

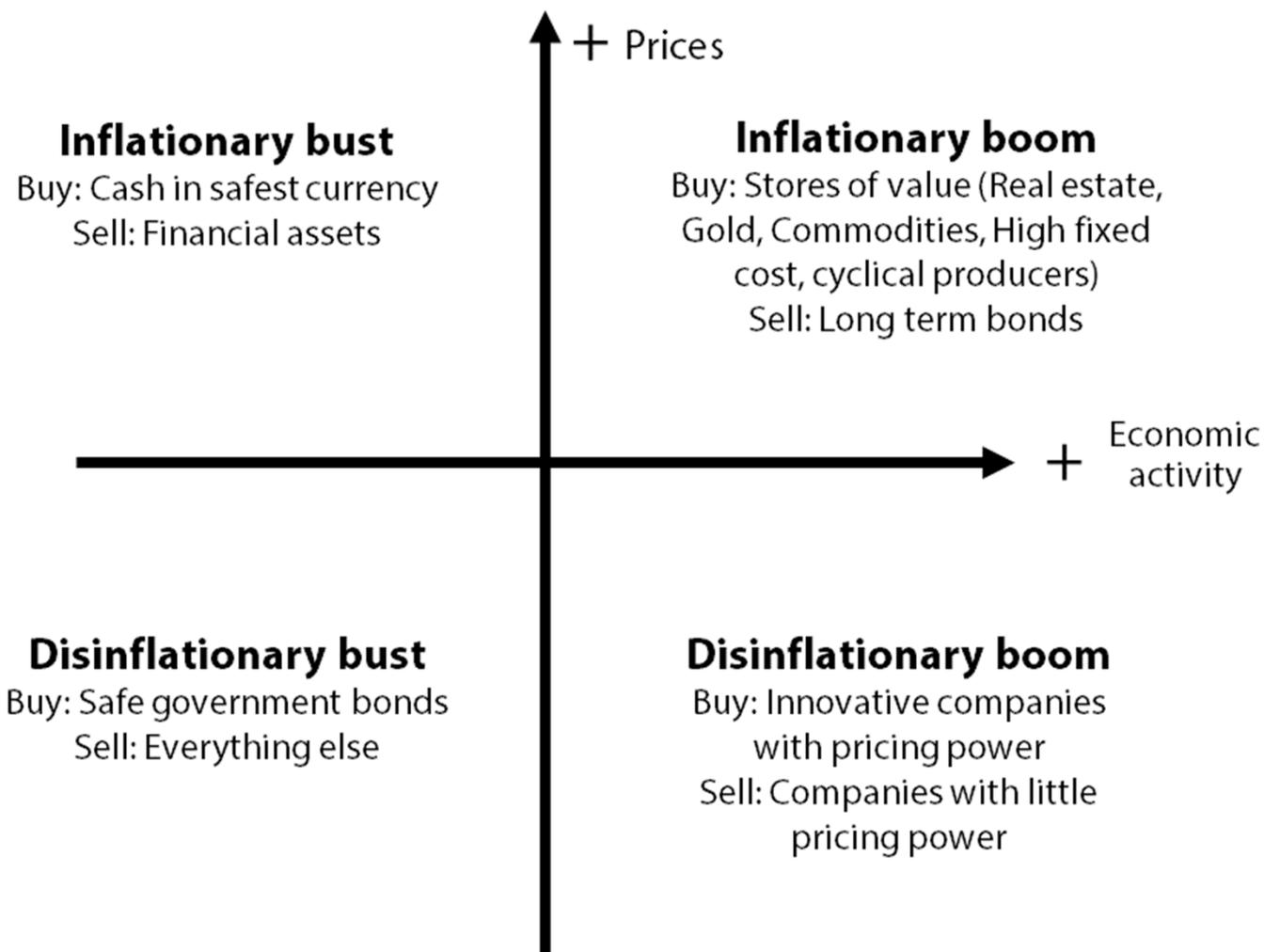
April 2018

Is Inflation Back? Financial Consequences

Charles Gave

The Four Quadrants

The Four Quadrants framework



For the last thirty years at least we have been at the bottom of our four quadrants, oscillating between deflationary busts and deflationary booms.

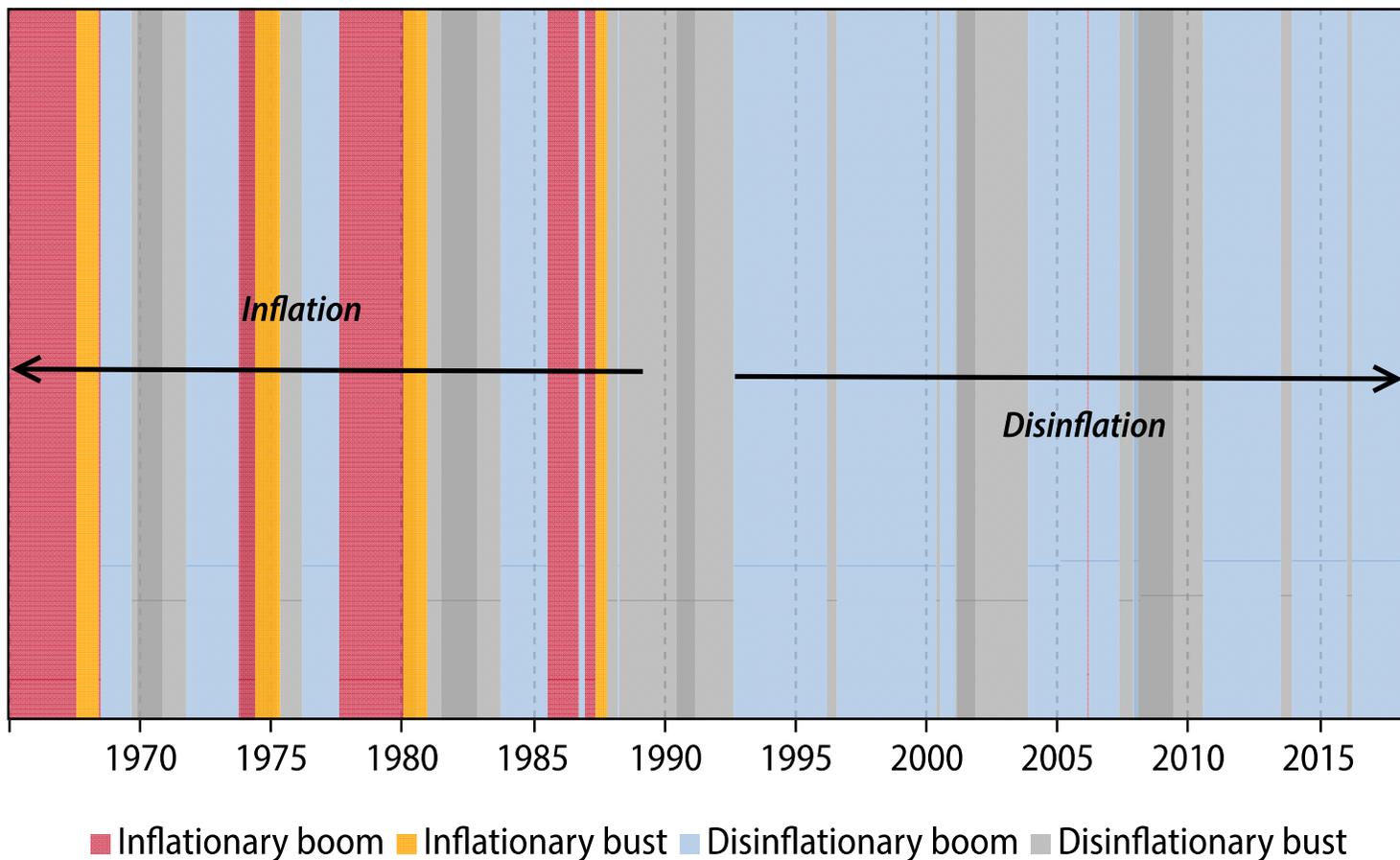
The only important question to day is: is inflation going to accelerate enough in the near future to take us back to the two top quadrants.

