REGIME CHANGE AND VALUE: AN ARAMCO VALUATION FOLLOW-UP

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Lead in

- In my post from a couple of days ago, I valued Aramco at about $1.65 trillion using three different perspectives on value.
- I qualified that valuation by noting that this was the value before adjusting for regime change concerns but that comment seems to have been lost in the wind, and it is perhaps because (a) I made it at the end of the valuation and (b) because the adjustment I made for it seemed completely arbitrary, knocking off about 10% off the value.
- Since this is a topic that is increasingly front and center in a world where political disruptions seem to be the order of the day in many parts of the world, I thought that a post dedicated to just regime changes and how they affect value might be in order, and Aramco would offer an exceptionally good lab experiment.

Going Concern and Truncation Risk

- Risk is part and parcel of investing. That said, risk came come from many sources and not all risk is created equal, at least to investors.
- In fact, modern finance was born from the insight that for a diversified investor, it is only risk that you cannot diversify away, i.e., macroeconomic risk exposure, that affects value.
- I want to talk about another stratification of risk into going concern and truncation risk that is talked about much less but could just matter even more.

DCF Value: A Going Concern Estimate?

- The intrinsic value of a company has always been a function of its expected cash flows, its growth and how risky the cash flows are, but in recent decades a combination of access to data and baby steps in bringing economic models into valuation has resulted in the development of discounted cashflow valuation as a tool to estimate intrinsic value.
- Extended to a publicly traded company, with a potential life in perpetuity, this value can be written as:

$$Value\ of\ business = \frac{E(Cash\ Flow_1)}{(1+r)^1} + \frac{E(Cash\ Flow_2)}{(1+r)^2} + \cdots + \frac{E(Cash\ Flow_{n+1})}{(r-g_n)(1+r)^n}$$

DCF Adaptability & Afterthoughts

- I believe that people underestimate how adaptable it is, usable in valuing everything from start ups to infrastructure projects.
- There is, however, *one significant limitation with DCF models* that neither its proponents nor its critics seem be aware of. Specifically, a *DCF is an approach to valuing going concerns*, and every aspect of it is built around the presumption.
  - Thus, you estimate expected cash flows each year for the firm, as a going concern, and your discount rate reflects the risk that you see in the company as a going concern.
  - In fact, it is this going concern assumption that allows us to assume that cash flows continue for the long term, sometimes forever, and attach a terminal value to these cash flows.

Truncation Risk

- If you accept the premise that a DCF is a going concern value, you are probably wondering what other risks that are being missed in a DCF valuation.
- The risks that I believe are either ignored or incorrectly incorporated into value are **truncation risks**.
- The simplest way of illustrating the difference between going concern and truncation risks is by picking a year in your cash flow estimation, say year 3. With going concern risk, you are worried about the cash flows in year 3 being different from your expectations, but with truncation risk, you are worried about whether there will be a year 3 in the first place.

Examples of truncation risk

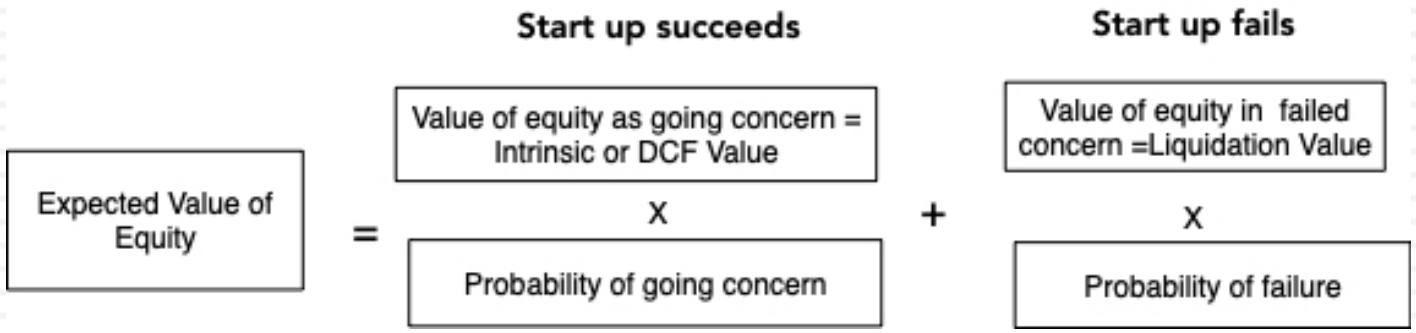
- Looking at the corporate life cycle, and at its two extremes, you will see truncation risk become not just significant but perhaps the dominant risk that you worry about.
  - With *start ups, it is survival risk* that is front and center, given that two thirds of start ups never make it to becoming viable businesses.
  - With d*eclining and aging companies, especially laden with debt, it is distress risk*, where the company unable to meet its contractual obligations, shutters its doors and liquidates it assets.
- Looking at political risk, t*runcation risk can come in many forms, starting with nationalization risk*, where a government takes over your business and pays you nothing in some cases and less than fair value in the rest, but extending to other expropriation risks, where you still are allowed to hold equity, but in a much less valuable concern.

