

#### ➤ **White House national security advisor describes what Russian attack on Ukraine might look like.**

President Joe Biden's national security advisor Jake Sullivan gave a grim description Sunday of what a Russian invasion of Ukraine might look like and urged Americans to depart the country immediately.

"If there is a military invasion of Ukraine by Russia, it's likely to begin with a significant barrage of missiles and bomb attacks," Sullivan said on CNN's "State of the Union" program.

"It would then be followed by an onslaught of a ground force moving across the Ukrainian frontier," he said, adding that there would be a substantial number of civilians caught in the crossfire.

Sullivan said that in the past 10 days the Kremlin has accelerated its extraordinary military buildup along Ukraine's border. Russia's current force posture in the region could "launch a military action very, very rapidly," he said.

For months, the U.S. and its Western allies have watched a steady buildup of Kremlin forces along Ukraine's border with Russia and Belarus. The increased military presence mimics Russia's playbook ahead of its 2014 illegal annexation of Crimea, a peninsula on the Black Sea, which sparked international uproar and triggered sanctions against Moscow.

Biden, who is spending the weekend at Camp David, spoke with Ukrainian President Volodymyr Zelenskyy on Sunday. The White House said during the call Biden reaffirmed U.S. commitment to Ukraine's sovereignty and territorial integrity.

The call, which lasted about an hour, follows Biden's hour-long Saturday call with Russian President Vladimir Putin.

The president warned his Russian counterpart that if there is a further invasion of Ukraine, Washington and its allies will impose "swift and severe costs." Biden said that while the U.S. remains prepared to engage in diplomacy, "we are equally prepared for other scenarios."

Last month, the Pentagon's top officials warned that the aftermath of a Russian invasion of Ukraine would be "horrific."

"Given the type of forces that are arrayed, the ground maneuver forces, the artillery, the ballistic missiles, the air forces, all of it packaged together. If that was unleashed on Ukraine, it would be significant, very significant, and it would result in a significant number of casualties," Chairman of the Joint Chiefs of Staff U.S. Army Gen. Mark Milley told reporters at the Pentagon on Jan. 28.

"It would be horrific," added Milley.

Milley, the nation's highest-ranking military officer, said that Russia's posture along Ukraine's border was unlike anything he has seen during his four-decade military career.

Over the weekend, Secretary of Defense Lloyd Austin ordered U.S. troops who deployed to Ukraine last year to leave the country and reposition elsewhere in Europe.

In November, 160 members of the Florida National Guard, assigned to the 53rd Infantry Brigade Combat Team, deployed to Ukraine to train with local forces.

"The Secretary made this decision out of an abundance of caution — with the safety and security of our personnel foremost in mind — and informed by the State Department's guidance on U.S. personnel in Ukraine," Pentagon spokesman John Kirby wrote in a statement.

"This repositioning does not signify a change in our determination to support Ukraine's Armed Forces but will provide flexibility in assuring allies and deterring aggression," he added.

Meanwhile, the State Department said Saturday that it would reduce its diplomatic staff at the U.S. Embassy in Kyiv to the "bare minimum."

#### ➤ **'A very scary concept': Energy ministers fearful of oil prices surpassing \$100 a barrel.**

Energy ministers representing Egypt and Cyprus on Monday said they were deeply concerned about the potential for oil prices to climb above \$100 a barrel.

It comes at a time when more than a dozen countries have urged their citizens to leave Ukraine amid warnings of an imminent Russian invasion.

International benchmark Brent crude futures soared to a new seven-year high on Monday morning on the elevated geopolitical tensions. The contract was last seen trading at \$93.86, down 0.6% for the session after earlier hitting a peak of \$96.16.

U.S. West Texas Intermediate futures, meanwhile, stood at \$92.59, roughly 0.5% lower.

The U.S. and Europe have threatened to sanction Russia if it invades Ukraine, escalating fears of a possible supply disruption from one of the world's top producers. Russia has repeatedly denied it is planning to invade Ukraine dispute amassing around 100,000 soldiers on Ukraine's borders.



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Speaking at an oil and gas exhibition conference in Cairo, Egypt, energy and petroleum ministers representing Egypt, Cyprus, Israel and the United Arab Emirates were asked whether they expected oil prices to spike into triple-digit territory.

“For me, being professional I can see it happening, but I don’t want it to happen,” Egypt’s Petroleum Minister Tarek El Molla told CNBC’s Hadley Gamble at EGYPS 2022.

“It is on the way, definitely,” he added.

Cyprus’ Energy Minister Natasa Pilides agreed it was “a very scary concept” to imagine oil prices surpassing \$100 a barrel. “It is actually quite tangible,” she added.

“It is very difficult to deal with because on the one hand, we have the tendency particularly in the last few months of subsidizing basically which is not the norm, so we are in that difficult position where when you start doing that it is very difficult to stop it,” Pilides said.

“We definitely need to stick to our targets in terms of the energy transition, but I would also add that natural gas has a place in that trajectory as a bridge fuel.”

Speaking at the same panel event, Israeli energy minister Karine Elharrar said: “It is a very hard question, but I think if we don’t want to be at [\$100 oil] then we have to make sure that we have a diversity of energy sources.”

The International Energy Agency has previously recognized natural gas as the “cleanest burning and fastest-growing fossil fuel,” but has cautioned that its longer-term use in a transition to net-zero energy systems is uncertain.

To be sure, the burning of fossil fuels, such as coal, oil and gas, is the chief driver of the climate emergency.

“You know me, I am not going to answer the question,” UAE energy minister Suhail al-Mazrouei told CNBC’s Hadley Gamble when asked whether oil prices could surpass \$100 a barrel.

“I think what is happening to the market is a geopolitical tension and that is what driving primarily the prices. It is very difficult to predict when it comes to geopolitics,” he added, referring to the Russia-Ukraine crisis.

Oil producer group OPEC and its allies, a group known as OPEC+, have struggled to ramp up production in recent months, despite pledging to gradually unwind record supply cuts. The UAE is a member of OPEC.

When asked whether OPEC+ had a plan in the event Russia invades Ukraine, al-Mazrouei replied: “I don’t think we need to escalate more than what is said. What we hear is there is no intention for invasion and that, I think, is comforting.”

“I would be on that camp that is not seeing that happening,” he said, adding that he hoped diplomacy between Russia and Europe would prevail.

### ➤ **Buffett’s Berkshire bought about \$1 billion worth of Activision shares before Microsoft deal.**

Warren Buffett’s Berkshire Hathaway purchased about \$1 billion worth of shares in Activision Blizzard in the fourth quarter, according to a regulatory filing, jumping in before Microsoft agreed to buy the video-game publisher for \$68.7 billion.

Berkshire owns 14.66 million shares valued at \$975 million as of the end of 2021, the filing shows.

Microsoft announced its intent to acquire Activision Blizzard in mid-January for \$95 per share, sending the stock up 25% to above \$82, though it’s since fallen a bit. It would be the largest deal ever by a U.S. technology company.

Buffett is poised to notch a handsome profit should the deal close. The stock reached as low as \$56.40 in the fourth quarter after the California Department of Fair Employment and Housing filed a suit alleging that Activision and its subsidiaries fostered a sexist culture and paid women less than men.

Activision also said in November that it was delaying the releases of Diablo IV and Overwatch 2. And it was hit with disappointing reviews of its new game Call of Duty: Vanguard, released the same month.

Bill Gates, the co-founder and former CEO of Microsoft, stepped down from the boards of Berkshire and Microsoft in 2020. Gates is a longtime friend of Warren Buffett, Berkshire Hathaway’s chairman and CEO. They rank fourth and sixth, respectively, among the world’s richest people, according to Forbes.

#### ➤ **Tax firm Mazars fires Trump Organization as client, says former president's financial statements are unreliable.**

The accounting firm Mazars has fired the Trump Organization as a client after saying that a decade's worth of statements of ex-President Donald Trump's financial condition "should no longer be relied upon," the New York Attorney General's office revealed in a court filing Monday.

Mazars, which for years prepared Trump's income tax returns and financial statements used to obtain loans for his company, told the Trump Organization's top lawyer Alan Garten that it would no longer represent the company due to the lack of reliability of the financial statements in a letter last Wednesday.

The letter was cited by AG Letitia James' office on Monday as it asked a state judge to order the Trump Organization, Donald Trump Jr. and his sister Ivanka Trump, and others to comply with subpoenas seeking documents and testimony.

James for several years has been investigating how the Trump Organization valued certain real estate assets in applications for loans, insurance policies, and tax-related issues.

Trump's former personal lawyer Michael Cohen has told Congress that the company manipulated the value of those assets depending on the circumstance to obtain better financial terms and to lower its tax obligations.

James' office said last month that it had determined that statements of Trump's financial condition described his valuation process "in broad terms and in ways which were often inaccurate or misleading when compared with the supporting data and documentation that the Trump Organization submitted to its accounting firm."

Those statements were prepared by Mazars based on information provided by the Trump Organization.

Mazars told Garten in Wednesday's letter that he should inform any recipients that the statements of Trump's financial condition for 2011 through 2020 "should not be relied upon."

The firm told Garten that its conclusion was based on filings made by the AG's office, "our own investigation," and other information from different parties.

"While we have not concluded that the various financial statements, as a whole, contain material discrepancies, based on the totality of the circumstances, we believe our advice to no longer rely upon those financial statements is appropriate," Mazars said in its letter to Garten.

Mazars also said in its letter that it would no longer "provide any new work product to the Trump Organization."

The firm said it based on its decision about the past work's reliability, "as well as the totality of circumstances, we have also reached the point such that there is a non-waivable conflict of interest with the Trump Organization."

Mazars said that as of the writing of the letter, "there are only a limited number of tax returns that still remain to be filed, including those of Donald J. Trump and Melania Trump. We will be providing you a list of those returns and their status towards completion separately."

"The due date to file those returns is February 15, 2022," Mazars said.

The Manhattan District Attorney's Office is conducting a parallel criminal investigation into the issues that James is eyeing in her civil probe.

The DA's office last year obtained Trump's personal and corporate tax returns dating to 2011 after a years-long fight by the former president to block a subpoena for those and other documents from Mazars.

