

All the additional regulations and capital requirements were supposed to make banks safer. Their shareholders don't seem to have noticed.

Even prior to the UK referendum, risk levels in the European and US bank sectors doubled in the past year. Events since then are pushing risk higher still.

### If Banks Are Safer Someone Should Tell Their Shareholders

Both the KBW Nasdaq Index of US banks and the Stoxx® Europe 600 Banks Index peaked in July of 2015 shortly before our Downturn Indicator signalled the transition from boom to bust in global equity markets. Since then, and prior to the UK Leave result, Omega Metrics® Value at Risk (VaR) and Expected Shortfall (ES) for 5-day losses have doubled in both indices. By June 23rd, the US Bank index had declined by almost 15% and the European Bank index had lost over 30%. By yesterday's close the KBW Index was down 22% and the European index was down 47% from last July.

Perhaps the experts who were certain that new and improved regulation would not diminish banks' ability to raise capital are now eagerly awaiting the next rights offer from an Italian bank.

### Post Referendum Losses Were Entirely Predictable

Far from being 'black swans', the losses which have shocked European banks in the past week were no more surprising than a sighting of a grey pigeon. The nonsensical claim that statistics can't assess risk in financial markets has been given the status of wisdom since 2008. But our analysis of market data prior to the UK referendum warned that the realised losses to bank share prices should have been expected. The proof is in Table 1, which shows 5-day VaR and ES levels on June 23rd.

### The World's Most Systemically Important Bank

According to the IMF, Deutsche Bank is the most systemically important bank in the world. In its worst 5 day period following the UK referendum result, Deutsche Bank was down 21.5%. This was the bank's worst 5-day loss since October 2008, but it was barely a breach of the Omega Metrics® 99% VaR for 5-day returns which we recorded on June 23rd. The ES level on that day was 28.4%.

The tail for 5-day returns is now so fat that a loss of at least 21.5% should be expected twice a year. Should that loss be exceeded, our tail model says that we should expect a loss of over 31%.

### CDS Levels Can Be Blind to Equity Market Risk

Owners of shares in the IMF's second most systemically important bank, HSBC, have had much better results than Deutsche Bank shareholders since the UK referendum result. HSBC has had no 5-day losses since June 23rd. HSBC's risk levels are only about half as high as Deutsche Bank's and the same is true of the 5 year Credit Default Swap rates for the two banks.

But JPMorgan, number 4 on the IMF's systemically important list, has a CDS rate only about two thirds that of HSBC. Our measure of tail risk shows however that JPMorgan returns have a significantly fatter tail than those of HSBC. Evidently bondholder sensitivities are not a good proxy for downside risk to shareholders.

**Table 1**

Instrument	99% 5-day VaR	99% 5-day ES	Worst 5-day Loss (since 23 June 2016)
KBW Nasdaq Bank Index	-10.9%	-16.8%	-9.3%
Stoxx® Europe 600 Banks	-14.3%	-21.8%	-16.8%
Banca Monte dei Paschi	-31.8%	-47.4%	-32.5%
Barclays	-14.2%	-21.3%	-27.1%
Deutsche Bank	-19.4%	-28.4%	-21.5%
HSBC	-10.8%	-15.7%	N/A
JPMorgan	-10.9%	-17.8%	-7.6%
UniCredit	-21.5%	-31.3%	-27.7%

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