AllianceBernstein®

Institutional Solutions

The future of asset allocation and digital assets

6 April 2022

Inigo Fraser-Jenkins, Co-Head of Institutional Solutions

Introduction

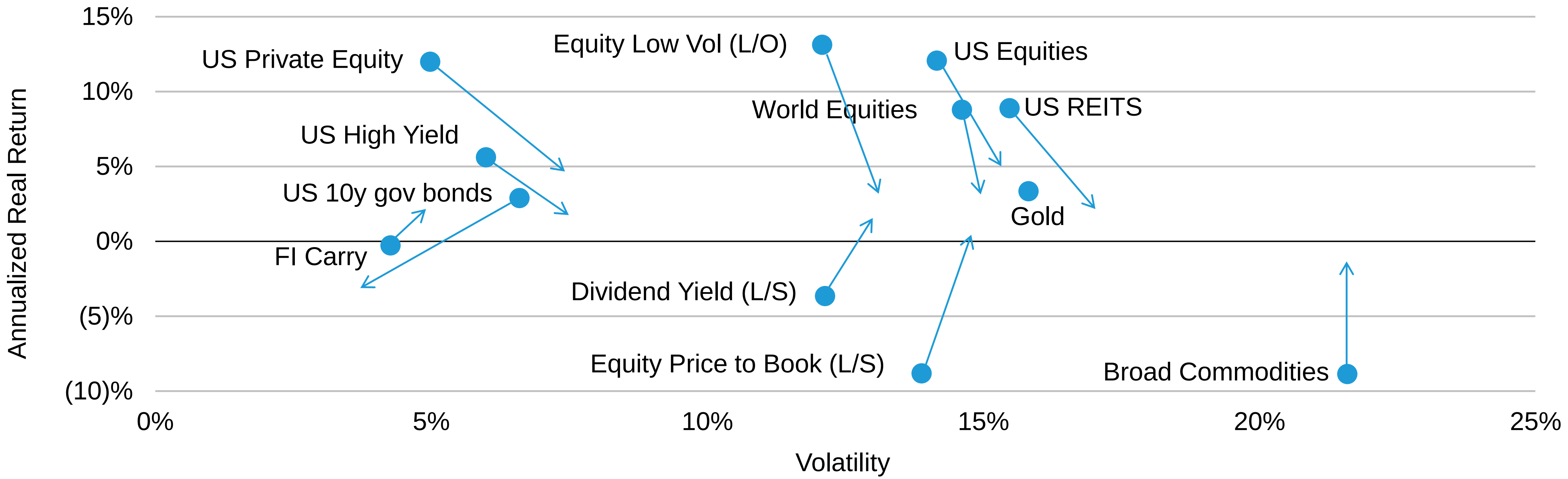
- Our view on the role of digital assets in portfolios is driven by the macro outlook:

  - Lower nominal returns and higher inflation
  - Equities are a key anchor for real return …
  - …But harder to achieve diversification
  - We have changed our mind about the strategic role of gold and crypto

  - Real assets are a key part of the portfolio response …
  - …. But we worry about expectations for private equity
  - A role for tokenisation of real assets

Our Outlook for Markets and Alpha Point to the Need to change the Building Blocks of Strategic Asset Allocation

Investors Must Add Risk; Pension Plans May Need to Add Factors



Historical analysis and current forecasts do not guarantee future results.

The dots represent the last 10 years of real returns and volatility for the major return streams that investors can buy. The arrows represent the AB Institutional Solutions team's forecasts for the next 5—10 years.

Note: The US Private Equity data are compiled from 1,562 funds, including fully liquidated partnerships, formed between 1986 and 2019. All returns are net of fees, expenses, and carried interest. Data are provided at no cost to managers.