If this is the case, then it will require a complete change in portfolio construction.

A short financial history of the US

Four Quadrants historically for the US economy

Shaded dark: US recessions



Gavekal Data/Macrobond

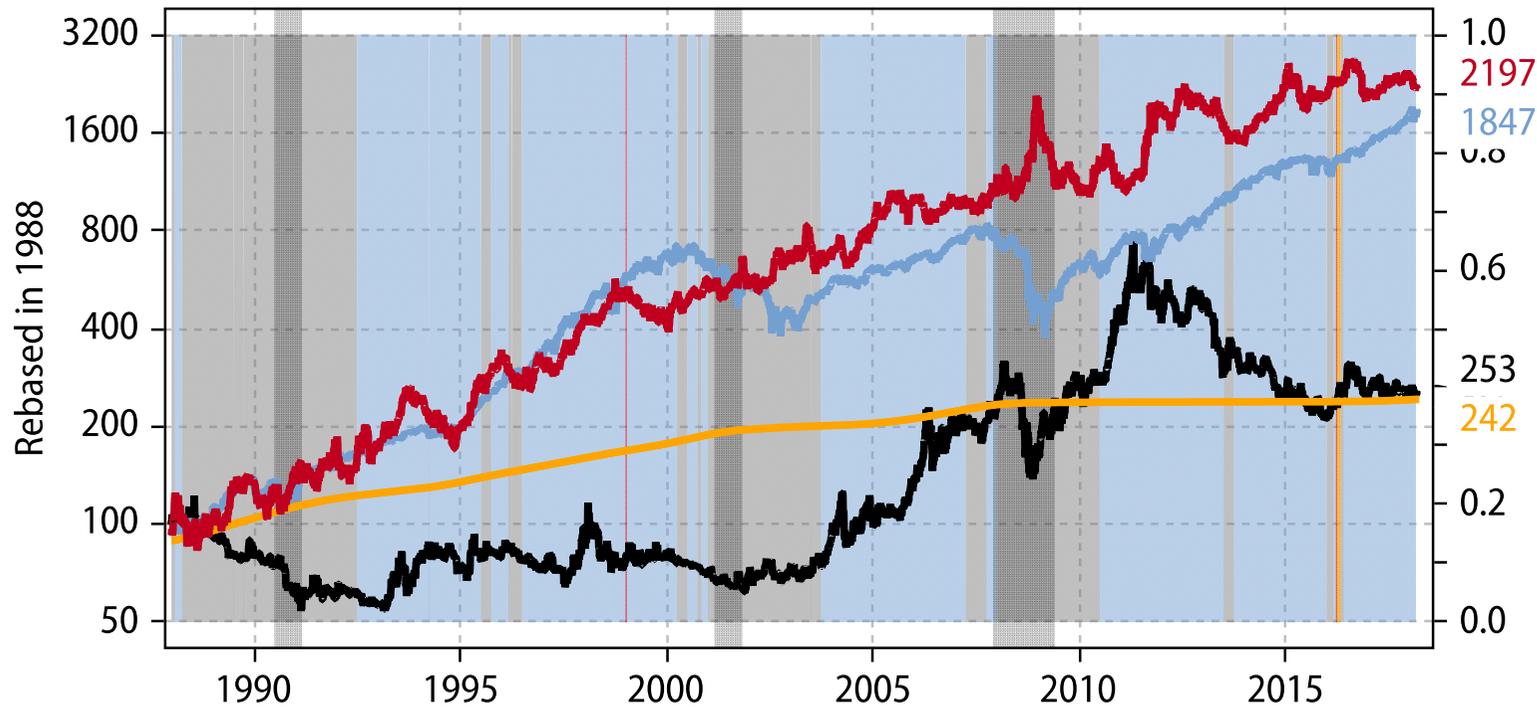
From 1955 to 1980 we were clearly in an inflationary period.

Since 1988, we have clearly been in disinflationary and deflationary periods.

If we accept the idea that we can invest in four assets—cash, precious metals (silver and then gold), long dated government bonds and equities—the returns are completely different whether we are in the top or the bottom of the four quadrants.

Performance of assets in a non-inflationary period

Four Quadrants for the US economy and the four assets classes



- Total return of a 30y zero coupon constant duration (lhs) — Cash capitalized (lhs)
- S&P500 total return in real terms (lhs) — Silver in real terms (lhs) ■ US recession
- Inflationary bust (rhs) ■ Inflationary boom (rhs) ■ Disinflationary boom (rhs)
- Disinflationary bust (rhs)

In the lower two quadrants, long bonds and equities have a very good performance while gold and cash go nowhere.

Moreover, long bonds and equities have a negative correlation.

