Case Number 2100.0

Cashing Out:
The Future of Cash in Israel

As the sun rose on another beautiful March day in Jerusalem, Ilan Steiner entered his office at the Bank of Israel full of energy and optimism. Since he began work as Head of the Currency Department for the central bank almost a year ago, he had been vexed by one of the biggest challenges plaguing his department: the future of cash. But recently he had discovered a promising new approach to tackling the issue, and was eager to round up his staff and get to work.

Like other national banks, Israeli law grants the Bank of Israel sole right to issue the country's currency—banknotes, regular coins, and commemorative specie. The Currency Department's mandate is to oversee all currency matters, and as such is responsible for a range of activities including formulating policy, designing counterfeit security features, and establishing criteria for control over cash quality. Its most important role, however, is to provide a regular supply of banknotes and coins in accordance with public demand. Ilan's first twelve months on the job had been dominated by these day-to-day operations of ensuring cash is safe, secure, and available to everyone. But looming overhead, there was a bigger question as to what role cash should play in modern Israeli society.

Ilan knew commercial banks, the government, and stakeholders within the Bank of Israel were keen to reduce the amount of cash in circulation in order to save on printing and distribution costs, reduce forgeries, and cut into the black economy. Nevertheless, most citizens still overwhelmingly favored using bills and coins for many transactions. The Currency Department's mandate is to ensure a resilient currency system that serves all consumers at all times, and Ilan had to consider how demand for cash would evolve in the next few years in order to prepare his department to meet the national need. If cash maintained its popularity, significant investments in upgrades in storage, inventory, and equipment would be essential in light of the increasing volume of notes and coins in circulation; but pouring funds into these projects just as the use of paper money went into decline would be a waste of scarce public resources.

What would Israel's future demand for cash look like? What sort of long-term investments in cash and storage were appropriate to meet this demand? These questions had plagued Ilan since day one, but a new policy framework—known as scenario planning—could hopefully help him think more clearly about the coming needs for cash of his countrymen and women. Sitting down at his desk, he began to write a memo to his employees filling them in on his plans.

This case was written by Benjamin Gilles, MPP '17, under the supervision of Mark Fagan, Lecturer in Public Policy at the John F. Kennedy School of Government (HKS), Harvard University. HKS cases are developed solely as the basis for class discussion. Cases are not intended to serve as endorsements, sources of primary data, or illustrations of effective or ineffective management. (January 2017)

The Future of Cash

For centuries if not longer, cash has been strongly tied to a sense of independence. From children eagerly holding out their hands as parents give them a coin or two, to adults slapping a wad of bills down at the bar to buy their friends a round of drinks, handling money provides individuals with a sense of personal freedom and power. At the national level, most governments choose to maintain their own currencies even when it might make more financial sense to adopt that of a larger state because of the importance of financial autonomy. They then spend a significant amount of effort designing their bills with images of national heroes and inspiring slogans.

Of course cash is not the only means of payment we have, but it has traditionally been the most popular, in no small part because for most of human history the alternatives were not particularly convenient. Consumers and companies have been buying goods and services on credit for hundreds of years, but until very recently merchants had to write down a customer's purchasing details and then physically deposit credit slips at the bank, which would then bill the customer. Thanks to major technological innovation, by the 21st century purchasing on credit had become much easier, requiring just a signature or an identification number with everything else done automatically online. Today, a shopper need only tap their card on the screen and a transaction is complete. Meanwhile, apps like Uber have begun using pre-stored details for payments, and services like Venmo allow people to make transfers by opening their smartphones rather than their wallets. As such, since the early 2000s a number of experts have asked whether the rise of digital payments would spell the end of cash's longstanding reign.