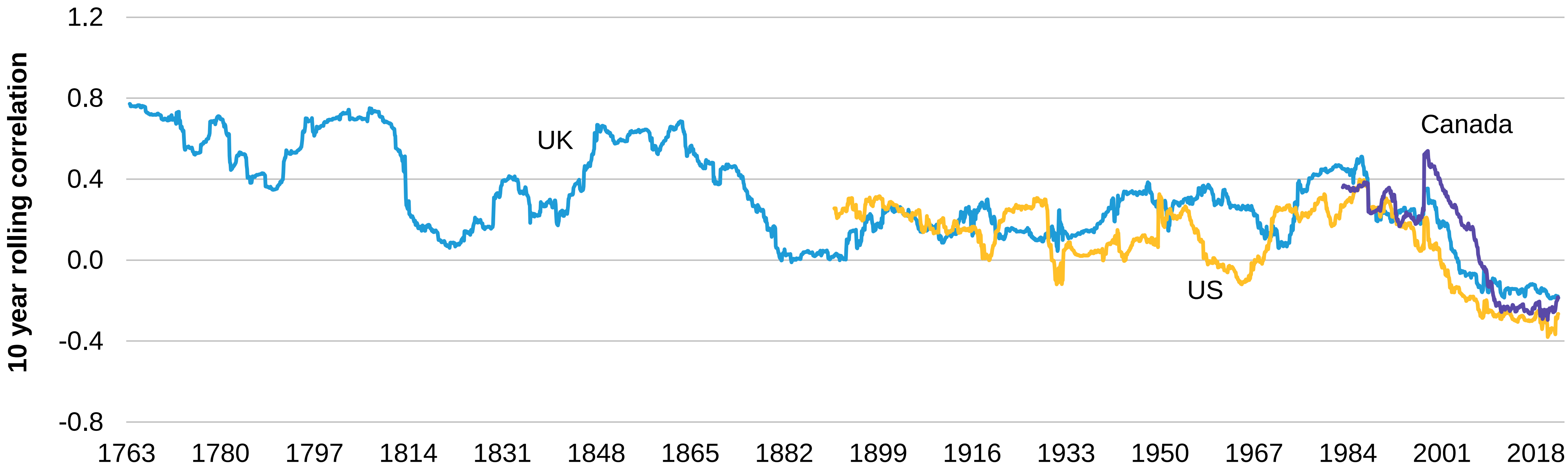
As of September 22, 2021

Source: Cambridge Associates, Datastream, FactSet, FRED, Ken French Data Library and AB

The Diversifying Power of Bonds Likely to Reduce…

...and increase risk of 60:40

Stock-Bond Correlation Has Recently Been More Negative than Prior 250 Years…*
…unlikely to persist



Historical analysis and current forecasts do not guarantee future results.
*Rolling 10-year correlation between stock and bond returns.
As of February 28, 2022
Source: Datastream, Global Financial data, Shiller's database and AB

Deflationary as Well as Inflationary Forces Are at Work

Deflationary Forces

- Technology and automation, which have been deflationary for years and remain that way
- Customers’ realization, once pent-up spending ebbs, that nominal savings returns are down and inflation is up, implying the need to save more, which lowers money’s long-term velocity
- The risk of zombie companies in the wake of the pandemic—not least because it may be politically hard to let companies go bankrupt in large numbers

Inflationary Forces

- Geopolitical forces on Energy prices and towards a less globalized world
- ESG is inflationary: consumers paying up for "ESG-friendly" products, less investment in upstream extraction and the “S” implies greater bargaining power for labour
- With debt/GDP at its highest level since WWII, governments will prefer inflation in order to keep debt under control
- Demographics: The global labor supply is shrinking, hinting at wage inflation

