



PMC

Portfolio Management Club

PORTFOLIO MANAGEMENT CLUB

NEWSLETTER

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JULY 2024

NOVA
NOVA SCHOOL OF
BUSINESS & ECONOMICS

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Foreword



It is the Board's pleasure to introduce the Portfolio Management Club's Newsletter – Spring 2024.

Reflecting on the first half of the year, we watched the headline topics that marked 2023 unfold. Inflation is cooling off, and few doubts are left about the American soft landing. The initial excitement around AI has evolved into a more realistic understanding of its productivity-enhancing capabilities. Geopolitical tensions remain high, with the Russian-Ukrainian and the Hamas-Israel conflict ongoing, while upcoming elections are set to shape the economic landscape. We remain vigilant for potential disruptors of the current fragile optimism we live in and the investment opportunities that may reveal.

Within PMC, Spring 2024 was a semester of consolidation. We brought back insightful office visits and professional events. Across 10 committees, our team produced over 40 presentations aimed at steering our portfolio. We launched the Red, White & Blue project, focusing on the US Elections, and hosted an event that provided winning participants with valuable work experience. Besides, we strengthened our commitment to our members, with a set of development and bonding opportunities to the talented individuals that made part of this semester's team and honoured PMC's legacy of excellence.

As we conclude the cycle of the current board, we are confident on the sheer value generated by Portfolio Management Club to its stakeholders as the premier platform for nurturing serious talent in the asset management field, given its relentless pursuit of excellence and industry-class standards. We extend our gratitude to everyone involved for their dedication and effort, instrumental in our achievements. We wish the upcoming board all the best and are excited to see them take PMC to even greater heights.

Daniel Gonçalves
President

Guilherme Mourão
VP of Asset Management

Beatriz Contente
VP of Operations

MARKETS & ECONOMY



SANTIAGO
SOMMER

Markets Overview



ANDRÉ
SILVA

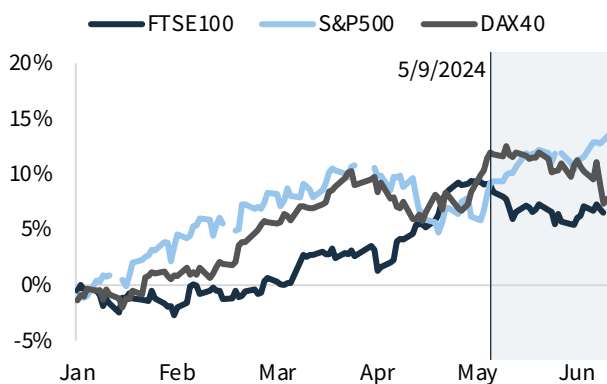
Economic Overview

Markets & Economy

Markets Overview

Major indexes rally in the US and Europe

After the second half of 2023 where the US stood out across developed economies and **matched positive economic data with all-time highs** recorded in major stock indexes, 2024 so far has already presented us with some **double-digit gains** in both North America and Europe: From the FTSE100 to the blue-chip German index DAX40, large cap European Indexes have kept in pace with the S&P500 until mid-May, but **lost some momentum** ever since.



YTD performance major indexes, Yahoo Finance

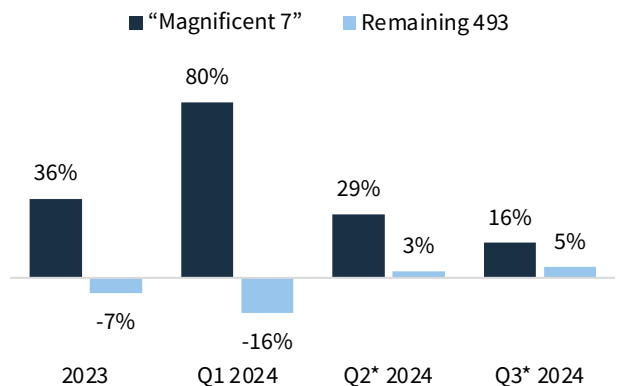
Earnings growth offset sticky inflation

The aforementioned equities rally can be traced back to November 2023 and, besides some market trends like the **AI and Semiconductor boom**, the market sentiment at the beginning of the year was particularly positive due to expectations of a soft landing that would lead the FED to cut rates 6 times this year. However, **inflation has been stickier** than expected - 12-month inflation ranging from 3.1% to 3.5% in the US since January - leading the market to price a single rate cut until the end of the year. On the other hand, **strong corporate earnings** surged to replace hopes of an easing monetary policy environment as a driver for growth: S&P500 earnings growth rate for Q1 was of 5.9%, surpassing March consensus forecast and hitting its highest value since Q1 2022.

Uneven growth across the S&P500

This first semester of a **staggering 15.6% growth** for the index, blowing out historical average, is greatly due to the already well known *Magnificent 7*. In fact, the 4 biggest tech stocks by market cap, Microsoft, Apple, Nvidia and Alphabet, are responsible for **more than half of S&P500 gains so far this year**, while only around 36% of the index constituents remained above their 50-day moving averages by the end of May.

One can also observe the gap within the index in terms of earnings' growth and P/E ratio, as the **Magnificent 7 mega cap stocks were priced at 34x**, while the other 493 stocks traded on average at a **less demanding 17x**.



YoY S&P500 EPS growth rate, Bloomberg

Honourable mention goes to **NVIDIA that is up nearly 158% year-to-date** and is expecting to **grow earnings by 133% in Q2 2024 (YoY)**. The dominant player in the production of GPUs for data centers has proven that AI trends have gained more traction in 2024 and even managed to surpass the 3 Billion USD in market cap in June, only ranking below Microsoft and Apple.

In opposite direction is the **real estate sector in the US**: The 31 stocks that are indexed in the S&P500 are **down 4.9%** year to date, including Prologis, the largest REIT in the market, down 36% since ATH.

Markets & Economy

Markets Overview (cont.)

Nikkei outperforms backed by a weak Yen

The upward trend that started in January 2023 in Japanese stocks continues to deliver impressive gains this year, as **Nikkei 225 has just recorded a 20% growth** rate year-to-date. However, it is in large part due to the **weakest Yen in 38 years** against the US Dollar: the gains are only 6% when measured in Dollars. The result is not surprising when considering the wide interest rate differential between the U.S. and Japan. Despite Japanese **bond yields have hit 10-year highs**, the Yen has been steadily depreciating against the Dollar and lost nearly 12% in the last 6 months.



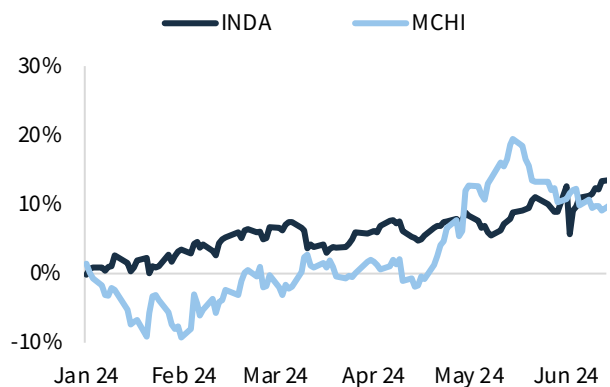
Japan 10 Years Government Benchmark Bond - Yield (%)

Emerging markets in opposite directions

Once the best performing market in the world since the beginning of the year, Chinese stocks have pulled back since mid-May highs with the **MSCI China Index falling by nearly 11%** ever since. Such a market correction can be attributed to **raised concerns about China's economic recovery** as, for instance, retail sales and fixed investments were weaker than expected in April.

