BRONCO ASSET MANAGEMENT

BAM CAL POLY POMONA

REQUEST FOR PROPOSAL

2025

PREPARED FOR:

CFA SOCIETY ORANGE COUNTY

Student Managed Investment Fund

California State Polytechnic University, Pomona

BRONCO ASSET MANAGEMENT

3801 W. Temple Ave,
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November 12th, 2024

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Date of Response: **November 13, 2024**

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University Overview

Founded in the Fall of 1938, California State Polytechnic University, Pomona (Cal Poly Pomona, or CPP) approaches higher education with a "Learning by Doing" philosophy.

Beginning with a class of 110 students as a satellite campus of California State Polytechnic College - San Luis Obispo, Cal Poly Pomona (CPP) is now a member of the 23-campus California State University (CSU) System, serving over 29,000 students of all backgrounds, including over 2,100 graduate students. CPP is highly ranked in numerous categories, such as return on investment, diversity, and social mobility. Overall, it is ranked as the #2 best regional public university and as the #2 best college for Veterans. CPP currently offers bachelor's degrees in 108 majors, 49 master's degrees, 10 teaching credentials, and two doctorates across 9 distinct academic colleges. The College of Business Administration (CBA) at Cal Poly Pomona continues the overarching philosophy of hands-on learning for students majoring in Finance, Accounting, and other relevant management disciplines. The Finance, Real Estate, and Law (FRL) Department at the CBA serves over 1,000 students in the major and offers a broad curriculum covering investment management and analysis, as well as niche courses such as Bond Analysis, Derivatives, Valuation, Financial Modeling, Multinational Financial Management, and Applied Portfolio Management. Additionally, the FRL Department hosts the Dr. J. Douglas Ramsey Financial Markets Room (Bloomberg Lab), complete with twelve Bloomberg terminals. In order for students to get experience with real-world applications, several finance classes have been moved to the lab during lecture hours and have begun integrating Bloomberg terminals into the investment analysis curriculum. The lab is extensively used by our Student Managed Investment Program. CPP also provides various other resources such as the WRDS analytics module, CRSP and Compustat Databases, the Value Line Investment Survey, and a vast collection of academic and industry papers through our Library database. When complemented with a wide range of specialized investment courses, students graduating from Cal Poly Pomona gain a competitive edge in the job marketplace.

DEPARTMENTS

College of Business Administration
- Finance, Real Estate, and Law Department
- Accounting
- Computer Information Systems
- E-Business
- International Business and Marketing
- Management and Human Resources
- Technology Operations Management
- Graduate Programs

College of Letter, Arts, and Social Sciences
- Economics Department

College of Engineering
- Computer Engineering Department

MAJORS & MINORS OFFERED

Undergraduate Programs
Bachelor of Science in Finance, Real Estate, and Law
Bachelor of Science in Accounting
Bachelor of Science in Economics
Minor in Finance
Minor in Real Estate
Minor in Accounting
Minor in Economics

Graduate Programs
Master of Business Administration
Master of Science Business Administration
Master of Science in Accounting
Master of Science in Economics
Master of Science in Business Analytics
Master of Science in Financial Analytics

INVESTMENT COURSES

Undergraduate Courses
FRL 3000 - Managerial Finance
FRL 3301 - Investments
FRL 3671 - Corporate Finance Theory
FRL 4041 - Financial Modeling
FRL 4311 - Financial Derivatives
FRL 4321 - Bond Market Analysis and Investment Management
FRL 4331 - Seminar in Portfolio Management and Capital Markets
FRL 4401 - Evaluation of Financial Policy
FRL 4611 - SMIF Senior Project
FRL 4631 - Business Forecasting
FRL 4671 - Business Valuation
FRL 4862 - Real Estate Investment Analysis
FRL 4990-01 - Applied Portfolio Management

CFA PREPARATION

Cal Poly Pomona (CPP) is a member of the CFA University Affiliation Program. Our Finance, Real Estate, and Law (FRL) curriculum covers more than 70% of the topics within the CFA Level 1 Candidate Body of Knowledge (CBOK), including ethics. As a result, many of our students are well equipped to take the CFA Level 1 exam post-graduation. Because of our affiliation with the CFA Institute, the institution has awarded our students scholarships. The FRL Department partners with the student-run Finance Society and Student Managed Investment Club (SMIC) at CPP to inform students about the CFA exam and its long-term benefits. These organizations host events and guest speakers to discuss how the CFA designation can be an essential tool to further students' careers. SMIC also organizes a study group for CFA Level 1 candidates.

STUDENT MANAGED INVESTMENT FUND (SMIF)

Our SMIF program started in 2017, with the catalyst being a group of students led by Alex Yussefian, who wanted to compete in the CFAOC competition. The competition has provided a platform for our program structure and content.

Through the commitment of administration, faculty, and most importantly our SMIF alumnis, we have grown our program to approximately $650,000 in assets across three portfolios. We expect to add substantially to our assets under management with future already committed donations. Most importantly, the SMIF program has had a very influential role in job opportunities and careers for our alumni, as evidenced by the tremendous feedback we receive from graduates and employers. The SMIF program is often mentioned by students as "the best thing I have done at CPP".

The Student Managed Investment Program consists of three components: Coursework, Bronco Asset Management (BAM), and the Student Managed Investment Club (SMIC). We are also supported by the campus club, the Finance Society.

COURSEWORK

The Coursework consists of one semester of portfolio research/construction (FRL 4990) during Fall and one semester of hands-on management of the constructed portfolio during Spring (FRL 4611).

BRONCO ASSET MANAGEMENT (BAM)

Bronco Asset Management is the actual portfolio management arm of our program. BAM staff consists of students who have previously completed the FRL 4990 course and SMIF alumni that serve as mentors. BAM manages all portfolios on an annual basis, with the first half of the year being part of the coursework and the second half of the year being a volunteer commitment as a condition of admittance into the program. Students actively manage the portfolio year-round, closely monitor market events, work with clients, maintain investment records, and provide regular reports to clients.

STUDENT MANAGED INVESTMENT CLUB (SMIC)

The Student Managed Investment Club was established with the primary objective of exposing Cal Poly Pomona students to financial literacy. Through its weekly workshops, it aims to empower students in their financial journeys by covering essential topics in personal finance and investment fundamentals. We frequently host seasoned industry experts who share insights into subjects such as fundamental security analysis and portfolio theory. SMIC also organizes the annual Stock Pitch Competition to enhance students' equity analysis skills.

The Student Managed Investment Club (SMIC) is the backbone of the university's Student Managed Investment Fund (SMIF) program. SMIC offers managerial and educational support to the program. Most importantly, SMIC takes the lead in preparing students for recruitment and training for SMIF.

In essence, both SMIC and SMIF create an academic space that facilitates in-depth discussions on financial matters, with a specific emphasis on portfolio and equity strategies.

FINANCE SOCIETY (FS)

The Finance Society (FS) is a student-run organization designed for students who share a common goal of pursuing a career in finance and have a passion for understanding and applying financial methods to their daily lives. This organization provides students with valuable opportunities to explore various career paths within the finance sector as well as gain insights by networking with alumni and industry professionals.

They host weekly seminars, workshops, and welcome guest speakers to dive into the different roles and aspects of the financial industry. Further, the Finance Society places an emphasis on bringing in alumni speakers to showcase the homegrown talent and opportunity that CPP can offer. The Finance Society is best known for its resume workshops and mock interviews, which can prepare students for real-world scenarios, providing students with practical experience.

The members of this club are intellectually driven and motivate each other to strive for leadership positions within the finance industry.

CAMPUS CULTURE & SUPPORT

A hands-on academic experience, that's the secret to Cal Poly Pomona's campus success. The university follows a polytechnic approach where the motto is "Learning by Doing". Our first hand experience mixed with valuable resources brings life to a campus full of passion.

Cal Poly Pomona's culture promotes a diverse and valued community. CPP speaks through action by encouraging students to join clubs, attend sporting events, join intramural sports, and take advantage of the many student services offered on campus.

More specifically, with the University's College of Business Administration, several programs are offered to prepare students for successful careers including: BAM, SMIF, CFA Institute Research Challenge, Dr. J. Douglas Ramsey Bloomberg Lab, and the Argus University Challenge. With the help of our faculty, CPP provides an abundance of resources to support student success. CPP FRL Department Chair, Wei Yu, recognizes SMIF through her incredible support and allows all students to access the Bloomberg Terminals. Our SMIF Program Director, Pawan Tomkoria passionately dedicates significant time and energy to ensure the success of the program and its students. Now, running into its 8th year, the SMIF program has built a strong network of alumni that serve as mentors to continuously enhance the program.

Team Structure

Our team of 18 students was divided into six groups, each tasked with managing specific segments of our investment process. We established six economic teams dedicated to the United States, Europe, China, Japan, Brazil/Mexico, and India/South Korea. Once these economic evaluations were concluded, we restructured into four new teams focusing on the eleven domestic equity sectors, along with international markets and fixed income. This approach served to expand our team's collective knowledge and played a pivotal role in cultivating our collaborative skills. Furthermore, our class is supported by two mentors who bring their previous SMIF and professional experience to our program. They contribute their diverse perspectives and innovative ideas, enriching the overall capabilities of the SMIF team. The BAM team structure is shown in our Organization Chart in Appendix I.

INTERNAL COMMUNICATIONS

The BAM team communicates through scheduled meetings and an array of different telecommunications such as Zoom, Slack, Email, and SMS messaging. A shared Google drive is accessible to all SMIF team members in order to reference all documents, class notes, data, presentations, and research discussed during class. The team has business continuity through holidays, including summer months. The BAM team will meet weekly during academic sessions and every other week during non-academic sessions.

MEETING SCHEDULE

Required coursework meetings are held weekly at 5:30 P.M. every Thursday in the Dr. J. Douglas Ramsey Bloomberg Lab on campus. Additional mandatory meetings are conducted on Tuesdays at 5:30 P.M. on an as-needed basis. During the summer recess, BAM meetings are held virtually every Sunday at 7:00 P.M. SMIC meetings are held on Tuesdays at noon, while Finance Society meetings are held on Thursdays at noon.

Program Incentives

CPP grants 6 academic units to students participating in the SMIF program, credited as FRL 4990 Applied Portfolio Management and FRL 4611 SMIF Senior Project.

SELECTION PROCESS

Admission to the Applied Portfolio Management course (FRL 4990) is selective and based on an application followed by an interview process. On the other hand, SMIC club membership is open to all students. In addition to the minimum CFA Orange County requirements, applicants should have many of the following characteristics:

1. High overall academic performance.
2. Majoring in a business-related field.
3. Bloomberg Market Concepts certification (mandatory).
4. Completion of the core Finance course "FRL 3000" (highly recommended).
5. Have taken an additional investment-related course.
6. Practical knowledge and understanding of the financial markets.
7. Have prior investing experience.
8. Ability to work in a collaborative team environment (mandatory).
9. Willingness to commit significant time to coursework (mandatory).
10. Genuine enthusiasm and a deep interest in an investment-related career (mandatory).
11. Exhibit strength in articulating and communicating financial concepts.

Any exceptions to the above must be approved by the course faculty

REPLACEMENT PROCESS

All SMIF members are required to make a one year commitment to managing the portfolio. Those departing after the year will be replaced by qualifying new members every year. All fund management positions are filled through a voting process. All decisions are subject to veto by the Faculty/Program Director.

Background of Students & Faculty

Bronco Asset Management (BAM) is led by a dynamic and diverse team of undergraduate and graduate students who share a profound passion for financial analysis, investments, and wealth management. These students have not only showcased unwavering commitment but have also completed various investment and finance-related courses, thereby equipping themselves with the knowledge that serves as the cornerstone of BAM's success. The diverse background and experiences within the group provides a multifaceted approach to decision-making, a key aspect in our achievements.

BAM consists of a roster of high-achieving individuals and prominent campus leaders who actively engage in extracurricular activities. Many of the team members participated in the investment clubs on campus which hosted alumni's who mentored them prior to joining SMIF. Multiple of the team members have earned esteemed scholarships and distinctions, such as placement on the Dean's and President's honors list. Our team is set apart by our track record of securing internships and launching careers with industry giants including, PIMCO, Capital Group, Citigroup, Goldman Sachs, JP Morgan, DoubleLine, Research Affiliates, Cerity Partners, Cathay Bank, EY, Bank of America, MassMutual, LPL, Edgewood Ventures, Wilshire Associates, UBS, and Travelers.

The BAM team consists of a diverse group of individuals that bring experience, intellectual capital, and enthusiasm together. Each student offers a unique background, a wide array of knowledge, and an intense interest in investment research. This provides the team with multiple insights and viewpoints on a variety of topics. Our team embodies the "Learning by Doing" philosophy that Cal Poly Pomona is known for. CPP also takes pride in its student diversity which is reflected in our investment team as well. The CPP team consists of diligent and knowledgeable individuals who strive to provide its clients with the best possible product through a balanced reward/risk management, while also embodying a high standard of ethics and transparency.

SMIF alumni stay heavily engaged with BAM and provide ongoing guidance to the team. Their experience and knowledge is invaluable in all aspects of portfolio construction and management; their efforts are truly appreciated by the current students. We believe the involvement of alumni is a significant differentiator for CPP.

In addition to our student body and alumni, Professor Pawan Tomkoria, our Program Director, brings over 30 years of experience in the medical and electronics industry. He has held various roles in finance, general management, and international business. Professor Tomkoria's unique blend of industry insight and academic excellence provides students with an invaluable mentorship, preparing them for real challenges of the investment world.

Furthermore, our Faculty Advisor and Department Chair are deeply committed to the SMIF program, dedicating substantial time and resources to BAM's growth and success. Their unwavering focus on the client and year-round portfolio management fosters a culture that is both supportive and challenging, propelling students to reach their fullest potential. This dedication ensures that BAM continues to thrive and achieve new heights in investment and wealth management.

Why Our Team is Uniquely Qualified

The BAM team possesses several unique qualifications that set us apart in managing investment portfolios. With a successful track record managing the CFAOC funds for seven years, we combine an eclectic, diverse team infused with experience, intellectual depth, high energy, and unwavering enthusiasm. Our decision-making is rooted in deep fundamental analysis and strong ethical values, further enhanced by team members with personal investing experience. Each team member meticulously applies their financial knowledge to construct data-driven portfolios grounded in thorough research and well-supported projections. Finally, our commitment to excellence doesn't stop there. Our unwavering focus centers on our clients and their specific needs and requirements. We diligently monitor the portfolio in real-time, ensuring that it aligns with our client's objectives on a year-round basis, including during non academic sessions. BAM's success is reflected in its AUM growth (as shown to the right).

Investment Philosophy

- BAM/SMIF strives to maximize risk-adjusted returns for our clients while keeping their objectives and expectations at the core of our investment decisions.
- Our investment decisions are driven by fundamental research meant to build long-term wealth for our clients.
- Multiple perspectives from a diverse team of individuals will benefit the portfolio construction and management process through discussion-based decisions.
- All decisions will undergo a rigorous analytical process. Our portfolio will remain adaptive to accommodate fluctuating market conditions.
- We believe markets are efficient in the long term, although short-term inefficiencies do occur. We seek out and capitalize on those opportunities by utilizing an active management approach to add value for our clients.
- Our approach will balance risk and reward with a conservative inclination.
- The Student Managed Investment Fund will embody Cal Poly Pomona's "Learning by Doing" philosophy.
- We will continue to evolve our program at CPP, building upon the guidance and contributions of our SMIF alumni, who serve as mentors.
- BAM/SMIF will operate with competence, diligence, and in an ethical manner, by placing the interest of the client before our own.

Passive Management

The BAM team follows an active strategy in the management of our portfolios. However, if any sector makes up less than approximately 10% of our overall equity portfolio, it will be represented by a broad sector Exchange-Traded Fund (ETF). Investing in ETFs for these sectors helps reduce unsystematic risk through diversification. We also choose ETFs to optimize the use of BAM's limited resources.

Given the above, we will invest in ETFs for seven sectors: Industrials, Consumer Discretionary, Consumer Staples, Energy, Utilities, Real Estate, and Materials.

Additionally, our international investments will be represented by a broad India ETF.

Within the Fixed Income portion of our portfolio, we take an active approach to allocations within fixed income sub-asset classes, and then apply this to select a combination of three actively managed funds and one passively managed ETF.

Market Overview & Asset Allocation

As a basis for investment decisions, BAM utilizes an investment philosophy focused on maximizing risk-adjusted returns that prioritize client objectives. Our capital market outlook is driven by fundamental analysis with a top down approach aimed at generating long- term wealth for the client. Our analysis begins by assessing global economies, developing a consensus and then utilizing our analysis for equity and fixed income research. BAM employs sources from Bloomberg, IMF, FRED, and others to conduct research. Allocation of capital is determined based on an economy's level of alignment with our investment priorities.

BAM's analysts have diligently prepared status reports on the economic condition of the United States of America (U.S.), the European Union (EU), China, Japan, Brazil, Mexico, India, and South Korea. Our capital allocation will be founded on this analysis.

U.S. Economic Outlook

BAM's U.S. economic outlook begins with the consensus from the following sources: Bloomberg, the United States Federal Reserve (Fed), the International Monetary Fund (IMF), the European Union Commission, and The Wall Street Journal (WSJ). After analyzing the consensus, BAM formulates its own outlook on the trajectory of the U.S. economy. The current market and BAM consensus are shown in the table below.

For 2025, BAM's forecast for U.S. real GDP growth is slightly lower than the consensus, at 1.4% (Figure A1). The lower growth is attributed to slowing consumer spending and slightly higher inflation putting downward pressure on real GDP. Further detail of each segment driving GDP will be discussed below.

INDICATORS PROJECTIONS

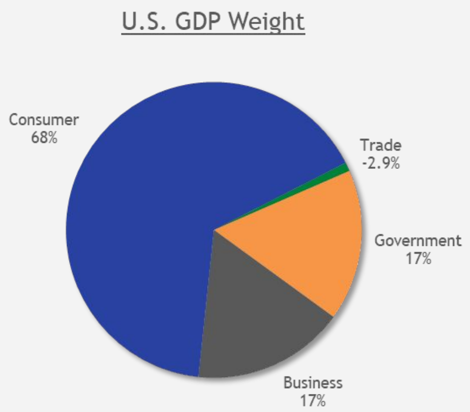
Figure A1:

	2023A	2024E	2025E (Consensus)	2025 (BAM)	2026E (Consensus)
Real GDP	2.9%	2.6%	1.9%	1.4%	2.0%
CPI	4.1%	2.9%	2.3%	2.8%	2.3%
Unemployment	3.6%	4.1%	4.3%	4.4%	4.2%
10yr Treasury Bond	3.9%	3.7%	3.7%	4.2%	3.7%

Source: Bloomberg

To arrive at our assessment of the market consensus, BAM conducted its own deep research into the U.S. economy. U.S. GDP comprises four types of spending: Consumers, Businesses, Government, and Trade (Net Exports). In our research we found net trade to be less significant than the other factors. Each component's relative contribution and our outlook for 2024-25 are discussed below:

Figure A2:



Source: Bloomberg

CONSUMERS AND IMPACT ON INFLATION & RATES

CONSUMER SPENDING

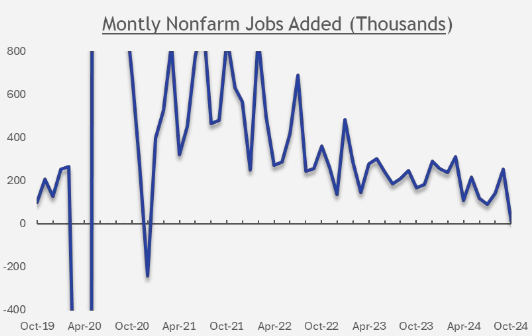
Consumer spending is the largest driver of Gross Domestic Product (GDP) in the United States, accounting for approximately 68%. BAM recognizes consumer spending is driven by consumer income and spending habits. In turn, these drivers can be explained by four main factors: new jobs created, wage growth within jobs, consumer savings, and consumer debt.

In the year leading up to March 2024, it was originally reported that the economy added 2.9 million jobs. After accounting for revisions by the Bureau of Labor Statistics, this figure adjusts to 2.1 million, averaging 173,000 jobs per month. More recently over the past four months, the economy has added an average of 154,000 jobs per month. BAM forecasts 2025 to align more with recent trends, at 150,000 jobs per month. This conservatism is driven primarily by an aging demographic and the current political climate surrounding immigration policy.

Analyzing data from the 2020 Census, the future labor pool (ages 0-17) has been declining in size with a growth rate of -0.15%, while the rate of retirees (aged 65+) grew at a more rapid rate of 3.31%. Over the past five years, this has led to a sluggish growth trend of 0.57% per year. The age group divergence suggests that the U.S. will experience an ongoing pattern of limited labor force growth in the near future. Further analysis of the working age population demonstrates a tight labor market, which has the potential to constrain economic growth while simultaneously propelling wage inflation. Historically, weakening demographics have been offset by immigration. However, after the recent election, we expect the current political party in power to be less conducive to immigration increase.

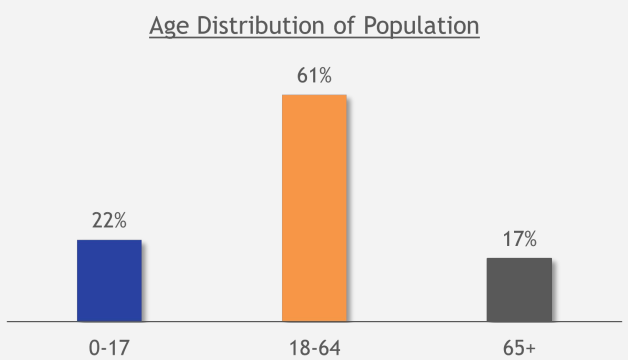
Wages grew at a 3% annual rate over the past 20 years, but this has accelerated to 4.7% over the past 5 years. We believe that the tightening labor pool is contributing to this higher wage growth. BAM believes wage inflation will normalize at 3.50%, higher than historical average, due to the recent election's effect on immigration. In aggregate, we expect total consumer income to grow by 4.7%.

Figure A5:



Source: Bloomberg

Figure A3:



Source: U.S. Census Bureau

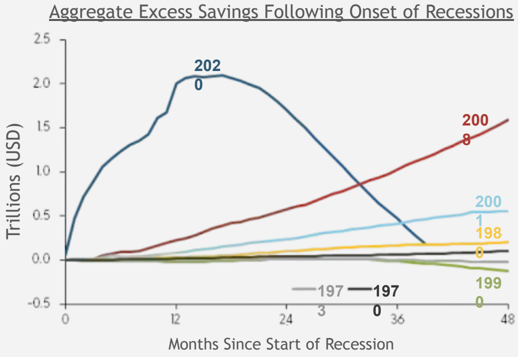
Figure A4:

Source: U.S. Census Bureau

The second driver of consumer spending, spending habits, can be split into two factors: savings and debt. Consumer savings peaked at approximately 26% of disposable income during April of 2020. This was soon after the $1,400 stimulus checks were released to the public. We believe consumers have depleted their excess savings since COVID-19 through ‘revenge spending,’ which refers to an influx of spending after a period of restricted discretionary spending. With low consumer savings and continually high levels of household debt (Figure A8), we believe consumers will increase their savings rate, thus reducing discretionary spending. BAM expects to see a 1% increase in consumer savings, contributing to a slowdown in the economy (Figure A7).

BAM concludes that a looser labor market will lead to a normalization of wage growth to 3.5%, jobs growth will average at 150,000/month, and the savings rate will increase by 1%. The net result is an increase in consumer spending by 3.7%.

Figure A6:

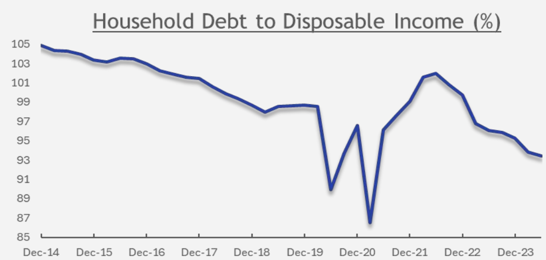


Source: Bureau of Economic Analysis and FRBSF calculations

Figure A7:

Source: Bloomberg

Figure A8:



Source: Bloomberg

INFLATION

We expect inflation to be above consensus at 2.75%. Our forecast is based on our outlook for wage inflation and commodity inflation, as well as the current interest rate cutting cycle by the Fed. Additionally, we have slightly rounded up our forecast for the potential impact of import tariffs. As rates come down, it will put upward pressure on inflation as spending and borrowing go up. Our baseline assumption is that the U.S. economy is made up of 68% labor and 32% materials. We assume that U.S. wage growth for the next year is 3.5%.

To determine material inflation, we utilized the December and January futures prices of WTI Crude, Copper, Corn, Live Cattle and Soybean. Adding to this, BAM calculated the weight of energy, agriculture, and metals from the Bloomberg Commodities Index. Next, we designated the year-over-year change in WTI Crude, Copper, Corn, Live Cattle and Soybean futures to represent each of the commodity classes (Figure A9). The materials weight of inflation was determined by multiplying the overall weight changes of materials prices, 1.54%, by 0.32 (32% materials assumption), and coming out to 0.30%. The labor weight of inflation was computed as 2.4%, calculated by multiplying the 3.5% wage growth by 0.68 (68% labor assumption).

After adding both results (2.4% and 0.30%), we came to a projection of 2.7% inflation, which we then rounded to 2.75% given expected import tariffs.