Garten did not immediately respond to a request for comment from CNBC.

A Trump Organization spokesperson, in a statement to NBC News, said, "While we are disappointed that Mazars has chosen to part ways, their February 9, 2022, letter confirms that after conducting a subsequent review of all prior statements of financial condition, Mazars' work was performed in accordance with all applicable accounting standards and principles and that such statements of financial condition do not contain any material discrepancies."

"This confirmation effectively renders the investigations by the DA and AG moot," the spokesperson said.

#### ➤ **Ukraine concerns ease on report of partial pullback by Russian troops.**

Russia is reportedly sending some troops at the Ukrainian border back to their bases, according to the country's Interfax news agency.

Interfax reported Tuesday that while the Russian Defense Ministry said large military exercises would continue, some units in its southern and western military districts had completed their drills and would be returning to their bases.

"The units of the Southern and Western military districts, having completed their tasks, have already begun loading onto rail and road transport and today they will begin moving to their military garrisons," Russian Defense Ministry spokesman Igor Konashenkov reportedly told journalists.



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Thousands of Russian troops began engaging in military drills last week in a move that was widely seen as a display of strength by Moscow. The drills came as more than 100,000 soldiers, tanks, missiles and even fresh blood supplies had been moved to Russia's border with Ukraine.

Moscow has repeatedly insisted it has no plans to invade Ukraine, despite warnings from Western countries in recent days that an invasion is likely to be imminent.

Timothy Ash, emerging markets senior sovereign strategist at BlueBay Asset Management, said in a note on Tuesday that "if Putin has really blinked, this would be huge win for Biden, [Ukrainian President Volodymyr] Zelenskyy and the West."

"They called out Putin for threats [and] menacing military actions and failed to concede anything much on Putin's red lines," he said.

Ash added that it would be difficult to see the entire situation as anything but a big defeat for Putin.

"What did he achieve?" he said. "He managed to rally the West back around NATO, which again has common purpose. Ukrainian sovereignty [has been] affirmed, even strengthened."

As a result of Russia's aggressive activity, Ukraine's military was now better armed and better able to defend itself, Ash added.

"Russia has been called out as an unreliable energy supplier — the West will accelerate diversification away from Russian energy sources," he said. "[Putin's] bluff was called. He may have written a long essay over the close historical links between Russia and Ukraine, but some will say he was the Russian leader who lost Ukraine. That will be his mark in history — he accelerated Ukraine's Western orientation."

In a televised exchange on Monday, Russian Foreign Minister Sergey Lavrov told President Vladimir Putin that the avenues the Kremlin could use to secure the security guarantees it has demanded — including diplomacy — "are far from exhausted."

While Lavrov suggested continuing along the diplomatic route, he added: "We have already warned more than once that we will not allow endless negotiations on questions that demand a solution today."

Russia is demanding that Ukraine never be permitted to become a NATO member and has said it wants the organization to roll back its presence in Eastern Europe.

Addressing the Ukrainian population on Monday, the country's President Volodymyr Zelenskyy said Ukraine "wants peace and we want to resolve all issues exclusively through negotiations." But he added that Ukraine could respond to any aggression with its "great army" that has "unique combat experience and modern weapons."

In a phone call on Monday, U.S. President Joe Biden and U.K. Prime Minister Boris Johnson agreed that "a crucial window for diplomacy" remained.

Biden and Johnson agreed that "any further incursion into Ukraine would result in a protracted crisis for Russia, with far reaching damage for both Russia and the world," and that a significant package of sanctions — including reducing European countries' reliance on Russian gas — would be imposed if Russian aggression escalated.

On Tuesday, Polish Foreign Minister Zbigniew Rau — the current chairman of the Organization for Security and Cooperation in Europe — is due to convene talks in Moscow between Lavrov and the OSCE's chairperson-in-office in Ukraine, Mikko Kinnunen.

Meanwhile, German Chancellor Olaf Scholz is due to touch down in Moscow on Tuesday to meet with Putin. Scholz met with Zelenskyy in Kyiv on Monday.

Berlin is not expecting "concrete results" from the talks in Russia on Tuesday, according to Reuters, but Scholz is expected to emphasize that the Kremlin "should not underestimate the unity between the European Union, United States and Britain."

Despite signals from various parties that diplomatic efforts to alleviate the situation are still on the table, the U.S. has warned that an invasion could still be imminent.

Secretary of State Antony Blinken ordered the U.S. Embassy in Kyiv to close on Monday, relocating staff to the city of Lviv in western Ukraine.

Meanwhile, British Foreign Minister Liz Truss told Sky News on Tuesday that "it is still the case that an invasion could be imminent, and it is highly likely."

U.S. national security advisor Jake Sullivan told CNN on Sunday that a Russian attack on Ukraine could happen "any day now." "That includes this coming week," he said.

Security officials in Washington, London and Ukraine told Politico on Friday that U.S. intelligence officers had briefed allies last week that the invasion may begin on Wednesday Feb. 16. However, Sullivan said on Sunday that officials "cannot perfectly predict the day."

According to thinktank Chatham House, recent research suggests one in four Ukrainians would be willing to physically defend their country if Russia were to invade.

➤ **Boris Johnson needs to respect every single line of Brexit agreement, Barnier says.**

U.K. Prime Minister Boris Johnson must respect every aspect of the Brexit withdrawal agreements, former European Union Chief Negotiator Michel Barnier has urged.

Johnson and prominent members of his ruling Conservative Party have publicly called for the scrapping or radical overhaul of the Northern Ireland Protocol, a portion of the withdrawal agreements negotiated by the U.K. and the EU in 2019.

The protocol came into force last year and was designed to prevent customs checks and an effective land border between Northern Ireland, which is part of the U.K., and the Republic of Ireland, which remains in the EU. This is particularly important given the fragile peace in Northern Ireland since the Good Friday Agreement of 1998.

However, the protocol requires checks on goods traveling into Northern Ireland from the rest of the U.K., and has caused uproar among Northern Ireland's unionists who claim it poses a threat to the country's place within the U.K.

British Foreign Secretary Liz Truss and European Commission Vice-President Maroš Šefčovič met in London on Friday for talks, but the impasse between London and Brussels shows little sign of abating.

The U.K. government has also bemoaned the bilateral agreement on fisheries contained within the Withdrawal Agreement, with the British fishing industry struggling to navigate post-Brexit license disputes.

Speaking to CNBC exclusively on Monday ahead of the French presidential elections, in which he is supporting center-right Les Républicains candidate Valérie Pécresse, Barnier said the British prime minister would need to honor agreements made with the European Union in order to preserve relations between the U.K. and France.

"The commitments made by Mr. Johnson in the Brexit negotiation — in the first pact we negotiated, which includes the Ireland protocol, and the issue there is that of peace in Ireland, the stability of the island, and the second pact on Brexit's trade and industry where the fisheries treaty is found — these two pacts that have been negotiated step by step, comma by comma, sentence by sentence by Mr. Johnson, and that he knows very well, must be respected, that the U.K. maintain its commitments with regard to the European Union, with regard to France," Barnier said.

Despite differences over the existing agreements, however, he suggested that it is more important to "look ahead to the future" as far as relations between London and Paris are concerned.

"We have many reasons to work together, not only on a military scale, against terrorism, climate change, transborder cooperation, there are many reasons why France and the U.K. should greatly cooperate."

➤ **Global semiconductor sales top half a trillion dollars for first time as chip production gets boost.**

Global semiconductor sales topped half a trillion dollars for the first time, as companies ramped up production to meet demand amid a worldwide chip shortage, a top industry association said.

In 2021, global semiconductor industry sales reached a record \$555.9 billion, up 26.2% year on year, the U.S.-based Semiconductor Industry Association (SIA) said on Monday.

The industry shipped a record 1.15 trillion semiconductor units last year.

"In 2021, amid the ongoing global chip shortage, semiconductor companies substantially ramped up production to unprecedented levels to address persistently high demand, resulting in record chip sales and units shipped," said John Neuffer, SIA president and CEO.

"Demand for semiconductor production is projected to rise significantly in the years ahead, as chips become even more heavily embedded in the essential technologies of now and the future."

The global chip crunch hit industries across the board from consumer electronics to automakers, and companies became unable to deal with the demand for and shortage of products.

It has also led to governments and lawmakers around the world scrambling to secure chip supplies and invest to bring manufacturing of semiconductors closer to home.



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Last year, U.S. President Joe Biden earmarked \$50 billion for semiconductor manufacturing and research as part of a \$2 trillion economic stimulus package. A bill known as the CHIPS for America Act is also working its way through the legislative process and aims to provide incentives to enable advanced research and development and secure the supply chain.

This month, the European Commission, the executive arm of the EU, announced a new European Chips Act that will enable 15 billion euros (\$17.11 billion) in additional public and private investments until 2030.

Semiconductors sales in China totaled \$192.5 billion in 2021, up 27.1% year on year, eclipsing any other market, the SIA said.

China has been focusing on boosting its domestic chip industry over the last few years amid geopolitical tensions with the United States. Beijing has made increasing self-sufficiency in semiconductors a priority, though China remains heavily reliant on foreign technology.

The market in the Americas saw the largest sales increase of 27.4% in 2021. Europe followed with 27.3% growth.

#### ➤ **UK inflation rate hits new 30-year high at 5.5%.**

U.K. inflation came in at an annual 5.5% in January, slightly ahead of forecasts and remaining at a 30-year high.

On a monthly basis, consumer prices contracted by 0.1%, slightly less than expected by economists in a Reuters poll. The annual print was expected to remain at 5.4%.

December's 5.4% annual rise in consumer prices was the highest since 1992, and the Bank of England has imposed consecutive interest rate hikes for the first time since 2004 in a bid to contain runaway inflation.

The Bank expects inflation to peak at 7.25% in April, having previously projected a 6% ceiling in its December report.

The Consumer Prices Index including owner occupiers' housing costs (CPIH) rose by 4.9% in the 12 months to January 2022, up from 4.8% in December, the Office for National Statistics said Wednesday.

The largest contributors were energy, fuel and food, among other items such as second-hand cars.

