Hamilton Lane®

COVID-19 & Market Update

19 April 2022 | Mario Giannini, CEO

KEY TAKEAWAYS

- So, what is next? It is difficult to see any outcome for the foreseeable future other than continued war in Ukraine. Russia cannot accept defeat and Ukraine cannot accept any conditions that Russia might accept in light of how much Ukraine has already suffered from Russian atrocities that will only continue. Page 7
- Here's a prediction: We will soon spend a great deal of time talking about famine in parts of the world. Page 11
- The war in Ukraine and inflation dominate news and have relegated COVID-19 discussions to back pages, except in one very visible place—China. Page 11
- Here's a conclusion that might surprise you: Overall, Q1 2022 was net cash flow positive for private equity as contributions came down significantly while distribution activity came down less. Page 19
- There's a lot of discussion of the disappearing SPAC market, but the big story for the private markets/public markets intersection is actually the disappearing IPO market. Page 20

Update #38.

In Norse mythology, the number 38 was said to represent unnatural bravery.

Ukraine's country code is +380, often presented as +38 0. Ukrainians deserve that number.

In 1938, Eddie Cochran was born. Who? He was one of the first rockers in the 1950s, with a series of hits. Sadly, he died in a car accident in the UK when he was 21. His most enduring hit was "Summertime Blues," a teen-angst anthem of the day that he co-wrote and performed. Take a look at him on a television stage in 1959. "Summertime Blues" is likely one of the most covered songs in rock history, intersecting with various styles and performers, so let's follow this song over time. It was voted song number 73 in Rolling Stones' 500 Greatest Songs of All Time. Interestingly, it barely made the top 10 singles chart around the world when it was originally released. Then, the covers began, first with the Beach Boys and then, in 1968, it hit number one on

the Dutch singles chart when Blue Cheer covered the song. I will include their "live" version so that we can all appreciate what the '60s could really be like away from the stardust memories of those that lived in that era.

The song became a true rock anthem with arguably its most iconic performance. (I believe that is the first, and I hope the last, time I use the word "iconic" in any of these updates. It is such a tired and overused term—everything now is iconic—but I had to try it out and see how it felt. It feels so daring, you may now see other equally incisive words like "synergy" or "literally." I might even discuss "giving 110% effort" to something so you know I'm really trying…) Back to the iconic performance: The Who, whether on the album "Live at Leeds" (The Who's best live performance of this song) or the performance that defined the song at Woodstock. I'll share a performance from 1970. The Woodstock version has too lengthy an ending. Compare that to Cochrane's live performance. Rock had come a long way and, if you don't like this performance, well, I guess rock isn't your thing.

The covers proliferated. Jimi Hendrix, Olivia Newton-John, the Rolling Stones, Bon Jovi, Bruce Springsteen, Alvin and the Chipmunks, The Black Keys, James Taylor, Joan Jett, and so many others. You weren't a performer if you didn't cover "Summertime Blues." Think of the various styles each of those performers have as they each gave their version of the song. James Taylor sounds as though he is performing at the Starlight Lounge on the Vegas strip. The Black Keys take distortion to another level and Joan Jett sings the song as though she is going to rip your face off. Debbie Harry and Blondie, one of the personifications of the punk movement, covered the song. Punk meets rock. I know Blondie is known for a variety of hit songs, "Heart of Glass," "Call Me" and "Dreaming." For some reason less known but still a number one song is perhaps my favorite, "The Tide is High." The video does answer, definitively, the question whether most early MTV rock videos aged well. (A bonus track because her voice is so incredible across a variety of styles: Miley Cyrus's version of Blondie's "Heart of Glass.")

Another cover, performed for the movie, "La Bamba," was Brian Setzer's, originally of Stray Cats fame. Rock meets rockabilly. If you haven't listened to Setzer, find a reason to try. I went to one of his concerts years ago and found myself in a sea of swing dancers, in full outfits, moving through the aisles and open areas in front and along the side. It was like being in an open-air swing dance competition. He won a Grammy for "Jump, Jive an' Wail." Not too shabby a guitarist either, is he?

What happens when rock meets country? Alan Jackson gives us his version of "Summertime Blues" that became a number one song in the U.S. and Canada in 1994. I suppose this is as much honky tonk as country, but you get the idea. Jackson became famous both because of his number one hits and also because he lambasted the country music scene for leaving its roots and going into pop music. He and George Strait even wrote a hit song, "Murder on Music Row," describing their views on the state of country music. Not a particularly memorable song, but part of what he thought was not real country can be heard when you listen to the top country song this week in 2022 and compare it to Jackson's rendition of "Summertime Blues." It's Keith Urban's "Wild Hearts." The guitar didn't die in popular music, it moved its current address to the country.

The last two covers I'll share are, first, from a band a number of you have said I should be covering in depth—Rush. I'll say right off the bat that I am not much of a Rush fan. I admire their musicianship. The three of them are among the best at playing each of their instruments. Their music does very little for me, though, and I find myself skipping to another song when I hear their stuff. Plus, I am not at all a fan of Geddy Lee's voice. A friend of mine once said to me, "Rush is like Yes, except that there aren't as many band members, so you can listen to it for a few minutes longer." There, I've put that out there. That said, I like their cover of "Summertime Blues." Then there's T-Rex's version in 1971. The almost simple add of that dominant percussion and you've changed the whole feel of the song. Marc Bolan and T-Rex were another underrated 70s band, seen as

just a “glam rock” group, although their best-known song was probably a result of this cover by Power Station, “Bang a Gong.” Did you know the bass and lead guitarists in that version were with Duran Duran? Never heard Simon Le Bon sing that kind of song. (To go somewhat full circle, Blondie often covered this song in live performances.)

A simple, three-chord song from the late 50s is re-done, re-invented, and re-imagined across styles and generations. It’s what makes music infinitely magical and unifying.

Russian Invasion of Ukraine

[I’ve asked what I read to keep up to date on what’s happening with the invasion. Sources such as the *Wall Street Journal* and *New York Times* are ok, but I have found a variety of Twitter feeds to have the best information. Here are some, in no particular order, I recommend you look at for different aspects of the war.

@IAPonomarenko
@RALee85
@MarkHertling
@TrentTelenko (*do not miss Trent’s incredible discussions of logistics and the military; if you only read one source for stuff you won’t see elsewhere, this is high on the list*)
@MickRyan
@michaeldweiss
@AndersAslund
@EliotACohen
@PhillipsPOBrien
@TheStudyOfWar (*good source for maps showing areas of control in Ukraine and analysis of military operations*)]

We are seven weeks into the Russian invasion. What is the situation?

Military Situation

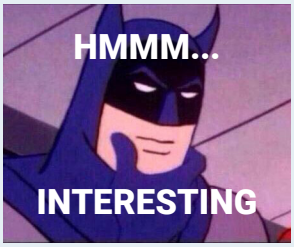
Russia’s strategy, at the outset, was predicated on a quick military victory, an invasion around multiple points in Ukraine with the goal of ousting the government, seizing a few cities and likely installing a puppet government. It was telling that the Ukrainians, as they seized Russian military equipment during the early days of the war, found that some Russian battalions came equipped with parade uniforms, no doubt for the victory march down Kyiv’s thoroughfares. Oops. Instead, the Russians have been routed from the Kyiv area in the North, have not claimed any city other than Kherson, in the South, and are bogged down throughout Ukraine, making little progress. They have suffered massive casualties in men, material, morale and high-ranking officers. What happened?

1. If your initial strategy is flawed and you are sending troops in for a week-long war, once it goes beyond that, you are overstretched in every way imaginable. Your troops are spread across too many places, your supply lines struggle to keep up because they weren’t designed for that type of war, and your troops’ morale quickly disintegrates. All of these happened to the Russian army. When you look at the history of successful invasions, they generally have one or two areas of focus. This invasion, with six

or seven areas of assault, could only succeed if Ukraine capitulated quickly. Anyone who has played the board game Risk knows that you do not overextend your forces and that defenders have a huge advantage over invaders. The Russians apparently have never played Risk, although I did find a Russian version of the game. Perhaps we should send Putin one to play on that very long table he uses.

2. The Ukrainian military, with eight years of training and assistance from the West, and some sophisticated anti-aircraft and anti-vehicle weapons, was far more formidable than the Russians, or anyone else, anticipated. They were aided by a population that had no interest in helping Russian invaders (there are numerous reports of Ukrainian citizens using their cell phones to send Russian troop locations that the Ukrainian army then used to destroy those positions) and a knowledge of the landscape that the Russians lacked. The Ukrainians also had a better strategy: Let the Russians move into territory, extending their supply lines, then attack those lines and isolate the Russians. Thus far, speed and agility has been able to push back bulk and numbers.

3. Russia's military, while far larger than Ukraine's, suffers the clear neglect of the kleptocracy that is Russia today. Much of the money earmarked for upgrading the military was likely stolen or diverted. Equipment is poorly maintained, modern technology is surprisingly lacking, command and control is not apparent, and, outside of a few elite units, the soldiers are draftees who simply do what they're told. The military, as a potential threat to Putin's standing, is not a power in Russia.



Russia has to wonder whether U.S. intelligence is monitoring every Russian conversation. The U.S.'s knowledge of Russian plans has been very accurate. This extends to the tidbit reported by the *WSJ* that the U.S. knew that the Russian invasion would start with an airborne assault on an airport close to Kyiv, with the goal of seizing and using that airport to bring in supplies and material to encircle Kyiv within a day or two. The Ukrainians were ready, repelled the attack, then rendered the runways useless so the Russians couldn't use it as a base.

4. Russia's inability to control Ukrainian airspace has been both puzzling and a reason for Ukraine's success thus far. Russia seems unable to eliminate Ukrainian air defenses and that has made the Russian air force resort to missions close to Russian or Belarus airspace and fire weapons from longer distances. It has also meant that Russian ground forces have little air cover and that Ukraine forces can move far more freely than if the skies were dominated by Russian aircraft.

