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The history of economic recessions has shown that every deep downturn has been accompanied by disruptions in the financial sector. Paradoxically, up until the financial world crisis of 2007-2009, little attention was given to macroeconomic and financial interdependence. And, in spite of a renewed interest on the matter, significant effort is still warranted in order to attain a comprehensive understanding of the causal links between the financial sector and the rest of the economy. In this paper we study the relationship between financial and real business cycles for a sample of thirty-three countries in the frequency domain. Specifically, we characterize the interdependence of credit and output cycles and conduct Granger-type causality tests in the frequency domain. We also perform cluster analysis to analyze groups of countries with similar cyclical dynamics. Our main findings indicate that: (i) on average, credit cycles are larger and longer-lasting than output cycles, (ii) the likelihood of cycle interdependence is highest when considering medium-term frequencies (we find that that Granger causality runs in both directions), and (iii) emerging markets tend to have cycles of shorter duration but are more profound than those exhibited in developed economies.