Meanwhile, the **MSCI India Index reaches new all-time highs** and records a 15% year-to-date growth rate after two months of moving sideways. Although the fundamentals of the Indian economy look attractive with

projections pointing to accelerated economic growth, less debt and increasing profits, stock valuations are on the high end of their historic range - real estate stocks trading at over 60x earnings, consumer staples at 50x and small and mid-caps exceeding 35x - which sets a sounding price premium, especially compared to Chinese counterparts that are **trading at 20 years lows**, averaging approximately 10x in forward P/E.



Index performance YTD, Yahoo Finance

Fixed Income

Approaching the end of 2023, cooling inflation and a potential slowing economy fuelled prospects of 6 rate cuts in the US in 2024 that would ultimately lead to soaring bond prices, **as yields were already close to multi decades highs**. However, strong economic activity, sticky inflation and a committed FED changed the market views on rate cuts to a single cut until the end of the year, boosting yields. Particularly, **the US 10-year Treasury rate is now at 4.4%, up 11% year-to-date**.

Investment-grade corporate bonds also look attractive with yields averaging above 5%. However, credit spreads are **below their long-term average**, just **0.92% in mid-June**.

High yield bonds have been attractive, offering yields above 8% with a controlled default rate, despite the compressed spread.

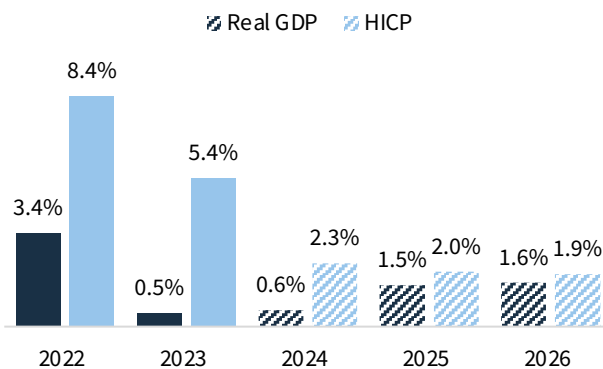
Markets & Economy

Economic Overview

Monetary Policy

The European Central Bank just declared on **June 6th** that they would be **lowering interest rates** for the **first time** since the high inflation crisis, starting in late 2021. This comes after months of **steady HICP decrease**, from around 7% in January 2023 to **2.4% in June 2024**. The **2026 inflation projection** remains at 1.9%, slightly **below the ECB's 2% target**.

Whilst many European firms view this as a victory, ECB President Christine Lagarde warned that the fight against inflation was **not over** and signalled that they were **not committed** to further rate cuts. This announcement follows the cuts from the **Bank of Canada**, who was the **first** member of the **G7** to start decreasing rates, as well as **Switzerland** and **Sweden**, who started lowering rates earlier this year.



Real GDP and HICP projections Euro area, ECB

Despite this decrease in the interest rate, the ECB still expects a **large drop in HICP** from 5.4% to 2.3%, with this decreasing trend continuing into 2026, attaining the inflation goal. Meanwhile, **Real GDP is projected to increase**, since a rise in investment and business confidence due to lower interest rates will help foster economic growth.

Whilst the ECB has taken the first leap, economists are certain that the **Fed will not follow** them anytime soon. The first Fed rate

cuts are only expected **later in the year**, possibly right **before the US elections** in November. Fed chairman Jerome Powell has justified this by claiming that, despite restrictive monetary policy being successful in driving inflation down thus far, it is **unclear** whether policies have been **sufficiently restrictive**, a question that will surely be answered with time.

With the notion of a sluggish Fed, the ECB may want to **hold off** from further rate cuts in the meantime to avoid a depreciation of the Euro. If interest rates are cut by *too much* in comparison to the US, the **dollar becomes more attractive**, leading to a depreciation in the value of the Euro. This means that imports become more expensive for the EU, which **may drive up inflation**. Therefore, it is unlikely we will see another ECB rate cut before the Fed acts.



A sluggish Fed refrains rate cuts by the EC, Yahoo Finance

US Economy

Fed's (in)action has been justified by a strong job market and economic growth. Nonetheless, the economic expansion, which began once covid measures were relaxed, has **begun to slow down**. Exiting the large growth phase of the business cycle, we can see that economic growth has become **more moderate**. For example, Real GDP growth stood at **1.3%** in the first quarter of 2024, in comparison to 4.9% in the third quarter of 2023. Estimates suggest a 2.5% growth in the second quarter of 2024.

Markets & Economy

Economic Overview (cont.)

Despite this, the Fed is still waiting for growth to slow down further before acting, as these numbers are still above the 1.8% estimate for long-run growth potential. This means that high interest rates are still the way to go to get down to that magic number.

Israel-Hamas Conflict

A key topic that shaped the global economy in the first semester of 2024 was the **war between Israel and Hamas**. In the previous Economic Overview, I wrote about how **the information technology sector** was one to watch, as **Israel is a global leader in computer services**, comprising a \$27.3 billion industry in the nation.

Whilst **disruptions** in this sector **were expected**, the fact is that it has remained somewhat resilient to the pressures of war. 'Silicon Wadi,' a region in Israel, remains home to one of the largest global hubs for

advancement in technology in the world, with various multinational companies such as **IBM, Alibaba, and Tencent** still operating in the area, employing around 35,000 people in the areas of Research and Development. Despite international condemnation of the Israeli government, including from its own allies, corporations have **not been deterred from investing in Israel**. In the first quarter of 2024, **20 new investment funds** were established for R&D in Israel, totalling around **\$1.7bn**.

In fact, it could be argued that the war helped propel the growth of this sector, as 11 of these funds were created to respond to the **immediate and urgent needs** caused by the war, confirming the thesis made in the previous Economic Overview that Israel would remain a major global centre for semiconductor technology and information systems.



Silicon Wadi, LaSexta

PORTFOLIO



FRANCISCO
PIRES

Portfolio Overview



LUKA
BUKELIC



ALBERTO
VECCHIA



MATILDE
CARDEIRA

Top Performers



TIAGO
SERRANO

In-depth Asset Analysis

Portfolio Overview

Portfolio Strategy

Strategy Highlights

In the previous newsletter edition, we discussed PMC's ongoing implementation of its revamped strategy. This strategy aims to **enhance transparency** and **intentionality** in our positions, leading to **improved results, ownership** and **learning experience**.

