hiya

Global Call Threat Report

Insights into today's worldwide spam problem

Q4 2022

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Phone spam is a global problem

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Section One

Phone spam is a global problem

The world is drowning in spam calls

7.5 billion. That's how many spam calls were observed by Hiya worldwide in Q4 of 2022. That's about 82 million each day. In fact, Hiya's data shows that 1 out of every 3 calls from non-contacts in the US is a spam (unwanted) call, and in some European countries more than 40% of calls received are spam. In the Americas, Argentina leads the pack with a 52% spam rate. In the Asia-Pacific region, Indonesia tops the list with a whopping 51.5% spam rate.

This report shines a light on phone spam around the world, highlighting the most relevant scams and comparing the volume of spam and fraud calls in various countries worldwide.

The data in this report is based on a representative sample of calls observed during Q4 of 2022 on the Hiya Voice Security Network, which includes Samsung Smart Call enabled devices and the Hiya mobile app. Spam is defined as unwanted calls, and includes both fraud calls and nuisance calls. The spam flag rate in this report represents calls that Hiya has identified and flagged as either fraud or nuisance. Spam ratios represent the number of unwanted calls from "non-contacts"; calls placed from numbers that are not in an individual's local address book.
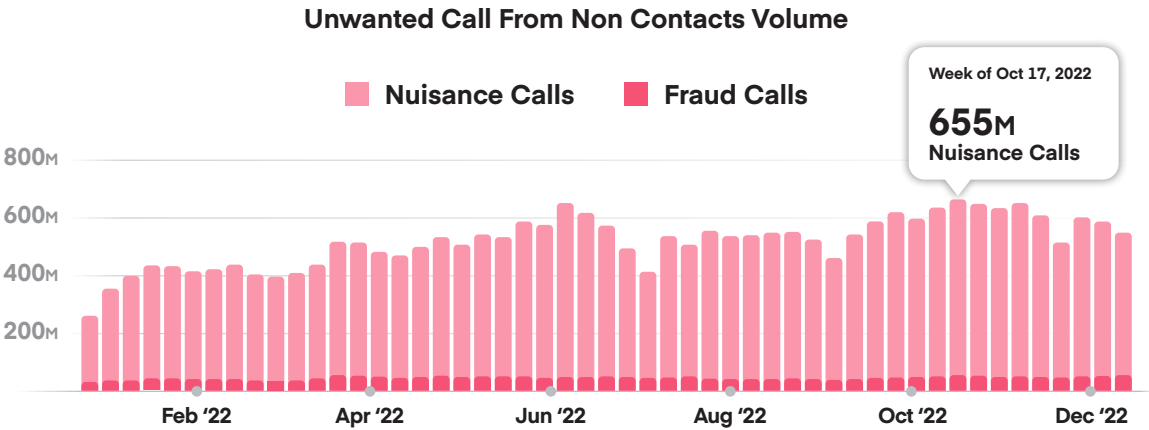
Hiya is detecting more spam than ever

During Q4 of 2022, Hiya flagged more spam calls than ever before. In fact, between October 17 and 22 the number of spam calls flagged by Hiya reached an all-time high of 655 million.

The increase in calls flagged as spam is attributed to the growing volume of calls that Hiya observes, and increasingly more accurate spam detection. With the recent addition of Personal AI, Hiya Protect now enables carriers to be more aggressive in stopping spam calls without stopping calls that subscribers want to receive.

7.5B(Billion)
Global spam calls flagged in Q4 2022

655M(Million)
All-time-high spam calls flagged
in a single week: Oct. 17-22, 2022

Unwanted Call From Non Contacts Volume

Nuisance Calls   Fraud Calls

Week of Oct 17, 2022
655M
Nuisance Calls

There has been a steady increase in spam calls flagged by Hiya during 2022.

Record-breaking spam calls in Q4 2022

Spam is a global problem, and it's only getting worse. In some countries, almost half of the calls received from non-contacts are spam calls.

The #1 phone scam takes a dive

The #1 phone scam in the US for the past two years, the auto warranty scam, took a steep dive in 2022. Still, one of every three calls from non contacts was flagged as spam — the worst performance ever.

1 in every 5 unknown calls is spam

Canadians get fewer spam calls than Americans, but they are experiencing a higher percentage of fraud calls — 15 times higher in fact. The most common scams are imposters posing as Amazon representatives.

Highest fraud call rate in Europe

In the UK, 28% of calls from non-contacts are spam. Of those spam calls, 13% – or nearly half – are fraud calls. The highest proportion of fraud in Europe. Rising costs are making it easier for scammers to drive relevant campaigns and feed off the insecurity of troubled times.

Leads Europe with the highest spam rate

In Spain, 43.9% of the calls received from non-contacts are spam, and France is not far behind at 43.0%. Those are the highest spam rates in Europe. What's more, Spain has the second-highest rate of fraud calls of any European country.
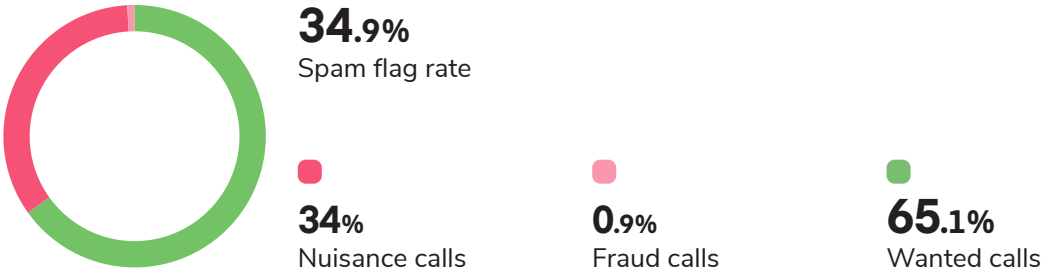
Germans experience average spam

Germany is #8 in Europe for spam with a spam rate of 21.21% of non-contact calls. In the second half of 2022, also a spike in Europol scam calls in the country.

United States

POPULATION

324 million

REGULATOR

FCC ⊙

34.9%
Spam flag rate

🟥
34%
Nuisance calls

🟪
0.9%
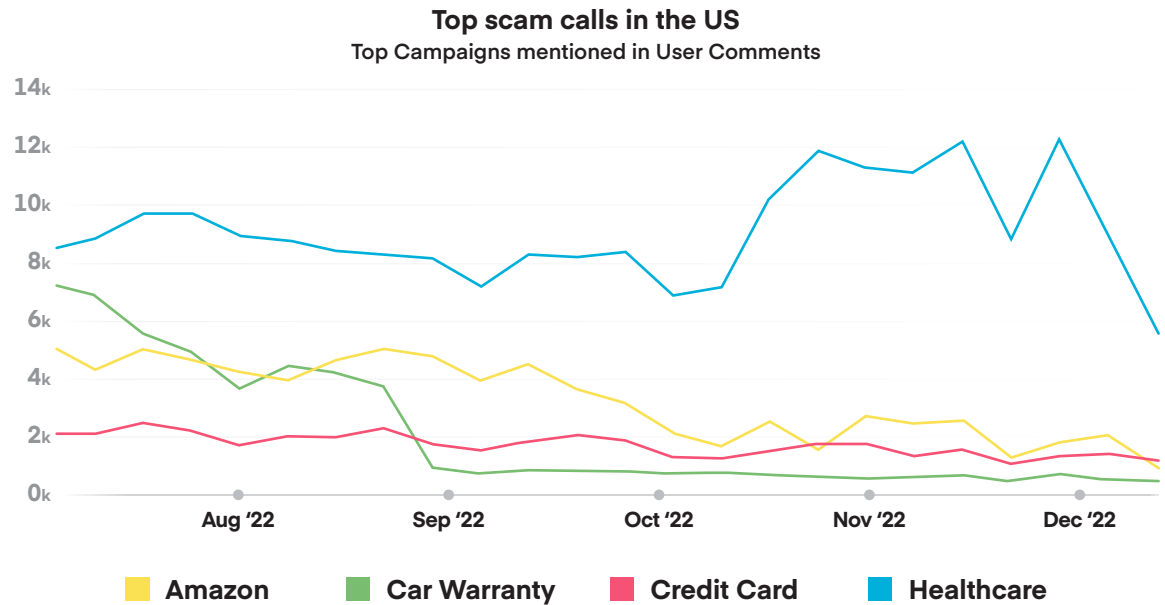Fraud calls

🟩
65.1%
Wanted calls

Auto warranty scam plunges as healthcare scams take the lead

With one of every three calls from non-contacts being flagged as spam, more spam calls are being detected in the US than ever before. However, the big story in the US is that the country's most prevalent phone scam over the past two years, the auto warranty scam, has lost prominence as the most popular scam in America. In July, following FCC actions to shut down auto warranty calls, the rate of these scam calls drastically declined. Healthcare scams are now the most common type of fraud call in the US.

