



Virginia Society of
Certified Public
Accountants

54th Annual Virginia Accounting & Auditing Conference

Emerging Developments & Issues for the
Economy & Business, Global Markets & Banking
Treasury & Payments, Digital & Other Technologies

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1

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1



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It feels as if no country, economy or industry around the globe has seemingly been spared in some way from the impacts stemming from: price inflation fluctuations; energy or environmental shocks; a rising and uncertain interest rate environment; pre-and-post-pandemic-era labor market changes; the perils and prospects for AI and the advancements in other technologies; or record levels of human migration.

While at the same time, these impacts have impelled governmental, business, financial and personal innovation and resilience ... and fostered opportunities.

Let's explore these developments and discover what may lie ahead!

Let's get at it ☺

Please note that any companies or products mentioned within this presentation are not being presented or offered as investment recommendations.

2

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2

Where Are We?

World Stage

Considerations

GLOBAL FINANCE & ECONOMICS

3

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3

Where Are We?

World Stage

World Economic Outlook & Conditions – GLOBAL Real GDP Growth (% change)

Retrospectively to 2023:

A series of compounding issues created a new global recession. Such as ...

- Rising energy and food prices
- Fiscal instability in the wake of the pandemic
- Consumer Insecurity

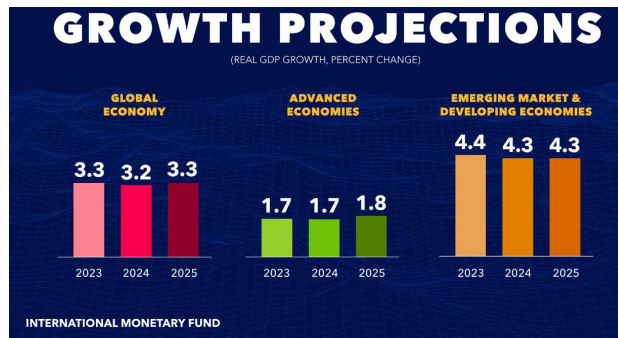
Led to global inflation in 2023 reached 6.9 percent.

- This was the highest annual increase in inflation since 1996

In 2024:

- Global growth is projected to be in line with the April 2024 World Economic Outlook (WEO) forecast, at 3.2 percent in 2024 and 3.3 percent in 2025.

- **Critical Issue:** Flat growth in the major groupings!



It's all about growth, inflation, global trade, climate/environment!

4

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Where Are We?

World Stage

World Economic Outlook – GDP Growth

Gross Domestic Product (GDP)

- GDP is a measure of the value of goods and services produced within a country's border during a set period of time.
- A key indicator of a country's economic health.
- Is calculated by subtracting the value of goods and services used in production from the total value of goods and services produced.

Includes:

- Goods and services produced for sale, as well as some non-market production like defense services.
- Can be calculated using the income method, which adds together the gross profit of companies and self-employed people, employee wages, and taxes on products.

Use:

- GDP growth rate is a key way to gauge how a country's economy is doing and is often expressed as a percentage change from the previous year.

It's all about growth, inflation, global trade, climate/environment!

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World Economic Outlook Growth Projections

PROJECTIONS			
(Real GDP, annual percent change)	2023	2024	2025
World Output	3.3	3.2	3.3
Advanced Economies	1.7	1.7	1.8
United States	2.5	2.6	1.9
Euro Area	0.5	0.9	1.5
Germany	-0.2	0.2	1.3
France	1.1	0.9	1.3
Italy	0.9	0.7	0.9
Spain	2.5	2.4	2.1
Japan	1.9	0.7	1.0
United Kingdom	0.1	0.7	1.5
Canada	1.2	1.3	2.4
Other Advanced Economies	1.8	2.0	2.2
Emerging Market and Developing Economies	4.4	4.3	4.3
Emerging and Developing Asia	5.7	5.4	5.1
China	5.2	5.0	4.5
India	8.2	7.0	6.5
Emerging and Developing Europe	3.2	3.2	2.6
Russia	3.6	3.2	1.5
Latin America and the Caribbean	2.3	1.9	2.7
Brazil	2.9	2.1	2.4
Mexico	3.2	2.2	1.6
Middle East and Central Asia	2.0	2.4	4.0
Saudi Arabia	-0.8	1.7	4.7
Sub-Saharan Africa	3.4	3.7	4.1
Nigeria	2.9	3.1	3.0
South Africa	0.7	0.9	1.2
Memorandum			
Emerging Market and Middle-Income Economies	4.4	4.2	4.2
Low-Income Developing Countries	3.9	4.4	5.3

Source: IMF World Economic Outlook Update, July 2024

5

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World Economic Outlook

The global economy is in an interesting spot at the moment.

Or, one might say ... it's a bit of a sticky wicket!

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World Economic Outlook & Conditions – Some Considerations: 2Q 2024

- Global growth is projected to be in line with the April 2024 World Economic Outlook (WEO) forecast, at 3.2 percent in 2024 and 3.3 percent in 2025.
- When it's all said and done ... it balances out to ... flat!
- Global trade picked up spurred by strong exports from Asia technology sector.
- Growth contributions from a number of countries. (India!)
- Economic recovery (finally) materialized in Europe, led by an improvement in services activity, softening of some inflationary factors, and management of energy alternatives (i.e. LNG from US).
- In China, resurgent domestic consumption propelled the positive upside in the first quarter, aided by what looked to be a temporary surge in exports belatedly reconnecting with last year's rise in global demand.
 - Property sector still recovering
- Downside surprises in Japan and the US were notable.

7

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World Economic Outlook & Conditions – Some Considerations: 2Q 2024 Japan

- Downside surprises in Japan and the US were notable.
- In Japan, the negative growth surprise stemmed from temporary supply disruptions linked to the shutdown of a major automobile plant in the first quarter.
- The strong “shunto” wage settlement is expected to support a turnaround in private consumption starting in the second half.
- The 2024 Shunto wage negotiations in Japan resulted in an average pay raise of 5.17%, which is the largest increase in 33 years.
- The negotiations, which are held annually in March, involve unions and management from major companies across Japan to determine pay and working conditions for the new fiscal year.

A few details (partial listing):

- Base pay rise: 3.2% and **real wage growth of 1.2%**
- Bonuses and overtime wages: 1.3%
- Part-time workers hourly wage growth: 4.3%

The term "Shunto" translates to "spring wage offensive" and refers to the annual wage negotiations between employers and enterprise unions in Japan.

The US is experiencing similar upward potentially inflationary pressure on labor costs, compensation and benefits packages!

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World Economic Outlook & Conditions – Some Considerations

- Services inflation is holding up progress on disinflation, which is complicating monetary policy normalization.
 - US lower gas prices are helpful.
- Upside risks to inflation (and thus price stability) have thus increased, raising the prospect of elevated interest rate levels for a longer period of time.
- ... this is in the context of escalating trade tensions, conflict, and therefore increased policy uncertainty ... which could hold back overall growth.

So, growth in the global economy appears to be stabilizing!

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World Economic Outlook & Conditions – Some Considerations: Inflation

Inflation

- Is the rate at which prices increase over a given period of time.
- It can be measured as a broad indicator, such as the overall increase in prices or the increase in the cost of living.

Core vs. Non-Core Inflation

- Core inflation is a measure of inflation that excludes volatile price components, such as food and energy, to provide a more stable, long-term view of inflation.
- Non-core inflation includes these volatile components.

Core inflation is often used to guide **monetary policy decisions**.

Monetary policy and fiscal policy are both used to regulate the economy, but they differ in who implements them and the tools they use!

10

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Fundamentals – Monetary vs. Fiscal Policy

Monetary Policy

- Central banks, like the Federal Reserve, use monetary policy to influence the money supply and credit in an economy.
- The main tools of monetary policy include:
 - Changing interest rates
 - Changing reserve requirements
 - Open market operations, such as buying and selling securities

Fiscal Policy

- Governments use fiscal policy to influence the economy through taxation and spending.
- The main tools of fiscal policy include:
 - Taxation
 - Spending
 - Borrowing

11

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World Economic Outlook & Conditions – Some Considerations: Inflation

Sequential Inflation

- Sequential inflation refers to the sequential change in prices and purchasing power that occurs when new money is introduced into the economy.
- As the new money circulates, it causes prices to adjust, which can drive up prices in a sequential manner.

Note: Covid-pandemic, relief and other legislative or economic programs.

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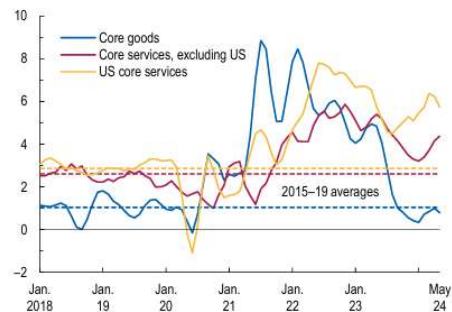
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World Economic Outlook & Conditions – Some Considerations: Inflation

- Inflation is coming down, however remains high in too many countries.
- Services inflation is holding up progress on disinflation, which is complicating monetary policy normalization.
 - US lower gas prices are helpful (more later)
- Upside risks to inflation (and thus price stability) have thus increased, raising the prospect of elevated interest rate levels for a longer period of time.

Figure 1. Sequential Core Inflation
(Percent; three-month-over-three-month, annualized)



Sources: Haver Analytics; and IMF staff calculations.
Note: The two aggregates are the purchasing-power-parity-weighted averages. Sample includes 11 advanced economies and 9 emerging market and developing economies that account for approximately 55 percent of 2021 world output at purchasing-power-parity weights.

13

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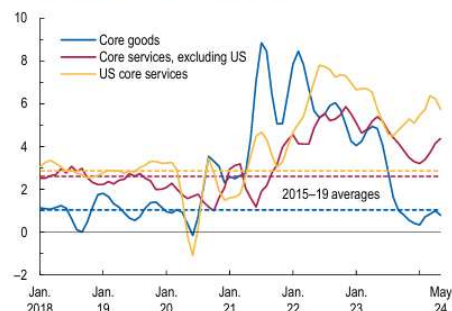
Where Are We?

World Stage

World Economic Outlook & Conditions – Some Considerations: Inflation

- Inflation is coming down, however remains high in too many countries.
- The uptick in sequential inflation in the United States during the first quarter has delayed policy normalization.
- This has put other advanced economies, such as the Euro area and Canada, where underlying inflation is cooling more in line with expectations, ahead of the United States in the easing cycle.
- **Nominal wage growth remains strong, and above price inflation in some countries ...**
 - ... = "real wage growth"
- Partly reflecting the outcome of wage negotiations earlier this year.

Figure 1. Sequential Core Inflation
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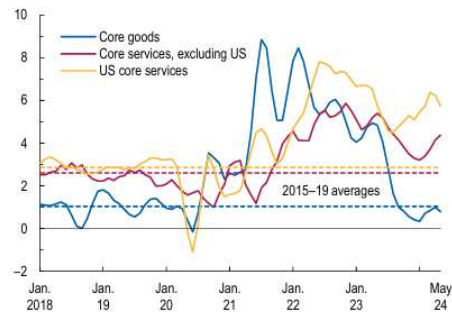
Where Are We?

World Stage

World Economic Outlook & Conditions – Some Considerations: Inflation

- Nominal wage growth remains strong, and above price inflation in some countries.
- Partly reflecting the outcome of wage negotiations earlier this year.
- Higher nominal wage growth, which in some cases reflects the “catch-up of real wages”.
- ... = “real wage growth”
- If accompanied by weak productivity, could make it difficult for firms to moderate price increases, especially when profit margins are already squeezed.
- This could lead to further stickiness in wage and price inflation.

Figure 1. Sequential Core Inflation
(Percent; three-month-over-three-month, annualized)



Sources: Haver Analytics; and IMF staff calculations.

Note: The two aggregates are the purchasing-power-parity-weighted averages. Sample includes 11 advanced economies and 9 emerging market and developing economies that account for approximately 55 percent of 2021 world output at purchasing-power-parity weights.

Where Are We?

World Stage

World Economic Outlook & Conditions – Some Considerations: Inflation

On a humorous note ... Some recently minted references to Inflation!

“Greed”-flation

- Greedflation refers to a situation where companies or businesses take advantage of market demand by increasing prices excessively, leading to higher inflation rates.
- Many believe this phenomenon is driven by greed, and has been attributed to surging global prices and ballooning corporate profits.

“Shrink”-flation

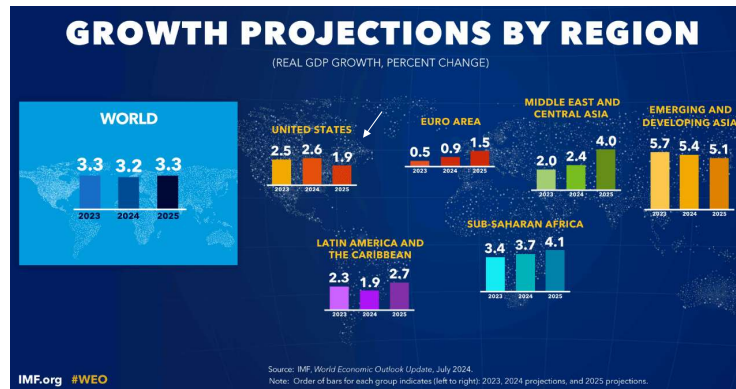
- Shrinkflation is a business practice where companies reduce the size and/or weight of their products while keeping the price the same or slightly increasing it.
- This practice is often seen in consumer goods like snacks, beverages, candy, household paper products, cleaning products, among others.