Hinesh Patel, portfolio manager at Quilter Investors, said the Bank of England's next policy meeting now looks likely to be a "rubber stamping" for another interest rate hike, with the only question being whether the Monetary Policy Committee opts for a rise of 25 basis points or 50 basis points.

"While there are signs that some of the supply chain bottlenecks are easing, and that prices for certain goods are moderating, the upside inflation risks remain clear," Patel said.

He noted that Russia-Ukraine tensions are keeping gas prices elevated while energy costs continue to soar, but a mild winter and spring and a potential de-escalation in eastern Europe could moderate prices somewhat.

"We currently have extremely tight labor markets at the moment through a combination of Brexit, long Covid and early workforce leavers, none of which will be addressed by monetary policy in the here and now," Patel added.

Households in the U.K. are feeling the pinch from a cost-of-living crisis as energy prices surge. The spike has prompted the country's energy regulator to raise its energy price cap by 54% from April, as supply side problems continue to exert upward pressure on costs.

"Households should brace themselves for further acceleration in the cost of living until at least the second half of 2022, particularly when the energy price hike is implemented in April," said Colin Dyer, client director at Abridn Financial Planning.

"The Bank of England could also be justified in raising interest rates more than once over the next few months to defend these soaring prices – meaning even more challenges may lie ahead for households."

#### ➤ **Minutes show Fed ready to raise rates, shrink balance sheet soon.**

Federal Reserve officials set plans into motion at their most recent meeting to begin raising interest rates and shed the trillions of dollars in bonds on the central bank balance sheet, according to minutes released Wednesday.

Some officials at the meeting expressed concerns over financial stability, saying that loose monetary policy could be posing a substantial risk.

They indicated that interest rate hikes likely are on the way soon, and they said the unwind of the bond portfolio could be aggressive.

"Participants observed that, in light of the current high level of the Federal Reserve's securities holdings, a significant reduction in the size of the balance sheet would likely be appropriate," the meeting summary stated.

The policymaking Federal Open Market Committee decided after the two-day session that it would not raise interest rates yet but strongly indicated a hike is on the way as soon as March.

Despite the seemingly hawkish tone, stocks shaved losses after the release of the minutes.



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“The market correctly interpreted them as dovish relative to expectations,” said Simona Mocuta, chief economist at State Street Global Advisors. “Frankly, I would call them anticlimactic.”

Markets have been on edge over the past several weeks as soaring inflation and hawkish talk from some Fed officials, in particular St. Louis Fed President James Bullard, has caused traders to price in the equivalent of seven 0.25 percentage point rate hikes this year. Market pricing eased some after the minutes release, with a 50-50 chance now of the Fed taking its benchmark rate up by 1.75 percentage points. “There’s been so much hype recently that I think everybody was braced for a very hawkish tone in the minutes, and the minutes were more like, ‘We’ll do it, of course, but we’ll walk before we run,’” Mocuta said. “It seems enough for the Fed to do four hikes. Talk the hawkish talk, tell everybody that we are watching this closely, and if we need to do more, we can do more.”

In addition to the rates talk, the committee set out procedures for how it will start unwinding its nearly \$9 trillion balance sheet, which consists largely of bonds it has purchased to drive down rates and stimulate growth.

March is also the month when the asset purchase program is set to end, though some members at the meeting were hoping for a faster conclusion. Instead, the committee set forth a path in which the Fed will buy \$20 billion in Treasuries over the next month and nearly \$30 billion in mortgage-backed securities.

“A couple of participants stated that they favored ending the Committee’s net asset purchases sooner to send an even stronger signal that the Committee was committed to bringing down inflation,” the minutes said.

Members discussed how the balance sheet reduction will occur. The most likely path is by allowing some proceeds from maturing bonds to roll off each month rather than being reinvested. However, some officials said it may be necessary to sell mortgages outright to get the balance sheet holding to purely Treasuries.

Since the meeting, fresh inflation readings have shown prices rising at the fastest pace in 40 years. The Fed targets inflation to average around 2%, and officials have conceded that policy needs to get tighter to bring prices down.

Inflation occupied a good deal of the discussion during the meeting, according to the minutes. The term is mentioned 73 times in the summary, with members saying that price increases have been stronger and more persistent than they had anticipated.

“Participants remarked that recent inflation readings had continued to significantly exceed the Committee’s longer-run goal and elevated inflation was persisting longer than they had anticipated, reflecting supply and demand imbalances related to the pandemic and the reopening of the economy,” the document stated.

FOMC members noted that inflation was beginning to spread beyond Covid pandemic-affected sectors and into the broader economy.

“Participants acknowledged that elevated inflation was a burden on U.S. households, particularly those who were least able to pay higher prices for essential goods and services,” the minutes said.

There also was discussion about financial stability. Officials noted that risks are coming from elevated asset prices as well as the rapid price increases in crypto assets.

#### ➤ **‘Pathetic’ performance has left U.S. ‘well behind’ China in 5G race, ex-Google CEO Eric Schmidt says.**

The U.S. government’s “dithering” has left the country “well behind” China in the race to build out 5G technology, former Google CEO Eric Schmidt said, as he urged Washington to step up investment in the next-generation internet technology.

Writing in an op-ed in the Wall Street Journal, Schmidt and Graham Allison, a professor of government at Harvard, said that America is “far behind in almost every dimension of 5G while other nations—including China — race ahead.”

The authors urged the Biden administration to make 5G a “national priority.” Otherwise, they said, “China will own the 5G future.”

5G refers to next-generation wireless internet that promises super-fast download speeds. But it could also form the basis for industrial and military applications and form a way for devices to communicate with each other. That’s why it’s seen as a critical technology and one of the reasons China is moving quickly with its own 5G rollout and future applications.

“The step up to real 5G speeds will lead to analogous breakthroughs in autonomous vehicles, virtual-reality applications like the metaverse, and other areas that have yet to be invented,” Schmidt and Allison wrote. “Applications abound that could advantage a country’s intelligence agencies and enhance its military capabilities.”

The pair also accused the U.S. of falling behind in several areas. They said that China’s average 5G download speed is significantly faster than the U.S.’s.

China's median download speed was just over 299 megabits per second in the third quarter of 2021 versus 93.73 megabits per second in the U.S., according to Speedtest, a company which measures internet speeds.

"Mobile internet speed is a central advancement of 5G, which enables a new domain of breakthrough applications with potent economic and national-security implications," Allison and Schmidt said.

The authors also said that Huawei, China's biggest telecommunications equipment maker, still dominates the market "although American sanctions have hurt Huawei."

Meanwhile, China has been "rapidly allocating the most efficient part" of the wireless spectrum, called midband, to telecommunications companies. The authors claimed that AT&T and Verizon are using the same spectrum band for both their 4G and 5G networks in the U.S.

Allison and Schmidt also said that China is outspending the U.S. when it comes to 5G.

"The pathetic U.S. performance in the 5G race is a sign of America's larger failure to keep up with China on strategically important technologies. China is also ahead of America in high-tech manufacturing, green energy and many applications of artificial intelligence," they said.

"On current trajectories, by 2030 it will likely lead the U.S. in the number of semiconductor chips it produces and in applications of biotechnology to defeat diseases like cancer."

Schmidt has been critical of the U.S. government's approach to technologies he views as key to the future and has warned on several occasions about the threat of China overtaking.

Last year, a report by the National Security Commission on Artificial Intelligence, which Schmidt chairs, said China could soon replace the U.S. as the world's "AI superpower" and that could have serious military implications to consider.

#### ➤ **Turkish lira nudges downward as central bank holds interest rates.**

Turkey's lira dipped slightly in Thursday afternoon trading as its central bank chose to hold the key interest rate at 14%, in line with analysts' expectations. The announcement was preceded by Turkish President Recep Tayyip Erdogan vowing to "break the shackles of interest rates," despite inflation in the country hitting a 20-year high of 48.69% last month.

"The further rise in inflation to close to 50% y/y in January was clearly not enough to sway Turkey's central bank (and crucially, President Erdogan) to shift back to orthodoxy," Capital Economics' senior emerging markets economist Jason Tuvey wrote in an email note following the news. The central bank has cut the country's interest rate by 500 basis points since September.

The Turkish lira was trading at 13.6243 to the dollar at 4:30 p.m. in Istanbul.

Turkey's currency has lost more than 48% of its value in the last year as Erdogan pushed on with his policy of eschewing rate rises despite sky-high inflation. Turkey's foreign exchange reserves have been steadily dropping, and Turks earning salaries in lira are increasingly unable to afford basic goods as their prices soar. Steep hikes in electricity and natural gas tariffs have compounded the pain for consumers and businesses.

Erdogan on Thursday pledged to lower inflation to single digits. Capital Economics sees inflation remaining around 50% in the coming months and only dropping toward the end of 2022.

"Despite the worsening inflation backdrop, interest rate hikes remain off the cards as policymakers continue with the pursuit of their 'new economic model' of low interest rates and a weak lira," Tuvey wrote.

In its statement, the Turkish central bank's monetary policy committee also formally outlined its pursuit of "permanent liralisation" in all its foreign policy tools.

"The Committee expects a disinflation process to start on the back of measures taken and decisively pursued for sustainable price and financial stability," the bank said.



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The lira has held fairly steady around 13.5 per dollar in recent weeks, propped up by heavy central bank FX intervention. But many economists argue that the status quo isn't sustainable.

"Erdogan saying debate about interest rates has subsided — I totally disagree," Timothy Ash, emerging markets strategist at Bluebay Asset Management, wrote on Twitter. "The lira might have stabilized with massive FX intervention but that is short term fix. How can inflation fall with massively negative real interest rates?"

Earlier this month, Fitch downgraded Turkey's credit rating to B+ from BB- with a negative outlook. The rating agency wrote that: "Policy-driven financial stress episodes of higher frequency and intensity have increased Turkey's vulnerabilities in terms of high inflation, low external liquidity and weak policy credibility."

"Fitch does not expect the authorities' policy response to reduce inflation, including FX-protected deposits, targeted credit and capital flow measures, will sustainably ease macroeconomic and financial stability risks," it added.