5. While the 200,000 Russian troops arrayed along the Ukraine border seems like a large invading force, the Ukraine army is equally large, and larger with the population as part of the defense. Invading and holding a country as large as Ukraine with 200,000 soldiers and a population that wants you out is impossible. For some sense of reference, the coalition forces that were assembled to invade and free Kuwait from Iraqi occupation in 1991 numbered over 800,000. Ukraine is 34 times bigger than Kuwait, with almost 15 times the population. How did Russia assume it could defeat and control the country with a quarter of the forces?

6. The Russian defeat in the battle for Kyiv was decisive. The Russians suffered significant losses of soldiers, equipment and morale. It will take some time to recover from that defeat. Those troops and equipment cannot simply be moved and be ready to fight.

What's Next

Phase 1 of this war, the Russian invasion across large parts of Ukraine, is over. Ukraine has won this phase, with Russian troops leaving the Kyiv area and numerous Russian battle groups rendered ineffective and unlikely to be ready to fight again for a very long period. The idea that Russia has an infinite supply of back-up troops and material is also unlikely. These were many of the best Russian units and equipment. However, what happens next is not likely to be good, for Ukraine, Russia or the world.

It is important to note that Ukraine has won the media battle. They have been very effective in portraying, and showing to the world, the loss of Russian equipment, with videos and pictures of those losses. They are very real and the Russian army has been pummeled. However, we don't know what Ukrainian forces have suffered. Russians show very few videos and Ukraine does not broadcast its losses. It is likely that Ukraine has suffered a great deal of human and equipment losses. How much is unknown, but Ukraine does not have an unlimited number of military personnel and equipment to replenish losses. Equipment can be resupplied by the West, but will it be fast enough? Will the destruction of Ukrainian infrastructure degrade the ability to fight?

POSSIBLE OUTCOMES	
RUSSIAN VICTORY AND SURRENDER OF UKRAINE 5%	• The damage to the Russian armed forces to date makes it unlikely that Russia can regroup and win a war across the entire Ukrainian country. This probability should be closer to zero, although, if we are talking about a war that lasts years, the probability increases.
UKRAINE DRIVING ALL RUSSIAN TROOPS OUT OF UKRAINE 5%	• To Ukraine's credit, this probability, while very low, is higher than the probability of a successful Russian effort to control all of Ukraine. The reason it is unlikely, however, is that Ukraine has been successful in its defense, using speed and technology to overcome the Russians. Driving them out of areas the Russians have occupied, whether in the Donbas, Kherson or other places in the south, will require large expenditures of manpower and equipment. They will be on the offensive and it is doubtful they have the military to do that against Russia unless the West provides equipment in numbers and capability far beyond anything being provided now.

LONG, PROTRACTED WAR WITH INCREASING CIVILIAN CASUALTIES AND DESTRUCTION OF UKRAINIAN CITIES WITH NO RESOLUTION IN SIGHT 45%	• While the world may have thought the Russian military was capable of waging a war that relied on precision, speed and execution, it is not. The Russian army has one playbook, and it is the playbook we saw in Grozny, in Homs, in Aleppo. It is a war of encircling cities or villages and destroying them. It is a war of killing and terrorizing civilians—murder, rape, forced conscription into fighting, forced deportation of children for adoption by Russian families. That is Russian strategy and the last seven weeks have shown that they are not able to do much else. • It is apparent that Russia's strategy now is to focus its forces on the Donbas region in the east and Ukraine's coastal cities in the south while continuing to bomb cities and villages almost randomly. Their strategy will be what we have seen in Kharkiev, Bucha, Mariupol and everywhere else they have fought. Destroy the cities and kill as many soldiers and civilians as it takes. If there is any question in anyone's mind as to Russian intentions with Ukraine, read this op-ed published in an official Russian state publication on April 3. It's nothing more than a call for the eradication of Ukraine and its people. • Will Russia succeed in these efforts? The only way it won't is if the world steps in and forces Russia to stop. Does anyone believe that will happen? The world can't even agree to send Ukraine MIG fighter jets. History has shown that, once a leader and the country embark on the road Russia has embarked, only a military defeat or coup stops them. We can pretend, defer, negotiate, plead, or ignore, but show me an instance where that has worked. Whether today with Ukraine or tomorrow with somewhere else, the world will need to deal with an Imperial Russia and Putin.
CONTINUED WAR WITH AN EVENTUAL CEASEFIRE AND DE FACTO PARTITION OF UKRAINE 35%	• I had thought this the most likely scenario in the last update, but no longer believe that now. A few reasons: ▸ Putin has no reason to stop. Having gone this far, he won't acknowledge defeat, particularly after his army was so visibly routed around Kyiv. He has little organized resistance within Russia against a broad, long war. ▸ Ukraine's resolve can only harden as they watch their cities being destroyed and war crimes committed in territories the Russians occupy. The brutal murder of civilians will make agreeing to Russian control of any part of Ukraine almost impossible to accept. (In one town the Russians occupied for a couple of weeks, they rounded up and killed all the males that might be able to join the military. The West expressed its outrage. Neutral countries said nothing.) ▸ There is no incentive now for a peace agreement. Ukraine believes it can win and Russia can't afford to admit it has lost. ▸ Sadly, any peace agreement with Russia is likely to be broken and is nothing more than the Russians buying time to invade again. That is what Russia does; that is who the Russians are. Ukraine knows this and any peace treaty would need protections that neither Russia nor any countries who agree to act as peacekeepers are likely to accept today. ▸ With all the negatives, this is still a potential outcome because, at some point, both sides may realize that they can't continue at war. The cost to both is too high. Would the "peace" be temporary? Probably. But that may be an acceptable outcome for some period of time.

ESCALATION OF WAR TO INCLUDE NATO AND POTENTIAL NUCLEAR WEAPONS 10%	• Unfortunately, I have raised the odds of this outcome and I'll divide it into two parts. I continue to believe the odds of nuclear weapons being used are very small. I don't think Putin will use one in Ukraine, although that is not as simple a judgment as it should be. If battlefield losses continue in the East, then no one can know what Putin and the Russian government are capable of doing to avoid a humiliating defeat. In addition, war crimes and atrocities will continue. At this point, Russia has no choice, in its own narrative, but to obliterate any trace of Ukraine and Ukrainian identity in the areas it occupies. At some point, even those NATO leaders most reluctant to cut off Russian energy imports to their countries or provide more powerful weapons to Ukraine will find themselves having to take some sort of action along those lines. Again, it is difficult to know whether that leads to more direct confrontation between Russia and NATO, but the odds of that path have increased from the last update. Sadly, Ukraine's success raises the stakes for the entire world.

I know, you think I'm being too cynical about Russia. I'll ask you to read two Wikipedia articles. In the case of Russia, history doesn't rhyme, it repeats. Over and over.

It's grim reading, but The First Chechen War, which Russia lost, ended in a peace treaty. Putin ignored the peace treaty and invaded Chechnya, with most believing that the pretext for the invasion was a false flag operation Putin ordered that was blamed on Chechens. It was in this war that Russia destroyed the city of Grozny. Obliterated. Go look at the pictures. The European Court on Human Rights found repeated instances of Russian abuses, including torture and mass killings of civilians. That was 20 years ago. *Plus ça change.*

Now stop me if you have heard this before. The head of Russia, whose name ends with "in," says that a neighboring sovereign country was mistakenly taken from Russia years earlier and should be returned to correct history. He says that the political party in power in that country posed a direct threat to Russia and that the area and defenses of that country could be used to invade Russia. Russian propaganda paints leadership in that country as a "vicious and reactionary fascist clique." Putin and Ukraine? No, it was Stalin and Finland in 1939. Then, as now, a vastly outnumbered Finnish army and population held off a massive Russian invasion and, in the first phase of the war, soundly defeated the Russians. The Russians regrouped and continued the war, with a final treaty giving Russia huge chunks of Finnish territory.

So, what is next? It is difficult to see any outcome for the foreseeable future other than continued war in Ukraine. Russia cannot accept defeat and Ukraine cannot accept any conditions that Russia might accept in light of how much Ukraine has already suffered from Russian atrocities that will only continue. How long will Western politicians and companies endure higher prices for their consumers and foregone revenue? It sounds like such a damning calculation, but how long will the West's attention span allow it to stay on economic war footing? It is easy to extol sacrifice when it is someone else's sacrifice that you are praising, but quite another when it affects your life. Russia has had decades of experience outlasting the West's sense of moral outrage. Will this be different? Russia's response certainly won't be. The response is further complicated in the West by the right in many of those countries, which has a strong affinity for Russia's message of nationalism and scapegoating. Look no further than Putin apologists in America's Republican party, nine of whom voted not to censure Russia and a third of whose Congressmen

voted not to support NATO. Listen to Tucker Carlson doubling as a Kremlin mouthpiece on his nightly Fox entertainment spot. Look at Le Pen and her rising poll numbers in the upcoming French election or Orban's election in Hungary.

Putin and Russia will not stop until Ukraine no longer exists. Any ceasefire or treaty will be a pretext for regrouping and another invasion. The only thing that will stop the scenario is a military defeat or collapse of Russian forces and that will only be with either greater assistance of weaponry or full embargo of Russian oil and gas. Italy's Prime Minister Draghi said it best when he noted that people need to choose whether they want air conditioning or peace. What do you think people will choose? Will Europe and the U.S. spend one day this summer in heat and humidity to save Ukraine? These are regions where vast numbers of people wouldn't take a vaccine to protect their family and friends. Turn down the AC?

It is difficult to understand, for many, the appeal of people like Putin, Le Pen or Trump. Dietrich Bonhoeffer was a German theologian. He was a staunch anti-Nazi and resisted Hitler and his genocidal programs. He was arrested and later convicted of an attempt to assassinate Hitler and hanged in 1945. While in prison, he penned a famous essay on the Theory of Stupidity, arguing that stupid people were more dangerous than evil ones. Do not, in his lexicon, mistake stupidity for an intellectual quality. As he says, some very smart people are stupid in this context and vice versa. It is worth reading in these times.

If you prefer the YouTube version.

