Federal Reserve Notes are Risk Free?

In finance, one of the earlier ideas you will learn is the idea of a risk free rate of return. This is the amount of return you can expect on an investment by making that investment in a vehicle that has 0% risk of default. You will get the return for sure, every single time – hence, risk free.

The risk free rate used in finance models is the return on long term government bonds. Often, US federal reserve notes are the returns used, though in other countries, practitioners sometimes use foreign government bond returns.

This is at odds with the facts.

First, through printing money, some governments may continue to make payments on debt even when they don't have the money to do so. This may result in the nominal return being as advertised but the real return by definition will be lower due to the inflation eating away at some returns. Obviously, financiers take inflation into account these days but government debt being risk free is still at odds with the facts for the following reason...

Governments default on debt all the time! Essentially every government that has ever existed has defaulted on its debt at some point. Sure, they can go centuries without defaulting, but eventually they do and will default. This makes them no longer risk free.

I have yet to see a strong push back on this idea but believe it to be worthwhile to consider should you work in finance and need to understand what type of rate is truly risk free.