Figure A9:

Commodities Futures Prices (Dec 25)			
	Dec ‘24	Dec ‘25	YOY Change
WTI Crude	$73.64	$69.67	-5.39
Copper	$426.95	$437.05	2.37%
Corn	$395.00	$435.00	10.13%
Live Cattle	$176.55	$175.23	-0.75%
Soybean	$982.75	$1,031.75	4.99%

Bloomberg Commodities Index Weights	
Energy	28.44%
Metals	39.44%
Agriculture	32.12%

Commodities Weights of Change	
Energy composite (YoY Change * Energy Commodity Index Weight)	-1.53%
Metals Composite (YoY Change * Metals Commodity Index Weight) =	0.93%
Agriculture Composite (YoY Change * Agriculture Commodity Index Weight) =	1.54%
Total Commodities Change (Sum of Energy, Metals and Agriculture Composite) =	0.94%

Inflation Calculation			
Labor Weight	68%	**Materials Weight**	32%
Wage Growth	3.50%	**Commodities Change**	0.94%
Total Labor Weight of Inflation (Labor Weight * Wage Growth) =	2.37%	**Total Materials Weight of Inflation (Materials Weight * Commodities Change) =**	0.30%

Source: Bloomberg Commodities Index

BAM 2024 Inflation Projection	
Inflation Projection (Total Labor Weight + Total Materials Weigh, rounded up slightly to include impact of import tariffs.)	2.75%

INTEREST RATES

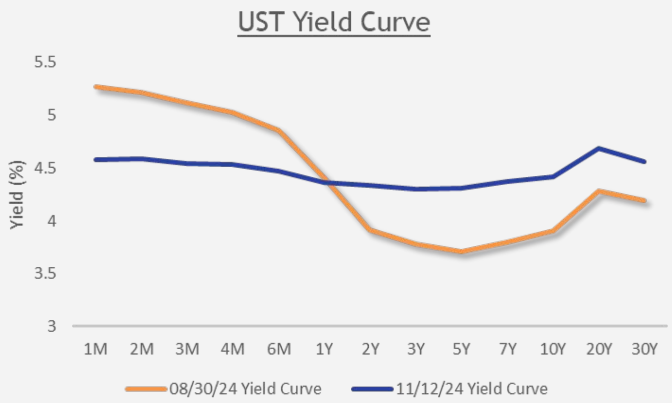
Inflation has significantly declined following the COVID-19 peaks due to rapidly increasing interest rates. The federal funds rate had been steady at 5.25%-5.50% since 2022, until recent cuts in September and November, which brought it to 4.50%-4.75%. The Consumer Price Index (CPI) has consistently trended downward since the high of 9.1% in the second quarter of 2022 (Figure A10); it achieved 2.4% in September 2024. With inflation almost in line with the Fed's goal of 2%, as measured by Personal Consumption Expenditures (PCE), the Fed believes the balance of risks lie more heavily in the weakening labor market. This pushed them to cut rates 50 bps in September and 25 bps in November forecasting another 25 bps to be cut by year end. The Fed has put their forecasted federal funds rate at 3.4% for 2025, a reduction from 4.1% since their last meeting, indicating an aggressive rate cutting campaign. The extent to which this campaign is realized is dependent on PCE and labor market data that will emerge over the coming months. Long term rates, contrary to previous rate cycles, have moved independently from short term rates (Figure A11); in the weeks following the Fed's rate cut in September, yields on long term bonds rose significantly with the 10-Year rising to 4.4%.

BAM projects that by the end of 2025 yields on long term (10Y) bonds will fall to 4.2%, approximating nominal GDP growth.

Figure A10:

Source: Bloomberg

Figure A11:



Source: Bloomberg

CONSUMERS SUMMARY

In summary, our 2025 projections are as follows:

- Consumer spending to rise by 4.7%
- Inflation to average 2.8%
- Long-term interest rate to be at 4.2% at year-end
- Unemployment to end the year at 4.4%

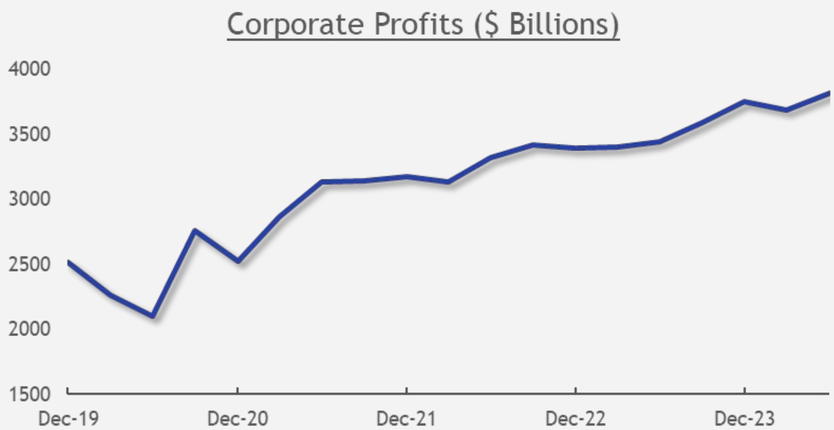
BUSINESS EXPENDITURES ANALYSIS

Business Expenditures contain two sub-categories: Non-Residential Investments (81%) and Residential Investments (19%).

NON-RESIDENTIAL INVESTMENTS

We believe corporate profits will drive business spending. Over the last decade, corporate profits have grown at an average rate of about 5.5%. More recently, in the past five years, the growth rate has increased to 8.3% (Figure A16). BAM estimates that future growth will be slightly higher than long term historical trends at 6%. The higher rate is due to the reshoring of manufacturing, the vertical integration of supply chains encouraged by the new administration, and potential tax cuts.

Figure A16:



Source: Bloomberg

U.S. DOLLAR OUTLOOK

The U.S. Dollar is the world's leading currency and still the benchmark/peg for dozens of countries. The current spot rate of the US dollar is at $105.04 (Figure A17), falling 2% against the combined basket of other world currencies. Futures markets are forecasting that the spot rate will depreciate to $99.20 in Q4 2025. This should create a favorable environment for corporate profits as American companies operating internationally receive favorable exchange rates. Additionally, a weaker dollar should lead to higher import costs making non-domestic products more expensive for U.S. consumers.

Figure A17:

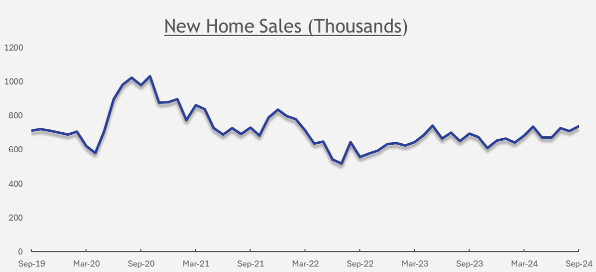
Current Spot Rate (As of 11/06/24)	Forecasted Q4 25 spot rate (FCUSDX)
105.04	99.20

RESIDENTIAL INVESTMENTS

Consumer income and mortgage rates have a significant impact on the economy. The era of near-zero interest rates from 2011 to 2021 allowed consumers to lock in mortgages far below today's prevailing market rates (Figure A21), making these consumers reluctant to sell and move out of these homes (Figure A19). Higher mortgage rates have also increased costs of new home starts. Coupling these factors, we've seen a housing shortage, as seen in record low vacancy rates (Figure A20), forcing home prices higher (Figure A22). Despite high costs, housing starts have actually increased since rates began to rise in 2022. BAM believes residential fixed investment will stay elevated as demand for housing outpaces supply and lower interest rates further encourage new housing starts.

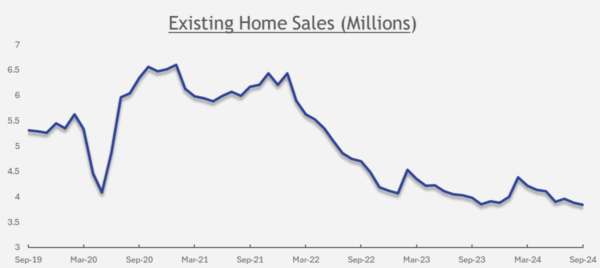
With home prices remaining elevated and a further expected increase in housing starts, BAM expects residential investment to rise by 9.0%.

Figure A18:



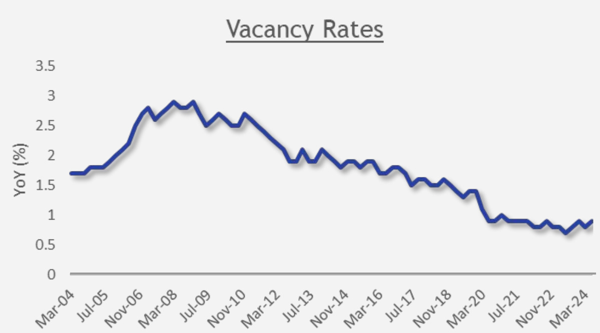
Source: Bloomberg

Figure A19:



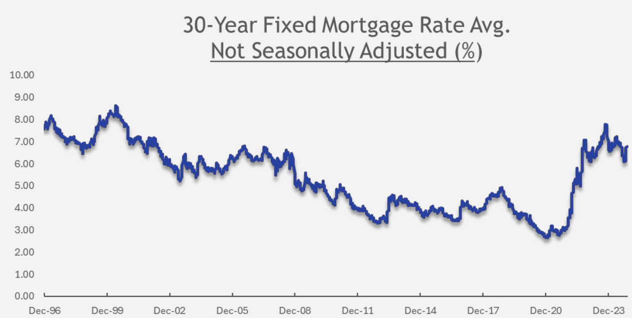
Source: Bloomberg

Figure A20:



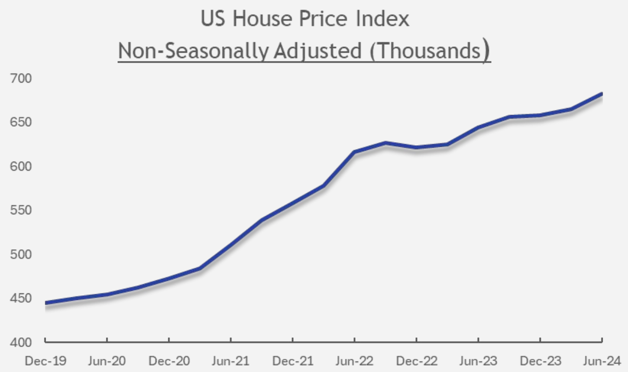
Source: Bloomberg

Figure A21:



Source: Federal Reserve Bank of St. Louis

Figure A22:



Source: Bloomberg

Figure A23:

Source: National Association of Realtors

GOVERNMENT EXPENDITURES ANALYSIS

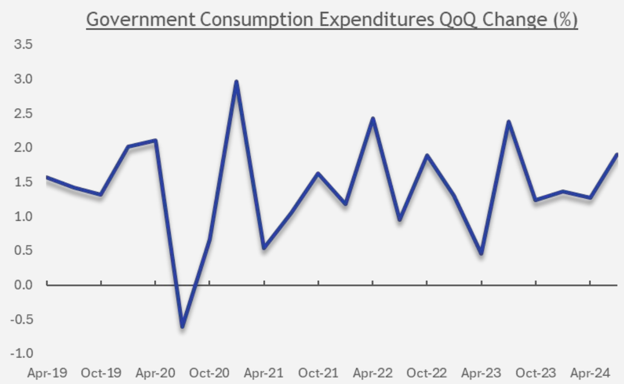
BAM estimates that government spending will grow nominally at a rate of 3.5% in 2025, driven by increases in federal budgets and planned expenditures. This growth rate for federal spending is also expected to be mirrored by municipal governments.

The 2017 tax cuts are expected to be renewed in 2025, reducing the likelihood of increased government revenues. Rising long term interest rates and accelerating debt will put further strain on government spending.

Given these dynamics, we foresee minimal potential for a budget surplus in the near term. The combined effect of higher spending, modest revenue increases, and escalating interest expenses, make it unlikely that government spending will see a significant upward trend beyond what is already projected.

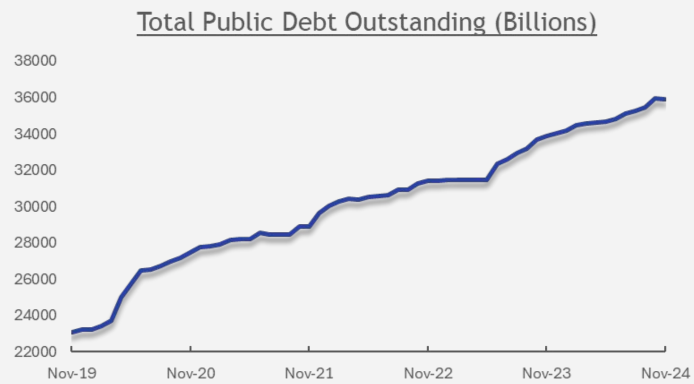
In conclusion, under current conditions, we do not anticipate any substantial upside in government spending capacity beyond the forecasted 3.5%.

Figure A24:



Source: FRED

Figure A25:



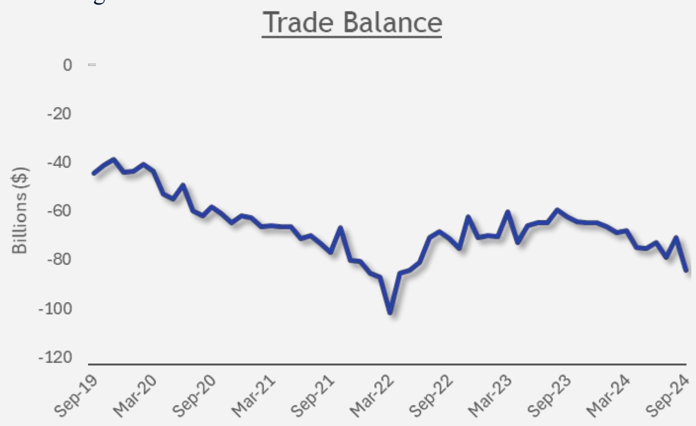
Source: Bloomberg

NET TRADE ANALYSIS

With exports being at record highs due to an increase of production in industrial manufacturing, we see potential in the long run in terms of balanced trade; this is a feat that the U.S will need time to work up to. As of recently, trade has experienced an improvement in the trade balance as the U.S has been exporting energy. For example, the U.S has plans to refine and export more Liquid Natural Gas as it is the world's leading exporter in this product. While the U.S is making considerable strides to become a stronger manufacturer, we don't see this outpacing imports as the U.S is still reliant on overseas products. In the future, U.S policy, such as the Chips Act, will help reduce our reliance on imports. However, we expect the significant overall impact on trade to be largely minimal.

The US trade deficit is currently 5.1% and was projected to grow to 6.1% in 2025. However, with the new administration, BAM anticipates trade deficits will deteriorate less than expected.

Figure A26:



Source: Bloomberg

SUMMARY

After evaluating consumer, corporate, and government spending, as well as net trade, we believe that the U.S. economy will grow at a slower rate than consensus. We conclude that low savings rates, high consumer debt, and a normalization of wage growth will dampen consumer spending and demand. Policy by the new administration will encourage nonresidential investment through lower tax rates. We believe that government spending will increase due to high projected budgets; however, we believe that there are potential headwinds that can slow government spending such as higher long term interest rates and the increase in government deficit post-pandemic. Finally, we believe that trade will remain an insignificant factor in GDP growth.

BAM expects slightly higher inflation based on the outlook for wages and material costs. Consequently, we are projecting interest rates on long term debt (10Y) to be 50 basis point higher than consensus.

Our overall U.S. economic expectations are as follows:

- GDP growth of 1.4%
- Inflation rate of 2.75%
- Long-term (10Y) interest rate of 4.2% by end of 2025
- Unemployment rate of 4.4%

E.U. Economic Outlook

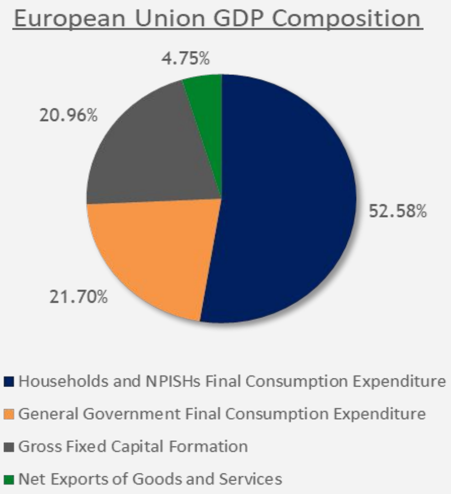
Figure B1:

	2023A	2024E (Consensus)	2025E (Consensus)	2026E (Consensus)
Real GDP	0.4%	1.0%	1.2%	1.3%
CPI	6.2%	2.5%	2.1%	2.0%
Unemployment	6.7%	6.7%	6.5%	6.4%
10yr Note (Germany)	2.6%	2.0%	2.2%	2.3%

Source: Bloomberg, ECB, & IMF.1313

To project the EU's economic outlook, BAM conducted thorough research on the primary types of expenditures which comprise the European union economy.

Figure B2:



Source: Bloomberg

BAM's outlook for GDP growth in the EU is similar to the Bloomberg consensus forecast. Key economies within the eurozone are struggling to reach growth targets amid expectations for fiscal consolidation in leveraged economies such as Italy (lowering from fiscal deficit of 7.8% of GDP to less than 3%). Despite improving conditions regarding consumer wage growth (up 5.2%), unemployment (record low of 6%), and cooling inflation, consumer spending and demand have remained sluggish, weighing heavily on the economy. Furthermore, composite PMI has experienced a steady decline due to slackening demand and slowdowns in key economies such as Germany and France.

These factors are reflected in our consensus expectation for EU real GDP at 1.2% growth for 2025.

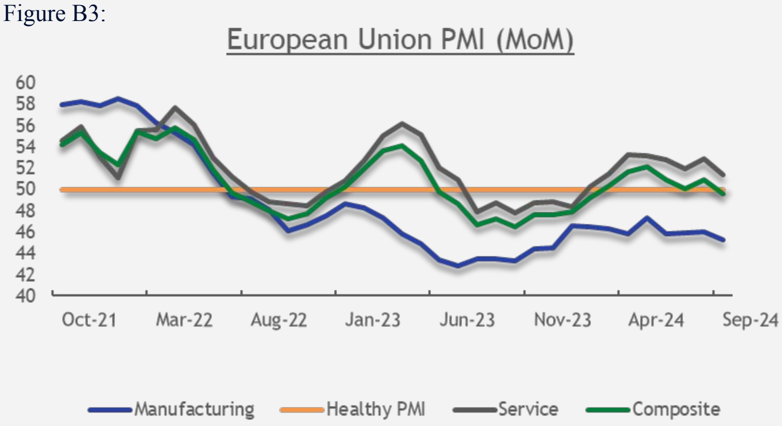
Inflation is expected to continue its downward trajectory on account of significant declines in energy costs (falling 33% in Q2 2024), coupled with degrading business purchasing confidence. The current low levels of unemployment indicate a stable labor market which is bolstered by job creation on account of tourism and aging demographics. We expect unemployment in the EU will continue to decline and provide support to consumers. Furthermore, given our outlook on cooling inflation, we expect interest rates to decrease near the forecasted consensus.

Overall, despite progress on some of the issues facing consumers within the region, slackening spending from governments and business indicate a mild economic outlook for the EU in the coming years.

PURCHASING MANAGERS' INDEX - COMPOSITE

Composite PMI initially saw a resurgence in 2024 (Figure 2) spurred by a surge in the services sector driven by increased overall demand. Following this initial spike, Composite PMI indicators have weakened again with the exception of the uptick driven by the Olympics. The primary driver of this weakness is attributed to a sharp drop-off in new orders for products and backlogs, signaling weaker consumer demand. Manufacturing has also taken a hit, due to weakness in construction spending and many other manufacturing based industries. France, in particular, experienced a decline from a composite PMI of 53.1 to 48.6, while Germany has narrowly avoided recession.

Figure B3:



Source: Bloomberg

UNEMPLOYMENT

Unemployment in the EU has seen a gradual decline over the previous decade and has currently reached the lowest point since the beginning of the 21st century. Despite disruptions to the European Union economy due to the COVID-19 pandemic along with the Russia-Ukraine conflict in the early part of 2020, the EU's efforts to retain jobs was one of the primary policy interventions that have reduced unemployment for individuals. Furthermore, strong summer tourism within the EU has temporarily boosted employment metrics in tourist dependent countries such as Spain, which added more than 150,000 jobs during the summer months alone.

Figure B4:

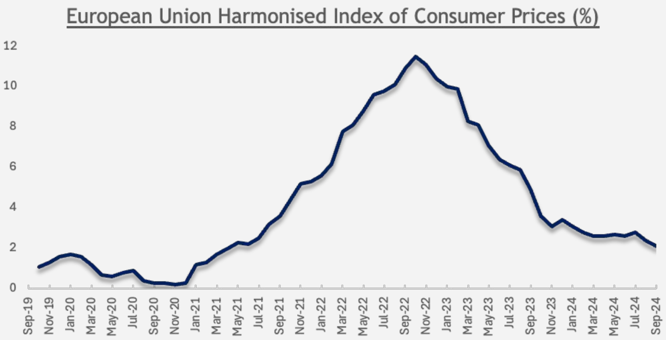
Source: Bloomberg

INFLATION AND INTEREST RATES

The European Central Bank's key interest rate (the deposit facility rate), has dropped steadily since August of 2024 and is currently sitting at 3.25% as of October. The ECB determined the deflationary process is in line to reach target levels (2%) despite a slight forecasted increase in inflation over the next coming months. The Bank of England held rates while the Swiss National Bank and U.S. Federal Reserve cut rates in September.

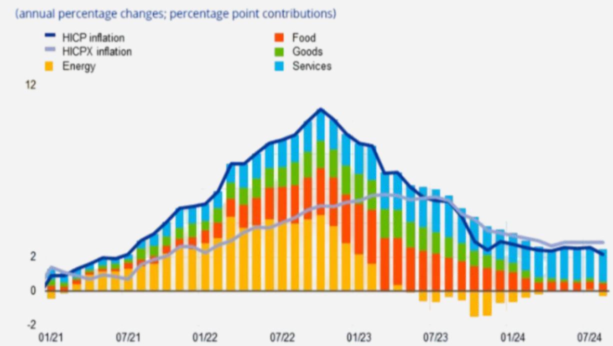
Underlying inflation is proving more stubborn than headline inflation, which includes energy, food, and other more volatile items (Figure 4 and 5). Steering the region back to target levels of inflation still remains a priority. However the continued weakness of the EU is likely to lead to rate cuts by the ECB.

Figure B5:



Source: Bloomberg

Figure B6:



Source: European Central Bank

SUMMARY

The near term economic outlook for the euro area is one of growing vulnerability and weakness, owing largely to Donald Trump's presidency, reductions in government spending, and business confidence. Despite some improving conditions for consumers within the EU, geopolitical tension, and sustained consumer uncertainty has dampened spending. This is weighing heavily on manufacturing output, which is also being held down by weak external demand as well. Services remain more resilient, particularly in contact-intensive sub sectors such as tourism, but momentum is slowing. With Donald Trump's victorious election result, the EU's economy will be negatively affected. Expectations of tariffs imposed on the EU may slow down exports. Donald Trump's ambitious strategy of cutting energy imports and straying away from green energy deals will affect the EU's plan in transitioning to green energy. The U.S. dollar has appreciated value since the 2024 election, therefore, due to the raise in dollar value, the Euro has depreciated in value and is set to continue trending downward. The economy is expected to grow slowly in the near-future, however, as Donald Trump advances with his foreign economic policies, the EU's economy will be negatively impacted.

BAM's future economic outlook for the euro area is negative. BAM remains cautious in Europe equities' exposure compared to US equities. The relative growth, inflation, and policy differential between Europe and US has led us to deviate from European exposure.

China Economic Outlook

China, the globe's second-ranking economy, has become a central figure in international commerce, technology, and politics. While China's economy reportedly grew faster than their 5% target growth in 2023, we believe this was driven by their elimination of their Zero-COVID policy. While it was in effect, this policy effectively concealed prominent macroeconomic weaknesses; including geopolitical tensions, property market concerns, high fiscal debt, aging population, and ineffective stimulus policy. BAM expects China to continue facing economic headwinds for the foreseeable future, as it will struggle to hit its growth targets and stabilize its property sector.

Figure C1:

	2023A	2024E (Consensus)	2025E (Consensus)	2026E (Consensus)
Real GDP	5.2%	4.8%	4.5%	4.1%
CPI	0.2%	0.5%	1.3%	1.5%
Unemployment	5.2%	5.2%	5.2%	5.0%
10yr Rates	2.56%	2.08%	2.02%	2.18%

Source: Bloomberg

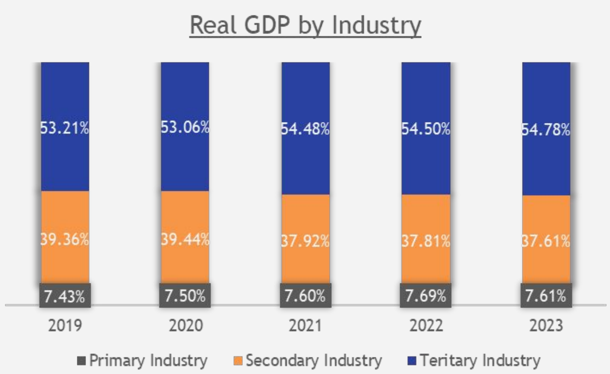
GROSS DOMESTIC PRODUCT

In the third quarter of 2024, China's GDP growth reached 0.9%, an increase from the 0.5% registered in Q2; however, GDP growth has slowed down these past quarters. Real estate and manufacturing have significantly contributed to their GDP's deceleration. Real estate, which accounts for more than 30% of China's GDP, is grappling with turbulence. Major developers like Evergrande and Country Garden have fallen since September 2021 and October 2023, respectively.

The Chinese government has provided significant investments in Manufacturing, yet overall production has remained stagnant, affecting China's domestic landscape and supply chains. In October 2024, China's Manufacturing PMI rose slightly to 50.1 from 49.8 in September (Figure C5). While domestic factors have weighed on China's growth goals, external challenges have further exacerbated the situation. External demand has been slumping due to countries imposing added tariffs against Chinese products, as they try to claim their own technological and industrial self-sufficiency. Additionally, this has led to a downward price trend over the past few years due to industries' overproduction of goods and services, causing deflationary pressure (Figure C3). This prolonged contraction hints at reduced business optimism, potential job cuts, and supply chain disruptions, threatening China's trade balance—especially since exports and services make up around 20% of China's GDP.

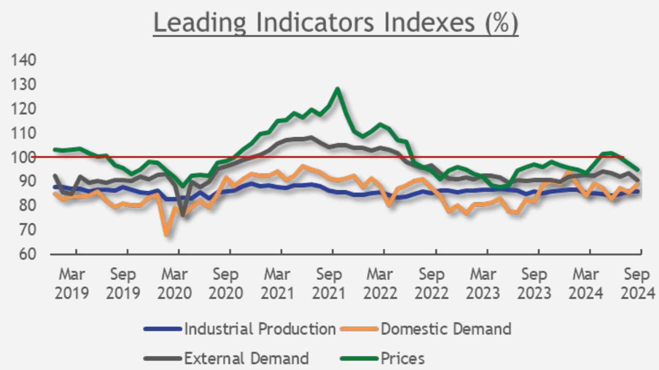
In October 2024, Services PMI climbed slightly to 50.1 from 49.9 in September (Figure C5). Service segments like healthcare remain stable, while others like retail may face challenges amidst the uncertain economic climate. China's GDP slowdown reflects the lingering effects of recent real estate troubles and China's manufacturing surplus. These have reduced consumer demand, which hovers above 50% of GDP (Figure C2) and significantly affected consumer spending (Figure C6).