Typical Approaches for dealing with truncation risk

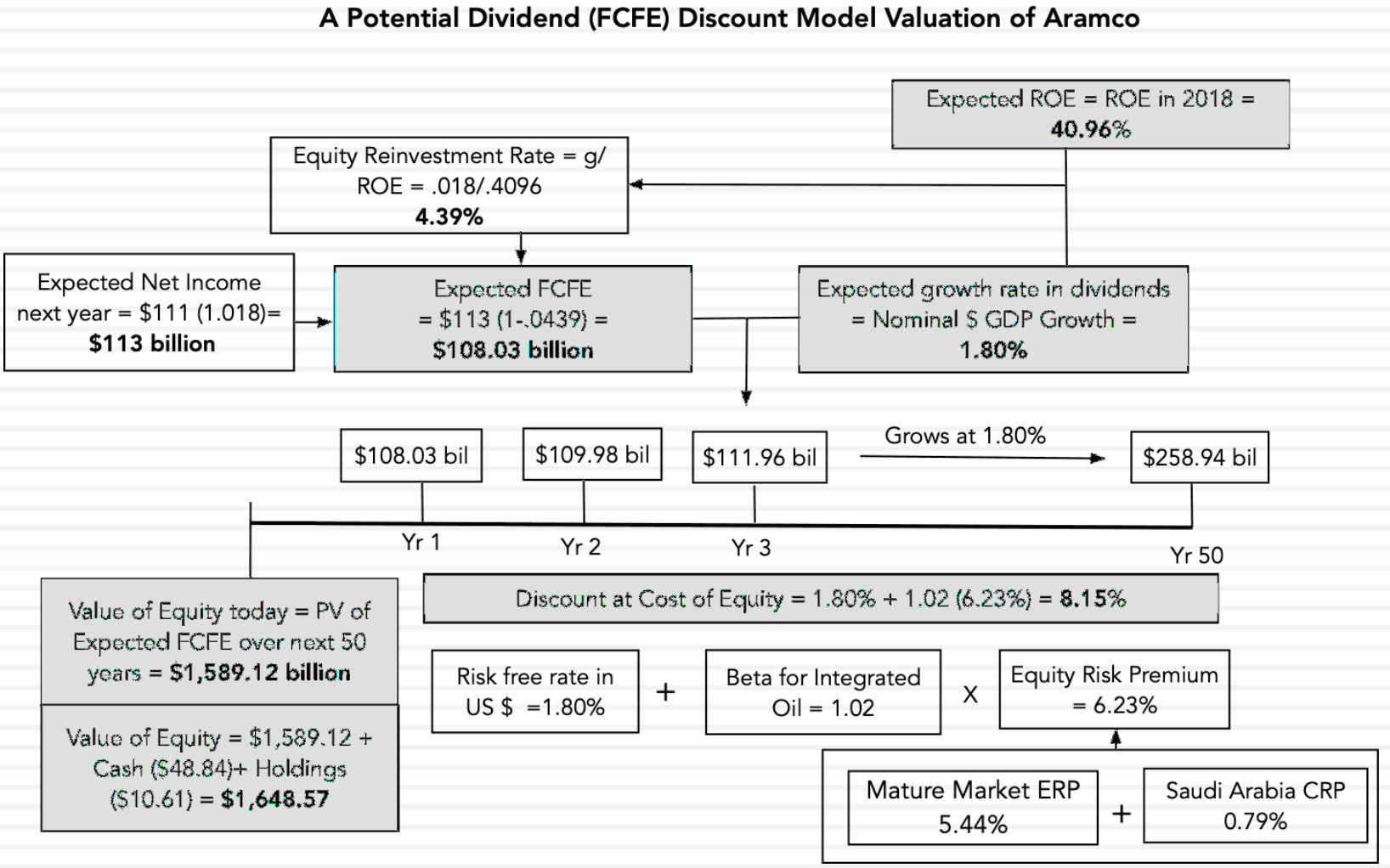
- Hike up the discount rate: The problem, though, is that his higher discount rate still goes into a DCF where expected cash flows continue in perpetuity, creating an internal contradiction, where you adjust the discount rate up for a truncation risk but you do nothing to the cash flows. In addition, the discount rate that these analysts use are made up, higher just for the sake of being higher, with no rationale for the adjustment. *Discount rates are blunt instruments and are incapable of carrying the burden of truncation risk, and should not be made to do so.*
- Scenario Analysis and Ranges for Value: Some analysts take the more sensible approach of scenario analysis, allowing for good and bad scenarios (including failure or nationalization) but never close the loop by attaching probabilities to the scenarios. Instead, they leave behind ranges for the value that are so wide as to be useless for decision making purposes.