Spam ratios represent the number of unwanted calls from "non-contacts;" calls placed from numbers that are not in an individual's local address book.

United States

Top scam calls in the US
Top Campaigns mentioned in User Comments

Legend: ■ Amazon ■ Car Warranty ■ Credit Card ■ Healthcare

⊘ **Healthcare** – Healthcare scams held the lead for the most common type of fraudulent calls in the US during the second half of 2022. Healthcare scams come in many different varieties. Scammers may be selling a bogus healthcare policy or medical device, or they may be trying to obtain a person's Medicare number to bill the government for procedures that never happened. Medicare scams increased late in 2022 during the open enrollment period.

⊘ **Auto Warranty** – The auto warranty scam declined sharply in the second half of 2022. Although pressure from the FCC helped shut down a major source of auto warranty scam calls from a Panama-based company, smaller operations continue to use this long-running scheme, so it's unlikely to disappear completely.

⊘ **Amazon** – The Amazon scam is commonly a robocall stating that a large purchase has been made to the recipient's Amazon account and to press a number to refute the charge. When the recipient speaks to a live agent, the scammer tries to get the victim to reveal their Amazon account information or the credit card number associated with the account.

⊘ **Credit Card** – Credit card scams plague the voice channel year round. Imposters pose as representatives of a bank or credit card, often stating that there has been a purchase that didn't clear and to resolve matters they'll need to get your credit card or bank account information — which the fraudsters can then use to make their own purchases.
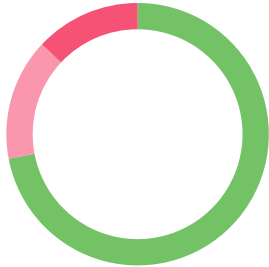
United Kingdom

POPULATION

65 million

REGULATOR

Ofcom ⊙
ICO ⊙

28%
Spam flag rate

🔴
15%
Nuisance calls

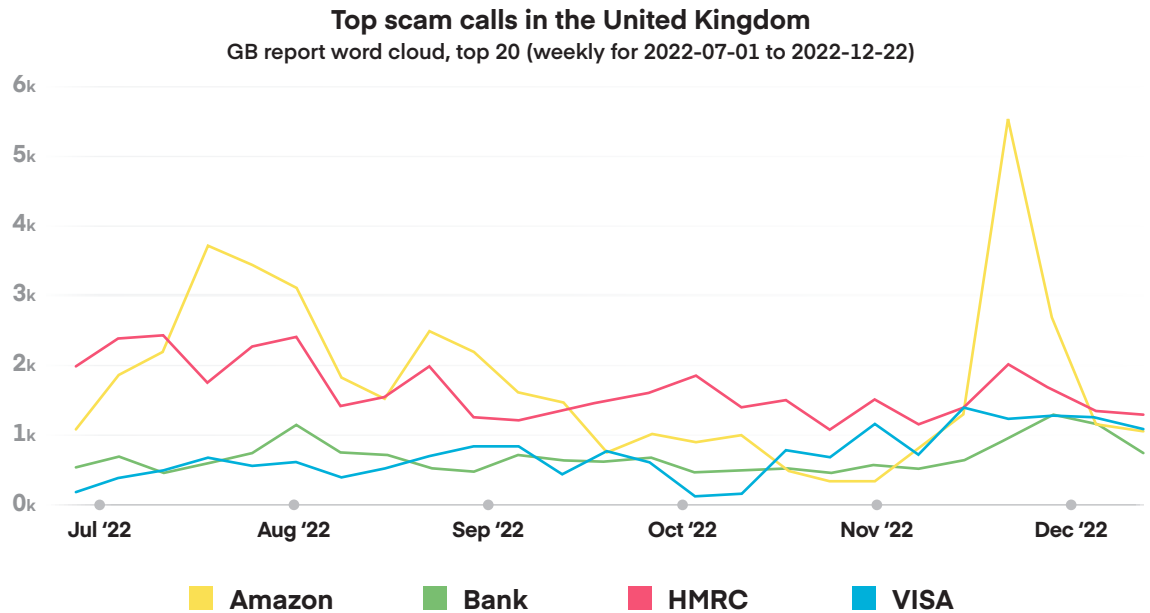🔴
13%
Fraud calls

🟢
72%
Wanted calls

Most of the unwanted calls in the UK are fraud calls

Like the US, about a third of incoming calls from non-contacts in the UK are unwanted calls. But unlike the United States, where most of the unwanted calls are simply nuisance calls, in the UK more than half of the unwanted calls are actually fraud. That gives the UK the distinction of having one of the highest fraud rates of all the countries tracked by Hiya.

Some phone scams have been around for years — such as those impersonating Amazon or the UK's tax agency Her Majesty's Revenue and Customs — while others are new. The second half of 2022 gave rise to various scams related to the rising cost of living, and Hiya observed a surge of energy-related scam calls leading up to an energy rebate that took effect October 1st. Troubled times and confusion over governmental programs create fertile ground for scammers.

Spam ratios represent the number of unwanted calls from "non-contacts;" calls placed from numbers that are not in an individual's local address book.

United Kingdom

Top scam calls in the United Kingdom
GB report word cloud, top 20 (weekly for 2022-07-01 to 2022-12-22)

Legend: Amazon (yellow), Bank (green), HMRC (pink/red), VISA (blue)

⚠ **Amazon** – Since Amazon is an international retailer, it's not hard for a scammer to happen upon a victim who has an Amazon account. As in other countries, Amazon impersonators may say that they suspect an unauthorized purchase, or that the credit card linked to the account needs to be updated. They'll say anything that might get the victim to disclose either the Amazon account number of credit card information.

⚠ **Bank** – Banking related scams are a perennial favorite in the UK. Someone posing as a bank representative calls a potential victim and claims there is something wrong with their account. The goal is to get the victim to reveal enough information for the scammer to access the account. The caller may even impersonate the bank with spoofing tactics to be more convincing.

⚠ **HMRC** – HMRC scams impersonate agents from the UK's tax agency, Her Majesty's Revenue and Customs. Often a robocall will inform the recipient that they are being investigated for tax evasion or tax fraud by HMRC. Recipients are instructed to press 1 to speak to a representative for more information. The goal is to steal the recipient's money, personal information, or both.