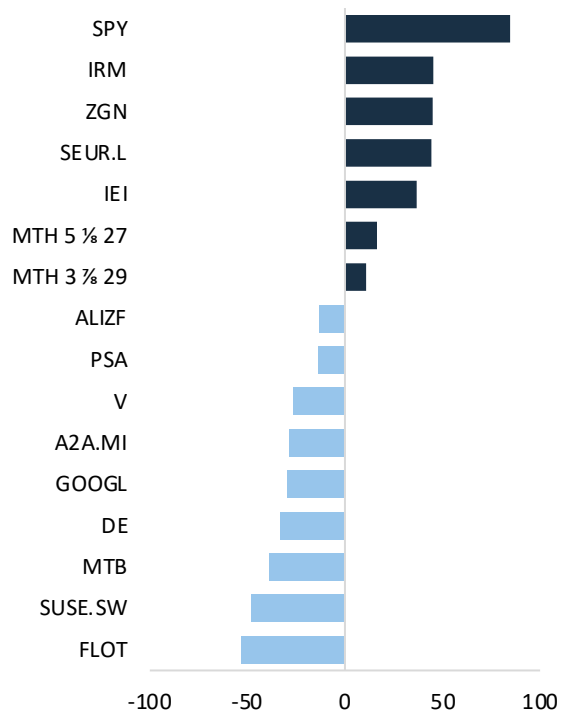
As a result, the process of **phasing out ETFs** is nearly complete. The addition of **new fixed income positions** has diversified the portfolio, yielding **significant returns** compared to the benchmark, displaying our bet in our ability to **identify opportunities** in this **asset class**.

In terms of monitoring, our team continued its **diligent efforts** to stay ahead of the market. Extensive **coverage** and critical **reassessments** led to the **closure** of several positions and allowed for **bigger positions**' taken.

This semester also provided an opportunity to strengthen our **risk management** practices. **Weekly** portfolio **updates** were provided, and **systematic stop losses/take profits** were implemented, which positively impacted our ability to **track the benchmark**. Additionally, improvements in **cash management**, by allocating proceeds to the benchmark, contributed to the performance achieved.

<i>Nr of ETF's except benchmark</i>	
3 Feb 24	1 Jun 24
<i>Individual bonds</i>	
5 Feb 24	7 Jun 24
<i>Equities average weight</i>	
2.6% Feb 24	3.1% Jun 24

Strategy Outcomes



Investment flows, thousands of dollars

The investment flows of the semester depict clearly the **implementation** of the strategy defined.

On one hand, there's an **increase in benchmark positions**. With respect to the equity benchmark, SPY, because of the **divestments** made from **several previous positions**, namely Allianz (ALIZF), Public Storage (PSA), Visa (V), A2A (A2A.MI), Alphabet (GOOGL), John Deere (DE) and MTB Bank (MTB).

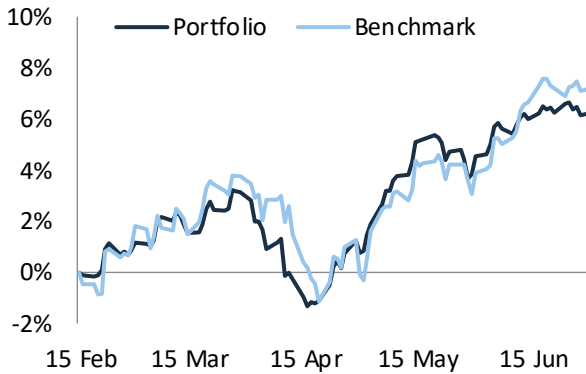
On the **fixed income department**, we assisted to the **crowd-out of the bond ETF's** and added a basket of **Meritage Home bonds** as well as benchmark exposure (IEI)

Besides the bonds, a **Macro based FX play** (SEUR.L), **Iron Mountain** (IRM) and **Ermenegildo Zegna** (ZGN) were added to the portfolio during the semester the work of **macro and investment teams**.

Portfolio Overview

Portfolio Performance

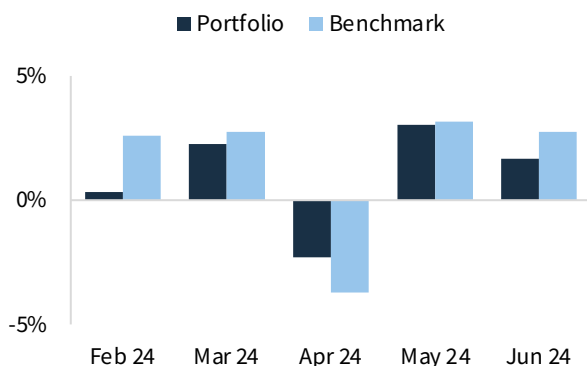
Overall Performance



Portfolio and benchmark returns 15 Feb – 30 Jun, %

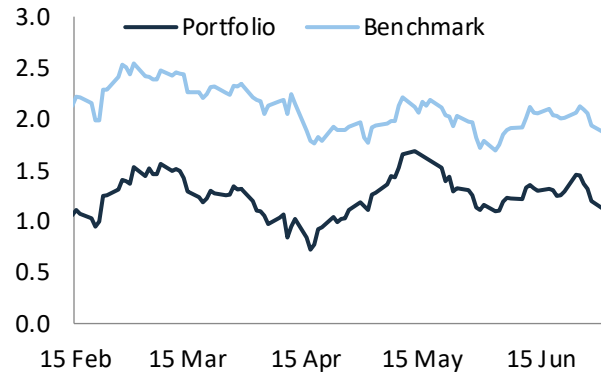
Overall, PMC’s portfolio had a **positive performance of 6.2%** during the semester (15 Feb – 30 Jun) versus the benchmark’s 7.0%, which represents an **underperformance of ~80 basis points**. Albeit the underperformance, this result is **encouraging** when considering its **small magnitude** and the **conditions** that justified the performance of the benchmark itself. In detail, the **extreme market concentration of returns** in the Magnificent 7 paired with the fact that the portfolio is **under exposed to NVIDIA** and **blue-chip stocks**.

The portfolio started the semester with a higher underperformance during the month of February (full month). Interestingly, PMC’s portfolio recovered from this performance by overperforming in April and coming in close to the benchmark in March and May.



