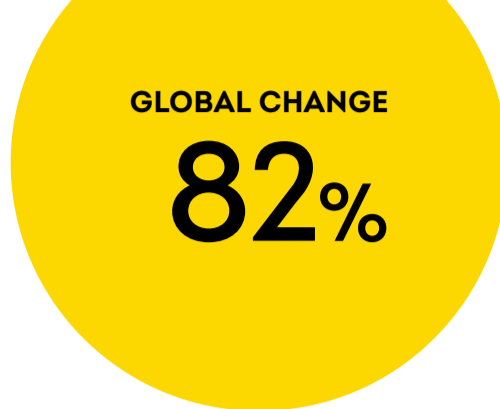


Fraud Trends - Quarterly Analysis

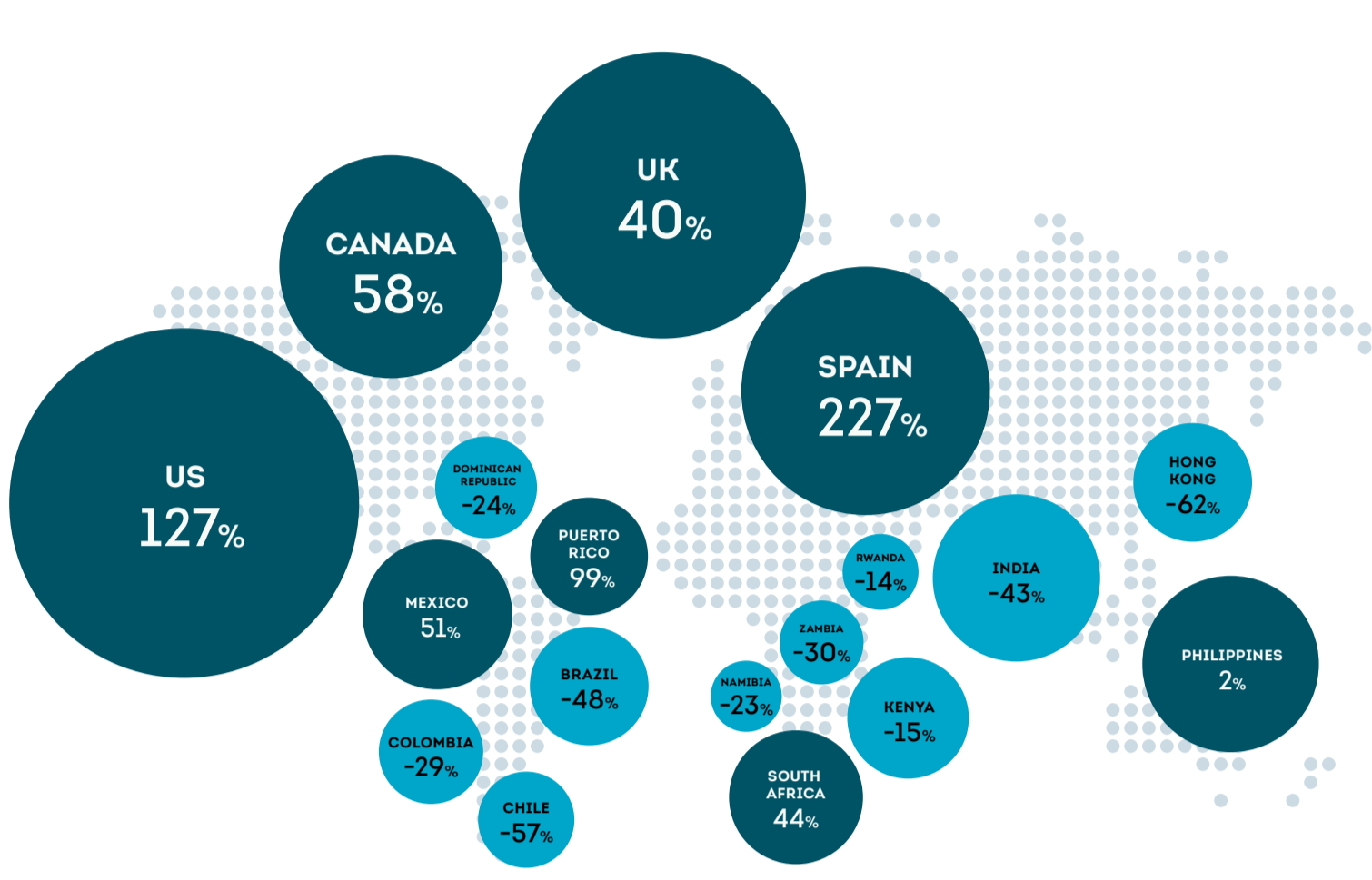
Digital Holiday Fraud in 2022

TransUnion analyzed ecommerce transactions for digital fraud during the traditional start of the global holiday shopping season: US Thanksgiving to Cyber Monday.* All findings except the last chart are based on intelligence from billions of transactions and more than 40,000 websites and apps contained in TransUnion's flagship identity proofing, risk-based authentication and fraud analytics solution suite – TruValidate™.

