



Japan Equity Strategy – Ring of Fire.

Mega-quakes, mega-eruptions and mega-storms are all part of living in Japan

20th August 2024

KEY TAKEAWAYS

- Japan's annual summer holiday has turned into something of a nightmare, as many who braved an earthquake warning and went away had to fight a typhoon to get home.
- Just about everyone who has heard of the Nankai Trough, or experienced Typhoon No. 7, has either bought or is likely looking to buy disaster survival gear.
- It's good and bad for business: good for some retail like disaster prevention and homebuilding, but bad for insurance and tourism.

Obon 2024

This year's Obon holiday week has given everyone a refresher on natural disasters, and how prone Japan is to them.

It started on Thursday 8th August as crowds headed out to visit their hometowns and elderly relatives, with the Japan Meteorological Agency issuing a special bulletin and advisory that the likelihood of a mega-earthquake along the Nankai Trough – which runs south of the island of Honshu – was suddenly higher than usual. A quake of such a magnitude would lead to an immense loss of life and property damage.

Prime Minister Fumio Kishida immediately cancelled a trip to Central Asia in case he would have to don the emergency blue workman overalls along with the rest of the cabinet. Japan's bullet trains along the major route from Tokyo, through Nagoya, Osaka, and Kyoto to Hiroshima, operated at lower speeds through the Shizuoka and Aichi prefectures, just in case.

Ready Made Disaster Backpacks...

...out of stock

A week later, with no further significant shift in the tectonic plates, the mega-quake advisory was lifted. So presumably it's safe now? The mega-quake alert was issued as a result of tectonic plate monitoring and two large earthquakes, one offshore Miyazaki, earlier that same Thursday.

Consumer data for August could look good this month as everyone has gone out to panic-buy supplies, from bottled water and sleeping bags to canned tuna and expensive backup batteries with solar cell arrays. A ready-made disaster backpack for one person which retails for Yen15,000-20,000 has sold out on Amazon, with the next deliveries expected in November.

There was no mega-quake in the end, but a mega-typhoon hit instead along the same Nankai Trough route north to Tokyo. It made a terrible mess of everything on the following Thursday and Friday just as everyone who'd gone on an Obon holiday was trying to get back, and the bullet train service between Tokyo and Nagoya was stopped for a day. Many of those with brand-new backup batteries were sitting pretty as electricity blackouts struck.

Japan / EQUITY STRATEGY RECOMMENDATION



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Mount Fuji – just having a nap.



Source: JAPANMACRO

Disaster shopping – bottled water purchase was limited per family per day, emergency battery (US\$580)



Source: JAPANMACRO.com

Warnings about Typhoon No. 7 went out three days ahead of the direct hit. The Met office deserves due respect for sounding the alarm on the oncoming typhoon, as well as the quake risk, both with serious implications for the population and the economy.

The Japanese people are generally used to the threat of natural disasters. Typhoons are a regular occurrence, and the surfing crowd adores them. Earthquakes occur hundreds of times a day, with big ones now and again. And with volcanoes regularly erupting, there is always the threat that the big one, Mount Fuji, blows its top again.

Firstly, though, the Nankai Trough risk.

The Nankai Trough risk

The Nankai Trough is where two hard tectonic plates meet. The one coming up from the Philippines at a rate of a few centimetres a year slides under the one on which Japan sits. Where the plates can't slide smoothly, they stick, and strain energy builds up at the fault where they meet. If enough energy is stored by the time the plates slip, the resulting release of energy takes the form of a large earthquake. These have been observed along this fault and recorded since 1600 at a rate of one every 100-150 years.

The cities most at risk are Shizuoka, Nagoya, and to a lesser degree Osaka, Kochi and Miyazaki. About half of Japan's population lives in the area where a major earthquake poses a threat, both directly from tremors and indirectly from an ensuing tsunami.

Industries in the regions most at risk mainly include car manufacturing and car parts suppliers, steel, petrochemicals, and electronics. The disruption to supply chains domestically and internationally could be quite severe.

The Nikkei newspaper, citing a report from the Cabinet Office in 2019, reports that a magnitude 9 earthquake and a 30+ meter high tsunami could result in 242,000 deaths, damage amounting to Yen100 trillion and an impact on the production of goods and services just shy of Yen25 trillion.

I Fell Into a Ring of Fire

When I was first sent to Japan as a young convertible bond trader I did not realise how seismically active it was. Forty years later I am acutely aware that Japan shakes often and is home to 111 active volcanoes, 12% of the global total, and that they regularly explode.