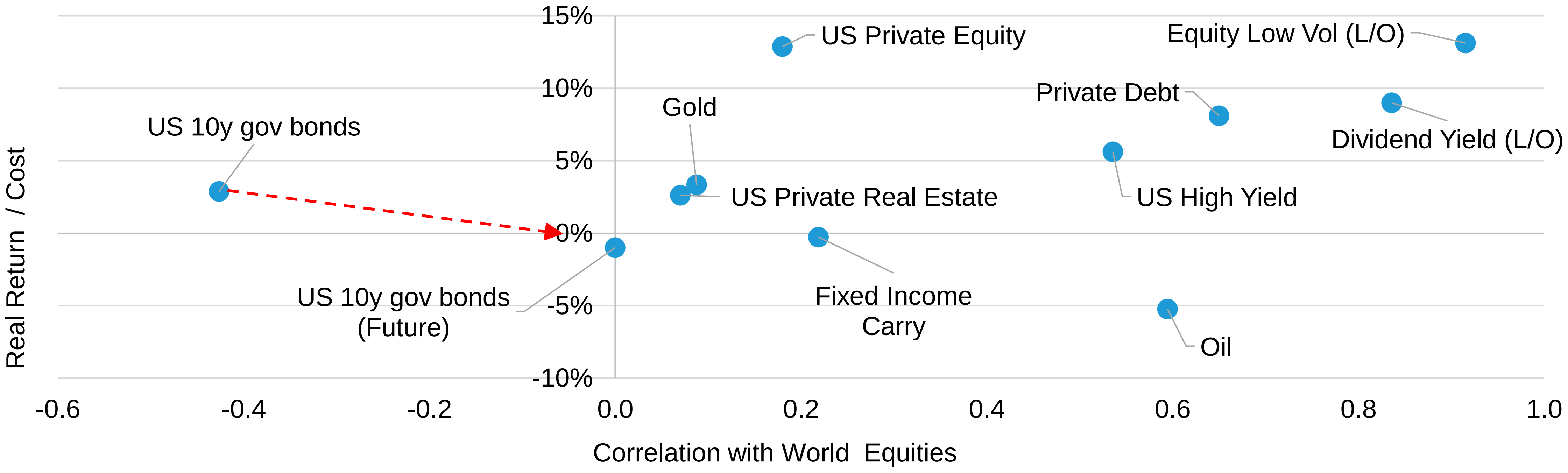
Real-Growth and Inflation-Hedging Tool Sets Evolve

Over the saving life-cycle needs evolve from real growth to inflation hedging

Real-Growth and Inflation-Hedging Tool Sets Evolve

Moderate Inflation		High Inflation	
Real Return	**Inflation Beta**	**Real Return**	**Inflation Beta**
REITS	Broad commodity index	EM equities	Oil
Equity Value	Oil	REITS	Gold
Equities (US, EM, Japan)	Gold	Equity Value	Municipal Bonds
Equity FCF yield	Commodity Equities	Equity FCF yield	Broad commodity index
	Equity Momentum	Equity Dividend yield	Commodity Equities
	Farmland / Timberland		Momentum (Equities and FX)
	Renewables/power delivery		Farmland / Timberland

Real Return vs correlation with World Equities



Historical analysis and current forecasts do not guarantee future results.

The dots represent the real annualized return and correlation with World Equities during the period of Jan 2010 to Dec 2020. Real return is calculated by adjusting the nominal return using the US CPI index. Data for Private Debt and Private Equity is calculated quarterly.