Suspected Digital Fraud Attempts During Holidays vs. Rest of 2022



Average daily volume change when comparing the periods of Jan. 1–Nov. 23, 2022 and Nov. 24–28, 2022.**

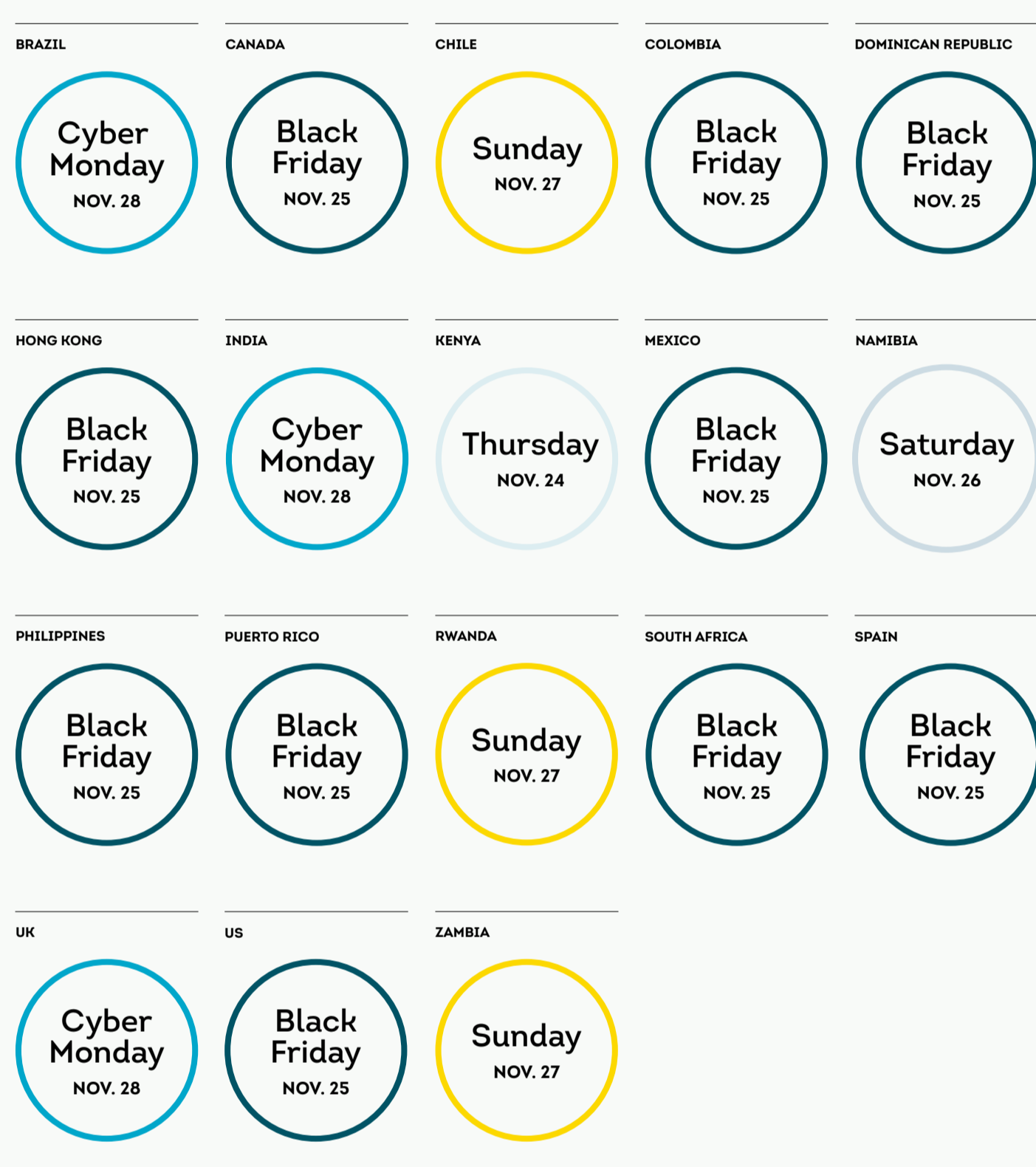


Size of bubble corresponds to the number of suspected fraudulent ecommerce attempts during the holiday period.