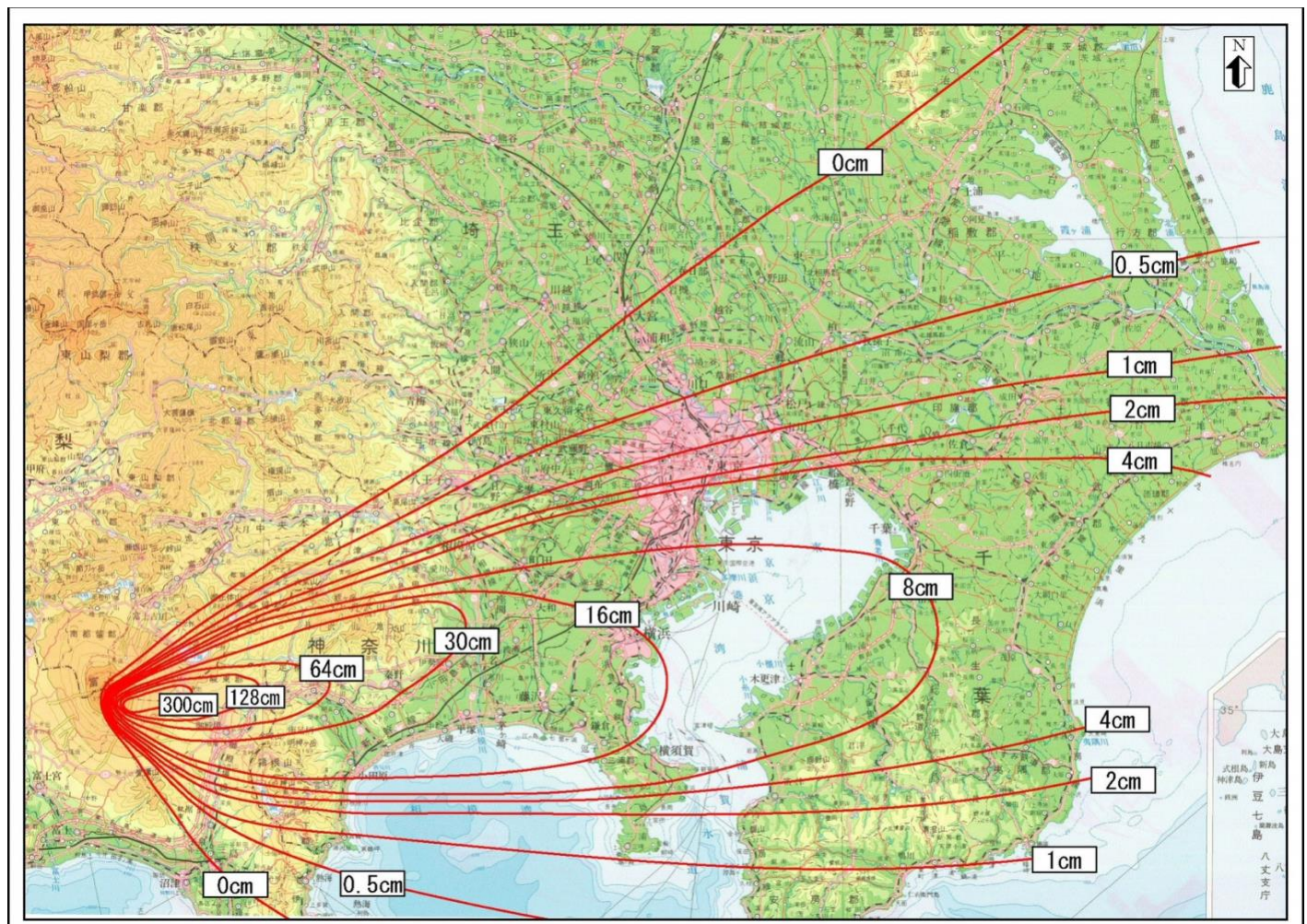
Some 145km North of Tokyo is Mount Asama which has been erupting regularly since 1982. And on the southern island of Kyushu is Sakurajima, which is one of the most active volcanoes in Japan. But Mount Fuji, next to Tokyo, is the bigger risk, as it would make a shocking mess of the metropolis that is home to 37 million people, just under one third of Japan's population. The last eruption was 300 years ago and many experts believe the next is long overdue.

