CIO View Special

10 themes for the year ahead

April 2023

DWS Investors for a new now

Marketing Material

CIO View Special

10 themes for the year ahead

Every once in a while, financial-market participants put out lists of their key investment themes, many of which tend to be quietly forgotten amidst "unforeseen" surprises. Take the collapse of a certain Silicon Valley bank few outside the start-up world had heard of a few weeks ago. The specifics may be novel, but the underlying fragility in banking highlights perennial concerns.[1]

To be clear, you cannot foresee the future, partly because at any given point in time, many futures are possible.[2] But you can prepare for possible futures and focus limited resources on causal mechanisms behind what might unfold. At the macro-level, that might mean paying attention to the risks being taken in anticipation of interest rates never moving upwards.

This sort of work takes discipline and humility. When money is easy, everyone can be a winner for long stretches of time. But as an old adage has it: "If you're playing poker for a while and you look around the table and can't tell who the patsy is, it's probably you."[3] Any investor will sometimes take what retrospectively turned out to be unwarranted risks, without fully understanding everything that might possibly go wrong. The key is to learn from them. Take recent market turmoil. As often happens, troubles in one corner of finance – in this case of midsize U.S. banks – had far reaching repercussions, including a venerable Swiss bank being taken over. The direct causes and consequences might have been difficult to foresee, but the underlying mechanics were not.

For a fiduciary institution, it is essential to keep track of forecasting accuracy and analyze not just what happened but what could have happened. In that regard, putting together a top 10 of themes can be helpful. Part of the point is that it creates opportunities to learn, precisely when events surprise or assumptions turn out to be mistaken. As the psychologist Daniel Kahnemann is fond of saying: "Our comforting conviction that the world makes sense rests on a secure foundation: our almost unlimited ability to ignore our ignorance."[4] Making thematic predictions and tracking forecasting accuracy can be a useful way to test this seemingly secure but dangerous foundation.

In that spirit, this Special contains five pieces highlighting market segments we currently see as especially attractive (European high-yield bonds, European small and mid-cap equities, emerging-market equities) and worth watching in 2023 (global infrastructure and real estate). The remaining five are a potpourri of underlying trends likely to re-shape investing for years to come. We look at Europe's energy and digital transformation and the likely resulting shift in the continent's economic geography; as well artificial intelligence, understanding Japanification better and the future of globalization. As for banking and global macro-economics, we continue to think that tighter financial conditions are exactly what is needed. The recent turmoil will lead bankers and investors to belatedly take mitigating measures, but probably with limited macro-economic fallout.

Björn Jesch
Global Chief Investment Officer

10 themes for the year ahead

#1 Generative AI – a new iPhone moment in tech?

After a short break, the IT sector is on the rise again in 2023, not least thanks to Generative AI

#2 Innovative clusters – northern lights, transforming Europe

Largely unnoticed by many investors, innovative clusters are emerging, beyond Europe's old industrial belts

#3 Deglobalization – rather diversified globalization

Brexit, Trump, Covid-19 and Putin's war on Ukraine came as shocks. The end of globalization? Probably not

#4 Aging societies – the end of "Japanification"

"Japanification" = shorthand for countries with persisting low inflation and yields, but the comparisons fall short

#5 European Transformation – finally, Europe gets a makeover

Europe is embracing digitalization and renewable energy – This will require substantial investments

#6 European small-caps – time to shine

"Big was beautiful" in the U.S. – European stocks chased U.S. big caps for the longest time

#7 Emerging-markets equities – time to revisit

Remain relatively cheap, investors stay cautious – wrongly so, as we believe

#8 Global infrastructure assets – a more nuanced outlook

In a challenging operating environment, selection and thorough bottom-up research remain crucial

#9 European high yield – enough meat on the bones

Emerged as relative winners in the fixed-income segment – and we believe they can still deliver

#10 Global real estate – how to find value

As prices adjust, many areas of the global real estate market are looking increasingly attractive

Generative Artificial Intelligence – a new iPhone moment in tech?

The IT sector faced some headwinds in 2022 but is off to a good start 2023 – also supported by AI.

It has been a smooth ride for technology investors for decades. Even if you invested at the worst of all times in the Nasdaq Composite Index (March 2000), you would have averaged a 5% annual return by now. No surprise that investors felt vindicated when the information technology sector (IT) started to underperform in late 2021, mainly for three reasons: rising interest rates[5]; reduced IT demand post-Covid, and geopolitical tensions leading to tech-related sanctions. Admittedly, IT in 2022 has seen its worst correction vs. the market since the bursting of the dotcom bubble. But not least because of the sectors outperformance this year, IT trades again on a 40% premium to the markets[6]. But this has more to do with markets technicalities and savings programs than with exciting new growth segments.

The arrival of Generative Artificial Intelligence (GAI) has been touted as "a very big moment for the computer industry" by a leading technology CEO. GAI refers to a class of machine-learning models that are designed to capture patterns in the underlying data to be able to create (generate) new data that plausibly matches the original dataset – creative algorithms. When OpenAI launched their chatbot ChatGPT last November it took only five days to reach one million users – a record. Ever since then, numerous companies have announced that they are introducing similar chatbots. We might be experiencing a new iPhone moment in technology where GAI is democratizing data and enabling an abundance of commercial use cases. We are aware that many will call this hype[7] and warn of likely problems in the new technology, but we stick to our positive view.

