

# *How video games changed the financial world*

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**M**ANY of us enjoy solving an apparently unsolvable problem or finding a way around, over, or through a barrier. This is what humans do – it is how we have survived and adapted. But the activity is now more pronounced than ever – and it is messing with our financial systems.

To explain this, I need to start with video games.

During the last few decades, video games (computer, console and hand-held) have come to absorb the attention of our young more than any other activity. Even children with attention-deficit disorder can play a video game for hours at a time. Equally disturbing, all of this activity takes place during a period of childhood development (from the ages of six to 13) when the neural pathways of the brain are still being formed.

I and others of my relatively advanced

years spent much of our formative youth outside the classroom engaged in organised sports, usually refereed by adults, in a world where “rules are there for a reason”. The video game generation, by contrast, lives in a world of rules that are meant to be broken.

The most important non-school activity for many children is playing video games. And the only way to win in a video game is to break a rule: You need to learn to walk through walls, go down a path that was previously blocked, or defy the laws of nature.

Half of the fun of most video games is in trying to find such loopholes. Even the average player gets rewarded for finding these hidden secrets. And the holy grail of any game is to break the system by finding a bug in it that the designers and testers didn’t know about.

In our book *Got Game*, my co-author Mitchell Wade and I found that people who grew up playing video games had significantly different attitudes in business compared with those who did not.

Indeed, the experience of playing video or computer games had a greater impact on how a person behaved as an adult than his social status, education, age, or any other sociologically important variable.

The effects of playing video games at a young age were in many cases positive, creating adults who were more strategic, better leaders, more competitive and even more sociable. But video games also created a younger generation of workers who were more open to risk and were always ready to try to beat the system.

This gamer generation is now the financial industry’s backbone. Close to 100 per cent of those under 35 in any developed nation grew up playing games through at least their teenage years. Those who specialise in mathematics and computer science are more likely than those in other fields to continue playing games right through college and into adulthood. Most of those maths geniuses employed on Wall Street and in other financial markets grew up with video games.

Derivatives, in the form of futures con-

tracts, have been around since the ancient Greeks, but they have boomed in the last decade. The worldwide value of derivatives, according to the Bank for International Settlements, has increased from about \$110 trillion in 1998 to over \$900 trillion last year. By contrast, the value of all publicly traded companies in the world is about \$80 trillion.

In an environment filled with rule-breaking financial instruments, national and international regulators of financial markets have a lot to learn from video game design.

Most video games are created to give the player as much free rein as possible. But to keep the system from breaking, designers spend tens of millions of dollars per game (up to 50 per cent of the cost of video game development is in the testing phase) to limit the scope of play.

Many video game players probably remember their disappointment when they reached the “edge of the world” in Super Mario – that place where it looks like there is a landscape reaching to the end of

the horizon but Mario can’t move any further. That was a hard and fast boundary.

Financial rules need to encourage innovation and creativity, but within limits – clear, distinct, unbreakable borders. The mindset of financial regulation design has to change from football – where a player can run offside but is penalised for it – to video games – where a player finds it impossible to run offside in the first place. The latter requires a lot more design upfront but a lot less refereeing later on.

Additional patches to Stock Market Regulation 1.0 – like those being considered in Washington and in European capitals – will not work. The current versions of regulation were designed for an analogue world. What we really need to launch is a digital Stock Market Regulation 2.0 – a version that won’t stop the financial whiz-kids from creating and innovating, but makes it very clear where the boundaries are.

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