Portfolio and benchmark monthly returns, %

Risk-adjusted returns



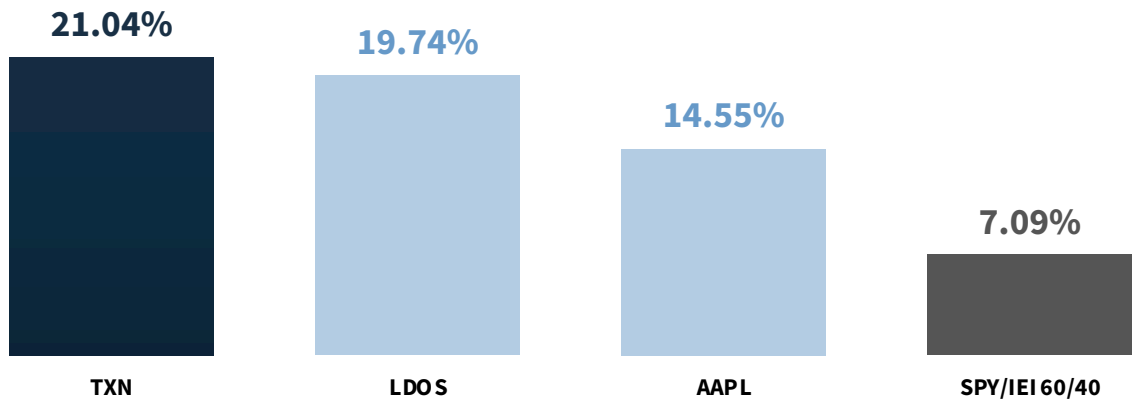
Portfolio and benchmark Info Sharpe ratio (15 Feb – 30 Jun)

The **improvements on our risk-adjusted returns** are significant, coming from our **enhanced risk management strategy**. First, our portfolio’s Info Sharpe ratio (1.2) has improved, sitting now closer to the benchmark (1.94). Additionally, the portfolio shows **improvements in maximum drawdown and volatility**. From the beginning of the semester, the maximum drawdown is nearly the same as the benchmark, and we managed to narrow the gap between the benchmark and our portfolio’s lower volatility. All this while narrowing the performance gap, thus **not compromising on returns**.

Portfolio Metrics	Portfolio	Benchmark
Cumulative Return	17.5%	47.7%
Volatility	8.9%	9.2%
Sharpe Ratio	1.20	1.94
Sortino Ratio	1.28	1.08
Drawdown	-2.8%	-0.4%
Skew	0.47	-0.05
Kurtosis	14.33	0.17
Var	0.9%	0.9%
Cvar	1.3%	1.2%
Win Days Pct	54.4%	54.8%
Alpha	0.03%	0.00%
Beta	0.60	0.63

Portfolio and benchmark metrics

Top Performers



Texas Instruments Inc. (TXN)

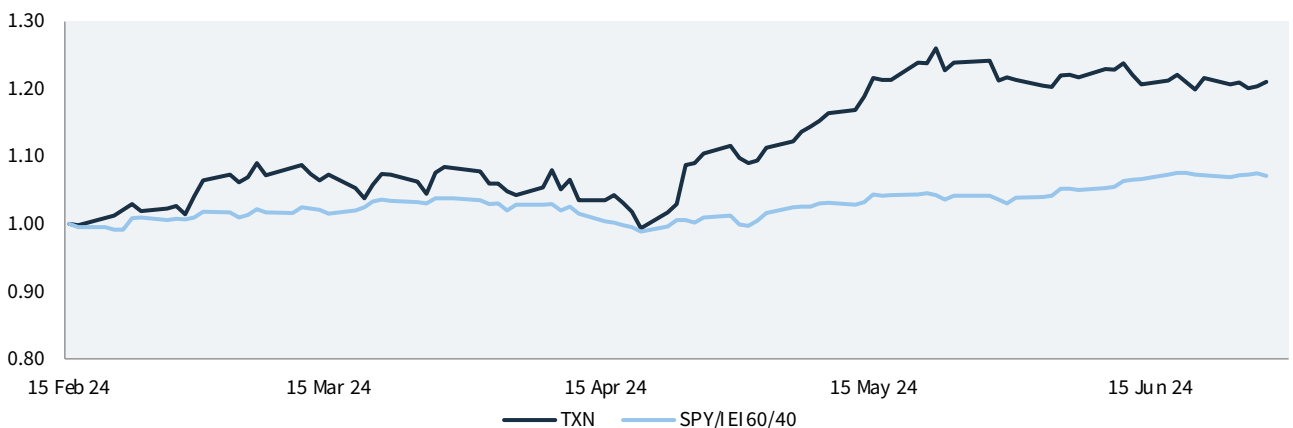
+21.04%

Texas Instruments is a **global semiconductor company** that designs and manufactures analog and embedded processing chips. Founded in 1930, it is headquartered in Dallas, Texas. The company serves industries ranging from **automotive to industrial and consumer electronics**. TXN is known for its innovative technologies and strong focus on R&D.

TXN stock performance for the last six months was **outstanding at +21.04%**. Such performance reflects the hoping signs of recovery of key markets for TXN, despite contracting revenue YoY, caused by the **slowdown** in the **industrial and automotive industry**.

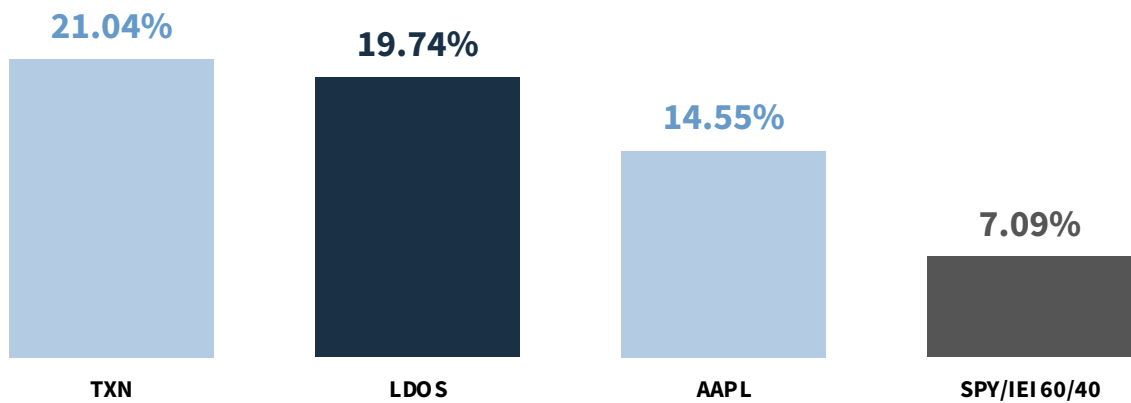
Our stake in Texas was bought initially in **April 2022** at an average price of \$171. The initial thesis relied on **company's long-term prospects**, competitive positioning, **scale advantages** and **FCF orientation**, as a **stable**, but not **still**, player in the booming semi-conductor industry. While the big wave of semi-conductors has passed, TXN remains a stable company, able to generate strong-cashflows, mostly due to its **vast portfolio of products**. Also, as an American player, it benefits from increasing **government incentives**, given the strategic role of **semi-conductors**. For these reasons, we are holding the stock while we follow closely the **development of TXN's sales**, the **key driver** for the stock's performance at the moment.

TXN performance versus Benchmark



Performance since 15 February 2024 or purchase date until 30 June 2024, accounting for dividends, disregarding currency effects. Rebased to 1. Data from Yahoo Finance and Refinitiv Eikon.