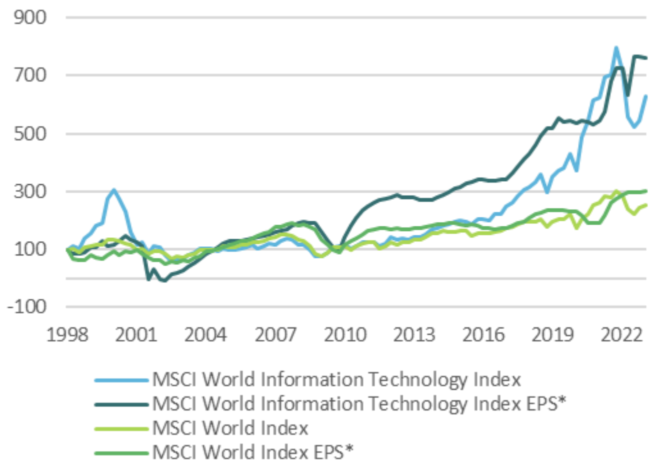
The availability of large datasets, the introduction of new techniques for training generative models and the rapid increase in computing power have speeded up the development of GAI massively. Fast Graphic Processing Units have enabled the training of models with billions of parameters in short time. We believe companies developing faster semiconductors or network connectivity are major beneficiaries of GAI's growth.

GAI can do more than creating, summarizing, or translating text. Further potential applications include creating music, pictures, videos, and/or speech. GAI can be used to generate deep fakes; however, it can also help detect counterfeits (i.e., anomaly detection) and improve security through enhanced encryption services. Finally, software and chip companies can optimize their own coding/design process by using GAI.

We believe a wide variety of new applications and companies will emerge around GAI, driving rapid growth. In developed markets where economic growth is harder to find, companies with a structural growth profile will likely stay in demand. We believe the IT sector has the potential to keep on achieving above-average growth that equity investors cannot ignore. But not at all costs.

IT sector vs. global equities

indexed: 6/30/98 = 100



Source: Bloomberg Finance L.P., DWS Investment GmbH as of 3/29/23

*Earnings per share (EPS)

This information is subject to change at any time, based upon economic, market and other considerations and should not be construed as a recommendation. Past performance is not indicative of future returns. Forecasts are based on assumptions, estimates, opinions and hypothetical models that may prove to be incorrect. DWS Investment GmbH as of 4/5/23

Northern lights, transforming Europe

Largely unnoticed by many investors, innovative clusters are already emerging, beyond Europe's old industrial belts.

One of Europe's hidden strengths is its diversity. As old hands in Brussels like to put it, Europeans are rarely all wrong, in exactly the same way at exactly the same time. Amidst all the talk of chancellor Olaf Scholz' "Zeitenwende"[8], it is easy to overlook how Europeans, young and old, are learning from each other. European businesses, large and small, were able to respond to the energy crisis caused by Putin's latest war much better than initial official guesstimates suggested. Meanwhile, the integration of Ukrainian adult (mostly women) into local labor markets appears to have been unusually smooth.[9]

Change in Germany's consensus-driven democracy tends to be glacially slow in normal times, only to suddenly accelerate in response to crises. A similar logic holds at the European level. "I have always believed that Europe would be built through crises, and that it would be the sum of their solutions.", Jean Monnet, one of the founding fathers of what became today's European Union, writes in his memoirs, before adding: "But the solutions had to be proposed and applied."[10]

Fortunately, Europeans have plenty of readily available examples of how the looming energy and digital transformations can be turbocharged to reinforce each other. In recent decades, Norway, Finland and Sweden have emerged as software powerhouses. Estonia regularly tops global lists in terms of highly valued tech start-ups per capita, ahead even of Israel.[11] Denmark is a leading player in biotechnology.

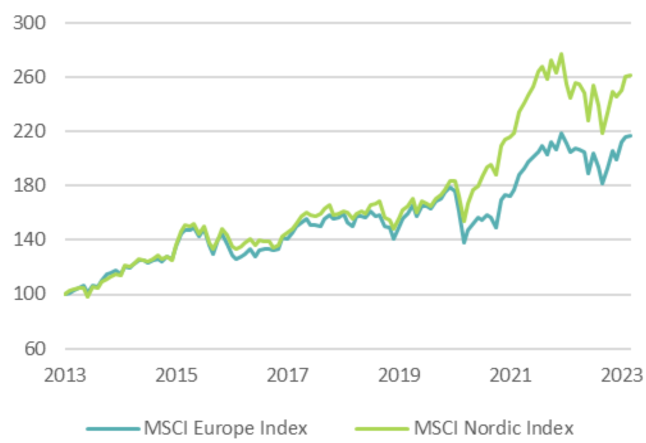
The fact that Nordic countries are also leaders in Europe's energy transition is no coincidence. To fulfil the potential of intermittent renewable energy sources requires real-time data at various points in the electric grid. Only once the technical, legal and commercial "infrastructure" is in place can digital management systems efficiently match generation and consumption.

More profoundly, data storage, processing and retrieval are extremely energy intensive. These, in turn underpin cloud computing, artificial intelligence and related digital services, including, for example, for sequencing genomes and bioinformatic applications. Nordic countries have the twin advantage of ample supplies of cheap renewable energy and a cold climate. The latter reduces the need for costly and energy-intensive cooling of data centers. With the growth in off-shore wind production, these advantages are likely to grow further, potentially reshaping Europe's economic geography.

Largely unnoticed by many investors, innovative clusters are already emerging, beyond Europe's old industrial belts. And once agglomeration and innovation start in some particular place for whatever reason, positive feedback loops tend to emerge. In Estonia, practically all public services, from paying your car's parking fee to setting up a business, are conducted digitally. Putin's war has taught Europeans many bitter lessons. But perhaps the most important one to keep an eye on is how much we can learn from each other and from innovative success stories in the continent's North and East.

Performance: European vs. Nordic equity markets

indexed: 1/31/13 = 100



Source: Bloomberg Finance L.P., DWS Investment GmbH as of 3/31/23

Deglobalization? Rather diversified globalization

For decades, global trade expanded steadily. Then came Brexit, Trump, Covid-19 and the war in Ukraine. We believe that this is not the end, but the reordering of globalization.

