



## Gaming NAFTA: Trump v. Nieto

Until recent remarks by incoming Treasury Secretary Wilber Ross, negotiations on the future fate of the North America Free Trade Agreement (NAFTA) seemed imminent as news reports suggested talks could begin later this spring. Only a month ago, President Donald Trump appeared ready to move on NAFTA, calling it “a catastrophe for our country.”<sup>1</sup> Meanwhile, Mexican officials appeared eager to commence talks in May so to resolve any uncertainty surrounding NAFTA well before their 2018 election cycle.<sup>2</sup>

With talks now in a holding pattern, this is an opportune time to analyze how future negotiations might play out. Using a game theory approach, applying the sequential movement rules from the Theory of Moves (TOM), several alternative Trump-Nieto interactions are played out in this report.<sup>3</sup> These game interactions are constructed by combining potential outcomes and player preferences regarding such outcomes.

The findings point to expectations of a reworking rather than outright rejection of NAFTA. However, the outcomes are heavily dependent on the preferences and strategies employed by the respective leaders.

### Potential Outcomes

As for NAFTA’s fate, four outcomes readily present themselves: Terminate, Major revisions, Minor revisions, and Status quo. Each outcome can be summarized as follows:

- **Terminate** = The termination of NAFTA by either party (only takes one for termination to be effective). While not excluding the possibility of a new agreement, this scenario anticipates an extended period with no trade agreement between the parties meaning a fall back to World Trade Organization (WTO) and/or pre-NAFTA tariff levels.
- **Major revisions** = The parties agree to major revisions or even wholesale treaty replacement. This scenario depicts the US as the main beneficiary, achieving many, if not most of their goals, and Mexico as potentially worse off under a heavily modified NAFTA or new trade deal.
- **Minor revisions** = The parties agree to relatively minor changes resulting in either mutual benefit or little negative consequence for either. In this scenario, Mexican leaders would yield, to a limited extent, to some US demands while keeping most key treaty provisions intact.
- **Status quo** = the continuation of NAFTA “as is” without any revisions or renegotiation.

### Players’ Preferences

Given the four scenarios described above, scripts are established for both Trump and Nieto ordering their preference for each outcome from best (4) to worst (1). The scripts are developed based on appraising each leaders’ statements regarding NAFTA, including renegotiation and termination. Presently, Trump appears non-committal on either reforming or wholesale replacement of NAFTA. He could conceivably terminate NAFTA through executive action, under Article 2205 of the Treaty, but as enacting legislation would remain termination would be largely symbolic. Nieto appears open to renegotiating parts of the 23-year old trade agreement, yet uncompromising on some issues. Recent conversations with Mexican officials further reinforce this sentiment, as they indicated the government would stand firm against tariffs or actions setting up a managed trade scheme.<sup>4</sup>

---

K.P. O’Reilly, PhD JD  
kpo@nwpcapital.com  
414.755.0461, ext. 110

172 N. Broadway, Suite 300  
Milwaukee, WI 53202

---

*NWP Takeaway: the current environment suggests four probable scenarios*

Allowing for the possibility of some preference slippage, especially in the mid-range, two preference scripts are devised for both leader:

*NWP Takeaway: Anticipated unequal preferences between Nieto and Trump mean restricted cooperation*

- **Trump, script A (America First):** Major>Terminate>Minor>Status quo
- **Trump, script B (Trade Accord):** Major>Minor>Terminate>Status quo
- **Nieto, script A (Mexico First):** Status quo>Minor>Terminate>Major
- **Nieto, script B (Preserve Trade):** Minor>Status quo>Major>Terminate

**Games and Outcomes**

By combining the outcomes and preferences scripts, four normal form 2x2 game matrices were constructed. As a matter of simplification, the players are given two strategy options: Yield or Stand Firm. The former indicates a cooperative stance and the latter a more antagonistic position. Figure 1 shows the four resultant games. An obvious departure from conventional game theory is the fact that TOM allows for more than one final outcome, as its rules dictate that the initial state of a game can influence the final state.

**Figure 1. Trump v. Nieto Game Matrices (scripts A and B)**

Game 1. Trump (script A) v. Nieto (script A)

		Trump	
		Stand firm	Yield
Nieto	Yield	Major (2,4)	Minor (3,2)
	Stand Firm	Terminate (1,3)	Status quo (4,1)

Simple game payoffs (row, column)  
Final game outcome(s) circled

Game 2. Trump (script A) v. Nieto (script B)

		Trump	
		Stand firm	Yield
Nieto	Yield	Major (2,4)	Minor (4,2)
	Stand Firm	Terminate (1,3)	Status quo (3,1)

Simple game payoffs (row, column)  
Final game outcome(s) circled

Game 3. Trump (script B) v. Nieto (script A)

		Trump	
		Stand firm	Yield
Nieto	Yield	Major (2,4)	Minor (3,3)
	Stand Firm	Terminate (1,2)	Status quo (4,1)

Simple game payoffs (row, column)  
Final game outcome(s) circled

Game 4. Trump (script B) v. Nieto (script B)

		Trump	
		Stand firm	Yield
Nieto	Yield	Major (2,4)	Minor (4,3)
	Stand Firm	Terminate (1,2)	Status quo (3,1)

Simple game payoffs (row, column)  
Final game outcome(s) circled

Applying TOM's rules, games reach a final outcome only when both players choose to stay at a given state. Players stop moving (altering strategy) when further action does not result in a better outcome or, in thinking ahead, they recognize that a subsequent counter-move by the other player will result in an inferior outcome. Players are assumed to be both rational and strategic in their move selection. The initial state of a game can weigh on the outcome by either encouraging one, both, or possibly neither player to move.

