The GameStop Frenzy Showed How Desperately We Need A Narrative Finance

Felix Mao

10.03.2021

”This is where we hold! This is where they get margin called!” reads a subtitled meme video from the subreddit wallstreetbets at the height of the GameStop mania that reportedly inflicted losses of $7 billion for the hedge fund Melvin Capital. The video, that has since been deleted by the poster, uses a scene from the movie 300 and adapts it to the GameStop situation as the poster perceived it. Leonidas becomes deepfuckingvalue, the financial analyst whose initial investment of $53,000 swelled to $48 million, his Spartan companions are diamond-handed retards, and the Persians are hedge funds employing scare tactics to block out the sun. Deepfuckingvalue asks his retard companions to *”sell them nothing, take from them everything”* and when called upon to sell the stock by the Persian version of Melvin Capital, he demands that the hedge funds *”come and buy them”*! Wallstreetbets is littered with such memes which begs the question of why a trading forum dedicated to making profits would bother with such little pieces of media that contribute nothing to the fundamental analysis or forecasting of stocks. The answer is astonishingly simple: Memes tell a great story. They make a compelling narrative. The aforementioned meme suggests that retail investors are unyielding heroes standing united in the face of overwhelming odds. Such simplifying relatable messages open the obscure world of finance to a much broader audience, and once a narrative takes off, it may just enter a positive feedback loop, where the fact that is is talked spreads it further which in turn leads to more chatter. Interest in GameStop has indeed skyrocketed during the short squeeze in January before plummeting to the status quo ante.

Figure 1: GameStop Search Queries. Source: Google Trends

While I am not claiming that the frenzy was purely narrative-driven, anyone who claims that narratives did not play a major role in driving the share price up exposes herself to ridicule. In his book ”Narrative Economics: How Stories Go Viral and Drive Major Economic Events” Nobel prize laureate Robert Shiller describes how the humanities and many social sciences have, in fact, long appreciated the importance of narratives. The social sciences most lacking behind are economics and finance (see figure 2).

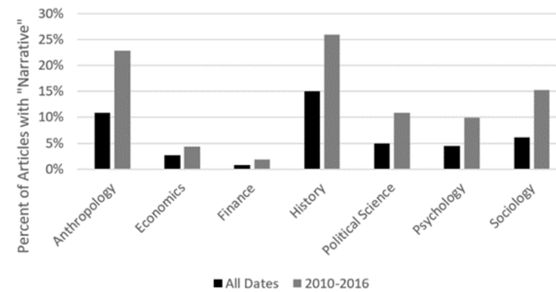

Figure 2: Papers comprising the term ”narrative” as a proportion of all papers. Source: Narrative Economics: How Stories Go Viral and Drive Major Economic Events

He defines a narrative as *”a popular story as it is currently being told that seems relevant to the interpretation of current events and human motivation”*. Some particularly contagious narratives go viral and spur major economic events. As Shiller points out their spread resembles that of an infectious disease which epidemiologists have been modelling for decades. A common epidemiological model is the Kermack–McKendrick Model whose main assumptions are:

- S = susceptible fraction of the population.
- I = infected and contagious fraction of the population.
- R = recovered and immunized fraction of the population.
- $S + I + R = N$, the total population, which is assumed to be constant
- c = contagion rate
- r = recovery rate

Furthermore, in a perfectly intermingling population the rate of growth of the infected, i.e., the time derivative of I, is equal to the constant contagion rate c times the product of the number of infected and the number of susceptibles minus the constant recovery rate r times the number of infected.

$$\frac{dI}{dt} = cIS - rI \tag{1}$$

Conversely, the rate of decrease of susceptibles, i.e., the time derivative of S, is equal to minus the contagion rate times the product of infected and susceptibles.

$$\frac{dS}{dt} = -cSI \tag{2}$$

Lastly, the rate of growth of the recovered, i.e., the time derivative of R, is equal to the constant recovery rate r times the number of infected.

$$\frac{dR}{dt} = rI \tag{3}$$

In essence, epidemics expand when people become infected faster than they overcome the disease. How many people are infected depends on the contagion parameter c, the number of susceptibles, and the number of infectious people. At the beginning, the epidemic grows rapidly since there are a lot of susceptibles, far more than there are recovered. Eventually, however, the pool of suspectibles diminishes to the point where too few new meetings between the susceptibles and the infectious that place and the spread comes to a halt. As the populations becomes increasingly immune, the speed of which depends on the recovery parameter r, new infections go down until in the limit everybody has gotten the disease and has recovered. Figure 3 illustrates.

The hump-shaped pattern of an epidemic is reminiscent of the explosion of GameStop search queries during the short squeeze. Indeed, Shiller elaborates on a host of hump-shaped viral phenomena from

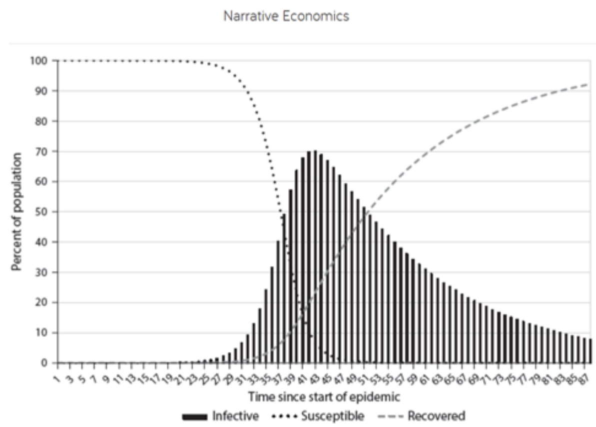

Figure 3: The Kermack–McKendrick Model. Source: Narrative Economics: How Stories Go Viral and Drive Major Economic Events

Tolstoy to Bitcoin. Swap the term disease for narrative in the Kermack–McKendrick Model and you obtain a ready-made model for the spread of a narrative. Hence, when studying narratives economists and financial analysts can take a page out of the epidemiology literature, which will allow them to not only better explain but predict economic phenomena. The GameStop rally is a perfect illustration of a narrative running amok. In fact, there were multiple narratives that came together in a contagious constellation. At least four narratives were at play: A narrative of fear and anxiety from the pandemic, a narrative of windfall gains, a narrative of payback for 2008, and a narrative of togetherness, each of which was repeated time and again on wallstreetbets. From its evolutionary past, the human mind is geared towards stories of us vs them, and when quick gains loom against the backdrop of a recession, simple memes can ignite a wildfire. What happened in January can hardly be explained away with a discounted future stream of expected dividends and consumption risk hedging. Some hedge funds are already monitoring wallstreetbets, and I would expect institutional investors to take narratives extremely seriously from now on. Perhaps GameStop could serve as an impetus for economists to do the same?