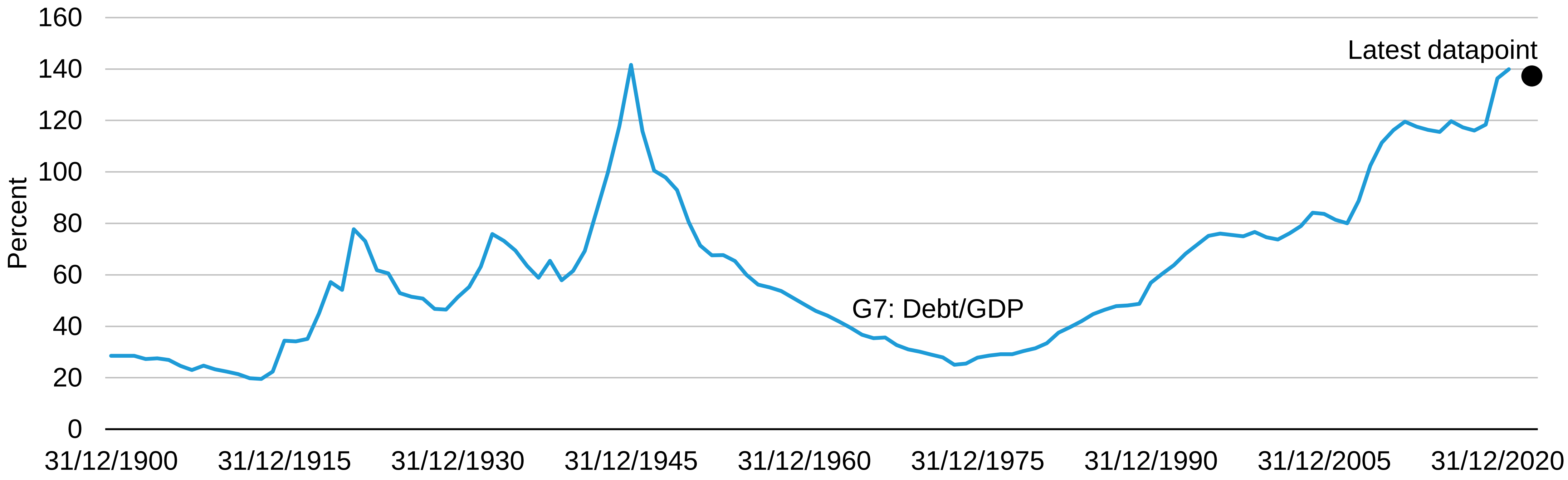
The US Private Equity data is compiled from 1,562 funds, including fully liquidated partnerships, formed between 1986 and 2019. All returns are net of fees, expenses, and carried interest. Data is provided at no cost to managers.

As of March 7, 2022

Source: AQR, Robert Shiller's database, Ken French database, Cliffwater Direct, Cambridge Associates, Datastream and AB

Government Debt to Reach Levels Last Seen in WWII, Maybe Surpass Those Levels

G7 Government Debt to GDP (GDP-Weighted)



Historical analysis and current forecasts do not guarantee future results.

The chart shows Government Debt/GDP for G7 countries, weighted by Nominal GDP denominated in USD. Data from 1900-2021 is from Global Financial Data. 2022 forecast is from IMF.

Source: Global Financial Data, IMF and AB

Gold is not a drag on 60:40 returns from these starting conditions

Average (annualized) return conditioned on equity valuation bond yield

Gold less of a drag when starting bond yields low

Gold: 60/40 (10-Year Return)

		BY Low 1	2	3	4	BY High 5	Average
Shiller Cheap	1			(3.2)	(5.2)	(15.7)	-12.3
	2	(6.1)	(5.5)	4.0	(11.9)	(16.7)	-8.2
	3	(6.1)	(0.3)	(8.0)	(12.1)	(16.0)	-6.6
	4		1.9	(4.8)			0.5
Shiller Expensive	5		10.7	6.4			8.1
	Average	(6.1)	3.1	(0.1)	(9.8)	(15.9)	

Gold enhances return when starting equity valuations high

Past performance does not guarantee future results.