The rate decision came just after Erdogan's first official visit to the United Arab Emirates in nearly a decade, during which he signed more than a dozen cooperation agreements with the oil-rich Gulf sheikhdom's leadership, which has pledged some \$10 billion of investment into Turkey. The trip is seen to be part of a broader effort by the Turkish president to mend relations with Gulf Arab states, as well as Israel, after years of acrimony and distrust.

Analysts broadly expect the Turkish central bank's policy settings to stay unchanged in the coming months. "If anything," Capital Economics' Tuvey wrote, "political pressures mean that the next move in interest rates is more likely to be down than up ... as inflation should, barring another collapse in the lira, start to drop back towards the end of the year."

# Your Weekend Wire

## The week ahead

Date	Time	Country	Indicator Name	Period	Reuters Poll	Prior	SmartEstimate®	Predicted Surprise
21.02.2022	01:30	Japan	Jibun Bank Mfg PMI Flash	Feb		55.4		
21.02.2022	08:00	Germany	Producer Prices MM	Jan		5.0%		
21.02.2022	08:00	Germany	Producer Prices YY	Jan		24.2%		
21.02.2022	09:15	France	Markit Mfg Flash PMI	Feb		55.5		
21.02.2022	09:15	France	Markit Serv Flash PMI	Feb		53.1		
21.02.2022	09:15	France	Markit Comp Flash PMI	Feb		52.7		
21.02.2022	09:30	Germany	Markit Mfg Flash PMI	Feb		59.8		
21.02.2022	09:30	Germany	Markit Service Flash PMI	Feb		52.2		
21.02.2022	09:30	Germany	Markit Comp Flash PMI	Feb		53.8		
21.02.2022	10:30	United Kingdom	Flash Composite PMI	Feb		54.2		
21.02.2022	10:30	United Kingdom	Flash Manufacturing PMI	Feb		57.3		
21.02.2022	10:30	United Kingdom	Flash Services PMI	Feb		54.1		
21.02.2022	12:00	United Kingdom	CBI Distributive Trades	Feb		28		

Date	Time	Country	Indicator Name	Period	Reuters Poll	Prior	SmartEstimate®	Predicted Surprise
22.02.2022	10:00	Italy	Consumer Prices Final MM	Jan		1.6%		
22.02.2022	10:00	Italy	Consumer Prices Final YY	Jan		4.8%		
22.02.2022	10:00	Italy	CPI (EU Norm) Final MM	Jan		0.2%		
22.02.2022	10:00	Italy	CPI (EU Norm) Final YY	Jan		5.3%		
22.02.2022	10:00	Germany	Ifo Business Climate New	Feb		95.7		
22.02.2022	10:00	Germany	Ifo Curr Conditions New	Feb		96.1		
22.02.2022	10:00	Germany	Ifo Expectations New	Feb		95.2		
22.02.2022	12:00	United Kingdom	CBI Trends - Orders	Feb		24		
22.02.2022	15:00	Belgium	Leading Indicator	Feb		2.7		
22.02.2022	15:00	United States	CaseShiller 20 MM SA	Dec		1.2%		
22.02.2022	15:00	United States	CaseShiller 20 YY	Dec		18.3%		
22.02.2022	15:45	United States	Markit Mfg PMI Flash	Feb		55.5		
22.02.2022	15:45	United States	Markit Svcs PMI Flash	Feb		51.2		
22.02.2022	15:45	United States	Markit Comp Flash PMI	Feb		51.1		
22.02.2022	16:00	United States	Consumer Confidence	Feb	110.3	113.8	110.38	0.08

Date	Time	Country	Indicator Name	Period	Reuters Poll	Prior	SmartEstimate®	Predicted Surprise
23.02.2022	08:00	Germany	GfK Consumer Sentiment	Mar		-6.7		
23.02.2022	08:45	France	Business Climate Mfg	Feb		112		

Source: Refinitiv

# Your Weekend Wire

## The week ahead

Date	Time	Country	Indicator Name	Period	Reuters Poll	Prior	SmartEstimate®	Predicted Surprise
24.02.2022	08:00	Sweden	Unemployment Rate	Jan		7.3%		
24.02.2022	08:45	France	Consumer Confidence	Feb		99		
24.02.2022	14:30	United States	GDP 2nd Estimate	Q4	7.0%	6.9%	6.98%	-0.02%
24.02.2022	14:30	United States	GDP Deflator Prelim	Q4		7.0%		
24.02.2022	14:30	United States	Core PCE Prices Prelim	Q4		4.9%		
24.02.2022	14:30	United States	Initial Jobless Clm	14 Feb, w/e				
24.02.2022	14:30	United States	Cont Jobless Clm	7 Feb, w/e				
24.02.2022	16:00	United States	New Home Sales-Units	Jan	0.804M	0.811M	0.8079M	0.0039M

Date	Time	Country	Indicator Name	Period	Reuters Poll	Prior	SmartEstimate®	Predicted Surprise
25.02.2022	00:30	Japan	CPI Tokyo Ex fresh food YY	Feb		0.2%		
25.02.2022	00:30	Japan	CPI, Overall Tokyo	Feb		0.5%		
25.02.2022	01:01	United Kingdom	GfK Consumer Confidence	Feb		-19		
25.02.2022	08:00	Germany	GDP Detailed QQ SA	Q4		-0.7%		
25.02.2022	08:00	Germany	GDP Detailed YY NSA	Q4		1.4%		
25.02.2022	08:00	Germany	Import Prices MM	Jan		0.1%		
25.02.2022	08:00	Germany	Import Prices YY	Jan		24.0%		
25.02.2022	08:45	France	Consumer Spending MM	Jan		0.2%		
25.02.2022	08:45	France	GDP QQ Final	Q4		0.7%		
25.02.2022	08:45	France	CPI (EU Norm) Prelim YY	Feb				
25.02.2022	08:45	France	Producer Prices MM	Jan		1.0%		
25.02.2022	09:00	Italy	Consumer Confidence	Feb		114.2		
25.02.2022	09:00	Sweden	Overall Sentiment	Feb		110.1		
25.02.2022	09:00	Sweden	Consumer Confidence SA	Feb		90.1		
25.02.2022	14:30	United States	Personal Income MM	Jan	-0.4%	0.3%	-0.09%	0.31%
25.02.2022	14:30	United States	Personal Consump Real MM	Jan		-1.0%		
25.02.2022	14:30	United States	Consumption, Adjusted MM	Jan	0.6%	-0.6%	0.52%	-0.08%
25.02.2022	14:30	United States	Core PCE Price Index MM	Jan	0.5%	0.5%	0.57%	0.07%
25.02.2022	14:30	United States	Durable Goods	Jan		-0.7%		
25.02.2022	14:30	United States	Durables Ex-Transport	Jan		0.6%		
25.02.2022	16:00	United States	U Mich Sentiment Final	Feb		61.7		
25.02.2022	16:00	United States	Pending Sales Change MM	Jan		-3.8%		

Source: Refinitiv

# Your Weekend Wire Figures

## Currencies

<b>EURUSD</b>	<b>1.1342</b>	<b>Weekly Change</b>
Week Low	Week High	
1.1281	1.1395	<b>-0.01%</b>

<b>GBPUSD</b>	<b>1.3600</b>	<b>Weekly Change</b>
Week Low	Week High	
1.3487	1.3642	<b>0.34%</b>

<b>EURCHF</b>	<b>1.0445</b>	<b>Weekly Change</b>
Week Low	Week High	
1.0438	1.0549	<b>-0.43%</b>

<b>AUDUSD</b>	<b>0.7205</b>	<b>Weekly Change</b>
Week Low	Week High	
0.7087	0.7227	<b>1.18%</b>

<b>USDCHF</b>	<b>0.9210</b>	<b>Weekly Change</b>
Week Low	Week High	
0.9189	0.9273	<b>-0.43%</b>

<b>USDCAD</b>	<b>1.2705</b>	<b>Weekly Change</b>
Week Low	Week High	
1.2665	1.2783	<b>-0.24%</b>

<b>USDTRY</b>	<b>13.6296</b>	<b>Weekly Change</b>
Week Low	Week High	
13.5034	13.6788	<b>0.95%</b>

<b>EURGBP</b>	<b>0.8339</b>	<b>Weekly Change</b>
Week Low	Week High	
0.8335	0.8402	<b>-0.36%</b>

## Indices and Commodities

<b>Eurostoxx 50</b>	<b>4 090.69</b>
Week Change	YTD
<b>-0.73%</b>	<b>-2.17%</b>

<b>Gold</b>	<b>1897.8</b>
Week Change	YTD
<b>2.01%</b>	<b>5.36%</b>

<b>SMI</b>	<b>12 069.18</b>
Week Change	YTD
<b>-1.28%</b>	<b>-6.22%</b>

<b>WTI</b>	<b>89.8100</b>
Week Change	YTD
<b>-4.37%</b>	<b>18.05%</b>

<b>S&amp;P 500</b>	<b>4 485.80</b>
Week Change	YTD
<b>-0.87%</b>	<b>-8.10%</b>

<b>VIX</b>	<b>27.82</b>
Week Change	YTD
<b>2.74%</b>	<b>63.24%</b>

Sources: Bloomberg/Refinitiv



# Your CRYPTO Weekend Wire

**Crypto Market Cap:** \$1,859,341,090,488

**Dominance\*:** BTC: 41.5% ETH: 18.7%

\*: Split of crypto usage within the global crypto market cap.

## News Flow

### ➤ **China’s tech giants push toward an \$8 trillion metaverse opportunity — one that will be highly regulated.**

Imagine this: the metaverse with Chinese characteristics. That’s how the virtual world that everyone’s talking about will likely look in the world’s second-largest economy.

China’s technology giants are beginning to invest in the metaverse — the latest buzzword in internet technology. It’s a term with no concrete definition, but largely taken to mean virtual worlds that people will be playing and living in.

Censorship will likely be rife and regulation tight as Beijing continues to keep a close check on the practices of its domestic technology firms. U.S. firms like Facebook parent Meta are going all-in on the metaverse concept, while Microsoft has positioned its proposed acquisition of gaming company Activision as a play on this theme.

Chinese firms are taking a more cautious approach. So, what are they up to and how will regulation play out?