Top Performers



Leidos Holdings Inc. (LDOS)

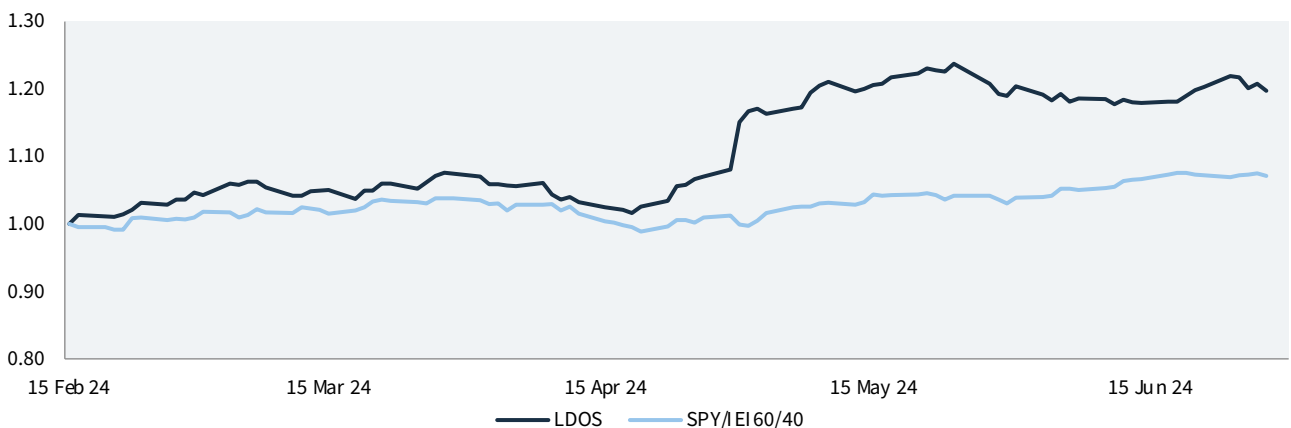
+19.74%

Leidos Holdings is a **leading American defence, aviation, information technology, and biomedical** research company. Established in 1969 and based in Reston, Virginia, it provides services to **the U.S. government and commercial clients**. Recognized for its expertise in **engineering and technology services**, Leidos specializes in systems integration, data analytics, and cybersecurity solutions.

LDOS stock grew 19.74% during the semester, **outperforming both the S&P500 and defence stocks (XAR)**. This performance was **driven by both macro and micro factors**. On a macro level, the **geopolitical situation was favourable for defence equities** and gave the overall sector positive momentum, as we expected in our investment thesis, even though the **risk of reduced fiscal spending** in Defence, Infrastructure and Health due to different US federal budget priorities persists and is particularly **relevant in case of Trump's election**.

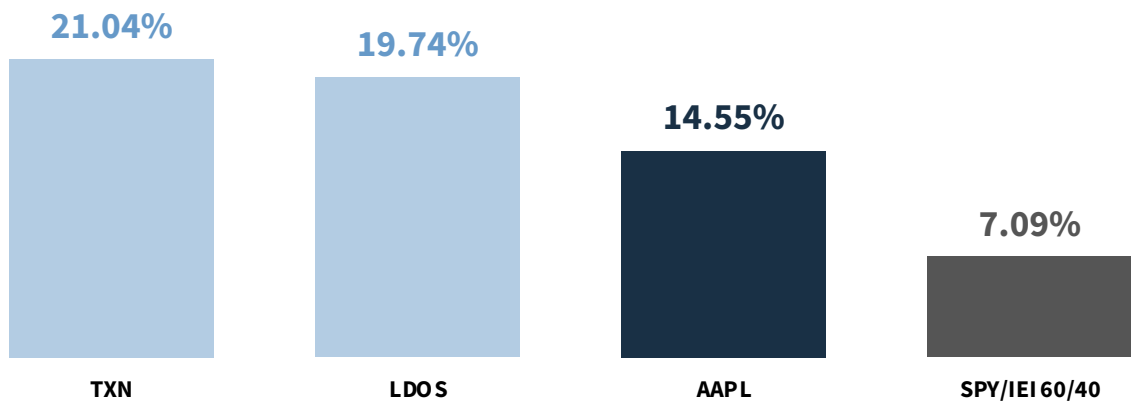
On a micro level, **LDOS reached PMC expectations in terms of FCF generation**, after improving its guidance more than one time during the semester at higher than previously anticipated levels thanks to **costs optimization**. Additionally, the **Health segment proved to be an exceptional source of growth**, exceeding the club's and the market's expectations. As a result of that, **after both earnings calls, the stock price increased significantly, and induced further outperformance**.

LDOS performance versus Benchmark



Performance since 15 February 2024 or purchase date until 30 June 2024, accounting for dividends, disregarding currency effects. Rebased to 1. Data from Yahoo Finance and Refinitiv Eikon.

Top Holdings



Apple Inc.

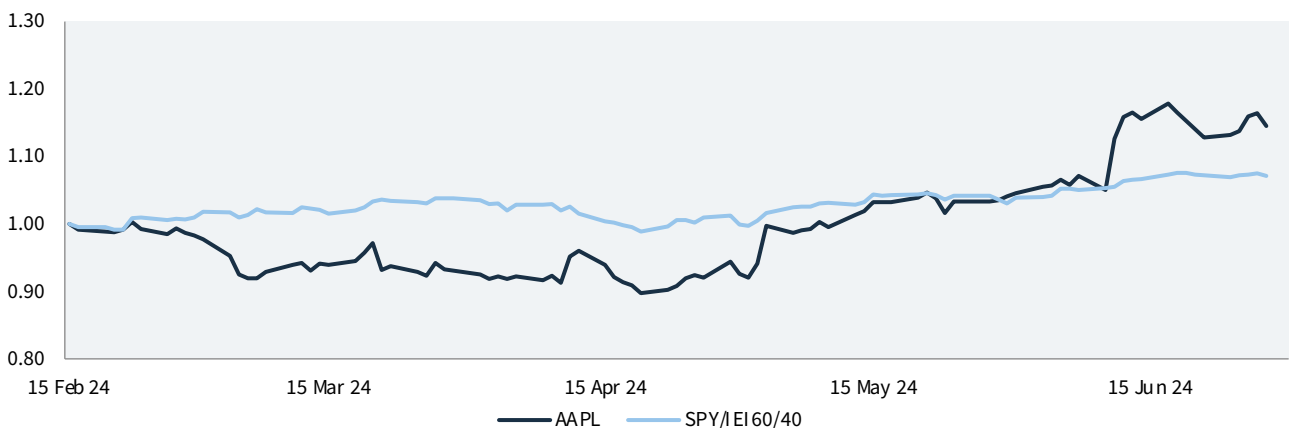
+14.55%

Apple Inc. is a **multinational technology company** that designs, manufactures, and sells consumer electronics, software, and online services. Founded in 1976 and headquartered in Cupertino, California, Apple is renowned for products like the **iPhone, iPad, Mac computers, Apple Watch and the Vision Pro**. The company is a pioneer in innovation, focusing on **sleek design and user experience**.

AAPL's stock **grew 14,55%** since February 15, 2024. Although its price decreased in the first quarter due to a drop in iPhone sales, this decline was reversed in early May after Apple released its second-quarter results, announcing its biggest-ever share buyback. Moreover, in June, AAPL's stock rose again following the announcement of its **new AI feature set, the Apple Intelligence**. Overall, **Apple's performance exceeded expectations** in this last semester.

