



**CAMBIAR
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1Q 2015

Market Commentary



- › Cancer Immunotherapy: A Therapeutic Breakthrough
- › U.S. Shale Oil - In the Middle of the Cost Curve
- › Are We Not Entertained? Declining TV Viewership and Media Monetization
- › The Quest for the SuperBattery

The first part of 2015 saw global financial returns transposed versus the back half of 2014. Following a peculiar 2014 where U.S. blue chip stocks generated the only significantly positive returns in U.S. dollar terms, conditions have so far reversed in 2015, with international returns faring better than U.S. returns in both local currency and dollarized terms. Returns have been favorable in most developed nations, though export-oriented businesses with local currency costs and U.S. dollar priced revenues have been especially successful. Overall, markets outside the U.S. registered on average 5% gain in dollar terms and over 14% in local currency terms; within the U.S., returns have broadened – with small cap stocks faring a few percentage points better than large caps (+4% versus +1%). In late 2014, dollar strength and a thirst for yield trumped almost all other investment attribute considerations among stocks, and here too the course reversed quickly in 2015, at least so far. Whereas defensive and yield-proxy stocks dominated results in 2014, these segments of the market entered the year richly valued, and have lagged significantly in 2015.

We continue to believe that an eventual shift away from zero percent interest rate policy (“ZIRP”) by the U.S. Federal Reserve will prove to be the most significant event of 2015, and may re-order many investment priorities. That is our *opinion*; until this actually happens, it is just an informed opinion and no more than that. It is possible that a move away from ZIRP could be pushed as far as early 2016, but this deferral would postpone the inevitable financial adjustment into the U.S. election cycle, a consequence that we can’t imagine anyone at the Fed would want. In the interim, the introduction of overtly negative interest rate policy (“NIRP”) in Europe and the implementation of aggressive bond buying (“QE”) programs in both Japan and Europe have been wildly successful. As of this writing, over a dozen European countries are borrowing at negative interest rates of up to five years maturity, and at less than 0.3% for maturities as long as ten years out. Because interest rates paid on cash reserves are negative, the treasury departments of most Eurozone banks must play a contorted game of “hot potato” as various financial instruments mature and purchase bonds that either have no yield at all or take some significant duration risks (and they are even running out of room to do this). Whatever the form by which banks choose to manage this process, it is forcing a significant amount of money to chase secure yields without much compensation.

In a world of gigantic long term demographic challenges and de-minimus yields on low risk instruments, *there is no alternative* (“TINA”) to plowing larger sums of money into riskier investments – be these bonds, real estate, or stocks – to meet actuarial assumptions. This coercive financial logic is dangerous outside of legitimately depressed economic conditions, which is why we believe it is imperative to re-normalize monetary policy away from ZIRP relatively soon in the U.S. That said, it is bond markets and not equity markets where the TINA dynamic has been most potent, leaving many parts of the equity markets still attractively valued. Admittedly, the strike zone is shrinking. But whereas this may be a negative for the prodigious flows into passive equity index funds which own *everything*, Cambiar can buy what we find attractive, and avoid paying full prices for stocks with debatable potential.

In the balance of this letter, we intend to discuss some of the more interesting topics in current equity markets.

Cancer Immunotherapy: A Therapeutic Breakthrough

Maria Mendelsberg – Investment Principal

One of the most exciting changes taking place in the healthcare sector is the way that we treat cancer. Cancer immunotherapy (or “Immuno-oncology”) will be one of the most important stories in the pharmaceutical industry for many years. These therapies work by using the body’s own immune system to fight cancer cells, as compared to historical protocols such as chemotherapy, which selectively poison certain cell types in the hope of eradicating the offending cancer cells, replete with grave side effects. One approach is to target cellular receptors known as “programmed cell death 1” (or PD-1/PD-L1), basically disarming the body’s immune response. Immunotherapy blocks tumor cells from binding to PD-1 and thus reactivates T-cells that can then “attack” the cancer and therefore shrink tumors. This therapy seems to generate a robust response in a number of different types of cancers – melanoma, lung, bladder, and renal to name a few. We are at the very beginning of this paradigm shift which has the potential to be a huge opportunity for many companies in the biotech and pharmaceutical industries. At present, there are four companies that appear poised to dominate this market: Bristol Myers (BMY), Merck (MRK), Roche (RHHBY), and AstraZeneca (AZN).

