# Investors must beware rampant speculation

There is a trend toward buying assets at any price and hoping for the best when it's time to sell

### NORM STEFNITZ

Families should be alert to a seismic tremor under their financial assets. It's called rampant speculation — buying at any price in the hope of cashing out at a better price.

The extreme price swings of Bitcoin and other cryptocurrencies are one example. They are described by Nobel economics laureates as a speculative bubble and by one Federal Reserve president as a Ponzi scheme. Despite these sober judgments, they remain popular with traders for their fluctuating prices.

This round of speculation brings to mind historic popular delusions: the 1636 Tulip Mania, the 1720 South Sea Bubble, and the 1929 Investment Trust boom. They went bust.

Investors remember made-in-Canada tragedies: the Bre-X Minerals fraud that peaked at \$290 in 1997 then went out of business, Nortel Networks whose shares fell from \$124.50 in 2000 to \$0.39 before bankrupting, and the dot-com frenzy that evaporated in 2002.

The outlook for today's excited trading in cryptocurrencies is turning cloudy.

Our Bank of Canada and the U.S. Federal Reserve are evaluating the introduction of digital currencies that would be pegged to their national currencies. Issuing government-backed digital money for commercial use would remove much of the speculative demand for cryptocurrencies that have no intrinsic value.

Also, the Ontario Securities Commission has warned speculators who trade cryptocurrencies that "unregistered crypto asset trading platforms expose Ontario investors to significant risks, including potential loss, theft and misuse of their assets."

Speculation is not confined to trading virtual money.

Housing and stocks are families' biggest assets. For years, our homes were valued on average at two to four times

householders' after-tax income. Now, speculative buyers pay more than 10 times their income as borrowing costs rise.

Also, for many years the prices of the stocks in Standard & Poor's 500 Index averaged 15 times their companies' reported earnings. Current speculation has driven those prices to three times that multiple. Canadian stocks also are no longer bargain priced.

This wave of speculation can be traced to the trillions of dollars our governments distributed to reverse the CO-VID-19 recession during the lockdown. As economies recover, that stimulus will taper off. The good times can't last.

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Homeowners and investors want to know if they face serious downside risks. Consider the following.

Our minimum mortgage rate was recently nudged up. It was another in a series of moves to cool down excessive borrowing to buy unaffordable houses and could be followed by additional restraints.

But more critical than restraints on demand will be an inevitable increase in supply if homeowners scramble to sell and clinch their profits before prices fall. The housing price slide could be considerable.

Stock market risk is equally worrisome. Corporate earnings must increase by three times merely to justify current stock prices. When government stimulus payments stop and household savings are spent, the anticipated economic upswing may be short-lived. In last year's pandemic, stock prices proved

extremely vulnerable when corporate earnings declined.

Future stock prices may reflect the much hyped infrastructure projects dependent on continued public spending. Investing in such projects requires qualified financial analysis.

Let's not forget, after the virus and variants pass there will remain a legacy of immense government debts taken on during the last two years. Resulting inflation is already pushing up interest rates.

So families ask what they should do. The best investment advice today is to consult an experienced portfolio manager who has carried clients through previous business cycles.

Successful long-term investment requires a flexible balance between bonds for stability today and stocks for growth tomorrow. Stocks that are inherently unstable cannot ensure stability.

Rising interest rates bring to mind the crisis experienced by investors who owned long-term bonds during the 1970s — they sustained double-digit losses as interest rates moved higher. Experienced managers know one sure way to secure stability plus rising income is to own short maturities that roll over as rates increase.

It's a truism that one security doesn't suit every investor. Each family is different. Independent investment counsellors tailor each portfolio policy to meet the client's particular needs and to select appropriate securities.

Their compensation is only a fee based on portfolio value and not on trading commissions or selling funds. They respect the fiduciary rule, to place a client's interest first.

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# Protecting future STEM workers post-pandemic

#### **MARY WELLS**

The COVID-19 pandemic and ensuing full and partial lockdowns that swept across Canada and the world have had unprecedented effects on education. Many Canadian high schools shifted to a quadmestered system and alternated in-person and remote learning. This meant students had to learn difficult concepts in math and science at an accelerated pace in semi-isolation without supports from their peers and teachers.

How well can someone learn in this environment and how confident will they be of their skills in math, physics and chemistry at the end of this process?

These are important considerations given high school completion of subjects such as calculus and vectors, Grade 12 physics and Grade 12 chemistry are necessary to be considered for admission into many of our university programs in science, technology, engineering and math (STEM).

Students have not experienced this crisis equally. Those living in poverty with limited access to technology and private spaces for learning, rural and remote students with inadequate internet connectivity and the stress and anxiety experienced by racialized and Black students whose families who were more likely to be infected with COVID-19. Female students have also been disproportionately affected.

In many households, female students are expected to shoulder a greater burden related to caregiving and domestic tasks — a workload compounded by the pandemic — which impacts the time they can devote to their studies. This is especially worrying as we consider the current significant underrepresentation of women in the STEM fields.

Attracting more women to the fields of engineering and physics is essential to maximize innovation, creativity and competitiveness in Canada. Historically, the critical point where the largest number of potential female engineers and physicists are lost occurs in high school, specifically in the physics classroom.

Of all female students who have completed the required Grade 10 academic science in Ontario, only about 15 per cent enrol in Grade 12 physics compared to 30 per cent of their male peers. This corresponds to a female participation rate of only 34 per cent in the physics classroom — a trend seen over the past decade.

How can we help level the playing field considering these inequities and ensure all students, especially women, have an opportunity to become future university students in STEM?

