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"Learn how to see. Realize that everything connects to everything else."

— Leonardo da Vinci

September 11th 2017

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German Bunds have never before been this expensive: the ‘Real Rate to Growth’ Ratio

Measuring the Bond Bubble

A key conviction of ours is that we live through a **Twin Bubble in asset markets**: an Equity Bubble, particularly in the US, and a Bond Bubble, particularly in Europe. We know how we got here: the irresistible push of 10 years of massive passive public flows by major Central Banks (together with NIRP policies), which led to few years of large-scale passive flows by a private sector made of ETFs, risk parity funds, vol funds, trend-chasing algos. Still, the valuation issue remains, it affects expected asset returns from here on, and may therefore cause potential deep re-pricings along the way.

Recently, in an attempt to measure the **Equity Bubble**, we referred to a measure of valuation such as the ‘Peak PEG’ ratio, which compares CAPE multiples of stocks in the S&P to the long-run rate of GDP growth for the economy overall. We adjusted for peak earnings, instead of average earnings, by taking the top two quarters in ten years; in so doing, avoiding the distortion in earnings during the Lehman crisis. It resulted that, against that valuation metric, the S&P was more expensive than ever before, including during the notorious tech bubble in year 2000. Oftentimes, we are told that stocks are not so expensive when compared to bonds, and their minuscule yields. Except that bonds are in a bubble themselves, offering little comfort to the endangered species of rationale investors. In this brief note, we look then at sizing up the **Bond Bubble**, to see how far we got away from normality.

In mid-2014, nominal yields on short-dated government bonds in Germany dipped down in negative territory, following the decision by the ECB to cut the depo rate below zero. At the time, GDP growth was in tatters across the Eurozone, inflation was deflation, and the existential crisis for the EU project in full display. Fast forward to today and German GDP is predicted at ~2% for 2017, inflation is at ~2%, the largest short-term threat to the EU survival (aka French elections) defused, all the while as the ECB, survey data, equity markets are all convinced the recovery is set to gather speed from here, and be ‘solid, broad-based in the period ahead’. Yet, short nominal rates on 2yr German government bonds are stuck at -0.76%, close to all-time lows, predicting that nothing much in policy will change well into 2019.

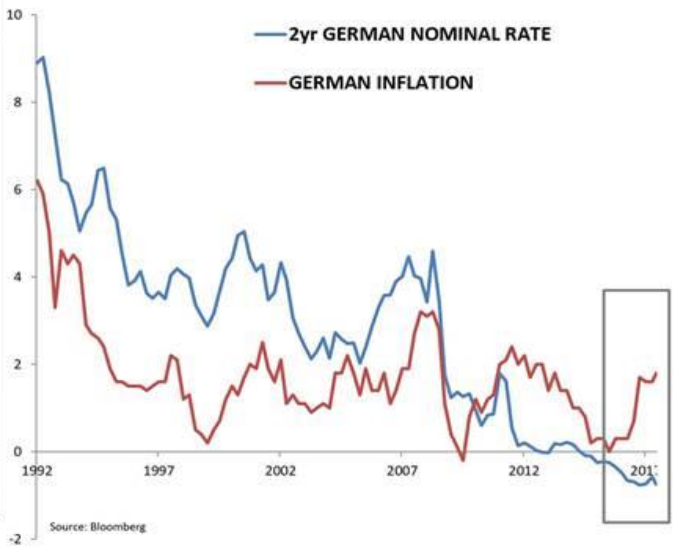
The thing is, though, that **inflation moved from zero to 2% in the past 9 months**, quite an acceleration, leaving **real rates in a -2.5% deep hole in Germany and other core EU countries**. **Real rates are now more negative than at any point in modern financial history.**