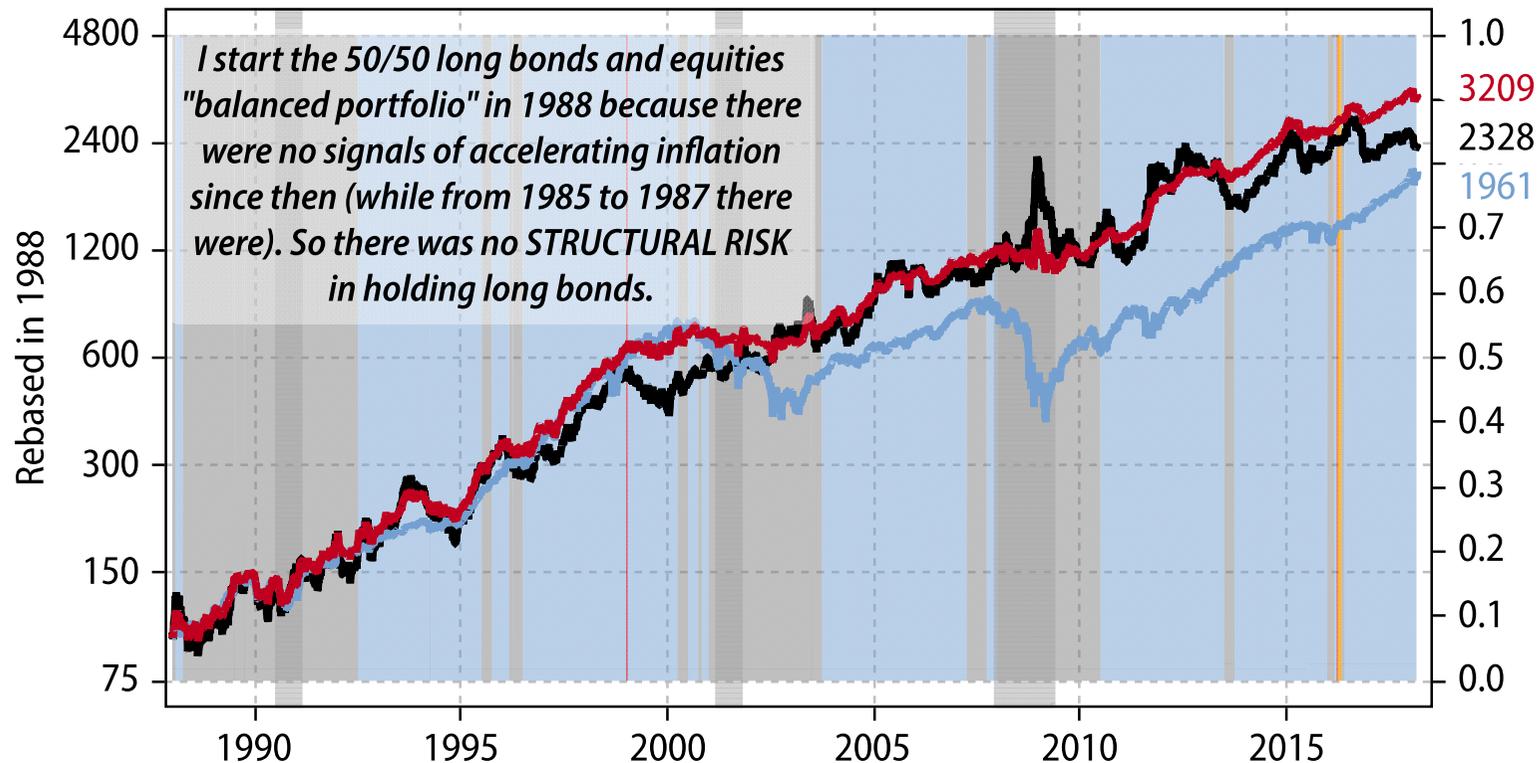
Thus, the best portfolio has to be a 50/50 portfolio rebalanced regularly.

Such a portfolio has outperformed all other portfolios over the medium term.

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The balanced portfolio as a solution

Four Quadrants historically for the US economy and balanced portfolio



- Balanced portfolio (lhs) — S&P 500 total return (lhs) — Total return of a long bond (lhs)
- US recessions ■ Inflationary bust (rhs) ■ Inflationary boom (rhs) ■ Disinflationary boom (rhs)
- Disinflationary bust (rhs)

Since 1988, a "balanced portfolio" has grown by 34 times, a constant duration long bond portfolio by 25 times and the equity portfolio (dividends included) by 20 times.