Karma's a Bitch

A. Germany has thus far been the major holdout in NATO's efforts to deliver more equipment to Ukraine. Germany has also refused to ban the import of Russian oil and gas. That seems an understandable position given Germany's reliance on that fuel and what it would do to the German economy. But I am indebted to Paul Krugman for pointing out the hypocrisy of that position. Stopping Russian gas would, by some estimates, reduce German GDP by a little over 2%. Serious, but worth the price of supporting Russia's invasion? Krugman put this in context for us. Think back to the financial crisis when nations in Southern Europe faced a terrible debt crisis. Recall how Germany insisted that a country like Greece impose austerity measures, telling them, with no little air of moral superiority, that the crisis was because of their own irresponsibility. The Greek economy shrank by 21% from 2009 to 2013. It is always easier to tell someone else what they should do, isn't it?

   (An interesting note here is that polls show a majority of Germans favor cutting off Russian gas, even re-starting nuclear plants as substitute energy sources.)

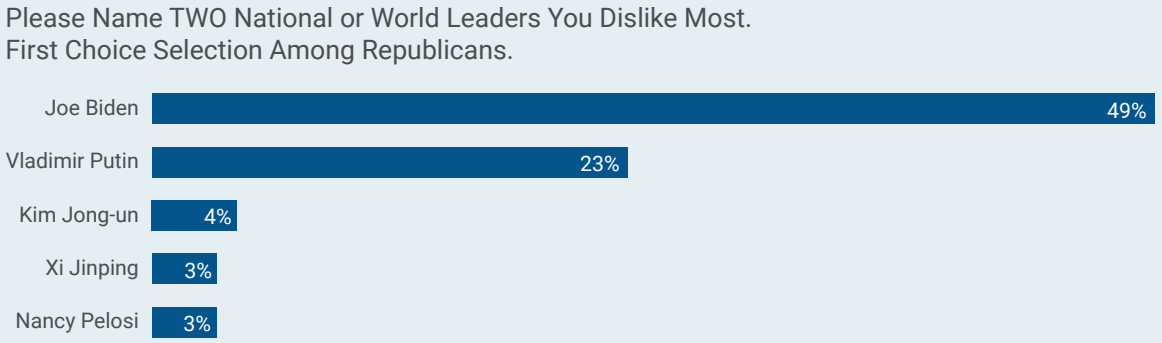
B. No legacies have been more tarnished as a result of Russia's invasion of Ukraine than Angela Merkel's and Barack Obama's. Both had key foreign policy outlooks predicated on appeasing Putin and Russia and a belief that economic engagement would keep Russian aggression within bounds. Merkel has chosen to remain silent about the invasion and her decisions. Obama? He recently said, "As somebody who grappled with the incursion

into Crimea…I have been encouraged by the European reaction because in 2014 I often had to drag them kicking and screaming to respond in ways we would have wanted to see." Uh, really? When Russia annexed Crimea, it was Obama who, going against then Vice President Biden and a majority of the U.S. Congress, refused, in 2014, to provide lethal military aid to Ukraine, arguing there was no U.S. strategic interest in assisting Ukraine in that way. The U.S. and Germany were the main drivers of that position. Later, in 2016, Obama said, "Ukraine is a core interest for Moscow, in a way that it is not for the United States."

Legacies have a way of altering in light of subsequent events and no amount of revisionist history will brighten that tarnish.

Some people have been surprised that a majority of Russians believe Putin's and Russian media's narrative that the "special operation" is necessary to rid Ukraine of Nazis and that the operation is going as planned. Surprised? A majority of Republicans believe Trump's and Fox News' narrative that the election was stolen and Biden is not a legitimate president. Russians have no choice in what media they hear or believe. Republicans do.

I know, you think I'm exaggerating, bringing my anti-Trump, anti-Republican bias. I'm not. Look at this poll of Republicans who were asked to name the two leaders they dislike most (and this was weeks after the Russian invasion started):



That's correct. U.S. Republicans prefer Putin to Biden. Let that reality sink in for a minute.

Follow the Money

There are no doubt many reasons Russia invaded Ukraine. One that gets little attention is money. Assume for a moment you are talking about a leader who runs the country like a Mafia empire. The sole purpose of his government is to accumulate power for himself and his family/cronies. The country and its people are simply exploitable resources to heighten the power and increase the wealth of that small group. (Shame on you, I'm not talking about Trump here.) That is how most describe Putin and Russia. Much of that wealth and power flows from the oil and gas in Russia and its sale to Europe and surrounding countries. Now, suppose Ukraine finds massive natural gas deposits offshore in the Black Sea and onshore in the Eastern

portion of the country. Gas fields so large that they will make Ukraine energy self-sufficient and supplant a great deal of Russia's energy sales to Europe.

You need to seize those fields. Now. Why? Both because you believe you can and because your power and wealth depend on it.

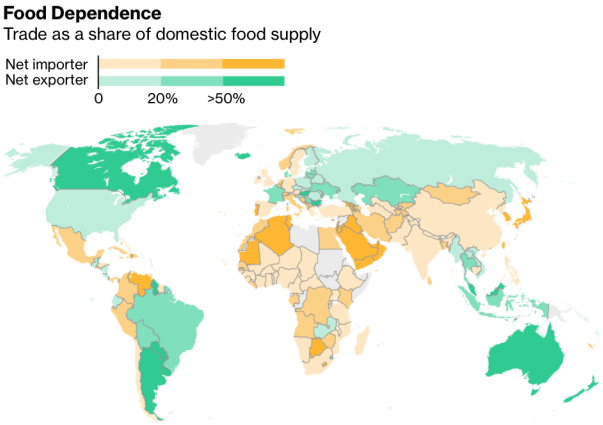
I Need Some of Those…

Source: The Ploughshares Fund, June 2021

There are so many intended and unintended consequences from Russia's invasion and the sanctions that have been imposed as a result. You have seen Larry Fink at Blackrock say that it marks the end of globalization as we know it. If there's another update, we can deal with that topic. Here's one that will almost certainly occur. What do we believe would be the outcome of Russia's invasion of Ukraine if Russia was not a nuclear power? Is there any doubt that some assembled forces, led by the U.S., would be deployed to Ukraine and the Russian army would be crushed rapidly? What would the prospects be, with a non-nuclear Russia, of that counterattack on Russia having some military impact on Russian soil? I'd say pretty high. What is the lesson every country on Earth will learn?

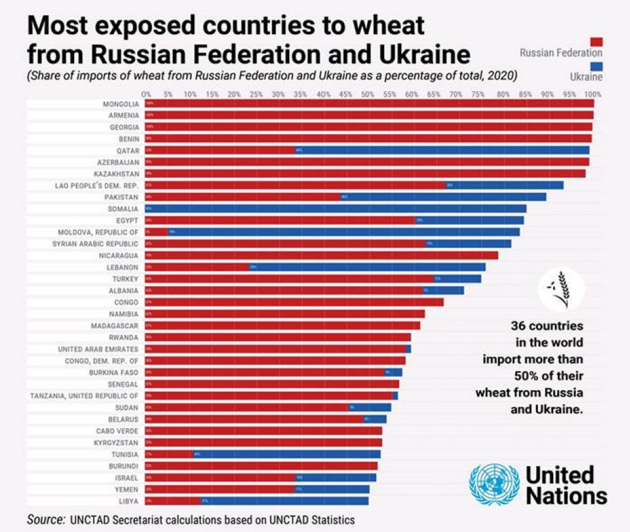
Nuclear weapons are a very effective means of (a) invading a neighbor with minimal risk of being invaded in return, and (b) preventing anyone from threatening to invade your country. Watching Russia threaten the world's most powerful militaries with the mere suggestion of using nuclear weapons will also persuade you that simply having those weapons in your arsenal is a powerful tool to advance your geopolitical goals. I expect to see a lot more countries looking to develop their own nuclear arsenal. Why not? What's the downside? I suppose the Clash told us what the downside might be in "London Calling." But, they're right, I have no fear: I live by the river.

One of the clear trends that will result from the Russian invasion of Ukraine and sanctions is a growing need to be more self-sufficient. This will, by necessity, favor countries that have some ability and means to be self-sufficient. Nowhere will that be more important than with respect to food. Rising food prices threaten both populations and governments that cannot provide enough food at affordable prices to their populations. Look at this chart and see what countries, in that kind of environment, will benefit and which will struggle or have to re-allocate resources.



Source: UN's Food & Agriculture Organization Global Perspectives Studies

We can look more closely at the countries that import the greatest share of Russian and Ukrainian wheat to see the most immediately vulnerable.



Here's a prediction: We will soon spend a great deal of time talking about famine in parts of the world. The reduction in wheat exports from Ukraine and Russia, the blockade of Ukrainian ports, the logjam of ships around China and other parts of the world, the slowdown in global shipping generally, reduced and more expensive fertilizer prices, and numerous other factors, will have a terrible impact on food supplies in very vulnerable parts of the world. Famine, death, and social and political upheaval are very real threats and I'm not sure the world has enough of an attention span or capacity to deal with those outcomes with a pandemic and a war in Europe. Who will step in to help? China? The U.S.? The UN? (I know, I rolled my eyes on that last one also.)

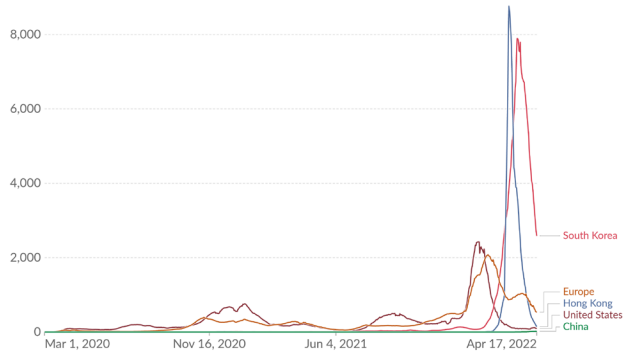
This is a serious issue that could be front and center very soon with very direct and indirect impacts.

COVID-19

The war in Ukraine and inflation dominate news and have relegated COVID-19 discussions to back pages, except in one very visible place—China.