In China, the total addressable market for the metaverse could be 52 trillion yuan, or around \$8 trillion, Morgan Stanley said in a note published last month.

Companies like Tencent, NetEase, TikTok owner ByteDance and Alibaba could be the front-runners in this space among China’s internet companies.

That comes down to the type of applications that could be part of the metaverse. Analysts say that virtual reality, gaming and social media could be some of the early applications.

This may include things like buying virtual items in games or creating digital avatars of yourself to participate in meetings.

“Metaverse is the future of social network. All China’s tech giants have to embrace it to find new ways to engage the youngest generation of internet users, which is critical at the time when their business models on smartphones and mobile internet are matured,” Winston Ma, managing partner at CloudTree Ventures, told CNBC.

In an earnings call in November, Tencent CEO Pony Ma said the metaverse will be an opportunity to add growth to existing industries such as gaming. Tencent is the world’s largest gaming company with a strong portfolio of PC and mobile games.

Tencent also owns WeChat, a messaging service with over a billion users that has social media aspects.

Ma said the company has “a lot of the technology and know-how building blocks” to explore and develop the metaverse.

Meanwhile, ByteDance has made an aggressive expansion into gaming over the last year. In August, the company acquired virtual reality headset maker Pico. ByteDance also owns TikTok, the short-form video app, and its Chinese equivalent Douyin. The Beijing-headquartered firm has laid foundations in VR, social media and gaming.

Alibaba this year said it plans to launch augmented reality glasses for virtual meetings. Augmented reality refers to virtual images overlaid on the real world. Again, this could be a play on the metaverse. The e-commerce giant launched a “virtual influencer” named Dong Dong for the Winter Olympics in Beijing. The digital avatar can be found on Alibaba’s Taobao shopping app and provides facts about the Olympics and promotes items related to the Games.

NetEase, another one of China’s gaming giants, has set up a base in the southern province of Hainan focused on the development of metaverse applications, local media reported last year.

Search giant Baidu launched a metaverse app last year called XiRang, a sort of virtual world that can hold up to 100,000 people at once. Baidu executives, however, downplayed expectations of the app at its launch and said many aspects were not yet up to par. Ma Jie, a vice president at Baidu, said it could be another six years until a full launch.

Still, there are signs that China’s biggest technology names are beginning to experiment and lay the groundwork for future applications.

“Similar to the pitch we’ve seen from Meta, the metaverse concept may at first involved VR/AR-supported games and social interactive environments,” Charles Mok, the founder of Tech For Good Asia, told CNBC.

“These will obviously be the areas that China big tech players will follow first, with features that are advanced in China — such as payment, and WeChat-like integrated online services — that can be extended and built into the metaverse.”



# Your CRYPTO Weekend Wire

## News Flow

The metaverse push by Chinese tech firms comes after an intense year of regulatory scrutiny on the country's tech sector. New anti-monopoly laws for internet platforms were proposed, while a landmark personal data protection law has been passed. Beijing has also cut the amount of time children under 18 years of age are allowed to play online games.

Analysts said these existing pieces of legislation will likely be used to regulate metaverse applications as well, even as new ones are developed.

"The sheer diversity of metaverse applications means developing a 'one-fits-all' set of policies will not be feasible for Beijing," Hanyu Liu, China market analyst at Daxue Consulting, told CNBC.

"Each specific application would receive its own unique set of regulations that builds upon existing legislature."

China also continues to censor content on its tightly controlled internet.

"We should also expect to see strict censorship, meaning there will most likely be an isolated, Chinese metaverse that is separate from the international," Liu said.

There are more specific pieces of regulation that analysts said could be used to manage the metaverse.

In January, authorities passed a set of regulations that governs how internet firms can use recommendation algorithms. That was followed by draft rules regarding so-called "deep synthesis" technology. This relates to software that could be used to generate or edit voices, video or images or virtual settings. The two rules overlap.

"This overlap with the recent algorithm rule as specifically required by the new rule would have important impact on Metaverse companies in China," Ma said.

Even Chinese cities and regions are looking at opportunities for the metaverse. Last year, the major city of Shanghai mentioned the metaverse in its five-year development plan for the information technology industry.

"China is extremely smart when it comes to this. It knows just when and where it needs to stay its hand; close enough so that it can keep a careful watch, but not to the point where it would cause irreversible harm to the industry," Liu said.

Some metaverse applications may rely on cryptocurrencies. For example, if you are buying some sort of virtual land or item, you could pay with a digital currency.

This is likely to be problematic in China, where the government has looked to wipe out trading and the so-called mining of cryptocurrencies. Meanwhile, the government has been promoting its own central bank-issued digital currency, known as the digital yuan or e-CNY.

"There'll likely be very limited options for crypto," Liu from Daxue Consulting said, adding that China's digital currency might be used instead in metaverse payment applications.

### ➤ **British authorities just seized NFTs for the first time, in a £1.4 million fraud probe.**

Britain's tax watchdog has seized three non-fungible tokens, in what is thought to be the first seizure of NFTs by a U.K. law enforcement agency.

Officials at Her Majesty's Revenue and Customs say they seized the NFTs during an investigation into a suspected value-added tax (VAT) fraud case worth £1.4 million (\$1.9 million).

The suspects allegedly tried to claim back more VAT, which is a type of sales tax, than what they were owed, using a mix of stolen identities, unregistered phones and false invoices to hide their identities. The scheme involved 250 alleged fake companies, according to HMRC.

"Our first seizure of a Non-Fungible Token serves as a warning to anyone who thinks they can use cryptoassets to hide money from HMRC," Nick Sharp, HMRC's deputy director of economic crime, said in a statement Monday.

"We constantly adapt to new technology to ensure we keep pace with how criminals and evaders look to conceal their assets," Sharp added.

NFTs are one-of-a-kind digital assets designed to track ownership of virtual items, like a work of art or video game character, on the blockchain. Blockchains are the digital ledger systems that underpin most major cryptocurrencies.

Demand for NFTs has soared lately, with sales of such tokens topping \$40 billion in 2021. However, the market is prone to thefts and scams, and there are concerns that much trading activity in NFTs has been fueled by market manipulation tactics such as wash trading.



## Your CRYPTO Weekend Wire

### News Flow

HMRC says it is the first law enforcement body in the U.K. to make a seizure of NFTs. Authorities seized three NFTs representing digital art, as well as another £5,000 in other crypto assets. The NFTs are yet to be appraised, and the probe is ongoing, HMRC said.

#### ➤ **Metaverse ETFs are booming in South Korea and retail investors are piling in.**

Metaverse exchange-traded funds are booming in South Korea as retail investors buy into funds focused on tech's new frontier. The metaverse refers broadly to a virtual world where humans interact through three-dimensional avatars. In the metaverse, users can engage in activities like gaming, concerts or live sports using virtual reality headsets like Oculus. South Korea's metaverse ETFs were the first to launch in Asia as the buzz around the next generation of the internet grew last year. ETFs are a basket of stocks or bonds that broadly track market indices and offer investors more diversification. South Korea's first four metaverse ETFs launched in October and drew inflows of \$100 million in just under two weeks, according to Rahul Sen Sharma, managing partner of index provider Indxx. South Korea isn't alone though. Metaverse ETFs have also been cropping up in the U.S. and analysts noted more will launch soon. As of Jan. 19, there were eight metaverse ETFs listed in South Korea, drawing over \$1 billion in inflows, according to data from Samsung Asset Management, which launched two of the ETFs. Of that amount, over \$800 million has gone into four ETFs focused on South Korean metaverse-related stocks, while more than \$338 million has been funneled into more global metaverse ETFs, the data showed. Some of the ETFs include Samsung Asset Management's KODEX K-Metaverse Active, NH Amundi Asset Management's Hanaro Fn K-Metaverse MZ, KB Asset Management's KBSTAR iSelect Metaverse and Mirae Asset Global Investment's Tiger Fn Metaverse. Top holdings in the ETFs include tech companies and chipmakers as well as stocks associated with South Korea's entertainment industry. Samsung's metaverse ETF, for instance, includes shares of Hybe, which owns the music label for hugely popular K-pop group BTS, as well as video game makers such as Pearl Abyss. Indxx's Sharma said the K-pop industry, with its global popularity, is expected to play an "integral" role in developing the metaverse. He noted several recent announcements related to K-pop metaverse infrastructure projects and non-fungible tokens. NFTs are digital tokens that represent proof of ownership of assets such as art, collectibles or memes. K-pop groups and labels have launched NFT merchandise and have also held concerts and fan events in the metaverse, according to media reports.

As metaverse ETFs launch in South Korea, retail interest has followed. More than 70% of the inflows into both domestic and global metaverse ETFs in South Korea are from retail investors, according to the Samsung Asset Management data. "The metaverse is touted as one of the most talked-about key topics of 2021 in South Korea," said Sharma from Indxx. "These high fund flow numbers represent a generally positive outlook towards the metaverse theme, additional to the developments that illustrate the growing popularity among the citizens and the government of South Korea," Sharma said. Sharma said retail investors in Asia-Pacific have been driving growth within ETFs more broadly. He noted the number of Australian retail investors in ETFs surged 33% last year. Sharma, citing a recent Euroclear report, said demand in Asia-Pacific for ETFs is set to rise from \$1.5 trillion to \$5 trillion over the next five years. In contrast, U.S. retail investor ownership of ETFs has slipped behind that of institutional investors. Investment advisors now own nearly 40% of U.S.-listed ETFs, compared with just over 35% five years ago, according to data from Citi. Meanwhile retail ownership has slipped from 40% five years ago to 38.5% now. Overall, institutional investors still eclipse retail investors when it comes to total trading volume. While in the U.S., retail investors make up about a quarter of trading activity, they constitute just 5% to 7% of Europe's total trading volume, according to Vanda Research. In China, retail participation is over 60%.



# Your CRYPTO Weekend Wire

## News Flow

### ➤ Here's the outlook for bitcoin as geopolitical tensions heat up and interest rates rise.

The bitcoin narrative could be tested this week as investors monitor tense developments between Ukraine and Russia and weigh the possibility of the Federal Reserve hiking interest rates by 50 basis points, or 0.5 percentage points, in March.