Metastatic melanoma is one of the deadliest forms of cancer, as five-year survival rates are quite low (15%). In 2014, Merck and Bristol Myers received approvals for their immunotherapy treatments, Keytruda (Merck) and Opdivo (Bristol Myers) in the metastatic melanoma setting. Overall survival after one year was 73% for patients on Opdivo and 74% for Keytruda (versus 42% for chemotherapy). Potential sales in the melanoma setting are about \$2 billion; this is large, but not necessarily large enough to meaningfully move the stock price for companies the size of Merck and Bristol Myers. However, the market opportunity outside of melanoma is considerably larger, as there are currently about 200 PD-1/PD-L1 trials being conducted. The next imminent launch will be in lung cancer, which could be a ~\$12 billion revenue opportunity by 2020. Lung cancer kills more than 150,000 people each year in the U.S. – more than breast, prostate, colon, kidney, and melanoma combined. Bristol Myers is currently in the lead, but both Merck and Roche will most likely file their therapies in 2015, followed by AstraZeneca in 2-5 years. Each of these companies is taking a different clinical approach in terms of this large population, so there is room for each of these companies to succeed.

There are several other indications that are also multi-billion dollar opportunities by 2020: renal (estimated at >\$3 billion), bladder (>\$4 billion), ovarian (>\$1 billion), and blood cancers (>\$4 billion). Similar to melanoma, five-year survival rates for the advanced form of bladder cancer are also about 15%. Roche has the lead in this market, as its PD-L1 has shown impressive results (52% response rate). Results seen in many of the other indications (renal, blood cancers, etc) have also been impressive. As we head into the later part of the decade, the next “leg” of the “Immuno-oncology” story will be combination therapies – where patients will be treated with one or more therapies or combinations with other targeted therapies, such as combining a PD-1 with Roche’s anti-angiogenesis drug Avastin in renal cancer. The potential cancer immunotherapy market is quite large and may lead to patients that live longer while remaining on single or multiple therapies for many years.

Pricing for these drugs has been quite robust, with both Keytruda and Opdivo charging \$150,000 per year for treatment (or about \$12,500 a month). Oncology drugs are relatively resilient when it comes to premium pricing, as there is a dearth of existing products that safely and efficaciously treat cancer due to the severe nature of the disease. Avoiding costly hospitalizations is another consideration.

Will PD-1's replace chemotherapy as the standard of care? It is possible, but that will most likely take time and require considerably more study. So far we have seen that metastatic melanoma patients taking Bristol Myers' Opdivo had a much higher survival rate versus those who were on chemotherapy (73% versus 42% were alive one year later), without the awful side effects. In lung cancer, we have seen a response rate using chemotherapy of 8%, while the PD-1/PD-L1's in the clinic have shown a 20-24% response rate. This is a major difference in a disease that has been very difficult to treat and has poor outcomes. Side effects seen with PD-1's/PD-L1's are mild in comparison to chemotherapy (raised liver enzymes and inflammation of the lung tissue which can cause shortness of breath). Hopefully, this therapy will replace a lot of chemotherapy use over time – helping cancer patients live longer, while having a better quality of life.

Cambiar has been able to participate in the cancer immunotherapy via our ownership of Roche (International Equity), Merck (Large Cap Value) and Novartis (International Equity and Large Cap Value). Roche has always been focused on oncology, and is making a large investment in immuno-oncology with its PD-L1. Although Novartis does not have a PD-1/PD-L1 in its pipeline, the company does have several oncology drugs in its portfolio that could potentially be combined with PD-1/PD-L1. Novartis is taking a different approach to cancer immunotherapy through its CAR T-Cell Therapy, whereby T-cells are removed from the patient's body and genetically modified with new DNA to attack targets on cancer cells. This method can also be used in combination with PD-1 and would be quite potent. Finally, AstraZeneca is a name we have researched, but the company is behind the others in terms of its pipeline progression in the immunotherapy space.

Are We Not Entertained? – Declining TV Viewership and Media Monetization

Andrew Baumbusch – Investment Principal

We have previously discussed certain media industry risk phenomena and the potential longer-term ramifications to the overall profit pool, but it was only just recently (April 15) acknowledged by FCC chairman Tom Wheeler. “For the first-time, we saw a full-year decline in the number of pay TV subscribers, with most all of those losses coming from cable. Why is this happening? Broadband is bringing new services....and consumers are pursuing alternatives.” This decline is concurrent with broad employment gains and positively inflecting new household formation. In other words, the macro economic backdrop cannot explain it. The present U.S. base of approximately 100 mm TV households may only decline fractions of a percent, or hundreds of thousands in any quarter, but in mass media small numbers often translate to huge dollars. Broadband services are something new and disruptive to the existing ecology.