For a long time globalization came down to just two points for economists: companies benefit from lower input costs and new markets; consumers benefit from lower prices. The political appraisal has always been more complex. The hope that global trade, embedded in multilateral rules, would make military conflicts less likely was contradicted by Russia's invasion of Ukraine. But it had become apparent long before that countries tend to decide against the economically most sensible alternative, and sometimes to a drastic degree. In industrialized countries the previously underestimated political consequences of globalization became apparent for all to see with Brexit and the election of Trump. What emerged above all was the disappointment of those who saw themselves as losers from globalization.

This does not help multilateralism. The trade war between China and the U.S. has further weakened the World Trade Organization (WTO). Bilateral agreements are gaining importance, supply chains are being reorganized, and trading partners are being reselected as countries seek others who share a similar value system. National security is again more frequently cited as a reason for or against a trade partnership. This usually makes exporting more complex, and in purchasing the most favorable suppliers can be eliminated.

This trend was accelerated by the pandemic and the war in Ukraine. Greater autonomy and secure access to critical goods were prioritized over short-term cost minimization in procurement and production. This affects structurally important products: energy, rare earths, pharmaceuticals, defense, high technology.

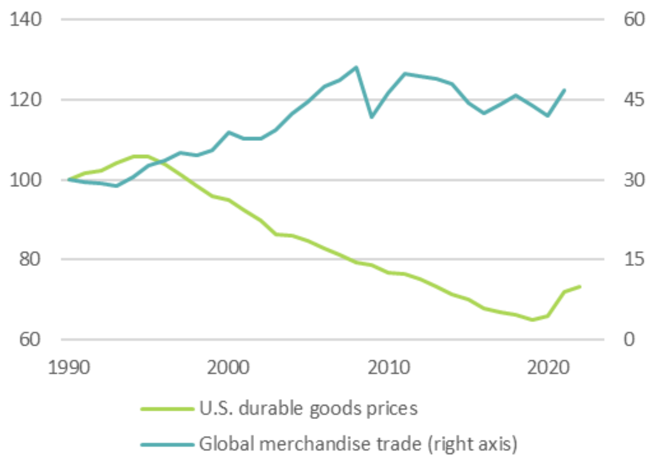
As the chart shows, globalization hit its peak in 2008 and was then temporarily dampened by the financial crisis. Even after a recovery period it never reached the pre-financial crisis trend, but rather continued to lose momentum from 2011 onwards. Still, we think it would be a mistake to say globalization is over. We prefer to speak of a diversified (or regionalized) globalization, for several reasons.

First, the advantages of the global division of labor and of large markets are too compelling for companies. Second, no region is self-sufficient and thus able to do without global trade. Third, global trade in data, services and intellectual property is increasing. Between 2010 and 2019, international data exchange grew by 45% p.a.[12] and trade in services and intellectual property grew by about 5% p.a., (vs. trade in goods at 3% p.a.). Fourth, we believe that foreign trade policy in Europe and the U.S. is increasingly taking into account voters' concerns, which could lead to greater acceptance of global trade agreements. The reorganization of supply chains that is taking place is likely to drive costs in the short term. In the longer term, however, benefits (such as greater certainty on planning, for example) are likely if trading partners have been chosen more carefully.

In general, one should not underestimate companies' adaptability. Look, for example, at how they have dealt with skyrocketing energy prices in Europe. But one thing remains the same: globalization is too complex to allow for any quick conclusions about its fate.

Merchandise trade vs. durable goods prices

indexed: 12/31/90 = 100 | % of GDP



Source: Bloomberg Finance L.P., DWS Investment GmbH as of 12/31/22

The end of "Japanification"

Unfolding trends in Japan's labor markets with big implications for aging societies generally.

Lately, some news headlines have been truly remarkable: "Major Japanese firms agree to hefty wage hikes",[13] what makes it remarkable is that it contains the word "Japan". Since the mid-1990s, "Japanification" has become shorthand for a supposedly perennial economic malaise that other rich but rapidly aging countries may face in the coming decades.

This year's spring wage talks (Shunto) between unions and Japan's leading firms are putting such ideas to the test. Strictly speaking, most actual wage negotiations take place at the enterprise unions or between company groups and their unions, rather than at the level of industries. Traditionally, Shunto has mainly been a way to facilitate coordination. Having pay talks take place roughly simultaneously according to some predetermined sequence first emerged during the post-war boom years to contain wage leapfrogging.[14]

Over the past decade, Japanese policymakers have instead been eagerly hoping for what they would see as a "virtuous cycle between wages and prices", that is a combination of rising prices and higher wages. There has been much debate over precisely why the legacy of debt crises that took place in the 1990s has led to sluggish growth and low or no inflation for over thirty years, despite increasingly expansive monetary and fiscal policies.[15] Shunto relies heavily on informal as well as formal information exchanges between enterprise unions and employee's representatives, as well as the government. The government has made its preferences for wage rises of 3% or above clear. Given productivity trends and seniority-based salary gains to the amount of around 1.7% p.a. for those Japanese workers still enjoying life-time employment, that might be roughly consistent with finally coming close to the 2% inflation target. But only if settlements for large enterprises also starting setting the tone for employees' pay at non-unionized smaller firms. Already, wage growth appears to have accelerated even before the current Shunto.

For now, we think that the Bank of Japan (BoJ), which is coming under new leadership will probably wait for firm evidence of sustained, economy-wide wage gains. Any BoJ pivot towards a normalization course would have significant implications for global equities, bonds and currency markets, given the size of Japanese investment flows.[16]

There is another reason to keep a close eye on those Shunto talks. For many years now, "Japanification" has been used to "explain" episodes of low inflation and interest rates in other aging economies. Look closely and there is always more involved than just aging. Indeed, the first example of "Japanification" was arguably the Great Depression, when populations were still young and growing. For several years, some observers have pointed out the many ways in which Japan's experience might be misleading.[17] One aspect appears especially relevant. Because of cultural, political, and language barriers, the Japanese labor market has long been unusually isolated. But given just how low entry-level Japanese wages now are compared to other rich countries, more and more young Japanese are trying to escape abroad. Already, it is becoming clearer and clearer that "Japanification" is not what it used to be.