*NWP Takeaway: Current game forecasts show Trump able to achieve major revisions to NAFTA*

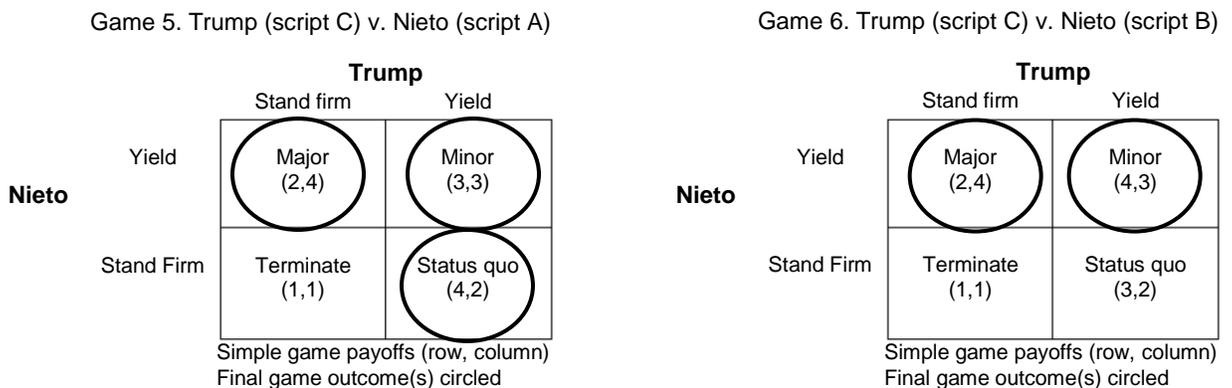
Initial analysis of the four games reveals that neither termination nor status quo are expected outcomes given the assigned preference scripts for Trump and Nieto. Overall, Trump gains an upper-hand as in three of the four interactions, achieving his best outcome, a major overhaul of NAFTA. The outcomes for games 1, 2, and 3, hold regardless of the initial starting position.

In all but one of the games, Nieto receives his second worst outcome. The exception is in game 4, which offers two possible final outcomes, or “nonmyopic equilibriums” (NME) in the language of TOM.<sup>5</sup> The outcome of minor revisions to NAFTA (3,4) is possible, but only if it is the initial starting point, meaning *both* Trump and Nieto must be prepared to Yield. From any other initial state, the game moves to a final outcome of major revisions (2,4).

**The Art of the Deal: Trump the Dealmaker?**

What though if Trump adopts a slightly more cooperative approach? What if repealing NAFTA becomes repairing it? Might domestic political pressure, including from pro-Trump red states that are economically reliant on NAFTA-related trade, sway President Trump’s thinking so terminating NAFTA is worse than the status quo? If so, an imaginable Trump the dealmaker preference script (script C) of Major>Minor>Status quo>Terminate significantly alters interaction outcomes. Assuming Nieto’s same preference scripts, both minor revision and status quo become potential game outcomes (Figure 2). The initial state influences both games, most notably in game 5 which offers three possible outcomes. A reason for these differing outcomes, as compared to game 1 through 4, is that Trump does not have a dominant strategy.<sup>6</sup>

**Figure 2. Trump v. Nieto Game Matrices (Trump script C)**



**Mexican Brinkmanship**

A final series of games can be devised by a creating hardline, take-it-or-leave-it, script for Nieto. This brinkmanship preference script (Nieto script C) is expressed as: Minor>Terminate>Status quo>Major. Such a script reflects insights gained during recent discussions with individuals inside and outside the Mexican government suggesting that defaulting to WTO provisions, following termination of NAFTA, could benefit Mexico more than the US given that agreement’s tariff structure.<sup>7</sup> The three games, interacting with Trump’s three preference scripts, are shown in Figure 3.

This aggressive posture results in more favorable outcomes for Nieto in two of the three games but includes the risk of termination. Game 7, which pairs the hardline preference script for both leaders, termination is the expected outcome. Meanwhile, games 8 and 9 offer the most advantageous pairing for Nieto’s aggressive script achieving his best outcome. Notably, game 9 includes Trump’s more cooperative dealmaker script.

