

Games Countries Play: Tariffs, Threats and Tail Risks

By Vineer Bhansali | April 2nd, 2025

The following article was published [here](#) on forbes.com.

As a market participant today, it is clear to most that the dominant driver of market performance, at least in the short term, is likely to be how the global game of tariffs and threats plays out. What is not clear is (1) What type of game it is (2) How much information participants have about each other's objectives (3) How much clarity each player has about the other players' actions and strategies (4) How many rounds of the game will be played, and (5) Are the players going to be time-consistent. In short, the list of things we know is much shorter than the list of things we don't know.

In game theory, there are two types of canonical games. Simultaneous games are games where each player takes an action only maximizing their own payoff while acting at the same time. Sequential games are games where each player takes turns.

The simplest and most familiar simultaneous game is the "Prisoner's Dilemma". Given the choices of the US to impose tariffs or not and the rest of the world (RoW) to retaliate by increasing or not increasing tariffs, traditional trade theory would recommend that both parties should, at least in the short term, leave the status quo as is to maximize short term gains; i.e. do nothing. But the Nash equilibrium solution to this game says that both parties will choose the solution where the US imposes tariffs and the RoW retaliates, reducing the gains to both. A race to the bottom, in other words, could happen, even if it is not the most profitable strategy collectively.



As the payoffs change, this game may evolve into the classic game of chicken. Again, with two drivers heading on a collision course towards each other, the optimal game-theory solutions in this game are for one to swerve and the other not to swerve (the “pure” strategies), along with a “mixed” strategy where one swerves and the other does not. The strategy of both swerving in opposite directions, which would result in the least loss, is unfortunately not an equilibrium solution. Randomization of responses can be optimal. And randomness creates uncertainty. Pre-commitment that cannot be negotiated, i.e. one driver disabling their steering mechanism, can make things more predictable. But also more dangerous potentially.

The players do not have to act at the same time, since most tariff games are sequential, and one can observe, even if imperfectly, how the other is acting or reacting. Some of these games have perfect information; i.e. each player knows what game the other player is playing. Most of them have imperfect information; i.e. one or more players does not know what game the other player is playing. Sometimes one player might have an advantage that they do not reveal until the other player uses a strategy that allows them to use this advantage. It might pay to hide all your cards. Again, having less information than more is volatility creating.

Using the technique of backward induction and assuming rationality of both sides (which one might argue is a lot to assume under current circumstances, but unfortunately we have to make this assumption to make any quantitative predictions), in many cases the optimal solution (known as the “subgame perfect equilibrium”, a mouthful indeed) can be found.

To make things more complex, sometimes as the game evolves, participants can change their mind; i.e. being time-inconsistent, including making 180-degree pivots, making a previously optimal solution no longer optimal. When faced with the choice of letting a new entrant into a market, an incumbent might threaten a price war detrimental to both, but when faced with the entrant’s decision to enter despite the threats, change to accommodating the new entrant. The initial threat, in this example may be seen as not credible and non-implementable in practice.

Today's geopolitical and market environment shows characteristics of all these types of games and their nuances. While no one has the crystal ball to forecast what will happen in the future, but we can expect the following:

1. The probability distribution of outcomes will be fatter and flatter: volatility, all else being equal, is likely to be higher than we have known recently.
2. There will be more path-dependency: all else being equal, the sequential, multiple response of players to other players is likely to result in outcomes that would be unlikely if all players were to rationally respond to other players just once.
3. The impact of shocks is likely to take longer to dissipate since the whole system can become unstable and tend to move towards the equilibria of a different game.

Faced with these facts, investors are likely to find that they cannot rely on the traditional tools of diversification and mean-reversion which bets on stable relationships to build robust portfolios in such environments. While the market is still hoping that the current environment, like all others recently will nicely revert back into a traditional equilibrium, there is the tail risk that it does not. Once the collective sentiment changes, these opportunities, both on the left and the right side, might not exist anymore.

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