Accelerating wage growth already, if you squint

Source: Bloomberg Finance L.P., DWS Investment GmbH as of 3/7/23

Finally, Europe gets a makeover

For investors risks and opportunities abound, as Europeans finally lay foundations for future prosperity.

Better late than never. As we have long argued, European economies urgently need a makeover[18]. If done properly, the shift towards digitalization and renewable energy have the potential to transform Europe's prospects, as indeed, the continent's north-eastern edge has already seen significant progress (see theme 2). Elsewhere, it took Vladimir Putin's latest war on Ukraine and the resulting cost-of-living crisis to bring home the urgency of reducing external dependencies and build sustainable economies.

If Europeans wish to secure their current high standard of living and lay the foundations for future prosperity, significant investments will be required, creating opportunities for private investors. By 2030, the European Union (EU) now aims for a renewable-energy target of 45%[19] (from previously targeting 40%). Moreover, the EU focuses on energy efficiency gains, since in Europe as in other continents, much of the energy being produced is wasted. In 2021, end-use consumption was about 70% of primary energy consumption, including all energy uses, implying an energy loss along the value chain of about 30%.[20] This suggests significant potential for efficiency gains in transportation, distribution, and the delivery of energy.

The policy aims give a taste of the challenges and opportunities ahead, within the context of a rather nuanced outlook for global infrastructure (see theme 8).

Europeans are just about to seize their opportunity and invest together in change. We assume that the willingness will continue over the next few years. But not only their willpower puts us in a positive mood. In democratic societies, it can take crises as well as electoral events to remove blockages. By re-sharpening targets, the next months should provide good entry points to invest in digital and energy infrastructure assets. As the chart shows, private investments in critical infrastructure are needed alongside public money to close the gap of nearly 600 billion euros per year in Europe alone.

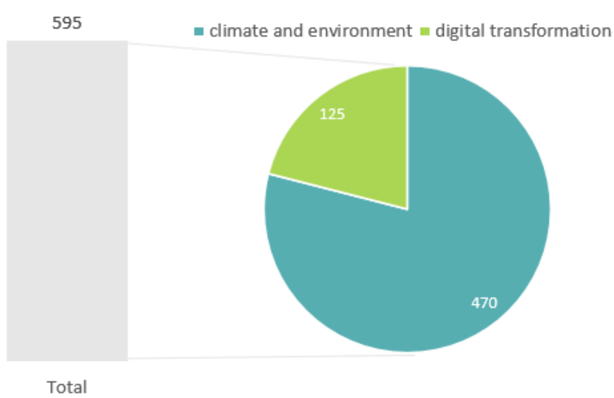
With the next European elections looming in 2024, time is short and changing political winds at the European level cannot be ruled out. Another open question is how the lofty goals will translate at the local level, once the sense of crisis passes; especially in federal countries, such as Germany. If Europeans can seize this opportunity, the gains could prove significant.

Digitization in the energy sector ideally means that energy flows can be analyzed and measured in real time, theoretically resulting in zero energy waste.

More decentralized energy economies can enable greater reliance on renewable energy. Innovative new(ish) technologies could also reinvigorate Europe's export sector. From smart meters to record energy consumption and sensors that collect information about the state of the electricity transmission network, to hydrogen and digital enablers such as fiber optic networks and energy- and cost-efficient data centers, there are plenty of opportunities to carefully choose from.

Europe: Investment gap in climate & digitalization

billion euros per year*



Source: European Commission Staff Working Document, "Identifying Europe's recovery needs and Climate" as of 5/27/20

* Over a period of 2 years

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Big was beautiful in the U.S., now European small caps shine

European stocks chased U.S. big caps for the longest time. This trend has reversed some months ago and we believe that especially Europe's small caps can continue to outperform.

Since the debt crisis of 2008, Europe's stock markets have been overshadowed by the dominating U.S. market. Rightly so as many may say, since Europe's equities (Stoxx 600) have gained only around 35% over the past 15 years[21], while the S&P 500 has more than tripled in euro terms. In the end, this resulted in a record valuation[22] discount of over 30% for Europe's stocks. But since mid-2022[23], the "Old Continent" has been making up ground. This may have less to do with the fact that the economy here is doing so splendidly, but rather that investors overestimated Europe's risks and America's economy.

Europe's race to catch up was probably triggered by the absence of an energy bottleneck in the winter and the generally higher-than-expected resilience of companies. We believe there are good reasons for the catch up to continue. Macroeconomic reasons (fiscal stimulus will be positive in Europe this year, but negative in the U.S.), but mainly equity market-specific reasons:

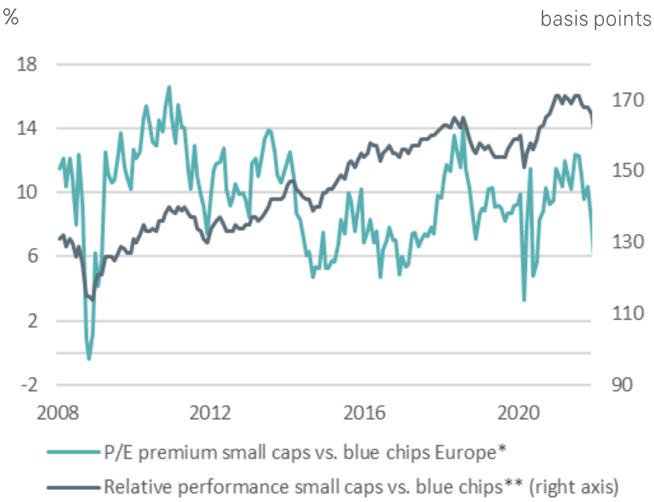
1. The valuation discount remains at 26%, well above its 20-year average of 14%.
2. We expect a greater need for downward revisions for U.S. than for European earnings estimates over the year.
3. The sector composition of the Stoxx 600 currently seems more attractive to us. The proportion of value stocks (including financials), which we continue to favor in this environment, is significantly higher than in the United States.