⚠ **VISA** – This scam is similar to banking scams mentioned above, except the scammer specifically mentions the victim's VISA card. Again, the goal is to get victims to reveal their VISA card number and/or account login information.
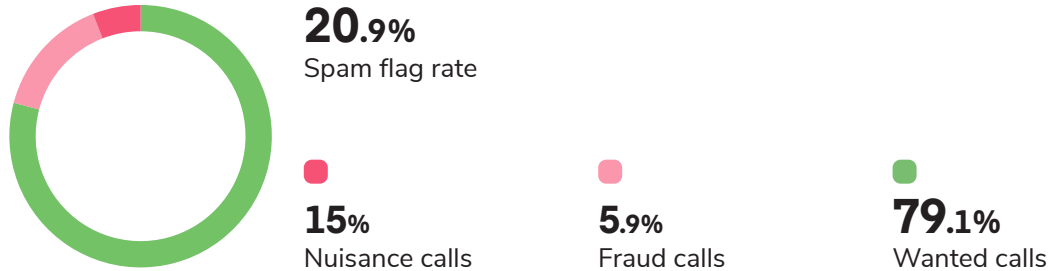
![hiya]

Canada

POPULATION

36 million

REGULATOR

CRTC ⊙

20.9%
Spam flag rate

🟥
15%
Nuisance calls

🟥
5.9%
Fraud calls

🟩
79.1%
Wanted calls
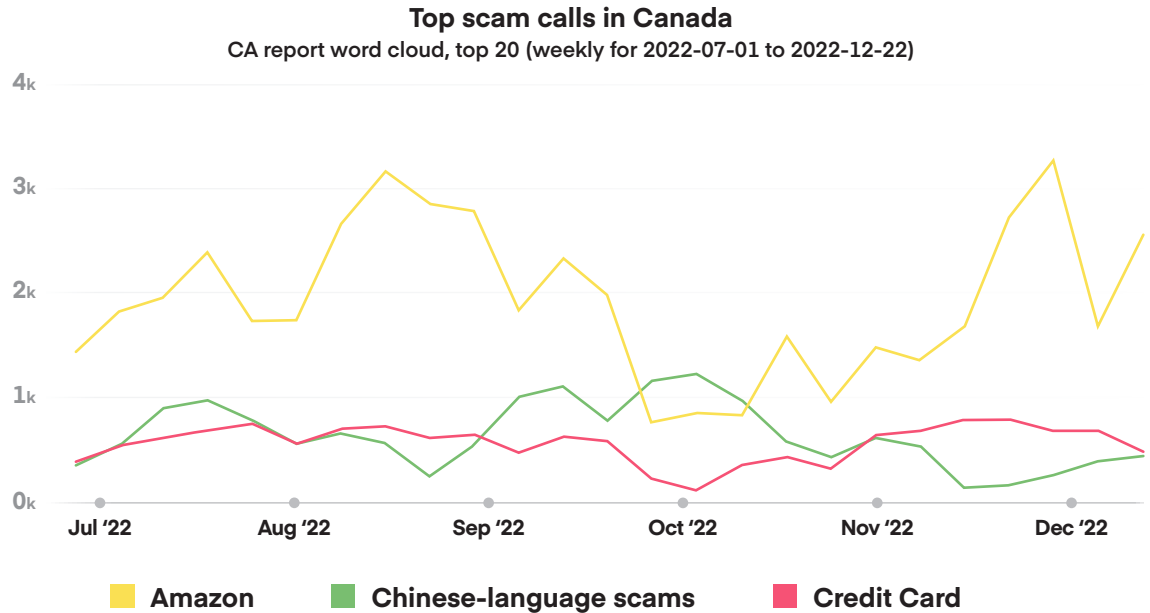

Government imposter scams growing in Canada

In Canada, one in five calls from a non-contact is spam. Most of these spam calls are nuisance calls (15%), but the number of fraud calls (5.9%) is trending upward.

Some of the scams in Canada are similar to those in other countries, such as callers claiming to be from Amazon customer service, or a bank or credit card company. There are also a variety of scams where the caller impersonates a government official, claiming to be from the Canada Border Services Agency, or the Department of Service Canada.

Many of the government imposter scams target immigrants and those who are less familiar with governmental processes in Canada. One of the growing scams is a Chinese-language scam that specifically targets Canadians who speak Chinese. There are also scams that target older Canadians, such as the Grandparent Scam.

Spam ratios represent the number of unwanted calls from "non-contacts;" calls placed from numbers that are not in an individual's local address book.

Canada

Top scam calls in Canada
CA report word cloud, top 20 (weekly for 2022-07-01 to 2022-12-22)

Legend: ■ Amazon ■ Chinese-language scams ■ Credit Card

(!) **Amazon** – The Amazon scam is the #1 scam in Canada. It also tops the list in the UK and comes in second in the US. Companies with global reach and high brand recognition are prime targets for scammers to impersonate.

(!) **Chinese-language scams** – There are a series of scams that target Asian Canadians, especially those who speak Chinese. Often the caller will claim to be from the Chinese Embassy, the Beijing police, or claim that a package from China with contraband has been intercepted. The caller will demand immediate payment in order to rectify the problem. The frequency of these Chinese-language scams trailed off in the fall, and then picked back up in December.

(!) **Credit Card** – Credit card scams are as prevalent in Canada as they are in the US. The tactics are the same: an imposter poses as a representative of a credit card company — usually claiming that there is a problem with a purchase or a suspected fraud — to get victims to reveal their credit card information.
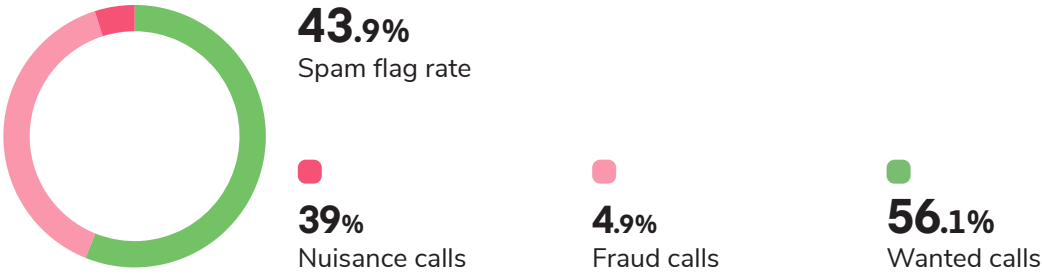
Spain

hiya

POPULATION

46 million

REGULATOR

CNMC ⊙

43.9%
Spam flag rate

🔴 **39%**
Nuisance calls

🔴 **4.9%**
Fraud calls

🟢 **56.1%**
Wanted calls

Spain has the highest spam rate in Europe

In Spain, more than 4 out of every 10 calls received from a non-contact is a spam call. Spain leads Europe with the highest spam rate at 43.9%. Spain also has the second highest fraud rate in Europe: 4.9%. It's the worst of both worlds.

Top spam calls in Spain: utility and mobile phone telemarketing
The two most prevalent spam calls reported by users in Spain are calls from utility companies and mobile phone companies. Most of these are sales calls and are reported by users as nuisance or telemarketing, but some are reported as fraud. The Spanish media has also shared news reports of scammers impersonating utility companies to defraud customers.
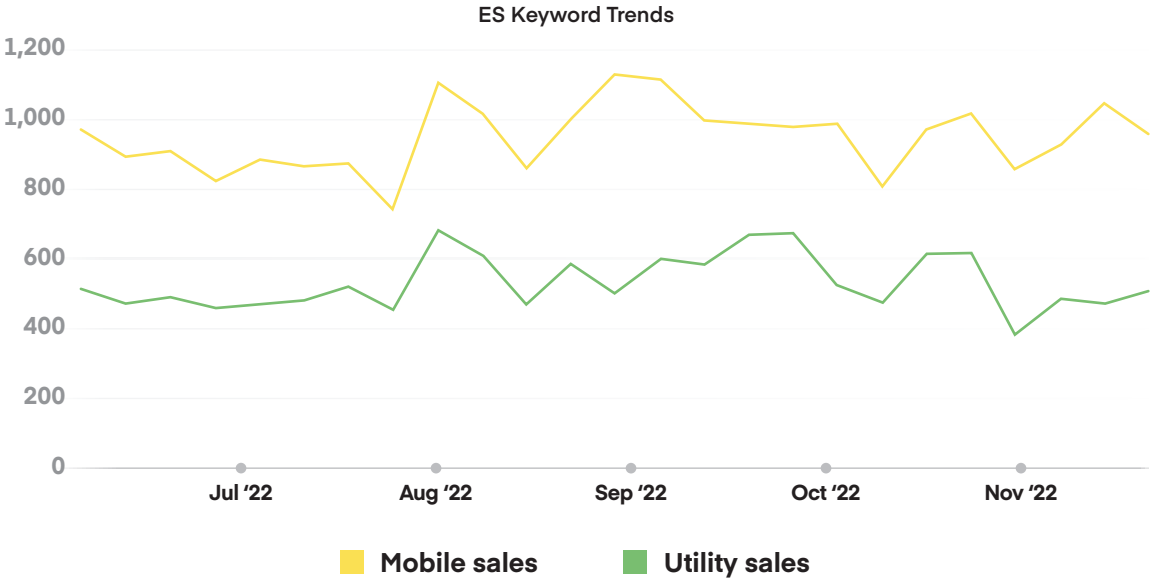
ES Keyword Trends