Our stake in Apple was bought initially in **November 2022** at an average price of \$140. The revenues generated by the sale of the AI-enabled gadgets, particularly the new iPhone set to launch in September, are yet to take off, but there is **optimism that the new AI feature will drive future stock growth**. Thus, we are holding the stock for now while we follow closely the **development of market sentiment** around the security.

AAPL performance versus Benchmark



Performance since 15 February 2024 or purchase date until 30 June 2024, accounting for dividends, disregarding currency effects. Rebased to 1. Data from Yahoo Finance and Refinitiv Eikon.

In Depth Asset Analysis

Meritage Homes Corporation

Key Facts



Securities: MTH 6 25; MTH 5 1/8 27; MTH 3 7/8 29

Asset Class: Fixed Income

Sector: Cons. Discretionary – Homebuilding

Credit Rating: BBB-/Ba1

Introduction

This analysis discusses the investment recommendation issued by Investment Team 2 on the 15th of April about bonds issued by Meritage Homes Corporation (MTH), one of the **largest American homebuilders**. Since then, the bond maturing in June 2025 was **recalled** by the company in early June, with the remaining bonds delivering a **positive return** (1.2% for the 2027 Bond and 2.1% for the 2029 Bond), mainly reflecting the **yield curve movement**.

Investment Thesis

The choice for Fixed Income rather than Equities was based on a perceived **narrow equity risk premium**, reflecting the cumulative impact of the **rate hiking cycle** on interest rates and the **relentless rally** observed in the U.S. equity markets. In other words, we understood the risk-return profile of bonds vis-à-vis equities to be one of the **most attractive in years**.

The choice of a basket of MTH bonds allows to **mitigate interest rate risk** while gaining exposure to **higher yields** (+150-200 bps) than upper classes of the Investment Grade universe, capturing a perceived **mismatch between the credit rating** and the **healthy liquidity and solvency positions** of the company, and the resilience of the industry despite affordability challenges on the consumer side and the potential effects from slower economic activity.

Company Overview

Founded in 1985, Meritage Homes Corporation is a **leading designer and builder** of single-family attached and detached homes in the United States. In 2023, it produced approximately **3.2% of all new homes** in the U.S., operating in 270 fast-growing communities in the West, Central, and East regions of the United States. The **average selling price** of homes built by Meritage was **\$433k** in 2023, reflecting its focus on the **entry-level and first move-up buyer segments**.

PMC Credit Scoring Model

The choice of MTH bonds was supported by the output of PMC's Credit Scoring Model. The model compares different issuers based on metrics such as Liquidity, Debt Coverage, Profitability, Leverage, and Market factors, assigning a creditworthiness score for each issuer. MTH was the **2nd top-scoring issuer** with a score of 62, behind industry peer NVR, Inc. Notwithstanding, it ranked well considering that it had a **lower credit rating** as determined by rating agencies, which was reflected in the **higher credit spread** of its bonds outstanding. Ultimately, the more **attractive credit spread** was the decisive factor in advancing to more thorough research.

Metric	MTH	LEN	DHI	PHM	MDC	TOL	NVR
Liquidity	37	43	20	5	100	1	79
Coverage	29	41	49	67	1	11	100
Profit & Turn.	30	28	47	68	1	40	100
Leverage	100	84	96	69	14	1	77
Markets	100	35	1	33	3	66	17
Debt Gov.	100	1	1	1	100	1	1
Final Score	62	44	47	48	38	19	73

PMC Credit Scoring Model output, own research

In Depth Asset Analysis

Meritage Homes Corporation

Liquidity

Meritage enjoys a **healthy liquidity position**, due to the accumulated profits of recent years, At the time, Cash & Equivalents balance **surpassed the 900M\$**, against 1054M\$ of long-term debt and 10M\$ of short-term financial debt. In addition, the **current ratio** stood at 8.06 and the **cash ratio** had grown from 0.79 in 2019 to 1.26 in 2023, providing enough confidence on the company's financial strength to face lower demand and potential negative industry or economy-wide shocks.

Coverage

Debt coverage is **not a concern** for the company. Besides the **deleveraging** that took place in the last 5 years (LT debt decreased from 1200M\$ to 1054M\$), **operating income** increased. At the time, the **interest coverage** ratio was 17.44x. The high interest coverage multiple, as well as the trajectory of deleveraging, gives us confidence that even if MTH's business outlook worsens substantially, it will **still meet** its **financial obligations**.

Profitability and Turnover

Since the pre-pandemic period, MTH's turnover **almost doubled** from 3.6B\$ in 2019 to 6.1B\$ in 2023. In the same timeframe, **profits more than doubled**, as the EBIT margin increased from 8.36% to 14.70%. It is worth noting that in 2022 turnover, margins, and **profits peaked** due to the industry expansion, and came down to a more **normalized level in 2023** due to lower demand and the effects of **higher interest rates** on new homebuilding. Nevertheless, the improvements in profitability are **undeniable** and synonymous with significantly **lower credit risk** compared to the pre-pandemic period, which in our view was not completely **priced in**.

Leverage

As profitability improved since 2019, Meritage reduced its reliance on debt to finance its operations. **Leverage decreased** while operating performance improved, combining a very favorable evolution of leverage ratios. Net Debt/EBITDA decreased from **2.14** to a **mere 0.15 in 2023**, underscoring the decrease in credit risk observed in the last few years.

Markets

Financial markets reacted to the changing credit risk profile of Meritage by adjusting the **pricing** of **credit default swaps (CDS)**. The 2-year CDS of Meritage Homes was **priced at 160 basis points** in April 2022 and approached **100 basis points** in the days leading up to the presentation. We still believe that such a premium is **unwarranted** given the short time horizon, the debt maturity wall of the company, its liquidity position, and the current business situation.

Individual Bond Analysis

The first two bonds have coupons of 6% and 5.125% and promise an expected annualized return of nearly 6%, as their yields to maturity at the time were **5.93% and 5.87%** respectively. The last bond pays a coupon of 3.875% and has an implied yield of 6.30% because of the term premium associated with the **longer duration**.

All in all, the bonds have **low duration** and **convexity**, for an expected return of **around 6% annual** during the holding period, which we recommended to be at least 2 years for the higher maturity bonds.

OPINION



BRUNO
CORREIA

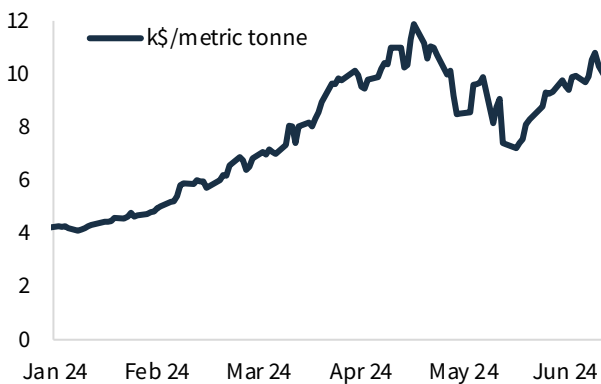
*Cocoa Coaster: Sour Peaks and
Sweet Dips?*

Opinion Article

Cocoa Coaster: Sour peaks and sweet dips?