Data from January 1972 through April 30, 2020

Source: Robert Shiller's database, Thomson Reuters Datastream and AB

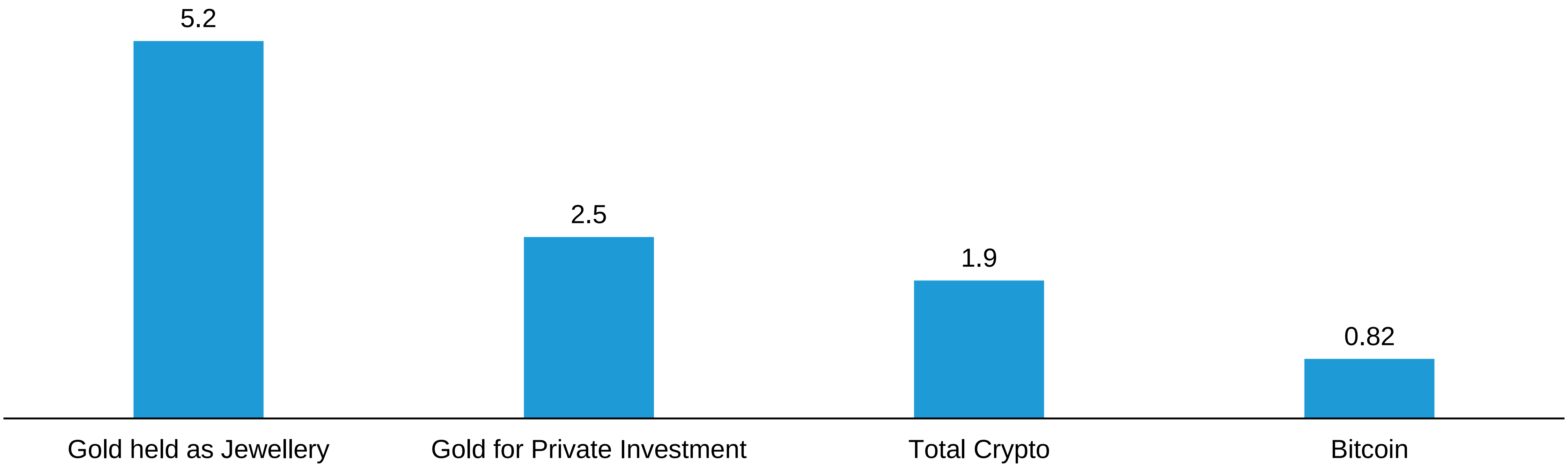
Cryptocurrencies in Asset Allocation: I Have Changed My Mind!

- Change in the policy environment: We think that on balance the post pandemic environment is inflationary
- Greater role of fiscal policy and high debt implies risk of debasement of fiat currencies
- Asset owners have need of return streams that can provide inflation protection
- Diversification harder to come by, need to find diversifiers as pension fund risk levels increase
- Supply of cryptos is not limited, but may *in practice* be limited
- However, the very reasons that make cryptos useful (protection against debasement) also means they can interfere with policy implementation (sanctions, negative rates, CBDCs, wealth taxes), does this mean they might be banned?
- Bitcoin’s big ESG problem