Thus far, the answer has been: No. Economists long presupposed that as nations increased their wealth and their financial structures became more advanced, the amount of cash in circulation would begin to slow as the convenience and preponderance of digital and plastic payment options won consumers over. Admittedly, this has taken place in some countries. Sweden, for instance, saw circulation of its *kroner* decline from 10,700 per Swede in 2005 to 8,000 by 2014. The reduction has resulted in interesting—and somewhat amusing—effects, as would-be robbers dejectedly left cashless banks empty-handed and tech-savvy churches began offering card readers to contributing parishioners.[1] Denmark had also seen demand for physical money plummet, but these Scandinavian nations remained outliers from the trend. Cash in circulation in rapidly-industrializing China grew fourfold between 2000 and 2014, while the value of banknotes similarly went up in many developed nations including South Korea, the United States, Britain, and in the Eurozone.[2]

Despite its ongoing resilience, though, cash is not without enemies. Critics of physical currency argue phasing out cash would lead to significant savings, higher sales, and more flexibility in monetary policy. As of 2007, the European Union's 360 billion cash transactions resulted in at least €50 billion a year in handling costs, according to the European Payments Council.[3] In contrast, "when minted from silicon, the cost of handling cash is subsumed by Moore's law, which has seen the cost of computer-processing power fall by half every eighteen months or so,"

[1] "Money for everything," *The Economist*, October 3rd 2015, https://www.economist.com/news/finance-and-economics/21669964-despite-many-usurpers-cash-still-king-money-everything.
[2] Ibid.
[3] "The end of the cash era," *The Economist*, February 15th 2007, http://www.economist.com/node/8702890.

argued the editorial board at *The Economist* in that same year, as "electronic information is instantaneous, weightless, and exact."[4] Moreover, "Visa reports contactless digital transactions take less than half the time of cash-based purchases, and consumers liberated from what happens to be in their wallets spend twenty percent more when shopping."[5] Of course, retailers are required to pay fees to companies such as MasterCard and Visa for credit card services so alterative payment options are not entirely free, but the total cost of digital transactions remains significantly lower than the cost companies and central banks incur by managing fiat money.

Maintaining paper currency also limits monetary policy options. Negative interest rates could be a useful tool to address large deflationary shocks, and if all money were electronic, paying a negative interest rate on reserves (basically charging a fee) would be trivial for a central bank. Yet, it is effectively impossible for banks to cut rates below zero when citizens can convert electronic deposits to no-interest paper currency in unlimited amounts.[6] For this reason, many financial experts—most vocally the Chief Economist at the Bank of England—had proposed eliminating cash as part of a plan to permit negative interest rates.[7]

Perhaps the most enticing reason to do away with cash from the government's perspective, though, was the potential to crack down on the underground economy. The exact size of the black market is unknown, but estimates coming out of the United States have pegged it at seven to ten percent of gross domestic product. A significant body of evidence has found a whopping fifty percent of currency in most countries is used to hide transactions.[8] Cash is obviously the ideal tender for illicit transactions, because it is anonymous and almost impossible to track. Doing away with paper and coins would enable governments to squeeze illegal activity and ensure citizens are paying their full share of taxes. Indeed, acknowledging this fact, legislation had been tabled in the Knesset (the Israeli legislature) to set maximum thresholds for cash transactions in an attempt to fight back against the black economy and corruption.[9]

Yet, it is precisely because of its anonymity that cash is still so attractive to so many people. Some consumers remain concerned firms running payment systems might sell information about their purchases to a third party.[10] Others are worried the digitization of the financial system leaves it open to cyber attack. While cash critics point out countries are already vulnerable to such attacks anyway—meaning the marginal risk of doing away with fiat money is dramatically less than the reward—citizens are unconvinced.