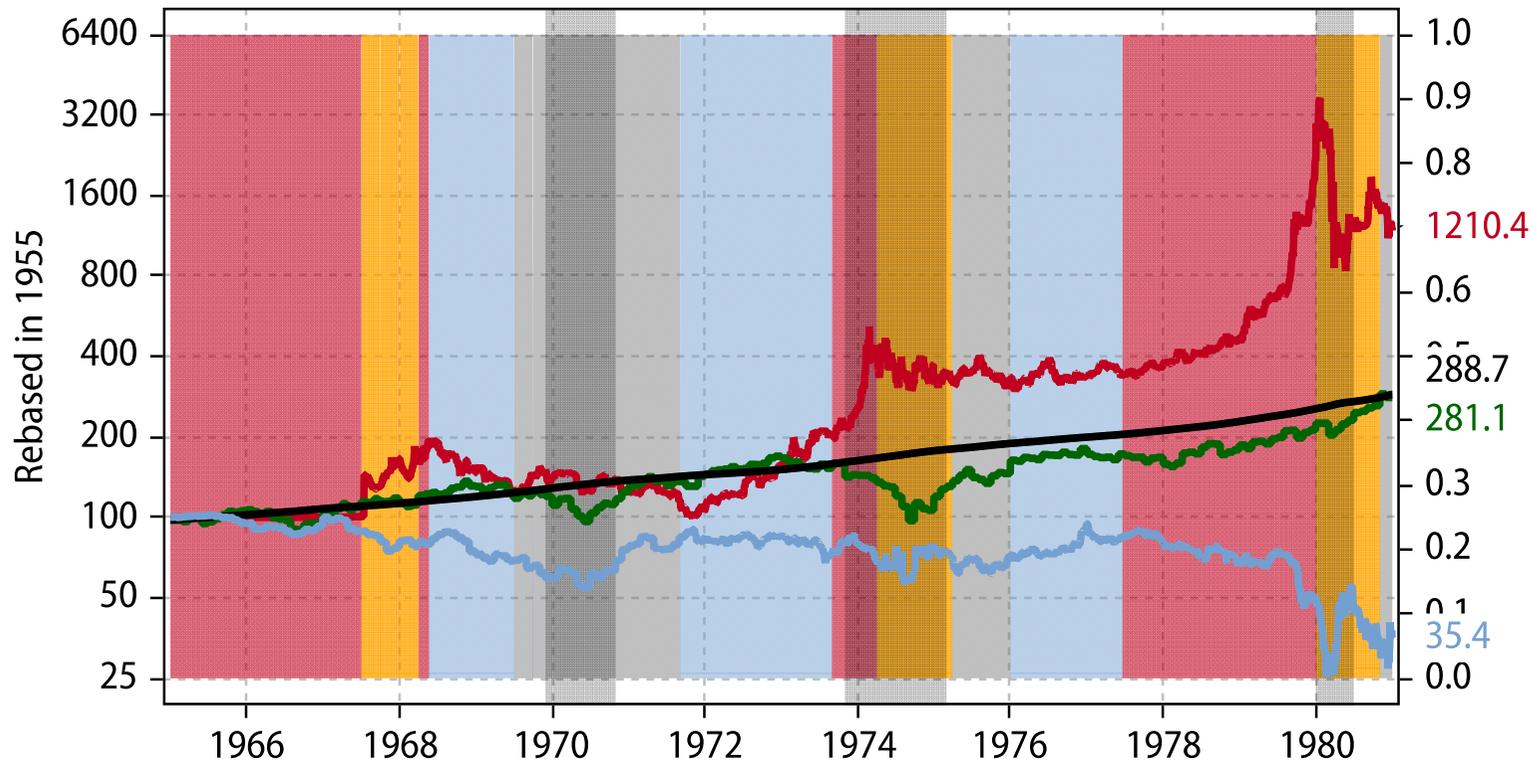
The balanced portfolio is the solution as long as we stay at the bottom of the four quadrants.

If we move back to the top of the four quadrants, then the story is completely different as evidenced by the previous period, 1965 to 1980.

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Performance of assets in an inflationary period

Performance of assets in an inflationary period



- 30y zero coupon constant duration (lhs) — Cash capitalized (lhs)
- S&P 500 total return in real terms (lhs) — Silver (lhs) ■ US recessions ■ Inflationary bust (rhs)
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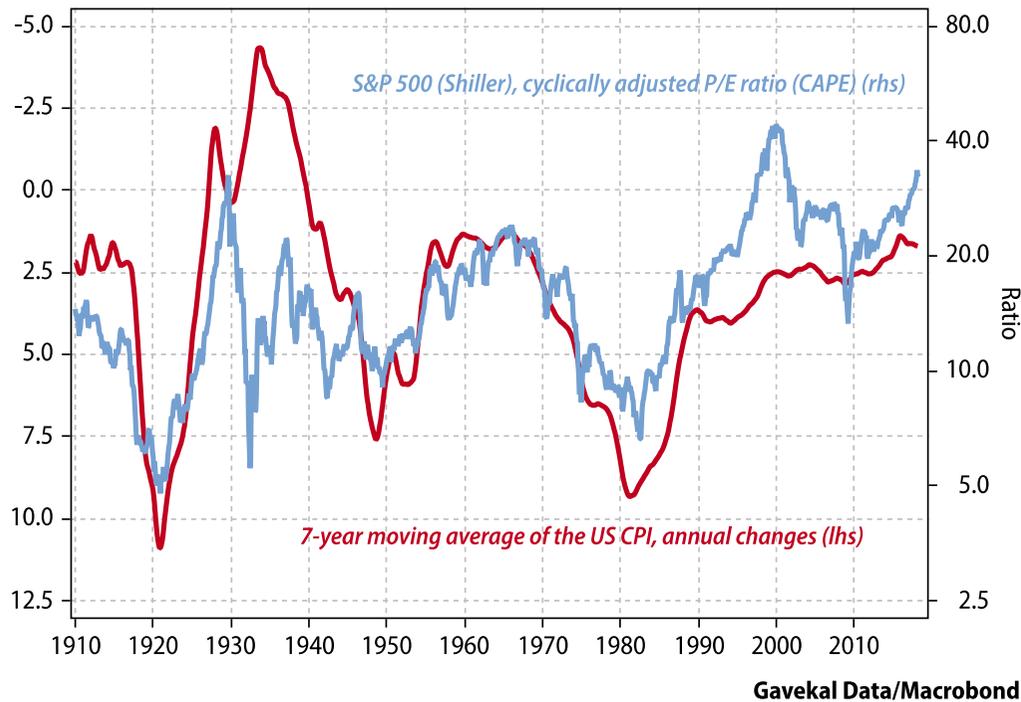
If we are in an inflationary period, bonds get destroyed and the best performer is gold.

Keeping a balanced portfolio with bonds is more than a mistake, it is a crime, since bonds in such a period go down structurally and have a positive correlation with equities.

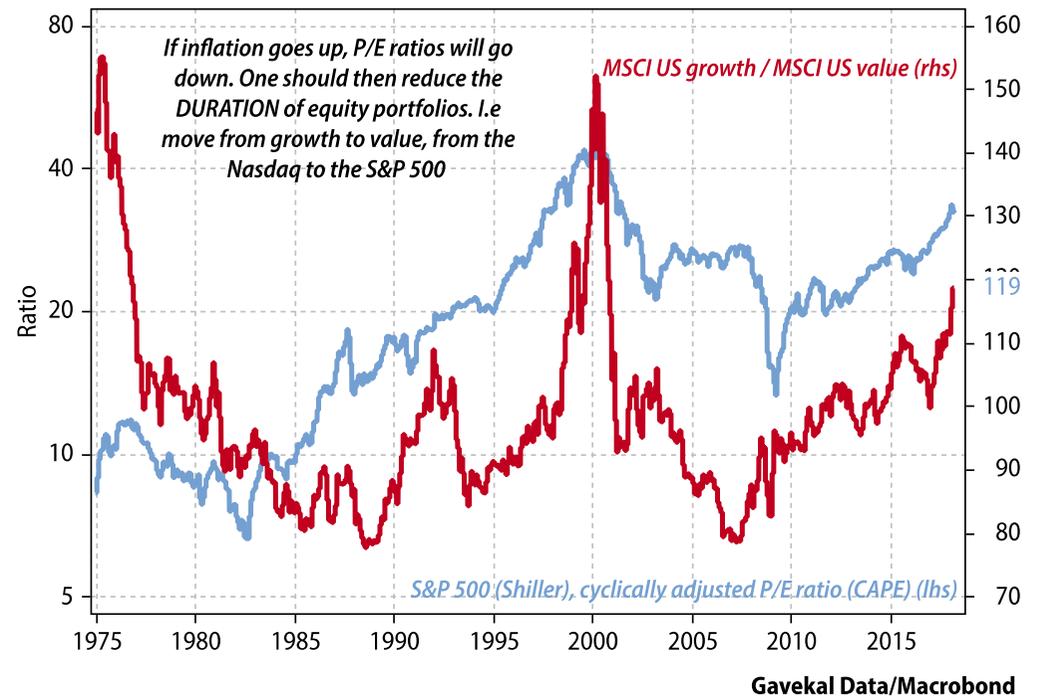
The solution is to hedge the equity risk with 20% gold or a mix of 20% gold and 20% cash.