Figure C2:



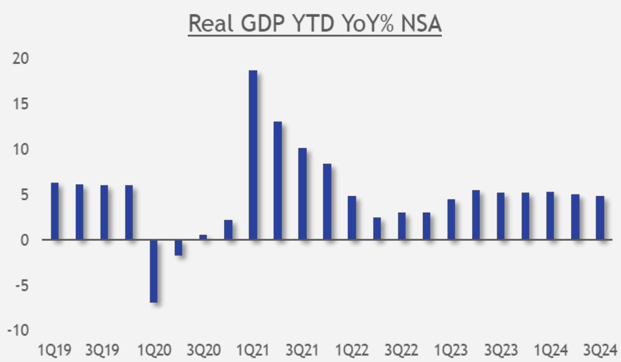
Source: National Bureau of Statistics of China (Bloomberg)

Figure C3:



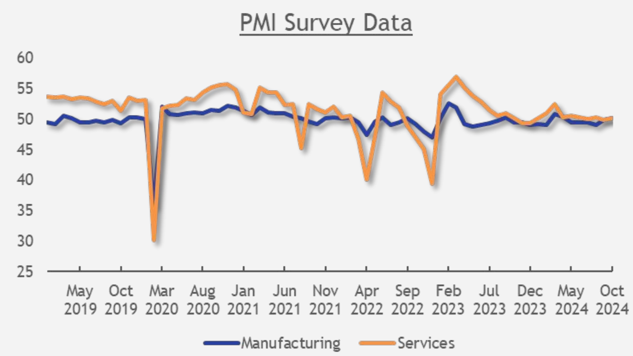
Indexes below 100% indicate slowing momentum.
Source: China International Capital Corporation (Bloomberg)

Figure C4:



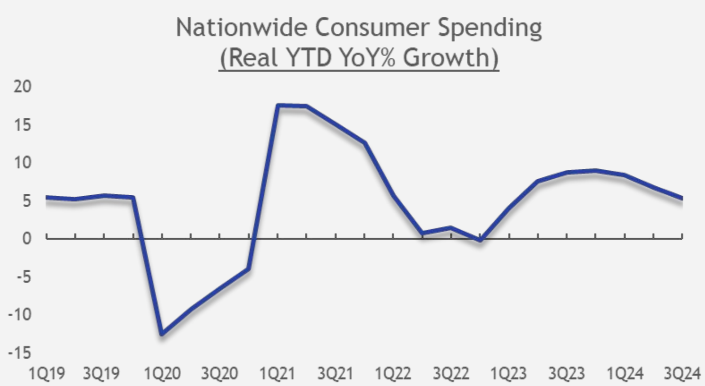
Source: National Bureau of Statistics of China (Bloomberg)

Figure C5:



Source: China Federation of Logistics and Purchasing (Bloomberg)

Figure C6:



Source: National Bureau of Statistics of China (Bloomberg)

REAL ESTATE SECTOR

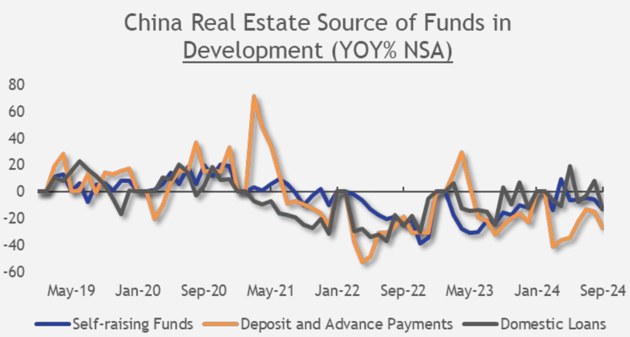
Historically, China's Real Estate Sector has directly contributed to about 20% of China's economy. When accounting for related goods and services, the sector accounts for a third of the economy. In China, all land is property of the central government. Land usage rights are endowed to local municipalities, who are able to lease these rights to developers. In turn, these developers can build on this leased land and buyers can purchase leases for these homes and buildings. This means that land usage rights are historically a major source of income for local governing bodies in China, who rely heavily on the Real Estate sector's success in order to fund public works and carry out expenditures.

In the 2000s through 2010s, Chinese real estate was seen as a lucrative and relatively safe investment, in part due to China's demand for high down payments. High down payments allowed developers to build using high amounts of interest-free capital. Chinese real estate was a key source of investment for China's middle class, additionally grabbing the attention of foreign investors. This created a real estate bubble, where real estate prices were driven by speculation rather than a demand for utility. This bubble led to developers overleveraging in order to keep up with, and encourage, high property demands. The bubble was burst in 2020 by President Xi's "Three Red Lines" policy. The policy severely limited the amount of debt that property developers are allowed to take on. The overarching goal of this policy is encapsulated by President Xi's words on the matter, "Homes are for living, not speculation."

This policy has yet to help Chinese consumers, who remain fearful of impending economic crises, and has led to the crash of the Chinese Real Estate Sector. The year 2021 saw the default of Evergrande, China's largest property developer. In 2024, the company is currently liquidating and is in legal disputes with the Chinese government, who accuses the conglomerate of inflating past revenue figures. Country Garden, once China's largest homebuilder, is also in hot water, defaulting on billions of dollars in loans and bond payments. It is estimated that there are 65-80 million unsold housing units in China, which becomes even higher when accounting for unfinished projects. Despite having close to the largest population in the world, some experts believe that China lacks the population size to occupy these homes.

Our outlook on China's former largest economic sector is highly unfavorable. China has seen the downfall of multiple top developers in the country, and continues to see a lack of demand for new homes. In addition to a major government policy that does not support growth in the sector, the real estate market was and is unstable. This not only puts China's economy in limbo, but also hurts the Chinese government's spending ability, due to their heavy reliance on revenue from the sector.

Figure C7:



Source: Bloomberg Intelligence

INFLATION

China is currently facing deflationary pressures as consumers at large are hesitant to spend. CPI saw an extremely low rate of 0.2 in 2023, and is not expected to significantly recover in 2024 (Figure C8). China is currently at a monetary disequilibrium, where consumer savings growth is outpacing aggregate demand. Deflationary pressure has led to price decreases in their exported goods, which is an issue for their exporting economy. Deflation would also lead to high costs in importing necessary goods, such as parts and machinery required by the technology sector. China currently wishes for growth in the export sector in order to regain economic growth after their real estate crash. However, economic slowdown would make this endeavor challenging.

In order to combat this, China rolled out a series of easing policies to drive growth in its economy. Their biggest policy has been their 50 bps reserve requirement ratio (RRR) cut. China expects this reduction in bank reserves to free up cash that can be loaned out, which would help drive borrowing activity. China also anticipates a 50 bps mortgage rate cut on existing house loans, in hopes of easing financial stress for middle class consumers. Although more direct approaches of helping consumers have been hypothetically discussed, China has yet to implement or announce significant policies to increase lower to middle class wages, or lower taxation for lower to middle class families; both of which would make a significant impact on consumer discretionary income and help offset deflationary pressure. It is unclear whether these current broad easing measures will bolster the Chinese economy. Our outlook is that China will be unable to convince consumers to put more money into the economy, and thus will not be able to come to a healthy yearly inflation rate in coming years.

Figure C8:

Source: National Bureau of Statistics of China (Bloomberg)

UNEMPLOYMENT

In recent years, the U.S. labor market is contending with a fundamental demographic shift: an aging workforce combined with a shrinking influx of young workers. Citizens in the 65+ age group are projected to grow around seven times faster than the working-age population, due to the aging population, businesses are finding that the pool of replacement workers is dwindling. The long-term trajectory points toward a limited workforce to support economic expansion. Historically, these demographic pressures were eased through immigration; however, this once-reliable labor supplement may falter under the current political environment. In response, employers have increasingly adopted a strategy of workforce maintenance: replacing employees rather than expanding headcount. This approach, while stabilizing, is a subtle indicator of caution, revealing an underlying hesitance to commit to growth amid broader economic uncertainty.

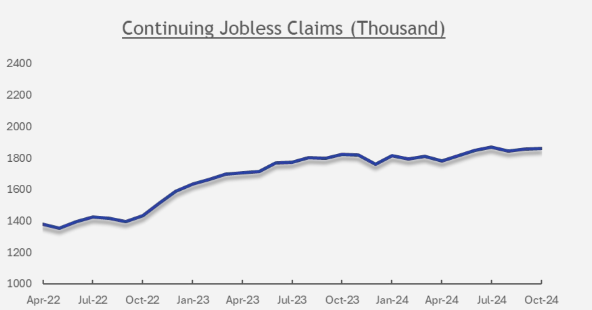
The labor market experienced a notable increase with September's non-farm payroll data, which revealed an addition of 254 thousand jobs. However, recent labor market statistics indicate 12% of those hires were in the government sector (21% over the past 12 months). This growth in employment raises concerns about sustainability, especially given the rising and (post election) accelerating federal debt. Currently, public debt as a percentage of GDP is high and government budgets are projected to grow by 3.5% next year. As this debt increases, this leans pressure on government hires. Given these factors, government employment appears unsustainable in the face of slow economic growth. Despite the Federal Reserve's recent interest cuts, which aimed at stimulating demand, the labor market's foundation remains fragile. Continuing jobless claims have moved upward, underscoring the difficulty workers face in securing positions, even as openings persist. Consumers are more careful about price hikes from inflation, due to the higher cost of living. Consumers are feeling more confident about the economy due to the recent rate cuts, however, their confidence is still lower than it was before the pandemic. These factors indicate a cooling of the labor market, restrained by both demographic realities and cautious corporate strategies.

As job listings begin to plateau and hiring becomes more selective, the unemployment rate is poised to climb. BAM's projection is consistent with the consensus, at 4.4% for 2025.

Figure A12:

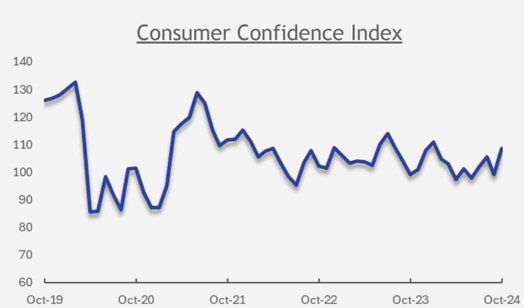
Source: Bloomberg

Figure A13:



Source: Bloomberg

Figure A14:



Source: Bloomberg

Figure A15:

Source: Bloomberg

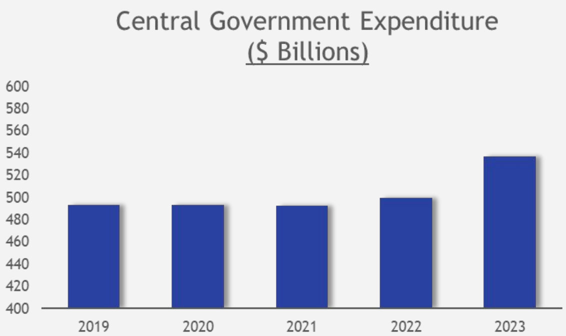
STIMULUS

Under President Xi Jinping's reign, there has been a clear leaning towards fiscal restraint, especially considering the prevailing budgetary deficit. Furthermore, it is clear that Xi has been more fixated on global security rather than domestic economic performance. This can be seen in the figures shown below, which display a slowdown in the support from the central government in the past few years. In 2023, there was an increase in central expenditures toward social security and employment, as a result of growth in their aging and unemployed population (Figure C9, C14-15). They also saw a significant increase in defense spending and debt payments.

More recently, in September 2024, the People's Bank of China (PBoC) made some more significant monetary adjustments, including a 50 basis point cut to bank reserves, lending, mortgage rates, and deposit rates. Lowered interest rates and reductions in foreign exchange reserves aim to boost liquidity and may support loan activity. Additionally, they distributed a $71 billion fund to help brokers, insurance companies, and funds buy stocks and help companies conduct share buybacks. In November 2024, China allocated a $1.4 trillion stimulus towards its struggling local governments. For reference, China's 2024 total government expenditures hit $2.8 trillion by September YTD (Figure C10). In efforts to further delay these debts, the central government also authorized the increased issuance of 3-5 year local government bonds. However, these efforts are unlikely to make a significant impact on their $8.35 trillion in off-balance sheet debts (estimated by the International Monetary Fund).

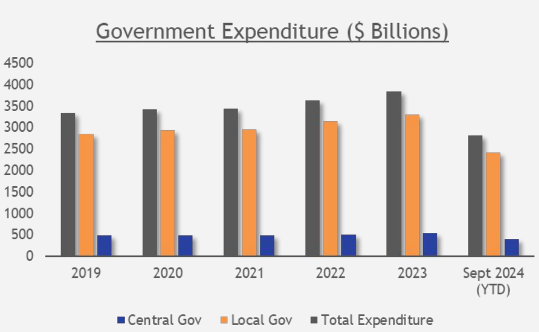
BAM believes China needs more targeted stimulus to combat deflationary pressures and boost demand, with additional assistance towards poorer households and easing the financial worries that encourage savings.

Figure C9:



Source: Ministry of Finance of the People's Republic of China (Bloomberg)

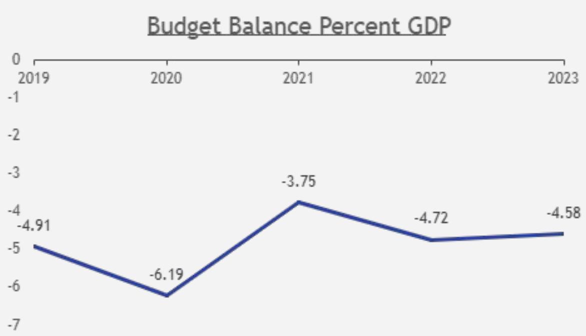
Figure C10:



Above is the proportion between central government spending and local government spending to total spending.

Source: Ministry of Finance of the People's Republic of China (Bloomberg)

Figure C11:



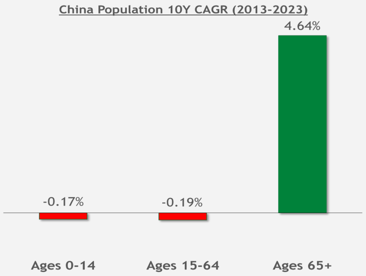
Source: Bloomberg

UNEMPLOYMENT

DEMOGRAPHICS

China's demographics provide supporting evidence to the expected continued decline in their economy. The working population is expected to decline based on their 10 and 40 year CAGRs (Figures C12-13). China's population is evidently becoming older. Looking at China's 40 year demographic CAGR from 1990-2030 there is a 1.14% decline in ages 0-14, a 0.60% increase in ages 15-64, and a huge 3.53% increase in ages 65+. China's 10 year population CAGR provides nearly the same outcome with a 0.24% decrease in ages 0-14, 0.20% decrease in ages 15-64, and a drastic 4.46% increase in ages 65+. The ongoing demographics are shifting into an increasing retired population and a declining working-age population, which can exert major pressure on the labor supply (Figure C14). The demographic imbalance may pose a challenge for the sustainability of social security, as a smaller workforce may struggle to support an expanding number of retirees. Furthermore, the decline in the working-age population will lead to decreased economic output and diminished consumer demand, ultimately hindering overall economic growth.

Figure C12:

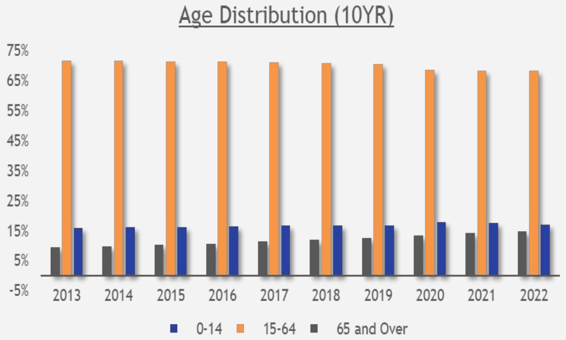


Source: Census.gov

Figure C13:

Source: Census.gov

Figure C14:



Source: Bloomberg

YOUTH UNEMPLOYMENT & COVID IMPACT

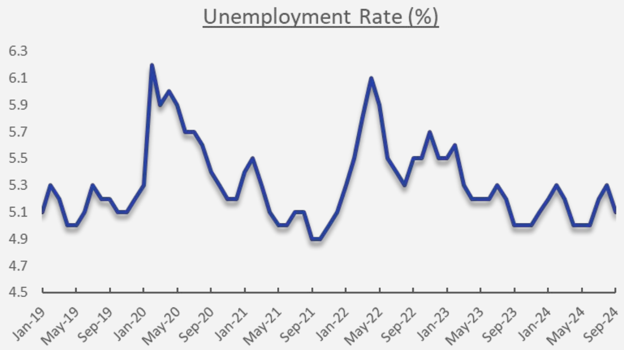
Overall unemployment currently sits above 5% (Figure C15), with youth unemployment hitting a record high of 21.3% in June 2023, to which China responded by ceasing the reporting of youth unemployment figures in August 2023. China stated that they will suspend reporting unemployment numbers. There are a few beliefs on what could have started this trend, but many point to China's Zero-COVID measures implemented in early 2020 as the culprit. The policy was a strict approach implemented to eliminate the spread of COVID-19, which caused many people to be stuck inside their homes. The Zero-COVID policy caused economic volatility. Business disruption led to caution in hiring workers and a rise in unemployment as these businesses struggled. Additionally, college graduates are increasingly struggling to find employment due to the number of graduates growing faster than the number of available jobs. The recent graduates have skills that do not align with the needs of the job market, which is also a factor in securing relevant job positions and causing a rise in unemployment.

One of the main drivers for unemployment is insufficient consumer and business demand. There is uncertainty around the future state of the Chinese economy and this is encouraging consumers to save rather than spend and businesses to be cautious on expanding (Figure C6 & C16).

GOVERNMENT ACTIONS

The Chinese government is also blamed for the rising unemployment. The government's crackdowns on the technology, real estate and education industries took a large role in the rise in unemployment. The crackdown on the real estate industry caused the real estate market to crash, which evidently affected not only unemployment, but the broader economic market as a whole. Many of the educated youth held jobs in these industries where regulatory actions caused massive layoffs. These regulations forced companies and investors to be more cautious about expanding, ultimately forcing more meticulous recruitment. Policymakers introduced measures to try to lift confidence and boost youth employment by offering subsidies to encourage private-sector companies and state-owned enterprises to hire more. They also began pressuring colleges and universities to do more to help graduates get jobs.

Figure C15:



Source: National Bureau of Statistics of China (Bloomberg)

Figure C16:

Source: National Bureau of Statistics of China (Bloomberg)

INTEREST RATE

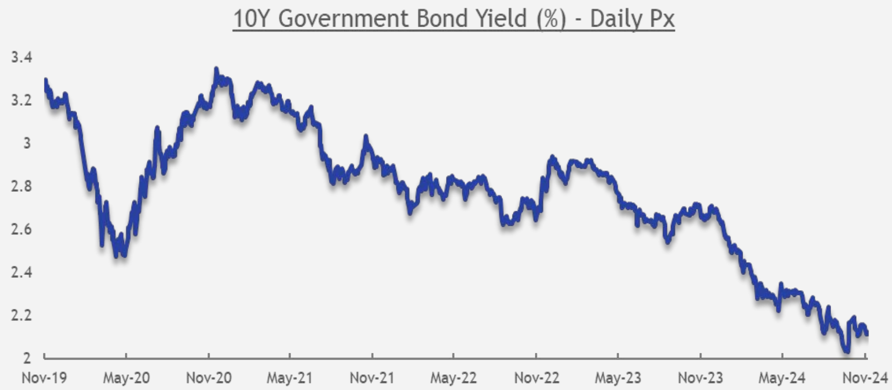
10Y GOVERNMENT BOND YIELD

In September 2024, China saw a record low 10 year government bond return rate of 2.04 (Figure C17). It continues to hover below 2.20 as of October 2024, showing a lack of significant recovery from a historically disastrous rate. The last time China saw a similarly major dip in 10 year Treasury yields was April 2020, in the midst of COVID-19 shutdowns. China has replicated April 2020's 10 year Treasury yield crash in October of 2024, with both time periods seeing a decline of over 20% YoY. This means that investors currently hold a similar level of pessimism and uncertainty towards China's long term economic growth, the same view as when China was facing global pandemic-related economic shutdown pressures..

Expectations of rising bond prices has led to investors and banks aggressively buying up long-dated government bonds, paradoxically creating threats of an upcoming government bond bubble. The PBoC has been forced to take aggressive and unorthodox actions to help drive bond prices back down. These actions include the prohibition and cancellation of bond purchases, threatening lower level banks, investigating banks who engaged in the recent aggressive bond purchases, regulatory fines, and 'quantitative contraction' through borrowing long term government bonds from banks and reselling them into the market.

We believe that this yield will continue to trend low due to the Chinese government's sustained easing policies. The PBoC's recent rate cuts in September 2024, and their lowered reserve requirements for banks will only stand to further depress their long term Treasury bond yield.

Figure C17:



Source: CHBE (Bloomberg)

SUMMARY

We believe the Chinese economy will continue to struggle to grow; they will experience disinflation, high unemployment, and a weak currency regardless of government stimulus. Investors and Chinese citizens alike feel unsettled about the Chinese economy, with many anticipating poor growth in the long term. Furthermore, they will continue to see global geopolitical headwinds. We also anticipate that the election of Donald Trump will negatively impact China's exports and foreign policies. Consequently, BAM anticipates they will be forced to find partnerships with other countries to soften the impact on GDP. Therefore, BAM does not see China as an attractive investment.

South Korea Economic Outlook

Figure D1:

	2022A	2023A	2024E (Consensus)	2025E (Consensus)	2025E BAM	2026E (Consensus)
Real GDP	2.8%	1.4%	2.5%	2.1%	2.3%	2.2%
CPI	5.1%	3.6%	2.5%	2%	2%	2%
Unemployment	2.9%	2.7%	2.8%	3%	2.7%	2.9%
10 yr. Gov Bond	3.74%	3.18%	3.05%	2.68%	2.68%	2.63%

Source: Bloomberg

BAM CONSENSUS

BAM's consensus deviates from the Bloomberg consensus in two areas. The first graph displays Real GDP growth. Through our macroeconomic research, BAM's forecast of South Korea's Real GDP is in line to grow stronger, driven by South Korea's strong manufacturing industry and improvements in trade partners. BAM projects South Korea's Real GDP growth to be 20bps higher than consensus. BAM also deviates from consensus in unemployment projection driven by South Korea's aggressive investments in the manufacturing industry and an increased global demand for South Korea's goods. Henceforth, we see their unemployment rates to be 30 bps lower than consensus, which suggests unemployment levels will remain low..

BAM believe's CPI to be in line with Bloomberg consensus, because of South Korea's capacity to reduce inflation.

Lastly, our views on the 10 year note align with consensus, because South Korea is aiming to increase private investments in its manufacturing sector to compete on a global scale.

GROSS DOMESTIC PRODUCT

Historically, South Korea's GDP has been driven by its manufacturing-focused economy. Given that South Korea focuses on manufacturing valuable electronics and automobiles, demand is driven by advanced economies. This is reflected in its exports as a percentage of their GDP, which has increased in the past 5 years. Their strongest trade partners include China and the United States. In the past 5 years there has been a shift in South Korea's top exporters. The United States transitioned into a strong importer of South Korean goods and China has been reducing their imports. This change is driven by geopolitical tension between South Korea, China, and the United States. South Korea has been strengthening its relationship with the United States by relying less on China as a primary market because they compete for electronic exports. Furthermore, South Korea has positioned itself to become a leading semiconductor manufacturer, which will fill U.S. demand (Figure D2). We believe that South Korea's strategic macroeconomic position warrants GDP growth that is slightly stronger than consensus.

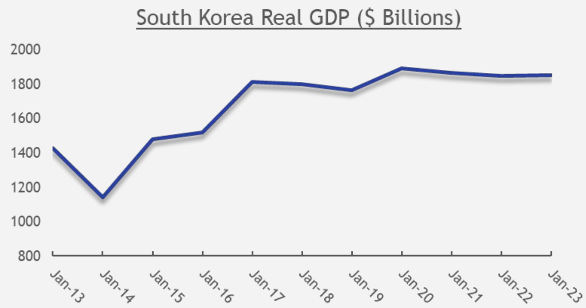
MANUFACTURING PMI

South Korea's electronics manufacturing sector has been driven by private investment and government support to innovate and invest more in the country's planned Yongin chip hub. This is reflected in South Korea's PMI numbers, which increased since April 2023. However, South Korea did experience a weaker PMI in 2022 and in September, October 2024. We do expect that as in 2022 the most recent downturn in PMI is temporary and expecting to recover (Figure D3).

CONSUMER SECTOR

Retail sales in South Korea held steady throughout the COVID-19 pandemic, which is a testament to the country's internal economic stability. This was driven by South Korea's effective management of COVID-19, which allowed citizens to maintain normal spending levels. Figure D5 illustrates growth in disposable income, which supports the rising retail sales in figure D4. Suggesting strong and resilient consumer market in South Korea.

Figure D2:

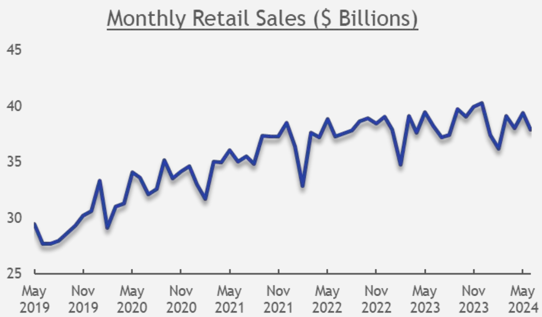


South Korea's GDP grows at a steady rate of 2.66% per the 10 Year CAGR.
Source: South Korea's Economic Consensus (Bloomberg)

Figure D3:

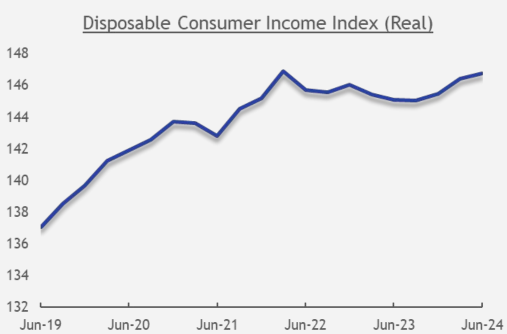
Source: Bloomberg

Figure D4:



Source: Bloomberg

Figure D5::

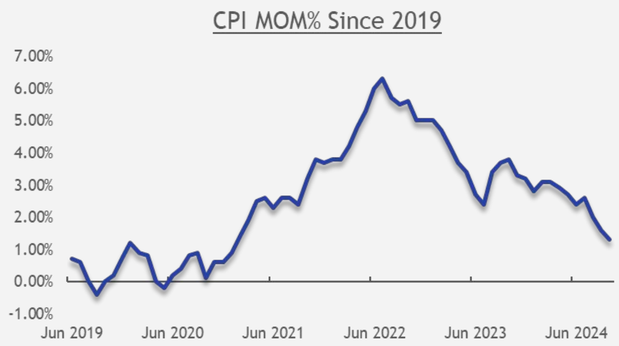


Source: Bloomberg

INFLATION

South Korea's inflation remains elevated compared to its pre-pandemic levels. Throughout 2021 and the first half of 2022 CPI increased and reached 6-7%. The driving factors of the inflation were: a post pandemic global trend of supply chain disruption, elevated energy costs, and high demand driven by economic reopenings. As an effect, South Korea opted to raise rates through 2022-2023 to combat inflation. By mid-2023, inflation had stabilized between 2% and 3% (Figure D6).