One solution is to offer free tutoring in math and science to high school students to help them succeed with remote learning during the pandemic. This is exactly what the University of Waterloo's faculty of engineering has done through a new initiative called Hive Mind. This program is aimed at grade 10, 11 and 12 students across Ontario who are struggling in advanced functions, calculus, chemistry and physics — all key subjects required to pursue post-secondary engineering programs.

Hive Mind was launched in February and there is an obvious need. The response has been overwhelmingly positive with more than 120 students registered and 350 one-on-one sessions

completed — and growing.

While available to all high school students, Hive Mind is being run as part of Waterloo's Women in Engineering (WiE) program, considering the underrepresentation of women in engineering and the disproportionate negative impact the pandemic is having on female high school students leaving them with less time to focus on their studies.

These are anxious times.

Despite optimism with soaring vaccination rates and a potential return to normalcy in learning this fall, the lockdowns may return as new variants emerge.

Canada needs more engineering-ready students, who represent the diverse communities engineers serve, and particularly, more women in sciences and engineering, to keep the disciplines robust, flourishing and innovative.

Proactively putting supports in place can make sure this will happen.

Our response to the pandemic and supports for our students — whether swift and supportive or slow and cynical — will have a broad and lasting impact on our future.

Let us shape smart policy to encourage

and retain a diverse group of talented young scientists and engineers in our future STEM workforce.

Mary Wells is dean of the faculty of engineering at the University of Waterloo.

## A near-death experience on the path of my life

While the moon landing was happening in 1969, I lay unconscious in my father's car

## DAVID L. CLARK

On the July afternoon that Neil Armstrong and Buzz Aldrin landed on the moon, I was unconscious, crumpled in the footwell of my father's car.

I was 13, not quite a boy any more, but still fascinated by the stars and planets and by the gung-ho camaraderie of space travel. Astronauts, not hockey players, were my heroes. I familiarized myself with the acronyms so favoured by NASA: CAPCOM, CM, TLI. I was deeply attracted to an abbreviated language that seemed free from feelings, secrets, and unspoken meanings.

I had a telescope powerful enough for me to count many of the moons of Jupiter. I built plastic models of the spacecraft that ferried astronauts away from the clutches and complications of Earth. I kept a scrapbook full of newspaper clippings of their accomplishments and their daring-do. All those clean-cut men, so kind and brave, and all those beautiful machines, so purposive and modern, augured a marvellous future, one seemingly unencumbered by the gravity of the past.

That hot summer of 1969, while students clashed with authority, I was thinking mostly of travelling to the moon. The recent death of a newborn sister named Jennifer, who appeared like a shooting star and was gone, left me feeling exposed to the harshness of space.

Was the whole family stillborn? I could not say. A vacation was in order, timed coincidentally with the Apollo II mission.

My parents had rented a small cottage on the ocean in Prince Edward Island. But once arrived they seemed disinterested in the significance of the landing itself. The closest television, a little black and white model, was owned by the proprietors and they lived miles away in Charlottetown. Later that evening we would drive there to watch Armstrong and Aldrin walk on the moon, my parents explained. After all, there was no sense wasting a perfectly good afternoon on the seaside. So while the family lounged on the beach, I retreated to the car to listen to the radio broadcast of the hours leading up to lunar landing. It was very warm and humid. To have this moment entirely to myself, I rolled the windows up and perched behind the steering wheel, where my father ordinarily sat. I listened to the ghostly voices travelling between Houston and the lunar module as it descended toward its place in history. The last thing that I recall was Flight Commander Gene Kranz running through the call and response of their final checklist to ensure



BUZZ ALDRIN THE ASSOCIATED PRESS FILE PHOTO

This July 20, 1969, photo shows Buzz Aldrin's boot and bootprint during a test of the lunar soil during the Apollo 11 extravehicular activity. A 13-year-old David L. Clark nearly missed the big event.

that men and machine were in good

shape to land. Control: Go.

TELMU: Go

GNH: Go. Surgeon: Go.

And then, nothing, a dreamless blank. It might have been my brother who found me, my skin pale and dry, folded up on the dirty floor of the car. I felt breathless and disoriented as I was dragged out to the ground. I recall the warmth of the red earth pressed upon my face. Kranz's reassuring words echoed faintly in my ears. While I was unconscious, the lunar module had touched down and Armstrong had sent that memorable message back to Earth: "Tranquility Base here. The Eagle has

landed."

I thought at first that I would feel mad at myself for having missed the moment. But strangely, I did not. Instead, I felt relief for those two men, so very far away, for having made their perilous journey through space. They were safe, yes, safe, I thought, buoyed by the well-wishes of others. Including those of a wounded boy who so often felt unsafe. Hanging on to that thought helped me silently endure my father's words while he berated me for my stupidity and carelessness. How could I do such a dumb thing, he demanded? I had no answer

then but one was on its way and had yet to reach me, as if transmitted from some distant planet. Looking into his angry eyes, I felt like laughing out loud but did not dare to do so. As I smiled to myself, I vomited repeatedly. It felt like I was trying to rid myself of something deep inside, something that I no longer needed or wanted to be.

Later that night in Charlottetown, while I sat with my parents watching Armstrong and Aldrin walk on the moon, I felt my fascination with space travel begin to waver for the first time. It was not to the arid moon that I needed to look but to the dusty and unforgiving world of the here and now. Within a few years I would gather the strength to flee the family home, never to return. It wasn't until much later that I was able to trace the origins of that desire, which grew and grew until it felt like a commandment to leave, back to that stifling car and to the darkness into which I had briefly travelled in the summer of '69. What seemed at first like something for which I needed permission gradually became an order that could not be ignored. Go. And I did. Into what was then an unknown future, perilous and irresistible.

David L. Clark is a professor in the department of English and cultural studies at McMaster University.