Finally, many people still like storing their wealth in physical financial assets. In fact, in the United Kingdom and South Korea, despite a significant increase in cash distribution over the last few years, use of coins and bills for actual transactions has remained steady; what has gone up is demand for £20 and £50 notes—the largest

---

[4] Ibid.
[5] "The end of the cash era," *The Economist*, February 15th 2007, http://www.economist.com/node/8702890.
[6] Kenneth Rogoff, "Costs and benefits to phasing out paper currency," Cambridge: Harvard University, 2014, https://scholar.harvard.edu/files/rogoff/files/c13431.pdf.
[7] "Money for everything," *The Economist*, October 3rd 2015, https://www.economist.com/news/finance-and-economics/21669964-despite-many-usurpers-cash-still-king-money-everything.
[8] Kenneth Rogoff, "Costs and benefits to phasing out paper currency," Cambridge: Harvard University, 2014, https://scholar.harvard.edu/files/rogoff/files/c13431.pdf.
[9] Internal document.
[10] "The end of the cash era," *The Economist*, February 15th 2007, http://www.economist.com/node/8702890.

available.[11] Across the Atlantic, $100 bills now account for almost eighty percent of the value of banknotes in circulation, up from sixty percent in the 1990s.[12] Quite simply, as very low interest rates diminished the opportunity cost of keeping money in the banks, citizens have been hoarding cash in their homes and other secure locations to protect against government and criminal intrusion in their bank accounts.

Israel followed most of its international counterparts, as the volume of cash in circulation grew by an average 10 percent per annum between 2004 and 2014.[13] Older consumers in particular still want to use cash, and citizens like to keep it on hand in case of emergencies. Yet, commercial banks have been looking for ways to cut operation costs stemming from handling cash, while other businesses are eager to profit from the fees paid by customers for alternative payment instruments. Finally, young people's tastes are changing, as studies show they are more willing to use online and card options than their parents.

The future demand for cash in Israel will be influenced in various degrees by multiple forces including the rise of alternative means of payment, public attitude, financial institutions' actions, retailer preferences, government intervention, and socio-economic development. The question is: How should the national bank think about the interactions of these dynamics? Admittedly, it is impossible to predict the future with full accuracy, but policymakers can begin to prepare for what lies ahead by using scenario planning to think about how these multiple forces might come together.

Scenario Planning: A Framework for Grappling with Uncertainty

"It's tough to make predictions—especially about the future." - Yogi Berra

In the early 1900s when Henry Ford was setting up his new motor company, he approached his lawyer, Horace Rackham, about becoming a potential investor in the fledgling enterprise. Seeking counsel, the attorney went to the president of the Michigan Savings Bank to ask whether this was a wise investment. The banker was dismissive, warning Rackham he might as well just throw his money away because while "the horse is here to stay, the automobile is only a novelty—a fad." Upon reflection Rackham decided to ignore the advice, and invested $5,000 in fifty shares. Ten years later, he sold his stock for $12.5 million ($307 million in today's dollars).[14]

This story illustrates just how incredibly difficult it is for anyone—even those who are well-educated and presumably knowledgeable in the field—to make accurate predictions about the future. Looking back, the investment advisor's opinion seems incredibly misguided, but in the early 20th century it actually made a lot of sense: cars were expensive, unreliable, and motorists were even depicted as a menace to society when their

[11] Victoria Cleland, "Future Demand for Cash: And Potential Implications," London: Bank of England, 2016.
[12] "Money for everything," *The Economist*, October 3rd 2015, https://www.economist.com/news/finance-and-economics/21669964-despite-many-usurpers-cash-still-king-money-everything.
[13] Internal document.
[14] Robert Szczerba, "15 Worst Tech Predictions of All Time," Forbes.com, January 5th 2015, accessed: April 3rd 2017, https://www.forbes.com/sites/robertszczerba/2015/01/05/15-worst-tech-predictions-of-all-time/#4e5b7d7b1299.

vehicles struck pedestrians.[15] Yet, the bank president failed to foresee the major social and technological changes that would make automobiles convenient, give them priority on the road to reduce collisions, and improve their reliability. Indeed, the company in which Rackham invested was one of the main catalysts of change, dramatically lowering the price of cars such that most average Americans could afford to purchase one, enabling their dominance to proliferate.