Legend: 🟡 Mobile sales   🟢 Utility sales

Spam ratios represent the number of unwanted calls from "non-contacts;" calls placed from numbers that are not in an individual's local address book.
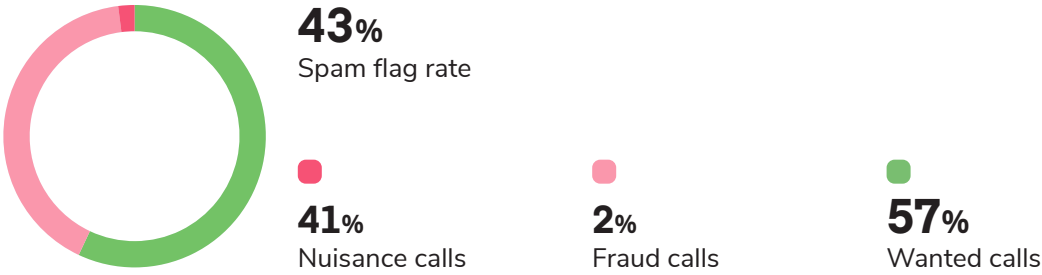
France

![hiya logo]

POPULATION

67 million

REGULATOR

ARCEP ⊙

43% Spam flag rate

● **41**% Nuisance calls

● **2**% Fraud calls
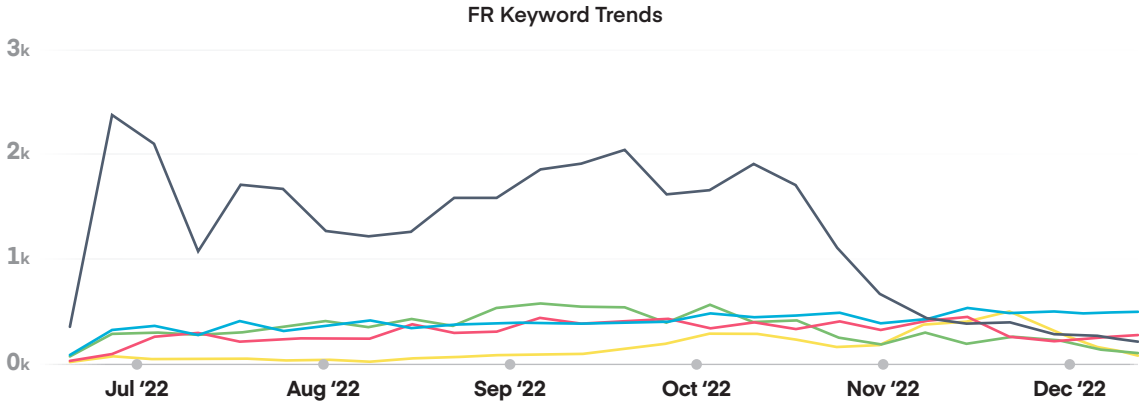
● **57**% Wanted calls

France has second-highest spam rate in Europe, but less fraud

In Europe, Spain may have the highest spam rate (43.9%), but France is close second at 43.0%. One consolation is that the rate of fraud calls in France is comparatively low, with just 2% of all non-contact calls being fraud. Compare that with a 4.9% fraud rate in Spain and 13% fraud rate in the UK.

Top scam in France: Compte de Formation Professionnel
The most common scam Hiya observed in France in the third quarter was related to a government initiative called Compte de Formation Professionnel (CPF). This program provides citizens with an allowance they can use to pay for professional training (to learn carpentry, do a course on professional coaching, etc.) The amount depends on an individual's circumstances, but it's around €3,000 annually. Fraudsters call to "advise" citizens on how they can get the most out of the budgeted amount, when all they want to do is take either a cut of the money, or the whole amount.

FR Keyword Trends

| ● Netflix | ● Bank Card | ● Pack deliveryage | ● Mobile Telemarketing | ● CPF |

Spam ratios represent the number of unwanted calls from "non-contacts;" calls placed from numbers that are not in an individual's local address book.

Germany

POPULATION

82 million

REGULATOR

BNetzA ⊙
(Bundesnetzagentur)

21.21%
Spam flag rate

🔴 **21**.21%
Nuisance calls

🟢 **78**.79%
Wanted calls
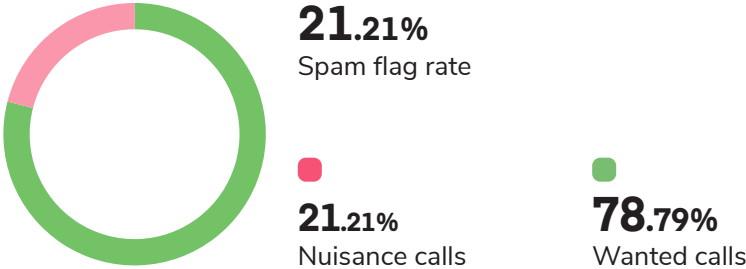
Germany experiences average spam

Of the 20 countries tracked in Europe, Germany is #8 for its spam rate, a little higher than the average with spam making up 21.21% of non-contact calls. Like many Europeans, Germans were also targetted with scammers posing as government agencies.

Top Scam in Germany: Europol
In 2022, Hiya first began receiving reports of a Europol scam. In this scam, the caller poses as an official from Europol (the European Union's law enforcement agency) or Interpol (the International Criminal Police Organization). The scammer commonly threatens victims with arrest unless they immediately pay a fine. By summer, the Europol scam quickly became the #1 phone scam in Germany. It has, however, declined since its peak in June.