Two important consequences

Structural inflation and Shiller P/E



Shiller P/E ratio and growth vs value



When inflation accelerates on a structural basis, two things happen in the financial markets:

- P/E ratios go down
- Value outperforms growth
- In the last 30 years, the “optimal” portfolio would have been the Nasdaq, hedged buy a constant duration 20-year US government zero
- If we move to an inflationary period, then we should own some “value” funds, hedged by gold and cash

A market-priced tool to assess where we are

So, we have to search for a tool which would tell us whether we were in an inflationary period (top) or a non-inflationary period (bottom) using the **market prices** (and only market prices—no government intervention) of assets which have not changed in nature since time immemorial.

I came to the conclusion that these two assets had to be gold on one hand and the total return of the dominant bond market worldwide, the US bond market, on the other.

The logic here is straightforward: gold has no yield, the bond market does. So, if over a sustained period of time gold starts to outperform the bond market on a **total return basis**, it must mean that either inflation or inflation expectations are rising since the investing public is willing to abandon a certain nominal return for a speculative capital gain on gold.

Put simply, if gold outperforms the bond market total return **it must mean that the public is losing confidence in the currency because the value of that currency is going down.**

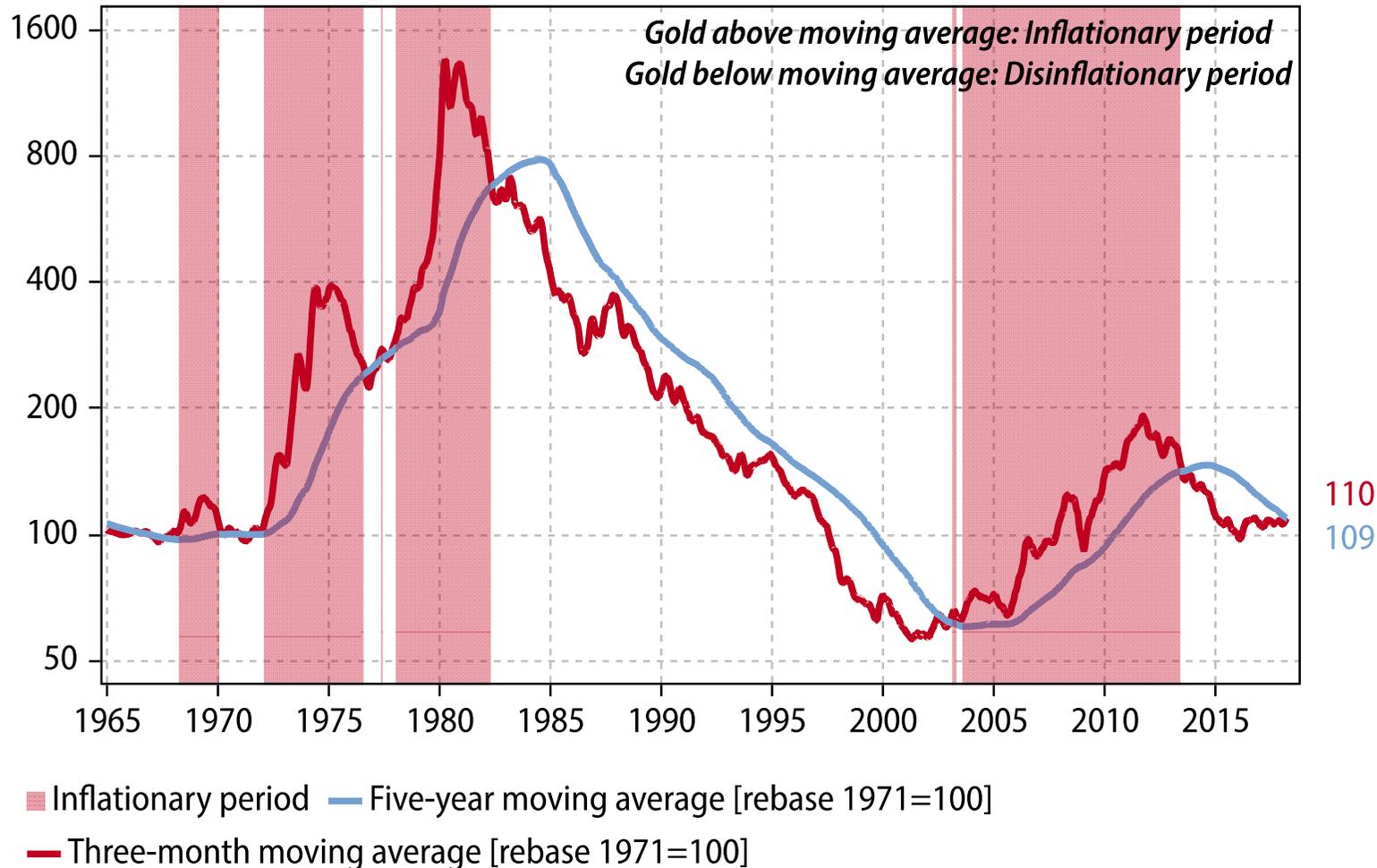
The next step was to test for the best “sustained” period of time. I finally settled on five years. So, to put it simply, if gold outperforms the total return of the us bond market (10-year bonds) over five years, then the economy is deemed to be at the top of the four quadrants, in an inflationary period. If gold underperforms over five years, then we are at the bottom.