Figure D6:

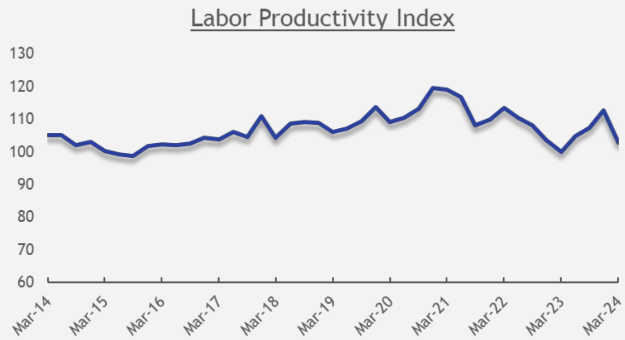


Source: Bloomberg

DEMOGRAPHICS

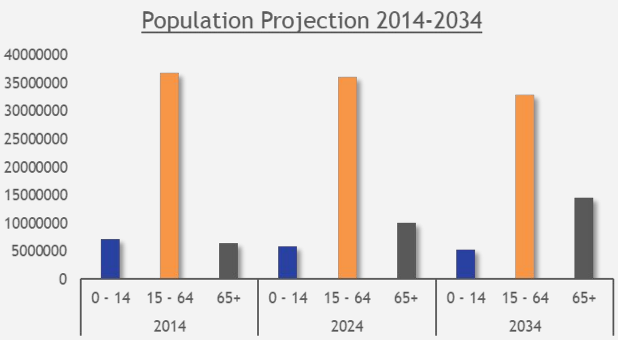
South Korea faces a major challenge in its declining population and aging workforce. South Korea's fertility rates are projected to be 0.68 in 2024 and were previously 0.72 in 2023. Additionally, its total population 10-year CAGR is flat at 0.10%. Their working age group is expected to decline by 9% by 2034, suggesting a weaker workforce in the future (Figure D8). Furthermore, South Korea's labor productivity has not grown since 2014, which demonstrates a weakness in South Korea's plan to become a leading semiconductor manufacturer (Figure D7).

Figure D7:



Source: Bloomberg

Figure D8:



Source: Bloomberg

SUMMARY

BAM forecasts South Korea as an economy with potential for growth, but falls short where it is important. They have made significant investments in becoming a global manufacturing leader of semiconductor, automobile and other valuable technologies. However, growth in South Korea's economy is limited by a weakening population and decrease in labor productivity. Furthermore, growth from this economy is driven by the tech sector's demand, which falls short of the United States tech sector and makes the U.S. a more appealing market for tech equity investments. Due to these concerns and disadvantages, BAM will not invest in South Korea.

Japan Economic Outlook

Figure E1:

	2023A	2024E (Consensus)	2025E (Consensus)	2026E (Consensus)
Real GDP	1.7%	0.0%	1.2%	0.9%
CPI	3.3%	2.5%	2.0%	1.6%
Unemployment	2.6%	2.6%	2.5%	2.4%
10 yr Gov Bond	0.6%	1.0%	1.3%	1.6%

Source: Bloomberg

INFLATION & CONSUMER SPENDING

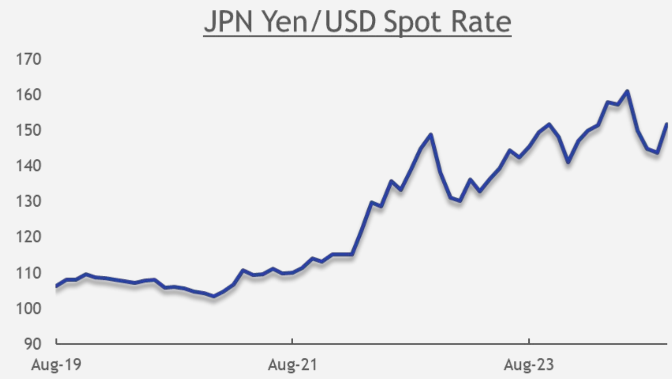
Japan has experienced relatively high inflation recently, reaching a peak of 4.3% in January 2023. The sudden rise in prices can be attributed to a few primary factors. Japanese consumers are heavily dependent on imports for energy and food. In 2022, Japan imported 94% of all energy used and 42% of total food consumption. With global wars in Europe, the energy supply chain has seen disruptions that increased the price of fuel, which contributed to higher inflation. In addition to energy, rising international prices of grain, feed, and fertilizer pushed food import costs even higher. The weakening yen further increases the costs of total imports, which in turn raises prices for the consumer. The combination of geopolitical tensions and currency depreciation has caused inflation to push past the Bank of Japan's (BOJ) target inflation rate of 2%. The BOJ departed from its long-standing near-zero interest rate policy, shifting to a 0.25% interest rate as of July 2024 to combat the high inflation. Interest rates are expected to increase if the inflation remains well above the target rate of 2%. The increase in rates and stabilization of energy prices has caused inflation to come down, reaching a rate of 2.5% in September 2024; the rate is still high relative to recent history.

While income had started to rise in late 2023 and early 2024, it has trended downwards recently. The change in income and high inflation has caused consumer spending to stagnate. Despite inflation having come down recently, consumers are still reluctant to spend, as shown by the 1.9% drop in consumer spending in August 2024 (Figure E4, E5). Additionally, real wage growth has seen a steady increase from May of this year, followed with a slight increase in savings which further reinforces the lack of consumer confidence. The reluctance to spend, tendency to save–coupled with rising rates, and a high inflation environment is indicative of a weak outlook on the economy. The outlook is reflected in the 1.2% and 0.9% forecasted GDP growth for the 2025 and 2026 consensus.

Figure E2:

Source: Bloomberg

Figure E3:

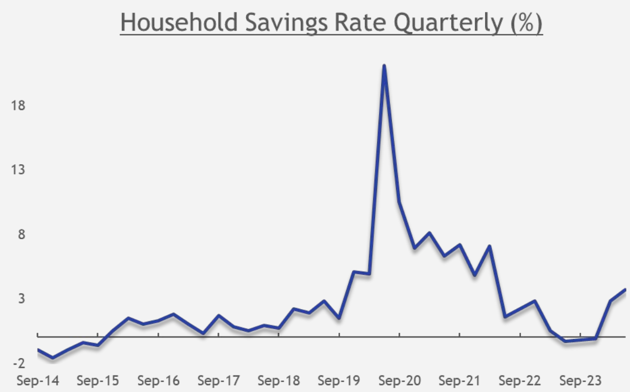


Source: Bloomberg

Figure E4:

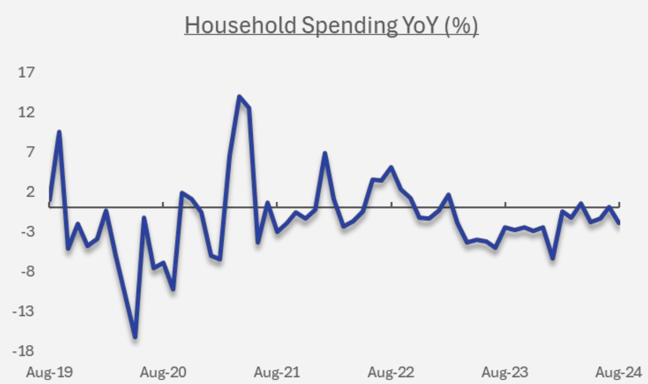
Source: Bloomberg

Figure E5:



Source: Bloomberg

Figure E6:



Source: Ministry of Internal Affairs and Communications (Bloomberg)

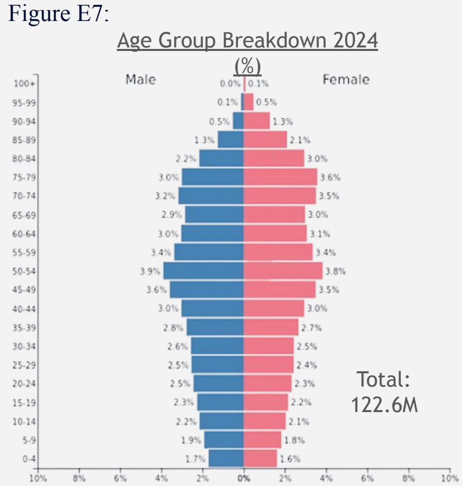
DEMOGRAPHICS

The Japanese economy confronts substantial challenges due to adverse demographic trends, marked by a diminishing working-age population. The median age currently stands at approximately 49, with a projected age of 49.8 by 2025 (Figure E7). This population is shrinking due to a number of contributing factors. In Japan, the average birth rate per woman is approximately 1.31, which has been steadily decreasing for numerous years. Overall, there are less children being born, and in turn, less individuals who will grow up to enter the workforce. Japan also has one of the lowest fertility rates in the world. The trend of Japanese women of reproductive age shows an inclination to focus on career growth rather than traditional family values. Japanese individuals as a whole, are more career driven due to their rigorous work culture, prioritizing their careers over family culture. Additionally, Japan has the second highest life expectancy in the world, sitting at an average of 84 years. This increases the median age, seeing as the population is getting older and not having children. The decline of the working-age population will decrease productivity in Japan as a whole for the long-term if there are no drastic controls put in place. Reducing productivity of the economy and decreasing its output due to a slowing prevalence of workers will have an adverse effect on GDP, further pushing us to consider other economies for investment.

UNEMPLOYMENT

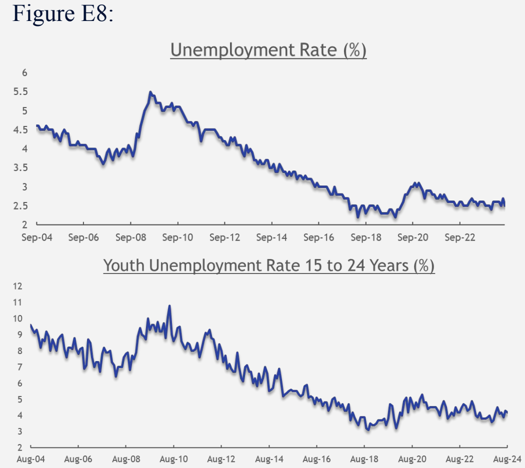
Japan has seen an upward trend in unemployment, which has spiked to 2.6% in the past 4 months (Figure E8). The current unemployment rate is relatively low compared to late 2017 to mid 2019, seeing as it is gradually increasing. Historically, there has been a high labor participation rate, which contributes to the historical unemployment rates (Figure E8). The labor participation rates directly affected the current available job opportunities, which have seen a decline due to: the shrinking working age population (-0.59% 10 yr CAGR), automation increase, and labor market reforms. Japan's youth unemployment rate is also exhibiting a gradual upward trend, closely following working age unemployment. The Japanese classify youth unemployment as individuals aged 15-24 years, not employed, but currently looking for work, excluding economically inactive individuals (full time students). As stated before, the youth unemployment rate closely follows working age unemployment. It remains relatively higher, fluctuating around the 4% margin for the past few years, approximately 2% higher than working age unemployment. We believe that the unemployment rate will continue to decrease if the economy recovers from its current recession.

Figure E7:



Source: PopulationPyramid.net

Figure E8:



Source: Bloomberg:

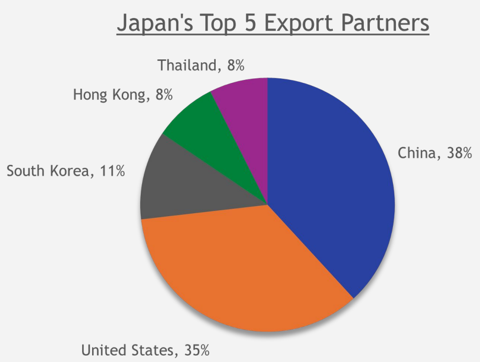
GEOPOLITICAL TENSIONS

BAM has concerns regarding Japan's exports to China and its manufacturing operations within China, crediting these concerns to escalating geopolitical risks in the region. Japan's total exports to China was approximately 160,822 million ($USD). Being Japan's largest trade partner, the total percentage of exports to China sits at approximately 28.3% (Figure E9). Key export commodities that Japan offers are machinery, cars, and circuits. Japan's trade balance has been fluctuating in recent years, most recently running a deficit of 294 million yen in September 24. Disruptions to domestic productivity and reliance on imported energy are the main contributors to the trade deficit. To further heighten this deficit, rising import costs and a weakening yen may pose challenges. Decreased trade to China due to rising geopolitical tensions will lead to economic shifts such as a possible slowdown in exports dependent industries.

These uncertainties have also raised apprehensions about the decline in inbound tourism from China, which holds substantial importance for Japan. Prior to the 2020 pandemic, Chinese visitors not only surpassed those from other nations, but also constituted the highest-spending group. In 2019, Chinese tourists accounted for 30.3% of total inbound visitors (Japan National Tourism Organization), with their share of total spending by inbound tourists even more significant at 36.8% (Bloomberg). In the month of August 2024, Japan received a total estimated number of tourists of approximately 3 million. Chinese tourists took up the majority of tourism travelers sitting at 745,000 which is approximately 24.8% of total tourists for the month of August. The high percentage of total travelers from China exposes Japan's tourism industry to downsides, should relations in regards to certain issues deteriorate.

Historically, the U.S. and China had trade tensions, which further increased when the U.S. implemented military action as allies with Japan. China did not appreciate this because an ally of the U.S. was sitting in their backyard (JPN). In more recent years, the tensions between Japan and China have only worsened. Some of this tension can be attributed to the 2023 chemical spill into international waters. In August of 2023, Japan spilled toxic and radioactive chemicals into waters near the Fukushima Power Plant. These chemicals drifted and made their way into international waters, which angered the Chinese government. To add to this issue, China is currently banning all Japanese seafood due to the seepage of those toxic chemicals. As a result of the ban, trade between the two countries has also stagnated. Since this disaster, tensions have been high between the two countries and tourism between the two has also decreased (Figure E10).

Figure E9:



Source: Bloomberg

Figure E10:

Source: Bloomberg

SUMMARY

When considering factors such as slowing consumer spending, rising interest rates, shrinking population, and geopolitical tensions, the Japanese economy may pose significant challenges. A lack of confidence as a result of slow consumer spending would further dampen the growth. Rising interest rates create more issues by increasing borrowing costs, which could affect investors in business investments. As for the shrinking population, the issue poses a long term challenge for the country seeing as it directly correlates to declining labor force and decreasing domestic demand. Lastly, the geopolitical tensions with China pose uncertainty as to where the economy is heading, this risk may negatively impact investor confidence and market stability. The low income growth and lack of any significant reversal in consumer spending have become disappointing. Based on our analysis of Japan's economy, BAM deduced that investment in Japan should be avoided.

India Economic Outlook

Figure F1:

	2023A	2024A	2025E (Consensus)	2026E (Consensus)
Real GDP	7.0%	7.1%	6.9%	6.6%
CPI	5.7%	4.65%	4.5%	4.4%
Unemployment	8%	7.8%	-	-
10 yr Gov Bond	7.17%	6.78%	6.61%	6.78%

Source: Bloomberg, CMIE

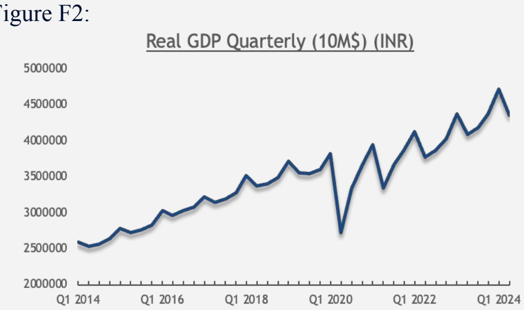
After enduring a turbulent economic downturn caused by the COVID-19 pandemic, India demonstrated great resilience in its recovery. The factors reflecting their resilience include strong real GDP growth, a strong consumer, supportive demographics, and substantial investments in infrastructure. Furthermore, Bloomberg estimates that India will emerge as the world's third-largest economy by 2027.

GROWTH IN CONSUMER AND BUSINESS

India's consumer and business sector has seen strong growth. This has been driven by wage growth, a growing middle class, and an increase in migration from rural to urban areas. Wage growth has remained at 9.5% (India Times) for 2024, a 20 bps decrease from 2023. However, this is still outpacing GDP growth. The services sector contributes roughly 55% of the nation's GDP. To bolster future economic growth, India's growing middle class will further increase the rate of consumption for goods and services. According to the India Brand Equity Foundation, India's middle class is expected to grow from 432 million in 2020-2021 to 715 million in 2030-2031. As the middle class grows, growing urbanization of India will fuel demand for infrastructure improvements such as housing, transportation, and railroad systems. Between 2010 and 2021, the urbanization rate in India has increased by 19.6%.

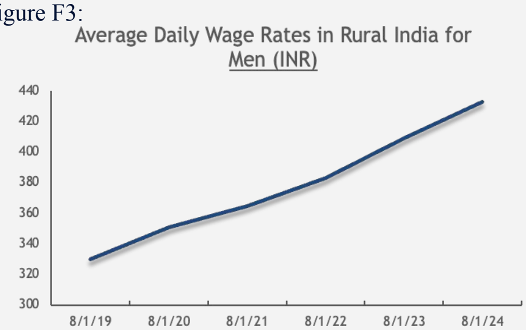
Both current and forecasted GDP figures emphasize the country's strength, indicated by the services and manufacturing PMI consistently reporting values above 50 (Figure F6-7). These are indicators of a strong economic expansion. Overall, these factors support India's improving economic growth, fueled by an increase in disposable income, an expanding middle class, and rapid urbanization. (Figure F3 & F4).

Figure F2:



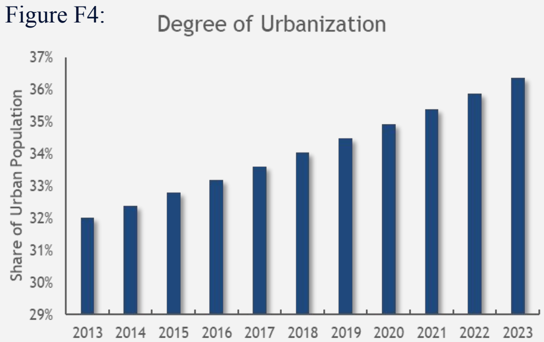
Source: Bloomberg

Figure F3:



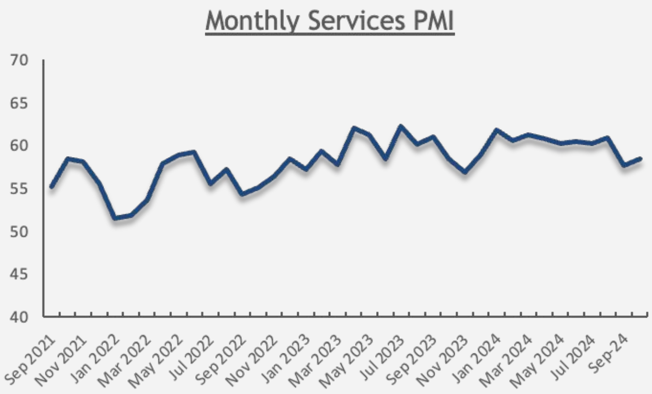
Source: Bloomberg

Figure F4:



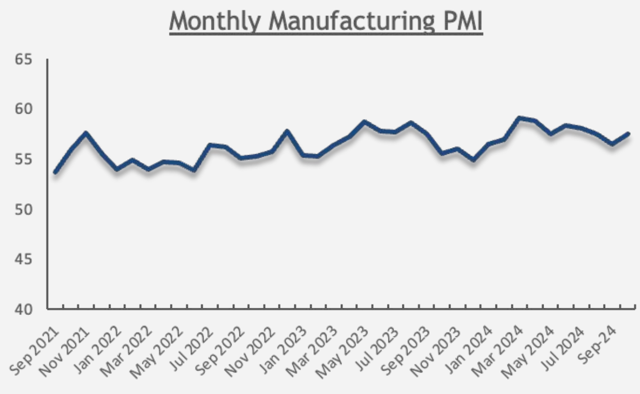
Source: Bloomberg

Figure F6:



Source: Bloomberg

Figure F7:

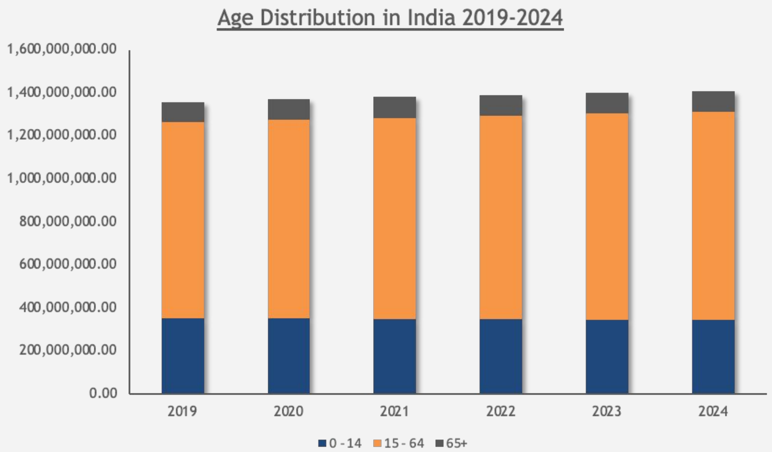


Source: Bloomberg

DEMOGRAPHICS

India's key advantage lies in its demographics, characterized by a growing population and workforce. India has recently surpassed China for the most populous nation, with a profound population of around 1.43 billion (Figure F8). The workforce in India is youthful, with a median age of 28.4 years, stark contrast when compared to China's median age of 39.6 years. India's younger demographic position is a crucial driver of economic growth and expansion in the coming decades. This supportive demographic will drive India's future economic growth.

Figure F8:

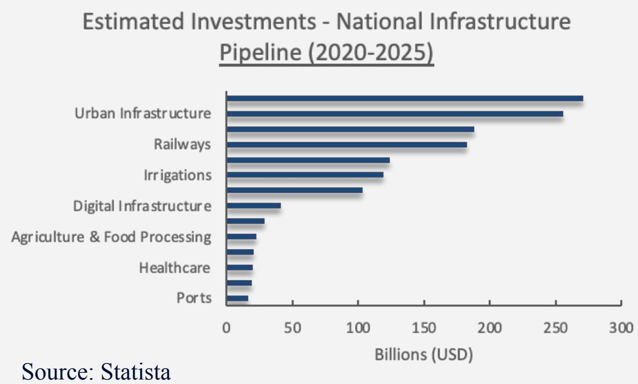


Source: Statista

India's impressive performance remains steadfast, not including the years affected by the economic challenges posed by the COVID-19 pandemic. Additionally, manufacturing contributes 17% to the GDP and employs over 27.3 million workers. Manufacturing has the potential for further enhancement, especially as other nations seek to reduce their reliance on China. According to the Reshoring Institute, manufacturing wages are currently much lower against competitors, with an annual salary of production workers of USD 2,000 versus USD 14,000 in China. This could be pivotal for India as the shift from China into India remains a common theme among Western Nations hoping to gain early market share and capitalize on this opportunity.

Historically, India faced inadequate infrastructure which hindered job growth and economic productivity. The current administration, led by Narendra Modi who was recently re-elected for his third term, is actively addressing this problem with an emphasis on "Make in India". India's tremendous growth (GDP) has fueled India's commitment to enhance its infrastructure. Roads and railways have remained a priority with the India administration, committing to an investment of $120billion with the goal of stimulating productivity and job growth. Additional investment are planned for the future (Figure F9).

Figure F9:

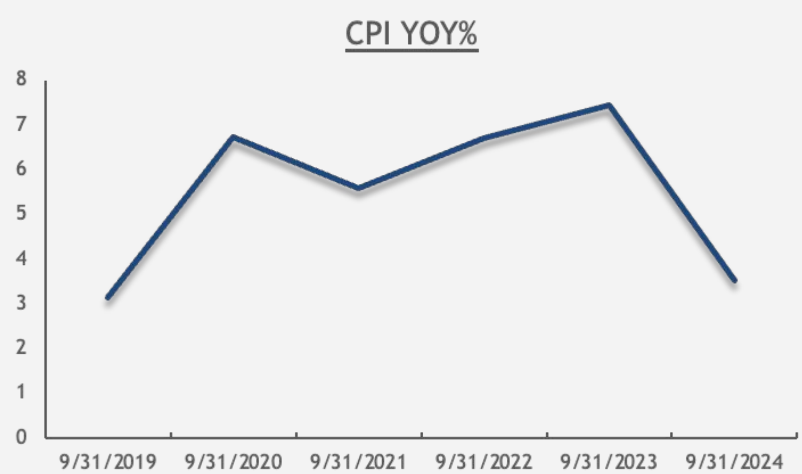


Source: Statista

INFLATION

The Consumer Price Inflation has trended downwards with a targeted projection of 4% for FY 2026 (Figure F10). A primary driver of CPI has been the recent monsoon variability which heavily affected the cost of goods such as food and drinks. Energy prices and supply chain have been under heavy scrutiny due to geopolitical tensions. While this may raise concerns, the rapid expansion of GDP offsets our worries as 4% is India's target inflation rate with a +/-2% range, providing room for GDP growth.

Figure F10:



Source: Bloomberg

GEOPOLITICAL LANDSCAPE

Despite geopolitical tensions surrounding the country and a shifting macroeconomic landscape, India has shown a resilient recovery, distinguished by robust growth. India has been able to capitalize on geopolitical tensions by its strategic location and neutral stance in geopolitics. By maintaining a neutral position, India is able to sustain strong diplomatic relationships with multiple global powers. This systematic opportunity is leveraged by Western countries attempting to diversify away from China. Additionally, its strategic location centers them as a central trading hub for Asia, the European Union, and the Middle East. India is able to leverage this geographic advantage to expand trade relations and play a significant role in the global supply chain. This strategic neutral stance attracts investors as it provides opportunities for growth while straying away from the possibility of geopolitical tensions.

SUMMARY

India's economic evolution and growth prospects are driven by its resilient nature, favorable demographics, strong GDP growth, investments into infrastructure development, and opportunities arising from geopolitical conflicts. Western countries are increasingly looking to India as a viable alternative to China, and India's commitment to economic growth is evident in its investments and policies, making it an attractive opportunity for our firm. Additionally, the Prime Minister, Narendra Modi has placed an emphasis on creating a business friendly environment, with initiatives such as “Make in India”. Doing so has established a robust platform for economic expansion. India’s favorable demographic and growing middle class also influence its long term potential, providing diverse opportunities across many sectors. These main growth factors position India as a growing market for strategic investments, allowing our firm to invest into an ever so transforming and evolving economy.