In economics, shrinkflation, is also known as package downsizing, weight-out, and price-pack architecture. 😊

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World Stage

Regional Economic Outlook & Conditions - Real GDP Growth (% change)



- A somewhat surprising slowdown in some regions have been offset by some unexpected gains in some other areas.

17

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17

Where Are We?

World Stage

Regional Economic Outlook & Conditions - Real GDP Growth (% change)

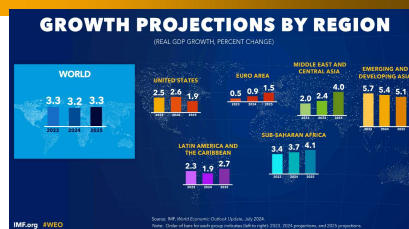
A somewhat surprising slowdown in some regions have been offset by some unexpected gains in some other areas.

Emerging Market and Developing Economies:

- Revised upward. Projected increase is powered by stronger activity in Asia, particularly China and India.
- For China, the growth forecast is revised upward to 5 percent in 2024, primarily on account of a rebound in private consumption and strong exports in the first quarter.
- Forecast for growth in India has also been revised upward, to 7.0 percent, this year, with the change reflecting carryover from upward revisions to growth in 2023 and improved prospects for private consumption, particularly in rural areas, and Foreign Direct Investment.

Sub-Saharan Africa:

- Downward pressure from Sudan conflict and Nigeria soft economic activity.
- Upward from continued FDI from China, Far East.



18

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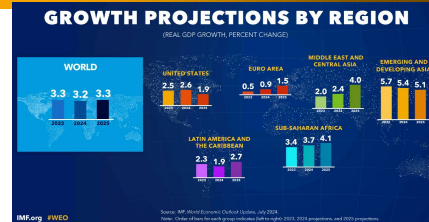
World Stage

Regional Economic Outlook & Conditions - Real GDP Growth (% change)

A somewhat surprising slowdown in some regions have been offset by some unexpected gains in some other areas.

Latin America and the Caribbean:

- Growth revised downward for 2024 in Brazil, reflecting the near-term impact of flooding.
- However, growth has been revised upwards in 2025 for Brazil to reflect reconstruction following the floods and supportive structural factors (for example, acceleration in hydrocarbon production).



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19

19

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World Stage

Regional Economic Outlook & Conditions - Real GDP Growth (% change)

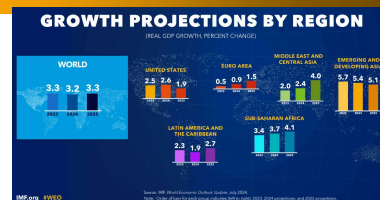
A somewhat surprising slowdown in some regions have been offset by some unexpected gains in some other areas.

Middle East and Central Asia:

- Oil production and regional conflicts continue to weigh on prospects.
- Growth forecast for 2024 in Saudi Arabia has been revised downward by 0.9 percentage point; the adjustment reflects **mainly the extension of oil production cuts (Russia)**.
- Upside marks brighter prospects for energy prices and contained conflict impact on oil supplies and logistics.

Critical Issues:

- De-dollarization initiatives?
- Regional conflicts
- Smooth trade flows and logistics



Market Summary > Brent Last Day Financial

72.35 USD

+13.99 (23.97%) ↑ past 5 years

Sep 16, 4:45 PM EDT • Disclaimer

NYMEX: BZWO0



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Source: IMF July 2024

20

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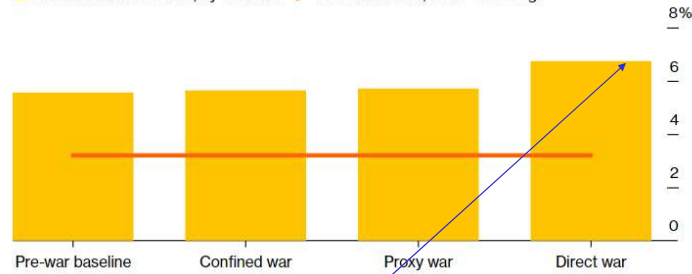
Considerations – Israel - Hamas Conflict / Impact / Scenario Analysis



War Could Push Global Inflation Higher

Global inflation in three scenarios for the Israel-Hamas conflict

■ 2024 inflation forecast, by scenario ↗ Actual inflation, 2015–2019 avg.



Source: Bloomberg Economics

Note: Global inflation rate in 2024, estimated using Bayesian global VAR

- A major oil shock (of over 80 – 120 bbl) would derail the worldwide effort to rein in prices.
- Leaving global inflation at c. 6.8% again this year.
- In the US, the Fed's 2% target would stay out of reach, and costly gasoline would be a hurdle for the Presidential Campaign.

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21

21

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Considerations

GLOBAL TRADE

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22

22

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World Economic Outlook & Conditions – Global Trade Recovery

- Global Trade makes a recovery!
- World trade growth is expected to recover to about 3¼ percent annually in 2024–25
 - From quasi-stagnation in 2023
- Will align with global GDP growth again.
 - 2024 and 2025 = over 3%
- The escalation of trade tensions could further raise near-term risks to inflation by increasing the cost of imported goods along the supply chain.
- Although tensions and cross-border trade restrictions have surged, harming trade between geo-politically distant blocs, the global trade-to-GDP ratio is expected to remain stable from 2024 and 2025.

Or, an almost or complete severing of trade ties = Decoupling!

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World Economic Outlook & Conditions – Decoupling

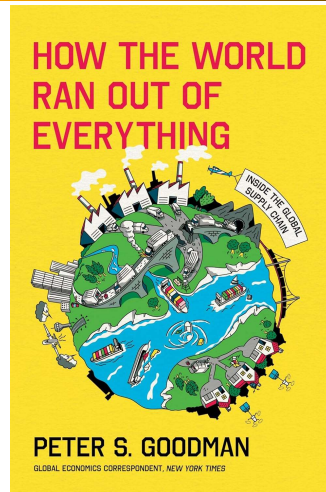
- **Decoupling** in global trade refers to the complete separation of economic ties between two or more economies.
- This can involve:
 - Dismantling trade and investment relationships
 - Severing supply chains
 - Establishing new economic partnerships
- Thought is that decoupling could have significant ramifications, including:
 - Reduced trade volumes
 - Increased tariffs and restrictions on investment
 - Serious impacts on supply chains
 - Global business impacts
 - Market crisis
- For example, China's share of US imports has dropped from 22% in 2018 to less than 14% in 2023.
- This is due in part to **tariffs**, which have led importers to look for new sources of supply.

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World Stage

An Interesting Resource – Global Supply Chain (Read or Kindle)

- How the World Ran Out of Everything: Inside the Global Supply Chain.
- By Peter S. Goodman, award-winning journalist.
- Reveals the fascinating innerworkings of our supply chain and the factors that have led to its constant, dangerous vulnerability.
- Reporting takes readers deep into the elaborate system, showcasing the triumphs and struggles of the human players who operate it—from factories in Asia and an almond grower in Northern California, to a group of striking railroad workers in Texas, to a truck driver who Goodman accompanies across hundreds of miles of the Great Plains.
- Weaves a powerful argument for reforming a supply chain to become truly reliable and resilient, demanding a radical redrawing of the bargain between labor and shareholders, and deeper attention paid to how we get the things we need.



25

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Source: IMF July 2024

25

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World Stage

World Economic Outlook & Conditions – Some Considerations

US fiscal and monetary actions and financial health
are inextricably linked to the global economy.

De-dollarization?

Also awaiting the outcome of the US Presidential election
and resultant actions, policies or sentiment.

So, we are not out of the woods yet!

26

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Source: IMF July 2024

26

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Considerations

THE U.S.

27

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27

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US Economic Outlook & Conditions – Some Considerations: Real GDP Growth

Retrospectively to 2023:

A series of compounding issues created a new global recession. Such as ...

- Rising energy and food prices
- Fiscal instability in the wake of the pandemic
- Consumer Insecurity

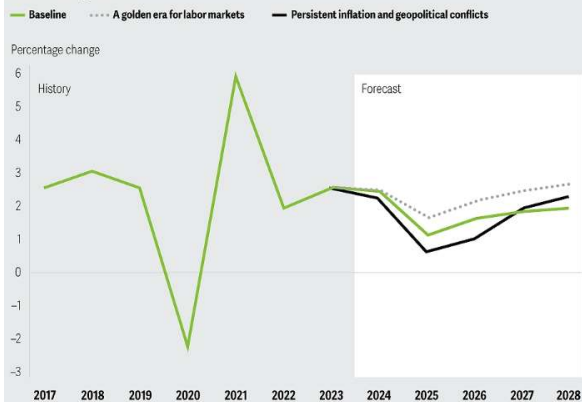
Led to global inflation in 2023 reached 6.9 percent.

- This was the highest annual increase in inflation since 1996

In 2024:

- Global growth is projected to be in line with the April 2024 World Economic Outlook (WEO) forecast, at 3.2 percent in 2024 and 3.3 percent in 2025.
- **Critical Issue:** Flat growth in the major groupings!

Real GDP growth



Source: Deloitte analysis.

Deloitte Insights | deloitte.com/insights.com

28

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28

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World Stage

The Big News – Fed Implements a "Jumbo" 50bp Rate Cut on 9/18!

THE BIG NEWS

Fed Implements a "Jumbo" 50 bp Rate Cut on 9/18!

29

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Where Are We?

The U.S.A.

Federal Funds Rate

- The federal funds rate, or Fed rate, is the interest rate that U.S. banks pay one another to borrow or loan money overnight. It also affects interest rates on everyday consumer products, such as credit cards or mortgages.
- The Federal Reserve adjusts the federal funds target rate range and monetary policy in response to developments in the economy.
- Adjusting rates helps the Fed achieve a dual mandate.
 - Keep prices stable / tame inflation
 - Maximize employment / growth
- The Fed raises interest rates when the economy starts overheating i.e. too much inflation
- Or,
- The Fed cuts interest rates when the economy looks weak - i.e. high unemployment.
- Other factors:
 - Gross domestic product (GDP)
 - Consumer spending and industrial production
 - Major events like a financial crisis, a global pandemic or a massive terrorist attack

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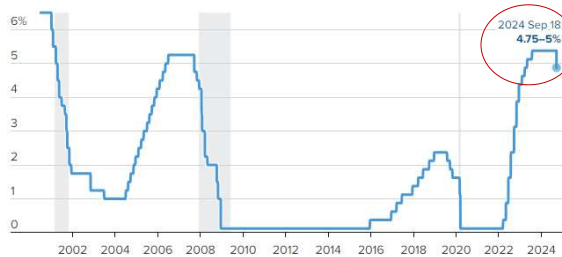
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The Big News – Fed Implements a "Jumbo" 50bp Rate Cut on 9/18!

- The Federal Open Market Committee chose to lower its key overnight borrowing rate by a half percentage point, or 50 basis points
- Amid signs that inflation was moderating, and the labor market was weakening.
- It was the first interest rate cut since the early days of the Covid pandemic.
- Represents first cut since the pandemic.
- Recognizes cooling of labor market.
- An aggressive start to its first easing campaign in four years.

Federal funds target rate July 2000–September 2024



Note: From December 2008 to present, the chart reflects the **midpoint** of the Federal Reserve's target range. The target rate began in 1982.
Shaded areas indicate recessions as defined by the National Bureau of Economic Research.
Source: Federal Reserve Bank of New York
Target rate as of Sept. 18, 2024



31

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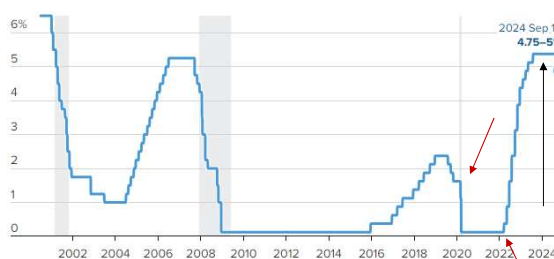
Where Are We?

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The Big News – Fed Implements a "Jumbo" 50bp Rate Cut on 9/18!

- The Fed last reduced rates on March 16, 2020.
- As part of an emergency response to an economic shutdown brought about by the spread of Covid-19.
- It began hiking in March 2022 as inflation was climbing to its highest level in more than 40 years, and last raised rates in July 2023.
- During the tightening campaign, the Fed raised rates 75 basis points four consecutive times.

Federal funds target rate July 2000–September 2024



Note: From December 2008 to present, the chart reflects the **midpoint** of the Federal Reserve's target range. The target rate began in 1982.
Shaded areas indicate recessions as defined by the National Bureau of Economic Research.
Source: Federal Reserve Bank of New York
Target rate as of Sept. 18, 2024



32

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The Big News – Fed Implements a "Jumbo" 50bp Rate Cut on 9/18! – Per The Fed ...