The largest cryptocurrency by market capital currency has long been regarded by early investors and enthusiasts as a safe haven asset — one that ideally could offset risk in investors' portfolios and limit exposure to negative shocks.

However, in recent months bitcoin has been trading like equities, specifically like riskier growth-oriented stocks. It's still recovering from a big drop from earlier in the year, when rising rates led investors to shed positions in tech and other risky assets.

"Bitcoin is labeled by some as a stateless currency, and it has indeed performed well in the past when there were geopolitical tensions, so we could expect some demand as a safe haven asset," said Yuya Hasegawa, crypto market analyst at Japanese bitcoin exchange Bitbank.

However, "the change in the landscape made bitcoin fragile to the U.S. stock market volatility, so bitcoin investors may not be able to feel at ease until the situation at the Russia-Ukraine border starts to settle down," he added.

The price of bitcoin is about 10% down for the year, according to Coin Metrics, and about 38% from its November all-time high.

With a rising rate environment, tech and growth stocks could remain in a chokehold for a while. That means if this is crypto winter, a term that refers to an extended bearish period, it could last for several months more.

"If we are in a bear market, we'll see another eight or nine months of sideways to down [movement], which is an opportunity for the tourists to leave the market and the real players to continue building this technology," said Chris King, CEO and founder of Eaglebrook Advisors.

Katie Stockton, founder of Fairlead Strategies, said a resistance level at \$46,730 should remain intact this week. Support is near \$37,360, but bitcoin doesn't look in store for a near-term test, she added.

Seasoned crypto investors have been here before and are rarely spooked by extended low periods. Bitcoin has experienced only one crypto winter before: In 2018, its price crashed by about 80% from its then all-time high. The market has evolved significantly since then.

Low periods are a time for the industry to clean up and build the infrastructure and applications that will make it easier for the next wave of newcomers in the next bull market. Between decentralized finance, nonfungible tokens, the metaverse and more, there's plenty of interest in new sectors of crypto that go beyond bitcoin.

"Use cases in adoption are burgeoning," said Rodrigo Vicuna, chief financial officer at Prime Trust. "We're just beginning to scratch the surface of where a lot of blockchains are going."

For example, interest — and money — in NFTs boomed in 2021. Most people still only see them as digital art, a concept that's hard to grasp for many. People also overlook other potential uses for NFTs. For instance, an NFT of a house deed could provide a history of property ownership, while NFT medical records may offer patients a safe way to share information with doctors, Vicuna said.

King noted that despite new interest in decentralized finance, or DeFi, it's still too early and underdeveloped for it to take off. DeFi allows users to participate in lending and other financial activities using blockchain and do so without any middlemen.

"We're very long DeFi in some of our strategies," King said as an example. "DeFi is still speculative. The infrastructure is still being built, it's still clunky and hard to use. "Bitcoin in 2013 through 2016 was hard to buy, but companies like Coinbase and Gemini made it easier. DeFi needs that onramp to improve it and make it less speculative. It just takes time."

With the bitcoin cycle lengthening and returns diminishing, these other assets play a big role in ushering new entrants into crypto broadly and increasing adoption. Bitcoin itself hasn't found its killer app yet — that is, the feature that makes it indispensable — King said, but increasing adoption will get it there.

"The most important thing that we follow and look at both from a short- and long-term perspective is adoption, it's really all that matters," King said. Like Facebook, Instagram and Uber, he said, "hype around these assets and the price going up led to more users joining the network, which is ultimately what we care about."



## Your CRYPTO Weekend Wire

### News Flow

#### ➤ **Fraudsters are using bots to drain cryptocurrency accounts.**

Dr. Anders Apgar was out for dinner last month with his family, and his phone would not stop buzzing. It looked like a robocall, so he tried to ignore it.

But the calls would not stop. Then his wife's phone also started to ring.

"When she picks it up, a banner came across, a notification that says, 'Your account's in jeopardy,'" he said.

The warning, which he said was a text message, prompted him to pick up his phone. That was when the couple's nightmare started.

It's the kind of nightmare many crypto account holders around the country are facing as hackers target a boom in the industry, cybersecurity experts said.

The Apgars, who are both Maryland-based obstetricians, began investing in cryptocurrency several years ago. By December, their account had grown to about \$106,000, mainly held in bitcoin. Like millions of investors across the country, their account is with Coinbase, the country's largest cryptocurrency platform.

When Apgar picked up the phone, a female voice said, "Hello, welcome to Coinbase security prevention line. We have detected unauthorized activity due to failed log-in attempt on your account. This was requested from a Canada IP address. If this (is) not you, please press 1, to complete precautions recovering your account." The call lasted just 19 seconds.

Alarmed, Apgar pressed 1.

He said he cannot remember if he manually entered his two-factor authentication code or if it came up automatically on his screen. But what happened in that moment led to his account being locked in less than two minutes. As Apgar has not regained access, he said he assumes the fraudsters stole most if not all of the crypto, but he can't be sure.

"It was just dread and an emptiness of just, 'Oh my gosh, I can't get this back,'" he said.

The Apgars were targeted by a particularly insidious type of fraud that takes advantage of two-factor authentication, or 2FA. People use 2FA, a second level of security that often involves a passcode, to safeguard a range of accounts at crypto exchanges, banks or anywhere else they carry out digital transactions.

But this new type of fraud goes right at that 2FA code, and it uses people's fear of their accounts being hacked against them. In acting they think will protect them, they expose themselves to thieves.

The fraud tool is called a one-time password, or OTP, bot.

A report produced by Florida-based cybersecurity firm and CNBC contributor Q6 Cyber said the OTP bots are driving substantial losses for financial and other institutions. The damage is hard to quantify now because the bot attacks are relatively new.

"The bot calls are crafted in a very skillful manner, creating a sense of urgency and trust over the phone. The calls rely on fear, convincing the victims to act to 'avoid' fraud in their account," the report said.

The scam works in part because victims are used to providing a code for authentication to verify account information. At first listen, the robocalls can sound legitimate — especially if the victim is harried or distracted by other things now the call comes in.

"It's human nature," said Jessica Kelley, a Q6 Cyber analyst who authored the report. "If you receive a call that tells you someone's trying to sign into your account, you're not thinking, 'Well, I wasn't trying to.'"

The bots began showing up for sale on messaging platform Telegram last summer. Kelley identified at least six Telegram channels with more than 10,000 subscribers each selling the bots.

While there is no official estimate on the amount of crypto stolen, Kelley said fraudsters routinely brag on Telegram about how well the bots have worked, netting for each user thousands or hundreds of thousands of dollars in crypto. The cost of the bots ranges from \$100 a month to \$4,000 for a lifetime subscription.

"Before these OTP bots, a cybercriminal would have to make that call himself," Kelley said. "They would have to call the victim and try to get them to divulge their personal identifiable information or bank account PIN or their 2FA passcode. And now, with these bots, that whole system is just automated and the scalability is that much larger."



## Your CRYPTO Weekend Wire

### News Flow

“Once the victim inputs that 2FA code, or any other information that they requested the victim put in their phone, that information gets sent to the bot,” Kelley said. The bot “then automatically sends it to the cybercriminal, who then has access to the victim’s account.” She said criminals could “potentially steal everything, because with these transactions, they can do them one after the other until the amount is basically drained.”

In a statement to CNBC, a Coinbase spokesperson said, “Coinbase will never make unsolicited calls to its customers, and we encourage everyone to be cautious when providing information over the phone. If you receive a call from someone claiming to be from a financial institution (whether Coinbase or your bank), do not disclose any of your account details or security codes. Instead, hang up and call them back at an official phone number listed on the organization’s website.”

David Silver, another Coinbase customer, knew the company would not be calling him. He recently received a robocall saying there was a problem with his account.

“And immediately, it was an electronic voice that told me it was Coinbase Fraud Department,” he said. “And I immediately turned to the lawyer sitting next to me and said, ‘Start videoing.’ I knew instantaneously what this was and what it was going to be.”

Silver knew what the call was about because he is not just a Coinbase client — he is an attorney who specializes in cryptocurrency and financial fraud cases.

Silver pressed 1 and found himself on a live call. A person got on the line pretending to be a Coinbase employee.

“And they immediately started telling me things that I know are in violation of what Coinbase would do,” he said. “For instance, they will never ask for your password. They will never try and take over your computer.”

Silver asked if he could be sent an email verifying that the call was from Coinbase. The answer was no.

“And their answer was no because there’s only certain ways that you can mask the email coming directly from a domain that nowadays, the domain carriers such as GoDaddy, Google — it’s very hard to spoof email coming from the domains,” he said. “And they weren’t willing to send me the email. I would say that was my last shred of hope that they were legitimate is when I asked them to send me the email and they said no.”

After nearly seven minutes, Silver was asked to share his computer screen. He ended the call.

“I’m not surprised I got the call. But I do question how they had my personal cell phone number and where they’re getting that information to tie me to Coinbase,” he said.

Apgar said he wishes he had never answered the phone. To make matters worse, he has been unable to get his account access restored, he said. When CNBC reached out to Coinbase about the Apgars regaining access to their account, a company spokesperson said the matter was turned over to its security team.

Apgar said Monday that he had just responded to an email from Coinbase to help restore access to the account.

Customer service at Coinbase has been a widespread problem, CNBC found last year. Customers around the country said hackers were draining their accounts but when they turned to Coinbase for help they could not get a response. After the story, Coinbase set up a phone support line to help customers, but even that has been fraught with problems.

Asked what he could have done differently, Apgar said it’s simple: not answer the phone.

### ➤ **Berkshire Hathaway Invests \$1B in Brazilian Digital Bank Nubank, Reduces Mastercard, Visa Positions.**

Berkshire Hathaway bought \$1 billion in shares of Brazilian digital bank Nubank in the fourth quarter of 2021, according to a 13F SEC filing.

In December 2021, when Nubank went public, Berkshire Hathaway reportedly acquired 30 million shares for a total of \$250 million. At that time, Nubank’s valuation reached \$41.5 billion.

In the fourth quarter of 2021, Berkshire also sold 1.27 million shares of VISA and 302,000 shares of Mastercard.