Anticipating the future is an impossible task, yet it is the challenge policymakers often face when they are trying to decide how best to deploy scarce public resources to meet the needs of constituents. Thankfully, today there are a number of tools that have been developed in both the public and private sectors to help government employees expand their minds and think about the range of possible scenarios that might come to pass. It is still not possible to say with certainty what the future *actually* holds. By seeking to recognize what they do not know and what some of the major relevant factors of change might be, however, planners are better able to search for information that offers insight into the direction the world is going, and can work to build systems that are flexible and resilient towards change. Of these tools, one of the most effective is scenario planning.

Originally used for military planning during World War II, in the 1970s a team of executives at Royal Dutch/Shell became interested in scenario planning while looking for better ways to prepare managers for possible changes in the energy landscape. They were particularly concerned with whether an eroding Western dominance in the Arab world would lead to instability in the oil sector. Using scenario planning, they systematically examined every possible angle of the situation and concluded it would take a miracle to avoid an energy price crisis given the major shifts. As such, they devised a set of focused storylines to make managers not just intellectually aware of the danger, but to assist them in proactively thinking about how to respond to it.[16]

Due to the 1970s oil shocks and other major shakeups, companies elsewhere were becoming dissatisfied with the then-current methods of planning that assumed a single smooth line of growth and development, when history was proving to be bumpy and full of unpredictability.[17] Scenario planning thus found a growing following as firms in many industries turned to it "for such purposes as providing input to strategic planning, improving investment decision-making, and guiding thinking about competitive moves (e.g., product line extensions, new market entry, or the formation of joint ventures and alliances)."[18]

Studies show humans have a number of predictable tendencies that make forecasting difficult, including bias, tunnel vision, and bounded awareness (looking only at the information we have, rather than asking what we might be missing).[19] Scenario planning addresses these shortcomings by having participants craft a range of rich and detailed possible futures. The purpose is not to make an accurate prediction, but rather to expand participants' thinking and foster a proactive mentality that enables them to take action down the road. The process forces

[15] Bill Loomis, "1900-1930: The years of driving dangerously," DetroitNews.com, April 26th 2015, accessed April 3rd 2017, http://www.detroitnews.com/story/news/local/michigan-history/2015/04/26/auto-traffic-history-detroit/26312107/.
[16] Paul J. Schoemaker, "Scenario Planning: A Tool for Strategic Thinking," *MITSloan Management Review*, Winter, 1995.
[17] Mark Polczynski, "Scenario Planning," 2009, accessed April 1st 2017, http://www.flca.net/images/ScenarioPlanning.pdf.
[18] David Garvin and Lynne Levesque, "A Note on Scenario Planning," (Case 9-306-003), Cambridge: Harvard Business School, 2006.
[19] Philip Eyrikson Tetlock and Dan Gardner, *Superforecasting: The Art and Science of Prediction*, McClelland & Stewart, 2015.

participants to think critically about their views, challenge one another, and conduct extensive research on the topic at hand to be able to take a more informed position. Once the exercise is over, managers who have expanded their imaginations are able to see a wider range of possible worlds—well positioned to watch for and take advantage of any unexpected opportunities, and perhaps even "move the world a little bit in the direction they want it to go."[20]

Given these strengths, the technique is particularly useful in situations of great uncertainty and change, where costly surprises have occurred in the past, and the quality of strategic thinking or the supply of new opportunities is low. Done properly, scenario planning embodies rigorous analysis, ongoing conversations, and multiple iterations of the scenarios themselves, all of which lead to a more robust planning and operating environment within the organization's leadership strata.[21]

Scenario Planning: Step-by-step

A scenario planning exercise is a rigorous, months-long process typically involving two- or three-dozen participants from across a firm or organization. It consists of interviews, workshops, debriefing sessions, and presentations. There is great variation in methodologies for the undertaking, and practitioners will want to refine their processes to find an approach that works best for them; however, a few key elements are described below.