Daily new confirmed COVID-19 cases per million people

Shown is the rolling 7-day average. The number of confirmed cases is lower than the number of actual cases; the main reason for that is limited testing.



Source: Johns Hopkins University CSSE COVID-19 Data

This chart shows cases per million inhabitants. You can see that cases have declined dramatically in the U.S. and Europe (proxies for similar declines in most places globally). Cases in Asia, including areas that were, a month ago, suffering from large outbreaks, such as Hong Kong, Singapore and South Korea, have declined dramatically.

I showed the chart for China because it barely registers as having any cases. Yet, because it maintains a zero-outbreak policy, no country in the world is more affected by COVID-19 than China, exactly because of its no-COVID policy. You have all seen that Shanghai, a city of roughly 25 million people, is in complete lockdown because of an outbreak in the city. There has been a great deal of public backlash against the lockdown, at least in the Chinese context, including food riots and public complaints about conditions. There appear to be genuine food shortages. It is unlikely the Chinese government will change its policy in the short term. A few things to consider.

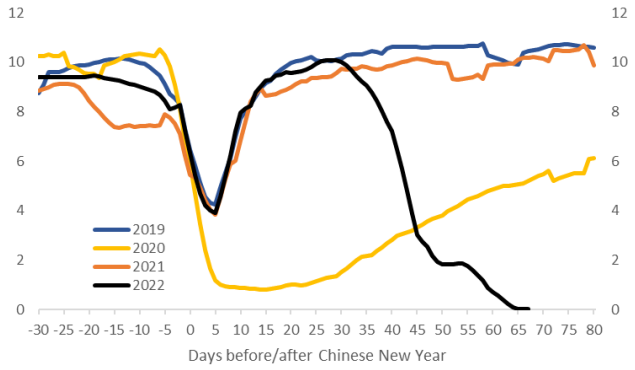
- China indicates that, even with hundreds of thousands of cases in Shanghai, there are no deaths and only one person in the hospital. Is

that true? If it is, why continue a zero-COVID policy? With those statistics, China should not be worrying about COVID. Its impact on the Chinese health system would be milder than the common cold. (One worry in China is that, if you test positive, you have to go to a health facility. That means even the mildest outbreak threatens to overwhelm the health system. But, why require that isolation? Again, it goes back to a zero-outbreak policy and what that requires.)

- In the last update, I wondered why Hong Kong's death rate was so high compared to places like New Zealand, that were also experiencing case increases after two years of isolation. My colleague Ana Lei Ortiz alerted me to the fact that, contrary to most countries' experience, older people in Hong Kong were *less likely* to be vaccinated than younger people. That is also likely to be true in the rest of China and may be a reason for the Chinese authorities to worry about COVID-19's spread. But, again, if those death numbers in Shanghai are accurate, then China's older, unvaccinated population is not experiencing the same COVID-19 impact the rest of the world has seen. Are those numbers accurate? Can they be?
- If no deaths will not cause China to deviate from its policy, what would? It would seem very little. It means, given how contagious the various strains of COVID-19 have become, China will move from lockdown to lockdown. The Chinese vaccine is not as effective as the m-RNA vaccines, so that won't help. COVID-19 will never become endemic in China if this policy continues. That seems like an untenable way to live for another few years.
- China's COVID response has a real impact outside of China on the global economy. If supply chain problems have been feeding the inflation problem, and we believe those supply chain issues will ease, the following is a discouraging chart.

Shanghai Subway Passenger Volumes

Million passengers, 7-day average.



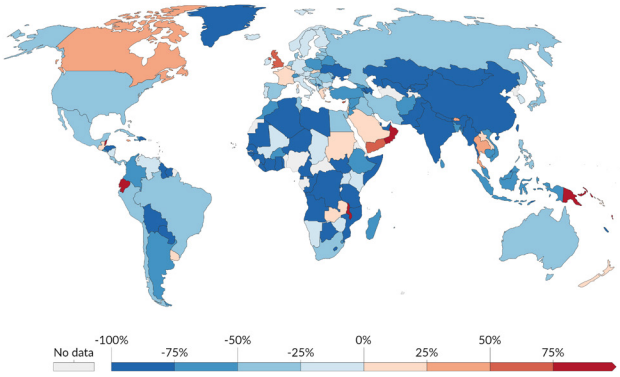
Source: Exante Data, Wind, metrodb.org

Shanghai operates the world's largest seaport in terms of cargo. There's not much cargo moving right now. This is true in any of the areas in which China imposes a lockdown.

Has COVID-19 essentially disappeared outside of China? No. Cases continue, although at far lower levels than earlier this year. But this is the most important chart with respect to COVID-19.

Biweekly Change in Confirmed COVID-19 Deaths

The biweekly growth rate on any given date measures the percentage change in the number of new confirmed deaths over the last 14 days relative to the number in the previous 14 days. Due to varying protocols and challenges in the attribution of the cause of death, the number of confirmed deaths may not accurately represent the true number of deaths caused by COVID-19.



Source: Johns Hopkins University CSSE COVID-19 Data

With the number of people vaccinated increasing globally and the number of people with building immunity through infections, the case count is becoming a less relevant measure of COVID-19's impact. We need to be focused on hospitalizations

and deaths. Hospitalizations is still an imprecise number, both because some places don't measure it and because you are listed as hospitalized with COVID-19 even if you are there for something else and happen to test positive. Deaths have little of that ambiguity. You can see in the chart that deaths are trending down in most places in the world. In those places where they are trending up, it is often due to an increase from very low numbers. The region that is puzzling is Europe. Why are deaths increasing there? Is it the trailing impact of the prior increase? While the numbers aren't large, they are different from what we are seeing elsewhere.

Is COVID-19 over? No. Can the virus mutate and become deadlier? Yes, but it has given no indication of doing so over the last two and a half years. (In fact, the virus has shown an incredible ability to mutate and become more contagious, and likely less virulent, which is what a virus should be doing from an evolutionary perspective to allow for greater spread.) I believe that, outside of places like China that are attempting to have no outbreaks, we will continue to have ebbs and flows of cases, with lower peaks of both cases and deaths as each wave moves through populations. It is not at the point where we can call it endemic like the flu since that has such pronounced and seasonal characteristics. COVID-19 does not appear, yet, to have any seasonality or rhythm to its outbreaks. But we are far closer to a wary coexistence with the virus than we have ever been.

The Public Markets

A. If you were judging simply by headlines and commentary, you would be moving all your assets into cash, although you'd likely suspect that all your assets were gone, with markets crashing and nowhere to hide. Inflation, higher rates, war, sanctions. Hide. Run. Do something other than invest or stay invested.

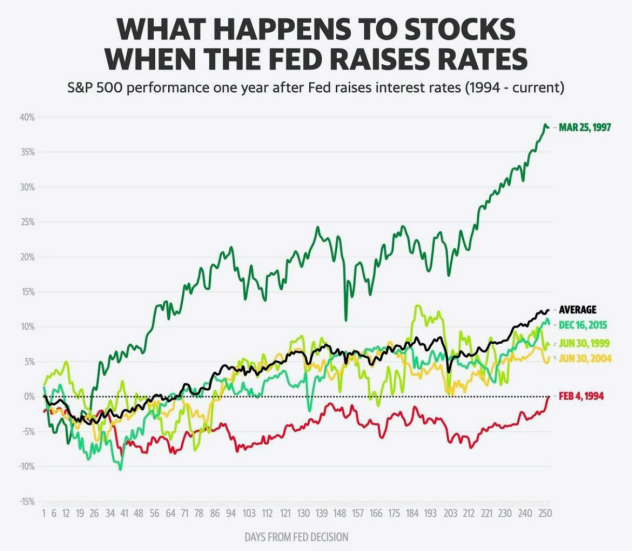
A quick test: How much has the S&P 500 fallen in the U.S. this year? How about FTSE in London? It has to be a lot. 15%? More?

S&P 500	DOWN about 8% (It was up about 27% in 2021)
NASDAQ 100	DOWN about 15% (We got that one right)
FTSE 100	UP about 3%
Shanghai Composite	DOWN 11.77%
Nikkei 225	DOWN about 6%
Canada: S&P/TSX Composite	UP about 3%
Tel Aviv 125	UP about 2.5%
Mexico IPC All Share	UP about 1.7%
Stoxx Europe 600	DOWN about 6%
Australia: S&P/ASX 200	UP about 1%

I don't know, but it doesn't seem like carnage to me. There's a fair bit of green around the world. It seems more like what we would have called, in the absence of news, a normal correction in some markets. With the news, you'd almost call it either, depending on your temperament, a market that doesn't seem upset by any of those headline issues, or a market that is delusional and will come to its senses and collapse.

B. In keeping with the last update's view that charts are worth far more than words (I know, rich irony from someone who has droned on endlessly for 38 updates), here are some interesting ones.

- To answer the question of why stocks, at least in the U.S., aren't crashing with rising rates, I offer the below chart that my colleague Demetrius Sidberry sent me.

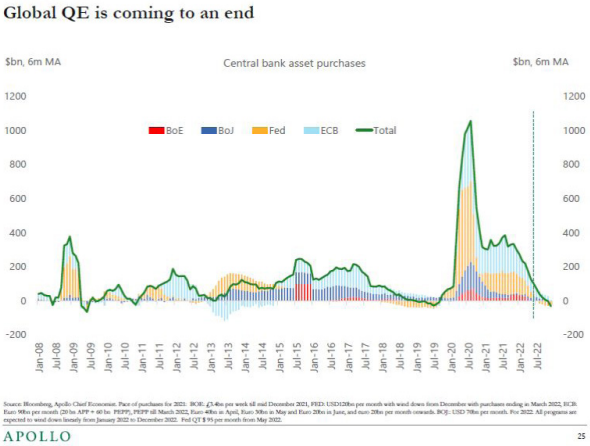


Source: Yahoo Finance

U.S. stocks may not be collapsing because, well, they generally go down a little and then go up after the U.S. Federal Reserve raises rates. Will this time be different? Maybe, but investing because you think it's different has not often been a good way to invest.