In June 2021, Berkshire Hathaway invested \$500 million in Nubank by leading the extension of a Series G funding round.

Although Nubank does not allow trading in cryptocurrencies, its investment unit, NuInvest, allows users to invest in crypto ETFs, according to the company website.

In 2018, Berkshire Hathaway CEO of Warren Buffett called bitcoin “rat poison squared.”



# Your CRYPTO Weekend Wire

## News Flow

### ➤ **\$1T opportunity: JPMorgan becomes first major bank in the Metaverse.**

The largest bank in the US, JPMorgan, has taken a massive step into the Metaverse, opening a virtual lounge in the popular blockchain-based world Decentraland after it labelled the sector as a \$1 trillion opportunity.

Visitors to the lounge, situated in Decentraland’s Metajuku mall, are greeted by a roaming tiger and a digital portrait of Jamie Dimon, the CEO of JPMorgan. If players walk upstairs, they can watch an executive’s presentation on the economics of cryptocurrency.

The “onyx lounge”, named after JPMorgan’s in-house blockchain payments system was unveiled alongside a report from the bank, detailing the types of business opportunities companies can expect to find in the Metaverse.

The report states: “The Metaverse will likely infiltrate every sector in some way in the coming years, with the market opportunity estimated at over \$1 trillion in yearly revenues”, while also highlighting that \$54 billion is already being spent on virtual goods each year—twice the amount spent buying music.

The report notes the average price of virtual land doubled from \$6,000 to \$12,000 between June and December last year and predicts that in-game advertising spending will reach \$18.4 billion per annum by 2027.

JPMorgan has identified a rush of individual creators utilizing Web3 to monetize their work in new ways as a driving force behind the new economy being build in the Metaverse.

Increasing mainstream adoption of the Metaverse is also being driven by interest from massive brands, notes JPMorgan, citing Adidas and Nike’s move to create NFT-based products and shopfronts as well as Samsung opening a Metaverse store as enormous steps forward in adoption.

As if to underline the point, Disney announced this morning that it has officially appointed a new executive, Mike White, to lead its foray into the Metaverse. According to a memo from Disney CEO Bob Chapek, Disney is looking to expand its storytelling prowess to the digital realm. “Today, we have an opportunity to connect those universes and create an entirely new paradigm for how audiences experience and engage with our stories,” said Chapek.

The JPMorgan report wasn’t all positive, however.

In a section titled "Navigating hype vs. reality," the report stated, “Despite much excitement about the possibilities of the Metaverse, in order to enable its full potential for engagement, community building, self-expression and commerce, key areas need to be further developed and matured,” pointing to flaws in the overall user experience, poor performance of avatars, as well as difficulties with commercial infrastructure.

### ➤ **UAE to Issue Crypto Licenses in Bid to Become Industry Hub.**

The United Arab Emirates is preparing to issue federal licenses for virtual assets service providers by the end of this quarter in a bid to attract crypto companies to the country, Bloomberg reported on Thursday, citing a government official.

The Securities and Commodities Authority (SCA) is in the final stage of setting up a framework allowing VASPs to set up shop in the country, the official said.

Having considered the approaches of the U.S., U.K. and Singapore, the UAE will take a hybrid approach: The SCA and central bank will be responsible for regulation, with regional financial centers determining their day-to-day procedures on licenses, according to Bloomberg.

The government also wants to create a favorable environment for crypto mining, the report said.

The government of Dubai, one of the seven constituent emirates, said in December that it will create a favorable regulated zone for crypto service providers in the Dubai World Trade Center, a skyscraper in the city. The next day, Binance, the world's largest crypto exchange, signed a cooperation agreement with the trade center.

Abu Dhabi’s International Financial Center, a finance hub and free-trade zone, issued its first crypto exchange license, to Matrix, in May 2020. In November 2021, three exchanges headquartered at the center were fully operational while another three were in the process of launching, the finance hub’s regulation chief told local news site The National.

The Dubai Multi Commodities Center, the largest free-trade zone in the UAE set up a regulatory framework for crypto firms in March 2021. It has already licensed 22 companies, Bloomberg reported.



# Your CRYPTO Weekend Wire

## Figures and Charts

Published on TradingView.com, Feb 18, 2022 07:17 UTC  
 Bitcoin / U.S. Dollar, 1D, BITSTAMP O40532.66 H40972.11 L40331.93 C40784.58 +228.47 (+0.56%)  
 Vol: 478



<b>BTC</b>	<b>40 767.38</b>	<b>Weekly Change</b>
Week Low	Week High	<b>-3.57%</b>
40 086.14	44 780.06	
<b>Circulating Supply</b>		
18 961 562.00		
<b>Market Cap</b>		
\$ 772 418 083 215.00		

TradingView

Published on TradingView.com, Feb 18, 2022 07:18 UTC  
 Ethereum / U.S. Dollar, 1D, COINBASE O2094.52 H2924.06 L2863.36 C2917.44 +23.88 (+0.83%)  
 Vol: 42.424K



	<b>2 909.93</b>	<b>Weekly Change</b>
Week Low	Week High	<b>0.71%</b>
2832.01	3198.57	
<b>Circulating Supply</b>		
119 627 409.00		
<b>Market Cap</b>		
\$ 347 855 430 063.00		

TradingView



# Your CRYPTO Weekend Wire Glossary

## A

- ❖ **Address (Crypto Address):** An address is comparable to a bank account number. It is a unique collection of numbers and letters. This identification code is required to carry out a blockchain transaction and is unique for each owner. (ie: 1GyWgXtkVG5gsm9Ym1rkHoJHAftmPnTHQj)
- ❖ **Airdrop:** An airdrop is a way to distribute coins. End users can generally get coins for free or in exchange for a small task, such as subscribing to a newsletter, sending a tweet or inviting other people via a personal affiliate link.
- ❖ **Algorithm:** The 'algorithm' is a way to solve a task using data processing and calculations. There are different types of algorithms in use by blockchains.
- ❖ **Altcoin:** An altcoin is any cryptocurrency or token created after the Bitcoin was developed.
- ❖ **Anti-Money Laundering (AML):** AML is the abbreviation for 'anti-money laundering'. AML stands for policy and legislation on money laundering. This prevents illegally acquired funds from being converted into a legal variant. Within the crypto world, it is no longer unusual for AML techniques to be used by exchanges and wallets. This term is often used as AML/KYC, where KYC stands for 'Know your customer'.
- ❖ **APY:** APY is short for 'annual percentage yield', which is the total return rate that is earned on an interest-bearing asset or savings account. The compounding interest should be considered when the APY percentage is projected. An APY of 5% will turn \$100 into \$105 after exactly one year.
- ❖ **ATH:** ATH is the abbreviation of 'All-Time High' and means the highest price ever paid for a particular coin. ATH is also often used to indicate that someone's total portfolio has reached the highest value ever.
- ❖ **ATL:** ATL stands for 'all-time-low' and is the opposite of ATH, or 'all-time-high'. ATL is used to indicate that the price of a coin or the entire wallet of a person is at the lowest level ever in terms of value.

## B

- ❖ **Bitcoin (BTC):** Bitcoin is the very first, best known and currently the most valuable digital coin.
- ❖ **Bitcoin (unit of Currency):** The bitcoin is the very first cryptocurrency invented in 2008 by an anonymous developer named Satoshi Nakamoto. It can be divided up to 8 digits after the comma. The smallest one is called a satoshi (0.00000001 BTC).
- ❖ **Blockchain:** The blockchain is a technique that makes it possible to safely store data in a decentralized way. This data can be money, but it could be other data as well.



# Your CRYPTO Weekend Wire Glossary

- ❖ **Bot:** A 'bot' is an autonomous program on a network, such as the Internet, that can interact with systems or users. It is often designed to automate certain manual tasks. Bots are often used in Telegram chat groups to prevent spam.

## C

- ❖ **CBDC:** CBDC stands for 'Central bank digital currency' and is the fully digital form of fiat money. Unlike at Bitcoin, this type of currency would be created by a centralized authority like a central bank or a monetary authority. It might or might not have a distributed ledger. Each central bank in the world can have a custom implementation. Currently, it is still in test phase or just a concept on paper.
- ❖ **Centralized:** Centralized means that one organization has control. For example, governments and companies are centralized. The opposite of centralized is decentralized, such as the Internet and the blockchain.
- ❖ **Coin:** A Coin is the umbrella term for cryptocurrencies and tokens.
- ❖ **Cold Storage:** Cold storage refers to storing cryptocurrency on a place where the private key cannot be accessed via the internet. This can be done on a hardware wallet, paper wallet or software wallet in an offline environment.
- ❖ **Cold Wallet:** A cold wallet is a wallet for storing cryptocurrency where the private key is not exposed to the Internet.
- ❖ **Cryptocurrency:** A cryptocurrency, also known as 'crypto', is a type of currency that is transferred via a blockchain. It uses strong cryptography to secure the transactions, that usually have value. While traditional fiat currencies are subject to counterfeiting, this is not possible in a cryptocurrency. Bitcoin is still the most valuable cryptocurrency.

## D

- ❖ **DAO:** DAO is an abbreviation of 'Decentralized Autonomous Organization'. This is an organization that runs automatically on itself without any human interventions. The work is automatically executed through Smart contracts.
- ❖ **DeFi:** DeFi is the abbreviation of 'Decentralized Finance'. It can be defined as a new financial ecosystem consisting of various financial tools, apps and services utilizing blockchain technology. It's an umbrella term for all these projects combined and is growing daily. Examples of DeFi functionality are banking services in the form of stablecoins, decentralized exchanges, derivatives, prediction markets, or lending and borrowing systems. The last one can be either peer-to-peer or with a pool. It is a combination of replicating products and services in the traditional finance industry as well as innovative new ones only possible with blockchain technology.

Sources: [blockspot.io/crypto-dictionary](https://blockspot.io/crypto-dictionary)



# Your CRYPTO Weekend Wire Glossary

❖ **DEX:** A DEX is short for Decentralized Exchange. This is an exchange where people can trade cryptocurrencies and tokens without the need of a middleman. It is usually run by code in a 'smart contract'. The transactions are generally written to the blockchain, which makes a DEX by default slower than a centralized exchange that uses fast databases. The main benefit of a DEX is that nobody, but yourself, holds the private key to the funds. Even though a DEX will not have a middleman regarding the trades, the exchange and the website are centrally managed. Therefore, it's not 100% decentralized in fact. The level of decentralization differs per DEX. Use the filters in this list with exchanges to find each DEX.