A Decision Tree Alternative

- Use a decision tree approach, where you not only allow for different scenarios, but you make these encompassing of all possibilities and also attach a probability to each one.
- In the case of a start up, then, your two possible outcomes will be that the company will make it as a going concern and that it will not, and you will follow through with a DCF, with a going concern discount rate, yielding the value for the going concern outcome and a liquidation providing your judgment for what the company will be worth, in the failure scenario:



Revisiting the Aramco FCFE Valuation

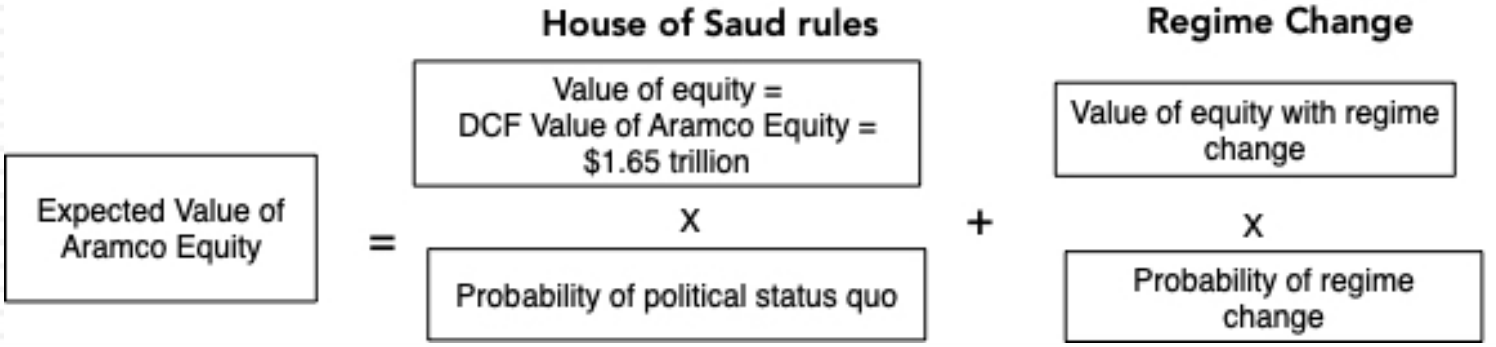


Pushback from readers…

- The biggest push back I have had on my valuations is that the cost of equity seems low for a country like Saudi Arabia, and my response is that you are right, if you consider all of the risk in investing in a Saudi equity.
- However, much of the risk that you are contemplating in Saudi Arabia is political risk, or put more bluntly, the risk of regime change in the country, that could have dramatic effects on value.
- In fact, if you remove that risk from consideration and look at the remaining risk, Aramco is a remarkably safe investment, with the safety coming from its access to huge oil reserves and mind-blowing profits and cash flows. The DCF values that I have estimated, centered around $1.65 trillion, are therefore values before adjusting for the risk of regime change.

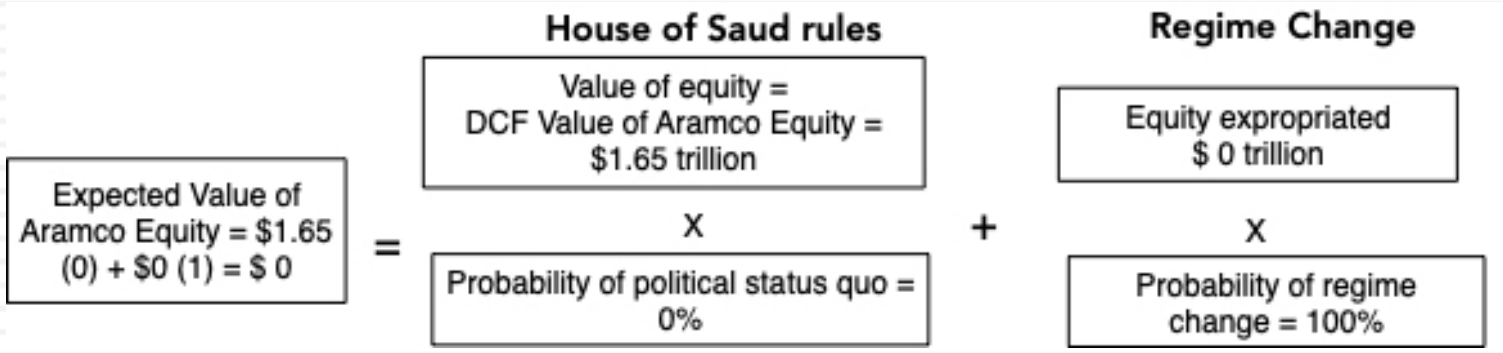
Regime Change and Consequence

- If you invest in Aramco, you clearly have an interests in who rules and runs the country, since every aspect of your valuation is dependent on that assumption.