- "The Committee has gained greater confidence that inflation is moving sustainably toward 2 percent, and judges that the risks to achieving its employment and inflation goals are roughly in balance," the Federal Reserve statement said.
- The decision to ease came "in light of progress on inflation and the balance of risks."
 - ✓ Notably, the FOMC vote was 11-1.
 - ✓ Governor Michelle Bowman preferring a quarter-point move.
 - ✓ Bowman's dissent was the first by a Fed governor since 2005, though a number of regional presidents have cast "no" votes during the period.
- "We're trying to achieve a situation where we restore price stability without the kind of painful increase in unemployment that has come sometimes with this inflation. That's what we're trying to do, and I think you could take today's action as a sign of our strong commitment to achieve that goal,"
 - ✓ Chair Jerome Powell said at a news conference following the decision.

33

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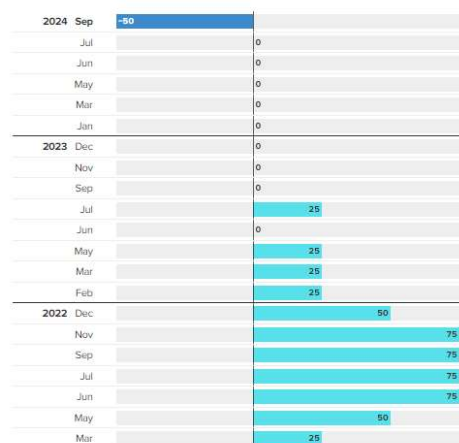
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The Big News – Fed Implements a "Jumbo" 50bp Rate Cut on 9/18!

- However, it sets the stage for future questions over how far the central bank should go before it stops cutting. There was a wide dispersion among members for where they see rates heading in future years.

Increases to the U.S. federal funds rate since 2022
Basis points



Source: Federal Reserve Bank of New York
Data as of Sept. 18, 2024



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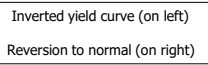
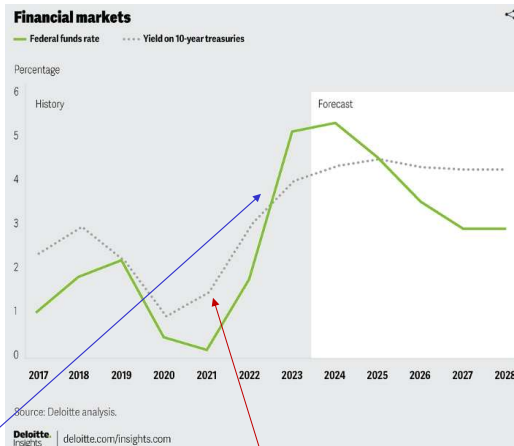
34

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US Economic Outlook & Conditions – Some Considerations: Financial & Capital Markets

- Projecting into a more normalized yield curve!



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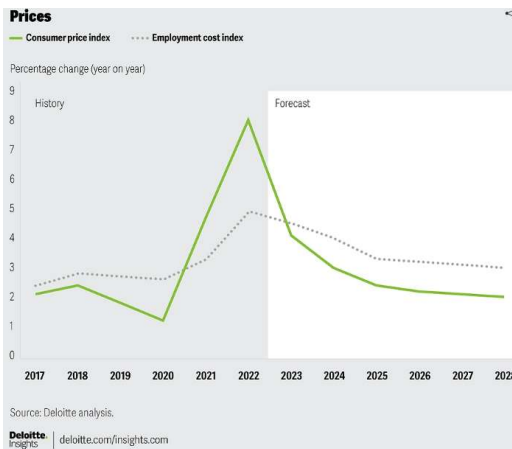
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35

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US Economic Outlook & Conditions – Some Considerations: Prices



- One purpose of using CPI is to generally aim to preserve the purchasing power of retirement pay and longer-term purchasing power.
- ECI, Employment Cost Index, measures private-sector wage increases.

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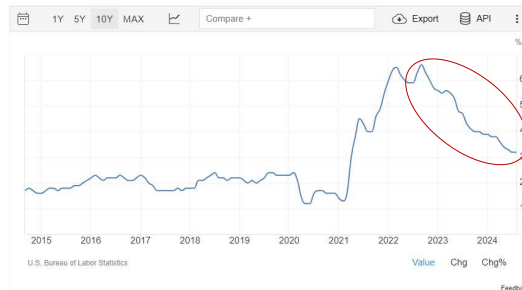
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36

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World Stage

World Economic Outlook & Conditions - Some Considerations: Inflation US (10 YR Core ex F&E)



Calendar	GMT	Reference	Actual	Previous	Consensus	TEForecast
2024-08-14	12:30 PM	Jul	3.2%	3.3%	3.2%	3.3%
2024-09-11	12:30 PM	Aug	3.2%	3.2%	3.2%	3.2%

- Matched July's figure of 3.2% and aligning with market expectations.
- Shelter index rose by 5.2%, accounting for more than seventy percent of the total 12-month increase in all items less food and energy index, up from 5.1% in July.
- Other indexes with notable increases over the last year include motor vehicle insurance (+16.5%), medical care (+3%), recreation (+1.6%), and education (+3.1%).

37

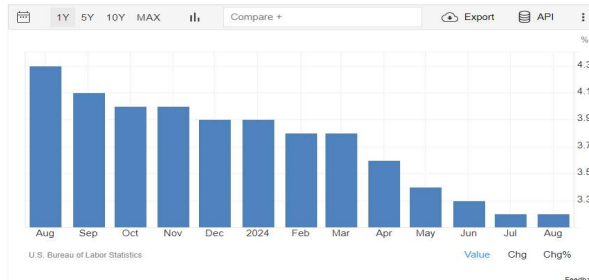
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37

Where Are We?

World Stage

World Economic Outlook & Conditions - Some Considerations: Inflation US (1 YR Core ex F&E)



Calendar	GMT	Reference	Actual	Previous	Consensus	TEForecast
2024-08-14	12:30 PM	Jul	3.2%	3.3%	3.2%	3.3%
2024-09-11	12:30 PM	Aug	3.2%	3.2%	3.2%	3.2%

- Matched July's figure and aligning with market expectations.
- Shelter index rose by 5.2%, accounting for more than seventy percent of the total 12-month increase in all items less food and energy index, up from 5.1% in July.
- Other indexes with notable increases over the last year include motor vehicle insurance (+16.5%), medical care (+3%), recreation (+1.6%), and education (+3.1%).

38

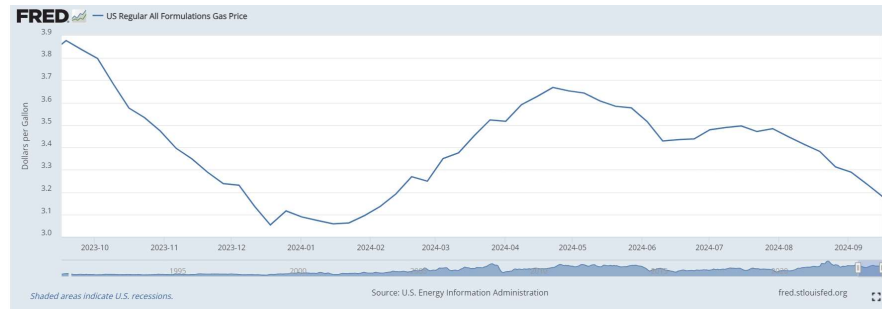
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38

Where Are We?

World Stage

US Economic Outlook & Conditions – Retail Gas Prices (1 Yr)



39

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39

Where Are We?

World Stage

US Economic Outlook & Conditions – Retail Gas Prices (5 Yr)



40

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40

Where Are We?

World Stage

US Economic Outlook & Conditions – Retail Gas Prices (10 Yr)



41

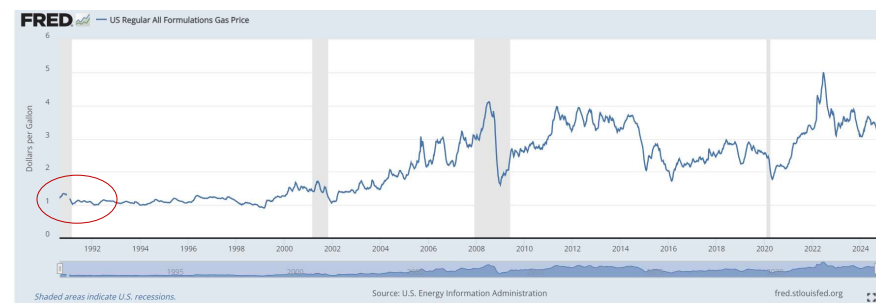
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41

Where Are We?

World Stage

US Economic Outlook & Conditions – Retail Gas Prices (30+ Yrs)



- Does anyone remember this? 😊

42

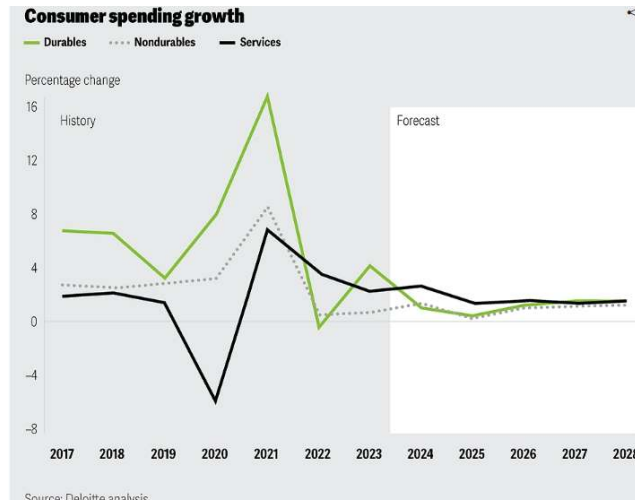
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42

Where Are We?

World Stage

US Economic Outlook & Conditions – Some Considerations: Consumer Spending Growth



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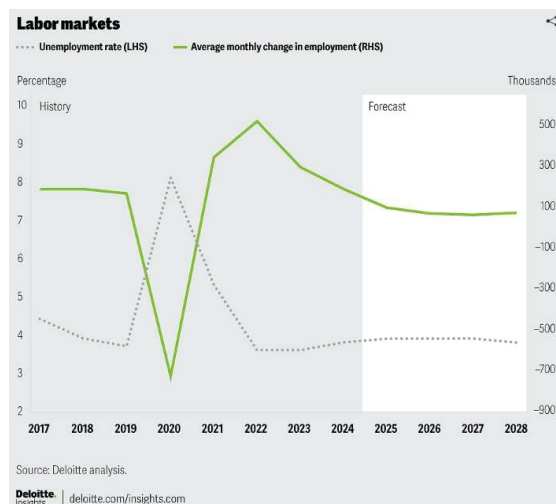
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43

Where Are We?

World Stage

US Economic Outlook & Conditions – Some Considerations: Labor Markets



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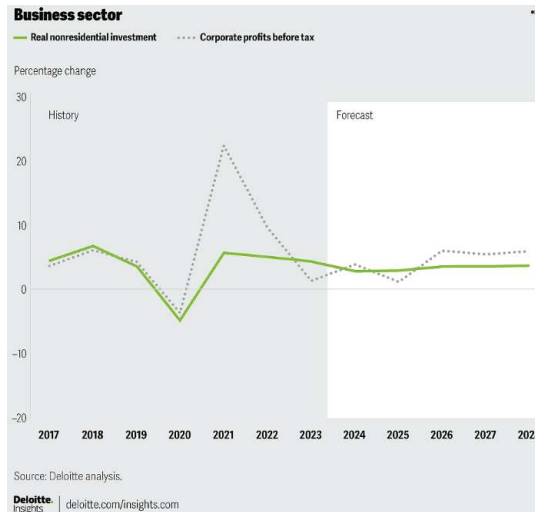
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44

Where Are We?

World Stage

US Economic Outlook & Conditions – Some Considerations: Business Investment



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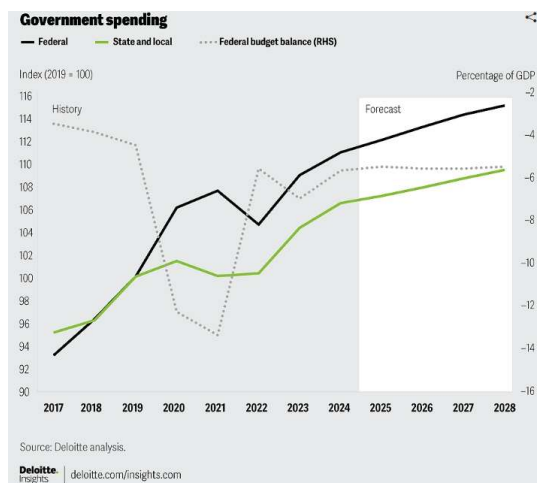
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Where Are We?