Ask: what problem is the exercise trying to solve?

Scenarios will only provoke meaningful learning and help participants develop strategies when they respond to genuine concerns.[22] As such, the first step is to come up with a clear focal issue for future analysis. To do so, participants will want to conduct interviews with key stakeholders, carry out literature reviews, and peruse the news for any relevant current events or trends. When this is complete, the participants should have the key question whose answer will provide great value to participants: an issue with a defined timeframe that could have dramatic long-term consequences for the ongoing health of their agency or company.

Find the key driving forces—and iterate!

What political, societal, legal, and industry trends are most likely to impact the aforementioned key focal issue? To complete future steps on the scenario planning process, participants will need to agree on those key variables and trends in the macro-environment that influence the focal issue.[23] Yet, finding these forces requires extensive workshop sessions, interviews, and individual research. This might prove time-consuming and somewhat frustrating, as it is not necessarily evident from the outset what kind of information is needed or available. Participants must be able to articulate how and why a force exerts influence on the problem they are trying to

[20] David Garvin and Lynne Levesque, "A Note on Scenario Planning," (Case 9-306-003), Cambridge: Harvard Business School, 2006.
[21] Paul J. Schoemaker, "Scenario Planning: A Tool for Strategic Thinking," *MITSloan Management Review*, Winter, 1995.
[22] Mark Polczynski, "Scenario Planning," 2009, accessed April 1st 2017, http://www.flca.net/images/ScenarioPlanning.pdf.
[23] Puget Sound Nearshore Ecosystem Restoration Project, "Appendix A: Eight Steps of Scenario Building," *Puget Sound Future Scenarios,* accessed March 30th 2017, http://www.pugetsoundnearshore.org/program_documents/ps_future_appenda-i.pdf.

solve. Importantly, the goal is not to come up with straight-line extrapolations from historical/statistical data; rather, it is to think about what small and even seemingly unrelated events could have an impact.[24]

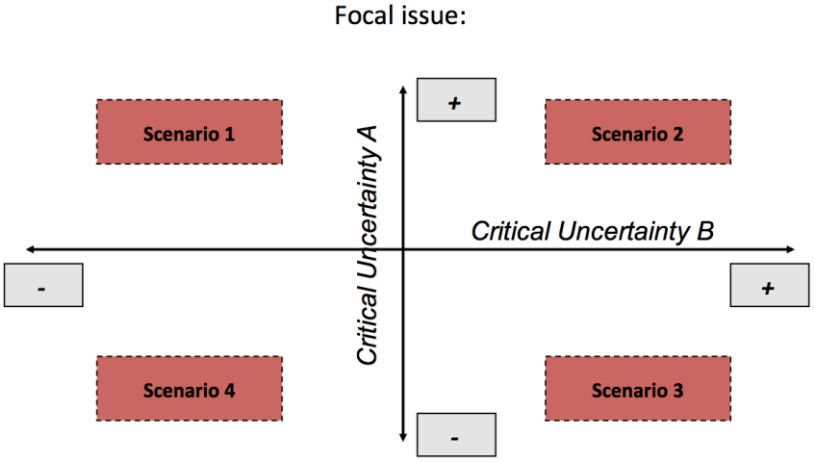
Once participants believe they have a comprehensive understanding of the issue and holistic information, it is time to ask again: Should the problem they are trying to solve remain the same, or be revised? If everyone remains satisfied with the existing problem, then the identified forces are plotted in terms of their importance and their uncertainty. Those two that score highest in terms of both importance and uncertainty together are selected as the 'critical' uncertainties that form the basis for the scenarios.

Build out the narratives

The two forces are plotted on a 2x2 axis (see Exhibit I below), with participants envisioning the most extreme conditions for each driver. For example, if one driver is 'government support', the two extremes could be: 'Strong government support and relaxation of regulation' and 'Weak support and strengthened inhibiting regulation.' Four distinct but plausible scenarios are created coinciding with each of the four quadrants.[25] The scenarios should be reasonable hypotheses that highlight the risks and opportunities ahead.