In addition, the local cyclical sectors are likely to benefit relatively more from China's opening (industry, mines, luxury) than the American ones. We also see more downside risk from the record-high margins in the U.S. than in Europe. Last but not least, U.S. stocks have to compete in an environment of significantly higher real interest rates[24]. Estimates for the Federal Reserve's interest-rate hikes were revised upwards again since the beginning of February, which especially hurts the technology sector in terms of valuation.

Within Europe, we particularly like small and mid caps (SMid caps). They have higher growth rates, higher profit margins and greater pricing power in the long-term comparison, which is especially rewarding in the current inflationary environment. In addition, SMid caps have a higher proportion of cyclical stocks with high operating leverage.

As corporate pessimism in Europe is likely to have decreased according to purchasing managers' indices and we expect an economic recovery (a slight one) in the course of the year, this further favors the segment. Last but not least, SMid caps also have some catch-up potential in terms of valuation. Their price-to-earnings ratio (P/E) relative to the blue chips is well below the 15-year average. That is the result of a – seldom – one year underperformance of European SMid caps from mid-2021 to mid-2022. In that period, the sector lost more than twice as much as the blue chips. However, we expect the old path to continue, at least in terms of the trend: over the past 20 years, SMid caps have outperformed blue chips by a factor of four.

Europe: small caps vs. blue chips



Source: DWS Investment GmbH, FactSet Research Systems Inc. as of 2/28/23

* Based on earnings estimates for the next 24 months. MSCI Europe SMID Cap Index and Stoxx 600
** Total returns, MSCI Europe SMID Cap Index and Stoxx 600

Time to revisit emerging markets

Emerging markets remain relatively cheap, despite offering higher medium-term earnings growth potential compared to developed markets.

Lately, China watchers have had plenty to ponder. In recent months, better liquidity support for the property sector, favorable news on rules governing foreign listings, and friendlier policies for the private sector dominated internet businesses have completely turned sentiment. The dramatic U-turn in Covid-19 strategy, looks set to boost domestic growth in gross domestic product (GDP). We were especially encouraged that the rapid re-opening post Chinese New Year did not trigger additional Covid waves.

While domestic and geopolitics certainly remain wild cards, the fundamentals have clearly improved and there are growing signs that domestic economic stability is a key policy priority over the coming 12 months. Going forward, we would expect China's recovery to accelerate, with economic data improving in the second quarter of 2023. We expect government policies to remain supportive for growth in consumption and a pickup in services. Pent-up Chinese demand is likely to also strengthen goods and services trade in the region, not least thanks to the return of tourists from mainland China. Investments should continue not only in infrastructure but also in the decarbonization of the economy. Urbanization remains another key driver as China strives to bring the urbanization rate up to 80% from the current 63%.

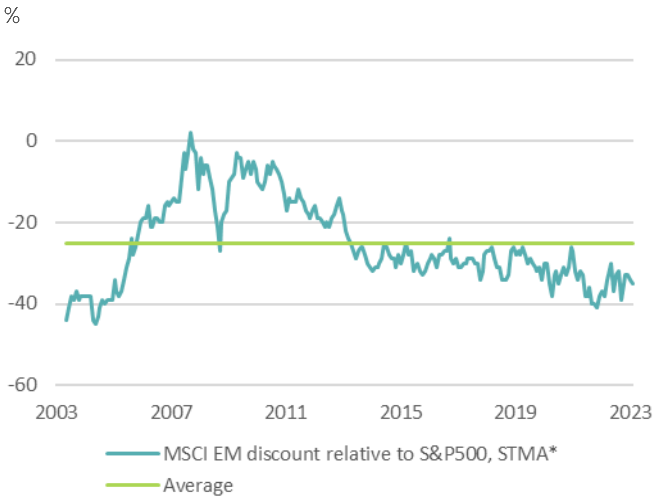
While momentum may surprise on the upside this year, China's medium-run growth rate is likely to normalize around a much lower trend than in previous decades. On top of demographic challenges in a medium-income country, the Chinese economy could also continue to face the same challenges prior to Covid-19, from weakness in its property market and local government finances to geopolitics.

Despite this, and recent wild swings in financial markets, we think that the China rally still has a lot further to go. The Chinese equity market has come down a long way since February 2021. More broadly, emerging markets (EM) remain cheap and investors' positioning from global funds stay light after they reduced their positions last year. In our view, earnings momentum should also prove rather better over the medium term than in developed markets.

Clearly, foreign investors have been unsettled by last year's policy headwinds in China. These offer an excellent broader lesson for emerging-markets investors. With countries that are governed in their own distinct ways, political surprises of both a negative and a more benign kind should always be expected. One key to investment success is to know when to look beyond past policy disappointments.

Despite occasional geopolitical flare-ups, we would expect foreign investor concerns to dissipate quickly, if and when economic data continues to improve in line with our expectations. China's governance model has long combined top-down direction with bottom-up autonomy. It remains to be seen whether President Xi Jinping will prove willing and able to reopen the political system's feedback channels to the extent necessary to ensure their efficient functioning over the longer term.[25] In the meantime, however, investor preferences appear well aligned with the pro-business reset China's rulers have lately favored.