World Stage

US Economic Outlook & Conditions – Some Considerations: Government Spending

- The federal budget balance is the difference between the federal government's revenue and spending. It can be expressed as a positive number for a budget surplus or a negative number for a budget deficit.



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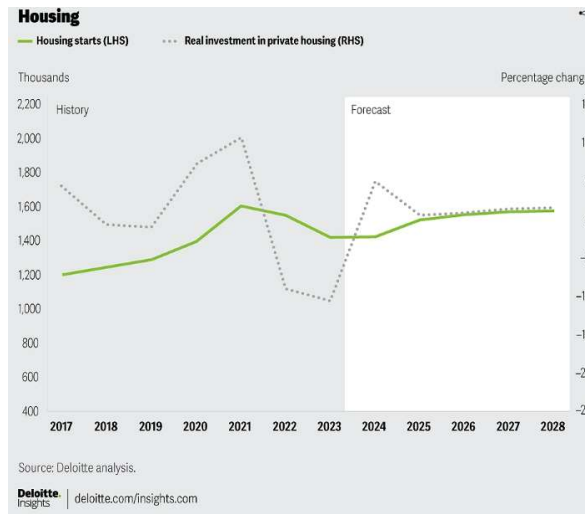
46

46

Where Are We?

World Stage

US Economic Outlook & Conditions – Some Considerations: Housing



47

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47

Where Are We?

World Stage

US Economic Outlook & Conditions – Housing – Build to Rent is Trending!

- As housing costs increase and demand for affordable homes rises.
- Typically 6-12 units per acre.
- BTR is generally lower-density than traditional multifamily, but varies greatly by developer style, attached versus detached and location.
- Pool, community center, fitness center; sometimes playgrounds, walking trails.
- Some communities have no amenities.
- Rental housing residents may have access to shared amenities if part of a master-planned community (MPC) that also has for-sale housing.
- Professionally managed.
- Onsite leasing office.

48

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Where Are We?

World Stage

US Economic Outlook & Conditions – Housing – Build to Rent is Trending!

- Some smaller properties do not have onsite leasing; companies with multifamily experience are common.
- The BTR sector is relatively new, with one quarter of properties built in the last three years.
- Horizontal BTR homes are typically smaller, with 1 to 3 bedrooms.
- Single-family detached and townhome properties typically feature 2 to 4 bedrooms.
- Horizontal BTR properties have an average square footage of 1,160 sq. ft. ⁽¹⁾ based on unit mixes and floor plans, similar to traditional MF.
- Single-family detached and townhome BTR properties range between 1,500 - 2,000 sq. ft.

49

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Where Are We?

The World Stage

U.S.A. - Markets

EQUITY AND CAPITAL MARKETS

50

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Where Are We?

The U.S.A.

Federal Funds Rate

- The Federal Reserve adjusts the federal funds target rate range and monetary policy in response to developments in the economy.
- Adjusting rates helps the Fed achieve a dual mandate.
 - Keep prices stable / tame inflation
 - Maximize employment / growth
- The Fed raises interest rates when the economy starts overheating i.e. too much inflation.

Or,
- The Fed cuts rates when the economy looks weak - i.e. high unemployment, signs or actual weakness in labor markets.
- Other factors:
 - Gross domestic product (GDP)
 - Consumer spending and industrial production
 - Major events like a financial crisis, a global pandemic or a massive terrorist attack

51

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Where Are We?

The U.S.A.

Capital Markets – 9/20 Close (Yahoo Finance Feed)

GT2:GOV
2 Year

3.75

GT5:GOV
5 Year

3.63

GT10:GOV
10 Year

3.88

GT30:GOV
30 Year

4.25

**So, a partially still an inverted yield curve
on the short-term end of the yield curve!**

52

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Where Are We?

The U.S.A.

Overlay of Yields: 2 yr and 5yr – Inverted vs. Normal Yields

2 year rate is greater than the 5 year rate, then normal

3.75 is GT 3.63

So, a partially still an inverted yield curve on the short-term end of the yield curve!



2020 – inverted yield curve (on left)
2021 – reverted to normal (on right)



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53

Recap

Where Are We?

The U.S.A.

2 Year Yield (10 Year Horizon)

VSCPA Nov 2021 0.52%

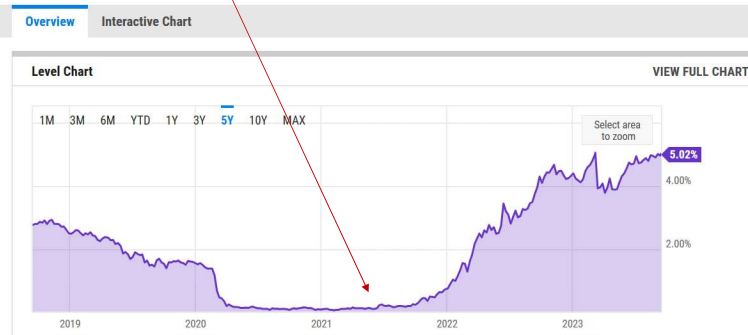
@ 9/20/22
3.95

@ 11/11/22
3.95

@ 5/17/23
4.12

2 Year Treasury Rate (I:2YTCLMR)

5.02% for Sep 15 2023



@ 12/7/23
4.60

@ 9/20/24
3.75

Observe: 2 year rate is higher than 30 year and 10 year = inverted!

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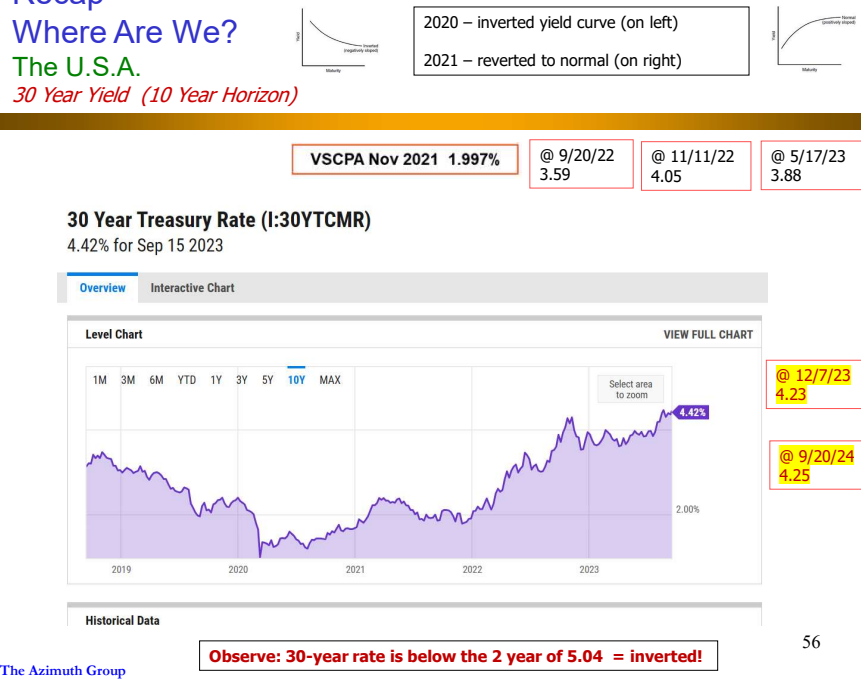
54

Recap
Where Are We?
The U.S.A.
10 Year Yield (10 Year Horizon)



55

Recap
Where Are We?
The U.S.A.
30 Year Yield (10 Year Horizon)



56

Where Are We?






The U.S.A.

Equity Markets – 9/20 Close (Yahoo Finance Feed)

Markets Overview

World Indices →

Americas

Name	Day Chart	Price	Change %
S&P 500		5,702.55	-0.19%
Dow 30		42,063.36	+0.09%
Nasdaq		17,948.32	-0.36%
Russell 2...		2,227.89	-1.10%
VIX		16.15	-1.10%

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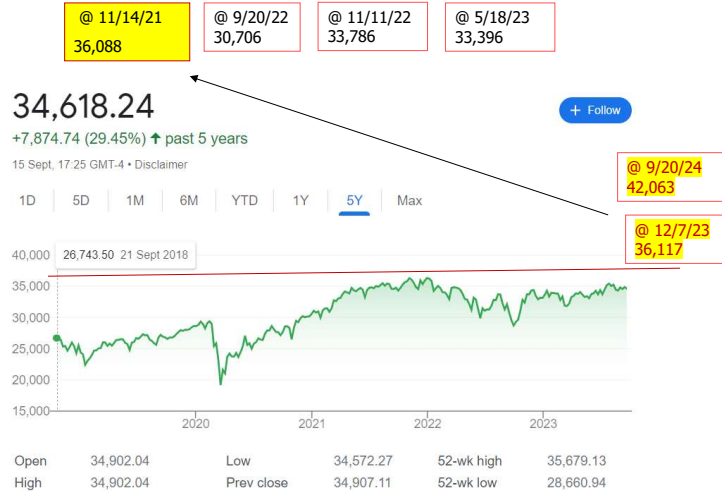
57

Where Are We?

The U.S.A.

DJIA (5 Year Horizon)

- In 2021, Dow was just shy of its 52-week high prior to onset of U.S. COVID-19 pandemic.
- Has reached new highs.
- Would suggest USD and markets are still a "GO TO" and anchor currency.
- Stocks have performed well through interest rate policy & debt limit debate.
- "Baked In" ?



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Where Are We?

The U.S.A.
NASDAQ (5 Year Horizon)

- In November 2021, the NASDAQ continued to rise to record highs ... amid sector rotation.
- Now poised above 2022 levels.
- Heading toward 2021 levels.



The Nasdaq Composite is an index comprised of around 3,000 stocks. While it features companies from all sectors, it has a **tech-heavy focus**. Nasdaq stocks include each FAANG of the so-called stocks — Facebook (FB), Amazon (AMZN), Apple (AAPL), Netflix (NFLX) and Google parent Alphabet (GOOGL).

- In mid-May had strong move since late March! Some AI Lift? Washing?

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59

Where Are We?

The U.S.A.
S&P 500 (5 Year Horizon)

- In November 2021, the S&P 500 continued to recover and make record highs on tech ... and big value rotation!
- Now approaching 2021 levels.



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Where Are We?

The U.S.A.

Consideration – Tech Stocks: "Greenwashing" and now ... "AI Washing"

- First there was "green washing" where companies exaggerated the environmental benefits of their products in order to boost sales.
- Now technology experts are warning us about "AI washing" an equally questionable tactic pursued by software and technology vendors to boost or exaggerate their artificial intelligence bona-fides, or when AI involvement is minimal.

61

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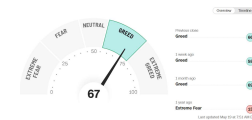
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Where Are We?

The U.S.A.

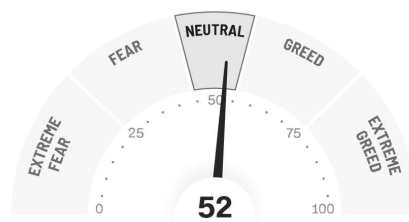
Fear & Greed Index

Seven indicators are measured on a scale from 0 to 100. The index is computed by taking an equal-weighted average of each. A reading of 50 is deemed neutral, with higher numbers signaling "greed." The indicators include:

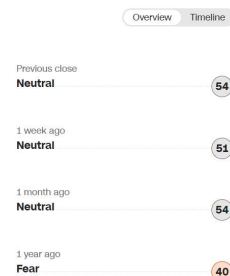


What Emotion is Driving the Market?

- The Fear and Greed Index was developed by CNN Business to measure how emotions influence how much investors are willing to pay for stocks.
- The index assumes that fear drives stocks lower while greed boosts stock values.
- CNN examines seven indicators that measure aspects of stock market behavior.



Last updated Sep 15 at 7:59:48 PM ET



- The Fear and Greed Index has been a reliable indicator of a turn in equity markets. The index sank to a low of 12 in Sept. 2008, when the S&P 500 fell to a three-year low in the aftermath of the Lehman Brothers bankruptcy and the near-demise of insurance giant AIG. By contrast, it traded over 90 in Sept. 2012 as global equities rallied following the Federal Reserve's third round of quantitative easing.
- On Mar. 12, 2020, during the rise of the COVID-19 pandemic, the index fell to an annual low of 2 when stocks plunged 10% and entered a bear market after President Trump announced a US travel ban due to the escalating coronavirus fears. By Nov. 2020, the index registered over 75 in "extreme greed" territory when optimism grew about a coronavirus vaccine.