*NWP Takeaway: A more accommodative Trump and hardline Nieto dramatically shifts the outcome*

**Figure 3. Trump v. Nieto Game Matrices (Nieto's script C)**

Game 7. Trump (script A) v. Nieto (script C)

		Trump	
		Stand firm	Yield
Nieto	Yield	Major (1,4)	Minor (4,2)
	Stand Firm	Terminate (3,3)	Status quo (2,1)

Simple game payoffs (row, column)  
Final game outcome(s) circled

Game 8. Trump (script B) v. Nieto (script C)

		Trump	
		Stand firm	Yield
Nieto	Yield	Major (1,4)	Minor (4,3)
	Stand Firm	Terminate (3,2)	Status quo (2,1)

Simple game payoffs (row, column)  
Final game outcome(s) circled

Game 9. Trump (script C) v. Nieto (script C)

		Trump	
		Stand firm	Yield
Nieto	Yield	Major (1,4)	Minor (4,3)
	Stand Firm	Terminate (3,1)	Status quo (2,2)

Simple game payoffs (row, column)  
Final game outcome(s) circled

**NAFTA's Future**

While speculative, these game scenarios offer insights on expectations for future negotiations between the US and Mexico over NAFTA. The strategies the leaders employ and how successfully they can communicate their preferences, whether real or purely for bargaining power, is crucial. Of the 13 potential outcomes, major revisions appear as an outcome in six instances while minor revisions account for five, and termination and status quo both occurring once. This is not to say that there is a near equal probability of the major or minor revision outcomes, however. Rather, as shown, these outcomes depend on the preferences and, in some instances, the initial positions taken by Trump and Nieto. Unsurprisingly, both leaders do better when adopting a hardline. Notably, by taking a hardline, Nieto increases his chances of a more favorable outcome, but does so by risking termination.

As we move closer to the actual talks and leaders' preferences become evident, the number of applicable game interactions will narrow. In the meantime, investors must brace for continuing uncertainty. Based on the results here, expectations point away from the status quo and to an inevitable revision, major or minor, of NAFTA.

*NWP Takeaway: Investors should anticipate rejection of status quo, though uncertainty remains as to the final outcome*

The views and opinions expressed are those of the firm as of the date on this report and are subject to change based on market and other conditions. There is no guarantee that the forecasts made will come to pass. This material is not intended to be relied upon as investment advice or a recommendation, does not constitute a solicitation to buy or sell any security and should not be considered specific legal, investment or tax advice. All investments carry a certain degree of risk and there is no assurance that an investment will provide positive performance over any period of time. The information and opinions are derived from sources the firm believes to be reliable, however, the firm does not represent that this information is complete or accurate and it should not be relied upon as such. This information is prepared for general information only.

©2017 Northwest Passage Capital Advisors LLC. All rights reserved.

---

<sup>1</sup> "Trump: Nafta Has Been a Catastrophe for Our Country." Bloomberg.com. February 02, 2017. Accessed February 10, 2017. <https://www.bloomberg.com/politics/videos/2017-02-02/trump-nafta-has-been-a-catastrophe-for-our-country>.

<sup>2</sup> While it is possible to construct three-player games so to include Canadian Prime Minister Justin Trudeau, the greater scrutiny by the Trump administration to trade relations with Mexico highlights the primacy the Trump v. Nieto interaction.

<sup>3</sup> For a complete discussion of the theory of moves (TOM), its rules, and application see Brams, Steven J. *Theory of Moves*. Cambridge: Cambridge University Press, 1994. The six primary rules of TOM are as follows:

*Rule 1. Play starts at an initial state, given at the intersection of the row and column of a payoff matrix (i.e., one of the four entries in a 2x2 payoff matrix).*

*Rule 2. Either player can unilaterally switch his or her strategy (i.e., make a move), thereby changing the initial state into a new state, in the same row or column as the initial state. The player who switches is called player 1 (P1).*

*Rule 3. Player 2 (P2) can respond by unilaterally switching his or her strategy, thereby moving the game to a new state.*

*Rule 4. The alternating responses continue until the player (P1 or P2) whose turn it is to move next chooses not to switch his or her strategy. When this happens, the game terminates in a final state, which is the outcome of the game.*

*Rule 5. If play returns to the initial state, the initial state becomes the outcome. (termination rule)*

*Rule 6. Each player takes into account the consequences of the other player's rational choices, as well as his or her own, in deciding whether or not to move from the initial state or any subsequent state. If it is rational for one player to move and the other player not to move from the initial state, then the player who moves takes precedence: his or her move overrides the player who stays, so the outcome will be induced by the player who moves. (two-sidedness rule)*

<sup>4</sup> Conversations with Mexican government officials during an investors meeting, Mexico City, March 3-4, 2017.

<sup>5</sup> Ibid, p. 224. Brams defines Nonmyopic equilibrium (NME) as "in a two-person game, a nonmyopic equilibrium is a state from which neither player, anticipating all rational moves and countermoves from the initial states, would have an incentive to depart unilaterally because the departure would eventually lead to a worse, or at least not a better, outcome."

<sup>6</sup> A dominant strategy is one that leads to a better outcome than any other strategy in all possible scenarios.

<sup>7</sup> Investors meeting, Mexico City, March 3-4, 2017.