MEASURING THE BOND BUBBLE

REAL RATES DIPPED DOWN RECENTLY AS INFLATION RESURRECTED FROM ZERO, WHILE NOMINAL RATES HELD STEADY

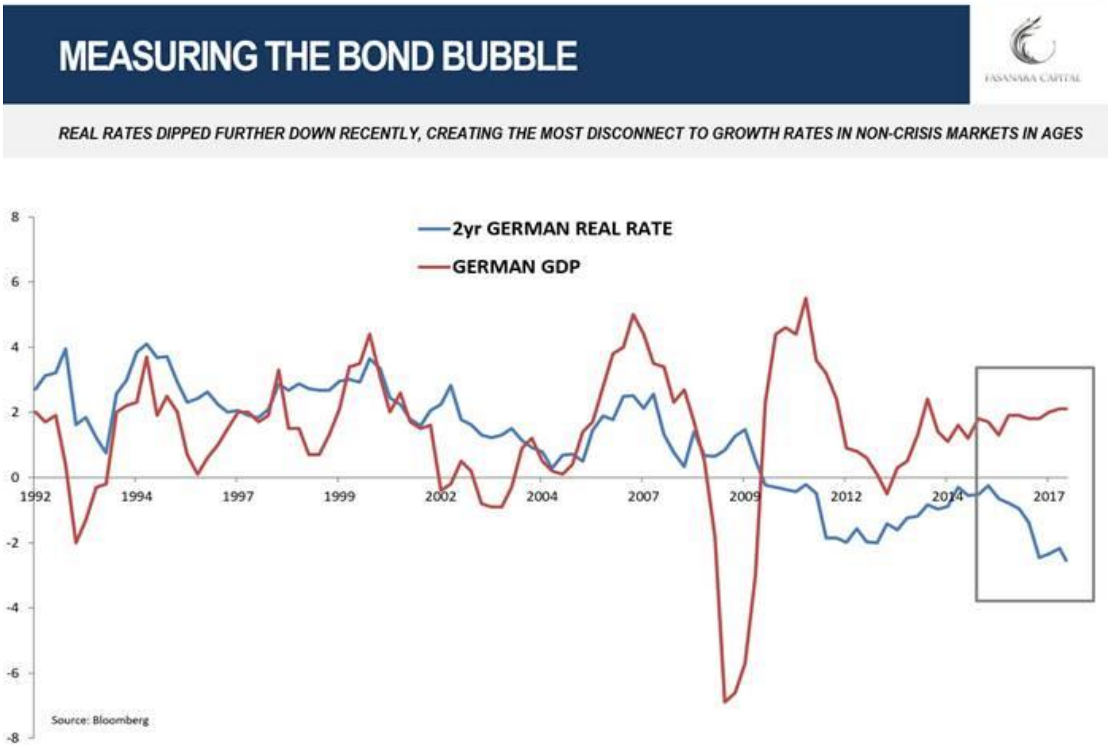
2-Year Yields XX			
Country	*2-year Yields*	*CPI*	*Real Yields*
SWEDEN	-0.683%	2.20%	-2.880%
UK	0.164%	2.60%	-2.436%
GERMANY	-0.749%	1.67%	-2.422%
BELGIUM	-0.549%	1.78%	-2.330%
DENMARK	-0.646%	1.49%	-2.139%
NETHERLANDS	-0.691%	1.33%	-2.021%
SPAIN	-0.356%	1.55%	-1.904%
FRANCE	-0.589%	0.72%	-1.307%
FINLAND	-0.699%	0.53%	-1.227%
ITALY	-0.073%	1.10%	-1.172%
SWITZERLAND	-0.815%	0.30%	-1.115%
NORWAY	0.596%	1.53%	-0.935%
USA	1.138%	1.73%	-0.590%
JAPAN	-0.148%	0.40%	-0.548%
IRLAND	-0.512%	-0.20%	-0.314%
POLAND	1.697%	1.80%	-0.108%
CANADA	1.237%	1.16%	0.073%
CHINA	3.573%	1.40%	2.173%
GREECE	3.174%	1.00%	2.175%
RUSSIA	7.820%	3.86%	3.955%
BRAZIL	8.265%	2.71%	5.553%