Most Popular Day for Suspected Digital Fraud Attempts

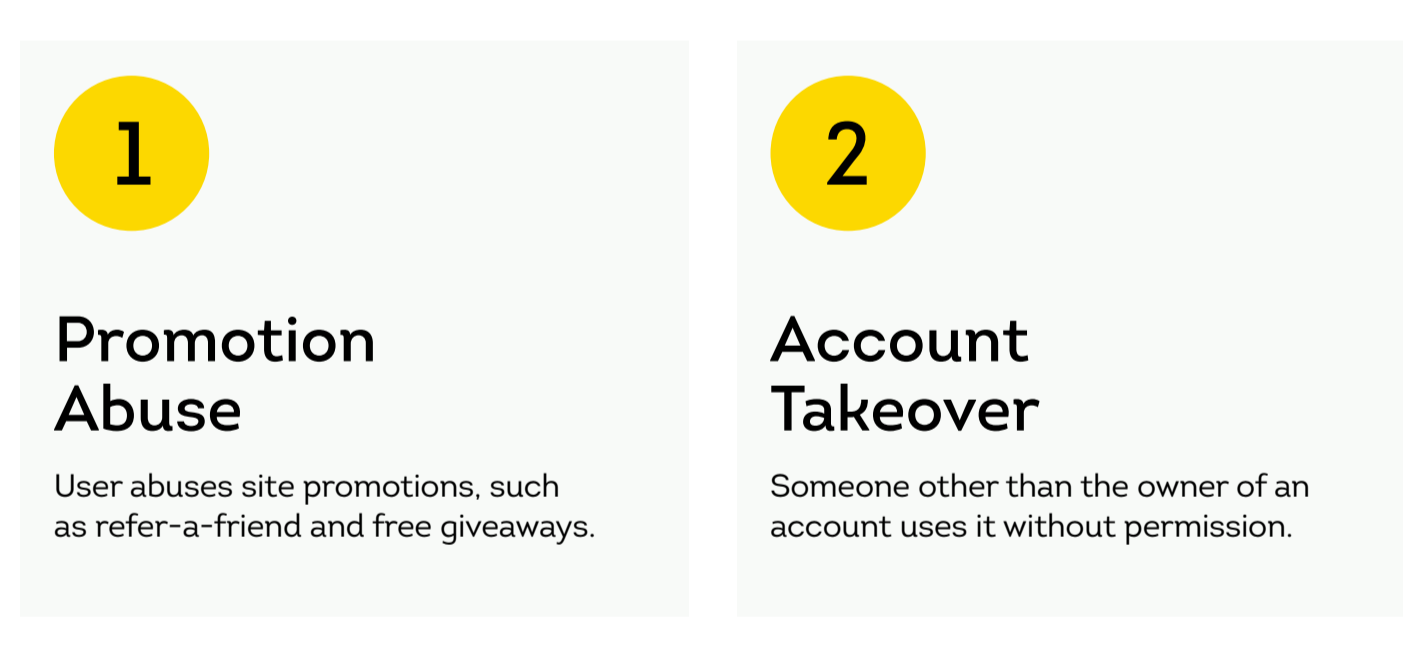


During start of 2022 holiday shopping season.