The back tests worked fine but left me with a problem: the size of the sample was pretty small because the price of gold became free only in August 1971, when Nixon moved out of the dollar (gold) exchange standard in place since Bretton-Woods.

So, to test my theory for the period going from 1914 to 2018, I replaced gold with silver. The results are the same. Since 1918 (with silver) and 1971 (with gold) in inflationary periods, the Shiller P/E ratios go down on average by -5% a year while in a non inflationary period, they go up by 5% or so a year...

Decision rule chart

Gold vs the US long bond market



Gavekal Data/Macrobond

Where the chart is shaded red, we are—probably—in an inflationary period.

If the chart is left unshaded, we are in a non-inflationary period.

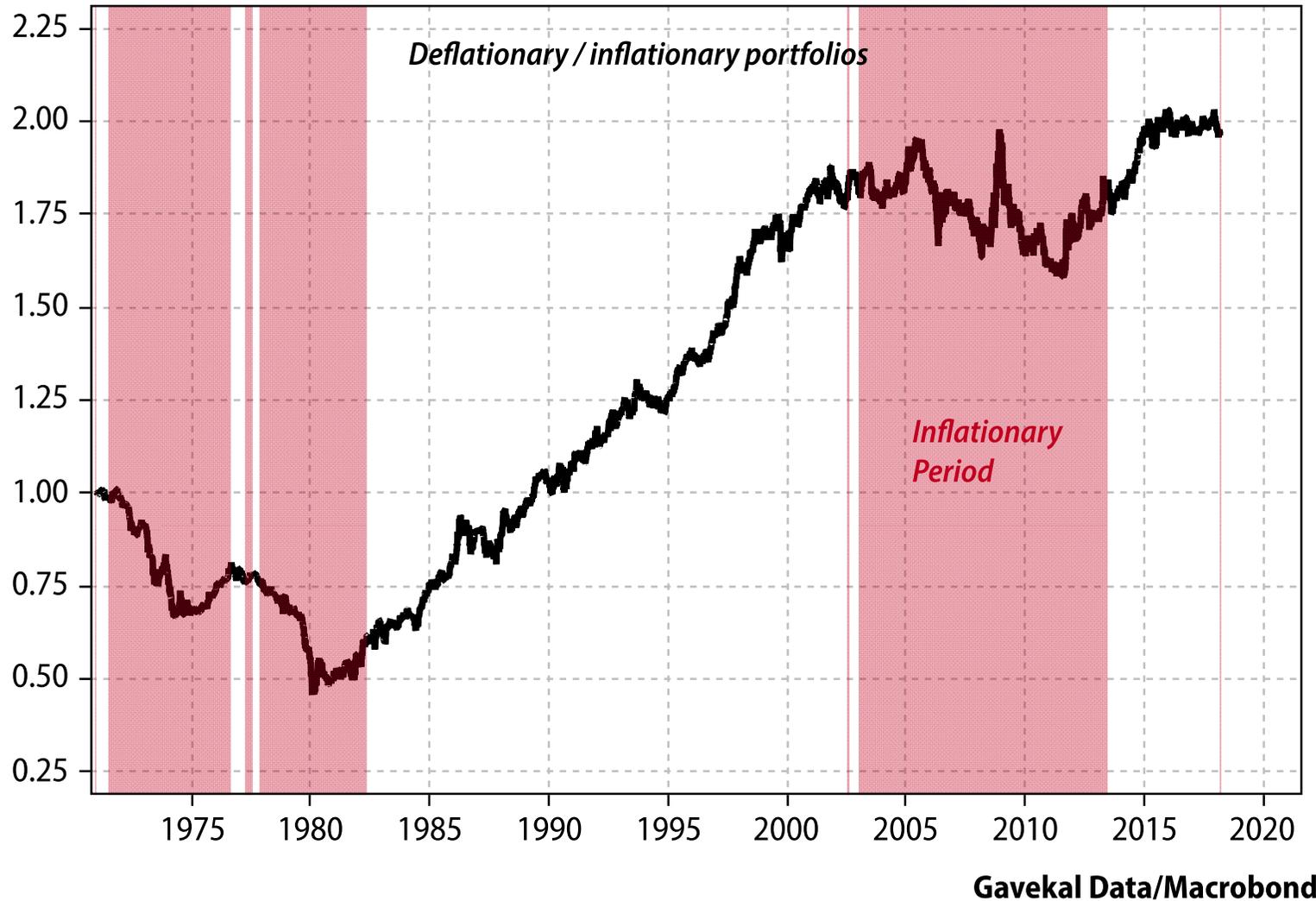
We are flirting with a regime change.

The next few months (weeks?) are going to be crucial.

Such a change would be equivalent to a sell signal on almost all the long bond markets in the world, especially the most vulnerable ones. In 2011 and 2012, we had the euro crisis...