As of September 30, 2021

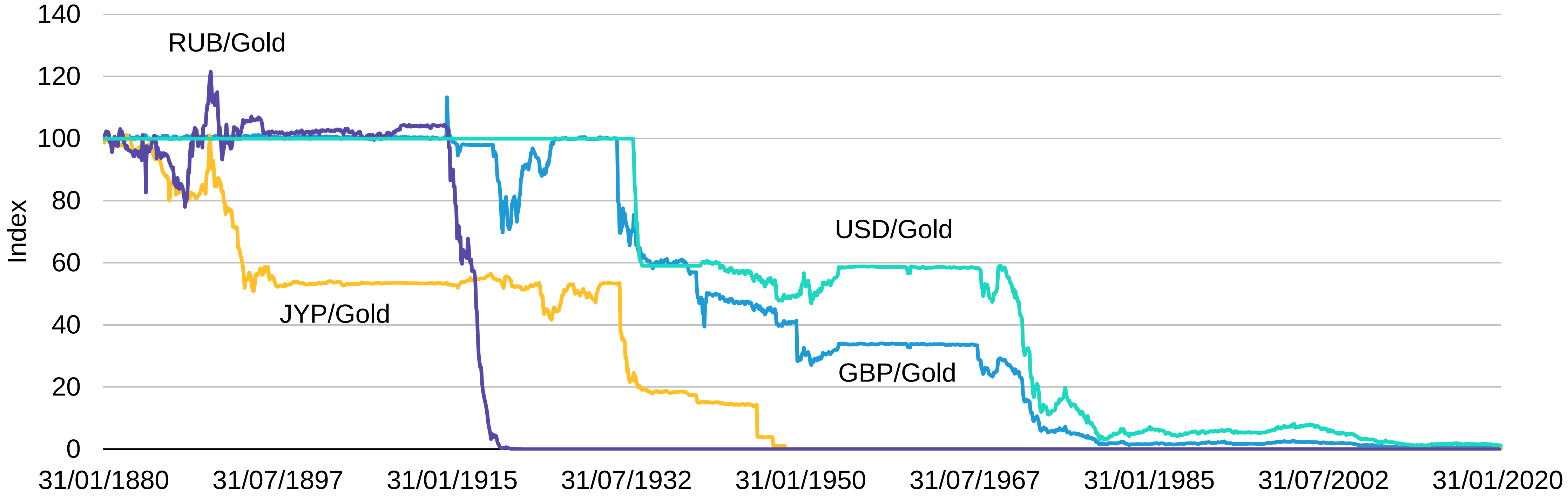
Relative Scale of Gold and Crypto Assets

Market Capitalization (USD Billions)



Information provided for illustrative purposes only
As of December 13, 2021
Source: Datastream, World Gold Council, www.coinmarketcap.com and AB

Sinking Without Trace? Major Currencies Against Gold Since 1880

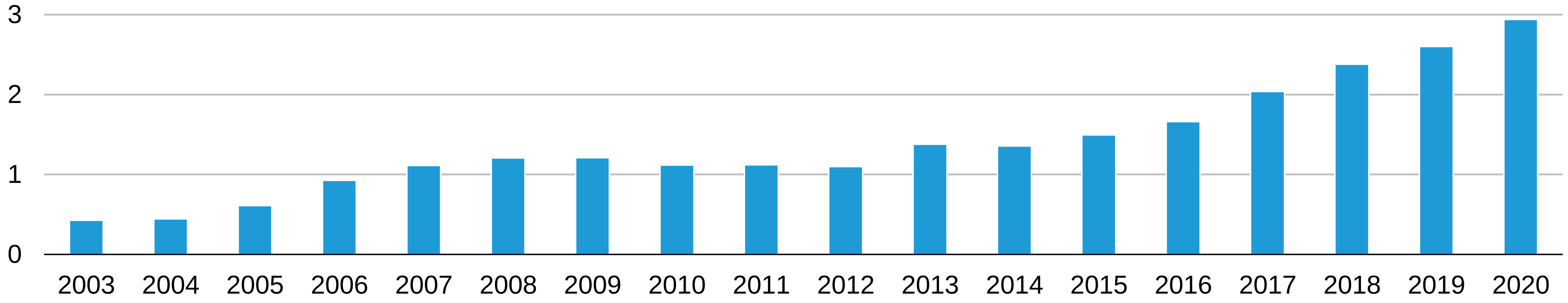


Historical analysis does not guarantee future results.
As of May 31, 2020
Source: Global Financial Data and AB

Flows into private assets to continue, especially private real assets…
… but private equity to disappoint

- Dry powder at record level, bids up entry prices and hence downward pressure future returns
- PE has relied on cheapening access to credit last 20 years, yields unlikely to decline further
- Private markets cannot disconnect from public markets in long run—exit strategy
- Wide distribution of returns across PE providers…it needs a passive alternative
- Don’t confuse stale prices with diversification!
- **Expect marginal flows into other types of private/real assets**

Private Equity “Dry Powder” at Historically High Levels
USD trillions



Historical analysis and current forecasts do not guarantee future results.
As of December 31, 2019
Source: Bain analysis, Preqin, SPACInsider, Thomson Reuters and AB

What Is Asset Tokenisation ?