The business of being entertained is flowing in two directions. Legacy TV viewership, which is easily measured and monetized, has been declining for years and was again down in Q1 2015 (-9% for cable networks, -15% for broadcast networks). However, the aggregate consumption of video, including over-

the-top (OTT), mobile, and subscription video platforms (SVOD) is still rising modestly. It's a sufficiently diverse phenomena as to be challenging to measure, though some estimates peg video consumption as high as five hours a day, with over an hour of this specifically on OTT platforms. This still difficult to measure total viewership reality [a problem which Large Cap Value holding Nielsen (NLSN) continues to try to solve] suggests video content as valuable as ever to consumers, but monetizing it for both content generators and distributors is as uncertain as ever. Both traditional TV monetization mechanisms – advertising and affiliate fees – at heart require a measurable TV-viewing base. But as total TV audiences morph their viewing hours to new consumption platforms, often entirely ad-free, how does one monetize this? A majority (59%) of U.S. households currently subscribe to some kind of SVOD service (such as Netflix, Hulu...), suggesting the problem of monetizing and measuring content consumption is poised to grow significantly.

Television has been remarkably immune to the forces of digital disruption and deflation that have plagued print media and the record business up to this point. Pay TV platforms, which have comfortably provided a relatively constant flow of incrementally monetizable subscribers, are now more tangibly at risk from broadband substitution. Other revenue streams such as syndication also appear vulnerable. Syndication is usually possible after 3-4 seasons and roughly 100 episodes of a particular TV show run. Broadcast and cable syndication have long been highly profitable revenue sources for both producers and networks, selling for as much as \$100k - \$500k per episode, with cable syndication as high as \$1-3 million per episode. Typical sit-coms and procedural dramas have been the preferred syndication content because they could be run and viewed non-sequentially, but with the growing popularity of serialized dramas (which seek to establish must-see viewing at a particular time), these programs are being squeezed at the margin from a demand perspective. Moreover, SVOD platforms like Netflix enable “binge viewing” at the consumer’s discretion, thereby diminishing the value of ad-supported content. Why watch two 30-minute shows with a 7-8 minute commercial load on each, when with a broadband connection one could watch nearly three back-to-back 22-minute episodes commercial free via SVOD? Or one could trade out 8 nights of an hour long serial for 320 straight minutes of commercial-free viewing of those 8 episodes on a single Sunday afternoon...for \$11 per month. Digital deflation is tough!

But to suggest all is lost overnight is far too simplistic and dangerous. Industries morph, good companies adapt to sustain and grow cash flow, and it remains our job to identify these value opportunities as they emerge. We have continued to find opportunity in media, right now a little bit lower in the market cap spectrum domestically, most recently in local broadcast TV. This is an area that has seen considerable consolidation in recent years, in part the result of the decade-plus long structural decline of historically dually-owned newspaper assets alongside broadcast TV rights. Local broadcast TV, though still considerably reliant on cyclical (and economically sensitive) advertising spend, has seen significant revenue diversification emerge in the form of retransmission revenue – whereby pay TV operators are now paying to re-transmit these local stations. Local broadcast TV still holds roughly 35% viewing share (local news, sports, etc). Local broadcasters are paid on average \$0.58 per viewing household, against \$20 for ESPN, \$7 for TNT and \$5 for CNN as stark examples of the gap.

Local TV broadcasters also hold an interesting core asset with significant intrinsic value given their spectrum position in a spectrum-constrained physical world. Another auction is slated for 2016 that may shed further light on the resident value inside some of these businesses. An emerging new broadcast standard called ATSC 3.0 is set to allow for robust data transmission capability, increasing the degrees of freedom around business model and monetization potential – notwithstanding TV ratings challenges. Not

to be dismissed either is the promise of the 2016 political year, with spend estimates for the Clinton Presidential campaign alone already ranging north of \$2 billion, much of which finds its way to local TV. *This is highly unfortunate for “battleground” states such as Colorado – home of Cambiar Investors.* We find current Sinclair Broadcasting Group (Small Cap Value) particularly attractive with regard to these aforementioned industry dynamics.