Checkup

Relative performance of inflationary and deflationary portfolios



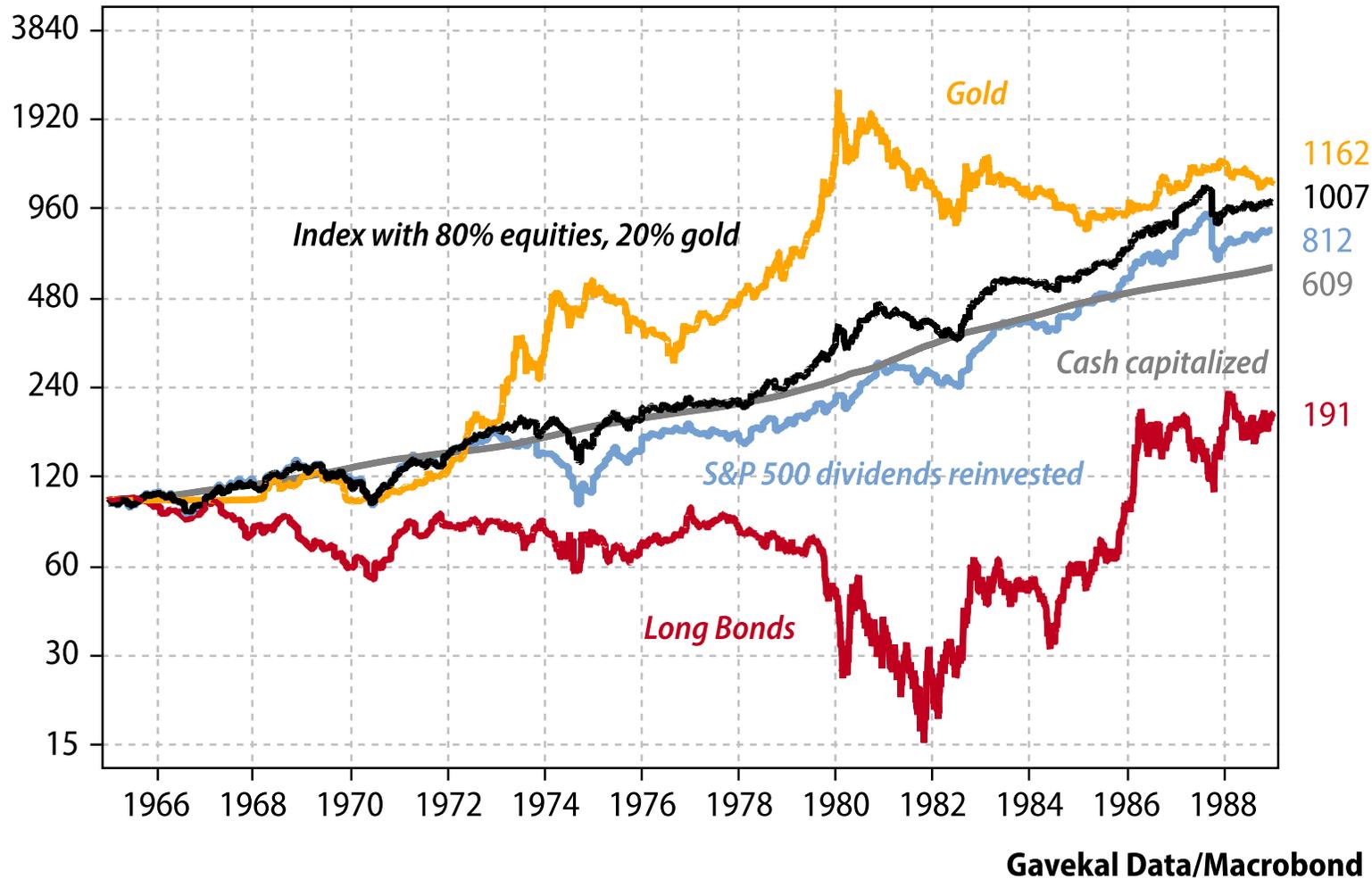
This chart shows the relative performance of a deflationary portfolio (50% equities, 50% long bonds) versus an inflationary one (50% equities, 25% cash, 25% gold).

When the chart is shaded red, we are in an inflationary period and the classical balanced portfolio underperforms big time. The reverse is also true.

How to diversify in inflationary times

The first solution: use gold and cash

The four investable assets: S&P 500, US long bonds, gold and US\$ cash in an inflationary period

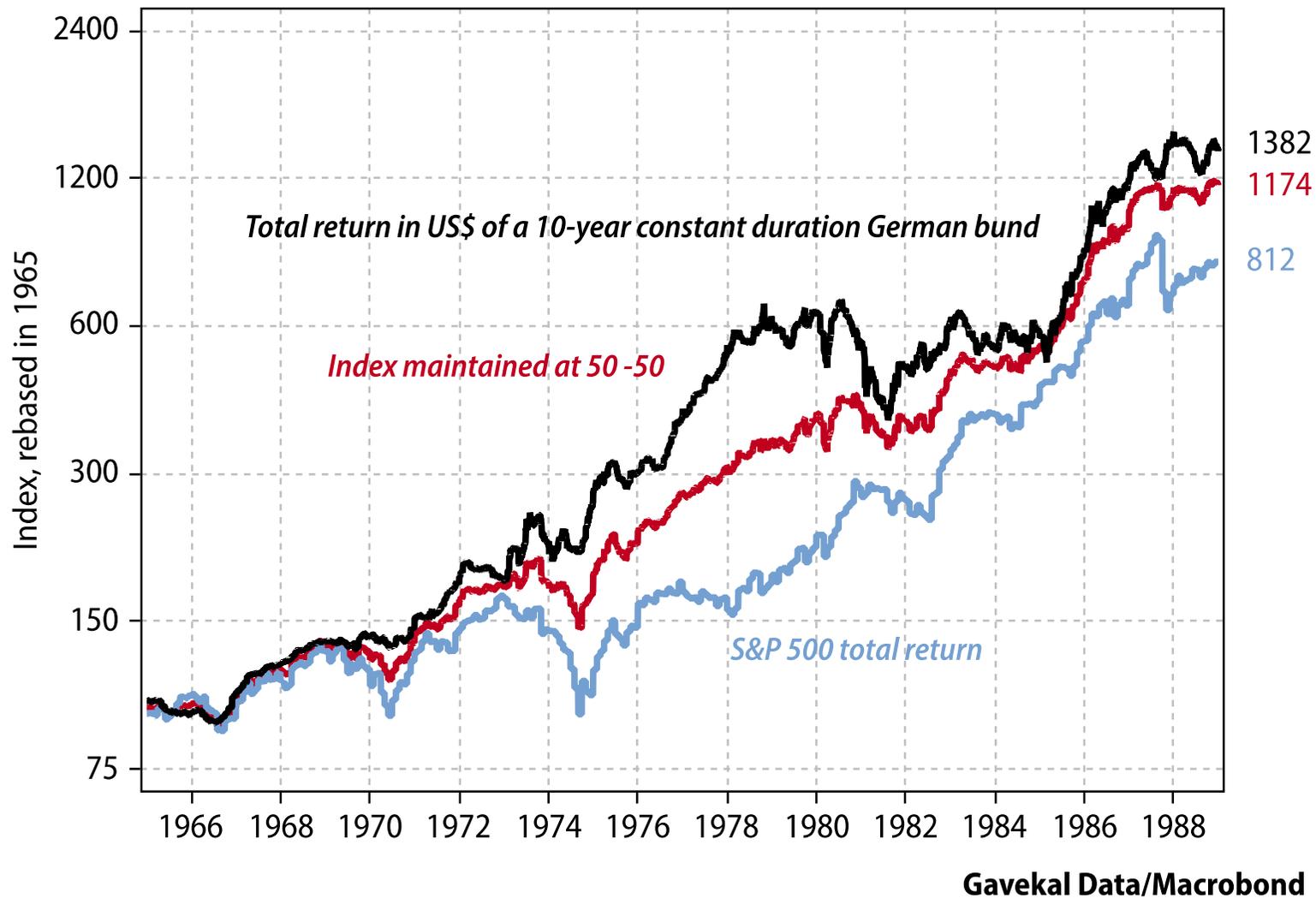


If one uses gold or cash, the volatility is lower and the results better

But the real diversification if one wants to protect one's portfolio invested in an inflationary country is to buy a long bond issued by a non-inflationary country

The second solution: use a 'serious bond market'

Diversifying the US stock market with a non-inflationary bond market



In fact, the best diversification for a local equity market in an inflationary period remains the bond market of a non-inflationary country

From 1965 to 1988, the German bond market did much better than the US stock market, dividends reinvested.

