

Market Pulse DKK: Very modest outlook for callable bonds in 2020

- The current OASgov points to a very modest or even poor 2020 for callable bonds relative to government bonds
- We base this conclusion on the relation between OASgov in the start of the year and the realized excess return following year. We have used the recent 16 year's realized returns
- In our view callable bonds should be used for opportunistic trading in 2020 unless OASgov widens some 15bp
- We don't foresee that foreign investors will drive spreads tighter, which is confirmed by the fact that their share
 of the market have not increased the recent six months (read more here)
- If 2020 becomes a year with no surprises and a very stable rate development where implied volatility will decline
 on the back of lower realized volatilities, then callable bonds can do okay. But that's a big if!
- It's possible that we can see some temporary performance after the year-end effects are gone and reinvestments kick off in first part of January, but for the full 2020 the outlook seems very modest

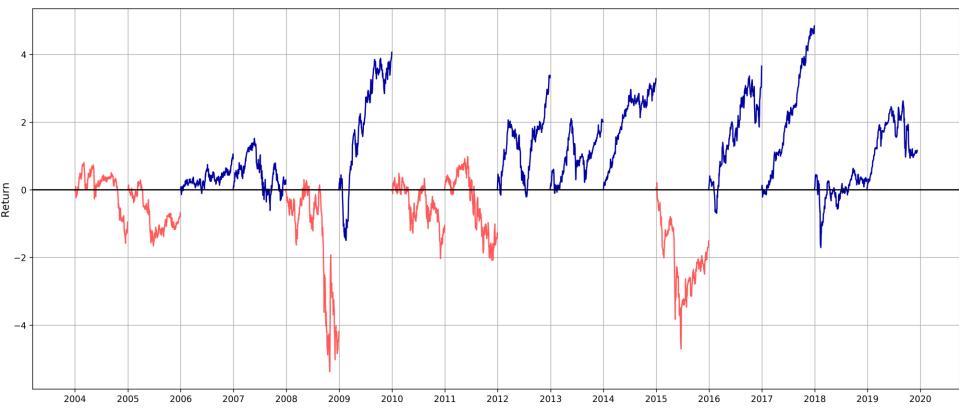
Year-on-year excess returns in callable bonds vary much

Is there an indicator that points to whether a given year will be prosperous for callable bonds?

Looking at year-on-year excess returns on callable bonds relative to government bonds over the last 16 years the picture is mixed. In 6 of the 16 year the callable bonds underperform and in some years the excess return have been very limited

Could OASgov be an indicator of what to expect with regards to excess returns in the following year and will the current OAS point toward a prosperous year for callable bonds?

Year-on-year excess return on Callable bonds relative to Government bonds (CM5Y)



History indicates that callable bonds only do well when OAS is sufficiently high when entering the year

The current OAS points to a slow year for callable bonds

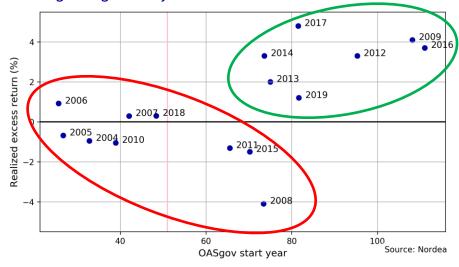
Since 2004 callable bonds have only outperformed government bonds when OASgov has been larger than 70bp (with 2006 as an exception, see later). This shows that callable bonds need some OASgov to compensate for the embedded risk

Currently OASgov is 51bp on 1%50 (pink line). So based on historical observations alone, the likelihood that callable bonds will overperform government bonds in 2020 seems low

The tightening of the swap-gov spread over the last years have benefitted callable bonds relative to government bonds. We don't believe that Danish government bonds will underperform swaps in 2020 and therefore callable bonds is not expected to gain anything on that account

In the start of 2006 OASgov was very low but callable bonds nonetheless performed. This was a result of the support from large borrower buybacks on the back of the massive increase in rates. This is in our view not a likely scenario for 2020

Year-on-year excess return on Callable bonds relative to Government bonds (CM5Y) plotted against OASgov in the beginning of the year on the 30Y on-the-run



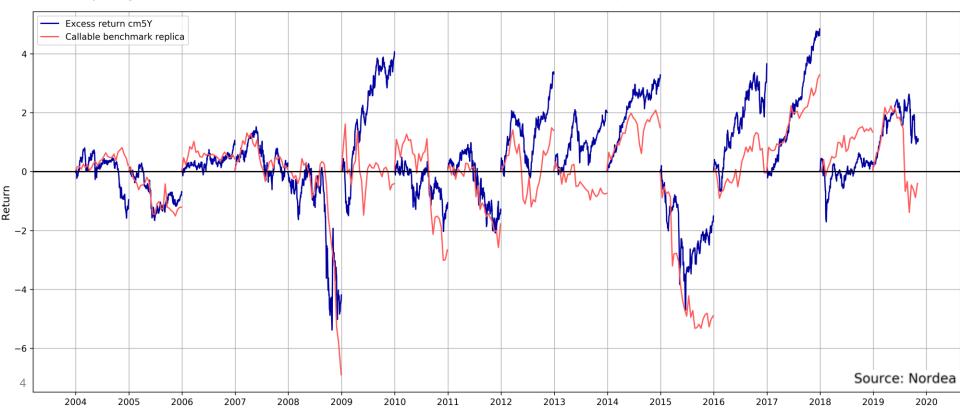
What can save callable bonds in 2020?

A year with absolutely no surprises will benefit callable bonds – but that's a big if!

As we argued on the previous page the current OAS isn't sufficiently large to compensate for blows to the risk factors that happen in a typical year. So what does it require for callable bonds to overperform government bonds?

Callable bonds does price in the negative convexity as well as the development in implied volatility. This is shown in the chart below. So, if 2020 becomes a year with no surprises and a very stable rate development where implied volatility will decline on the back of lower realized volatilities, then callable bonds can do okay. But that's a big if given the large uncertainty regarding the true state of the economy, the new strategy of the new ECB president and the many unsolved issues (trade war, Brexit, Italy ...)

Year-on-year excess return on Callable bonds relative to Government bonds (CM5Y) (**blue** lines) and a replica of the Convexity/Vega in a basket of duration neutral EUR Swaption straddles (**red** lines)



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