Cocoa or “The Food of the Gods” is soon to be a **luxury commodity**. The new reality settles for higher as seen in the recent price surges.

Fortunately, Cocoa prices **dropped** more than **30%** from its All-time high, in April. Before this, since the beginning of 2024, **prices skyrocketed nearly 90%** making some pray for a chocolate miracle. The question is: what sparked cocoa prices? Well, the quick answer is, **the weather**, but it doesn't take long to uncover the **structural problems** in the industry. Sour...



Cocoa's price evolution, k\$ per metric tonne, Yahoo Finance

Not the typical exotic plant...

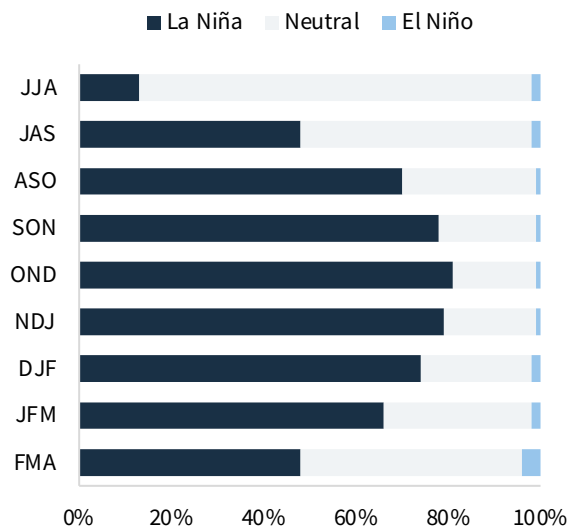
Firstly, it is important to understand Cocoa is not the typical exotic plant: it is **highly sensitive** to **water stress**, meaning poor crops whether the rainfall is **scarce or excessive**. This climate specificity concentrates over **70%** of the globe's cocoa production in **Africa**, mainly in **Cote d'Ivoire** and **Ghana**, the 2 major producers (~60% of the planet's production).



The mighty weather...

Ending 2023, West and Central Africa faced severe climate hazards, including “**El Niño**” and the famous dry spells from the Sahara Desert, the “**Harmattan**”, the latter also felt in Portugal and Spain. The El Niño phenomenon **disrupts** the so **needed rain**. This year, it led to unusually **high temperatures** and **severe droughts** in the region, preventing cocoa flower from **flourishing**. Fortunately, El Niño has **reached its peak** and amid a neutral climate effect, markets had some time to breathe and **correct**, have they?

Even though producers were able to harvest the “**Light crop**”, early in July – the smaller of its two annual harvests, it solely represents **less than 10%** of the full season's production. Adding to that, climate specialists forecast a **70% chance** of emerging the El Niña phenomenon. Realistically, the shift to El Niña brings **cold and heavy rain** to the table delivering a **harsh blow** to an industry already in its knees. El Niña is expected to appear during the months of August to October (ASO) and persist from November to January (NDJ).



Official NOAA CPCC ENSO Probabilities July 2024, [IRI/NSO](#)

Opinion Article

Cocoa Coaster: Sour peaks and sweet dips? (cont.)

The structural problems

Although these **climate events** are to blame by the bad crops, the problem **extends far beyond** the weather. There are **high-concerning structural problems** in the industry of cocoa in West Africa. Cocoa plantations have **historically been neglected** and **under-invested**. Most are owned by **small farmers** who **struggle to make a living** and have **little control over illegal gold miners** taking over their land. The land is then, left unusable due to **heavy metals** employed in mining. To join the party, a **swollen shoot virus** disease is devastating crop yields contributing heavily to the global output shortage.



Illegal gold miners invade cocoa farms, MyJoyOnline

What to expect now?

Normally, the **main crop** materializes between **October** and **December**, the beginning of the **rainy season**. Bear in mind **planting occurs in the same period** and the first harvest occurs only 4-5 years later. The trees will then last up to 30 years. The only way to save the infected trees is to **cut and plant new ones**, however this has become incredibly difficult for West African smallholder farmers **who don't benefit from cocoa price hikes** thanks to the **fixation of the selling price** by government organisations. On the other side, the **EU deforestation regulation** will ban imports on commodities grown on land deforested after 2020, starting next year.

To put it briefly, the **odds are all against** the thriving of cocoa production. Unless West African Countries ensure **farmers are paid fairly**, there is no incentive to increase production, a situation further exacerbated by the **El Niña phenomenon** which might lead some farmers to **stop producing for good**. Moreover, Cocoa stocks have been dwindling for the past 3 years and as a result, the **long-term supply of cocoa is endangered**, especially with developing countries attaining a particular taste for chocolate.

Given this context, will urgent measures, if taken, be enough to cover this year's lost production and the world's rising demand for Cocoa? Most probably not for the medium-short term. A **new rally might be near** before the prices stabilize at **higher tops**.

Every course of action involves inherent risks, and this is no different. Last years' El Niño phenomenon was **one of the 5 worst** registered in history. Should the El Niña allow for a better crop compared to last year's, **cocoa prices might decline**, offering a glimmer of hope for chocolate makers. This could lead to increased profits margins and a notable recover. The certain thing amidst the uncertainty is that opportunity will be around, with risk managers on the spotlight. From rich dark to smooth milk, everyone has their favourite chocolate taste, but here, no one wants the bitter outcome.



CLUB'S ACTIVITIES



NICOLAS
LEE

Quantitative Team at Glance



BEATRIZ
CONTENTE

Events in Review

Quantitative Team at Glance

Projects Overview

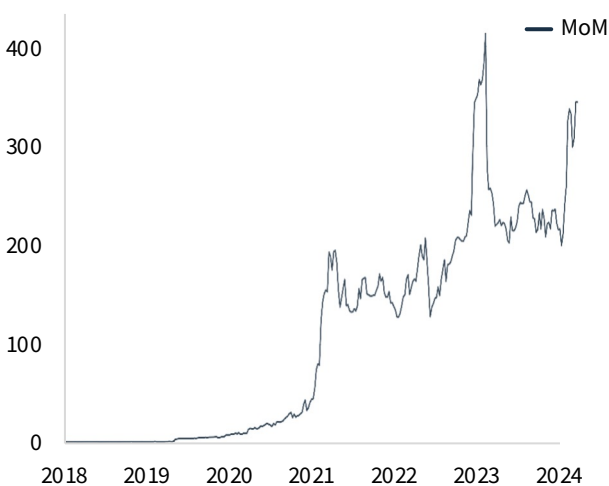
Research @ DigitalMZN

This semester, the Quant Team joined forces with **Digital MZN** to investigate **factor investing** in cryptocurrencies. Our study, covering data from 2018 to 2024, analyzed the **top 100 cryptocurrencies each week**, focusing on Market, Size, Momentum, and Volatility factors.