The extreme cases

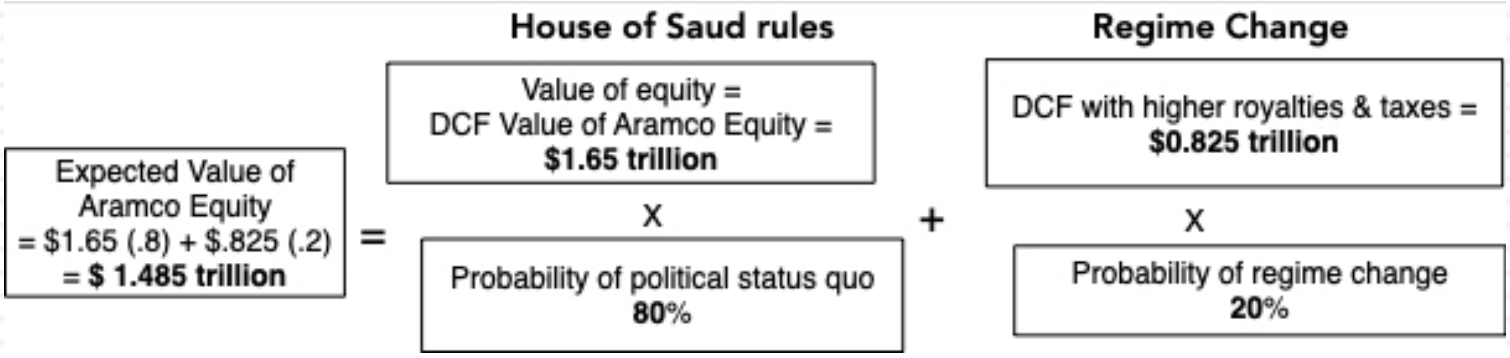
- If you believe that regime change in imminent and certain, and that the change will be extreme (with equity being expropriated and Aramco being brought back entirely into the hands of the state), my expected value for equity becomes zero:



- If at the other extreme, I either believe that regime change will never happen, or even if it does, the new regime will not want to kill the goose that lays the golden eggs and leaves existing terms in place, the value effect of considering regime change will be zero:

The middle ground

- The truth lies between the extremes, though where it lies is open for debate. I believe that there remains a non-trivial chance (perhaps as high as 20%) that there will be a regime change over the long term and that if there is one, there will be changes that reduce, but not extinguish, my claim, as an equity investor, on the cash flows.



Democracy versus Autocracy

- Democracies are messy institutions, where governments change and policies morph, because voters change their minds. Put simply, a democracy generally cannot offer any business iron clad guarantees about regulations not changing or tax rates remaining stable, because the government that offers those promises first has to get them through legislatures, often can be checked by legal institutions and, most critically, can be voted out of office.
- Autocracies offer more stability, since autocrats don't have to get policies approved by legislators, often are unchecked by legal institutions and don't have to worry about how their decision poll with voters. Companies operating in autocracies can be promise rules that are fixed, regulations that don't change and tax rates that will stay constant.
- The bottom line: Democracies create more going concern risk (higher discount rates) and autocracies create more worries about regime change (post-valuation adjustment).

The risk trade off

- The going concern risk that is added by being in a democracy will depend on how the democracy works.
  - If you have a democracy, where the opposing parties tend to agree on basic economic principles and disagree on the margins, the going concern risk added will be small.
  - In contrast, if you have a democracy, where governments are unstable and the opposing parties have widely different views on the very fundamentals of how an economy should be structured, the effect on going concern risk will be much higher.
- The regime change risk in an autocracy will vary in how the autocracy is structured and how transitions happen.
  - Autocracies structured around a person are inherently more unstable than autocracies built around a party or ideology.
  - Transitions are more likely to be violent if the military is involved in regime change, in either direction. In addition, violent regime changes feed on themselves, with memories of past violent meted out to a group driving the violence that it metes out, when its turn comes.

Bottom line

- I have often described valuation as a craft, where mastery is an elusive goal and the key to getting better is working at doing more valuation.
- I am glad that I valued Aramco, because it is an unconventional investment, a company where I have to worry more about political risks than economic ones. The techniques I develop in valuing these risks will help me not only in valuing Latin American companies, as that continent approaches one of its periodic phases of disquiet but also in developed markets, which seem to be showing emerging market traits.
- As we approach an election in Britain next month and a presidential election in the United States in 2020, it is worth noting that we face starker divides on economic first principles between the opposing parties than we ever did in the past, leading to much greater going concern risk for all companies