As of: 29-08-2017 Source: OECD Data - ©Fasanara

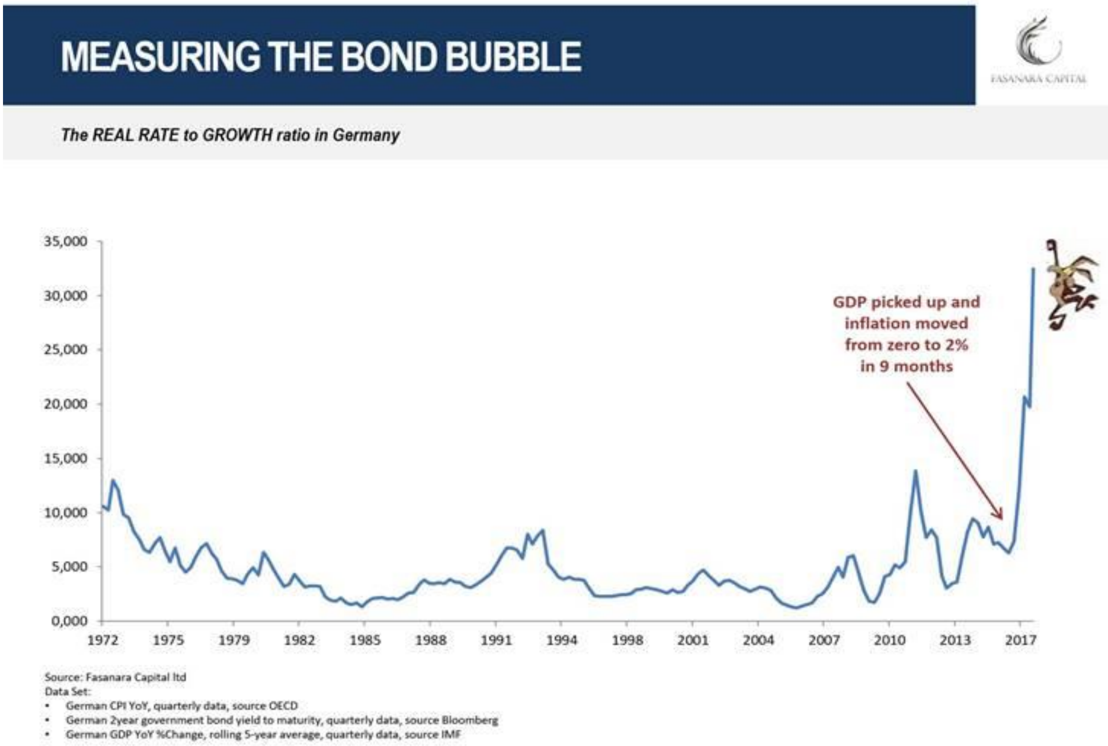


The comparison to growth rates, and long-run trend growth, is even more striking. Rationally, if negative rates were deployed to spur growth (through financial repression), and reduce unemployment (although not directly a mandate for the ECB), then it follows that now that growth resurfaced interest rates should adjust. The higher the growth rate, inflation adjusted, the higher the real rates the economy can take.

As growth picked up and rates did not, their relationship broke down markedly. The disconnect that ensued shows up as one of the largest to date.



Assuming long rates correlate to long-run growth, we then go adjust the level of real rates to trend growth. The resulting **'Real Rates to Trend Growth' ratio is literally off the chart. When compared to trend growth, government bonds in core Europe have never been as expensive as they are today. They are 200/250 basis point away from equilibrium.**



In looking at small yields on govies from a different 'equity-like' perspective, legendary investor Warren Buffett complains about his largest portfolio holding, Treasury bills, yielding just 1%. He states how skittish he feels paying something 100x earnings, where earnings can't go up. Holders of negatively yielding Bunds, for maturities up to 5 times over those of T-bills, can only look at that as a luxury.

Endless other ways to look at valuation on bonds can be used, most of which concur in pointing to the current times as an outlier in history. Nor should we really be surprised by such an outcome, as unprecedented, unconventional monetary policy does exactly what it says: unprecedented, unconventional stuff. Yet, to not be surprised does not imply to have to get used to, nor does it mean to forget the execution risks of never-seen-before policymaking, which are also unprecedented.

The ECB has a plan. Markets do not.

The stance of the ECB on this matter is clear. At present, the ECB sees no reason to panic for fears of rampant inflation, nor for financial bubbles. The ECB, in its forward guidance for 2018, sees no need for rate increases until well after the net purchases are over. The ECB also states that inflation needs to be close to 2% in the medium term, the convergence must be durable, self-sustained, and concern the whole of the region. In other words, inflation must be driven by broad-based robust demand and wage growth. Also, the EUR is turning the screws in anticipation of what seems inevitable, meanwhile offering yet another excuse for procrastination.

Yet, even on such contingency, moving through smoke and mirrors, the ECB presser and sources are consistent with a sequencing that sees the quantum in size and duration of Quantitative Easing to be discussed/decided in 6 weeks from now, and composition and rules of QE to be changed in December. It seems that the roadmap to adjustment is set. Fundamentals and valuations will come closer one another, somewhat. Soon, it seems. None of this is priced in, though, in bond nor in equity pricing. The EUR alone began to adjust.

Let us be clear. Nothing in this note is meant to say that it is a bad strategy on the part of the ECB. Rather, we just intend to point to the current valuation on Bunds and other core European bonds (govies, corporate and junk bonds) as fitting the classic definition of a financial bubble, insofar as a large disconnected to fundamentals in visible. As any bubble, it is unstable and unsustainable.