62

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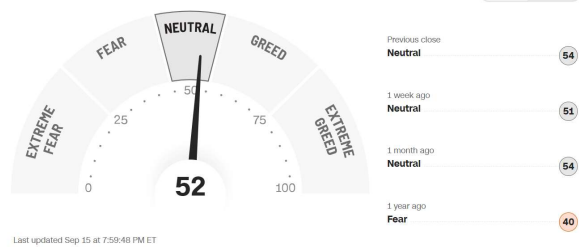
Where Are We? The U.S.A. Fear & Greed Index

Seven indicators are measured on a scale from 0 to 100. The index is computed by taking an equal-weighted average of each. A reading of 50 is deemed neutral, with higher numbers signaling "greed." The indicators include:



- **Stock Price Momentum:** A measure of the Standard & Poor's 500 Index (S&P 500) versus its 125-day moving average (MA).
- **Stock Price Strength:** The number of stocks hitting 52-week highs versus those hitting 52-week lows on the New York Stock Exchange (NYSE).
- **Stock Price Breadth:** Analyzing the trading volumes in rising stocks against declining stocks.
- **Put and Call Options:** The extent to which put options lag behind call options, signifying greed, or surpassing them, indicating fear.
- **Junk Bond Demand:** Measures the spread between yields on investment-grade bonds and junk bonds.
- **Market Volatility:** CNN measures the CBOE's Volatility Index (VIX) based on a 50-day MA.
- **Safe Haven Demand:** The difference in returns for stocks versus treasuries.

What Emotion is Driving the Market?



63

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Where Are We? World Stage

US Economic Outlook & Conditions – Some Considerations: (VIX) 9/20 Close

The Fear & Greed Index is a compilation of seven different indicators that measure some aspect of stock market behavior. They are:

1. Market momentum
2. Stock price strength
3. Stock price breadth
4. Put and call options
5. Junk bond demand
6. Market volatility
7. Safe haven demand

The index tracks how much these individual indicators deviate from their averages compared to how much they normally diverge (deviation)

The index gives each indicator equal weighting in calculating a score from 0 to 100, with 100 representing maximum greediness and 0 signaling maximum fear.

Fear & Greed Index

What emotion is driving the market now?
[Learn more about the index](#)



VIX is the ticker symbol and the popular name for the Chicago Board Options Exchange's CBOE Volatility Index, a popular measure of the stock market's expectation of volatility based on S&P 500 index options for next 30 days.

64

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Where Are We?

Debt Ceiling

Considerations

DEBT CEILING & BUDGET / SHUTDOWN

Potential Headwinds?

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Where Are We?

Debt Ceiling

Considerations - What Is The Debt Ceiling or Limit?

- Like in some personal finances ...
- ... governments must borrow when they spend more money than they receive.
- They issue bonds (long-term capital markets), which are IOUs that promise to repay the money in the future and make regular interest payments.
- Government debt is the total sum of all this borrowed money.
- The debt ceiling, which Congress established a century ago, is the maximum amount the government can borrow. It's a limit on the national debt.
- Though they sound similar, **deficit and debt are two different things**.
 - A deficit is a budget shortfall, whereas debt is the running total of all deficits and surpluses.
 - **Deficits add to the debt, while surpluses reduce it.**

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Where Are We?

Debt Ceiling

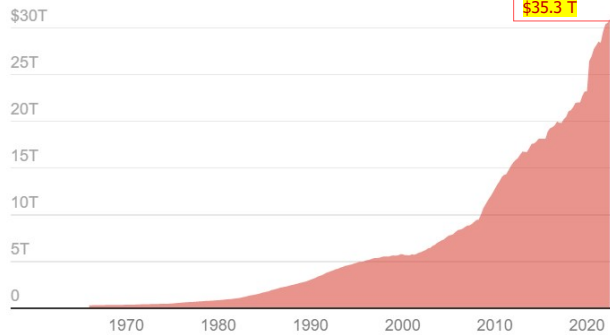
Considerations – National Debt

Retrospectively ...

- In January, 2023, U.S. government debt was \$31.4 Trillion.
- After months of debate, lawmakers voted in June of that year to suspend the ceiling until January 2025.
- On August 1, 2023, Fitch Ratings, one of the country's three major credit rating agencies, announced that it had downgraded the US credit rating from AAA to AA+.
- Fitch had been reassessing the nation's creditworthiness over the prior two months, putting the US on negative watch in May 2023.

A mountain of red ink

U.S. government debt has more than tripled in the past 15 years, requiring Congress to raise the debt ceiling repeatedly.



All data are quarterly figures from FRED except for the most recent figure, which equates to the current debt ceiling.

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Where Are We?

Debt Ceiling

Considerations

- If the debt ceiling isn't raised before the Treasury Department exhausts its options, decisions will have to be made about who gets paid with daily tax revenues.
- Further borrowing will not be possible.
- Government employees or contractors may not be paid in full. Loans to small businesses or college students may stop.
- On the way there, it becomes more expensive to insure potential credit losses.

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68

Where Are We?

Debt Ceiling

Considerations

When the government can't pay all its bills, it is technically in default.

- Assuming interest payments get top priority ... could also:
 - Cause every family facing cuts or impaired services or benefits in some way
 - Delay Social Security payments
 - Veterans could receive IOU's instead of actual monetary benefits
 - Federal employees could be furloughed
 - Catastrophic to capital and financial markets ...
 - ... where the creditworthiness of the U.S. is the cornerstone of the global financial system
 - Trigger market crashes
 - Crush businesses (especially leveraged or net users of cash)
 - Dampen consumer confidence

69

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Where Are We?

Debt Ceiling

Considerations

- Assuming interest payments get top priority ... could also: (continued)
 - Pose other threats and shocks to the financial system
 - Cause a "contagion" to other sovereign country economies and financial systems
 - Adversely shock and weaken our trading partners in commodities markets
 - Catapult the U.S. economy into a recession
 - Treasuries could tank
 - Interest rates could spike and dollar sink ... causing global economies to reel
- This is a reality, against a scenario where the debt limit may need to be raised

70

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Where Are We?

Debt Ceiling

Considerations - What Happens Next?

- It's not clear whether Republicans in the House will agree to lifting the debt ceiling without strings attached.
 - Spending Cuts
 - Links to funds for support for Ukraine-Russia and Israel-Gaza conflicts
 - Any COVID clawbacks
 - Immigration
 - Other?

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Virginia Society of
Certified Public
Accountants

DIGITAL PAYMENTS & FINANCIAL TECHNOLOGY

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- Payment & settlement systems are mechanisms established to facilitate the clearing and settlement of trade, monetary and financial transactions.
- Traditional methods of paying for everything from everyday consumer items, to settling business-to-business (B2B) arrangements, and even cross-border transactions are being solidly challenged and substituted by a host of alternative payment methods, domestically and around the globe.
- An Alternative Payment Method (APM) is any way to pay for goods or services that (may not) involve cash, checks, or a debit or credit card.*

*Note: Depends on the definition and situation of the exchanging parties

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- In recent years, APM's have grown in popularity, offering consumers, consumers and even financial institutions an assortment of ways to conduct and settle financial transactions, in order to keep up with demand.
- Options abound and innovations in methods and technologies include, for example: Biometric Authentication and Facial Recognition, Digitalization, Blockchain and Cryptocurrencies, AI and Machine Learning, Mobile and Contactless Payments, Open Banking and API's, and Virtual Cards to name a few.
- These options can often be more effective, convenient, or affordable than traditional methods.

74

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- But no one APM is dominant, and preferences vary significantly across geographic location and demographics.
- APM's are actively in use now, and will become even more prevalent in our future.

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Alternative Payments

Considerations

Traditional Methods ... are still with us ... and Cash is still King!

- Traditional payment methods for payments are still actively in use.
- Cash is still "King"! 
- Despite the prospect of cashless societies, paper-based payments like cheques and cash still play important roles.
- Card payments are growing swiftly and being used for ever smaller payments.
- Debit and credit cards are being more cross-border, and online card payments are increasing everywhere, in particular in the United States.
- Even with the simplicity of point-of-sale and mobile applications, cash will likely not completely replace all electronic methods, in the near-term.
- However, cash is being challenged by alternative payments.



76

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Alternative Payments

Considerations

Traditional Methods vs. Embracing Digitalization- Security & Privacy

Fed Study Findings:

- The most-cited reason American consumers gave for not embracing the digitization of payment processing was concerns over security.
- While physical data, such as stolen debit and credit cards, are more valuable in the underground cybercriminal market, there is a lingering feeling among consumers that newer payment systems are more vulnerable.
- Unfortunately for payment processors everywhere, recent cyber-crimes have made front page headlines
- The list of “worst data breaches in history” needs constant updating.

A “data breach” happens when someone who isn’t supposed to access certain information manages to get their hands on it. This information could be anything from personal data to financial records held by an organization.

77

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Alternative Payments

Considerations

Traditional Methods vs. Embracing Digitalization & The Impact of High-Profile Data Breaches

- The effects of these breaches are long-lasting, not only for consumers’ opinions on digital payment security, but on the businesses themselves.

Some Examples:

- Target shares have tumbled after their high-profile data breach, where millions of customers’ credit card information was exposed. 
- The hack of Sony Playstation’s online network of video gamers’ credit card information resulted in hundreds of thousands of unsubscribers. 
- Russian hackers stole millions of users’ email addresses and passwords from one of the most trusted and secure companies:

Google!



78

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Alternative Payments

Considerations

Traditional Methods vs. Embracing Digitalization & The Impact of High-Profile Data Breaches

Some Links:

WIKIPEDIA:

https://en.wikipedia.org/wiki/List_of_data_breaches

- North America (reported in part due to relatively stricter disclosure laws).
- The list includes those involving the theft or compromise of **30,000 or more records**.
- Although many more smaller breaches occur.
- Breaches of large organizations where the number of records is still unknown are also listed.
- In addition, the various methods used in the breaches are listed, with **hacking** being the most common.

79

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Alternative Payments

Considerations

Traditional Methods vs. Embracing Digitalization & The Impact of High-Profile Data Breaches

Some Links:

Center for Strategic and International Studies: Timeline.

<https://www.csis.org/programs/strategic-technologies-program/significant-cyber-incidents>

- This timeline records significant cyber incidents since 2006, focusing on cyber attacks on government agencies, defense and high-tech companies, or economic crimes with **losses of more than a one-million dollars (\$1M)**.

80

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Considerations

Traditional Methods vs. Embracing Digitalization & The Impact of High-Profile Data Breaches

Some Links:

Information Is Beautiful:

<https://informationisbeautiful.net/visualizations/worlds-biggest-data-breaches-hacks/>

- **World's** Biggest Data Breaches & Hacks.
- Selected events **over 30,000 records stolen**.

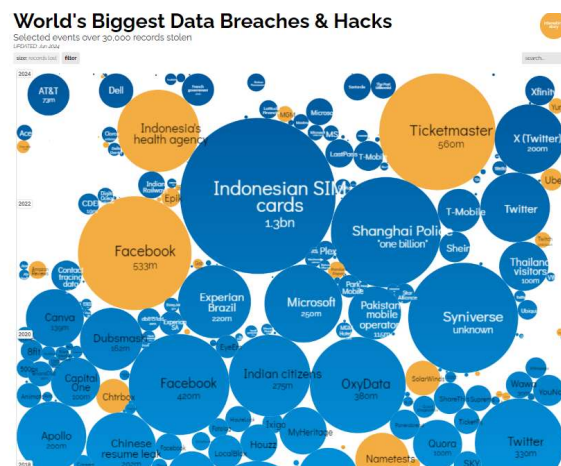
Alternative Payments

Considerations

Traditional Methods vs. Embracing Digitalization & The Impact of High-Profile Data Breaches

Some Links:

Information Is Beautiful:



Alternative Payments

Considerations

Traditional Payments – Some Common Types

- **Cash** - is a physical currency, such as banknotes and coins. It is widely accepted for in-person transactions, although its use is rapidly declining in favor of electronic methods.
- **Checks** - are written orders instructing a traditional bank to pay a specified amount of money from one account to another. While check usage is declining, it is still a particularly popular B2B payment method. In fact, paper checks are still the most commonly used type of non-cash payment method in the U.S.
- **Credit cards** - like Visa, Mastercard, and American Express, allow consumers to make purchases on credit. Cardholders repay the borrowed amount, often with interest, at a later date. Credit cards are widely accepted around the world.
- **Debit cards** - are linked to a bank account and allow users to make payments directly from their account balance. They are commonly used for both in-person and online purchases.

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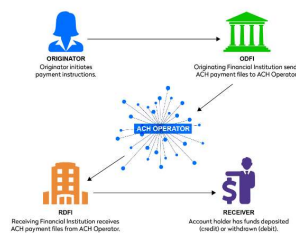
83

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Considerations

Traditional Payments – Some Common Types

- **Prepaid cards and gift certificates/vouchers** - are reloadable payment cards that consumers can use for transactions. They are not linked to a bank account or credit line, making them a useful alternative for budgeting and online transactions.
- **Bank transfers** - involve moving money from one bank account to another, either electronically or through a bank branch. This method of bank transfer is often used for large transactions, salary deposits, and international transfers.
- **Direct debits** - allow businesses to withdraw funds directly from a customer's bank. They are often used to pay recurring bills, such as utility bills, mortgage payments or subscriptions. (e.g. NACHA's ACH)



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Alternative Payments

Considerations

Alternative Payments – Info

Alternative payments:

- Also referred to as "**non-traditional**" or "**emerging payment**" methods, are generally non-cash and credit or debit card-based payment options.
- Are improving financial inclusion, convenience, security, and innovation.
- Their market value is projected to reach more than \$15 trillion by 2027, with a CAGR of 16.3% over the period 2017-2027.
- They can be used for Business, Consumer, and Peer transactions (i.e. P2P or C2B, G, or combinations of parties etc.)