Brazil Economic Outlook

Figure G1:

	2023A	2024E (Consensus)	2025E (Consensus)	2026E (Consensus)
Real GDP	2.9%	3.0%	2.0%	2.0%
CPI	4.6%	4.3%	3.7%	3.5%
Unemployment	4.6%	4.3%	3.7%	3.6%
10 yr Gov Bond	10.4%	-	–	–

Source: Bloomberg

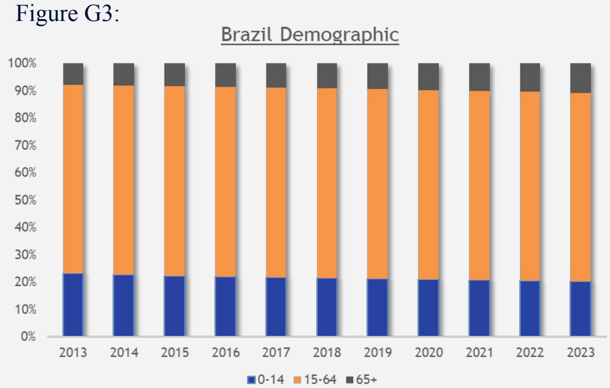
DEMOGRAPHICS

From 2013 to 2023, Brazil's demographics have shifted significantly. The population aged 0-14 years has decreased with a CAGR of -0.005%, indicating a declining birth rate. The working-age population (15-64 years) remains stable, slightly increasing with a CAGR of 0.008%. The most notable change is in the elderly population (65+ years), which has grown with a CAGR of 0.04% (Figure G2-3). This shift creates economic challenges, as fewer young people are entering the workforce to replace retiring workers, which could lead to labor shortages and reduced productivity. An aging population also puts pressure on Brazil's social security system, as a smaller workforce must support an increasing number of retirees, straining public resources. Additionally, changes in age distribution may shift consumer demand toward healthcare, potentially slowing overall economic growth.

Figure G2:

Age	2013-2023 Change	2013-2023 CAGR
0-14	-3.5%	-0.005%
15-64	0.9%	0.008%
65+	2.6%	0.04%

Figure G3:

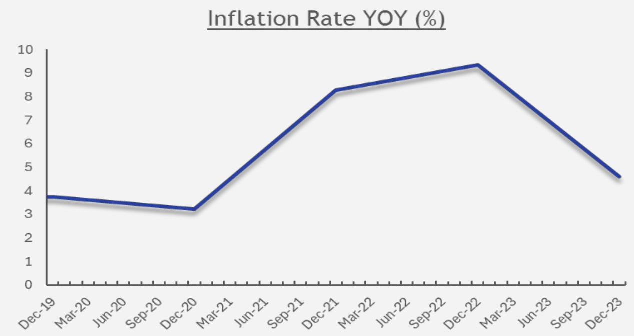


Source: Instituto Brasileiro de Geografia e Estatística (IBGE)

INFLATION

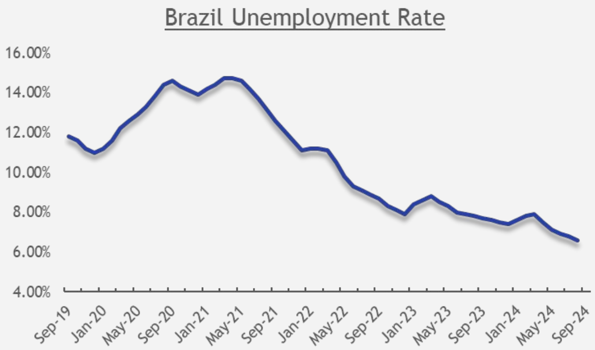
Brazil's inflation rate is projected to decline gradually, stabilizing around 3.5% by 2026. The projected decline is influenced by a mix of tighter monetary policies from Brazil's Central Bank, which increased interest rates to control inflation, as well as anticipated improvements in global supply chains as economies recover from COVID-19. Additionally, lower inflation may be sustained by government fiscal policies. However, as Brazil's population ages, consumer spending will likely decrease over time, which could reduce consumer spending in the long term.

Figure G4:



Source: Bloomberg

Figure G5:



Source: Instituto Brasileiro de Geografia e Estatística (IBGE)

UNEMPLOYMENT

In late 2020 to early 2021, Brazil's unemployment rate peaked over 14%, it has since steadily declined to below 8% by mid 2024 (Figure G5). This drop in unemployment rate is due to improvements in economic policies aimed at incentivizing businesses, infrastructure investments, and the promotion of industrialization. Foreign investments in energy, technology, and retail sectors have contributed to the growth in construction, real estate, and service industries. These factors support the continued stability in employment, providing some support for Brazil's labor market.

SUMMARY

Declining unemployment, Brazil's demographic trends, economic challenges, and consumer spending outlook lead us to conclude, an investment focus on the U.S. will be more strategic for long-term returns. Brazil's aging population and declining birth rate are expected to limit workforce growth, leading to potential labor shortages which may hinder productivity and economic expansion. Additionally, a growing elderly population will increase pressure on the country's social security system, causing financial strain and limiting funds for growth-driving projects.

While inflation is projected to stabilize and unemployment is decreasing, these improvements may be temporarily given Brazil's slower economic growth rate compared to the U.S. The aging population may slow consumer demand and spending, which could slow market expansion. The U.S. by contrast offers a larger and stable economy with a massive labor market, diversified industries, and higher consumer demand, creating more reliable growth. Due to these reasonings, BAM will not invest in Brazil.

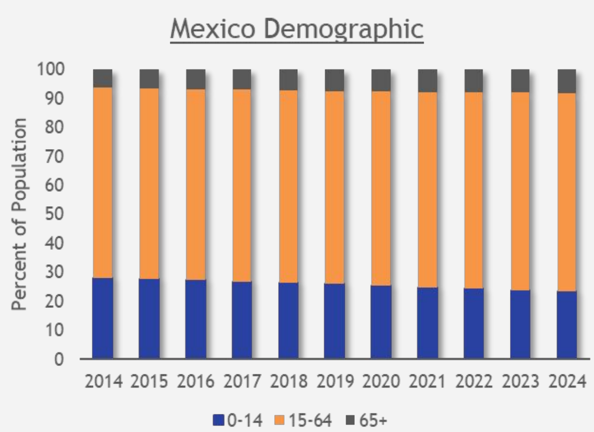
Mexico Economic Outlook

Figure H1:

	2023A	2024E (Consensus)	2025E (Consensus)	2026E (Consensus)
Real GDP	3.20%	1.40%	1.40%	2%
CPI	5.60%	4.70%	3.80%	3.70%
Unemployment	2.80%	2.80%	3.10%	3%
10 yr Gov Bond	8.95%	9.40%	9%	8.70%

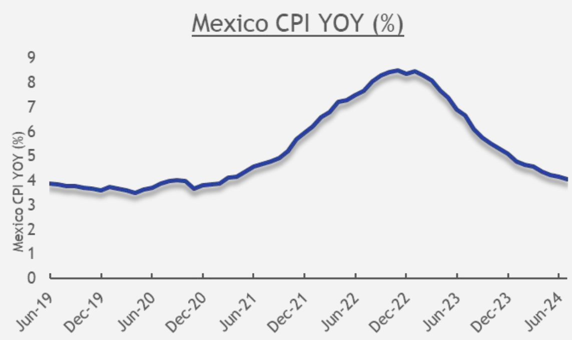
Figure H2:

Age	2014-2024 Change	2014-2024 CAGR
0-14	-4.76%	-1.84%
15-64	2.97%	0.44%
65+	1.81%	2.53%



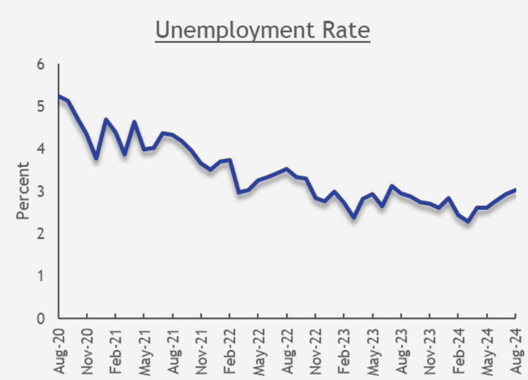
Source: Bloomberg

Figure H3:



Source: INEGI

Figure H4:



Source: Bloomberg

SUMMARY

Mexico is currently contending with a significant demographic shift towards an aging population. This trend is primarily driven by a decline in the birth rate, from 2.32 births per woman in 2011 to 1.82 births per woman in 2021, coupled with rising life expectancy. These changes have resulted in a diminishing youth population and an expanding elderly population. (Figure H2)

Inflation began to escalate at the onset of the Ukraine war and hit a peak of nearly 9%. However, since early 2023, it has been on a downward trajectory. Additionally, Mexico still faces inflationary pressures, as it has not yet achieved its target of 3% set by Banco de Mexico. The third-quarter inflation of 2024 was recorded at just under 5%. (Figure H3)

Mexico's labor market has demonstrated resilience, with unemployment rates declining post-pandemic. Nonetheless, recent minimum wage increases may have a slight negative impact on employment levels (Figure H4). Mexico is planning on raising its minimum wage by 20% in 2024, as well as new Mexican President Claudia Sheinbaum plans to keep a double-digit minimum wage increase in 2025 and beyond.

Given these dynamic, our strategy outlook prioritizes a focus on U.S. domestic equity markets while avoiding investments in Mexico.

Global Economic Summary

Our global economic outlook anticipates growth; however, we expect this growth to decelerate as a result of a growing geopolitical tensions, aging working population, and demographics. Additionally, with the United States having elected an administration that seeks to impose tariffs on virtually all foreign trade, we anticipate an increase in global economic volatility. Persistent inflation and a prolonged period of higher interest rates are expected.

In this context, the United States continues to present itself as the most appealing investment prospect, while India shines as the world's fastest-growing major economy.

As a result in regards to equities, adopting a slightly defensive stance is appropriate, although staying invested in equities is likely to yield better results than holding cash or bonds.

Capital Markets Outlook

BAM's capital market outlook is formulated through a comprehensive analysis of our economic outlook, employment of the Capital Asset Pricing Model (CAPM), and anticipated fixed-income yields. To implement the CAPM, we initially defined the market as the S&P 500 and subsequently applied an equity risk premium (ERP) model devised by Professor Aswath Damodaran of NYU Stern. The essential inputs within this model are as follows:

- Current level of Index (S&P 500, 11/6/24): 5,929
- Expected cash payout (dividends + buybacks) as % of earnings= 74.41%
- Expected earnings growth rate for the next 5 years: Top-down consensus 9.07%
- Current long-term risk-free rate: 10 Year T-bond = 4.24%
- Expected growth rate in the long term after year 5 = 4.24%

Once we derived the ERP for the S&P 500, we then used CAPM to derive the expected return of the Russell 3000. Under these assumptions, our financial model has generated an expected return of 8.04% for U.S. equities. The Capital Asset Pricing Model (CAPM) guides our approach to forecasting future returns for both developed and emerging international equities. In the context of domestic fixed income, we utilize the yield to worst metrics from the Bloomberg Barclays Aggregate Bond Index. Our cash yield projections are derived from the 3-month Treasury Bills (T-Bills) yield.

The table below presents historical and anticipated returns for various asset classes. We place greater confidence in the expected return column as it offers an emphasis on the current economic landscape. This preference stems from the historical data, which pertains to a period when interest rates were declining. Today we find ourselves in a period of increasing rates.

Asset Class	Index	Expected Return	10yr Historical Return	10yr Standard Deviation	Expected Return Model & Assumptions
Domestic Equities	**R3000**	8.04%	12.87%	14.18%	CAPM
Developed Markets	**M1EA**	7.13%	5.41%	13.88%	CAPM
Emerging Markets	**M1EF**	6.57%	4.23%	18.04%	CAPM
U.S. Fixed Income	**AGG**	4.83%	1.64%	5.52%	Yields
Cash	**T-Bill**	4.56%	1.70%	1.88%	3 Month T-Bill

Asset Allocation

In our pursuit to obtain an optimal asset allocation, we engaged in a comprehensive portfolio optimization exercise. This exercise was supported by an advanced Excel model which has been further verified by a Monte Carlo simulation model conducted by our graduate students. Based on this Excel model, our portfolio was constructed by assimilating the following key benchmarks:

- Russell 3000 Total Return Index (U.S.)
- MSCI Developed Markets Total Return Index (DI)
- MSCI Emerging Markets Total Return Index (EM)
- Barclays U.S. Aggregate Bond Total Return Index (AGG)
- Bloomberg U.S. Treasury Bills 1-3 Month Total Return Index

Two evaluative scenarios were explored. The first scenario we obtained insights from our current capital market forecast (Expected Returns). The second was based on the records of historical capital market trajectories. After careful consideration, our conviction gravitates towards the "Expected Returns" scenario deeming it more aligned with the prevailing macroeconomic landscape.

Adhering to our client's distinct investment policy, we instituted the following allocation constraints:

- Fixed Income: Encompassed a restrictive bandwidth of 20-40%.
- Equities: Constrained within the bounds of 60-80%.
- Cash Equivalents: Restricted to a maximum 20%.
- Foreign Equities: Confined to 30%.

Guided by these constraints, the subsequent calculations illustrate our recommended asset stratification, specifically tailored to:

1. Maximize Return Potentials,
2. Minimize Systematic Risk, and
3. Maximize Sharpe Ratio.

PORTFOLIO OPTIMIZER RESULTS

10-yr Historical			
Metrics	**Max Ret.**	**Min. St Dev**	**Max SR**
Return	11.54%	6.63%	8.99%
Standard Deviation	12.92%	9.30%	9.80%
Sharpe Ratio	0.89	0.71	0.92
Allocations % U.S. / EM / Dev. / Fixed Income	80/0/0/20	12/30/18/20	60/0/0/40

BAM Expected Returns				
Metrics	Max Ret.	Min. St Dev	Max SR	Tactical Adjustment Max SR
Return	7.05%	5.89%	6.26%	6.59%
Standard Deviation	12.92%	9.30%	9.80%	11.31%
Sharpe Ratio	0.55	0.63	0.64	0.58
Allocations % U.S. / DI / EM / Fixed Income	80/0/0/20	30/13/17/40	30/20/10/40	65/0/5/30

Utilizing the insight from the BAM Expected Returns scenario, the scenario of Minimum Standard Deviation was ruled out due to its notably lower return compared to the Max Sharpe Ratio scenario, while maintaining comparable risk levels to the latter.

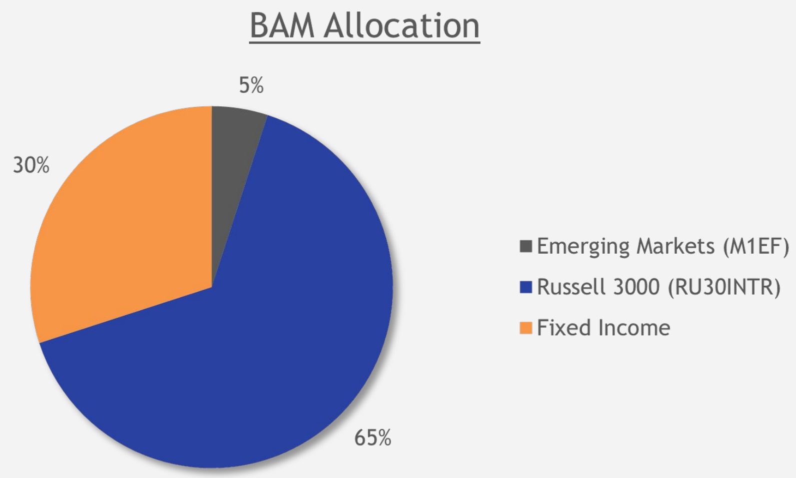
In the contemplation between the Maximized Returns and Max Sharpe scenarios, we did not find Max Return to be attractive due to Sharpe ratio being significantly lower. Moreover, we deemed an 80% allocation to equities as excessively risky and inadequately diversified.

Given the higher fixed income allocation in the Max SR scenario and our economic outlook, we find the Max SR scenario more appealing. However, based on our economic outlook, BAM decided to limit our international equities to only India. Incorporating these thoughts, BAM suggests a reallocation of equities to 65% U.S and move 5% from bonds to Emerging Markets (India) equities. This reallocation towards Emerging Markets is propelled by BAM's positive outlook on India as an investment hub, coupled with a desire for slight international diversification.

Given the current flat yield curve, BAM has decided to combine the fixed income and cash allocation into a single 30% bucket. Within the fixed income and cash allocation of 30%, BAM decided to allocate 40% to the AGG, 20% to CLO's, 20% to Intermediate Treasuries, and 20% to mortgage-backed securities. Our allocation to the AGG is based on the fact that BAM's interest rate outlook is generally consistent with the consensus, with only slightly higher long term rates versus consensus. However, we believe higher government deficits will result in higher-for-longer inflation pushing yields on long-term Treasuries higher. This drives our 20% allocation to Intermediate Treasuries as they can capture appreciation as short term rates fall. Finally, a desire to capture higher yields with minimal credit risk drove the decision to allocate towards CLO's and mortgage-backed securities.

Within international markets, we advocate steering clear of investments in EU, China, South Korea, and Japan attributing to their weak economic forecasts and high geopolitical risk. Conversely, BAM has focused its international investment focus to only India, predicated on our optimism regarding its enduring economic stability and growth trajectory. India's consistent growth observed this year is projected to extend into 2025.

Consequently, BAM's revised target asset allocation stands at 65% in Domestic Equity, 5% in Emerging Markets, and 30% Fixed Income. The ensuing portfolio asset allocations and projected metrics, grounded in our securities recommendations, are delineated as follows:



BAM Portfolio	
Metrics	**Expected Ret. (Max SR)**
Return	7.26%
Standard Deviation	11.31%
Sharpe Ratio	0.64
Allocations % U.S. / DI / EM / Fixed Income	65/0/5/30

CFA Benchmark	
Metrics	**Expected Ret. (Max SR)**
Return	6.87%
Standard Deviation	11.18%
Sharpe Ratio	0.61
Allocations % U.S. / Int. / Fixed Income	50/20/30

PERFORMANCE GOALS

Our mission is to exceed the CFAOC benchmark while being prudent with risk. Based on our economic and capital market outlooks, portfolio optimization, tactical adjustments, and securities selection, we expect our portfolio to return 7.26% with a standard deviation of 11.31%. Thus, allowing BAM to offer better risk-adjusted returns. Details on how the BAM portfolio metrics are calculated are further explained in the Equity Portfolio Characteristics section and Fixed Income section.

Fixed Income: Valuation and Selection

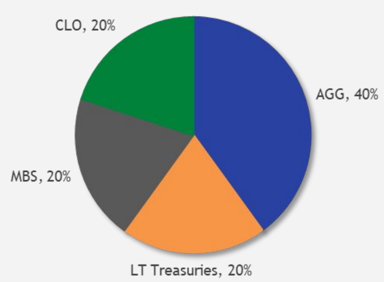
	APPROPRIATE	INAPPROPRIATE
Cash (Money Markets Funds)	X	
U.S. Treasury Notes and Bonds	X	
Investment Grade Corp. Bonds	X	
Securitized (ABS/MBS/CMBS/RMBS)	X	
High Yield Corp. Bonds		X
Developed International Debt		X
Emerging Market Debt		X
Preferred Stock		X

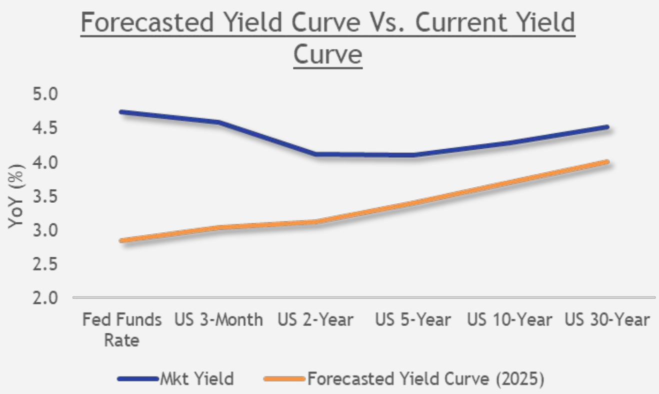
	Min	Average	Max
Yield to Worst	4.21%	4.95%	6.02%
Duration	0.24	4.76	6.3

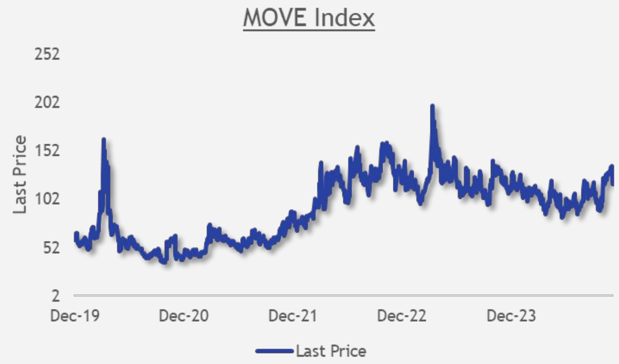
Within our fixed income portfolio, we allocate a portion to mortgage-backed securities (MBS), which offer a more attractive yield compared to Treasuries. This yield premium is largely due to MBS credit risk in lending to consumers and the inherent refinancing risk. In regards to credit risk, the MBS we are recommending are supported by government-sponsored entities like Ginnie Mae, Fannie Mae, and Freddie Mac, which securitize these assets, aligning their risk profile closely with that of Treasuries. With regards to refinancing risk, there is uncertainty concerning the short term future of the U.S. economy and whether we will achieve a 'soft landing'. This uncertainty is represented in the MOVE index, which tracks implied interest rate volatility. This volatility, if realized, increases the likelihood of mortgage rates falling within a range that would trigger refinancing at mass, exposing investors to reinvestment risk.

We forecast nominal GDP to reach 4.2% by the end of 2025, with 10-year Treasury yields approximating nominal GDP. For refinancing to be viable, a 50 basis point gap is typically needed between an existing mortgage rate and the prevailing rate. Given our resilient economic outlook, we anticipate much of this volatility, specifically among the 10-year, will not be realized, reducing refinancing risk and enabling us to capitalize on the current high yields available in MBS.

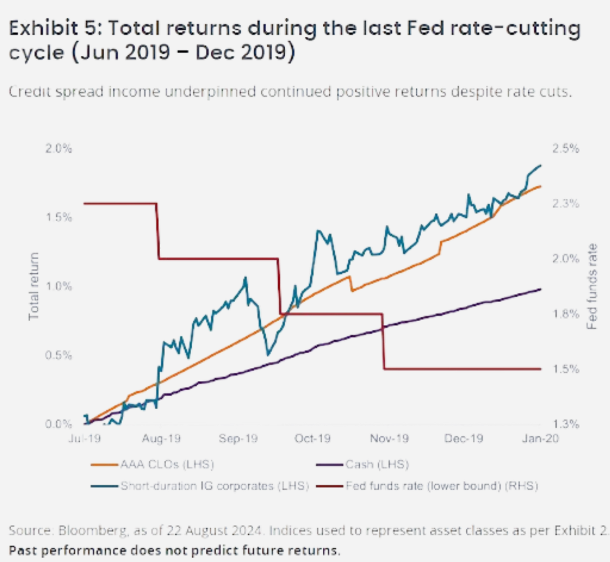
Fixed Income Allocation







We have also allocated funds toward collateralized loan obligations (CLOs), specifically in AAA-rated tranches. The floating rate nature of CLOs expose investors to reinvestment risk, which is compensated for in their highly attractive yields. By examining historical performance during past rate-cutting cycles we observe that CLOs exhibit much less volatility compared to corporate bonds. Additionally, default rates for CLOs have historically remained below 0.5%, as shown in the graph above, underscoring the robust safeguards and risk mitigation features of these securities, especially within the AAA-rated segments.



Given that CLOs have very little duration, their return profile is almost entirely reliant on their current yield, where wider credit spreads helped them perform similarly to short-term corporate bonds while retaining lower volatility. Currently, CLOs offer a yield advantage, with a premium of around 70 basis points over short-term corporate bonds. Due to CLOs having floating interest rates, they provide a natural buffer against long-term interest rate fluctuations.

Further, within our portfolio, we want to have a broad mix of the total bond market as represented by the Bloomberg Aggregate Bond Index. This index is a broad base, market capitalization-weighted bond market index representing investment grade bonds traded in the United States. Finally, as a hedge, we will invest in Intermediate Treasuries.

Correlation During Recessions (NBER) Between the S&P 500 & Fixed Income Indices				
	The Agg	Intermed. Treasury	Agency MBS	High Yield
Dot-Com Bubble	-0.113	-0.029	-0.117	0.076
GFC	-0.269	-0.039	-0.182	0.285
COVID-19	-0.168	-0.462	-0.042	0.570

Recession Data (NBER)	
Dot-Com Bubble	Nov 2001 (4Q01)
GFC	Jun 2009 (2Q09)
COVID-19	Apr 2020 (2Q20)

The table above shows the correlation between the S&P 500 and various fixed-income indices during three key recessionary periods. A negative correlation indicates that these fixed-income assets generally moved in the opposite direction of equities during these downturns, acting as a hedge. The AGG and Intermediate Treasuries consistently exhibit negative correlations, especially during the GFC and COVID-19, signaling their safe-haven status in times of crisis. Agency MBS shows slight negative correlations, offering moderate diversification benefits. High Yield bonds, on the other hand, display positive correlations with equities, particularly during COVID-19, behaving more like risk assets in volatile markets.

We avoided High Yield and International bonds due to low credit spreads and currency risk. We also avoided preferred stocks due to extremely poor historical risk-adjusted returns.

TARGET FIXED ASSET SECTOR ALLOCATION

As previously stated, we limited our fixed income to AAA CLOs, Agency MBS, Intermediate Treasuries, and a Bloomberg Aggregate Bond fund. We do not allocate by industry or sector.

Equity Valuation and Selection

PASSIVE VS. ACTIVE MANAGEMENT

BAM employs an active management approach driven by rigorous economic and fundamental research. We invest in sector ETFs when our equity allocations to these sector is below approximately 10%. We are invested in ETFs in seven of the GICS sectors: Industrials, Consumer Staples, Consumer Discretionary, Energy, Utilities, Real Estate, and Materials, accounting for 38.5% of our domestic equity allocations. For Fixed Income and International investments, we utilize ETFs and mutual funds. Our strategy optimally balances resources while diversifying to minimize company-specific risk.

TOP-DOWN VS. BOTTOM-UP

While BAM believes that markets are efficient in the long term, we recognize short-term inefficiencies are inevitable and can provide lucrative opportunities. By using a Top-Down approach, we position our portfolio to capitalize on those opportunities while balancing risk for our clients. Our extensive research and active analytical processes are key to identifying these inefficiencies. Based on our firm's extensive academic research, we adopted the “Growth at a Reasonable Price (GARP)” strategy, which identifies growth at an undervalued price (See Fundamental Factors for a detailed breakdown of the GARP strategy.)

FUNDAMENTAL VS. QUANTITATIVE VS. TECHNICAL

We place fundamental analysis at the forefront of our equities strategy, basing our decisions on in-depth, top-down company research. The use of several quantitative strategies aids in the valuation process and provides further guidance in our investments. We believe that a mix of all three methods with a primary emphasis on fundamental analysis, is the optimal process in seeking investment opportunities.