C. I don't want to spread too much cheer in a uniformly cheerless market environment, so I'll offer evidence of why rates will only go higher and the stock market must, absolutely must, come to its senses and head down.

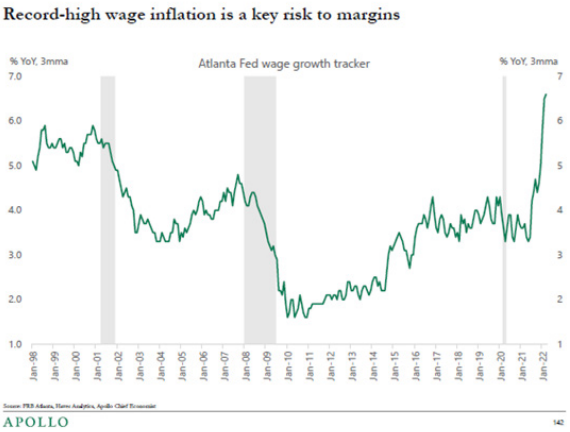
- A chart courtesy of Torsten Slok at Apollo:



We have all been told that the only reason the market has done well over the last 13 years is central bank largesse. (I know, I have argued that corporate earnings have been pretty good and might be a reason but been told those are also only due to central bank actions.) All that money flowing into the system is turning into outflows in a few months. Not good for stock prices, we are told.

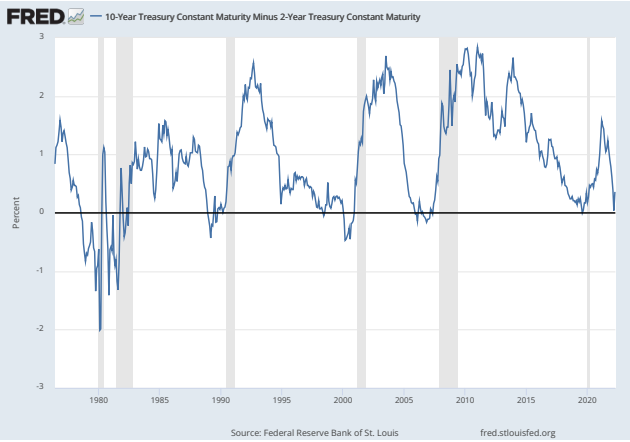
(As an aside, if you do not currently get Torsten's updates, you should. Interesting data and commentary. Stop reading these updates and start reading some serious stuff!)

- Here's another one from Torsten:



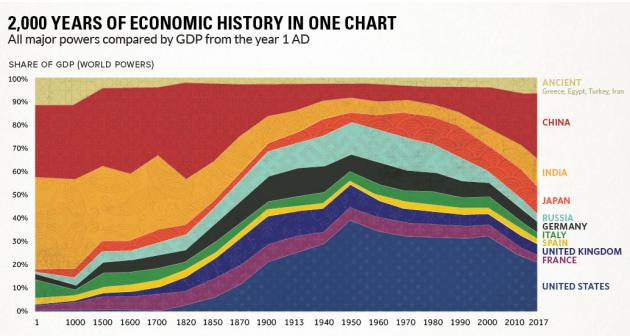
This kind of wage inflation is, in theory, a double whammy. One, it will pressure profit margins, an underpinning for strong stock market performance. Equally troublesome, it will spur the Fed to raise rates aggressively to bring that wage pressure down and prevent inflation from heading out of control.

- Then there's our perennial favorite, the U.S. yield curve:



It actually inverted, for a day or two, last week, but has since rebounded. Is that enough, as it was in 2019, to say a recession is coming? Or, as I've mentioned earlier, are we closer to the late 70s, early 80s period when the yield curve went deeply negative as the Fed fought inflation and the economy struggled for years, with two recessions close together? That scenario is decidedly poor for equities. A scenario in which a recession occurs relatively soon, with Fed easing (or turning neutral) and fiscal stimulus, is decidedly positive for equities. (And here's a point to consider: As we talk of tightening, what if fiscal policy in China, Japan, the EU and the U.S. all turn stimulative later this year?)

D. Now, this one, only because I found it fascinating. You don't normally see 2,000 years of anything in one chart, but here you go.



For about 1,700 of those years, economic power was concentrated in Asia, primarily China and India. That power moved largely west starting in the 1700s and peaked in 1950. Now, it is returning to Asia and we are back to the proportions we saw around 1850. As a point of current reference, notice how increasingly small Russia has become since Putin took power in the 1990s. No one can accuse him of turning Russia into an economic power.

The Private Markets

SNEAK PEEK

In the category of "yeah, but what have you done for me lately," it looks as though 2021 PE returns will be over 40%. While no one may care about ancient history, let's take a moment and consider that achievement for an industry that has heard, for the last 10 years, that returns have to come down and there's too much money chasing too few good deals.

Now you're thinking, "Q1 will be a disaster and show that 2021 returns were based on inflated valuations." (Please ignore that 2021 was the highest year for distributions back to limited partners and Q4 2021 was the highest quarter for distributions on record, so it's not just a return based on valuations.) My colleague John Stake has provided a sneak peek at Q1 activity.

- For Q1 2022, it's still early days and we don't have any reports from GPs yet, but looking at public market data and our own indicators, we would expect a range of -2.5% to 1.5% for PE funds.
- We expect to see more negative returns in the VC and growth space, where valuations particularly for companies that recently went public have come down…a lot.

We'll even give you a sneak peek at valuations in the future. Call us PE Nostradamus. Q2 could be painful. How do we know this? Right now, private valuations have not come down with public valuations and growth has been strong enough to make up for any multiple contraction. But deal activity has slowed significantly precisely because those private multiples haven't adjusted downward and general partners are not willing to buy at those "inflated" prices. That will change. It always does. And, when it does, then portfolio adjustments will be made. Down.

In times of stress, some people turn to food, some to drink, some to quiet contemplation, meditation. I turn to the Dark Web. Many a sleepless night and tired day spent combing its corners and alleyways. Information is there and, yes, some may be slightly suspect – and likely left by Russian bots that provide so much of the source material that those of us who rely on FB and QAnon have come to believe.

But, surely, buried somewhere was some perspective from the past.

It was tough going but, at last, I happened upon a fragment, an early draft of a short story, "The Rocking Horse Winner," by DH Lawrence. Who is this Lawrence? The English author from the early 20th century. He entered a period of voluntary exile, his "savage pilgrimage," because his writing, in England, was seen as too sexual and explicit, and wandered the world. Oh, c'mon, I thought. Who is forced out because of that kind of writing? He found himself in Taos, New Mexico, where he joined with others to form a utopian society and that's when it hit me. Of course, he was an early PE investor and similarly faced the slings and arrows that PE greats face and went to Taos to form a private markets utopia! I know, I also wonder how these insights come to me. Spend enough time lurking the Dark Web and you too shall be hit with moments of genius. But I digress again. It was there that I found this draft of what became his famous story (turned into a movie). I have no doubt he was forced to alter the theme from private equity to horse racing to avoid being the victim of early cancel culture for his PE leanings, but I think we can all see that he was describing almost the exact market environment we face today.

There was a young partner who started her general partner career with all the advantages, but she had no luck. In fact, if she was being truthful about the firm, she felt the firm had no luck. All it accomplished, which was a considerable amount, was the result of toil and work and sacrifice. Other firms had luck. Other partners at other firms had luck. She was sure of that fact and it bothered her a great deal. Although the firm did spectacularly well, no one was ever totally happy in the office. There was never enough money. The firm had grand funds, but they spent them rapidly. There was always the pressing feeling of not having enough money. However, the spending on new investments was always kept up.

And so the firm came to be filled with unspoken words. "There must be more money! There must be more money!" The associates could hear it where they sat, during breaks and in the evenings, at holidays and on weekends. Behind the shining rocking horse that one of the associates had in his cube, behind the acrylic blocks that adorned the bookshelves, a voice would say quietly, "There must be more money! There must be more money!"

It came whispering from the movement of the rocking horse and even the horse, bending his wooden head impatiently to go faster, heard it. “There must be more money!”

One day Paul, a particularly precocious associate, said to the young partner, “Why must we fund raise and why do we not simply tell people when we want money and they give it to us? Isn’t that what other firms do?”

“Well, I suppose it’s because we have no luck.”

Paul was silent for some time.

“Is luck money?” He asked.

“Not exactly,” said the young partner. “It’s what causes you to have money.”

“Then what is luck?” Asked Paul.

“As I said, it’s what causes you to have money. That’s why it’s better to be born lucky than rich. If you’re rich, you may lose money, but, if you’re lucky, you will always get more money.”

“Oh!” Said Paul. “And are we not lucky?”

“Very unlucky, I should say,” replied the young partner. “Very unlucky indeed to be trying to raise funds in this market environment where the denominator effect is causing our limited partners to have less money.”

“The denominator effect?” Inquired Paul.

“Yes,” said the young partner. “That is unluckiness, for it is when markets go down and our investors’ asset values drop and they have less money overall and, therefore, less money to give us. It is a sorry state of affairs for which we are not responsible and for which we can do little for it affects us no matter how talented we are!”

He went off confused, looking for luck. He would sit in his cubicle, on his big rocking horse, and he would ride it madly and with such energy that it worried the other associates. Wildly, the horse rode, Paul’s hair flopping up and down, his eyes with a strange fire. The associates worried that Paul would injure himself in the manic rides he took with the horse. He would not speak, he would not look about him. When he dismounted, he would stare into the horse’s eyes and stroke the horse’s side, whispering, in a fierce voice, “There must be more money! There must be more money!”

The associates called the young partner to do something about Paul and his mad rides on the rocking horse. She arrived at his cubicle to see him one afternoon, ferociously riding his horse, silent, his eyes fixed on some distant point the young partner could not see. At last he suddenly stopped and dismounted.

“I got there!” He screamed.

“Where did you get to?” Asked the young partner.

“Where I wanted to go!” He answered curtly.

“What is that place called?” Said the young partner, now a little afraid as Paul stood, his body still as he faced the young partner and the associates now gathered in the corridors, whispering to themselves.