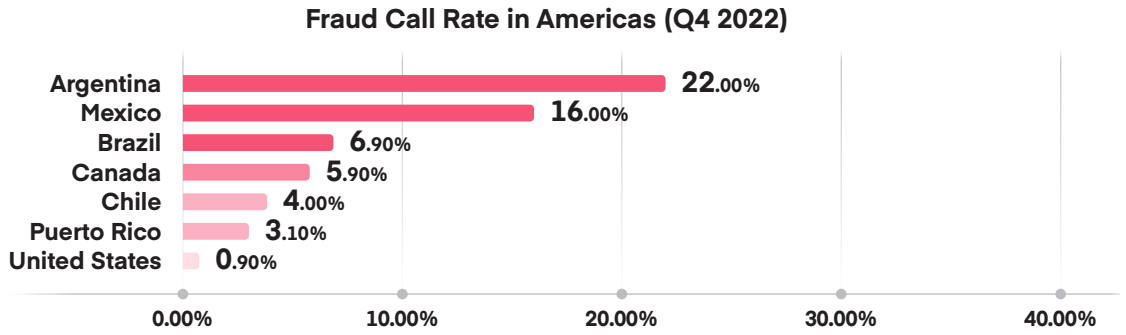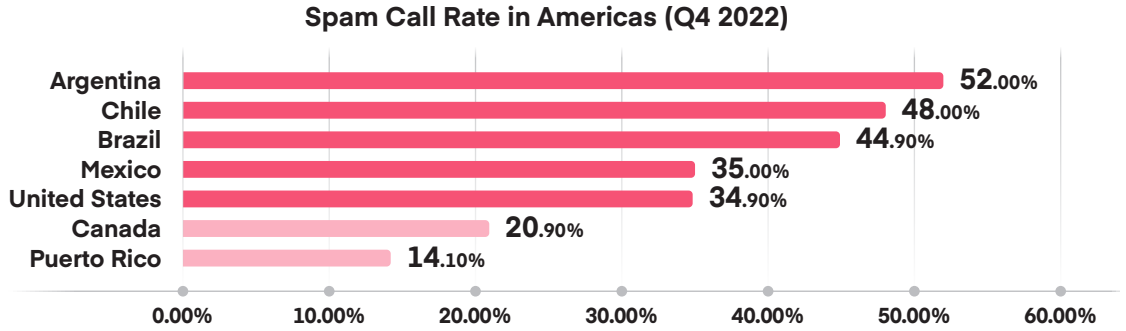*Hiya uses a single 'spam' warning for both nuisance and fraud calls.
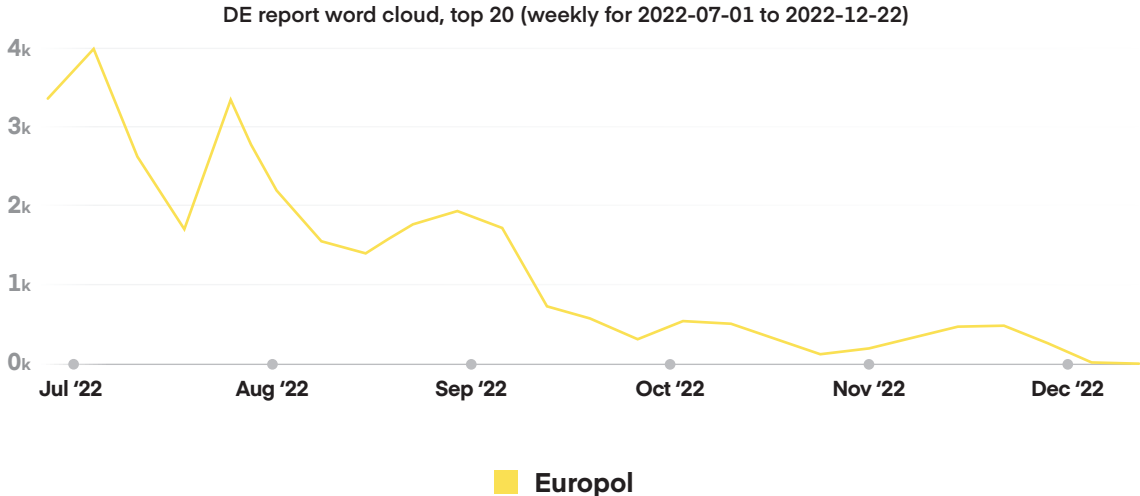
DE report word cloud, top 20 (weekly for 2022-07-01 to 2022-12-22)

Europol

Spam ratios represent the number of unwanted calls from "non-contacts;" calls placed from numbers that are not in an individual's local address book.

Americas

Hiya

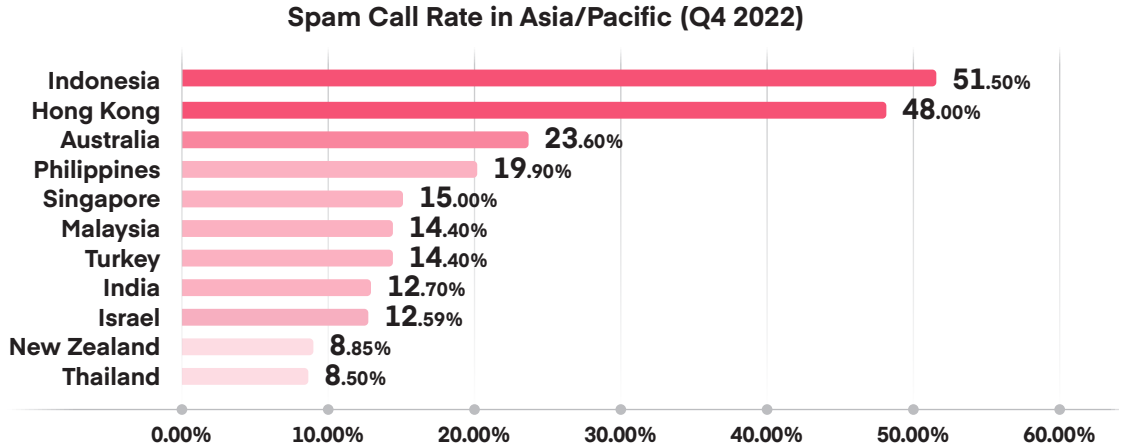**Spam and fraud calls soar in Argentina**

Spam Call Rate in Americas (Q4 2022)

Argentina	**52**.00%
Chile	**48**.00%
Brazil	**44**.90%
Mexico	**35**.00%
United States	**34**.90%
Canada	**20**.90%
Puerto Rico	**14**.10%

0.00% 10.00% 20.00% 30.00% 40.00% 50.00% 60.00%

Fraud Call Rate in Americas (Q4 2022)

Argentina	**22**.00%
Mexico	**16**.00%
Brazil	**6**.90%
Canada	**5**.90%
Chile	**4**.00%
Puerto Rico	**3**.10%
United States	**0**.90%

0.00% 10.00% 20.00% 30.00% 40.00%

Asia/Pacific

Indonesia tops the world with a 51.5% spam rate.

Spam Call Rate in Asia/Pacific (Q4 2022)

Country	Rate
Indonesia	51.50%
Hong Kong	48.00%
Australia	23.60%
Philippines	19.90%
Singapore	15.00%
Malaysia	14.40%
Turkey	14.40%
India	12.70%
Israel	12.59%
New Zealand	8.85%
Thailand	8.50%

0.00% 10.00% 20.00% 30.00% 40.00% 50.00% 60.00%

Fraud Call Rate in Asia/Pacific (Q4 2022)

Country	Rate
Hong Kong	10.00%
Turkey	6.90%
Philippines	4.90%
Malaysia	4.40%
Singapore	4.00%
Australia	2.60%
India	1.70%
Thailand	1.10%
New Zealand	0.95%
Israel	0.59%
Indonesia	0.50%

0.00% 2.50% 5.00% 7.50% 10.00% 12.50%

Europe

Spain and France lead Europe with highest spam rates while the UK is experiencing more fraud than any other European country.