The scenarios are then developed into short stories. These narratives should explore the occurrences that must have taken place to get the world from the present to the future in question; they should also discuss uncharted or unexpected territory, although they must ultimately remain plausible lest they risk being dismissed as too far-fetched. The possible futures should not be normatively categorized as 'good' or 'bad,' but should be seen as "mixed bags, at once wonderfully dreadful and dreadfully wonderful."[26] Participants should not expect any of these stories to someday come true, as any real world will likely contain aspects of all four narratives—and many other twists and turns besides.

Exhibit I. The Scenario Matrix



[24] Mark Polczynski, "Scenario Planning," 2009, accessed April 1st 2017, http://www.flca.net/images/ScenarioPlanning.pdf.
[25] Torsten Wulf, et al., *A Scenario-based Approach to Strategic Planning,* Leipzig: Leipzig Graduate School of Management, 2010.
[26] Lawrence Wilkinson, "How to Build Scenarios," *Wired,* November 1st 1995.

Consider the implications and generate early warning signals

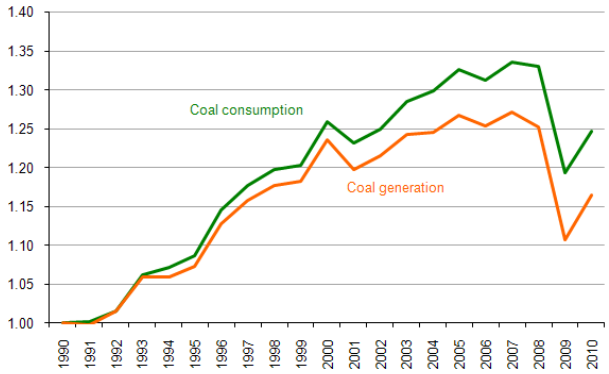
The main objective of drawing up scenarios is to inform the agency's strategic decision-making. With the four alternatives laid out, participants and other stakeholders can evaluate the efficacy of various possible strategies.[27] The team should return to the initial question and see what the implications might be in each of the four scenarios. They will also want to begin thinking about policies or programs for moving the agency forward successfully, asking how any one strategy will play out in all four worlds. Robust strategies are those that work regardless which of the four future strategies prove true. Participants will also want to think about the early warning signals that "may indicate the likely emergence of one scenario or another."[28] If thoughtfully chosen and properly monitored, these signs can give an organization a head start on the competition when changes do occur. Signals might include new technological developments, the result of a lawsuit, or shifts in the price of important commodities like fuel.

Ideally, scenario planning is not a one-time exercise, but a career-long devotion to building awareness of the outside world. For it to be effective, participants must guard against agenda control and a narrow imagination in crafting scenarios. Everyone should feel comfortable asking questions and challenging one another to be as creative as possible while remaining realistic. Done well though, scenario planning can help—in the words of Harvard Kennedy School professor Brian Mandell—"see sooner, faster" and encourage an organizational agility to effectively adapt to the uncertainties that lie ahead.

Scenario Planning in Action: The Coal Case

By the early 2010s, the US coal industry faced an uncertain future. Coal consumption had plummeted during the Great Recession (see Exhibit II), and while it was slowly on the rise after 2010, a number of social, economic and political forces were coalescing to potentially make further growth far less likely. President Barack Obama was promising a new era of renewable energy generation and reduced greenhouse gas emissions, which many experts predicted meant more stringent regulation on the country's dirtiest fossil fuel. Meanwhile, an innovation in natural gas production, called fracking, had opened up new repositories of gas, lowering prices of this major coal competitor.