Paul wrote down the name of a limited partner that had to date never invested with this general partner and said, “Go there and you shall be lucky!”

All looked at Paul in astonishment, for he had never talked to a limited partner or, as far as anyone knew,

had ever expressed any interest in what any other member of the firm said to any limited partner. The young partner immediately rushed out, found an IR person, and flew to meet the limited partner. To everyone's amazement, she was able to secure a commitment rapidly and was hailed in the internal Slack channel, "Self-Promotion Central."

This happened twice more, a name no one had known blurted out after another manic ride and another commitment secured, more money into a fund. The partners all rejoiced and increased the pace of their spending and asked the young partner for more names to augment the company coffers. If they had looked carefully, their spending appeared to exceed even the increasing pace of fund-raising. But, had anyone commented on that deficit, they would have been satisfied, for that is surely the mark of a successful firm.

The young partner went to Paul and demanded to know how he knew the limited partners would give them money, but Paul simply stared at her and said, "I'd hoped the whispering would stop."

"What whispering?" She asked.

He told her of the whispering from the walls, from the Lucite cubes, from the keyboards and iPhone lying on desks, the whispering from everywhere, everywhere, but they have only gotten worse he told her. Now the voices screamed and seemed to shake the office itself, shake the furniture and even the people trying to walk along the corridors like passengers on a ship swaying on the waves. "There must be more money!" they cried. "Oh! There must be more money. Now, now…now! There must be more money. More than ever!"

The young partner was quite concerned for Paul's wellbeing and conferred with her partners as to what they should do for poor Paul.

"Poor Paul?" said one senior partner. "Why, it is poor us, for the denominator effect is making fund-raising so difficult. We must ensure that Paul finds these wondrous names he brings us so that we can continue to grow at the pace our desires deserve. Go…go now and tell him we must have more names and the reasons for the names so we can find them ourselves and not rely on his strange fixations."

The group murmured their agreement and set out to start their summers, for there was warmth in the air and the Great WildePEest Migration to the Hamptons was upon us.

The young partner explained to Paul the importance of his mission and he turned and fled, slamming the door to the large conference room behind him. The next afternoon, as the young partner walked down a corridor, she heard a faint noise. What was it? She stood, unmoving, outside the large conference room door, listening. There was a strange, heavy, and yet not loud noise. It was a soundless noise, yet rushing and powerful. Something huge, in violent, quiet motion. What was it? In God's name, what was it? She thought she knew; she thought she should know. Softly, frozen with anxiety and fear, she turned the door handle.

The room was dark. Yet, in the space near the window, she heard and saw something moving backwards and forwards. She watched in fear and amazement. She switched on the light and saw Paul, in bright green pajamas, madly going backwards and forwards on his rocking horse that he had moved into the large conference room. She could see him clearly as he pushed the wooden horse to go faster and faster.

"Paul," she said. "What is this madness?"

"It's the Numerator Effect!" he screamed in a powerful, strange voice. "It's the Numerator Effect! It's so clear, as if a giant arrow is pointing to the Numerator Effect!"

$$PE\ as\ \%\ of\ total\ portfolio = \frac{PE\ Value}{Total\ Value\ of\ Stocks, Bonds\ and\ PE}$$

He looked at her, his eyes shining as if in a fever, as if catching and reflecting the whole of the sun in their orbit. His voice came out in jumbled words, frenetic as he sat, still, on the wooden horse.

"It's the Numerator Effect for god's sake. We have been thinking it's the denominator effect, that investors don't have enough money because markets are going down. No! No! It's the numerator: Investors have money, but if they gave even all their current general partners money, the numerator would blow up! Don't you see, they don't have enough for all the general partners coming back to market demanding more money and for more funds. It's the numerator: Every general partner is coming back to market at the same time and investors have plenty of money for normal demand but not nearly enough for the number of general partners lined up for more. Don't you see? Don't you see? It's the numerator, not the denominator! We've been looking at the wrong side of the equation."

LOOK HERE!!!

$$PE\ as\ \%\ of\ total\ portfolio = \frac{PE\ Value}{Total\ Value\ of\ Stocks, Bonds\ and\ PE}$$

"But," the young partner objected, "the names you gave me had money."

Paul looked at her as if she was speaking in tongues.

"Those limited partners have just started their programs. Of course they had money because this isn't the denominator effect and their numerator is quite small. Oh, don't you see? Don't you see?"

HELLO!? Look at this number!

$$PE\ as\ \%\ of\ total\ portfolio = \frac{PE\ Value}{Total\ Value\ of\ Stocks, Bonds\ and\ PE}$$

With that final utterance, Paul collapsed on the floor.

The associates, many of whom had peeked in the door to hear the commotion, rushed to help Paul to his feet and they brought him to a chair, where he continued to speak deliriously of numerator effects and the crowding out effect and words that made little sense. The associates eventually left him in the chair, passed out. Greatness never wants to be associated with uncomfortable revelations, however accurate.

The young partner called an emergency zoom meeting of the partners and relayed the strange ravings from Paul. They all strained to hear over the soothing sound of ocean waves in the background and the periodic splash of a Polaris as it made another swing around a swimming pool.

"This is ridiculous" said the senior partner who had spoken earlier. "We all know the denominator effect. It is why money is difficult to raise today. Who has ever heard of the numerator effect? Why, that would imply that some are getting money when we are not, or some are getting more money than we are as limited partners make choices. That is so preposterous a notion that I am surprised you would call this kind of meeting to pass on that nonsense. I suggest you show Paul the door for he is quite incapable of understanding our business."

The young partner was sad to tell Paul the news but was saved that misfortune when she learned that Paul had resigned his position, taken his bright green pajamas and, last she heard from one of the associates, had found global fame as DJ Pauly PE, the world's highest-paid disc jockey.

Money Flows

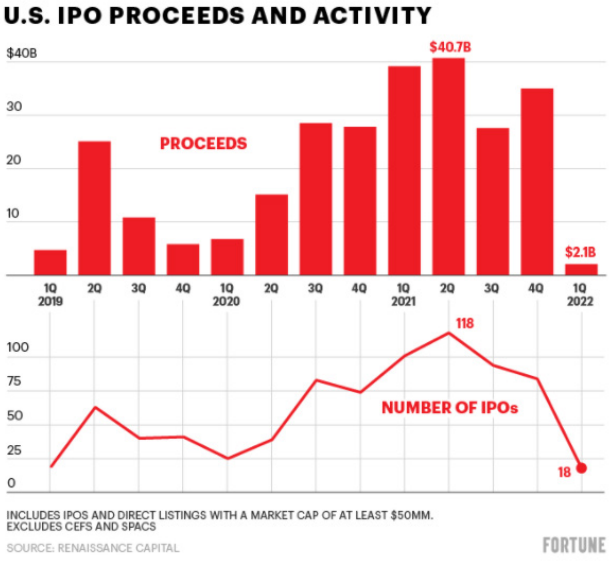
What happened to contributions and distributions in Q1 2022? There's always a fear, when public markets become volatile, that investors will have all their capital called and none returned. Again, thank you to my colleague John Stake for these numbers:

- Here's a conclusion that might surprise you: Overall, the quarter was net cash flow positive for private equity as contributions came down significantly while distribution activity came down less.

- Q1 2022 PE capital calls were ~50% of what we saw in Q4 2021, or ~70% of Q1 2021 data.
- Q1 2022 PE distributions were about 50% to 60% of the levels seen in Q4 2021 but still flat to slightly up compared to levels seen in Q1 2021.
- Buyout and growth funds, as individual strategies, were net cash flow positive, while venture capital funds were net cash flow negative for the quarter, after three quarters of being net cash flow positive.

There's a lot of discussion of the disappearing SPAC market, but the big story for the private markets/public markets intersection is actually the disappearing IPO market. Take a look at this chart.

Where have all those exits gone?



Credit Markets

Thanks to my colleague Nayef Perry for these observations on the credit market as rates, particularly in the U.S., push higher.

- Credit Suisse forecasts loan interest coverage could fall 0.5 – 1.0x over the next year, depending on the growth outlook.
- Lower-rated firms make up the largest share of debt outstanding and leverage levels are generally up, suggesting overall credit markets could be vulnerable.
- New loan activity is down, but less than you might have expected. 2022 new issue volume through April is about two-thirds the average activity level from 2015-2021 and trailing 2021 by about 39%.
- Ah, you are saying, now is the time for distressed debt investing. Perhaps. Levels of distress in the loan markets remain very low, with a smaller volume of loans trading below 80, which is the distressed line. Overall default rates remain at 0.6%.

We could ask Marvin Gaye, but here are some interesting perspectives from my colleague Brian Gildea from his discussions with general partners.

- The most pain in the market correction has been at the ends of the barbell from a risk perspective, with both the lowest-risk assets (government securities) and the highest-risk investments (cash-burning businesses) declining sharply. Valuations have moved the most for lower-quality companies – high quality has been less impacted. This is indicative of a more rotational movement than a broad selloff.

- Short-term interest rate expectations have clearly moved higher, but long-term rates have remained fairly stable and that's where it matters most from a deal and company performance perspective.
- There will be large capital needs to work through capacity constraints to develop more robust supply chains and industrial businesses will become a more interesting investment opportunity, rather than the growth/tech that has been broadly pursued the past few years.
- In Asia, valuations have corrected massively, creating some interesting opportunities.

The Private Markets' Report Card

(Pay particular attention to the comments section as they have changed significantly from the last update)

DIRECT DEALS			
INVESTMENT AREA	CURRENT DEAL FLOW	INVESTMENT PROSPECTS	
		TODAY	ONE YEAR FROM NOW
Liquid/Traded Credit	D	C	B
	• Loan prices remain somewhat elevated. However, pricing has come down to $97.38. • The percentage of loans trading above 99 is down to ~39% from a high point of over 70% in prior months.		
Preferred/Structured/ Liquidity-Based Financings	B	B	B
	• Preferred equity financing activity remains steady, although has seen some pricing pressure in early 2022 and 2021 vs. 2020. • Elevated purchase price multiples, the desire for yield, and a desire to deploy capital should enable continued activity.		
Rescue Financing	D	D	C
	• Pure play rescue opportunities appear limited. However, working capital pressures due to supply chain issues could lead to increased bridge financing opportunities.		
Distressed	F	D	C
	• Level of distress in the loan markets remain low. • The issuer default rate is 0.6%. • Opportunities in the distressed space appear to be concentrated in Healthcare, Media/Telecom, and Gaming/Leisure sectors.		

