

## 200 Years of Sovereign Haircuts

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How risky is sovereign debt? And under which circumstances have creditors suffered losses on their sovereign debt holdings? These questions have regained crucial relevance for investors and policymakers, in particular in advanced economies. In this paper, we take a long-run perspective and compute investor returns and investor losses (haircuts) in sovereign debt markets since 1815 and worldwide. To our knowledge, this is the most comprehensive dataset on sovereign bonds and debt crises ever compiled. The results provide unique new insights on the asset class of sovereign debt and put recent crisis experiences in emerging markets and in the Eurozone into historical perspective.

Our data archive covers more than 300 sovereign debt restructuring events with external creditors in more than 100 countries between 1815 and 2015, including restructurings in many of today's advanced economies such as Germany, Spain, Italy or Japan. Haircuts are computed by comparing the present value of bonds and loans before and after each restructuring.

We start by presenting the new dataset and by categorizing the episodes of external default, restructuring and haircuts. We find striking parallels in crisis resolution processes and debt crisis outcomes over the past 200 years. For example, the size and variation in creditor losses (haircuts) is similar over the past 200 years, despite the changes in institutions, financial markets and economic fundamentals over time. We also find that cases of outright debt repudiation and debt cancellations (haircuts of 100 percent) are surprisingly rare. Most sovereign defaults end with a negotiated settlement and haircuts well below 50 percent.

In the second part of the paper, we look beyond crisis events and calculate long-run returns on sovereign bonds since 1815, including defaulted and non-defaulted bonds. For this purpose we compute ex-post cash flows for a sample of more than 2500 sovereign debt instruments in history. We find that the returns of buy-and-hold investors in sovereign bond markets were surprisingly high, when compared to safe benchmark assets. On average, investors received a positive return (premium) ex-post -- even on those bonds that suffered from large haircuts. This is because many bonds pay high coupons and have low issuance prices pre-default, thus compensating for any subsequent default losses. We conclude that sovereign bonds have been and continue to be an attractive asset class for investors, despite the frequent defaults and haircuts.

In the last part of the paper, we explore the correlates of haircut size and investor returns. Why do some debt crises result in creditor losses of only 10 or 20 percent, while others imply haircuts of up to 90 percent? What predicts high or low returns on sovereign bond investments? To address these questions, we gather long time series of explanatory variables. In particular, we compile the most comprehensive dataset on historical public debt stocks available in the literature thus far. Our preliminary findings show that global conditions at issuance (ex-ante) are good predictors of the level of bonds returns and haircuts (ex-post). In particular, we find that bonds issued in boom times, defined as years with exceptional creditor growth in core countries and/or high levels of international capital flows, see lower returns and higher haircuts ex-post. These findings are consistent with recent research suggesting that investors may neglect default risks when times are good ("this time is different" syndrome).