To gather a pool of prospective investments, BAM targets equities that fulfill key criterias in growth, valuation, and financial strength. We employ a fundamental security screening tool using the EQS function on the Bloomberg terminal to scan for equities exhibiting the following metrics:

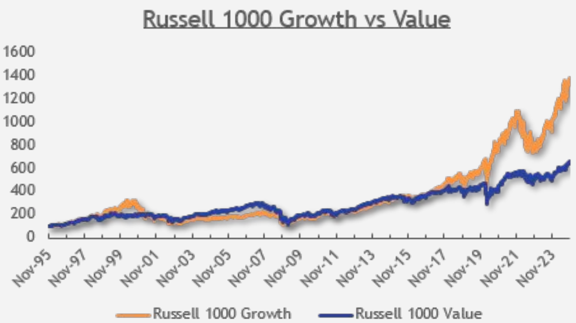
1. Country of Domicile: United States
2. Global Industry Classification Standard (GICS) Sector: INPUT
3. Market Cap ≧ $20 Billion
4. Revenue Growth FY20-24 (higher is better)
5. Revenue Growth FY24 vs FY26 (higher is better)
6. FY20-24 Diluted EPS growth (higher is better)
7. EPS Growth FY24 v FY26 (higher is better)
8. PEG Ratio (forward PE / forward growth rate) (lower is better)
9. P/FCF (lower is better)
10. GP/TA greater than or equal to x (adjusted for each sector) (read paper)
11. ROIC (higher is better)
12. EBIT/Interest (higher is better)

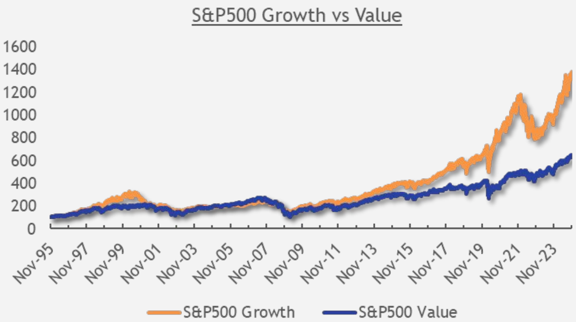
Utilizing the equity screener function further cuts down the time searching for investment opportunities, improving our internal efficiency.

VALUE VS. GROWTH

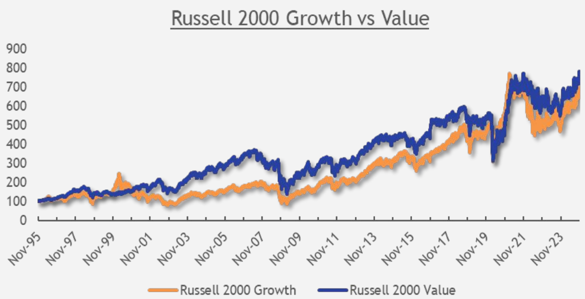
Our firm follows a Growth at a Reasonable Price (GARP) strategy, which emphasizes growth while considering crucial fundamental factors like the PEG ratio, price-to-free cash flow, and return on investment capital. We made this strategic decision after analyzing the long-term total returns of large-cap and small-cap equities using the Russell 1000, Russell 2000, and S&P 500 indices, which exhibited the outperformance of large-cap growth stocks.

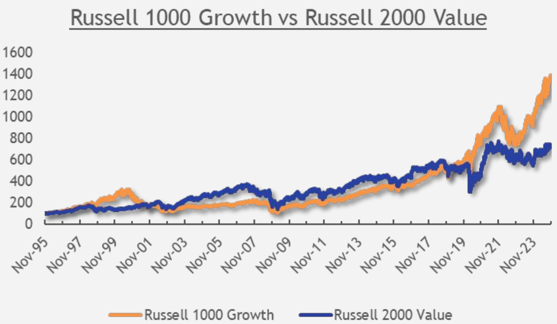
While simultaneously examining these indices, we found little evidence that value has consistently outperformed growth, except for the upside in value premium during the post-Dotcom era. BAM believes the tax cuts in 2017 contributed to the benefit of highly profitable large-cap companies and with the new incoming administration, taxes are likely to be cut again. However, a much bigger factor is the structural shift in the economy, emphasizing a disruptive and technologically driven economy. This change is evident in the recent drivers of growth including, AI, electric vehicles, renewable energies, work-from-home, and data solutions. We believe these trends are long-lasting and will continue to favor growth.





Our above graph compares the performance of large-cap growth versus large-cap value. We see that growth outperformed during the Dotcom bubble, while value did better up to the financial crises. Post 2009, the two strategies performed similarly until the pandemic, post-pandemic growth has reasserted itself in a very strong fashion. Above is the graph of the S&P 500 and shows very similar results to the Russell 1000.





We also analyzed performance of the small cap sector using the Russell 2000 index. As shown above,, small cap value tends to outperform growth other than briefly during the Dotcom bubble. Broadly speaking, growth tends to do better in large caps, while value does better in small caps. Next, we compared the performance of these two outperforming strategies against each other. Above demonstrates the spread between the two best performing indices which was the Russell 1000 growth and the Russell 2000 value. From this analysis, we can see that large cap growth more recently tends to outperform small cap value for the past 5 years which we believe is to remain true for the near future. Although growth stocks have outperformed, we do not wish to overpay for this growth. Based on this analysis, BAM is proposing a GARP strategy in large cap stocks.

LARGE CAP VS. MID-CAP VS. SMALL-CAP

We currently limit our domestic equity strategy to large-cap stocks with a market cap above $20 billion. Our benchmark (R3K) is heavily weighted by market cap and influenced by mega-cap corporations; however, BAM is not comfortable with taking as high of a concentration as the benchmark (below). Our $20 billion market cap minimum allows us to to benefit from the maturity and stability of large/mega cap companies while having a higher potential for growth from comparatively smaller cap companies.

MAG 7 Weighting	
R3K	25.75%
BAM (Domestic Equity)	17.94%

INTERNATIONAL VS. U.S.

We compared the 10-year Average Historical returns and volatility (standard deviation) of domestic versus international equities:

Indices	Avg. Total Return	Avg. Standard Deviation
R3K	12.82%	14.64%
MSCI Developed	8.13%	13.75%
MSCI Emerging	1.92%	16.19%

Clearly, international stocks have underperformed domestic equities. This can be attributed to some crucial factors. For example, International markets generally have higher volatility, slower growth, and higher geopolitical risk. Based on this myriad of factors BAM has decided to focus mainly on U.S. equities, except India. India is projected to become the fastest-growing major international economy in the following years. Due to this, our firm decided to allocate 5% of our portfolio in India and 60% in United States equities. While our international allocation is small relative to the benchmark, the correlation between domestic and international markets has risen dramatically over the recent decades. The correlation illustrates how the diversification benefit of investing internationally isn't as strong as it was previously (R3K-MSCI Developed correlation: 90%, R3k-MSCI Emerging Correlation: 74%). The recent development of the correlation between international and domestic stock supports our reasoning as to why we chose to allocate a smaller portion to international markets. Although our portfolio will be heavily invested in the United States, many of our companies do generate revenue overseas, providing our portfolio exposure to international markets.

MARKET TIMING vs. SECTOR ROTATION vs. LONG-TERM HOLD & BUY

BAM utilizes a sector allocation approach that incorporates a comprehensive economic overview. We believe that we are at the beginning of the Late Cycle phase, which means a slowdown in economic growth. We assessed the future performance of all GICS sectors with the economic cycle in mind, as discussed by a Fidelity research paper on business cycles and their historical relationship to sector investing.

While we realize that the portfolio management period is one year, we employ a long-term holding period approach, primarily investing in equities that we believe will have steady growth for years to come. In line of our long-term approach, we do not engage in a market timing approach due to our emphasis on risk management through more conservative decision making.

The table below shows sector weightings of the Russell 3000, BAM's portfolio sector weightings, and the reasoning behind these choices relative to the Russell 3000. We did not eliminate any sectors from our portfolio completely due to our emphasis on diversification and long-term holds.

Sectors	R3K Weight	BAM Weight	Reasoning
Information Technology	28.40%	25.00%	Slow Late Cycle growth
Healthcare	12.17%	15%	Defensive Late Cycle growth
Financials	13.84%	12%	Slow Late Cycle growth
Communication Services	8.26%	9.5%	Tech-like growth at lower price
Consumer Staples	5.68%	8.5%	Defensive; late Cycle
Industrials	9.70%	8.5%	Slow growth Late Cycle
Consumer Discretionary	10.27%	8%	Poor growth Late Cycle
Utilities	2.40%	4%	Defensive; Late Cycle
Energy	3.55%	4%	Stable growth Late Cycle
Real Estate	2.88%	3%	Stable growth Late Cycle
Materials	2.54%	2.5%	Stable growth Late Cycle
Total	100%	100%	

Security Selection Methodology

Our security selection process encompasses our economic analysis, sector allocations, equity strategy (GARP), fundamental factor-based screening (see below), specific security analysis, including our BAM 13 framework (see research section), and DCF and DGM valuation. Each security analysis is presented to the firm and included in the portfolio based on a majority vote.

SECURITY VALUATION METHODOLOGY

The valuation method begins with establishing screening criteria that our team uses to determine securities that fit our investment philosophy and equity strategy. After the screening process, we compare each security using the BAM 13 framework. Next, we review company SEC filings and equity research reports such as Argus, Value Line, J.P. Morgan, and Barclays. Additionally, we reviewed quarterly earnings reports and management presentations. Finally, we review each company's industry outlook using these similar sources and IBIS World database. Reviewing these reports helps BAM understand each company's competitive position in its respective market. These factors provide the prerequisites for valuation methodologies of Discounted Cash Flow (DCF) and Dividend Growth (DGM) valuation models.

MARKET CAPITALIZATION & LIQUIDITY

We adhere to the client's criteria and our Growth vs. Value research, by screening for companies with market caps over $20B. This market cap range allows us to benefit from the stability and maturity of larger companies while leaving room for growth. Additionally, we consider an average daily trading volume of at least 50,000 shares as a standard liquidity measure.

FUNDAMENTAL FACTORS

In executing our GARP strategy, we use the following financial metrics in our screening process:

- Country: US
- Sector: INPUT
- Market Cap: $20B
- Revenue Growth 2020-2024 (higher is better)
- Revenue Growth 2024 v 2026 (higher is better)
- 2020-2024 Diluted EPS growth (higher is better)
- EPS Growth 2024 v 2026 (higher is better)
- PEG Ratio (forward PE / forward growth rate) (lower is better)
- P/FCF (lower is better)
- GP/TA Greater than or equal to x (adjust for each sector) (trial & error)
- ROIC (higher is better)
- EBIT/Interest (higher is better)

The components mentioned were designed specifically for BAM's GARP (Growth at a Reasonable Price) strategy, which emphasizes leveraging growth securities at a reasonable price. We considered three key metrics: growth, valuation, and management.

BAM's screening process involved assessing 4-year historical revenue growth and future revenue projections to identify high-growth prospects. To align with our GARP strategy, we examined two Revenue and EPS metrics: 4-year historical growth and projected growth through 2026.

In addition to the growth metrics, we considered valuation metrics, such as the price-to-earnings-growth(PEG) ratio, Price-to-Free Cash Flow and Gross Profits over Total Assets.

Finally, we reviewed management metrics, focusing on Return on Invested Capital and the EBIT/Interest ratio to evaluate how well companies are managed.

DEVIATION DISCIPLINE

BAM will maintain our growth at a reasonable price strategy unless there's a significant economic change within the assumed one-year management period. In such a case, we'll adjust our asset and sector allocations accordingly.

If the portfolio underperforms the benchmark and has a Tracking Error of 2.5 or higher at mid-year, we will shift our domestic equities to higher weighting to which equity class is outperforming.

Equity Portions		
BAM Portfolio	**VS**	**CFAOC Benchmark**
1.03	Beta	.95
21 Billion	Average Market Cap	20 Billion
24.8	FWD P/E	21.6
10.1	P/B	4.05
18.9%	EPS Growth 1 YR (25 vs 24)	17.3%
1.10%	Dividend Yield	1.40%

	Less Than	Approximately Equal to	Greater Than	Varies Widely
Market Capitalization	X			
Portfolio Beta		X		
P/E Ratio			X	
P/B Ratio			X	
Dividend Yield	X			
Earnings Growth Rate			X	

Equity Diversification

Our portfolio diversification strategy allocates 65% to U.S. Equities, 5% to Emerging Markets, and 30% to fixed income. This allocation is the result of extensive research, including a global economic outlook, research papers, firm-wide discussions, and portfolio optimization. Our portfolio was created to maximize the Sharpe ratio using the portfolio optimizer to achieve an optimal risk-return balance, with some tactical adjustments given our economic outlook. The final allocation of 65% U.S. Equities, 5% Emerging Markets, and 30% Fixed Income yields an expected return of 7.26% with a sharpe ratio of .64

Our domestic equity portfolio is diversified across all 11 sectors, when our sector allocation is less than approximately 10% we diversify by investing in a broad sector ETF. When the allocation is greater we invest through individual stocks with each company weighted based on their projected performance.

To mitigate the risk associated with domestic stock investments, we slightly diversified into international markets. We allocated 5% of our portfolio to India due to the strong growth potential, coupled with being a potential alternative to China and its current geopolitical tensions.

AVERAGE PERCENTAGE INVESTED

The allocations to each security (including average weights as a percent of the total portfolio) are listed in the table below. As clearly outlined in the RFP guidelines, no individual security occupies more than 5% of the equity portfolio. The weightings of each security within the Financials and Communication Services sectors remained equal. We varied our weighting for each company within the Information Technology and Healthcare sectors based on our outlook for each security.

Sectors	Total Portfolio Weight	Number of Securities	Highest Weighted Individual Security (% of Total Portfolio)
Information Technology	16.25%	6	3.2%
Healthcare	9.75%	4	2.9%
Financials	7.80%	3	2.6%
Communications	6.18%	3	2.1%
Industrials	5.53%	ETF	–
Consumer Discretionary	5.20%	ETF	–
Energy	2.60%	ETF	–
Consumer Staples	5.53%	ETF	–
Materials	1.63%	ETF	–
Real Estate	1.95%	ETF	–
Utilities	2.60%	ETF	–
Total	65%	23	–

Mutual Fund & ETF Selection

DOMESTIC EQUITY

We decided to invest in a sector ETF if its overall allocation to that sector was less than approximately 10%. We made this decision as a result of attempting to minimize idiosyncratic risk and to optimize BAM's limited resources. BAM's final domestic equities ETF allocation is 38.5% of U.S. equities, distributed across Consumer Discretionary, Consumer Staples, Energy, Industrial, Materials, Real Estate, and Utilities.

INTERNATIONAL EQUITY

For our emerging market segment, BAM selected India. When investing our equity allocation, we aimed for a passively managed fund. Our evaluation considered fund expense ratios, AUM, tracking error, dividend yield, and short and long-term performance, leading us to choose the Franklin FTSE India (FLIN). We chose a passively managed fund because there were higher returns, lower expense ratios, and higher targeting towards sectors which according to our BAM consensus were more likely to outperform. Furthermore, the fund exhibits lower tracking errors compared to similar funds highlighting its resilience in an emerging market that is characterized by volatility and uncertainty.

FIXED INCOME

Based on our economic forecast, BAM had three specific goals with Fixed income:

1. To provide a hedge to our equity portfolio
2. Provide higher consistent and reliable income streams
3. Reduce overall risk and volatility

For the hedge objective, we used high credit quality securities such as intermediate Treasuries, Agency MBS, and an Aggregate fund while avoiding alternatives such as long-term corporate which did not provide adequate risk reward and had lower credit ratings. The higher yields on these high quality securities will provide consistent income and act as a buffer against our equity holdings.

For yield, we allocated a portion of our assets into MBS and CLOs which provide higher yields and can be used to take advantage of rates remaining higher for longer.

Finally, to manage risk relative to the benchmark, we invested 40% of our fixed income in an actively managed fund tracking the Bloomberg Aggregate Bond Index which aligns with our economic outlook relative to consensus.

We analyzed fixed-income funds based on the following metrics: credit risk, yield-to-maturity, yield-to-worst, duration, and expense ratio. After carefully considering these metrics as well as our investment objectives, we chose the following four funds to add to our fixed income section:

- SPDR® Portfolio Intermediate Term Treasury ETF (SPTI)
- iShares MBS ETF (MBB)
- Janus Henderson AAA CLO (JAAA)
- And Dodge & Cox Income Fund (DODIX)

Emerging Market Portfolio	BAM	Number of Funds	Ticker
India	100%	1	FLIN
Total	100.00%	1	

NUMBER OF STOCKS & FUNDS IN THE PORTFOLIO

Our domestic equity portfolio comprises 16 stocks and 7 ETFs across different sectors. Our international equity portfolio consists of one ETF for our chosen emerging market that we deem the most desirable for investment.

	Number of Funds	Number of Equities
U.S.	7	16
India	1	0

Equity Sell Discipline & Risk Management

At BAM we manage our equity risk through four different perspectives:

1. Analysis of Portfolio Excess Return Attribution
2. Real-time tracking of our portfolio performance versus CFAOC Blended Benchmark
3. Regular (Weekly) Review of Macro and Idiosyncratic risks
4. Monitoring our Equity Tracking Error

In compliance with the client's guidelines, a stock will be sold if it reaches a 30% stop-loss for all individual equities or if it increases to 10% of the equity portion of the portfolio. If the latter condition is met, BAM will sell the security until it is only 5% of the equity portion.

If our firms see negative changes in the fundamentals of a company or industry, we will conduct a thorough top-down security review and analyze the market's driver, sector performance, and individual company headwinds. If our analysis indicates a negative outlook, the stock will be sold, and another will be reviewed and selected to take its place.

When a stock reaches its intrinsic value, which was calculated by our DCF and DGM models, we will conduct a security review and update our analysis to determine if we should continue to hold said security. If we believe the equity has reached its valuation ceiling, it will be replaced by another security from the same sector. If overall market conditions change, we will revisit our strategic asset allocation and sector decisions.

To ensure our portfolio does not veer too far from the benchmark, BAM uses tracking errors to measure our portfolio's performance. If the portfolio tracking error exceeds 2.5 by mid-year and portfolio returns are below the benchmark, BAM will shift its investment strategy to overweight which equity class is outperforming. In the case of our portfolio exceeding the benchmark by more than 2.5%, then we will continue with our strategy. It is expected that the BAM team will stay within the discipline described above.

SELL DISCIPLINE - MUTUAL FUNDS & ETFS

Our strategy involves closely monitoring the performance of ETFs and mutual funds in comparison to their designated benchmarks. If any of these investments fall short of their benchmarks by 50 basis points or more, we will initiate a sell. This approach enables us to safeguard against significant losses on underperforming assets while preserving the flexibility needed for our long-term investment horizon. When extensive research indicates a reasonable expectation that the ETF in question will not return to our accepted performance range within a month, our team is open to deviating from our standard discipline.

Portfolio Construction

The portfolio construction process commenced with a reevaluation of our investment philosophy. Subsequently, we reviewed the CFAOC request for proposal to assess the client's objectives, time horizon, and risk tolerance. Adopting a top-down approach, we then conducted a comprehensive macroeconomic analysis to guide our global asset allocation strategy, focusing on key regions: the United States, the E.U., China, India, Brazil, Mexico, South Korea, and Japan. This analysis emphasized crucial economic indicators, including GDP, inflation, unemployment rates, and 10-year yields. Following this economic assessment, we turned our attention to evaluating asset performance, considering historical risk and return metrics for the following:

- Domestic Equities
- Fixed Income
- Cash (T-Bills)
- Emerging International Markets
- Developed International Markets

When analyzing these asset classes, we utilized a discount cash flow model developed by Dr. Damodaran to calculate the equity risk premium for domestic equities. Additionally, we constructed an Excel portfolio optimizer to observe the most efficient mix of the five assets to find the maximum returns, minimum risk, and maximum Sharpe ratio. Considering the optimizer only established the best mathematical allocation using projected data, we tactically adjusted the designation of our assets based on our economic outlook. Our firm placed less emphasis on emerging and developed markets and more on domestic equities to better align our investment philosophy as well as the client's risk profile.

Our target asset allocation is 65 percent domestic equity, 5 percent emerging markets (India), and 30 percent fixed income. The asset classes are discussed below.

DOMESTIC EQUITIES

The domestic equity portion of our portfolio is strategically allocated among all eleven GICS sectors as a risk management tool (Diversification). We first reviewed the allocation of each sector based on the allocation of our Russell 3000 benchmark. Then, we tactically adjusted our allocation after considering the economic cycle we are in (late cycle) as well as our underlying GARP strategy. To maximize the most efficient use of BAM’s limited resources, the sectors that made up less than about 10% of the total allocation were executed as ETFs. These sectors comprised 38.5% of our domestic equity and comprised the following: Real Estate, Energy, Utilities, Materials, Consumer Discretionary, Consumer Staples and Industrials. The rest of domestic equity was divided into individual securities and consisted of the following sectors: Healthcare, Technology, Communications and Financials.

When selecting the individual securities, we used a screener that applies our GARP equity strategy to filter for a pool of potential stocks. Additionally, we applied our BAM 13 framework to check the securities from the screener for those that would be most healthy and have growth potential. After having our selected pool of securities, we each administered a fundamental analysis and applied valuation models using DGM or DCF models to help assist our final recommendation. For our individual securities, we implemented different weightings within the information technology and healthcare sector, while assigning equal weighting to the communication and financial sector to ensure diversification across industries. Our final domestic equity portfolio consists of seven sector ETFs and 16 individual stocks covering the remaining four sectors.

INTERNATIONAL MARKETS

After making tactical adjustments to our portfolio optimizer, we allocated 5% of our assets to international equities, specifically in emerging markets. Based on our economic analysis, India was the only foreign market we found attractive. BAM has chosen Franklin FTSE India ETF (FLIN), which best aligns with the team's strategy of large-cap growth. To minimize risk while capturing the overall market performance, the team decided to invest in a passive ETF as it is low-cost, diversification, and relative outperformance. Altogether, India has exhibited better economic growth due to a more attractive labor market as a source of offshoring in comparison to alternatives such as China which is experiencing political and geographical turmoil. India's focus on improving its infrastructure also offers a promising outlook when considering its long-term growth potential.

FIXED INCOME

For the fixed-income portion, we looked at the following sub-asset classes:

- Treasury Bonds (Short/Intermediate/Long)
- U.S. Aggregate Bond Indices (LBUSTRUU)
- Corporate Bonds (Short/Intermediate/Long)
- Municipal Bonds
- High-Yield Bonds
- Non-Agency and Agency MBS
- ABS
- Preferred Stock

To optimize our allocation, we began by outlining specific goals for the fixed-income portfolio: reducing overall risk and volatility, providing a hedge to our broader equity portfolio, and generating consistent and reliable income. To achieve these goals, we selected a diversified approach, incorporating various fixed-income asset classes that align with our objectives.

We allocated a portion of the portfolio to Intermediate Treasuries and an aggregate bond fund due to their well-established reputation as a "flight to safety" and their strong inverse correlation with equities, providing an effective hedge against equity market downturns. Additionally, we directed a portion toward AAA-rated Collateralized Loan Obligations (CLOs), as they align with our objective of generating stable income streams due to their high credit quality and relatively attractive yields. This investment enhances income while adhering to our risk mitigation strategy, as these AAA-rated CLO tranches exhibit lower default risk.

To further support income generation and enhance portfolio stability, we allocated a portion of the portfolio to Mortgage-Backed Securities (MBS). These securities offer competitive yields, which support our income goals, and their distinct characteristics can serve as a hedge against equities, particularly during economic downturns when MBS performance tends to improve. This allocation helps in reducing overall portfolio volatility and bolstering income stability.

Finally, we invested in an aggregate bond fund to add further diversification. This fund provides broad exposure to various bond sectors, which reduces concentration risk and supports a balanced risk-return profile across the fixed-income portfolio. By diversifying across these asset classes, we can better meet our goals of income generation, volatility reduction, and effective hedging, thus enhancing the resilience and reliability of our fixed-income investments.

These allocations also enable us to exceed our benchmark, achieving a lower duration of 4.76 and a yield-to-worst of 4.95%%, compared to the benchmark duration of 6.20 and yield-to-worst of 4.83%.

Pricing & Stop-loss Monitoring

Our firm will continuously track the CFAOC portfolio positions in real-time through a shared spreadsheet on Google Drive and utilizing the Bloomberg PORT function, with frequent security pricing monitoring. Performance and results will undergo analysis during regular BAM meetings. These meetings will occur weekly during the academic calendar and bi-weekly during non-academic sessions, combining in-person and virtual sessions throughout the year. In addition, we will maintain a close watch on weekly stop-loss levels, promptly identifying securities nearing the 30% stop-loss limit during these meetings, initiating the process for suitable replacements. Our monitoring will also extend to the top 5 under and over-performing securities to determine when a security review is warranted, along with reviewing securities within +/- 5% of intrinsic value.

COMPLIANCE

We vote on all equity selections, and all decisions are based on a majority vote. Adherence to CFAOC and BAM policies and guidelines is monitored by the Chief Compliance Officer. Furthermore, all decisions must be approved by the Managing Director, and all trades are executed by the Trader. The faculty advisor is copied on all trade proposals and has veto power on decisions.

REBALANCING

The portfolio will be rebalanced as necessary based on our analysis of economic conditions, sector weights deviations, and individual security weights deviation. Otherwise, BAM will rebalance annually to maximize time and cost efficiency, and minimize execution risk.

RISK MANAGEMENT

We manage risk through five different perspectives:

1. Weekly review of Macro and Idiosyncratic risk
2. Real-time tracking of BAM Portfolio Performance versus CFAOC Blended Benchmark
3. Analyzing Portfolio Excess Return Attribution
4. Monitoring the Equity Portfolio's Tracking Error.
5. Diversification across asset classes, geography, and within sectors.

A significant deterioration in any of these factors results in a deep review of potential portfolio actions. With respect to idiosyncratic risk, BAM manages risk in three ways. First, we do a fundamental analysis of the company's operations and risks. Second, BAM diversifies across all eleven sectors. Finally, we monitor each security's individual performance on a weekly basis, including any news releases, management commentary, earnings releases, analyst reports, and other market changes. We are also implementing the use of Tracking Error as a risk control tool in our equities portfolio. Different teams are assigned countries to research, then present to the class with their outlook and conclusion. Within Fixed Income, we monitor risk via regular analysis of the U.S. economic outlook and its impact on rates. Should the outlook strengthen to the point of increasing expected rates, we would manage risk by lowering the duration of our bond holdings. Conversely, if economic conditions worsen to a point of anticipating lower rates, BAM will increase duration by shifting from MBS to long duration bonds. We strongly believe this approach allows us to keep risks within reasonable levels.

CASH RESERVES AS RISK CONTROL

We do not intend to use cash reserves as a method of risk control. The cash will instead be fully invested within the portfolio throughout the year except during short periods between rebalancing. With the safe yield offered by the portfolio's Treasury securities, we find it unnecessary to hold cash.