Spam Call Rate in Europe (Q4 2022)

Country	Rate
Spain	43.90%
France	43.00%
Italy	35.11%
Poland	29.10%
Sweden	28.90%
United Kingdom	28.00%
Finland	21.90%
Germany	21.21%
Portugal	20.82%
Norway	18.80%
Denmark	18.60%
Belgium	18.20%
Switzerland	14.69%
Czech Republic	14.23%
Greece	12.20%
Austria	10.70%
Slovakia	10.32%
Netherlands	10.30%
Hungary	8.30%
Ireland	4.80%
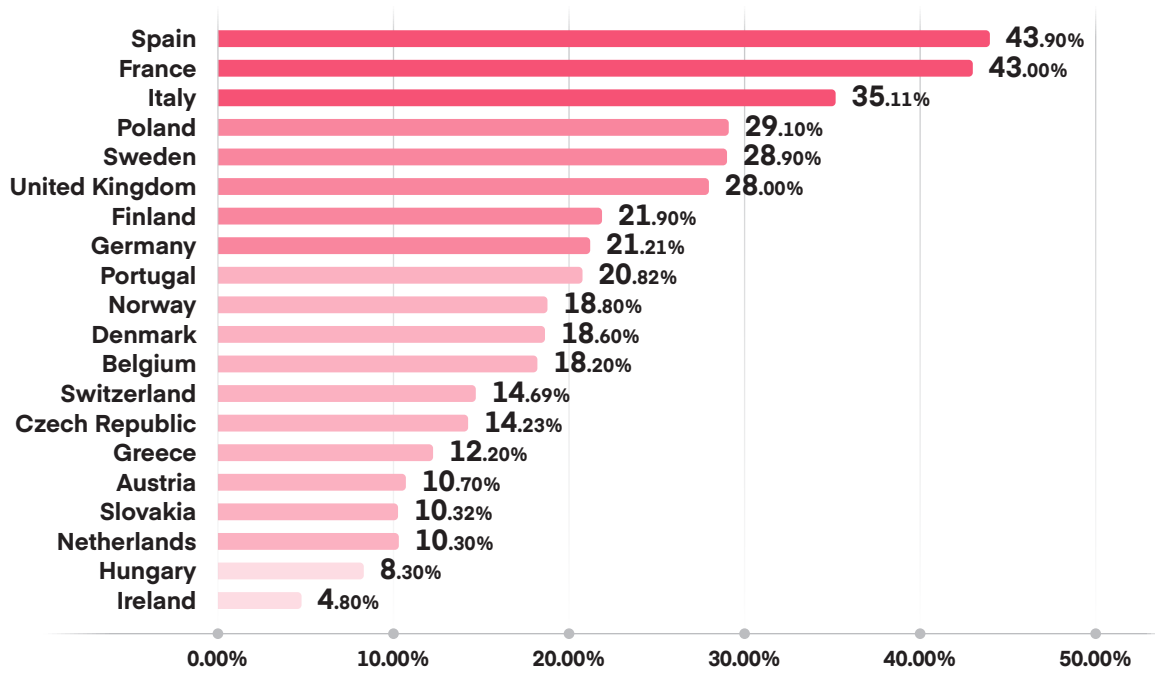
Fraud Call Rate in Europe (Q4 2022)

Hiya uses a single 'spam' warning for both nuisance and fraud calls in Germany and Italy

Country	Rate
United Kingdom	13.00%
Spain	4.90%
Sweden	4.90%
Finland	2.90%
Norway	2.80%
Poland	2.10%
France	2.00%
Hungary	1.80%
Austria	1.60%
Denmark	1.60%
Netherlands	1.40%
Greece	1.20%
Belgium	1.20%
Ireland	1.20%
Portugal	0.82%
Slovakia	0.82%
Switzerland	0.69%
Czech Republic	0.23%
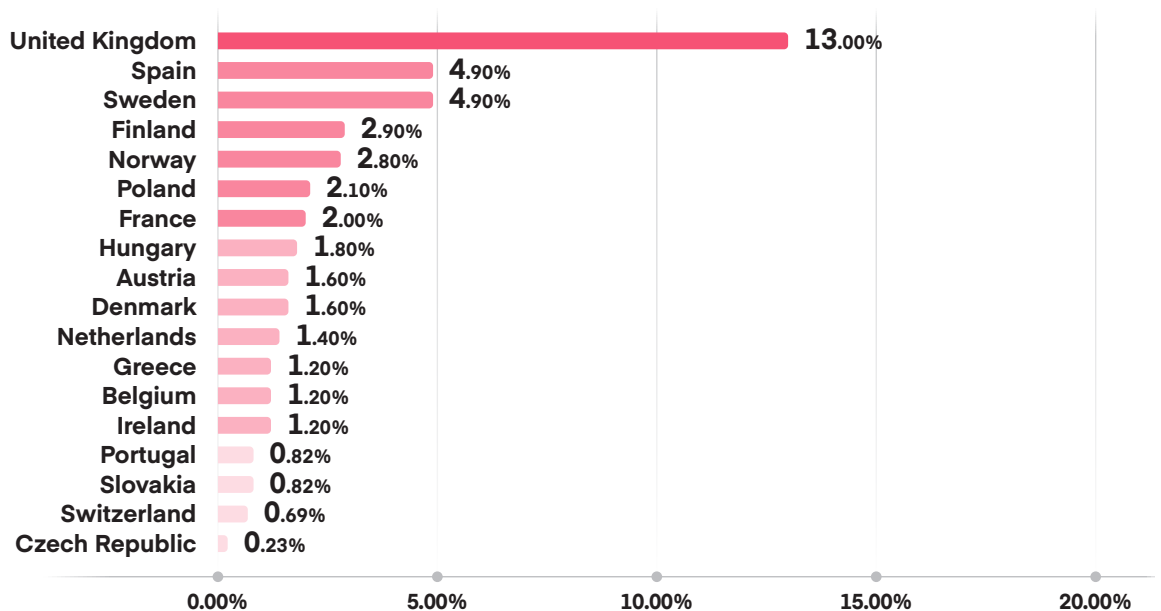
SOLUTION

How carriers can fight back against spam

Hiya Protect is a complete call protection solution that enables mobile carriers to protect their subscribers by blocking and labeling spam calls, and helping them identify wanted calls. It is used by carriers, OEMs, and network providers who are looking to create a differentiated voice offering and increase customer satisfaction.

Hiya Protect is powered by the industry's largest and most comprehensive real-time data set, with call event data from more than 250 million users across 60+ countries. The only solution with Adaptive AI, Hiya Protect allows service providers to proactively identify threats in real time and continually adapt to the latest spam tactics. Hiya Protect recently added a new layer of protection, Personal AI, which is the industry's first-ever personalized call protection. Similar to an email spam filter, it personalizes call protection to the individual subscriber so they receive the calls that are important to them and are protected from targeted attacks.

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Section
Two

Spam calls by country

Argentina

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PERIOD

Q4
Sep 2022 - Dec 2022
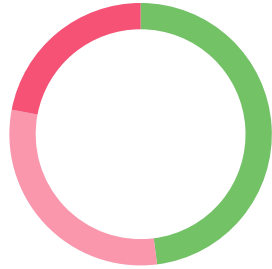
52% Spam flag rate

One in two calls from non-contacts is labeled as spam

■ **30**% Nuisance calls

■ **22**% Fraud calls

■ **48**% Wanted calls

57% of all spam calls in Q4 were labeled as fraud
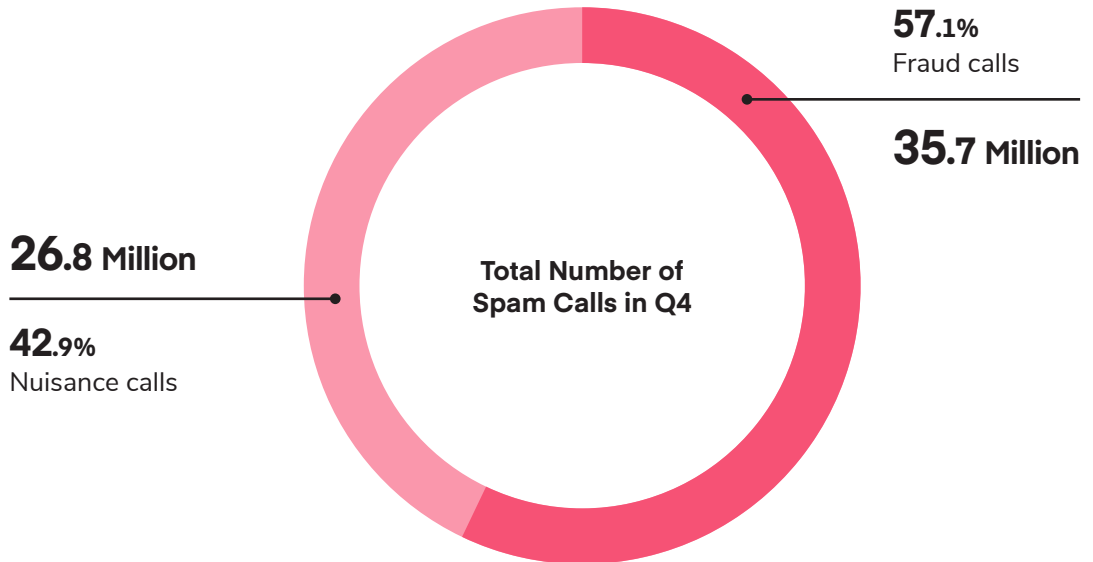
57.1% Fraud calls

35.7 Million

26.8 Million

42.9% Nuisance calls

Total Number of Spam Calls in Q4

Spam ratios represent the number of unwanted calls from "non-contacts;" calls placed from numbers that are not in an individual's local address book.