Exhibit II. Coal consumption and generation (1990-2010)



[27] Torsten Wulf, et al., *A Scenario-based Approach to Strategic Planning,* Leipzig: Leipzig Graduate School of Management, 2010.
[28] David Garvin and Lynne Levesque, "A Note on Scenario Planning," (Case 9-306-003), Cambridge: Harvard Business School, 2006.

While this was obviously a concern to energy companies, it was also an issue for America's railroads. Coal made up a significant percentage of the train companies' business, so declining consumption would have a serious impact on profits. Recognizing the potential volatility, in 2013 the heads of the largest railroad corporations came together to go through the scenario planning process, in hopes of gaining a better sense of the possible futures they faced as an industry and how they could prepare themselves for a coming period of change. Over the course of several months, they gathered the evidence and built a case for what they believed awaited them in the rail transport sector.

After initial discussion, the railway heads concluded a quartet of **driving forces** were most likely to impact the coal industry:

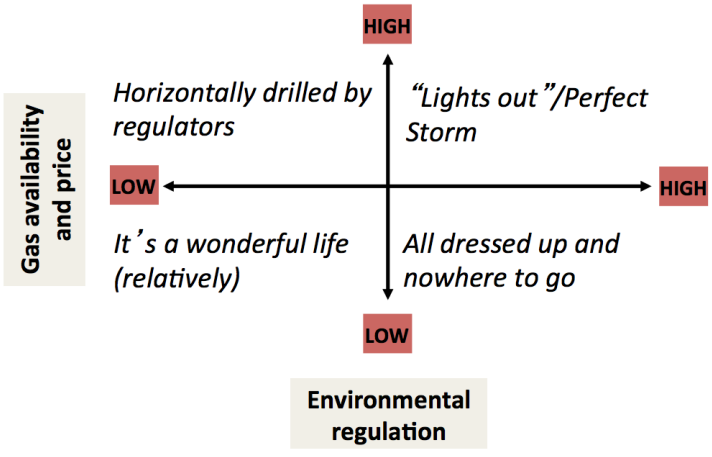
1. Concern over climate change, which might lead to regulation;
2. An increased cost of Eastern coal production brought about by more stringent regulation;
3. A lower price of natural gas due to fracking and new deposit discoveries; and
4. Lower global demand.

The participants agreed issues one and two could be combined into a single category, 'Environmental Regulation,' and issue three could be expanded into 'Gas Availability and Price.' Issue four could be addressed through the interaction of critical uncertainties such as regulation and alternative fuel sources, as well as exogenous economic circumstances such as another recession. Given the influence the interplay of other factors had on issue four, it was eliminated from the final analysis, leaving the executives with two **critical uncertainties**:

- Gas price and availability
- Environmental regulation

The two uncertainties were then combined into a 2x2 matrix, and a **scenarios framework** plotted out. (See Exhibit III.)

Exhibit III. Future Scenarios



The resulting four **scenarios** were:

- *Horizontally drilled by regulators:* In this scenario, the government would impose heavy regulation, but the shale boom would turn out to be a bubble. While there would be an eventual shift away from coal, it would be delayed until renewables could come online.
- *It's a wonderful life (relatively):* In this best-case scenario, gas availability would remain limited and environmental regulation would stay low. There would be little deviation from the existing norm, and demand for rail transportation by coal companies would remain strong.
- *Lights out/Perfect storm:* This worst-case outcome would see strong regulation, especially at the federal level leading to higher coal costs, complemented by lower natural gas prices. Additionally, there would be strong federal and state support for renewables, further cutting into coal's demand.
- *All dressed up and nowhere to go:* Here, regulators would be kept at bay, but lower gas prices would sideswipe coal's dominance. There would be regional variance due to state-specific gas economics, but overall the rail industry could expect accelerated replacement of coal by gas.