Valuation discount EM vs. U.S. equities



Source: DWS Investment GmbH, FactSet Research Systems Inc. as of 3/31/23

*MSCI Emerging Markets discount relative to S&P500, Second Twelve Months Average

A more nuanced outlook for global infrastructure

In a challenging operating environment, selection and thorough bottom-up research remain crucial.

Infrastructure has delivered another outstanding year in 2022. Its longer-term appeal in inflationary times remains intact.[26] The short-term outlook is more nuanced.

Economic growth forecasts currently point to relatively shallow recessions in most markets. Infrastructure assets exposed to consumer demand are likely to face some pressure. For example, electricity producers that have no long-term supply contracts but feed directly into the spot market or short-term day-ahead market have done well over the last year thanks almost exclusively to unprecedentedly high-power prices. Conversely, an economic downturn in 2023 would probably hit these assets among the hardest.

However, traditional core assets, which tend to focus on mature assets providing yield, but limited capital appreciation potential, as well as so called "core plus" assets, without volume risk, are likely to see more resilient performance.[27] Still, a careful asset by asset analysis is required, with affordability concerns likely to be at the top of the agenda for many regulators. That might limit regulated assets' ability to react to economic conditions. Contracted businesses that have inflation-passthrough and the ability to adjust terms - more than a regulated utility, for example – are likely to outperform in the current environment.

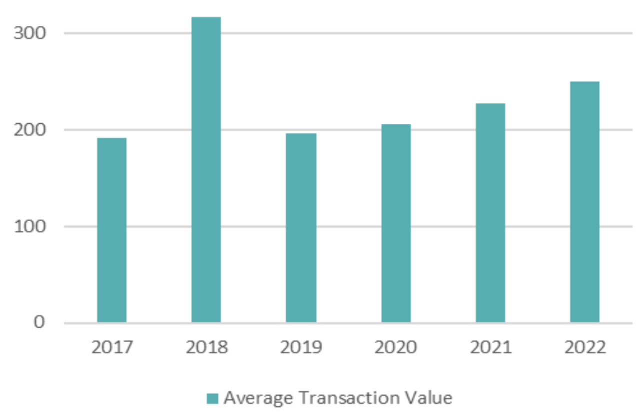
With interest rates having risen and set to remain higher than they have been for many years, the impact on discount rates and infrastructure valuations will be increasingly felt across the market. The impact will partly depend on how quickly an asset has been able to adjust revenue streams to boost cash flows. In the more rigid core market, this may see valuations decline relative to core plus assets, which often have greater flexibility to adjust revenue streams and renegotiate contracts. Likewise, assets where valuations were normalized to reflect the anomalous nature of the persistent low-rate environment should see their valuations hold up relative to those assets which may have benefitted from low discount rates in recent years.

While headline inflation has probably peaked in most markets over late 2022, underlying inflation is likely to remain sticky, posing earnings risks for infrastructure assets less able to adapt. Key areas to watch remain the elevated capital and material input costs. Assets will see continued material cost pressures with metal prices, energy prices and, in particular labor costs, remaining elevated, even if the pace of cost increases slows.

Finally, we may see significant policy support on offer to infrastructure investors to speed up the energy transition. However, it is not clear yet whether many of the technologies deemed crucial to transition success will provide attractive returns to infrastructure investors. Examples include green hydrogen and charging infrastructure, where only limited business streams currently suit infrastructure investors. In short, selection and thorough bottom-up research remain as crucial in the coming 12 months as they have been in 2022.

No signs of excess in terms of deal sizes

million euros



Source: Estimate based on DWS's own database*, as of 12/1/2022

* For unlisted European infrastructure transactions, including publicly available transaction information from Infrastructure Journal, InfraNews, Pitchbook, Bloomberg, Preqin

Europe’s high-yield bonds still have plenty to offer

High-yield bonds emerged as relative winners in the fixed-income segment – and we believe they can still deliver. We favor Europe vs. the United States.

An annual loss of "only" 11.6%. That doesn't exactly sound like a good argument for an asset class. But it all depends on the context. Because with this result, European high-yield (HY) bonds[28] still performed significantly better than most other bond segments last year – the best house in a bad neighborhood so to say. Especially government bonds took a beating. Most European 10-year bonds lost 20% or more, while 30-year German Bunds lost almost half their value. This brings us to one of the reasons for the relatively good performance of high-yield bonds: their short duration of effectively 3.2 years[29]. The price loss in the event of interest-rate hikes is correspondingly lower (this cannot be ruled out for the current year either, even if it is not our base scenario).

Of course, 2022 was anything but a good year for high-yield bonds, especially in the first six months. That's when bond prices suffered from both rising sovereign-bond yields and a rising risk premium (spread). The latter peaked in early July before collapsing back to levels seen at the beginning of the war. While this does not imply a further spread tightening over the course of 2023 – with a corresponding positive price effect – we do not expect much more here. On the contrary, we expect higher volatility leading to a renewed possible spread widening. As we have already experienced since the beginning of March in the course of the banking crisis.

However, this does not detract from the attractiveness of the asset class. After all, the effective yield of over 7% speaks for itself in our opinion. Especially when you consider the following points that support European HY as well:

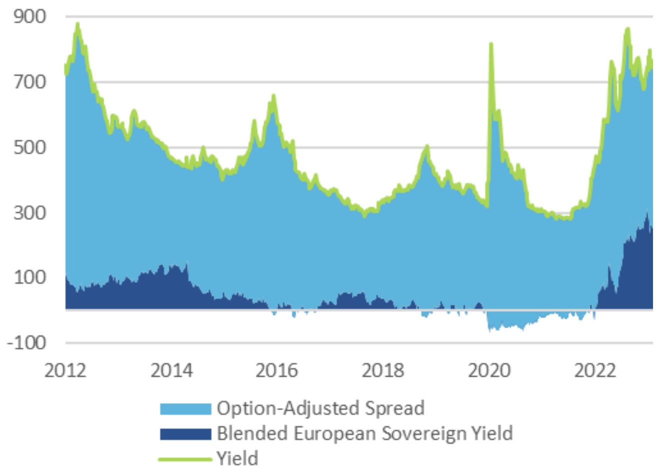
– Default rates have so far remained very much within tight bounds[30]. Further, in the medium term we do not expect them to rise to a usual level for a recession. For two reasons:
– The feared winter recession did not happen, and it appears that energy supplies for the coming winter are secured. We also no longer expect a recession for 2023. However, the soft downturn is also likely to be followed by only a mild upswing, which is not a bad environment for high-yield issuers.
– Especially if they enter the downturn with positive remaining balance-sheet ratios[31], particularly as they have borrowed (this secured funding) generously over the past two years.