U.S. Shale Oil – In the Middle of the Cost Curve

Tim Beranek – Investment Principal

Global oil benchmark prices fell by more than 50% in 2014. This was atypical of selloffs of this magnitude, which are normally triggered by a sharp drop in global oil demand due to an economic recession. Market conditions in 2014 evidenced a moderate but growing imbalance between supply growth and demand growth, with demand growth of 0.7% (to 92.5 mm boe/d) – trailing supply growth of 2.2%. More crucially, markets were roiled by a decision by the OPEC cartel to withhold any attempt to curb its supply to correct this imbalance. Most of the growth in global oil supply since the 2007-09 recession has come from U.S. shale oil. Shale itself isn't a new discovery, as the energy industry has been long aware of these oil-soaked rock formations. Yet only recently has technology advanced to economically extract the oil. It was only very recently that the scalability of U.S. shale oil, presently at over 4 million boe/day (5% of global supply), registered as a source of competitive disruption to OPEC, many of whose members had become comfortably conditioned to \$100+ per barrel oil.

OPEC's November decision not to cut production remains intriguing in terms of the industry structure. OPEC barrels, especially those from the Persian Gulf, represent the world's lowest cost barrels to produce. Yet time and again, these barrels have been withdrawn from the market to ward off oversupply. This has had the effect of rewarding higher-cost oil producers with much needed revenue and pricing, and granting larger oil companies a reasonable expectation of longer term price stability to fund costly megaprojects. There are very few, if any, cyclical businesses that have sustained higher cost producers in this manner. By withholding price support, high cost producers are presently in deep trouble, and longer-tailed projects lack the price stability to be pursued. But between now and the time when market supply falls far enough behind demand growth to restore pricing and capital spending, industry conditions will be very tough, and a new pecking order may emerge.

There are two interesting upshots to the changed market structure. Unless OPEC changes course and reverts to their historic role of supporting prices through volume restraint, the oil markets appear poised to have *more extreme price moves* and *shorter cycles*. U.S. shale production can (effectively) be turned on and off within a year or so. This doesn't bode well for megaprojects that are extremely expensive with long lead times. The integrated "major" oil companies such as Exxon-Mobil, Chevron, BP, and others have specialized in developing megaprojects. It is Cambiar's view that these companies will have a difficult time navigating the new realities of the oil markets; as a result, we don't see a compelling investment case. Interestingly, the largest M&A purchase since the oil price crash, Royal Dutch-Shell's cash and stock buy of BG would see Royal Dutch double down on liquefied natural gas (LNG) production and infrastructure, and lessen its exposure to traditional oil production. Cambiar owns BG in our International strategy, and we are likely to retain the position as our shares transition to ownership of Royal Dutch once the purchase is finalized.

U.S. shale oil barrels are, on average, cheaper to produce than those originating from already well established production regions such as deep water Gulf of Mexico, the Canadian Oil Sands, offshore West Africa, or the North Sea. Projects once slated for the Arctic region and parts of West Africa look wholly unfeasible now. Hence, as global oil demand continues to grow and the global oil markets move closer to being in balance over the next 1-2 years, U.S. shale oil supply will be needed. Typical contracts with oilfield service providers and downstream consuming companies embed a 6-9 month lag between well development and production. This implies that we are unlikely to see any production curtailment from sharply lower capital budgets until late 2015. The 2015 capital budgets for most energy producers are down 40%-50% versus 2014, which has led to a similar drop in the domestic rig count. There is no doubt that the sharp drop in capital budgets and drilling activity will curtail U.S. shale oil production. But because shale oil is new to the world, it remains unclear the degree and magnitude of production loss that will follow. Cambiar is closely watching how shale oil production responds to this lower level of spending, and how capital budgeting develops for other higher cost forms of oil production.

Energy is a beaten down sector in a stock market that is otherwise setting new records. Over the very long term (50+ years), energy has generated among the best total returns to shareholders of any sector in the market. We sense there are a lot of short term and long term investors that are trying to get positioned ahead of the turn, and it does appear as though a major low was reached at around \$43 per barrel in March. Cambiar is cautiously constructive that there is money to be made as prices recover from this unsustainable level; that said, selectivity will be key in the companies we own, and the exposure they provide our clients. With a changed cost curve and potentially permanently less predictable pricing, we expect many energy companies large and small will not be able to sustain business as usual. The energy industry is undergoing a paradigm shift, and it is likely to be a bumpy process. Neither buying yesterday's winners nor buying the most down and out names in the sector are apt to be successful investment strategies.