While the above provides a brief summary of the four positions, the participants spent many hours going over the more fine-grained details of each, to craft four distinct **narratives**. As an example, they produced the following narrative framework for the "Lights out/Perfect storm" scenario:

<u>Regulation</u>

- Federal regulation materializes.
- There are restrictions on greenhouse gases through a 'cap & trade' scheme.
- Other provisions such as a carbon tax and RPS are imposed.
- Mining opportunities—such as mountaintop removal—are prohibited.

<u>Energy Mix</u>

- An abundant, accessible supply of natural gas leads to low, stable gas prices.
- There is heavy utilization of new gas generation capacity.
- Legislative support favors natural gas, further driving down prices.
- There is no significant or economically feasible development of clean coal technologies.
- Due to legislative pressure and innovation breakthroughs, renewable energy sources are able to meet greater demand.

<u>Broader Economy</u>

- There is a declining demand for electricity due to conservation and low industrial growth.

Next, the railwaymen and women looked at the **implications** of each scenario. Using the "Lights out/Perfect storm" example again, they broke the consequences down to those that would be felt by the coal industry and the rail transportation sector, respectively:

Industry

- Volume, pricing, and profitability will all decline.
- There will be increased volatility in the industry.
- There will be changing traffic patterns—for example, demand in Illinois and the PRB will be up, while the reverse will be true in the Appalachians.

Railroad

- There will be underutilized assets on the network.
- There will be reduced need for investments on both the railway and coal industry side.
- Returns on investments will be lower, and investment risk will increase.

With the consequences of the scenarios identified, the executives were then able to come up with an action plan for each one of the possible futures. Should the worst-case chain of events come to pass, for instance, they crafted a multi-prong strategy that included shifting their business model to focus heavily on transporting renewable energy components (like wind turbines) and turning to global markets for coal export; limiting investment in the coal business and driving down costs with technical specifications for interoperability; and adopting more creative profit-making policies such as utilizing their right of way control for gas pipelines. Moreover, they would attempt to sell their coal network while it is still valuable.

The final stage of the exercise required them to look at real-world events, to discern what **early warning signs** suggested which of the four scenarios seemed most likely. Surveying the landscape, they believed three confirming indicators supported the Perfect Storm future:

- The price of natural gas had been below $5 for the last year.
- The supply of natural gas was growing at over five percent for the last year.
- There was legislation in the pipeline with a high probability of success.

Additionally, some other leading indicators—such as a Gallup poll showing support for carbon restraints, the midterm election results, and limited environmental challenge to shale gas extraction—added further credence to a shift to a “Perfect Storm” future. As such, they came up with a response plan to ward off the threats. This put many of the strategies mentioned above into action, such as focusing on the export market, reducing investment in coal assets for utility customers, and adopting measures to ensure greater labor flexibility.

This multi-month process was arduous at times, but in the end the team had thoroughly mapped out a holistic understanding of where their industry might go, which allowed them to return to their companies armed with some indicators to watch and some ideas to enable agility as the landscape shifted beneath their feet.

Memo from Ilan Steiner

BRIEFING MEMO

To: Leadership Support Team
From: Ilan Steiner, Head
Date: March 2nd 2014

Subject: Scenario Planning and the Future of Cash in Israel

To All:

As you know, one of the biggest questions we face is whether we should prepare towards phasing out physical currency in Israel.

Over the next few months, we will undertake a process called 'scenario planning' to help us better understand the possible choices surrounding this question, and how we can respond.

I believe you have already been briefed on scenario planning as well as the facts on currency demand in Israel. Other countries are making investments in cash storage and processing systems based on the demand curve of the last ten years—but will the growth trend continue to hold? We need to be prepared to make best use of our resources.

Please come to our meeting with a 2X2 scenarios framework of our critical issues as regards currency demand, along with implications for each of the resulting scenarios.

Each scenario should be named, and have an accompanying 60-second narrative.

We will discuss what you have come up with as a group, in hopes of making a robust final framework and looking for some early warning signs that can inform how we move forward.

Thank you all in advance for your efforts.

Best,
Ilan