Mount Fuji

Mount Fuji has had 16 documented eruptions since 781, and they were not regularly spaced, so citing an average number of years between each eruption is not particularly useful. The last eruption, in 1707, was preceded by a large earthquake in the Nankai Trough, 49 days before the volcano exploded. Volcanic activity prediction is by no means perfect, but there have been a lot of advances in spotting the early signs of one, and today Japanese scientists are concerned.

Anything within 20km from Mt. Fuji's central cone would be in the firing line of fist-sized rocks, but further out and into the wider Tokyo metropolis, clogging ash would be the main issue. Rain would turn this into slush, railways and roads would clog and the distribution of goods would be affected. There would also be immediate and long-term health issues from dust. Tokyo saw 16cm of ash and dust the last time there was an eruption; another would make Tokyo unlivable for a while.

The 1707 Mt. Fuji eruption ash distribution



Source: Wikimedia Commons

As for the risk, scientists are worried that pressure has been building inside the volcano since cracks were discovered in the roof of its magma chamber following the 2011 Tōhoku earthquake. Of Japan's 111 active volcanoes, around 20 have shown signs of a change in activity since the 2011 quake.

On higher alert

The Japanese public are on higher alert for a natural disaster than they were a month ago, so we should expect to see interest in:

- Accumulating disaster recovery items to keep at home, in addition to food and water, rechargeable battery packs, small solar panel arrays and some camping equipment. Much of this is bought online through Rakuten or Amazon, or in varied retailers such as BIC Camera, Yamada Denki, and some of the D.I.Y. centres.
- Building and infrastructure maintenance. With the refurbishment of older buildings continuing apace, the strengthening of buildings has become a very active business. Additionally, there is active development of earthquake countermeasures. Companies such as Sho-Bond and Shimizu may be interesting to research.
- Building new homes and demolishing those built before 1980. Anything built a few years after the Kobe earthquake in 1995 is generally very strong and an upgrade from the revised earthquake building standards of 1980. Older buildings are at much higher risk of collapse, especially houses with heavy ceramic tile roofs which were popular before the '80s. As long as it is cheap to borrow money – mortgage rates have not changed since the Bank of Japan raised interest rates – this latest scare could lead to a boost in new homes being built, benefiting the many listed homebuilders.
- On the downside, the valuations of Japan's insurers may start to be questioned. Valuations are currently inflated by the prospect of quick profits through the mandatory unwinding of cross-shareholdings whilst the underlying business is not looking particularly strong and could be in for a series of shocks, literally. The claims risk for extreme weather damage, from increasingly aggressive storms to hail, have the potential to increase year on year as temperatures become more extreme. The seas in the coastal waters off the Izu islands have hit an unusually toasty 30°C.
- Hong Kong's fortune tellers were predicting a bad year for Japan, both seismically and including other horrible disasters, and the press and social media filled up with warnings not to visit. There are several headwinds to tourism for the rest of 2024 in addition to the probability of more storms ruining a holiday: growing animosity towards foreign tourists, rising costs as the yen strengthens, and the potential for a bed-bug outbreak. It is quite likely that inbound tourist numbers plateau or peak this year. Japan is not ready for higher levels of mass tourism, and earthquakes and mega-storms are a nasty surprise for the uninitiated. Japan Airlines and All Nippon Airways cancelled over 600 flights as Typhoon No. 7 hit, bullet train services were suspended and there were a number of power cuts in the Kanto and Kansai regions.

Waves can be significant pleasing surfers. Heavy tiled roofs on pre-1980's houses are still common in towns.



Source: JAPANMACRO.com

And the risk of that earthquake from government experts? The Earthquake Research Committee annually revises its estimates, and in January 2023 it said the chance of a magnitude 8 or 9 earthquake centred in the trough was 60% over the next 20 years, increased from 50% because of how overdue it is. The probability of such an event is estimated at 30% within 10 years, 70-80% within 30 years, and 90% within the next 40 years.

Nankai Trough – Mount Fuji connection

Although earthquakes and volcanic eruptions don't appear to always be linked, the possibility is there of a volcano such as Mt. Fuji going off after an earthquake in the Nankai Trough, as this is what happened last time.

Japan is very well prepared for disasters and recovery periods are quick. Storms, earthquakes, and seismic activity are well monitored and flagged, so as we saw during Obon, there should at least be warnings.

Mount Fuji, iconic, beautiful and a major tourist attraction. Potentially a monster.



Source: JAPANMACRO.com

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- Neutral – shares will perform in-line +/- 10%
- Sell – shares will lag the market index by more than 10 percentage points.

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