



# Quantum Supremacy: Complicated Technologies Define Realpolitik, Hegemony & Wealth

Technology  
22 October 2020



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Quantum technologies will define the post [Global Corona Crisis \(GCC\)](#) world.

A quantum computer uses qubits, or subatomic particles in various quantum states to perform many calculations at the same time.

Quantum computing is not a replacement for the binary classical computing that has become a staple of contemporary life, nevertheless, according to [Nobel laureate Richard Feynman](#), “Because quantum computers use quantum physics to emulate the physical world, they can solve problems that today’s computers will never have the power to tackle.”

Currently oscillating between denial & panic, the **Battle Royale** that will in fact define and ultimately explicate the rise of China over the West and indeed the World will not be fought-out in the South China Sea or [Formosan Straits](#) but rather in the laboratories found in Hangzhou, Santa Barbara (California) and Pancras Square, London.

Cite:- [Military Conflict With China](#), 6 November 2019

Cite:- [Taiwanese War & Markets Fallout](#), 30 January 2019

Cite:- [Taiwan’s Looming Crisis Is A Much Bigger Threat Than Markets Realise](#), 20 June 2018

Long considered the apex element required to achieving the “[technological singularity](#)”, those whom achieve quantum supremacy first will then control geopolitical hegemony, financial markets and ultimately, the twenty-first century.

Thus, it should not come as a surprise to learn that the race towards functional quantum technologies is upon us, both at a private sector level (Alphabet Inc. [GOOG:US], IBM [IBM:US] & Microsoft [MSFT:US]) but obviously, also at a governmental level (Chinese Academy of Sciences (CAS), European Telecommunications Standards Institute (ETSI) and the NSA Cybersecurity Directorat).

In recent history, few if any industries have been faster to adopt nascent technologies than financial services.

Investment money has already started to flow to start-up’s, with Goldman Sachs and Fidelity investing in full-stack companies such as [D-Wave Systems Inc.](#), while RBS and Citigroup have invested in software players such as [QC Ware Corp](#) and Canadian [1QBit](#).

Cite:- [Edge vs Cloud Computing](#), 7 November 2018

There is good reason to believe that the industry will rapidly ratchet-up investments in quantum computing, which can be expected to address a clearly defined set of simulation and optimisation problems; in particular, portfolio

optimisation and arbitrage strategy in the short-term and risk analytics and reduced trading costs in the longer term.

While investors use classical computers for all these problems today, the capabilities of these machines are limited; not so much by the number of assets or the number of constraints introduced into the model as by the type of constraints. For example, adding noncontinuous, nonconvex functions such as interest rate yield curves, trading lots, buy-in thresholds and transaction costs to investment models makes the [optimisation “surface”](#) so complex that classical optimisers often crash, simply take too long to compute, or, worse yet, mistake a local optimum for the global optimum.

To get around this problem, [Quants](#) often simplify or exclude such constraints, sacrificing the fidelity of the calculation for reliability and speed.

Such trade-offs, would be unnecessary with [quantum combinatorial optimisation](#).

Exploiting the probability amplitudes of quantum states is expected to dramatically accelerate portfolio optimisation, enabling a full complement of realistic constraints, reducing portfolio turnover, transaction costs and do so in real-time. Quantum computers can perform some sorts of mathematics far faster than any classical machine – they can search databases and speed up the analysis of optimisation problems – an elemental operation with a thousand uses for investors and other fields.

Cite:- [The Investment Theme We Like, For A Technology We Hate: Facial Recognition Technology \(FRT\) and Dual-Use Applications](#), 13 July 2020

Cite:- [Automation, Artificial Intelligence & Bionic Markets](#), 1 March 2019

But of course, there’s an implicit **Faustian Pact** embedded in accepting complicated quantum technologies into our ecosystem: the godlike and omnipotent super-technology leads pioneers and computer-scientists to believe that the technology could one day be used to hack into a bank account protected by a password, among other applications.

Cite:- [Hong Kong Affects Backend Of Australian Wealth Management](#), 4 December 2019

Current cryptography would render itself redundant and with recent news that [the Bank of Japan will begin experimenting with a Digital Yen](#), our own [Reserve Bank of Australia is considering similar](#), the [Bank of China’s “Digital Currency Electronic Payment” \(DCEP\)](#) and [Facebook’s Libra](#), investors and laymen alike need pay attention.

Cite:- [Central Banks Are Now Market Makers: Reshaping The Global Economy From A Torus Revolution Towards A Torus Knot](#), 22 July 2020

The threat to the security of the modern communications infrastructure is also urgent but manageable, despite the fact that China’s efforts to develop hacking-resistant communications networks by taking advantage of the laws of quantum physics to protect data, should also warrant further heedfulness.

The Western world’s complete failure in pioneering 5G native technology is already an acknowledge Mea Culpa in Washington, Westminster, Canberra, Tokyo and Ottawa.

Cite:- [Why cyber security will be key issue in 2020s](#), 15 January 2020

In September, Chinese Physicist Pan Jianwei, claimed a quantum leap with machine declared a million times greater than [Google’s Sycamore](#), which already declared “[quantum supremacy](#)” in late 2019.

Whether hyperbole, geopolitical posturing or indeed factual, China’s technological innovation contributed nearly sixty percent to the nation’s economic growth last year, according to the science ministry and if China has not already accomplished quantum supremacy, they’re not far off.

Between 1997 and 2017, China’s share of the global research and engineering budget grew from three percent to 27 percent, according to a report by a data analytics firm Govini released in January.

Cite:- [Wolf Warrior Statecraft](#), 5 May 2020

A major challenge for quantum computing is that it usually needs to work in extremely cold and isolated environments; subatomic particles are fragile, short-lived and prone to error with even slight disturbance from the surroundings. This is material in so that research facilities pioneering complex quantum technologies are regularly ‘bunkering’ themselves, quite literally – seeking cooler, more stable environments and working conditions – and naturally then drawing the [attentions of transnational intelligence agencies](#), et al.

With China already [successfully launching quantum-driven satellites](#) and leading the world in 5G infrastructure, [legitimate concerns arise regarding protecting communication channels](#) in the twenty first century.

Cite:- [China’s Space Silk Road](#), 26 August 2019

Cite:- [Defence Complex Investments](#), 4 July 2018

As serious as the spectre of a hot war in the South China Sea or [Formosan Straits](#) presents, for both industrious but also renitent reasons, the **Battle Royale** about to unfold in the sphere of quantum technologies between the **Sinosphere** and us, is superseding in every serious regard possible.

“**Animum Debes Mutare, Non Caelum**” (You must change your disposition, not your sky) – **Seneca.** ■

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