In other words, we think a current yield of over 7% provides a decent risk buffer, whether against credit defaults or further increasing interest yields. We currently prefer the European market to the U.S. market as it has: a higher average credit rating[32] (including a smaller share of energy and biotech stocks), higher spreads, a more inefficient market with a broader yield spectrum. In addition, the supply-demand environment in Europe currently seems more attractive.

The banking crisis in March set back the high-yield segment, as investors are alarmed by the lack of trade liquidity on such turbulent days. Moreover, they perceive a higher risk of recession including defaults. However, this is not our core scenario.

European high-yield bonds

basis points



Source: Bloomberg Finance L.P., DWS Investment GmbH as of 4/11/23

How to find value in global property markets

As prices adjust, many areas of the global real estate market are looking increasingly attractive. One example is U.S. industrial.

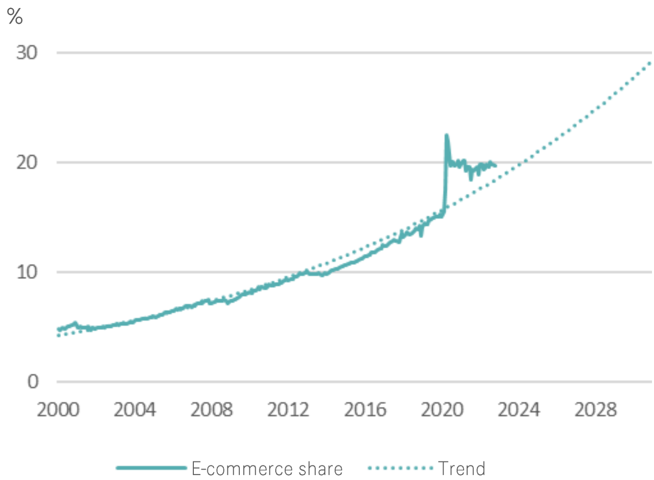
From a longer-term perspective, real estate looks like an increasingly plausible beneficiary of investing in inflationary times. As we previously argued, much of the space entered the current downturn, featuring hefty price corrections in some segments, admittedly at low transaction volumes, in remarkably robust health.[33] In U.S. residential, for example, rental growth has been surprisingly strong.[34] If labor markets remain robust, a return to rental growth in the course of 2023 is very likely, despite recent dips.[35] Partly, that reflects the subdued U.S. residential construction for much of the past decade. Contrary to previous booms, and to perceptions among some market commentators known for their skepticism, there simply aren't that many imbalances to be corrected.[36] Areas such as cyclically-sensitive office markets are best considered in a regional, market-by-market or even asset-by-asset context. From an investor's perspective, the trickier question is how to think about those segments that do have a very good decade behind them.

Take industrial real estate, which has stood head-and-shoulders above other sectors since the mid-2010s. As e-commerce swelled, companies scrambled to build distribution networks capable of rapidly fulfilling online orders. Builders could not keep up with demand, causing rents to soar, with e-commerce tenants competing for a dwindling supply of available space.

Superficially, it may seem like the bloom coming off the rose for industrial properties. Yet recent events, even beyond the banking crises, have cast a shadow over the sector. A prominent e-commerce vendor announced layoffs and plans to sublease buildings. Net new U.S. warehouse demand (or absorption) fell in 2022. And would it not seem entirely plausible for a bust to follow the boom? We do not think so. The slowdown can be readily explained: During the Covid-19 pandemic, homebound consumers shifted spending from vacations, dining, and other entertainment toward goods ordered online. E-commerce surged from 15% of U.S. retail sales (including restaurants but excluding autos and gas) in 2019 to 22% in April 2020, fueling a warehousing boom. E-commerce penetration has since drifted back to 20% as spending patterns have normalized, and industrial leasing has followed suit.

However, the sector's underlying drivers are not only intact; in our view, they have probably strengthened. We believe that U.S. e-commerce penetration will increase to at least 25% by the end of the decade, consistent with its pre-Covid-19 trend and levels in other developed markets such as the UK. Moreover, efforts to protect supply chains from geopolitical, pandemic, and other disruptions may well have permanently increased the amount of critical inventory being held – and the space it takes to store it. To be sure, it would be a mistake to extrapolate the vagaries of the past two years to a longer-term investment horizon. Covid-19 and its aftermath temporarily accelerated, and then softened, warehouse demand. But abstracting from the recent volatility, we believe the future remains bright for industrial real estate. And if asset valuations come under renewed pressure in coming months, that could provide even more attractive entry points.