As a broad example, the domestic refiners have performed very well over the past few years, as domestic oil production growth has unfolded. They have benefited as the new supply has been in their own backyard, lowering their feedstock costs vs. their international competitors and creating a competitive advantage. But as it is becoming evident that U.S. supply growth is going to slow or potentially contract, domestic refiners are likely living through as good of an environment as they are going to see. For this reason, we elected to move on from our refiner investments during Q1, which included Valero (Large Cap Value), Tesoro (Small-Mid Value), and Delek Holdings (Small Cap Value). We still expect core areas of U.S. shale oil to be critically important to the long term global oil markets. Our investments prospectively are focused on oil producers with high quality acreage, good balance sheets, sensible managements, and available cash to fund their drilling programs through what will be a dark year or two. Some examples of companies that have the financial strength to manage in the current lower commodity price environment but which can excel when the cycle turns include Anadarko Petroleum and EOG Resources that we own in Large Cap Value, as well as Cimarex Energy, which we own in the Cambiar Small-Mid Value portfolio. As drilling activity eventually picks up again, we expect to find select opportunities in the oil field services area as potential investments.

The Quest for the SuperBattery

Brian Barish - President

The Holy Grail at the intersection of the environmental movement to reduce carbon emissions and further progress in a modern economy is the humble battery. A large enough grouping of cheap and robust rechargeable batteries, connected to environmentally friendly but intermittent sources of non-carbon based energy such as solar and wind, could (in theory) be connected to the power transmission grid and obviate the need to run power plants. If electric car technology and costs can be brought down, the same gigantic clusters of batteries could power a fleet of electric cars, and render the dynamics of the crude oil market moot. This "superbattery" is, or should be, a goal for modern societies...but a suitable superbattery technology remains elusive.

Not unlike the above oil shale discussion, battery technology is not new to the landscape; we just have yet to "unlock" it, economically speaking. Electrochemical batteries were first described by scientists in the year 1800, and have since evolved rather slowly compared to other industrial products. The first rechargeable batteries were conceived before the U.S. Civil War in 1859. All batteries use the same chemical principles, where one material contains extra electrons and another material absorbs the extra electrons as power is discharged. Many battery types naturally degrade through continued use, as chemical reactions not directly related to the flow of electrons affect the composition of battery materials. Modern portable electronics are usually powered by lithium or nickel-based compounds, which do not degrade as much through use as other formulations. However, these batteries are more expensive to produce, lose storage capacity from incomplete recharges, and in the case of some lithium formulations, cannot discharge their energy quickly without becoming chemically unstable. The periodic table of the elements is not mutable, which limits how innovative one could possibly be in constructing cheap/powerful/non-degrading/chemically stable batteries.

Costs are falling with scale, however. Electric car pioneer Tesla estimates it produces batteries at a current cost of \$250 per kilowatt-hour of power, about half of costs in 2009 (although these claims are difficult to corroborate). Tesla's batteries can still only be charged so many times before chemical degradation occurs. With global energy consumption roughly measured at around 200,000 terawatts (200 trillion kilowatts), costs would need to fall by orders of magnitude to substitute away from fossil fuels. Tesla is a good example of a provocative story that is very difficult to value on a conventional basis; given looming competitive responses, its stock is far from a valuation level that we would be comfortable owning on behalf of our clients. There are a few legitimate battery technology companies (they are on the small side) that exhibit promise toward the ultimate goal with undemanding valuations. One is a French supplier of satellite and aerospace batteries called SAFT, which has exhibited some promise in advanced high-density lithium-based battery formulations. We currently own this position in our International Small Cap strategy. We have held a position in industrial battery producer EnerSys (Small Cap Value), which produces old-fashioned lead acid and zinc-air batteries for trucks and construction equipment, as well as replacement car batteries. EnerSys is approaching the superbattery problem from the low end, revisiting older heavy metal based battery technologies, but with designs that could mitigate the chemical degradation issue. Sony (Large Cap Value, International Equity, Global Select) has reportedly developed a biological battery that generates electricity from sugar in a way that is similar to the processes observed in living organisms. This sounds more than a bit speculative, but is worth a try. Whoever actually solves

the riddle and creates a viable superbattery will fundamentally alter numerous industries and change the world in ways that will be difficult to measure financially.

We hope these snapshots of key industrial issues in 2015 are helpful to your understanding in general, and how we are addressing the opportunity set for our clients currently.



Brian M. Barish
President
Cambiar Investors LLC

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