Source:
Samsung Smart Call users in Argentina

Brazil

PERIOD

Q4

Sep 2022 - Dec 2022
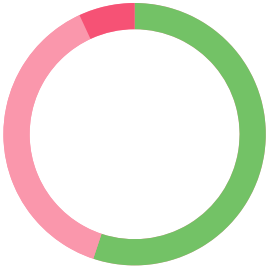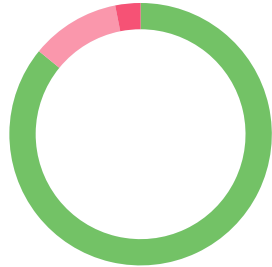
44.9%
Spam flag rate

Nearly one in two calls from non-contacts is labeled as spam

38%
Nuisance calls

6.9%
Fraud calls

55.1%
Wanted calls

15% of all spam calls in Q4 were labeled as fraud
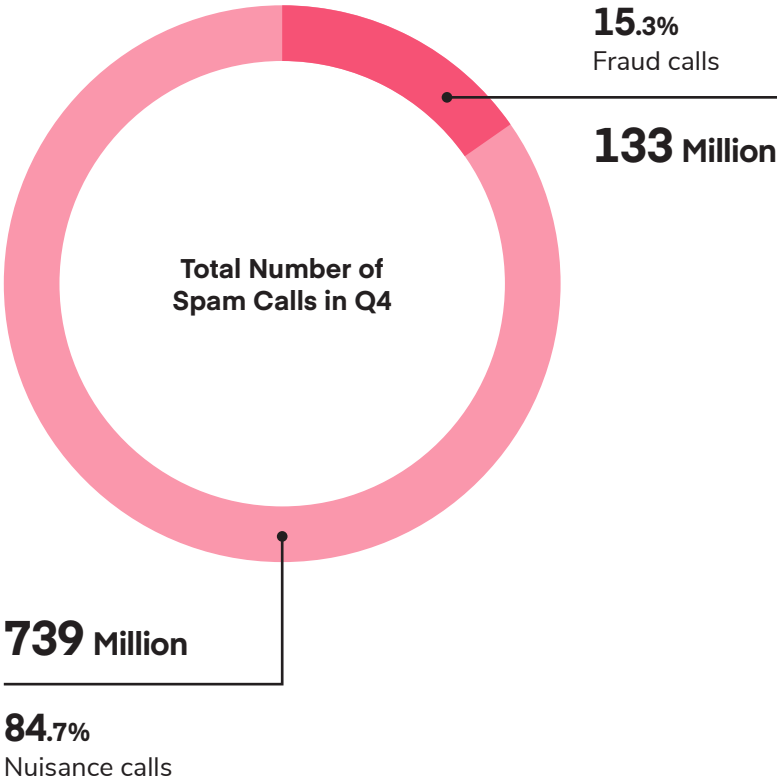
15.3%
Fraud calls

133 Million

Total Number of Spam Calls in Q4

739 Million

84.7%
Nuisance calls

Spam ratios represent the number of unwanted calls from "non-contacts;" calls placed from numbers that are not in an individual's local address book.

Source:
Samsung Smart Call users in Brazil

Canada

PERIOD

Q4
Sep 2022 - Dec 2022
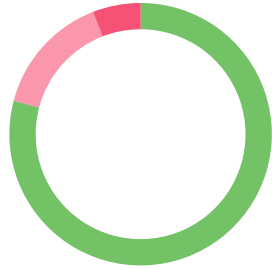
20.9%
Spam flag rate

One in five calls from non-contacts is labeled as spam

15%
Nuisance calls

5.9%
Fraud calls

79.1%
Wanted calls

28% of all spam calls in Q4 were labeled as fraud
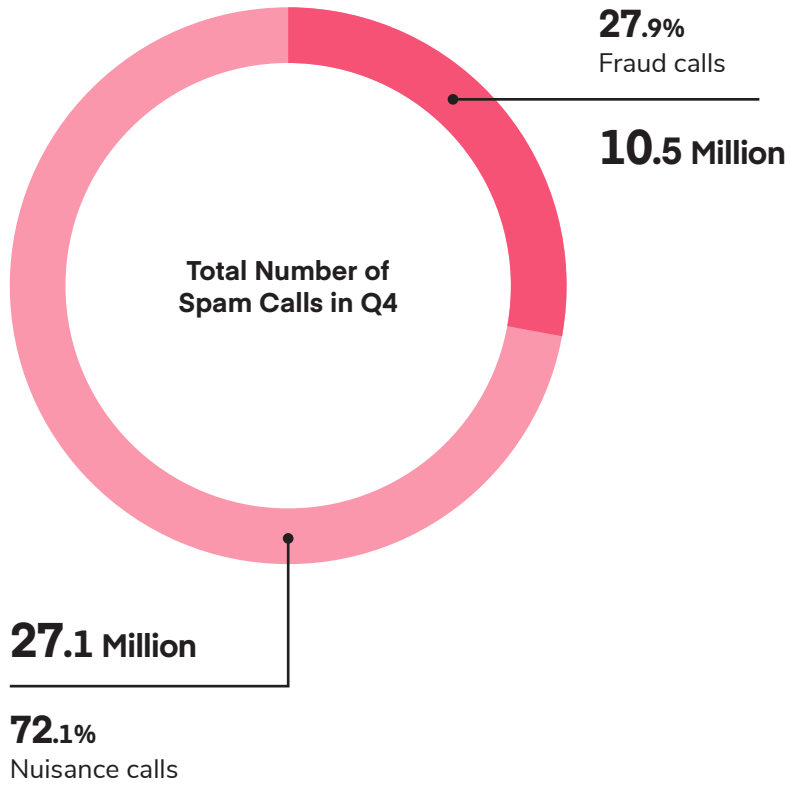
27.9%
Fraud calls

10.5 Million

Total Number of Spam Calls in Q4

27.1 Million

72.1%
Nuisance calls

Spam ratios represent the number of unwanted calls from "non-contacts;" calls placed from numbers that are not in an individual's local address book.
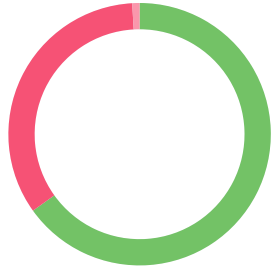
Source:
Samsung Smart Call users in Canada

Chile

PERIOD

Q4
Sep 2022 - Dec 2022

48%
Spam flag rate
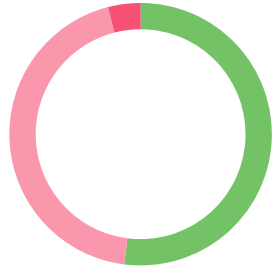
One in two calls from non-contacts is labeled as spam