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Alternative Payments

Considerations

Alternative Payments – Tools

- **Digital wallets or mobile wallets** - also known as "electronic wallets or e-wallets" allow users to store their debit or credit card, or bank account information, securely on a mobile device. They allow quick and contactless payments at physical stores, online retailers, and in-app purchases.

Examples of well-known digital wallets include:

- ✓ Apple Pay
- ✓ Google Pay
- ✓ Samsung Pay
- ✓ WeChat Pay

- **Mobile payment apps** - enable users to send money to friends and family, split bills, and make online payments using linked bank accounts or credit cards.

Examples of well-know apps include:

- ✓ Venmo
- ✓ Alipay
- ✓ PayPal
- ✓ CashApp

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Alternative Payments

Considerations

Alternative Payments – Tools

Examples of well-know apps include: (continued)

✓ CashApp

- Cash App is a financial platform providing services through its bank partners, Lincoln Savings Bank and Sutton Bank. It also offers investing services through Cash App Investing LLC, which is a registered broker-dealer and a Financial Industry Regulatory Authority (FINRA) member.

To use Cash App:

- ✓ Download the app.
- ✓ Set up your account, you can connect it to your bank account to start using the platform.
- ✓ You can a link your Visa, MasterCard, American Express and Discover debit and credit cards.
- ✓ However, if you use a credit card as a payment method, Cash App may charge a processing fee.
- ✓ Each individual and business using Cash App has a username that you use to send or request funds. Alternatively, you can search by name, email address or phone number.

87

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Cost

Free to download and use basic services

Standout features

App allows users to invest money in individual stocks as well as buy and sell bitcoin

Availability

iOS or Android

Transfer speed

1 to 3 business days or instant cash-out deposits for a 1.5% fee (25 cent minimum)

Links to accounts

Yes, bank accounts and credit cards

Security features

Data encryption and fraud detection technology; unique, one-time login codes, two-factor authentication

87

Alternative Payments

Considerations

Alternative Payments – Pay Pal

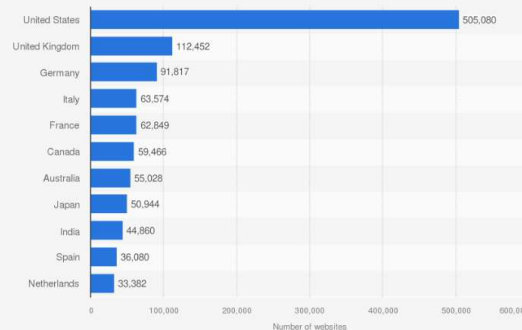
- E-commerce brands have tailored their websites to improve the experience for their digital shoppers.

- **20 billion annual transactions**, and in use in 200+ markets.

- As of March 2024, PayPal had **426 million active users**, which includes both consumers and merchants. This makes PayPal the world's leading payment processor, with a 45% market share.

PREVALENCE OF PAYPAL

Number of websites that have PayPal as digital payment solution across various countries and territories in the world as of October 9, 2023



Source:
SimilarTech
© Statista 2023

Additional information:
Worldwide, Statista, October 9, 2023; 1,611,522 websites in total. The source separates between "websites" and "unique" this further.

88

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Alternative Payments

Considerations

Alternative Payments – Pay Pal

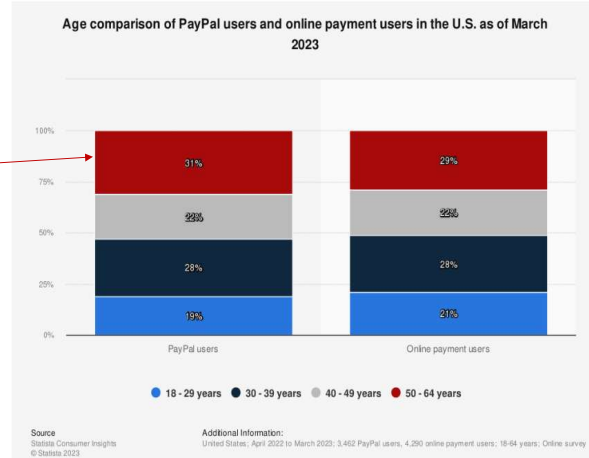
- Largest user base across the alternative payment spectrum, PayPal users provide a very accurate representation of the online payment landscape.

- 31 percent of users were between 50-64 years old – the largest age group in the survey!!!

- The older generation holds steady with those elder millennials.

- Story: is that even older generations are turning to alternative payment methods to complete their purchases, which may likely dispel some myths!

AVERAGE USER AGE MAY SHOCK YOU



89

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89

Alternative Payments

Considerations

Alternative Payments – Tools

- **Cryptocurrencies** - often referred to as "crypto" are decentralized digital currencies that operate on blockchain technology. They offer a secure way to conduct transactions across borders. In recent years, they have been rapidly gaining mainstream acceptance as a form of payment by some businesses and merchants.

Notable examples of cryptocurrencies include:

- ✓ Bitcoin
- ✓ Ethereum
- ✓ Litecoin

- **Contactless payments** - involve tapping or waving a card or mobile device near a payment terminal equipped with near-field communication (NFC) technology. This approach reduces physical contact during transactions and enhances speed and security.

90

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Alternative Payments

Considerations

Alternative Payments – Tools

- **QR code payments** - involve scanning a QR code displayed at a merchant's point of sale (POS) using a mobile app. This method is prevalent in China, where Alipay and WeChat Pay are the most popular payment method methods.
- **Biometric payments** - rely on the unique physical characteristics of users to authenticate transactions. They match users' input with their previously stored information.

Biometrics are increasingly being used to make secure and convenient payments:

- ✓ Fingerprint
- ✓ Voice
- ✓ Facial recognition
- ✓ Retinal

... Linger Privacy Concerns!

91

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Alternative Payments

Considerations

Alternative Payments – Tools

- **Peer-to-peer (P2P) payments** - are payments made using platforms that enable individuals to send money directly to one another using email addresses or mobile phone numbers.

Popular examples of P2P platforms include:

- ✓ Zelle
- ✓ Wise (previously TransferWise)

- **Wearable payments** - refers to payments made using technology built into wearable devices. They enable users to make payments by simply tapping their wearable devices on compatible terminals.

Popular examples of devices are:

- ✓ Smartwatches
- ✓ Fitness trackers
- ✓ Jewelry
- ✓ Bags

92

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Alternative Payments

Considerations

Alternative Payments – Tools

- **Buy-Now-Pay-Later (BNPL/Installments)** – With BNPL, customers can purchase a product through a third party, which pays the business right away. Then, they repay the third party in one lump sum or installments (fees and interest vary).

Often interest-free. Increasingly popular in online retail.

Most companies require customers to repay the amount via a debit card, credit card, or bank account.

Emerging examples include:

- ✓ PayPal Credit
- ✓ Klarna
- ✓ Afterpay

93

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93

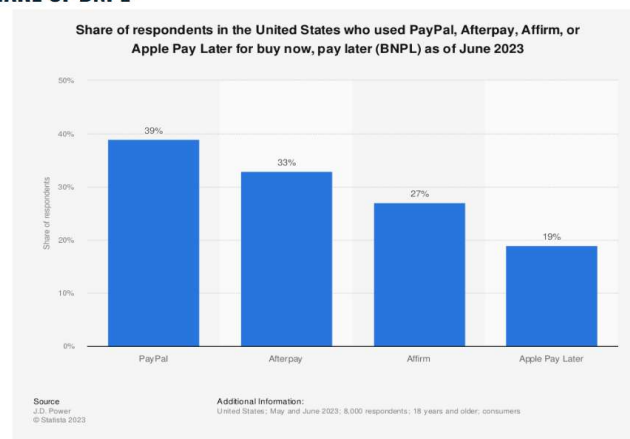
Alternative Payments

Considerations

Alternative Payments – Tools

- PayPal is a leading brand consumers use for BNPL purchases, according to J.D. Power.
- In a recent survey, they found that PayPal (used by 39 percent of consumers) and outpaced other notable brands including Afterpay (33 percent), Affirm (27 percent) and Apple Pay Later (19 percent).

SHARE OF BNPL



94

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Alternative Payments

Considerations

Alternative Payments – Tools

- **Virtual Cards** - A virtual card is a disposable credit/debit card number that is linked to your existing card but often expires after a single transaction or within 24 hours of being issued.
- With a virtual card, you don't have to share your real credit/debit card with a business, making it one of the most secure alternative online payment methods.
- Virtual cards can be generated instantly and for free via your banking app.
- To make an online payment, type in the new virtual card numbers, and your original card will be charged.
- To make an offline purchase, add a virtual card to Google or Apple Pay and tap with your device.

95

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95

Alternative Payments

Considerations

Alternative Payments – Tools



- **Instant Payments** – is an improvement upon the Real Time Payments initiatives before 2020. FedNow is an instant payment service developed by the Federal Reserve for depository institutions in the United States, which allows individuals and businesses to send and receive money.

The service launched on July 20, 2023. Banks will be able to build products on top of the FedNow platform.

- It operates on a 24-hour, 365-days-a-year basis, as opposed to the older FedACH system that was closed on weekends and holidays.
- FedNow charges financial institutions a transaction cost of \$0.043 per transaction.
- Instant payments with FedNow can accomplish many of the improvements for which a central bank digital currency (CBDC) was proposed.

96

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Alternative Payments

Considerations

Global Payments Modernization

Alternative payments are central to Global Payments Modernization.

Existing payments systems lack the strategic value financial institutions, stakeholders and eco-system partners need today.

They need a modernized payments infrastructure that reduces friction by connecting traditional banks, payment operators, clearing and settlement mechanisms (CSMs), including blockchain and FinTechs, while employing a marketplace/eco-system approach.

97

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97

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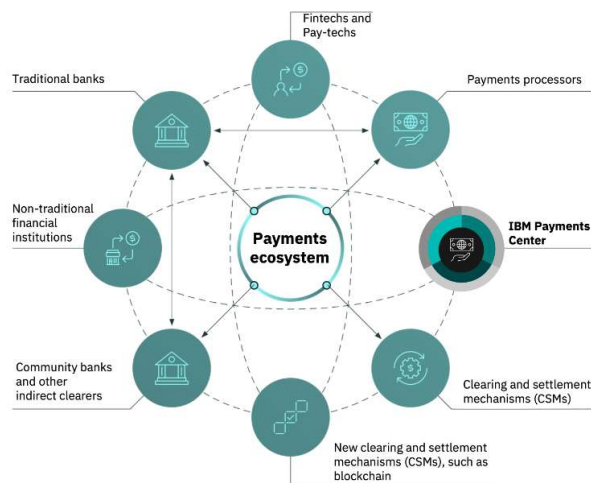
Considerations

A Visual Example of APM Eco-system: IBM Payment System Vision

A global network of payments ecosystems to enable rapid, multi-industry transformation through a secured, stable and scalable framework on an open and collaborative marketplace.

Some Keys:

- Cloud Computing
- AI
- FinTech
- API's



98

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98

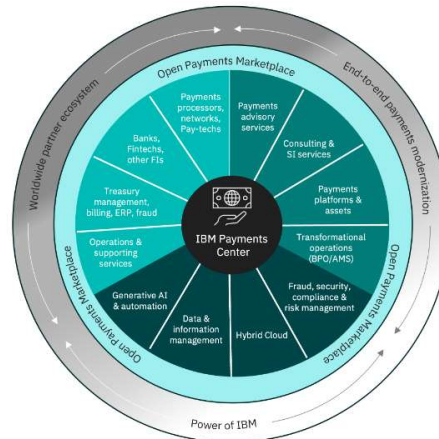
Alternative Payments

Considerations

A Visual Example of APM Eco-system: IBM Payment System Vision

Center offers:

- An approach to a global payments ecosystem offers consulting, architecture, and engineering services, using standardized payments infrastructure, through a marketplace approach.
- Business process outsourcing through Payments-as-a-Service (PAYaaS) platform. This allows businesses to reduce the infrastructure and operational costs of current payment systems.
- Expertise leveraging multiple cloud models.
- Consulting and Technology to reduce infrastructure costs, enhance operational efficiency, and improve customer experience for financial institutions and businesses.



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Alternative Payments

Considerations

A Visual Example of APM Eco-system: IBM Payment System Vision

A global network of payments ecosystems to enable rapid, multi-industry transformation through a secured, stable and scalable framework on an open and collaborative marketplace.

Some Keys:

Cloud Computing in Payments, also known as “cloud-based payments” ...

- Is a payment processing architecture that uses cloud computing systems to process and accept payments online.
- **Cloud computing** refers to the on-demand delivery of IT resources over the internet, such as servers, storage, and databases, from a cloud provider. In cloud-based payments, the cloud is a cluster of servers that host data remotely, allowing businesses to collect payments from customers around the world.

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Alternative Payments

Considerations

A Visual Example of APM Eco-system: IBM Payment System Vision

A global network of payments ecosystems to enable rapid, multi-industry transformation through a secured, stable and scalable framework on an open and collaborative marketplace.