## E

- ❖ **ERC-20:** ERC20 coins are all tokens on the Ethereum blockchain. These coins are also supported by most Ethereum wallets.
- ❖ **ETF:** ETF is an abbreviation for 'Exchange-Traded-Fund' or a listed fund on a stock exchange. This is a tradable product (security) that follows the price of an underlying asset. Examples are an equity index, a basket of certain securities, bonds and commodities. There are several applications for a Bitcoin ETF, but none of these has yet been approved by the SEC in the United States of America.
- ❖ **Ethereum:** Ethereum (ETH) consists of one blockchain where both its own transactions (Ether) and those of numerous other coins (tokens) are recorded. Ethereum distinctive feature is the so-called "smart contract". The programming language of Ethereum is written in such a way that programmers can write their own programs based on the Ethereum blockchain.

## F

- ❖ **Fiat Currency:** Fiat currency or also simply called fiat is money issued by a government or organizations that can issue it, like banks for example. It doesn't have any value by itself and is for decades not backed by gold anymore either. It instead remains value based on the trust of the people. Once the trust goes away it will decrease in value and could eventually cause hyperinflation.
- ❖ **Fully Diluted:** Fully Diluted in crypto refers to fully diluted market cap. This is the market cap of a coin based on its total supply instead of the circulating supply. This is an important metric for investors to compare coins and help with the decision if it's overvalued or undervalued.

## H

- ❖ **HODL:** HODL is the wrong spelling of 'hold'. This spelling mistake was once made by someone accidentally or intentionally on a forum. Since then, this term has been used to indicate that you keep or should be holding your position.



# Your CRYPTO Weekend Wire Glossary

## I

- ❖ **ICO:** An 'initial coin offering' (ICO) can be compared a bit with an IPO. Investors get an opportunity to invest in a certain coin for the first time. The difference with the stock market however is that a company must meet all kinds of requirements before the IPO can take place. The market of ICO's is much less regulated. Therefore, it happens more often that an ICO is fraudulent.
- ❖ **Interoperability:** The term interoperability in crypto refers to blockchain interoperability. In short, this means the ability to share information between different blockchains. Since the launch of Bitcoin, a lot of new blockchains have emerged of which the most well known Ethereum. All these new blockchains are in a way competing to get adoption by developers and users and results in a lot of silos. Since each blockchain usually has its own speciality, it would make sense for developers to utilize more than one blockchain. For this to work there is a need for the interoperability and several projects are working on this.

## K

- ❖ **Key Pairs:** A key pair is the combination of a public and private key together. During the process of creating a wallet, a pair of keys is generated. The private key is the most important one and should be backed up safely and not shared with anyone.
- ❖ **KYC:** KYC is an abbreviation for 'Know Your Customer' and was created to combat money laundering via cryptocurrencies. At almost every ICO it is mandatory to prove that you are who you say you are. This is also regularly requested at crypto exchanges.

## M

- ❖ **Masternode:** A masternode is a server, ran from home or in a data center, that has an essential role in a decentralized network. It usually performs specific tasks, like storing files or data and keeping it accessible in the network. It could also function to validate the transaction or for consensus purposes like voting on proposals. The technical (memory, CPU, etc.) and financial criteria (number of coins needed) are different for each coin. If the masternode you set up does not perform well it's possible to lose your coins if those are meant as collateral. The rewards could also just stop and then you can just start over again. A masternode usually gives a high reward that's paid out in the coin itself.
- ❖ **Maximum Supply:** This is the maximum number of coins that will exist for a token or cryptocurrency. If there is a max supply defined, no more coins can be created. 'Burned' coins are part of this supply, so therefore it is always larger than or equal to the total supply.  
**For Bitcoin, the maximum is set to 21 million.**
- ❖ **Mining:** Mining is also known as 'Cryptocurrency mining' or 'Cryptomining'. It is a process where blocks are added to a blockchain by solving a mathematical puzzle. The block can also contain transactions on that blockchain and will then become verified and immutable. Depending on the blockchain, mining can be done with a CPU, GPU, specialized hardware or a combination of all.



# Your CRYPTO Weekend Wire Glossary

## N

- ❖ **NFT:** *NFT is the abbreviation of non-fungible token. This is a type of token representing a unique asset. These can be either digital or represent real-world assets. Examples are a sword in a game or ownership of a piece of land. NFT's are generally scarce, unique and indivisible. The Ethereum blockchain makes it easy to create NFT's with it's ERC-721 and ERC-1155 standards.*

## O

- ❖ **ODN:** *ODN is the abbreviation of 'OriginTrail Decentralized Network'. This is an open-source and permissionless network that relies on an off-chain technology stack consisting of several inter-related layers. It is a decentralized network of data providers, data creators, data holders, and data viewers. The glue between all entities is the ERC-20 based Trace Token (TRAC). This is used as a collateral stake to keep data holders honest and for payments to compensate the data holders for providing their resources.*

## P

- ❖ **Paper Wallet:** *A paper wallet is an alternative to a hardware or software wallet. It is a piece of paper or a PDF containing the information to access the cryptocurrency in that wallet. It normally consists of a 'public key' and a 'private key'.*
- ❖ **Permissioned Blockchain/ledger:** *Anyone can mine Bitcoins because it is a public blockchain. This is not the case with a permissioned blockchain. There is a layer above it that determines which entity can write transactions in a block. The XRP coin from the company Ripple Labs is an example of such a blockchain and has CGI, MIT and Microsoft as approved entities for example. These are called "transaction validators".*
- ❖ **PoA (Proof of Authority):** *PoA stands for 'Proof of Authority'. This is a validation method to process transactions and blocks in a blockchain only by approved accounts. These are known as 'validators' and run specific software to store the transactions in blocks. Since the identity is linked to the system, it can contribute to more trust.*
- ❖ **Private Key:** *A private key in the crypto space can be defined as the combination of letters and numbers that corresponds to a specific public key. The private key can be used to gain access to the assets on that public key, also known as the wallet address. Once you share your private key with somebody, store it on your computer in plain text or type it in a website or app, you risk losing all your funds stored on its a corresponding public address.*
- ❖ **Public Key:** *A public key in the crypto space can be defined as a combination of letters and numbers and forms the address to which the cryptocurrencies or tokens can be sent to. Everybody who knows the public key of somebody can see the assets stored on that address. Only the owner of the corresponding private key can send those assets out.*



# Your CRYPTO Weekend Wire Glossary

## Q

- ❖ **QR Code:** A QR code is a type of barcode in the form of a square. The letters QR stand for 'Quick Response'. The code contains many dots, a few small squares and sometimes a small logo in the middle. This is different from most other barcode types, which are rectangular with lines. A QR code can therefore contain much more information. Within the crypto world, it is often used to make a 'wallet' address scannable. This speeds up the process of transferring crypto and prevents errors.

## S

- ❖ **Satoshi Nakamoto:** Satoshi Nakamoto is the alias of the creator of Bitcoin, who wants to remain anonymous. Nobody knows who it is. It could be a person, a group, a company or even a government. It is quite likely that it is a person because there are people who have communicated with him or her via e-mail.
- ❖ **SEC:** SEC is the abbreviation of 'Securities and Exchange Commission'. This is an independent government organization of the United States of America. The SEC holds the primary responsibility regarding the financial markets. They enforce the federal securities laws, propose new rules and regulate the US financial markets.
- ❖ **Stablecoin:** Stablecoins are tokens or cryptocurrencies attempting to have a minimized volatility of its price. It usually tries to keep a stable price of a related asset like USD for example. It can be backed by the related asset or replicated using smart contracts. Stablecoins are usually pegged to fiat money, but it's also possible to be pegged to precious metals like gold or silver, or even other assets. It enables an easily accessible way to store crypto wealth, temporarily, in a more stable asset during market volatility instead of using the traditional financial ecosystem. Fiat withdrawals can take a few days and could be costly as well.

## T

- ❖ **Tether:** The Tether is often abbreviated as USDT on exchanges. This is a non-government regulated 'stablecoin' with a value of around 1 US dollar. The company behind this coin claims that every Tether in circulation is covered with real dollars on their bank account.
- ❖ **Total Supply:** The 'total supply' indicates the number of coins already in circulation, supplemented with the coins that are not tradable yet. So, it only applies to coins already in existence. This is different from the 'max supply', in which future coins are included. The total supply is greater than or equal to the 'circulating' supply. It can consist of tradable and non-tradable coins, such as reserved or not yet released coins for the team or investors.
- ❖ **Transaction Fee:** The 'transaction fee' is the amount that must be paid to execute transactions on the Blockchain. This fee is usually paid to the 'Miners', but sometimes they are burned. There are also several cryptocurrencies, where you don't have to pay a fee.



# Your CRYPTO Weekend Wire

## Glossary

### W

- ❖ **Wallet:** A 'wallet' is a place to store cryptocurrencies encrypted. There are several variants, such as a paper wallet, hardware wallet or software wallet. Each coin has one or more supported wallets.
- ❖ **Whale:** A 'whale' is someone with a very large position in a coin.
- ❖ **Whitepaper:** A 'whitepaper' is a document that is almost always written for the launch of a new coin through an ICO. All aspects of a coin should be explained here: how it is used, for what and sometimes also the price expectation. After the ICO new versions can be released if the situation changes.

### Y

- ❖ **Yield Farming:** Yield farming is the process of generating the most returns possible on your crypto assets by putting them to work. Within the crypto space, DeFi has taken on a big role and services inside this space are making yield farming possible. There are nowadays ways to move your crypto assets to pools to gain interest on those assets giving it an annual percentage yield (APY). Just buying crypto-assets and holding them in your wallet, won't generate any yield, but lending them out with DeFi services like, Compound, for example, does make this possible. A term closely related to yield farming is liquidity mining.

Sources: [blockspot.io/crypto-dictionary](https://blockspot.io/crypto-dictionary)

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