INVESTMENT AREA	CURRENT DEAL FLOW	INVESTMENT PROSPECTS	
		TODAY	ONE YEAR FROM NOW
"Traditional" Performing Credit	B	B	B
	• The transition to SOFR contributed to year-end momentum in 2021. • While activity levels continued into January 2022, loan new issuance moderated in February and market activity levels through early April have remained subdued. • Hamilton Lane's year-to-date deal flow (as of 4/12/22) is hovering around 90% of prior year levels. For context, 2021 was a record year for deal flow.		
Secondary-LP Market	A	B	B
	• Deal flow in the early part of 2022 has been stronger than at any point since pre-COVID, with many large LP portfolios - $1-3 billion each - hitting the market. However, valuations are being tested by rising interest rates and the downward pressure in the public markets. • Many portfolios are pricing below expectations and only the highest-quality funds are clearing the market. • Limited secondary dry powder is also contributing to further pressure on pricing, as supply/demand continues to favor buyers.		
Secondary-GP Led	A	A	B
	• GPs are eager to explore this market and advisors are keenly focused on bringing deals to market. • Buyers have limited capacity for the influx of demand, and many deals will fall away or be undercapitalized relative to expectations. That said, the highest-quality deals continue to command attention and access to these opportunities remains a key priority.		

INVESTMENT AREA	CURRENT DEAL FLOW	INVESTMENT PROSPECTS	
		TODAY	ONE YEAR FROM NOW
Buyout	A	B	B
	• Investors are looking for bargains that may be presented by a wobbly market dealing with inflation, interest rates and Russia's invasion of Ukraine. • Geography is an important consideration as some regions — Europe (Ukraine) and Asia (COVID resurgence) are more impacted by certain factors than others. But sellers of high-quality assets are still holding firm to '2021' valuation expectations. These deals are still clearing at market prices while lower-quality deals are experiencing wider bid/ask spreads. • Flight-to-quality similarly experienced during the early stages of COVID is starting to occur. Resilient, mission-critical companies with control of their supply chains and pricing are most desirable – cash flow, cash flow, cash flow. • Too early for forced selling to occur but the weakest capital structures and industries most vulnerable to rising energy prices and supply chain disruption may get challenged sooner than later. • Many companies have been successful passing on higher costs to customers, but more investors are starting to wonder how long can this last?		
Growth Equity	A	C	C
	• All of a sudden there's more space available in financing rounds, but valuations and exit paths have become cloudier as the market resets.		
Follow-On Equity	B	B	B
	• GPs may have a strategic choice to make related to follow-ons. The deal-flow is there and the rationale for scaling businesses and strengthening control of supply chains through vertical integration is extremely strong now. • But how will GPs manage their different workstreams and bandwidth? Will GPs focus on value creation through follow-ons, will they be bogged down by operational challenges in their portfolio, or will they be able to go on the offensive and acquire new platforms that may become available at attractive valuations due to market volatility? Those with the most stable portfolios, best management teams and platform-level, add-on acquisition engines will provide GPs with the most optionality. • Additionally, GPs have been focused on building out these types of value creation capabilities for years, so the decision will likely be less binary and more company specific. Look for strong companies to be active and try and consolidate.		

INVESTMENT AREA	CURRENT DEAL FLOW	INVESTMENT PROSPECTS	
		TODAY	ONE YEAR FROM NOW
PIPEs	F	D	C
	• Crickets. Very limited deal flow exists. Hedge funds and opportunistic credit managers have become the 'buyers of last resort' for struggling SPAC deals.		
Venture	A	C	C
	• Loads of dry powder continues to fuel an active market, but sector matters. Crypto is frothy while the life sciences sector regroups from a massive repricing in the public markets. • Some sectors like enterprise security are proving to be more resilient as well. Portfolio company fundamentals are still strong. Investors are focused on high-quality growth opportunities and avoiding riskier bets with the hope that down the road a healthier public market will reappear without much disruption to the portfolio. • A greater focus on path-to-profitability vs. revenue-at-all-cost is expected. Continuing to see tougher terms and structured investments being introduced into recent deals, which is also helping to support valuations for now.		
Energy	B	B	B
	• Energy commodity prices remain elevated despite calls for more OPEC production and some countries releasing inventory from strategic reserves. • Energy price volatility, regardless of direction, tends to cool asset trading, as bid-ask spreads widen among market participants. Prior to the war-induced price spike, we were seeing a period of relative stability with a strong but stable trend toward rising prices. This, coupled with ongoing inflation fears and the positive correlation of energy assets to inflation, was starting to ramp up investor interest. • In spite of the near-term price changes, we have not seen significant revisions to capex plans amongst the large producers and rig activity has only picked up modestly since the start of the year, indicating that producers in North America remain wary in the near-term about leaning into high prices.		

INVESTMENT AREA	CURRENT DEAL FLOW	INVESTMENT PROSPECTS	
		TODAY	ONE YEAR FROM NOW
Infrastructure	A	A	A
	• Assets related to energy transition, data/communication and global logistics continue to see strong investor interest. • Renewable generation platforms seeking to transition from project developers to independent power producers have attracted significant capital, with premiums being paid for larger development pipelines. • Take-private transactions in the data/communications space have also seen significant activity, as private investors have seen value arbitrage opportunities in publicly-traded fiber, data center and tower assets. In the U.S., seeing some increased investor interest in rural broadband as investors get more comfort with how direct-to-consumer subsidies from the federal government will help private asset owners with their customer base.		
Agriculture	B	C	B
	• The Russia-Ukraine conflict has the potential to be very negative for agricultural assets globally, although high prices in certain row crops will produce strong cash flow yields in the near-term. • Russia and Ukraine both account for a large share of the world's wheat supply and wheat prices globally have been spiking in the last couple of weeks. However, many agricultural fertilizers also come from Russia and Ukraine and are used to produce high crop yields on row crops around the world. The lack of fertilizer production and retaliatory export bans from Russia may hurt crop yields the world over, including in the U.S. • Similar to energy, uncertainty and crop price volatility will likely have a cooling effect on deal making in the near-term, while Ag's downside protection and positive inflation correlation will likely attract capital longer-term. • Since Russia's invasion, corn and wheat prices have spiked globally, exacerbating inflation and triggering fears of global food shortages in certain export markets. • While Ukraine is a large supplier to Europe, the bulk of its exports go to developing countries which will feel the near-term price increases more severely. Higher grain prices and a lower risk premium experienced by agricultural assets in North and South America should attract more capital interest to those assets.		
Real Estate	C	B	B
	• A couple months ago we said … Attractive cap rate spreads relative to financing costs in most countries continue to attract investors searching for yield to the real estate asset class. • Recent increases in interest rates definitely have put the brakes on the number of buyers responding to calls for offers (a U.S. multi-family project 4-6 months ago would have 30 buyers, today that's maybe 15-20). • Lenders and buyers are still cautious on office. Despite the current capital market disruptions, demand for quality real estate is strong.		

FUNDS		
FUNDS	INVESTMENT PROSPECTS TODAY	COMMENTS
Credit-Primary	B	• Capital markets remain open, but uncertainty is growing. Credit tends to do better in uncertain markets and LPs are starting to appreciate downside protection again.
Credit-Secondary and Distressed	C	• Slim pickings in the distressed market continue but the traditional distressed players are back at the gate, predicting another doomsday. • While not actionable yet, the imbalance between interest rates and inflation coupled with speculative debt being at an all-time high gets them excited. • The geopolitical uncertainty is just accelerating a trend that has already started and may become the catalyst all distressed players have been waiting for since the summer of 2020.
Buyout	B	• Existing portfolios are coming under pressure and at the same time most, if not all, GPs try to raise capital in an already overcrowded market. So far, GPs are not adjusting valuations, but it is just a question of time if the public markets continue to correct. • What keeps GPs optimistic is the underlying operational performance of their portfolios (*i.e.*, if their companies can continue to grow it will offset shrinking multiples keeping valuations flat), but if consumer confidence goes out the window, portfolios will be hurting big time. • While not good for existing exposure, it may just be the medicine GPs need to behave rationally again, and GPs and LPs alike will be rewarded with stellar performance in funds that are getting raised now.
Growth	B	• Declines in public market tech stocks and growth companies will test valuations, but there will be a lag before private markets need to publish mark downs, which likely helps mute the degradation. • Hitting growth targets has become even more important as companies try to outgrow multiple contraction. • Expect to see a much-needed slowdown in fund deployment as private market valuations reset and LPs hit a saturation point of growth exposure. Perhaps we won't see growth funds back to market every 12 to 18 months in the foreseeable future.
Venture	B	• Public market repricing is not yet having a meaningful impact on the early-stage market as return profiles remain binary and record dry powder searches for opportunity. • For older portfolios, managers are relearning the value of interim liquidity, particularly as the IPO market is more discerning and looking for more profitable businesses and not just growth.