Some Keys:

AI in Payments ...

- Means using artificial intelligence technologies to streamline and enhance various aspects of financial transactions and payment processes.
- These technologies leverage algorithms, machine learning, and data analytics to automate tasks, improve accuracy, detect fraud, and optimize decision-making.

101

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Alternative Payments

Considerations

A Visual Example of APM Eco-system: IBM Payment System Vision

A global network of payments ecosystems to enable rapid, multi-industry transformation through a secured, stable and scalable framework on an open and collaborative marketplace.

Some Keys:

AI in Payments ... (continued)

- Payments AI uses artificial intelligence to route transactions to the best gateway and bank to increase your conversions.
- Robo-advising
- GenAI-powered chatbots and virtual assistants facilitate conversational payments, enabling users to make transactions, check balances and receive support through natural language interactions. This is an important value-added service to attract customers and helps with the ease of making payments.

102

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102

Alternative Payments

Considerations

A Visual Example of APM Eco-system: Financial Technology "FinTech"

A global network of payments ecosystems to enable rapid, multi-industry transformation through a secured, stable and scalable framework on an open and collaborative marketplace.

Some Keys:

Financial Technology "FinTech" ...

- Is a combination of the words "financial" and "technology," refers to software that seeks to make financial services and processes easier, faster and more secure.
- Is a term that refers to the use of technology to improve and automate financial services and products for consumers and businesses.
- Can include software, mobile apps, and algorithms used on computers and smartphones.

103

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103

Alternative Payments

Considerations

A Visual Example of APM Eco-system: Financial Technology "FinTech"

A global network of payments ecosystems to enable rapid, multi-industry transformation through a secured, stable and scalable framework on an open and collaborative marketplace.

Some Keys:

Financial Technology "FinTech" ...

- The goal of Fintech is to help people better manage their finances, and it can be applied to many areas, including banking, insurance, investing, and payments:
 - ✓ Mobile banking - checking account balances using a bank's app
 - ✓ Online lending platforms
 - ✓ Digital payment systems - sending money to friends using a wallet app i.e. Venmo (i.e. P2P)
 - ✓ Robo-advisors
 - ✓ Blockchain-based applications – cryptocurrencies like Bitcoin

104

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104

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Considerations

A Visual Example of APM Eco-system: Financial Technology "FinTech"

A global network of payments ecosystems to enable rapid, multi-industry transformation through a secured, stable and scalable framework on an open and collaborative marketplace.

Some Keys:

Financial Technology "FinTech" ...

- Also encompasses more complex technologies, like blockchain networks that house encrypted transactions.
- Is a growing field that's becoming more integrated into everyday life.
- The global fintech market was valued at USD 294.74 billion in 2023 and is projected to be worth USD 340.10 billion in 2024 and reach USD 1,152.06 billion by 2032, exhibiting a CAGR of 16.5% during the forecast period (2024-2032).

105

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105

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Considerations

A Visual Example of APM Eco-system: IBM Payment System Vision

A global network of payments ecosystems to enable rapid, multi-industry transformation through a secured, stable and scalable framework on an open and collaborative marketplace.

Some Keys:

API's in Payments ...

- Payment APIs, or "application programming interfaces", are **web scripts** that connect and enable apps, online stores, eCommerce sites to payment processors and gateways, by ensuring communication between all entities involved in the payment process.
- They allow businesses to accept and process payments, manage transactions, and automate billing.
- They can enhance the security transactions, using secure encryption methods to protect data and maintain compliance with the Payment Card Industry Data Security Standards (PCI DSS), which reduces the potential risk of data breaches and fraud.

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Alternative Payments

Considerations

Payments: An Indication of Global Reach and Usage

Payment methods around the world

Payment Methods	Worldwide	North America	Latin America	Europe	Asia Pacific	Middle East & Africa
Digital / mobile wallet	44.5%	29.3%	19.8%	26.4%	60.2%	14.4%
Credit card	22.8%	32%	36.5%	18.9%	19.1%	28%
Debit card	12.8%	20.1%	16.3%	18.8%	5.8%	13.8%
Bank transfer	7.7%	5.8%	9.5%	13%	6.5%	15%
Cash on delivery	3.3%	0.7%	5.5%	3.3%	4.1%	16.4%
Charge & deferred debit card	3.3%	7.4%	2.6%	4.6%	0.8%	3.4%
Buy now pay later	2.1%	1.6%	0%	7.4%	0.6%	-
Direct Debit	1.2%	0.8%	1.3%	4%	0.3%	1.8%
Pre-paid card	1.1%	0.9%	1.4%	1.2%	1.1%	4%
PostPay	0.9%	0.9%	5.4%	0.1%	1%	-
Other	0.4%	-	0.8%	1.2%	0.3%	1.3%
PrePay	0.4%	0.4%	0.8%	1.1%	0.2%	1.8%

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Considerations

Alternative Payments: Emerging / Trending

Central Bank Digital Currencies (CBDCs)

- Central banks are exploring digital currencies and digital assets as a way to:
 - ✓ Improve payment efficiency.
 - ✓ Reduce printing and storage costs.
 - ✓ Reduce the need to transport physical cash.

Open banking

- Uses open APIs to allow third-party developers to build applications and services around financial institutions. This can help financial institutions create new revenue models and increase financial transparency.

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108

Alternative Payments

Considerations

Alternative Payments: Emerging / Trending – Open Banking

Open banking promises deeper collaboration and innovation



* Source: Discover

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109

Alternative Payments

Considerations

Alternative Payments: Emerging / Trending – Risk Management, Fraud Prevention, Security



* Source: Discover

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110

Alternative Payments

Considerations

Alternative Payments: Emerging / Trending – Web 1.0, Web 2.0

- In Web 1.0, the information that entered the Internet was generated by site owners
- In the era of Web 2.0, content can be created and shared by users.

This is where are today!

111

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Alternative Payments

Considerations

Alternative Payments: Emerging / Trending – Blockchain

- Blockchain - is a compound word– here the 'blocks' are the records of data, and the 'chains' are the links each record has with each other.
- A blockchain is a transparent and decentralised database (called a distributed ledger) which keeps track of every single peer-to-peer transaction, in real time. Transparent in the sense that anyone can view a public blockchain.
- Decentralised in that all users possess identical copies of that blockchain and that no one person or authority has governing power over that blockchain or its uses.
- Developments and features are agreed on by way of reaching a majority consensus by its users.
- Every transaction is recorded and stored as a block of information. Each block is defined by a block-number and stores transaction data, including the transaction amount and a record of which wallets the transaction took place between.

112

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Alternative Payments

Considerations

Alternative Payments: Emerging / Trending – Blockchain

Some fundamentals:

- Each valid exchange of data results in a transaction ID - a unique code for each transaction. Securely possessing a 'private key' or password, users can ensure that their funds or digital items are accessible exclusively to themselves.
- Each block is 'mined' or rather, cryptographically verified, to authenticate and validate the transactions occurring within that block.
- This process results in an 'immutable' (uneditable) database that is always available (decentralised) with all users certain they all hold the same verifiably correct information as all other users.
- Removes the need for central points of data reliability
- Removes the use of unnecessary intermediaries or 'middle men'
- Allows for "Trustless" behaviour and transactions

113

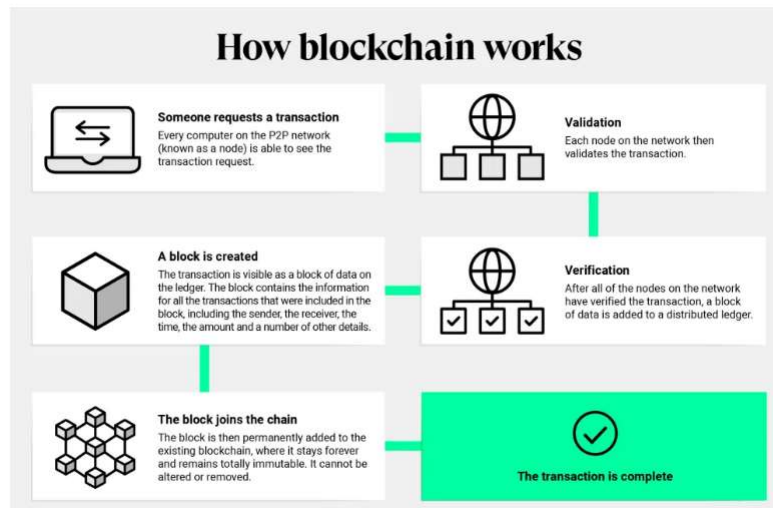
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Considerations

Alternative Payments: Emerging / Trending – Blockchain



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114

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Considerations

Alternative Payments: Emerging / Trending – Blockchain Challenges

- Blockchain Hacking
- Environmental Impacts ... energy
- Equity of Access

115

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Alternative Payments

Considerations

Alternative Payments: Emerging / Trending – Tokenization

Tokenization in Payments ...

- Refers to a process by which personal information or a piece of sensitive data, such as a credit/debit card number, is replaced by (converted to) a surrogate value/unique identifier known as a token.
- The sensitive data still generally needs to be stored securely at one centralized location for subsequent reference and requires strong protections around it. The token has no inherent value or meaning and is useless if intercepted by fraudsters.

Asset Tokenization ...

- Now, many in both the crypto world and mainstream finance are working to bring those benefits to traditional assets, in an emerging sub-field of digital assets called **asset tokenization**.
- At its core, asset tokenization means putting the record of ownership for traditional assets on blockchains.

116

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116

Alternative Payments

Considerations

Alternative Payments: Emerging / Trending – Non-fungible tokens

NFTs (non-fungible tokens)

- Are unique digital assets (cryptographic tokens) that exist on a blockchain and cannot be replicated.
- NFTs can represent digital or real-world items like artwork and real estate.
- Gained widespread attention and adoption across various sectors beyond just digital art and collectibles.
- This surge in interest propelled NFT-based payments into the spotlight, as businesses and individuals explored new ways to monetize and exchange digital assets securely and transparently.
- The rapid growth of NFT-based payments can be attributed to the unique properties of NFTs, such as ownership verification, and interoperability across different platforms.
- NFTs are ideal for facilitating payments for digital goods and services, ranging from virtual real estate and in-game items to event tickets and intellectual property rights, fractional ownership, lending, and trading of digital assets in a decentralized manner.
- Smart Contracts – are digital contracts stored on a blockchain that are automatically executed when predetermined terms and conditions are met. The terms of agreement between users is set in code.

117

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117

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Considerations

Alternative Payments: Emerging / Trending – Web 3.0 KEY CONCEPTS

Web 3.0 or "Web3"

- The term Web3 is used to describe the next iteration of the world wide web or internet. It is anticipated to be the successor to Web 2.0, which is currently organized around centralized intermediaries such as Amazon, Google, and Microsoft. Such entities store data, verify identity, and provide or intermediate services.
- The widespread adoption of this centralized model of the internet has led to the rise of online shopping, online banking, streaming services, and social networking. The goal of Web3 is to organize similar services that are not intermediated by large companies. Thus, the definition is more aspirational than precise.
- As a matter of common usage, Web3 is used to refer to the use of some combination of blockchains and cryptocurrencies (tokens) to provide decentralized products and services.
- Web3 projects usually share four features:
 1. They are open source
 2. They have their own cryptocurrencies
 3. Anyone can use them, and
 4. Users interact with them through a blockchain.

**Imagine how different
that ecosystem will look!**

118

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118

Alternative Payments

Considerations

Alternative Payments: Emerging / Trending – Web 3.0 KEY CONCEPTS

Web 3.0 or "Web3"

- Rapid innovation in Web3 and the subsequent proliferation of projects has led to more than 23,000 distinct cryptocurrencies.
- This growth in cryptocurrencies is because, in order to build services that are not delivered by large intermediaries and are not based on the users' identities, Web3 protocols need to have a decentralized, anonymous way to transfer value and information, which is typically done through cryptocurrencies or tokens.
- These are usually designed in conjunction with the project's code to strengthen users' economic incentives to interact with the project.
- Services offered are **not conditioned on individual identity**.
- For this reason, interactions on blockchains are described as being **pseudonymous**, because interactions are initiated from specific addresses (which are observable), but the individual or business behind the addresses is not necessarily known.
- Further, any individual can control multiple wallets and generate new ones at will.

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Alternative Payments

Considerations

Alternative Payments: Emerging / Trending – Web 1.0, Web 2.0, Web 3.0 "

Web 3.0 or "Web3"

- The concept represents a new stage in the development of Internet technologies, with an **emphasis on decentralization**.
- Is an actively developing next generation of Internet technology, and is set to revolutionize the world of payments.
- The integration of Web3 payment solutions with emerging technologies such as Artificial Intelligence (AI), Internet of Things (IoT), and Machine Learning (ML) is revolutionizing the payment landscape.
- AI is being leveraged to improve fraud detection, optimize transaction processing, and enhance customer insights. Algorithms can analyze transaction patterns in real-time, identifying and mitigating fraudulent activities more effectively than traditional methods.
- Web3 payment refers to transactions conducted on decentralized networks (DeFi) using blockchain technology.
- Web3 payments based on a DeFi or blockchain platform's distributed ledger have lower transaction fees than traditional payment instruments.