Tokenisation of real assets is the process of converting the ownership rights to an asset to a digital token on a blockchain. The tokens are initially created through a Security Token Offering (STO), which is similar to an IPO in equity markets, and represents an ownership interest in an asset

Tokenisation Involves Four Key Stages

- Deal structuring & digital tokenisation to the Blockchain
- Primary distribution to STO subscribers
- Post-Token management (dividend payments, fee collection, executing other smart-contract features)
- Secondary trading

Regulatory Framework

- In the US STO's are regulated by the SEC and subject to the same rules as traditional securities
- In the EU they must comply with MiFID II directives
- Some countries like Thailand and UAE currently have no regulation of STO's
- Meanwhile it is banned in China and South Korea

St. Regis Aspen Resort Project Example

- Led by a real estate asset management and advisory firm Elevated Returns LLC
- Instead of launching a publicly traded REIT via an IPO it chose to issue a securitized token—Aspen Coin—that represents ownership of Aspen Digital Inc, a corporation formed with the sole purpose of owning the St. Regis Aspen resort
- The project raised $18 million in funding

Historical analysis and current forecasts do not guarantee future results.
Source: Blockstate and AB

Asset Tokenisation Pros and Cons

Pro	Summary
Fractionalisation	Rather than owning the asset outright, tokens allow investors to own even very small fractions of the asset, thus expanding access to retail and smaller institutional investors.
Liquidity	Greater investor access due to fractionalization increases asset liquidity. Tokens can also be exchanged on secondary markets. In addition, token trades have a much faster settling time than the current T+3 / T + 2 market standard at the moment.
Customisation	Tokenisation allows a very high degree of individual features in a contract, for example providing exposure to single or several rooms in a single building or certain parts of a big infrastructure project.
Automation	Smart contracts enable automation of compliance, document verification and seamless transfer of cashflows among other features.
Lower Fees	As a result of automation and a smaller number of required intermediaries tokenisation has a much better cost efficiency allowing for lower fees.
Data transparency	Blockchain provides an immutable, secure and readily accessible record.
Con	**Summary**
Track record	No or very limited track record of real asset token performance.
Verification	Who verifies asset authenticity and who is responsible for enforcing the contract?
Career risk	High career / reputational risk for institutional investors as early adopters.
Regulation	Evolving regulatory framework, particularly across different countries.
ESG	How energy efficient is it to maintain various blockchains?
Security	Scams / hacks / cybersecurity issues.
No common standard	Tokenisation is going to involve multiple platforms with different protocols that might not be compatible with each other.

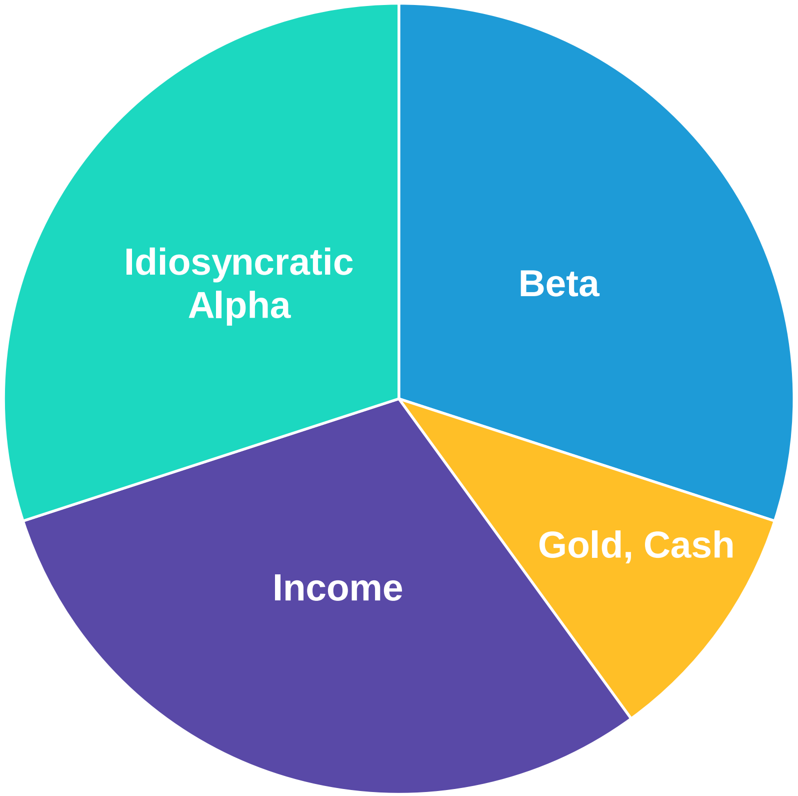
Historical analysis and current forecasts do not guarantee future results.
Source: AB