It remains to be seen how long the bubble can be blown for. **Capacity issues** matter, as at current rates, the ECB will have no Bunds left to buy in 6 to 8 months. In Germany, **negative accruals on**

savers may also work as a countdown, as such a tax on capital is increasingly hard to justify. Ultra-loose money spur **asset bubbles**, in so doing exacerbating **income inequality**, which in turn viciously deters long-run growth. It may not be long before these arguments become the dominant narrative.

Easy money fuels asset bubbles, inequality

Cheap money helped asset bubbles and unproductive uses of capital, flooding to safe haven parking lots or seeking speculative gains from participating in credit-fuelled asset bubbles across commodities, real estate, LBOs, big takeovers and buybacks, etc. We discuss some of the unintended consequences of QE in this note, while we argue why we think the wealth effect failed here. The twisted effects of cheap money cannot go unnoticed by central bankers. Eventually, they are self-defeating. The excess of capital leads to its own demise, a glut of everything that eventually helps to crash prices. Rephrased, in the words of BIS Claudio Borio 'financial booms do not go on indefinitely, they fall under their own weight.'

Why are rates so low

Unarguably, **rates are low for structural reasons that stretch beyond central banks asset purchases programs.** The **natural rate of interest** - i.e. the inflation-adjusted safe interest rate that the economy will converge to over the long term, neutral in terms of impact on inflation and unemployment - has certainly decreased over time, owing to a lower productivity growth, deflationary technological innovation, over-indebtedness, falling productivity of credit, chronic oversupply of goods and services. This is confirmed by long-range central banks projections, market forward rates, global interest rates, etc. Yet, the magnitude of how negative rates got to should scratch one’s head. Nothing here is intended to suggest rates should not remain historically low, but real rates should really be more negative than they were last year, for example? And more negative than at any time in history? Probably not.

It happened already

Central banks might try holding onto deep negative rates for longer for reasons other than comfort over broad-balanced inflation and sustainable recovery. Debt itself is a likely target, with negative rates being a way to handle the rundown of the excess debt burdening an economy characterised by shallow structural growth rates. Ceteris paribus, negative real rates decrease debt/GDP ratios. It is not the first time this happens. Financial repression in aftermath of WWII helped cure unworkable levels of war debt.

Rebuilding in risk premia: at what speed?

It all boils down then to the speed of the adjustment. How quickly or slowly, orderly or disorderly will risk premia be added back up to general asset valuations. Can normalisation be peaceful. The starting point for such adjustment must matter. If the starting point for the adjustment is a definitive bubble in risk assets, then the odds of a disorderly adjustment increase; one cannot just assume - as complacent markets do today - that it will be smooth sailing all the way through. It probably won't be. Not certainly, but probably, given the starting point we adjust from.

It is a truth universally acknowledged that the single biggest determinant of long-term returns must be the price you pay for something. Valuations matter.

Asset bubbles and the speed of adjustment

To recap. Equity markets in the US are in bubble territory, when measured against trend growth, even considering multiples built on the two top quarters in earnings of the past ten years. They come cheaper only against bond yields. Except, bonds are in a bubble themselves, never as big a bubble when yields are measured against the same trend growth. **So valued, the expensiveness of government bonds is off-the-chart.** Which means, we have bubbles in major equities and major bonds at the same time. Emergency policymaking and ultra-loose monetary policy are being phased out, due to 1) capital destruction in core EU, 2) capacity constraints (no more bunds to buy past mid-2018) and 3) income inequality threatening to trigger regime change. **The bond market says nothing much will change in the next two years. We doubt that the adjustment can take that long.**

How it ends

In our opinion, it ends like this.

Related Readings:

"Ultra-low or negative interest rates: what they mean for financial stability and growth", Bank for International Settlements Read

"Negative Real Interest Rates: The Conundrum for Investment and Spending Policies", CFA Institute Read

"Negative interest rate policies : sources and implications", World Bank Group Read

"Why negative interest rate policy (NIRP) is ineffective and dangerous", WordPress Read

"Negative Interest Rate Policy (NIRP): Implications for Monetary Transmission and Bank Profitability in the Euro Area", IMF Read

"Assessing the implications of negative interest rates", ECB Read

The Liquidation of Government Debt, Carmen M. Reinhart and M. Belen Sbrancia, IMF Read