FUNDS	INVESTMENT PROSPECTS TODAY	COMMENTS
Energy	B	• Energy transition funds are seeing strong investor interest. Even traditional upstream-focused funds that have weathered the cycle and taken advantage of the recent price stability to send capital back to LPs are finding some success in raising new vehicles. • Growing consensus that the energy transition will take time and responsible upstream investment is still a viable strategy in a hydrocarbon-hungry world.
Infrastructure	A	• Infrastructure fundraising remains strong, as institutions continue to expand their allocations to infrastructure and GPs have responded with new offerings in the small-to-mid cap space, infrastructure debt and sector-specific funds focused on data/telecom and energy transition.
Agriculture	C	• Fundraising slow given underwhelming returns. Industry was recovering from tariff-imposed price and supply chain disruptions but COVID-19 further depressed prices, disrupted supply chains and injected additional labor uncertainty. • Now the industry is recovering from COVID-19 uncertainty, but facing additional price volatility and supply chain issues related to agricultural inputs resulting from the Russia-Ukraine conflict.
Real Estate	B	• With real estate fund performance exceeding expectations in 2021, and fund realizations occurring at values in excess of NAV, many investors are finding themselves either under-allocated to real estate and ramping up their fund activity or reserving capital waiting for more certainty around interest rates and pricing. • Many diversified real estate funds concentrated mainly on European investments are seeking to raise significant capital in 2022 but without attractive first close incentives we think fundraising will be slow in Europe.

Conclusion

> "There are only patterns, patterns on top of patterns, patterns that affect other patterns. Patterns hidden by patterns. Patterns within patterns.
>
> If you watch close, history does nothing but repeat itself.
>
> What we call chaos is just patterns we haven't recognized. What we call random is just patterns we can't decipher. What we can't understand we call nonsense. What we can't read we call gibberish."
>
> **— Chuck Palahniuk,** *"Survivor"*

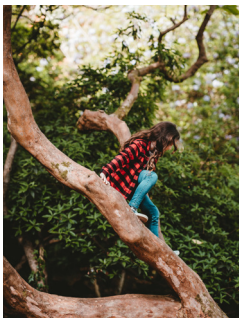
How did he become "Crate?" He didn't recall; one day, Tim and Red were calling him "Crate," as if he'd always just been Crate. It was better than his real name, the one they used at home. Too many syllables and impossible to say fast. Red's name was so obvious, her hair that flaming color, massed in curls and strands that looked like she'd had a bad encounter with electrical currents. He asked her once if she needed a lot of rubber bands to hold her hair in a ponytail. She pushed him off the chair and walked away. She didn't talk to him for days. Tim? If your name is that short, you don't need a nickname. You're always Tim.

They grew up together, the three of them. Some random encounters in the neighborhood and, soon, small groups coalesce. You are an 'us' or a 'them.' How do they know they belong together? Something in the words they use? A look that no one else can see? Soon, they have their own language and rituals— times they meet, things they will do. Unspoken gestures become code, an alphabet no one can decipher.

There was a house at the end of the street. At that age, it seemed so large. It's only years later, when you revisit those places, that you see how small they are. Everything diminishes when you look behind you. The house was abandoned, but they made it their own. They used flashlights and, while none would have ever dare been alone in that house, the three of them together supplied enough courage to sustain them all. Even Tim, who hated the dark and was sure that a rat would find him and filch a finger before he could move it, sat cross-legged on the floor. Others used the house and the three sampled the discarded cigarette butts and empty liquor bottles, adults for a moment in the cone of the light.

How many years has it been? Crate doesn't remember. The bonds that formed invisibly disappeared quietly, only kept together in memory fed by an infrequent conversation or message. They had agreed to meet by the oak tree. The oak tree. The tree they endlessly climbed, moving from branch to branch. The game Red invented was to drop from one branch and grab on one below. Crate and Tim were afraid of heights, keeping to the lower branches, while Red would climb higher. One day, she announced that she had found the perfect location near the top where there was a clear space that let her drop through the tree and grab onto a branch far below. Crate watched her climb, hoping she wasn't going to do it. But Crate knew Red.

She was going to drop.



She sat on the branch, so high, all of them so young, of an age when courage has no experience to know how strong it needs to be. She let go and they watched her fall, gravity pulling her, the leaves shaking in the elevator pattern as her body descended. Whoosh, and then she grabbed a branch, her hands wrapped around the bark, and her body swung like

a pendulum above the ground. She threw her head back and let out a scream— pride, joy, triumph.

“Crate,” She yelled, “It’s your turn!”

At that age, there is no turning back. He slowly climbed the tree, not daring to climb as high as Red had gone. She climbed with him, showing him the gap in the branches she had found. It looked wide enough, but Crate stopped at a branch not nearly as high as Red had gone. He knew Red understood and he knew Tim was praying Crate would choose a low branch so Tim could do the same.

“It’s not clear underneath this branch,” Red told him.

“It’s ok,” Crate said. “I’ll swing a little from this branch and be in that clearing and then grab the branch you used.”

Red looked doubtful, but Crate said he’d be fine. He would have said anything not to climb to those higher branches.

“Go for it!” She smiled.

He remembers hanging from the branch, looking down and judging the distance he needed to swing. Just a little. Well, maybe more than a little. He began to swing, back and forth, telling himself to let go. How hard could this be? Red had fallen more than twice as far and been fine. He swung forward one more time and let go.

He will always remember that feeling. The fear, the exhilaration, the sense of time elongated and the soundless vacuum around him. A perfect moment.

If Crate had had a better understanding of physics, never one of his best subjects, he would have known that an object moving forward, even a little, is unlikely to fall to Earth at a 90 degree angle. Unfortunately, that was the angle at which Crate needed to fall to slide through the clearing of branches as effortlessly as Red had done. Crate doesn’t remember much of the next few seconds, other than branches and leaves slapping at him as he fell through, and his frantic efforts to grab any branch near him.

Tim reports that, when Crate hit the ground, he heard a crack, although he thought it was a branch. It wasn’t. It was Crate’s leg. He was lying on the ground, scraped and bruised but, worst of all, with a part of his leg shattered and the bone puncturing the skin. He remembers Red screaming his name as she scampered down the tree and Tim, frozen, staring at him. Red yelled at Tim to go get someone. NOW!

Crate knew something bad had happened, the blood everywhere was enough to tell him that. But the look on Red’s face and his disfigured leg were things he’d never seen before. Crate’s mother came running, asking what happened. Crate looked at Red and she frowned. An unmistakable code. Clear.

“I fell off that branch,” he said, pointing to one reasonably close to the ground. “I’m sorry, I was just goofing around.”

Crate knew that, at that movement, he had cemented the bonds among them forever. Forever is such a long time at that age. It was only later that he understood how brief forever is.

OK, readers, you’ve come this far. You know the drill: A story has appeared. Why? We don’t know. What does it mean? We aren’t sure. I tell myself there is randomness in the universe and these updates may be proof of that. (Perhaps I am better at astrophysics than Crate.) It would be good to know what happened to Crate’s leg and how the friends greeted each other when they met years later. But, that universe is slipping away from us, headed for its own destiny. Parallel worlds sometimes intersect, a brief kiss in time and then they depart. You and I, we have a conclusion to find and let us all go get a glass of water, take a break, and come back to finish this update.

When the updates were primarily focused on the pandemic, I can, with the benefit of hindsight, observe that we seemed to be dealing with something we hadn't dealt with before—a pandemic that shut down the world. I know pandemics had happened before, but this seemed, to use another overused word, "unprecedented." Prior pandemics, like the Spanish Flu, seemed so far back in history. In addition, government response globally was unlike anything we had seen in the Spanish Flu era. The speed at which information was processed, the pace of vaccine development. We had not been through anything like that, we had little feel for where we were headed. Prior pandemics seemed so remote in time that it was hard to draw analogies or learn much. Think of that SAT question: Bubonic Plague is to COVID-19 as what is to what? That's a question you leave blank and move on…

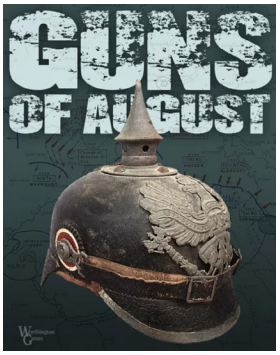
Now, here we are with the pandemic still with us, but two and a half years of learning, of adjusting, of knowing better. We're ready to get on with our pre-pandemic life, but now we also have a war in Europe, high inflation, rising interest rates, there are shortages or long waits for things, there's geopolitical uncertainty. How can this be?

This feels different from the pandemic. Very different. One difference is that the virus threatened us all. How we reacted may have been different, but the virus and government response meant it was front and center for all of us. That is not true of higher rates, inflation or war in Ukraine. There are some in the world it impacts dramatically and alters lives, almost irrevocably. Some it barely affects. There are some governments that are reacting and there are others that are ignoring most of these issues. There are some people that are engaged and there are others that don't care and won't change their lives. It is easier to ignore or avoid those issues than it was the pandemic.

Here's another difference. The pandemic felt new and novel, *terra incognita*. (It's always good to throw in a dead language to liven things up.) War, inflation and interest rates do not. Been there, done that. We have seen all of this before, right? Here's the rub. We haven't seen war like this in Europe for over 70 years (although, for those in the Bosnian War, there would be some disagreement). We haven't seen inflation and higher rates like this in the developed world in 40 years. We don't have much muscle memory for this kind of thing and, worse, we have a natural view that "it will all work out" because, guess what, it has been a very benign geopolitical and economic environment for decades compared to the hundred years before that period.

I believe it will "all work out." I don't believe we are headed to WWIII or economic calamity. I believe that because we will make good decisions today. I realize I say that against a backdrop of a sorry state of politicians around the world on whom we are counting to make some of these right decisions. But I believe that we each have the ability to make choices that help, and I remain optimistic that we will make those right choices. We will do that because of the fact we have been here, facing similar situations and issues. We have, and will, learn, adjust and react.

Here, though, is my advice for this update. Go read something historical (or listen to it or watch it—whatever your preferred form). We have been through wars and higher rates and inflationary periods. What did Churchill say? "Those that fail to learn from history are doomed to repeat it." Read or listen or watch something by Barbara Tuchman to see how geopolitical things can go crazily right or wrong. Read Reinhart and Rogoff on economic history. You get the idea. There is a ton of stuff out there in various mediums. Learn a thing or two about what happened in similar episodes to know what we face today. To know what choices you want to make. What conversations you want to have. What might happen and what will influence the direction events might take. The Kardashians or Bridgerton might be infinitely more interesting, and Call of Duty or Minecraft might be infinitely more fun, but some understanding of history might be infinitely more useful (and might surprise with how interesting or fun it is).



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As of April 19, 2022