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Alternative Payments

Considerations

Alternative Payments: Emerging / Trending – Web 1.0, Web 2.0, Web 3.0

Web 3.0

- DeFi - defined!

Decentralized finance (DeFi) is an emerging financial technology that challenges the current centralized banking system. DeFi attempts to eliminate the fees banks and other financial service companies charge while promoting peer-to-peer transactions.

- Unlike traditional online payments Web3 payments provide:
 - Enhanced security
 - Transparency
 - User control, utilizing smart contracts and cryptocurrencies
 - Lower fees
 - Speed of transaction processing.
- Among the areas/use cases of the financial system where Web3 payments have found application are:
 - International transfers
 - Decentralized marketplaces
 - Micropayments

121

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121

Alternative Payments

Considerations

Alternative Payments: Emerging / Trending – Web 1.0, Web 2.0, Web 3.0

Web 3.0

- Among the areas of the financial system where Web3 payments have found application are:
 - International transfers
 - Decentralized marketplaces
 - Micropayments
- Streamlines cross-border payments and remittances.
 - ✓ Eliminating the need for intermediaries and reducing transaction fees and processing times.
 - ✓ By leveraging blockchain technology, users can send funds internationally in real-time, bypassing traditional banking networks and currency conversion fees.
 - ✓ Web2 relies on intermediaries and centralized platforms, while ...
 - ✓ Web3 enables peer-to-peer interactions without the need for intermediaries, offering more control and ownership to users.

122

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122

Alternative Payments

Considerations

Alternative Payments: Emerging / Trending – Web 2.0 vs Web 3.0

The **Metaverse** refers to a computer-generated environment and immersive and persistent three-dimensional virtual realm and reality space, shared with many users, that spans various digital platforms and merges with the physical world, where people can shop, work, play and hang out together in real time with other uses.

Web 2.0 vs. Web 3.0

Download this guide

Web 2.0	Web 3.0
Centralized Application delivery, cloud services and platforms are governed and operated by centralized authorities.	Decentralized Edge computing, peer-to-peer and distributed consensus increasingly become the norm in Web 3.0.
Fiat currency Payments and transactions occur with government-issued currency such as \$USD.	Cryptocurrency Transactions can be funded with encrypted digital currencies such as Bitcoin and Ethereum.
Cookies Using cookies helps to track users and provide personalization.	NFTs Users can get unique tokens that are assigned value or provide some form of perk.
CSS and Ajax Web 2.0 is defined by layout technologies that provide more dynamic control than Web 1.0.	AI Smarter, autonomous technologies, including machine learning and AI, will define Web 3.0.
Relational databases Databases underpin the content and applications of Web 2.0.	Blockchain Web 3.0 makes use of blockchain immutable ledger technology.
Social networks Web 2.0 ushered in the era of social networking, including Facebook.	Metaverse worlds With Web 3.0, metaverse worlds will emerge to meld physical, virtual and augmented reality.

* Source: TechTarget

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Asynchronous JavaScript and XML (AJAX) is a combination of web application development technologies that make web applications more responsive to user interaction. Whenever your users interact with a web application, such as when they click buttons or checkmark boxes, the browser exchanges data with the remote server.

123

123

Alternative Payments

Considerations

Alternative Payments: Emerging / Trending – Web 3.0

Web3 Payment Solutions Market



Market Statistics

Market value (2023)	Market value (2032)	CAGR (2024-2032)
\$9.64 BN	>\$93.5 BN	>28.5%

Segment Statistics

On-chain solutions segment	NFT-based payments segment
Market share 2023	CAGR 2024-2032
>40%	>29%

Regional Statistics

North America
Market share 2023
>35%

GMI Global Market Insights
Insights for tomorrow

* Source: NPay

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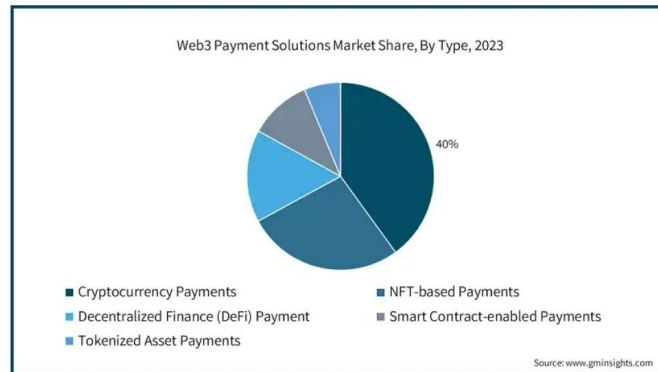
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124

Alternative Payments

Considerations

Alternative Payments: Emerging / Trending – Web 3.0



Alternative Payments

Considerations

Alternative Payments: Emerging / Trending – Web 3.0, Web 4.0, Web 5.0

Web3 is a decentralized web that gives users more control over their data.

Web 4.0

The fourth iteration of the World Wide Web, known as Web4, is distinguished by a more participatory and collaborative approach to web creation.

Web 4.0 apps are made to be easier to use and facilitate rapid information and idea sharing amongst users.

Web4 is a "semantic" web that can provide more relevant and personalized search results and automate many tasks.

- A proposed development of the World Wide Web in which data in web pages is structured and tagged in such a way that it can be read directly by computers.
- The tag is a small piece of code that is inserted into the page's source code. It allows the third-party analytics tools to log connections on its server.

Web 5.0

Web5 is a "human-centric" web that is designed with the needs and well-being of users in mind.

Where Are We?

The World Stage

Economics & Elections

ECONOMICS & ELECTIONS

127

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127

Where Are We?

World Stage

US Economic Outlook & Conditions – Some Considerations: US Elections

- Ageing population.
- Structure and funding of entitlement programs.
- Managing to a changing workforce / Labor Force Supply considerations / birth rates.
- SME Programs.
- Corporate and regulatory environment.
- Defense spending / changing nature of defence.
- Tax legislation.
- Fiscal management of US government and deficit.
- Tariffs.
- Sources of funding to support legislation

128

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128

Where Are We?

World Stage

US Economic Outlook & Conditions – Some Considerations: US Presidential Election

- Sentiment and “hot sectors” can play a role, however, fundamental conditions generally drive market performance.
 - Greenwashing
 - AI Washing
- Repositioning your portfolio based on potential policy changes can be a risky strategy.
- Stick to your investment and financial plan/objectives, while of course being mindful of the environment and dynamics.
- Markets don't really favor parties.
- Volatility is likely to rise but could prove short-lived.

129

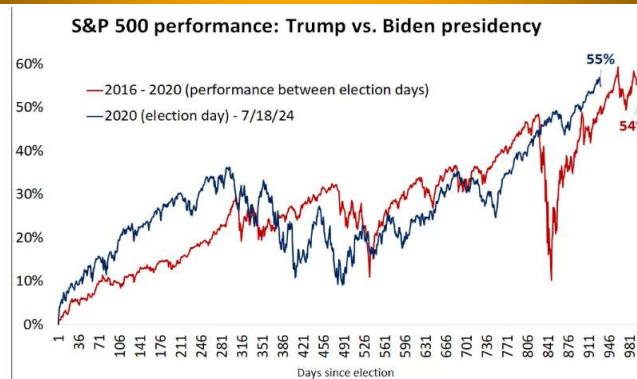
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Where Are We?

World Stage

US Economic Outlook & Conditions – Some Considerations: US Presidential Election



- Market conditions don't favor a party.
- Since 1930, there have been 23 U.S. presidential elections, with Democratic candidates winning 13 times and Republicans prevailing the remaining 10.
- The average annualized price return (excluding dividends) of the S&P 500 was 9.6% when a Democrat won and 5.7% when a Republican won. But when looking at longer-term horizons, such as 10 years post-election, results for both parties are similar, with the S&P 500 returning around 7%.

130

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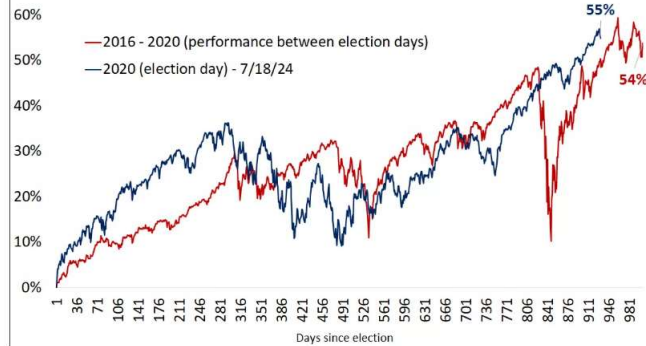
130

Where Are We?

World Stage

US Economic Outlook & Conditions – Some Considerations: US Presidential Election

S&P 500 performance: Trump vs. Biden presidency



Source: Morningstar Direct, Edward Jones.

- The same pattern is observed over the past two administrations. Despite the sizable chasm between Joe Biden's and Donald Trump's policies and both experiencing equity bear markets (one caused by the pandemic during the Trump presidency and the other by aggressive Fed tightening during the Biden presidency), stock market returns have been nearly identical. The S&P 500 has returned 14% per year after dividends under each president, highlighting that markets are neither biased toward one party nor exclusively driven by election outcomes.

131

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131

Where Are We?

World Stage

US Economic Outlook & Conditions – Some Considerations: US Presidential Election (VIX)

- The VIX is a number derived from the prices of options premium in the S&P 500 index (which is an index comprising 500 large cap stocks), amongst other factors, for the next 30 days.
- It is a good indicator of the "expectation" of market volatility, and it is not representative of the actual volatility or what will happen.
- It is just a general assumption based on the premiums investors are willing to pay for the right to buy (call) or sell (put) stock.
- This premium in options can be loosely defined as risk.
- Just like other forms of insurance, the greater the risk the higher the premiums, and the lower the risk the lower the premiums.
- When the options premium fall the VIX falls and when premiums rise the VIX rises.



VIX is the ticker symbol and the popular name for the Chicago Board Options Exchange's CBOE Volatility Index, a popular measure of the stock market's expectation of volatility based on S&P 500 index options for next 30 days.

132

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132

Where Are We?

World Stage

US Economic Outlook & Conditions – Some Considerations: US Presidential Election (VIX)

- The VIX is not set by any one person, but rather the results of millions of transactions by millions of traders from around the world.
- The buyers and sellers move the option prices, more buyers and the premiums go up, more sellers and the premiums go down.
- The VIX takes a weighted average of all these options prices in the S&P 500 index and derives a single number that is called the VIX.
- This one VIX number gives us a general idea if investors are paying more or less for the right to buy or sell the S&P 500 index.



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133

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133

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World Stage

US Economic Outlook & Conditions – Some Considerations: US Presidential Election (VIX)

- Mathematically, the VIX represents the S&P 500 index +/- percentage move, annualized for one standard deviation.
- Example: if the VIX is currently at 15. That means, based on the option premiums in the S&P 500 index, the S&P is expected to stay within a +/- 15% range over 1 year, 68% of the time (which represents one standard deviation).
- The long-term average is 19.2%.



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134

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134

Where Are We?

World Stage

US Economic Outlook & Conditions – Some Considerations: US Presidential Election (VIX)

- The long-term average is 19.2%.
- If the VIX heads higher than 20, then fear is starting to enter into the market and it is forecasting a higher risk environment.
- Remember, the VIX is not set by any one person or even groups of people; it is solely determined by order flow of all buyers and sellers of options.
- As a historical point, during the height of the great housing crisis in 2008 and 2009 the VIX rocketed to levels far above 50.
- Therefore, in relation to the model, the options are pricing that the S&P 500 index (the largest 500 companies) were to be in a range of +/- 50% over the year, 68% of the time!



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135

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135

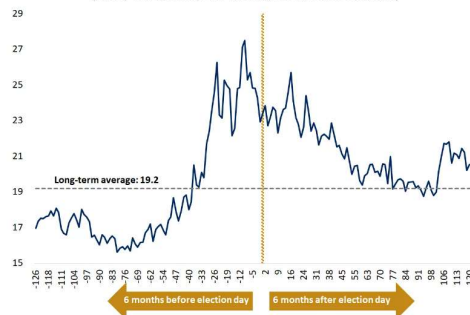
Where Are We?

World Stage

US Economic Outlook & Conditions – Some Considerations: US Presidential Election (VIX)

Volatility is likely to rise however may be short-lived!

Volatility index (VIX) 6 months before and after election day
(1992, 1996, 2000, 2004, 2008, 2012, 2016 elections)



Source: Bloomberg, Edward Jones.

VIX is the ticker symbol and the popular name for the Chicago Board Options Exchange's CBOE Volatility Index, a popular measure of the stock market's expectation of volatility based on S&P 500 index options for next 30 days.

136

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136



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Q&A

THOUGHTS

CLOSING COMMENTS

THANK YOU!

137

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137



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Emerging Developments & Issues for the
Economy & Business, Global Markets & Banking
Treasury & Payments, Digital & Other Technologies

Jeffrey Lewis

MBA RR CTP AAP CertICM

September 2024

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138

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138