tr>
<td>Federal Taxes (30%)</td>
<td>(0.60)</td>
<td>(0.30)</td>
</tr>
<tr>
<td>Net Profit (Loss) After Taxes</td>
<td>(0.10)</td>
<td>0.35</td>
</tr>
</tbody>
</table>

*No allowance for indirect business expenses

*For easy comparison, assumed to be in the same tax bracket

We’re proud to announce that Patrick M. O’Keefe is the recipient of The Detroit Executives Association’s 2018 Executive of the Year Award.

Joe Hanson, President of the Detroit Executive Association said, "Mr. O’Keefe was chosen because he has demonstrated exceptional leadership, admirable business ethics and a proven track record for helping companies comeback strong and make a difference in their communities.” O’Keefe joins a notable community of industry leaders including Roger Smith, Joe Antonini, Joseph Hudson, Eugene Miller, Deiter Zetsche, and Edsel Ford among others.

Patrick O’Keefe has been recognized for the fourth year as one of the top 100 Irish-American leaders in business.

He was honored at the 33rd Annual Business 100 Awards dinner on December 12th at the Metropolitan Club of New York in Manhattan. The Annual Business 100, given by Irish America magazine, honors the best and the brightest Irish-American and Irish-born leaders representing some of the most innovative and influential companies and corporations in the world. Now in its fourth decade, the Irish America Business 100 has a long history of providing recognition to a fundamental core of American business leaders.

Save the Date
Middle Market Forum
Tuesday, April 9 7:30-9:30 am
San Marino Club, Troy
Join us as we discuss the current state of the economy and how it will affect the middle market.

To register visit www.okeefellc.com.

Grow Michigan, LLC, an organization founded in 2012 dedicated to providing subordinate funding to small businesses with a commitment to Michigan, announced the State of Michigan Strategic Fund has approved a new investment for a second Fund, Grow Michigan II. The purpose of this investment is to leverage private sector investment and grow Michigan jobs.

The second Fund will be similar to the first. It supports entrepreneurs and small businesses looking to grow; often those who don’t have the liquidity to finance expansion on their own or with solely a traditional bank loan. The subordinated debt works in conjunction with traditional bank loans. The money must be invested in Michigan and generally goes to manufacturing, technology and similar industries.

Among the desired attributes of the companies it lends to:

- Profitable small businesses with strong management teams
- Established relationships with senior lenders
- Typical loan size between $500K and $5 million
- Revenue from $3 million to $50 million and positive EBITDA
- Capital will lead to increased employment in Michigan
Special Automotive Issue Inside:
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Future of Electric Cars
Autonomous Vehicles