Top Ecommerce Fraud Types

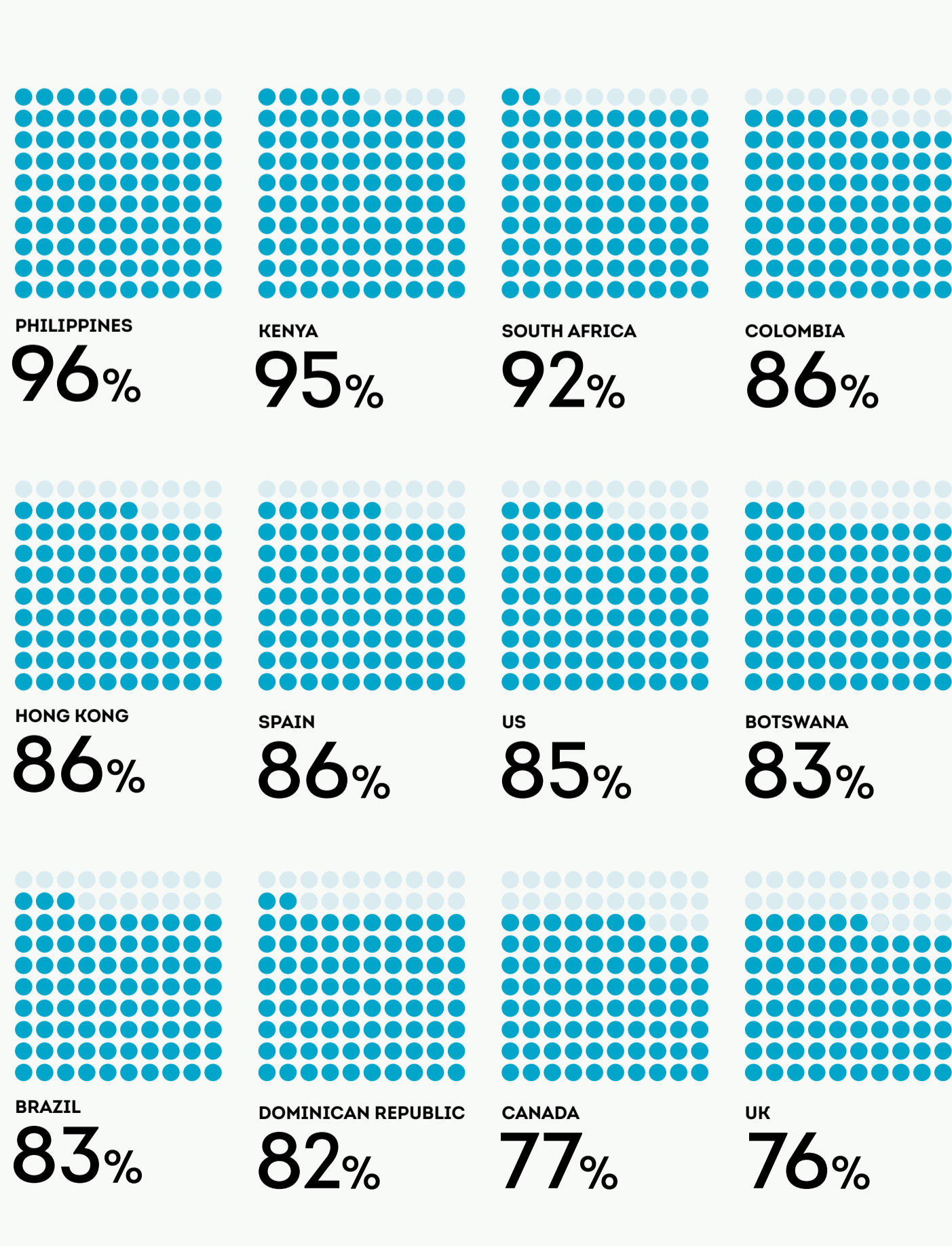
Globally from Thursday, Nov. 24 to Cyber Monday 2022.



Consumer Concern



Percent of consumers surveyed who said they're concerned with being victimized by online fraud this holiday season.***



*For Hong Kong, TransUnion analyzed transactions on Double 11, Nov. 11, and US Thanksgiving to Cyber Monday.
**Suspected digital fraud attempts are those that TruValidate customers either denied or reviewed due to fraudulent indicators. The country and regional analysis examines transactions originating from select countries and regions.
***TransUnion's Consumer Pulse survey of 13,119 adults was conducted August 11–September 16, 2022 by TransUnion in partnership with third-party research provider, Dynata. Adults 18 years of age and older residing in Botswana, Brazil, Canada, Colombia, the Dominican Republic, Hong Kong, Kenya, the Philippines, South Africa, Spain, the UK and the US were surveyed using an online research panel method across a combination of desktop, mobile and tablet devices. Survey questions were administered in Chinese (Hong Kong), English, French (Canada), Portuguese (Brazil) and Spanish (Colombia, the Dominican Republic and Spain). To increase representativeness across resident demographics, the survey included quotas to balance responses to the census statistics dimensions of age, gender, household income and region. Generations are defined as follows: Gen Z, born 1995–2004; Millennials, born 1980–1994; Gen X, born 1965–1979; and Baby Boomers, born 1944–1964.