We explored two market regression models: one using the S&P 500 and the other using Bitcoin returns. One of the key outcomes of our study was the high correlation between Bitcoin and almost every other cryptocurrency, highlighting Bitcoin's dominant influence in the market.

Additionally, our findings revealed interesting dynamics, mostly associated with the **Momentum factor**. In fact, chasing winners brought impressive returns, although it also posed **significant risks**, with a notable drawdown in 2023.

To mitigate the risk of momentum crashes, we considered a **volatility-targeting strategy** inspired by Barroso and Santa-Clara (2015). While successfully tested on S&P 500 stocks, replicating this for cryptocurrencies remains a future goal due to data constraints.



Cumulative return Momentum factor, own research

Macro Scorecard

Last semester, we embarked on an exciting new project: the Macro Scorecard. This tool is designed to be an **automated first step** in assessing **economic sentiment**, providing a comprehensive overview to drive **informed investment decisions**.

The Macro Scorecard leverages the **Bloomberg API** for Excel to gather **real-time** data on various macroeconomic indicators. By calculating z-scores for each country on these metrics, we aggregate the scores to form a comprehensive ranking. The tool also incorporates forecasts made by analysts, allowing for dynamic and up-to-date comparisons.

Countries can be evaluated against different **peers** or according to their **stage of economic development**. To ensure the data is easily interpretable, we **preprocess certain variables**. For instance, inflation is measured by its distance from the target inflation rate, offering a clearer perspective on economic stability.

Stay tuned as we will continue to refine the Macro Scorecard.

Country	Stage	Average	Forecast
Germany	Developed	12	8
France	Developed	10	8
Italy	Developed	14	11
Spain	Developed	9	6
Netherlands	Developed	12	7
Ireland	Developed	10	8
Portugal	Developed	11	8
Greece	Developed	8	7
USA	Developed	13	10
China	Emerging	16	14
Japan	Developed	14	10
New Zealand	Developed	9	7

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Macro Scorecard output, own research

Events in Review

External Events

Office Visit to BNP

In February, PMC had the chance to visit the **Lisbon Office of BNP Paribas**. It was an insightful visit, that comprised a **company presentation**, a **floor-tour**, an **interview preparation quiz** and a **networking moment**. We would like to thank BNP Paribas for this opportunity, their availability and openness, allowing us to experience first-hand the buzzing environment of trading and more.



OFFICE VISIT TO BNP PARIBAS

27 FEBRUARY 2024

PMC at Casa de Investimentos

PMC went on a business trip to Braga, to participate in the annual client's assembly of Casa de Investimentos. In this event, the Portuguese asset manager reflected on the **performance** of their products and provided their **views** on what was ahead. This experience clearly showed the power of **transparency**, **knowledge-sharing** and **financial education** to deliver results and maintain **investor's confidence**. We would like to thank Casa de Investimentos for the opportunity.



CFA Workshop with Pedro Galvão

In April, PMC had the pleasure to host Pedro Galvão, CFA, a private banker at Bankinter for a learning session that covered **human bias** and how they affect **investment decisions**. There was also time for questions regarding **private banking**, how it differs from other bank areas and the importance of **managing client relations**. We would like to thank Pedro Galvão, Pedro Barata and CFA Society Portugal.



Get to know PwC Financial Services

To conclude the semester, PMC hosted PwC at Nova, for a deep dive into **auditing financial institutions**. The event comprised a company presentation, a **learning session on IFRS 9** and impairment calculation for financial institutions that culminated into a **case competition**, that yielded **summer internships** for the winning team. Finally, there was also time to **network** and unfold **common misconceptions** on the nature of the auditing work. We would like to thank PwC for their collaboration.



Events in Review

A glimpse on our internal events

Welcome Dinner



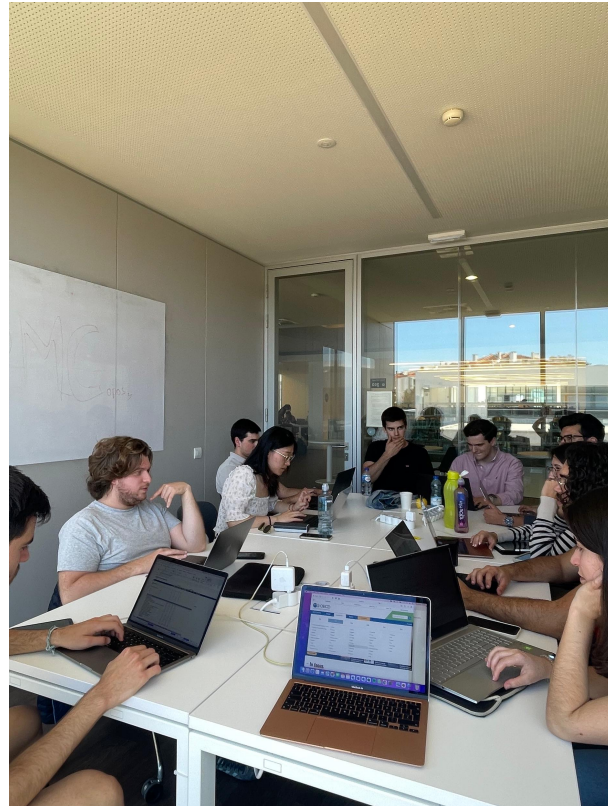
PMCopos



PM Cup



PMCoWorking



Thank you!

We appreciate your time and hope you enjoyed reading our newsletter. If you have any question or suggestion, feel free to contact us by sending an e-mail to portfoliomanagementclub@novasbe.pt. In the meanwhile, meet our team:

Board

Daniel Gonçalves (President) | Guilherme Mourão (VP of Asset Management) | Beatriz Contente (VP of Operations)

Operations Team

HR: Andreia Vicente | Events: Inês Quintas

Marketing: João Salgado | Raquel Carujo

External Affairs: Beatriz Carvalho | Carolina Pinto | Guilherme Ascensão | Xinyi Wang

Portfolio Management Team

António Francisco Pires (Head) | Francisco Pinto | Pedro Oliveira

Macro Team

Andreia Pimenta (Head) | André Silva | Hugo Fernandes | João Rosa | Omar Cuppini | Santiago Sommer

Investment Team 1

Lennart Erdman (Head) | Diogo Antunes | Diogo Augusto | Jan Gruener | Matilde Cardeira

Investment Team 2

Tiago Serrano (Head) | Alberto Vecchia | Diogo Afonso | Hugo Africano | Rebeca Santos

Investment Team 3

Nazir Hemrage (Head) | Andrea Zanetti | Bruno Correia | Luka Bukelic | Margarida Correia

Quantitative Team

Nicolas Lee (Head) | Daniel Ferreira | Gianni Ranzetti | Martim Esteves | Sebastian Wand | Tomas Racocha

Editorial Team

Daniel Gonçalves

Corporate and Academic Partners



BNP PARIBAS



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