E-commerce share of U.S. retail sales*



Source: United States Census Bureau, DWS Investment GmbH as of 11/1/22

*Including restaurants, excl. autos and gas

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DWS Investment GmbH as of 4/5/23

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6) Comparing the price-earnings-ratio based on 2024 estimated earnings of the MSCI World Information Technology Index and the MSCI World Index
7) Similar to 3D-printing or VR binoculars
8) "Zeitenwende" refers to the start of the war in Ukraine, which marks a turning point in the history of Europe, according to Olaf Scholz, February 27, 2022.
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20) https://www.eea.europa.eu/ims/primary-and-final-energy-consumption
21) Source: Bloomberg Finance L.P. as of: 3/31/23
22) Calculated using the price/earnings ratio based on estimated earnings for the next 24 months.
23) The Stoxx 600 has outperformed the S&P 500 since spring 2022, but only since fall in currency-adjusted terms.
24) The real interest rate resulting from inflation-indexed 10-year government bonds is 1.5 % for the USA and 0.1 % for Germany.
25) Is China Back? by Yuen Yuen Ang - Project Syndicate (project-syndicate.org)
26) More than just a potential inflation hedge (dws.com)
27) "Core plus" describes strategies that offer greater risk and greater potential returns compared to the investment characteristics of traditional infrastructure investments. They can thus be added to a core portfolio to augment returns (hence, core plus).
28) The correct term would be non-investment grade bonds or bonds whose creditworthiness has been rated as substandard by the major rating agencies.
29) Throughout the text, reference is made to the ICE BofA Euro Non-Financial High Yield Constrained Index.
30) At 0.8% in 2022, they were well below the average of the past 12 years.
31) Thus, the debt-equity ratio and interest coverage are roughly at 20-year averages.
32) More than 60% of Euro HY has a BB rating (highest rating for HY), while only a very small part has a CCC rating.
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Glossary

The Bank of Japan (BoJ) is the central bank of Japan.

Blue-chip index is a term commonly used for an index that covers the leading companies of a country or region.

Brexit is a combination of the words "Britain" and "Exit" and describes the exit of the United Kingdom of the European Union.

Bunds is a commonly used term for bonds issued by the German federal government with a maturity of 10 years.

Core infrastructure is the term for assets that are primarily income producing. They cover network assets that provide essential services including water, electricity and rail networks.

"Core plus" describes strategies that offer greater risk and greater potential returns compared to the investment characteristics of traditional (core) infrastructure investments.

Decarbonization is the reduction or elimination of carbon dioxide emissions from a process such as manufacturing or the production of energy

The discount rate is the interest rate charged to commercial banks and other depository institutions for loans received from the country's central bank's discount window.

Duration is a measure expressed in years that adds and weights the time periods in which a bond returns cash to its holder. It is used to calculate a bond's sensitivity towards interest-rate changes.

Earnings per share (EPS) is calculated as a company's net income minus dividends of preferred stock, all divided by the total number of shares outstanding.

Emerging markets (EM) are economies not yet fully developed in terms of, amongst others, market efficiency and liquidity.

The euro (EUR) is the common currency of states participating in the Economic and Monetary Union and is the second most held reserve currency in the world after the dollar.

The European Union (EU) is a political and economic union of 27 member states located primarily in Europe.

The financial crisis refers to the period of market turmoil that started in 2007 and worsened sharply in 2008 with the collapse of Lehman Brothers.

Fiscal policy describes government spending policies that influence macroeconomic conditions. Through fiscal policy, the government attempts to improve unemployment rates, control inflation, stabilize business cycles and influence interest rates in an effort to control the economy.

The Great Depression was the deepest and longest-lasting economic downturn in the history of the Western industrialized world.

Green hydrogen refers to hydrogen that is generated by renewable energy.

The gross domestic product (GDP) is the monetary value of all the finished goods and services produced within a country's borders in a specific time period.

Headline inflation is the raw inflation figure based on the consumer price index (CPI) and not adjusted for seasonality or for the often volatile elements of food and energy prices.

High-yield bonds are issued by below-investment-grade-rated issuers and usually offer a relatively high yield.

Inflation is the rate at which the general level of prices for goods and services is rising and, subsequently, purchasing power is falling.

Liquidity refers to the degree to which an asset or security can be bought or sold in the market without affecting the asset's price and to the ability to convert an asset to cash quickly.

Firms referred to as mid cap generally have a market capitalization of between $2 billion and $10 billion.

Glossary

Monetary policy focuses on controlling the supply of money with the ulterior motive of price stability, reducing unemployment, boosting growth, etc. (depending on the central bank's mandate).

The Nasdaq Composite Index is an equity index which contains all common stocks listed on the NASDAQ exchange.

The price-to-earnings (P/E) ratio compares a company's current share price to its earnings per share.

The Purchasing Managers' Index (PMI) is an indicator of the economic health of the manufacturing sector in a specific country or region.

The real interest rate is the nominal interest rate adjusted for inflation as measured by the GDP deflator.

A recession is, technically, when an economy contracts for two successive quarters but is often used in a looser way to indicate declining output.

The risk premium is the expected return on an investment minus the return that would be earned on a risk-free investment.

The S&P 500 is an index that includes 500 leading U.S. companies capturing approximately 80% coverage of available U.S. market capitalization.

Small cap firms generally have a market capitalization of less than $2 billion.

Sovereign bonds are bonds issued by governments.

The spot market is a public financial market where financial instruments, such as commodities, currencies, and securities are traded for immediate delivery.

The spread is the difference between the quoted rates of return on two different investments, usually of different credit quality.

The Stoxx Europe 600 is an index representing the performance of 600 listed companies across 18 European countries.

The U.S. Federal Reserve, often referred to as "the Fed," is the central bank of the United States.

Valuation attempts to quantify the attractiveness of an asset, for example through looking at a firm's stock price in relation to its earnings.

Value stocks are stocks from companies that are trading at prices close to their book value and that are therefore cheaper than the market average on that metric.

Volatility is the degree of variation of a trading-price series over time. It can be used as a measure of an asset's risk.

The World Trade Organization (WTO) is an international organization based in Switzerland, which regulates commerce between nations through mutually agreed rules.

Yield is the income return on an investment referring to the interest or dividends received from a security and is usually expressed annually as a percentage based on the investment's cost, its current market value or its face value.

Important information – EMEA, APAC & LATAM

Important information – North America (1/2)

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