Information Sources & Research

BAM's primary source of information and data is the Bloomberg Terminal. Additionally, we use supplemental sources such as the IMF, World Bank, U.S. Bureau of Labor and Census Bureau, Financial Times, Wall Street Journal, the Value Line Investment Survey, WRDS analytics module, CRSP, Compustat Databases, IBIS databases, National Institute of Statistics and Geography, and a vast collection of academic and industry papers through our library.

Our firm utilized prominent academic and industry research papers, financial journals, and publications; as well as historical and real-time financial data to inform our macroeconomic outlook, investment strategy, and individual security analysis. Our most recent addition to this research "library" is the paper:

"Cost of Capital in a Year of Elections" by Carla S. Nunes, James P. Harrington. September 25, 2024.

This paper provides various methodologies for an empirical cost of equity calculation. The paper also highlights the impact of election-related factors on the cost of equity, such as market volatility, cost of debt, and equity valuations. For BAM it adds support that the capital asset pricing model is not to be used blindly.

Furthermore, BAM continues to use the following papers that have been mentioned in prior proposals to you:

"How Does Quality Work?" by Obenshain of Verdad Capital. Oct. 4, 2021.

"Is (systematic) value investing dead?" by Ronen Israel, Kristoffer Laursen, and Scott Richardson. Mar. 14, 2020.

"RIM-based Value Premium and Factor Pricing Using Value-Price Divergence" by Lin William Cong, Nathan Darden George, and Guojun Wang. Feb. 18, 2023.

"The Business Cycle Approach to Equity Sector Investing" Fidelity Investments research. Sept. 30, 2022.

"The Cross-Section of Expected Stock Returns" by Fama/French. Jun., 1992.

"The Other Side of Value: The Gross Profitability Premium" by Novy-Marx. Jun., 2012.

"Value versus Glamor Stocks: The Return of Irrational Exuberance?" by Benoit Bellone and Raul Leote de Carvalho. Aug. 27, 2021.

UNIQUE APPROACHES TO INFORMATION

To further enhance our qualitative and fundamental equity analysis, our team has adopted the BAM 13 analytical framework. This framework evaluates historical and prospective growth, operational efficiency, and corporate governance. Its integration into our analysis enables the selection of companies that exhibit growth, efficient management, shareholder-focused operations, and superior performance relative to competitors.

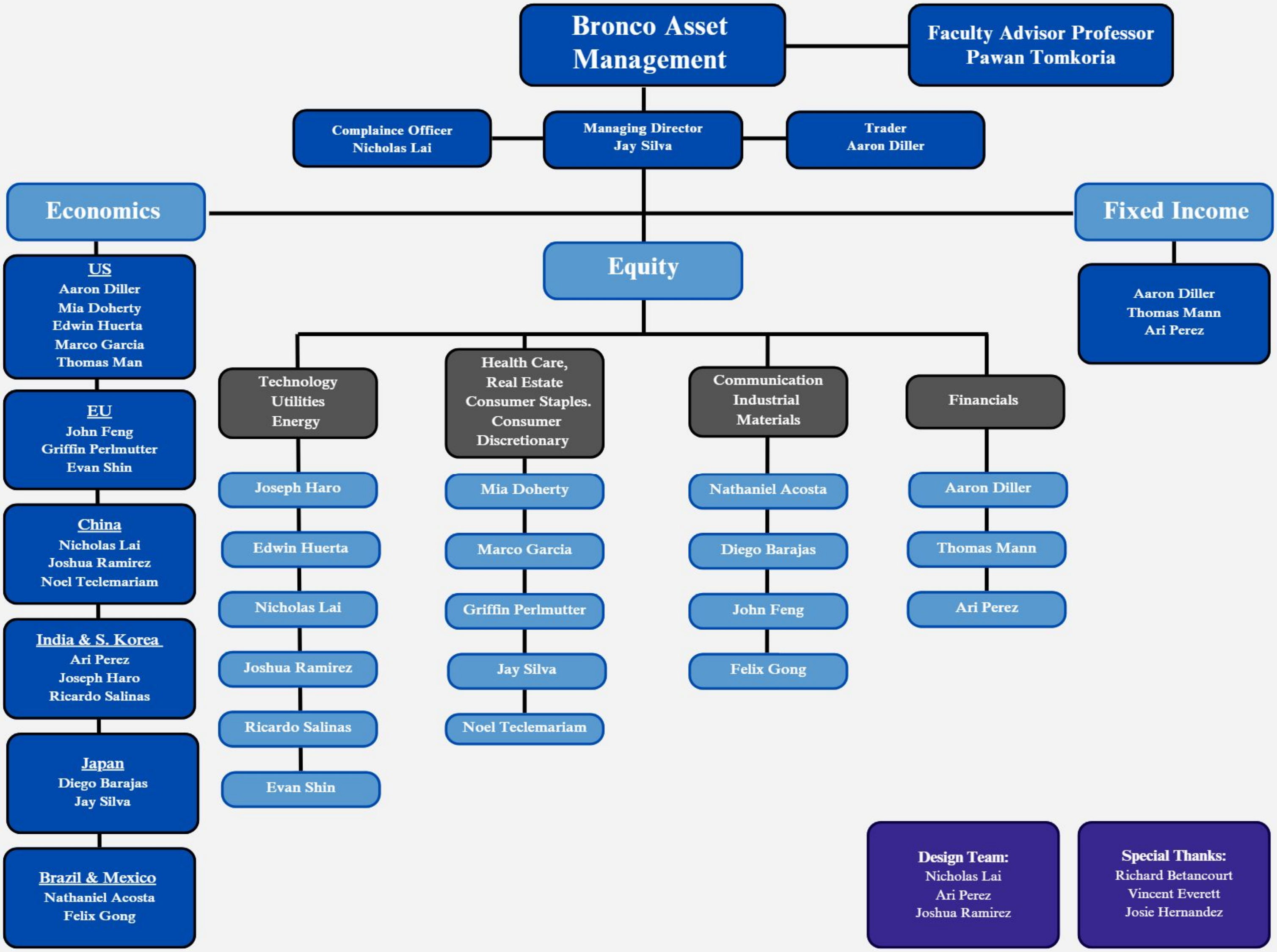
We employ the 13 criteria listed below.

BAM 13

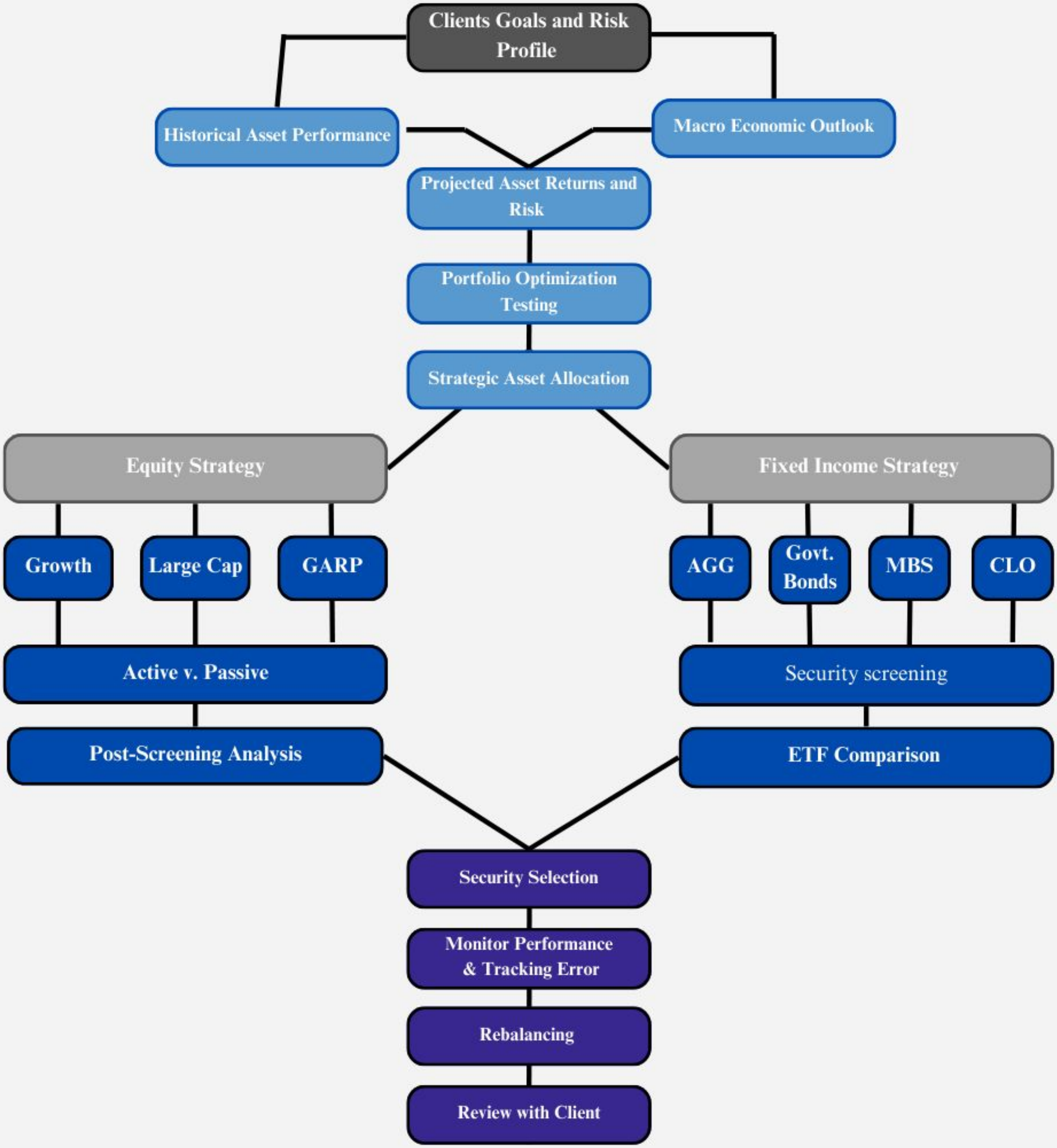
1. Future revenue growth 2024-2026 CAGR (Higher than sector growth between 2024 and 2026, %)
2. Future EPS growth 2024-2026 CAGR (higher than sector growth between 2024 and 2026, %)
3. Has EPS growth exceeded Revenue growth 2024-2026? (CAGR)
4. Industry Growth exceeds GDP growth 2026 vs 2024
5. R&D as a percent of sales 2022 vs 2024, flat or rising
6. Is operating income margin improving 2022 vs 2024?
7. Is Working Capital Turnover Ratio improving 2022 vs 2024?
8. Is Net Insider Buying exceeding Selling over last 4 quarters?
9. Attractive Relative PEG Ratio
10. ISS Governance Quality score (lower is better)
11. Company is Industry Leader?
12. Company has Sustainable Business Model?
13. Stable Management

The BAM team allocated 60% of our time and resources into a top-down macroeconomic analysis. We focused our efforts on constructing a world economic outlook and forecast, a capital markets outlook, optimizing portfolio asset allocation, and equity and fixed income strategies. 40% of our time is focused on a bottom-up approach, which consisted of sector allocation, stock screening, and individual fundamental equity analysis and valuation.

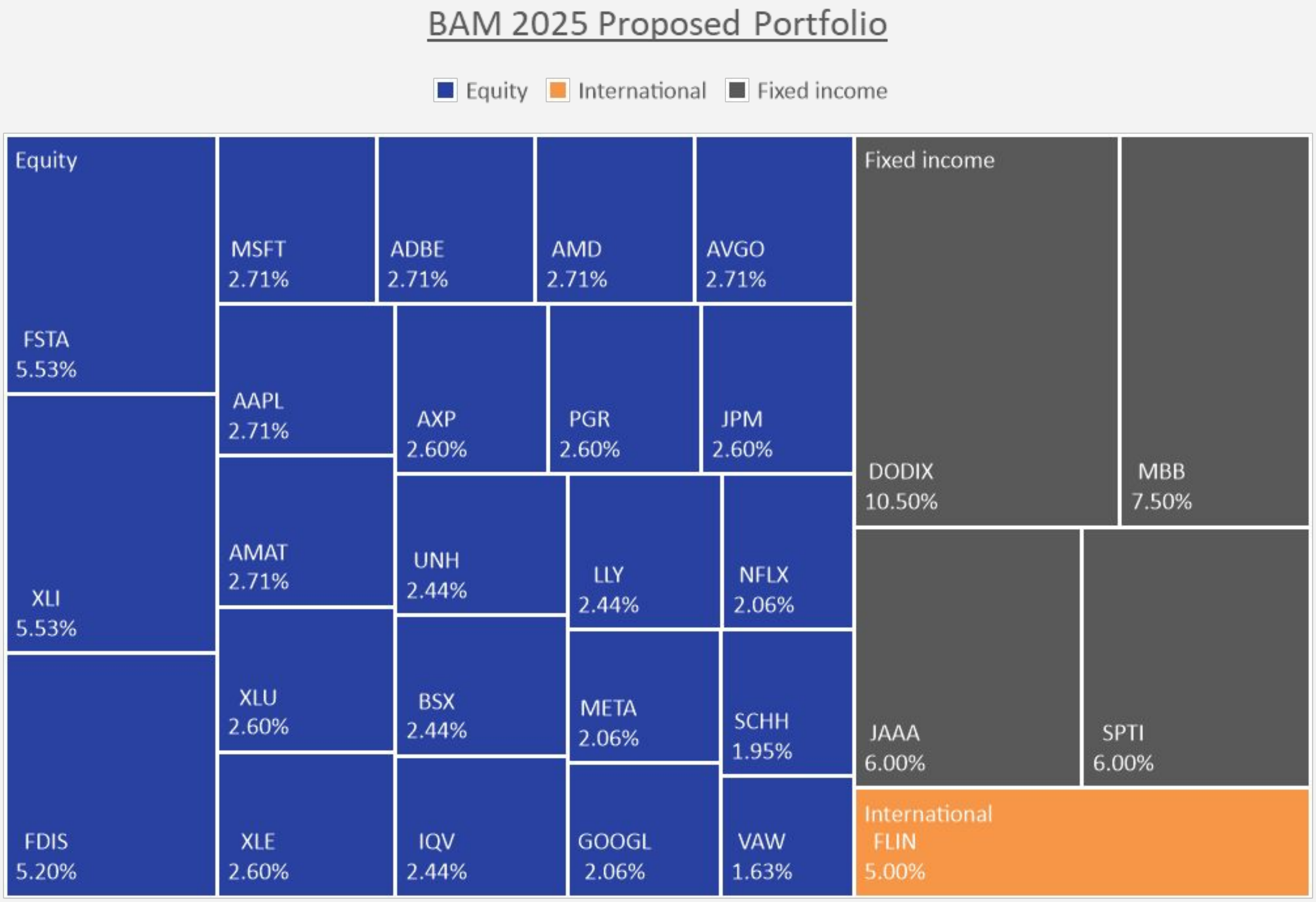
APPENDIX I: CPP BAM ORGANIZATION CHART



APPENDIX II: INVESTMENT PROCESS FLOWCHART



APPENDIX III: PROPOSED PORTFOLIO



APPENDIX IV: SAMPLE STOCK ANALYSIS - AMEX

American Express Company (AXP)

The Power of Plastic

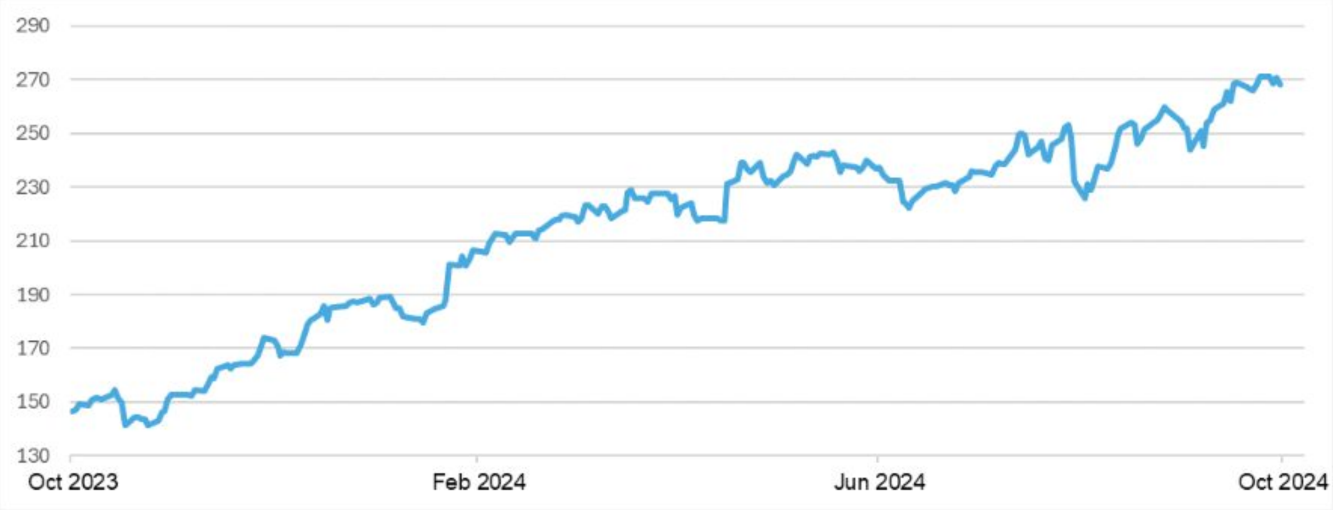
Date of Coverage:
11/08/2024
Analyst:
Aaron Diller
Thomas Mann
Ari Perez

Investment Thesis

American Express is well positioned to capitalize on growth in the payment processing and credit services industries. We expect their revenue to grow in the mid-single digits as their fee and interest-based income, which currently makes up over 40% of their total revenue, continues to increase. Americans are demonstrating a growing appetite for debt, which should bolster revenue growth for the company. Additionally, American Express has begun targeting a younger, still affluent consumer in Millennials and Gen-Z. This transition will allow American Express to further capitalize on its discount revenue, which already accounts for approximately 50% of its revenue makeup. With these changes, American Express is set to benefit from expanded market opportunities, driving continued growth in the long term while being better positioned to withstand unexpected economic turbulence.

Rating	BUY
Financial Services	
Credit Services	
Ticker	AXP
Current Price	$267
12 Month Price Target	$302
Upside/Downside	13.37%
Market-Cap (mm)	$202,050
Enterprise Value (mm)	$209,130
52-week High	$286.36
52-week Low	$141.02
Price-to-Earnings	20.04
Beta	1.21

Price Performance (TTM)



APPENDIX IV:

Company Description

<u>Overview</u>

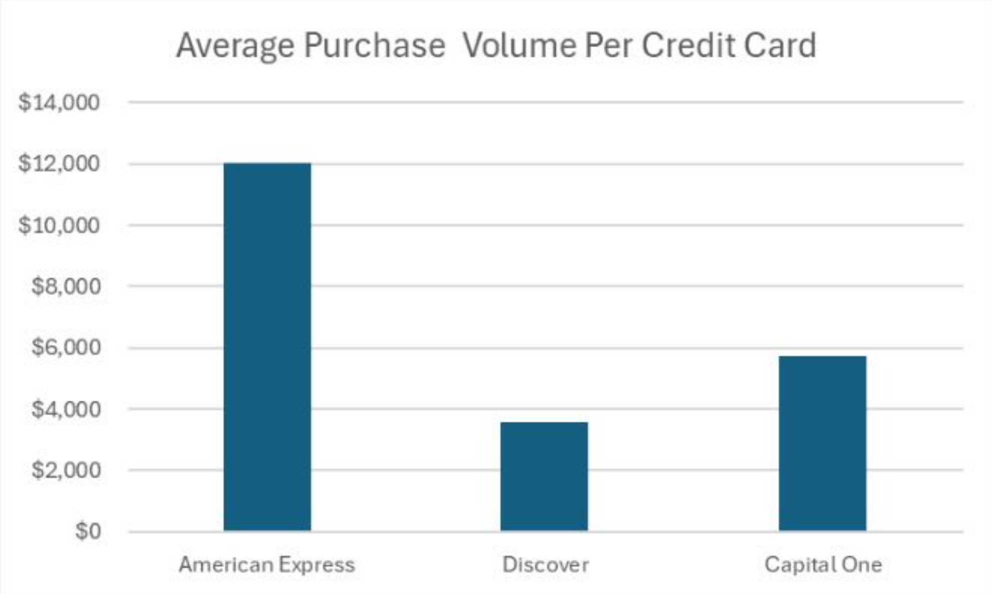
American Express Company is an integrated payments company that operates on both the consumer and merchant side. Formally, the business has four segments – U.S. Consumer Services (USCS), Commercial Services (CS), International Card Services (ICS) and Global Merchant and Network Services (GMNS). These businesses function together to form an end-to-end integrated payments platform, which is the primary differentiator that underpins the company. American Express's business model is viable because, unlike its competitors that operate solely as payment networks, it functions as both a payment network and card issuer. This dual role enables the company to carefully select its cardholders, cultivating a brand identity tied to wealth and luxury. This is exemplified in the credit quality and the transaction volume of their consumers.

<u>Business Model</u>

Discount revenue (49% of revenue), the largest revenue source, represents the amount the company earns and retains from the merchant payable for facilitating transactions between Card Members and merchants on payment products issued by American Express. The amount of fees charged for accepting these cards as payment, or merchant discount, varies with, among other factors, the industry in which the merchant conducts business, the merchant's overall American Express- related transaction volume, the method of payment, the settlement terms with the merchant, the method of submission of transactions and, in certain instances, the geographic scope for the card acceptance agreement between the merchant and American Express (e.g., local or global) and the transaction amount. In some instances, an additional flat transaction fee is assessed as part of the merchant discount, and additional fees may be charged such as a variable fee for "non- swipe" card transactions or for transactions using cards issued outside the United States at merchants located in the United States. The following table displays the average fee charged to merchants for payment processing on credit cards.

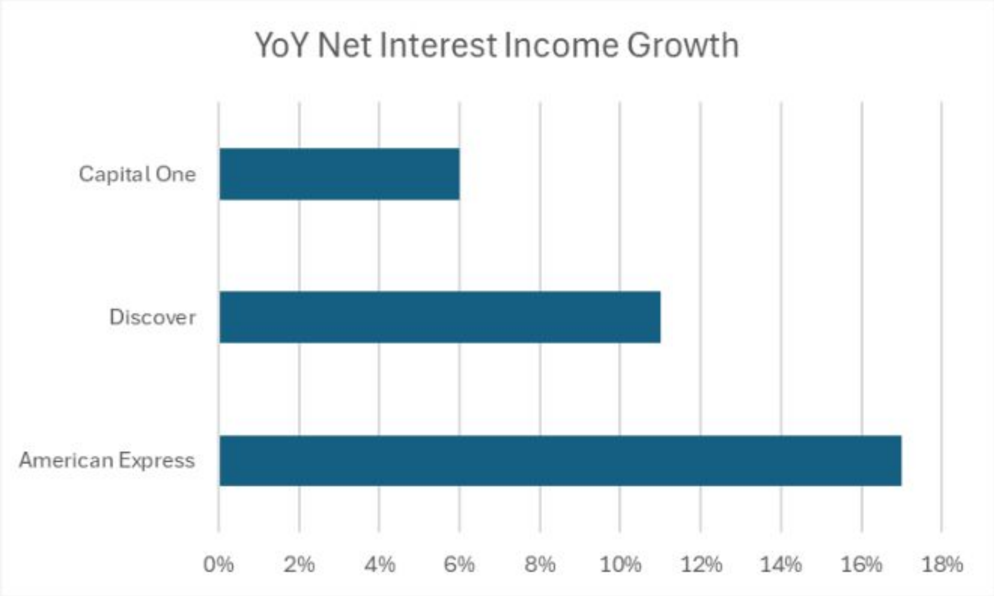
APPENDIX IV:

American Express has long justified its higher fees charged to merchants by leveraging the premium reputation of its cardholders. Known for attracting affluent consumers with higher spending power, American Express cardholders on average spend more per transaction compared to users of other cards. This spending potential makes it appealing for merchants to accept the card despite the higher fees, as it can lead to larger overall sales and increased brand loyalty from a desirable customer base.



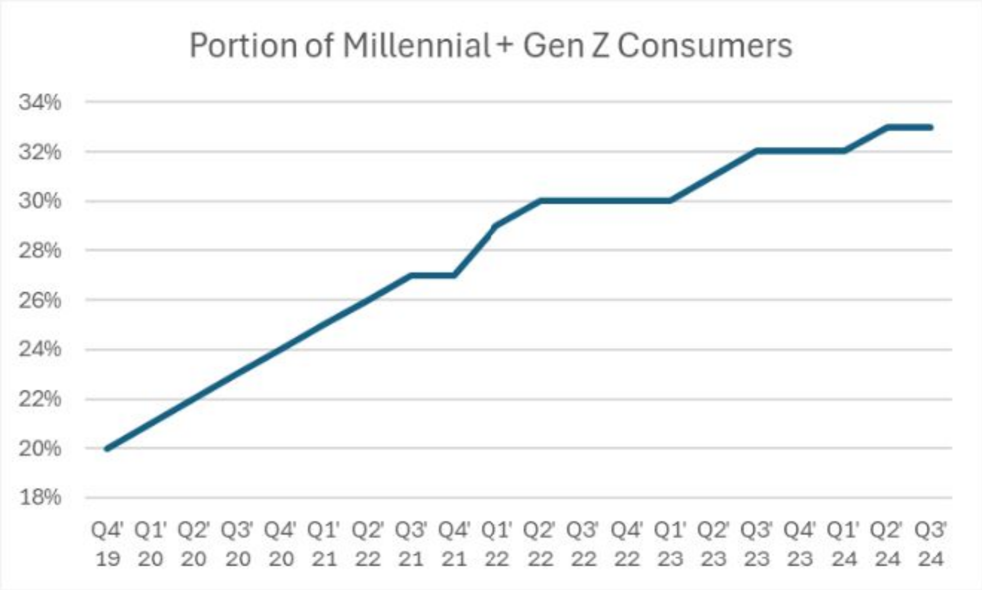
Interest income (30% of revenue) represents revenue derived from interest on outstanding loan balances. American Express currently has over 141.2 million cards in circulation amassing almost $1.7 trillion in purchase volume. Cardholders who do not pay balances in full each month carry that balance forward and accrue interest with rates ranging from 17 - 28%. American Express has been able to grow net interest income at a faster rate than competitors suggesting they are more effective at leveraging higher interest rates.

APPENDIX IV:



Net card fees (11% of revenue) represent revenue derived from annual fees associated with their credit cards. This has become the fastest-growing revenue segment for American Express at 18% YoY growth as of Q3, highlighting both the appeal of their premium rewards offerings and the effectiveness of their strategy to broaden their customer base. This rapid growth is driven not only by high-net-worth individuals but also increasingly by wealthy Gen Z and Millennial consumers. Management began their crusade to capture this demographic in 2019. Since then, Millennials and Gen Z as a portion of total clients have risen from 20% to 33%. With this increased exposure to this younger generation, credit quality, as measured by net charge offs and delinquency rates, is largely unchanged from pre-pandemic levels of 2019. This indicates that the customers they've acquired, while younger, are still relatively affluent. American Express has tailored its card offerings to meet the evolving expectations of these younger demographics, who value experiential rewards, travel perks, and access to exclusive events. By curating benefits that align with lifestyle preferences popular among Millennials and Gen Z, AMEX has successfully expanded its target demographic, increasing adoption among younger users who might have previously viewed premium cards as inaccessible or irrelevant.