I suspect that the same thing will happen if one were to replace the German bond market (useless since the euro) with the Chinese one.

Is the Chinese renminbi the new deutsche mark?

Total return in US\$ of 10y government bonds



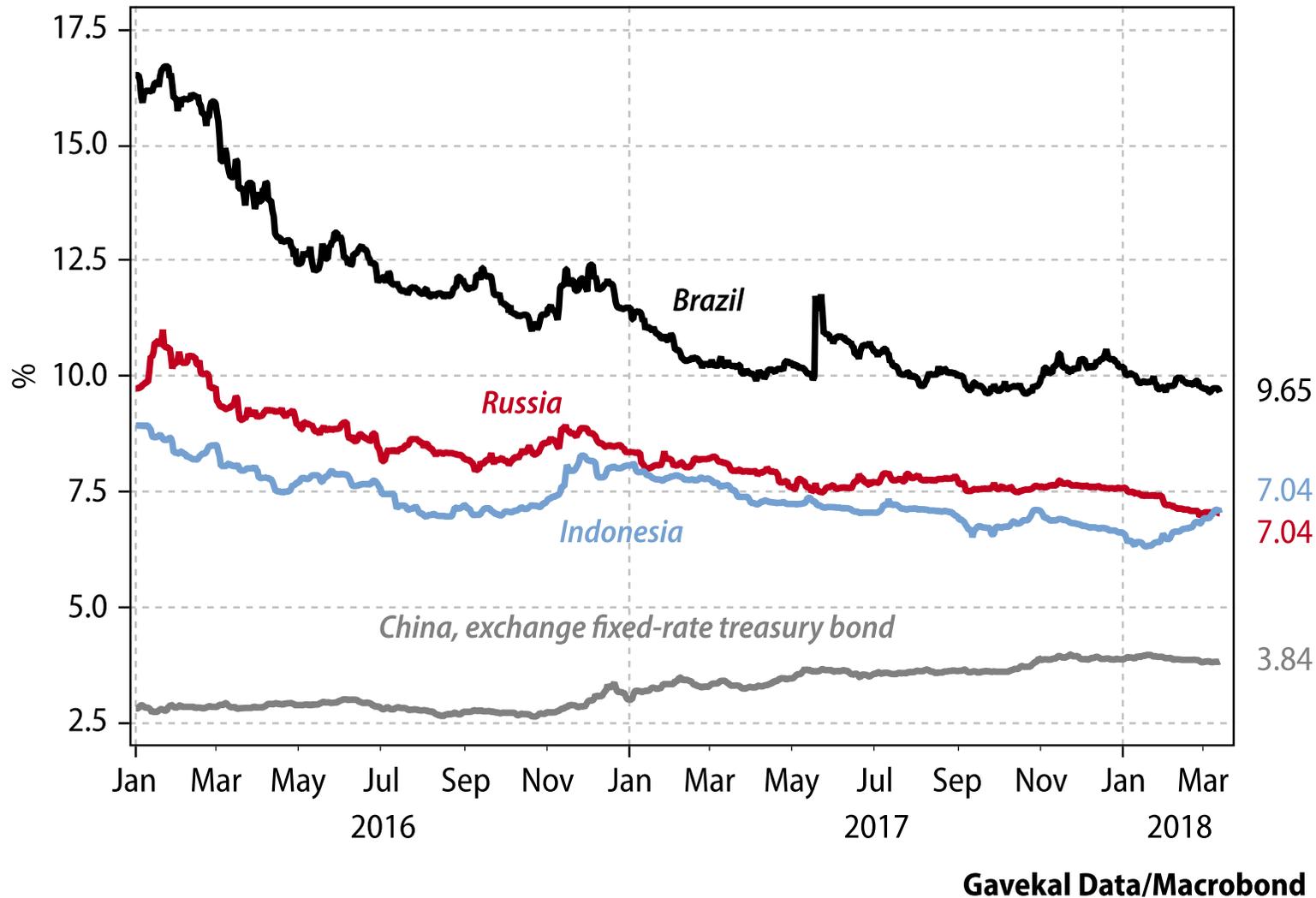
Obviously, the best bond market since 2006 has been the Chinese one.

Our belief is that China wants to “de-dollarize” Asia, for to achieve that goal the renminbi needs to be a strong currency.

Thus, one could use a Chinese long bond as a hedge against an inflation risk in the US and a deflation risk in the eurozone. But one could also use government bond markets “tied” to the Chinese bond market.

Will these bond markets converge towards the Chinese market?

Government benchmarks, 10-year yield



The Chinese central bank has offered swaps to all these countries.

In doing so, to a large extent they are underwriting the stability of these currencies.

The local central banks are also following a very reasonable policy.

I would not be surprised if the 10-years of these countries over the medium term were to converge to Chinese levels.

Conclusion

1. The next bear market is going to be **the bear market of indexation**. By construction, the indexes are made of the things which have worked in a disinflationary period, and this disinflationary period has lasted more than 30 years.
2. Most money managers have no clue how to manage money in an inflationary period, and computers are especially useless. If we move to an inflationary period their portfolios will be destroyed.
3. As an aside, one should be invested in countries which have an undervalued currency today, since their exchange rates, by going up, will reduce the inflationary pressures.
4. Most of these countries are in Asia, and this is where one should have ones bond portfolios, in local currencies.
5. Inflationary periods tend also to favor countries which have a current account surplus.

Contact and disclaimer

Thank you!

This presentation was prepared by

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