There Is No Such Thing as Passive Asset Allocation

The future of ACTIVE asset allocation

- Benchmark for most investors should be inflation, to preserve purchasing power
- The true divide is idiosyncratic alpha vs. beta, not asset classes and public/private
- Asset class betas lower, so have to include factors betas alongside assets…
- More flexible set of "betas" allows ability to seek out diversification if duration doesn't provide it
- Only pay active fees for idiosyncratic alpha
- No separate buckets for private equity
- Income is no longer fixed income but needs a broader set of assets

The Building Blocks for Asset Allocation



Source: AB

Action Points for Asset Owners

- **Investors should expect to be squeezed on nominal returns, inflation and diversification. That defines the investment outlook for next decade. The urgency of the inflation question brings this to the fore.**
- Given liquidity and regulatory risk, it would be hard to have a positive tactical case on crypto
- There is also no empirical evidence that crypto can hedge inflation or equity beta…
- Having said that, with debt at high levels and inflation rising, we think that demand for zero-duration non-fiat assets should increase. There will be more demand for assets that can hedge, and as it matures this could increase institutional allocations
- The real focus for the industry likely to be tokenized real assets
- A technology that is arriving just at the point that the need for physical real assets is increasing
- The inflation question today accelerates the need to move towards a new approach to asset allocation

Current analysis and estimates do not guarantee future results.
As of January 19, 2022
Source: AB

Disclosures and Important Information

Note for All Readers: The information contained here reflects the views of AllianceBernstein L.P. or its affiliates and sources it believes are reliable as of the date of this publication. AllianceBernstein L.P. makes no representations or warranties concerning the accuracy of any data. There is no guarantee that any projection, forecast or opinion in this material will be realized. Past performance does not guarantee future results. The views expressed here may change at any time after the date of this publication. This document is for informational purposes only and does not constitute investment advice. AllianceBernstein L.P. does not provide tax, legal or accounting advice. It does not take an investor's personal investment objectives or financial situation into account; investors should discuss their individual circumstances with appropriate professionals before making any decisions. This information should not be construed as sales or marketing material or an offer of solicitation for the purchase or sale of, any financial instrument, product or service sponsored by AllianceBernstein or its affiliates.

Note to Readers in Canada: This publication has been provided by AllianceBernstein Canada, Inc. or Sanford C. Bernstein & Co., LLC, and is for general information purposes only. It should not be construed as advice as to the investing in or the buying or selling of securities, or as an activity in furtherance of a trade in securities. Neither AllianceBernstein Institutional Investments nor AllianceBernstein L.P. provides investment advice or deals in securities in Canada.

Please note, all information included herein is AB's own views, based on certain assumptions, and is subject to change at any point time. There is no guarantee any of the following will occur in part or in full. The foregoing is not comprehensive and does not reflect all possible market changes. This information is not investment advice or investment research and should not be relied on when making an investment decision.

For Investment Professional use only. Not for inspection by, or quotation or distribution to, the general public.