APPENDIX IV:

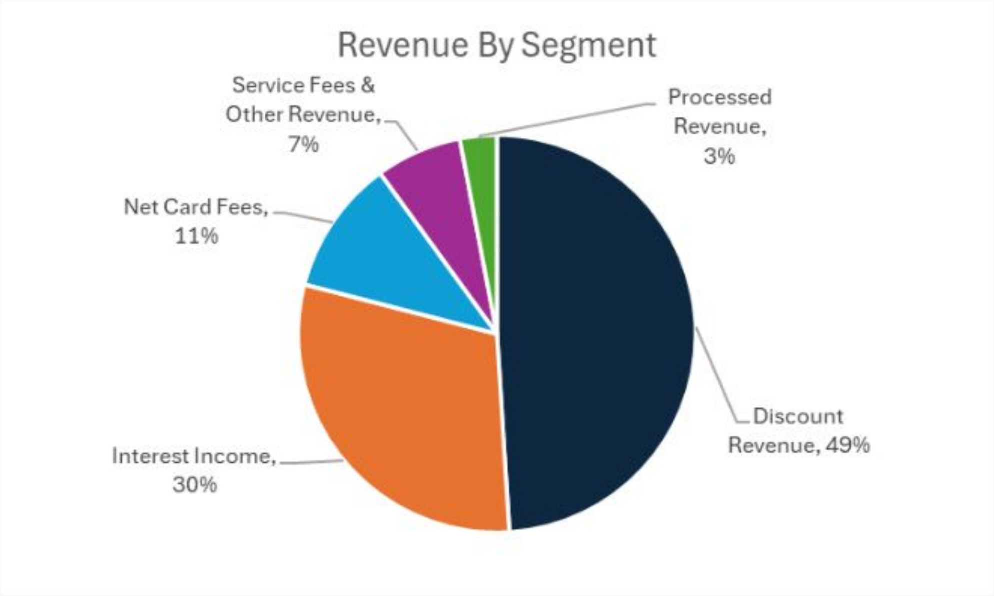


Moreover, American Express's role as both issuer and network allows it to rapidly adjust rewards structures in response to shifting trends, such as emphasizing digital subscriptions, dining, and sustainable spending incentives, which are increasingly valued by younger consumers. This flexibility positions AMEX to effectively capture and retain the loyalty of younger cardholders, who often prioritize spending on experiences over material goods and value seamless digital integrations. This focus on tailored incentives reinforces AMEX's pend-centric' model, as the rewards encourage frequent usage and higher transaction volumes, thus driving increased merchant fees and further solidifying AMEX's revenue streams. By appealing to the preferences of Gen Z and Millennials, American Express has not only grown its customer base but also enhanced brand loyalty and strengthened its image as a premium, forward-thinking financial brand.

Service fees and other revenue (7% of revenue) primarily represent service fees earned from merchants and other customers, travel commissions and fees, Card Member delinquency fees, foreign currency-related fees charged to Card Members, and income from investments.

Processed revenue (3% of revenue) primarily represents revenues related to network partnership agreements, comprising royalties, fees and amounts earned for facilitating transactions on cards issued by network partners.

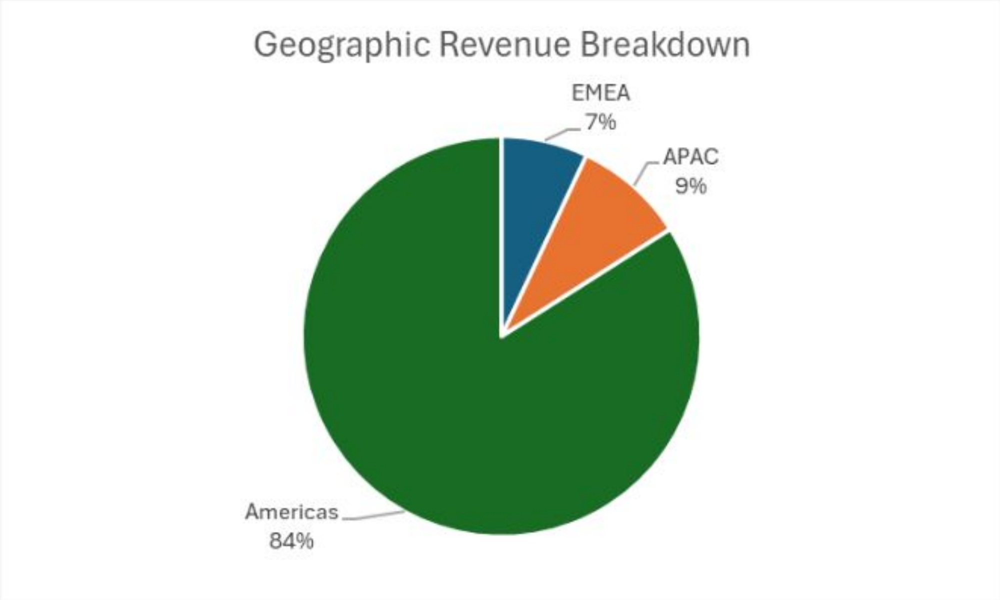
APPENDIX IV:



<u>Growth Prospects</u>

American Express operates internationally with most of its business concentrated in the United States. Its international segments are among the fastest growing, however, and offer significant growth potential, especially in emerging markets across Asia-Pacific and Latin America, where rising middle-class demographics drive demand for premium credit and financial services. AMEX's reputation for high-quality service and rewards positions it well to capture affluent, travel-focused consumers seeking cross-border payment options.

APPENDIX IV:



American Express is also targeting a larger, younger demographic in Millenials and Gen Z. The following table shows the percentage of consumers by generation.

Q3' 24	Millennials + Gen Z	Gen -X	Baby Boomer +	Total
YoY Growth	12%	4%	0%	6%
% of Total	33%	37%	30%	100%

American Express has adapted its product offerings and marketing efforts to appeal to these younger audiences, emphasizing digital services, lifestyle rewards, and accessible credit options that align with their values and preferences. For instance, AMEX has launched cash-back cards, flexible payment options, and "buy now, pay later" products that resonate with the financial preferences of younger consumers who may prioritize convenience, flexibility, and affordability.

AMEX has made significant investments to build brand loyalty with Millennials and Gen Z through strategic partnerships with brands, events, and digital platforms that resonate with these generations. Collaborations with streaming platforms, like Hulu, and major sports brands, such as Formula 1, tap into the interests and lifestyles of younger consumers. This approach aligns with AMEX's strategy to engage customers early in their financial journeys, aiming to establish enduring relationships that will keep them as loyal, high-value cardholders as their incomes grow. By targeting this demographic with relevant, experiential offerings, AMEX lays a solid foundation for sustained revenue growth and strengthened brand loyalty.

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Industry Overview

American Express Co's primary industry participation lies within the financial services sector, specifically in credit card issuing, credit card processing, money transferring, and travel agency services.

American Express' most formidable competitors include Discover and Capital One. Similar to American Express, both of these competitors are issuers and a payment network, however, American Express targets their customer base to mainly affluent individuals. This level of affluence can be seen in FICO scores, where AXP has 8% of users with a credit score of less than 660 while Discover is 18% and Capital One is 32%. This level of affluence brings about a competitive advantage as they can mitigate the risk that banks take on such as delinquency and charge offs. The average charge off ratio over the past 5 years for AXP was 1.64, while Capital One was 2.76 and Discover with 3.28.

During times of economic downturns, a bank must have a certain level of liquid assets to survive the possibility of headwinds. This is known as the Tier 1 Capital Ratio, taking a company's most liquid assets as a percentage of their risk weighted assets. If a bank does more lending with risky customers, you should see this ratio become higher than that of its competitors as there is more of a chance the bank would need to absorb loss by means of charge offs, This is an idea we see when comparing American Express to Capital One and Discover. American Express displays a Tier one Capital Ratio of 11.30 Discover with 12.30, and Capital One with 14.20. This enables them to spend more on other investments including premium advertising.

This idea that American Express is aware of their affluent consumer base can be further illustrated by the loan reserve they have in the case of a loss. **We can see that in the last quarter American Express' debt as a percentage of loans outstanding was only 4.01%, while Discover was at 6.63% and Capital One with 5.16%.**The competing companies expect their customers to default or completely abandon lines of credit with them, meaning they have to reserve a larger portion of their overall retained earnings as a cushion for their risky business model

As a result of American Express having a higher portion of customer affluency, they have more money to put into investments such as marketing. **We can see that American Express marketing investment as a percentage of total revenue is 15.51%, while Capital One has 7.68% and Discover with only 4.17%.** A large part of what makes American Express immediately identifiable is their brand image. This is done through things such as client events and tailored rewards that really make the cardholder feel like they have a premium product, a byproduct of emphasizing your investment in marketing. This allowance for marketing underscores how advantageous their consumer base is by allowing them to spend their money on investments that can further propel their business model into the hands of new customers.

The company's revenue model largely depends on discount revenue merchant fees collected during transactions, which is supported by its high-profile customer base with significant spending power, making these fees worthwhile for merchants. American Express' highest performing revenue segment lies within billed business. **This is essentially expressed as card member spending on things like cash advances and interest paid on transactions.** This is a segment that has seen growth of 8% here in the U.S and 11% in the international market. In terms of growth, American Express has demonstrated a 6% growth within the past year in billed business, showing their ability to capture market growth potential. The company's annualized revenue growth of 12% cements its place among the top performers in the sector.

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Credit Services Industry

T12M Comps	Market Cap ($B)	5-Year Rev. CAGR (%)	5-Yr EPS CAGR (%)	D/E	PEG	P/B	P/CF	P/E
Median	5.12	6.35%	4.56%	93%	0.79	1.80	2.36	12.47
AMEX	192.60	9.25%	14.93%	32%	1.29	6.47	7.76	20.04

To summarize, American Express shows its potential for growth by means of capitalizing on the billed business model and further expanding into the realms of a new consumer base such as Gen X and Millennials. We believe that their ability to capitalize on growth drivers is shown within their fundamentals. For example, they show healthy growth in revenue and EPS illustrating that not only is American Express growing in ways they command billed business but that

they are also impressively profitable on the investments that shareholders entrust within the company. Further, American Express remains a safe investment as they are able to absorb the costs of strong economic headwinds with a

favorable Tier 1 Capital Ratio. Ultimately, we believe that their superior financials exemplify why they deserve a premium valuation.

Financial Analysis

Key Metrics	2019	2020	2021	2022	2023	2024E	2025E
Revenue ($B)	43,556	36,087	42,380	52,862	60,515	66,025	71,749
Rev Growth (%)	8.04%	-17.15%	17.44%	24.73%	14.48%	9.11%	8.67%
EPS	7.99	3.77	10.02	9.85	11.21	13.36	14.81-
EPS Growth (%)	1.01%	-52.82%	165.78%	-1.70%	13.81%	19.81%	10.85%
ROE (%)	29.24%	13.18%	35.06%	31.56%	31.28%	37.88%	28.49%
LTD/Equity	2.51	1.87	1.74	1.72	1.71	1.80	1.74
Y/E PE Ratio	15.18	32.07	16.33	15.00	16.71	20.26	18.31
Net Charge Offs	2.14%	2.33%	2.32%	0.79%	0.88%	-	-
Delinquency Rate	1.49%	1.37%	0.75%	0.93%	1.22%	-	-
Net Interest Income Growth	12%	-7%	-3%	28%	33%	-	-

American Express, along with the rest of the industry, experienced a significant slowdown with the onset of COVID-19 and subsequent lockdowns. A restricted consumer was unable to travel, dine out, and spend lavishly in the sectors that drive American Express's business model suppressing revenue and decreasing profitability. As the economy normalized in the following months, consumers returned to old spending habits with their pockets lined with stimulus cash driving

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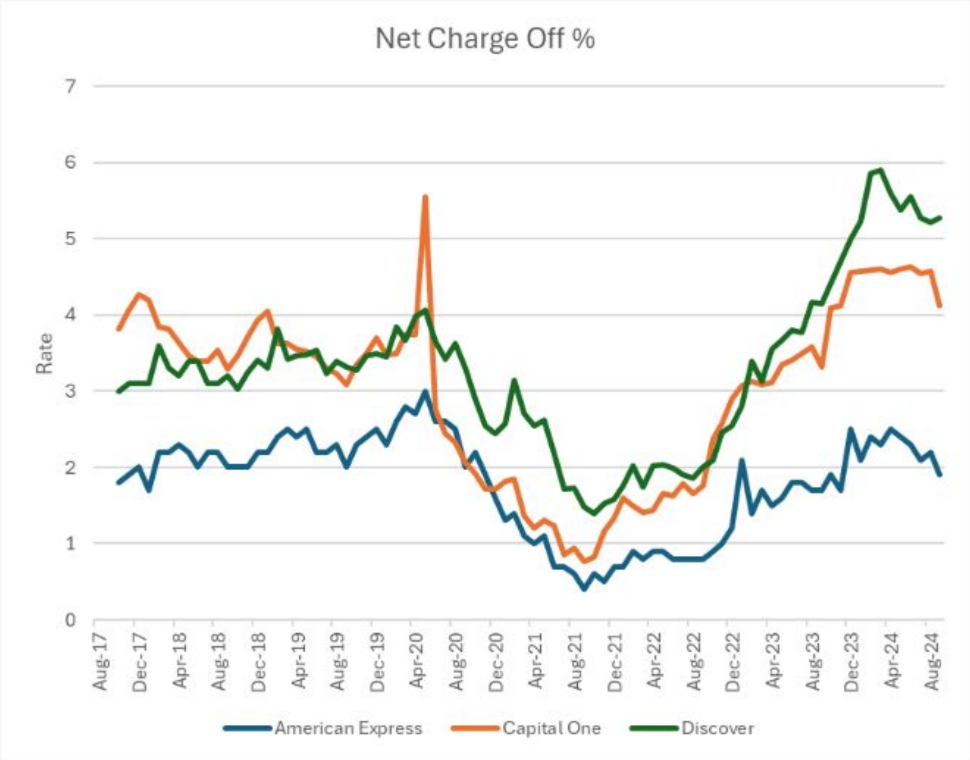
extreme revenue and EPS growth. Savings from the lockdowns and associated stimulus are largely gone now, resulting in a normalization of spending and thus revenue growth. The drop in EPS growth seen in 2022 was largely due to increased credit provisions with the expectation of increased delinquencies as stimulus dried up. The company has averaged an ROE of 26% over the past 10 years, significantly higher than competitors like Discover, at 21%, or Capital One, at 10%. This reflects management's ability to significantly expand the business while maintaining profitability despite operating at a larger scale than competitors. They've done this while also reducing long-term debt to equity, improving the financial health of the business and indicating the growth of the company was organic.

Another important aspect to consider is the comparison of net charge-offs and delinquency rates relative to competitors in the industry. Net charge-offs refer to loans that are deemed to be in default, meaning the lender has little expectation of recovering the outstanding balance. In contrast, delinquency rates reflect the percentage of accounts that are 30 days or more past due on payments.



These metrics are crucial for assessing the overall credit quality of a company's loan portfolio and understanding the associated risks within the broader business context. A higher rate of net charge-offs or delinquencies could indicate potential financial strain and increased risk for the lender.

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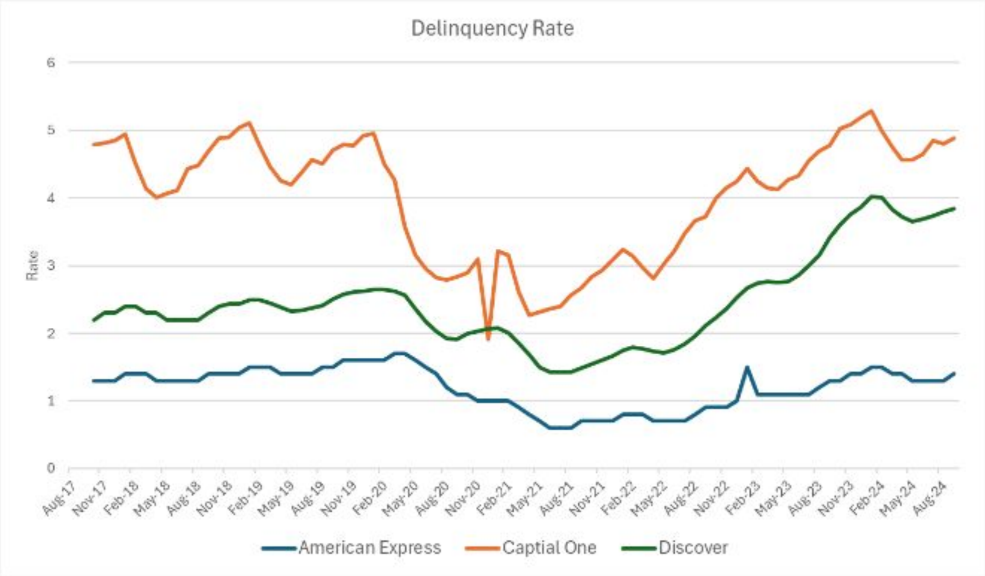

For American Express, the focus on a wealthy consumer base plays a significant role in enhancing credit quality. This affluent demographic tends to have more robust financial profiles, which can lead to lower default rates on loans. As a result, American Express benefits from a reduced risk of defaults, positioning itself favorably compared to its competitors. This strategic emphasis not only strengthens the company's financial health but also provides greater stability in its lending practices, ultimately contributing to a more resilient business model.

The added resilience of this model comes with the trade off with lower operating margins as their higher credit quality consumers command better rewards programs and lower interest rates. To attract and retain this wealthy demographic, they must invest in premium rewards offerings, such as exclusive travel benefits, cash-back incentives, and luxury experiences. These enhanced perks, while appealing to high-net-worth individuals, can compress operating margins since the cost of providing such rewards can be significant.

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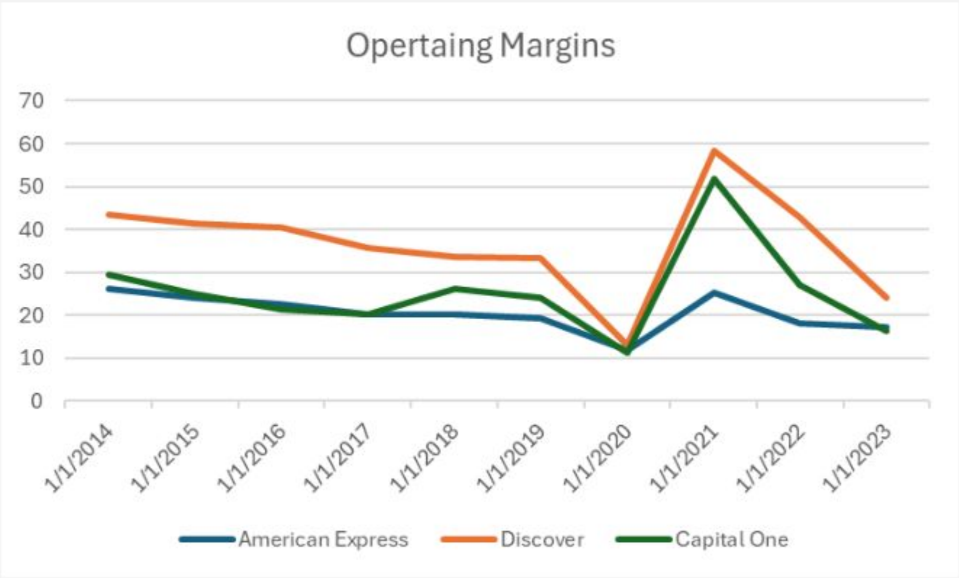

Additionally, offering lower interest rates to these creditworthy consumers further compresses profit margins. Although it narrows the spread between American Express's borrowing and lending rates, it supports long-term financial stability and customer loyalty.

Valuation

We arrived at our $302 price target using a dividend growth model (DGM) analysis with an 8.57% cost of equity, 4% dividend growth rate, and 0.85 payout ratio (Appendix A.1). The rationale for these inputs is detailed below.

- The cost of equity was calculated using the CAPM model, with an equity risk premium of 3.96%, a beta of 1.21 and a risk free rate of 3.78%.
- As financial services companies mature, their growth trajectory often aligns closely with the pace of nominal GDP growth. This trend occurs because, in well-established markets, these companies face inherent limitations on revenue expansion imposed by the overall circulation and growth of the money supply. While nominal GDP has historically been closer to 6%, we use 4% to be conservative.
- We calculate our payout ratio by dividing the net cash flow returned to shareholders by the net income for a given year. Here, net cash flow returned to shareholders includes the sum of dividends paid and net share repurchases. By averaging this payout ratio over the past five years, we arrive at a value of 0.85.

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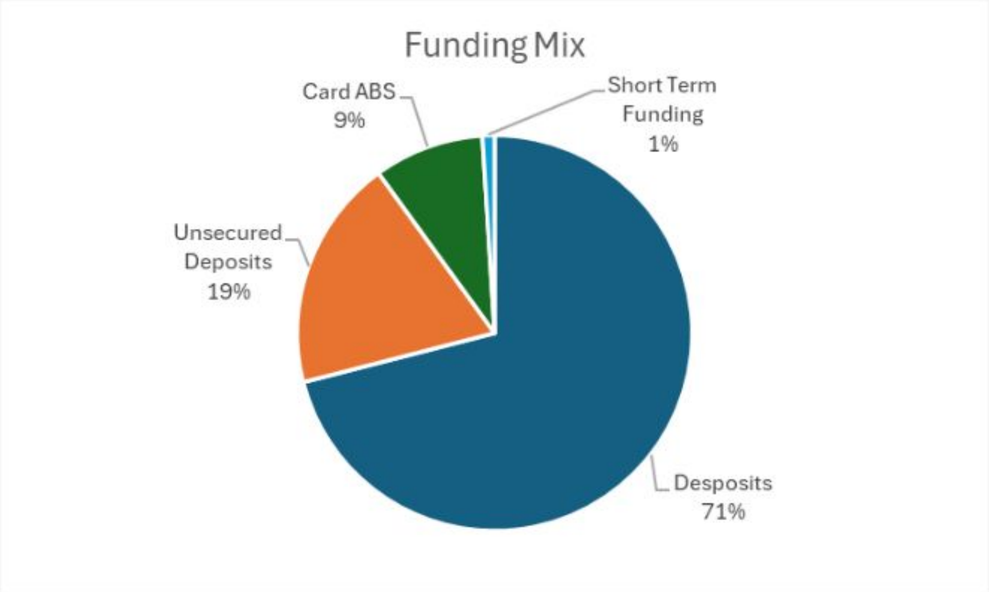
- These inputs give us a target price of $296, or a 10.9% upside. We then add the current dividend yield to get a total return of 11.9%.

Risk Assessment

As a consumer-driven company, American Express's revenues are closely tied to the business cycle, with slowdowns in the broader economy negatively impacting its revenue and operational efficiency. For instance, in 2020, reduced consumer spending led to a noticeable downturn. During such economic slowdowns, the large lines of credit extended to cardholders become more susceptible to default risk. However, American Express is relatively insulated from this due to its affluent client base; high-net-worth individuals are generally less affected by economic cycles than middle- and lower-income groups, which reduces the company's overall default exposure.

American Express's financial stability is significantly bolstered by the composition of its customer deposit base, which makes up roughly 71% of its total funding. These deposits, including certificates of deposit (CDs), provide a stable, low-cost funding source but can be vulnerable to large-scale withdrawals. However, a key mitigating factor is that 92% of these deposits are FDIC-insured, indicating a broad base of smaller deposits rather than a concentration in larger accounts. This diverse deposit structure lowers the risk of substantial withdrawals, as it minimizes the likelihood that a few large clients could impact funding by pulling their balances.



Regulatory intervention is another key risk, especially as the Department of Justice's lawsuit against Visa underscores the potential for regulatory scrutiny across the payments industry. While American Express could benefit in the short term as Visa, its largest competitor, faces these allegations of monopolistic practices, the situation highlights the broader

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regulatory risks present in the industry. To mitigate this risk, American Express maintains diversification across various business segments, including payment processing, consumer lending, and corporate lending. This diversification enhances its ability to adapt to industry shifts and regulatory changes, helping to safeguard its long-term growth and stability.

Appendix

Exhibit A.1	Dividend Growth Model Source: Bloomberg, BAM Estimates

Appendix A.1

DGM Valuation Model: Shareholder Perspective: All Amounts in Millions

Last Updated 11/12/2024

NAME	Ticker
AMERICAN EXPRES	AXP

Target Price	301.71
Current Stock Price	268.59
Div Yield %	1.04%
Total Potential Return	13.37%

CF to Shareholders		FY 2020	2021	2022	2023	TTM 2024
Dividends Paid	CF_DVD_PAID	1,474.00	1,448.00	1,565.00	1,780.00	1,886.00
Stock Bought $	CF_DECR_CAP_STOCK	1029	9252	3502	3650	5355
Stock Sold $ (enter as negative)	CF_INCR_CAP_STOCK	44	1648	56	28	52
Net CF to Shareholders TTM 2022 est		2,547.00	12,348.00	5,123.00	5,458.00	7,293.00
Net Income (Operating, from BB)		3,135.00	8,060.00	7,514.00	8,374.00	9,836.00
Payout Ratio		0.81	1.53	0.68	0.65	0.74
Diluted # Shares (Millions, from BB)	is_sh_for_diluted_eps					696.96

DGM Valuation: Financial Companies (banks/insurance/asset

Valuation= D1/(r-g)

D = Total Capital Return = (Annual Dividends Paid + Stock Bu

r = Equity cost, use CAPM: Damodaran R3K Rm, 10-y T-bonc

g = dividend growth rate

D1 = Next Year net CF to shareholders

CAPM	
Equity Risk Premium (Damodaran)	3.96%
Beta	1.21
10 Year T-Bond Rate	3.78%
Ke *	8.57%

Dividend Growth Model			
Div Growth Rate (g) (see note below)	4.0%	UPSIDE	
Net Income FY 2025 (Operating, from BB)	10348.69		11.75%
Average Payout Ratio	0.85		
Net CF to Shareholders FY 2025 est	8796.3865		
Net CF to SH per Share FY 2025	12.62107797		
DGM Value/Share (at Start of FY 2025)	276.0757277		

Target Price			
Equity Value Per Share	276.0757277		
FY End Month	12	Jan =1, Feb =2	
Target Price Month (1st of Month)	11		
# Months to Target Date (12 FWD)	13		
Target Price	$ 301.71	Average target value:	291.0809218

The Excel Model will calculate value (Cell C30) as of BEGINN

We need to adjust this to our Target Price date

Div Growth Rate estimates:

Most banks will grow at Nominal GDP, so use approx 10 year Tbond rate

Some banks that are more innovative in technology, so use Tbond plus 0.5%