44%
Nuisance calls

4%
Fraud calls

52%
Wanted calls

8% of all spam calls in Q4 were labeled as fraud
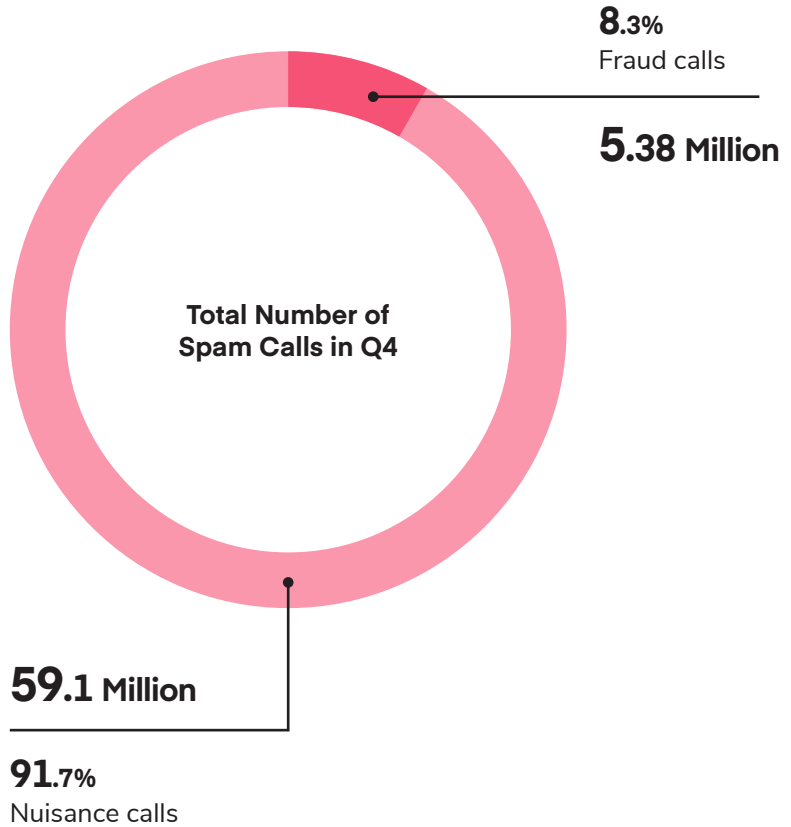
8.3%
Fraud calls

5.38 Million

Total Number of Spam Calls in Q4

59.1 Million

91.7%
Nuisance calls

Spam ratios represent the number of unwanted calls from "non-contacts;" calls placed from numbers that are not in an individual's local address book.

Source: Samsung Smart Call users in Chile

Mexico
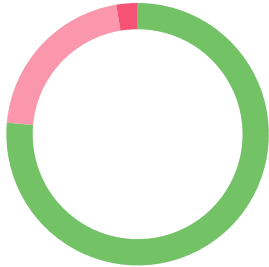
hiya

PERIOD

Q4
Sep 2022 - Dec 2022
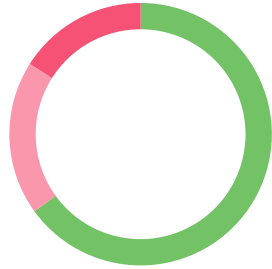
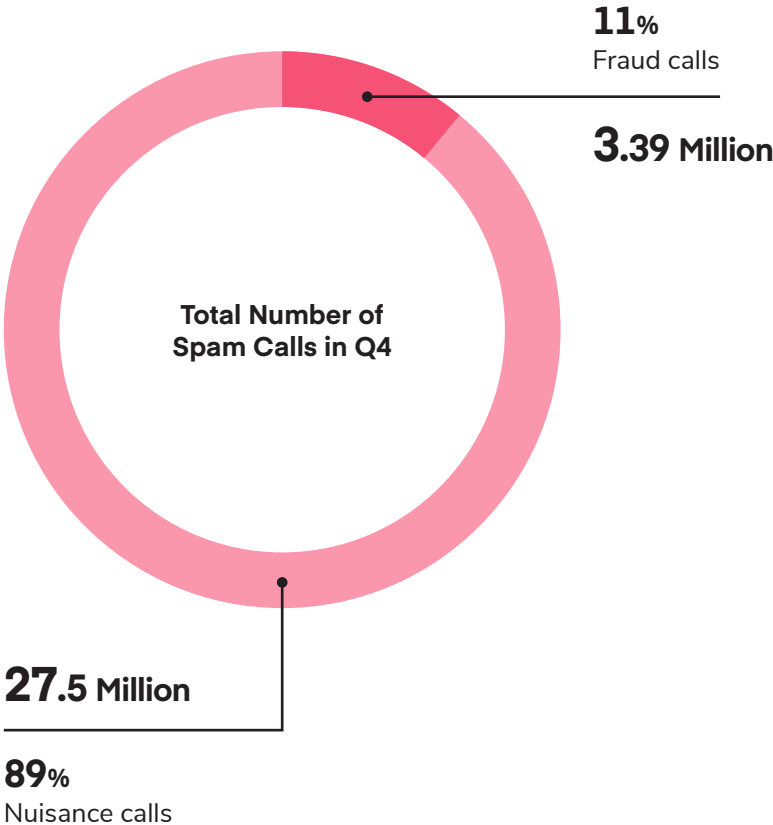**35**% Spam flag rate

One in three calls from non-contacts is labeled as spam

19% Nuisance calls

16% Fraud calls

65% Wanted calls

45% of all spam calls in Q4 were labeled as fraud
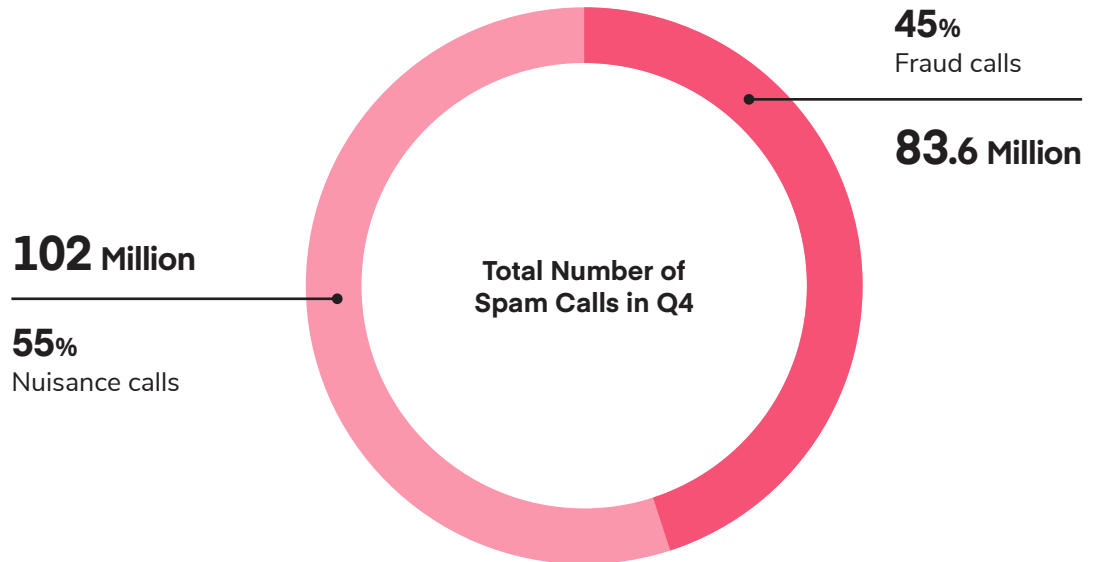
45% Fraud calls

83.6 Million

102 Million

55% Nuisance calls

Total Number of Spam Calls in Q4

Spam ratios represent the number of unwanted calls from "non-contacts;" calls placed from numbers that are not in an individual's local address book.
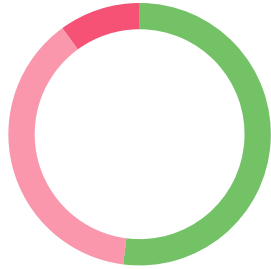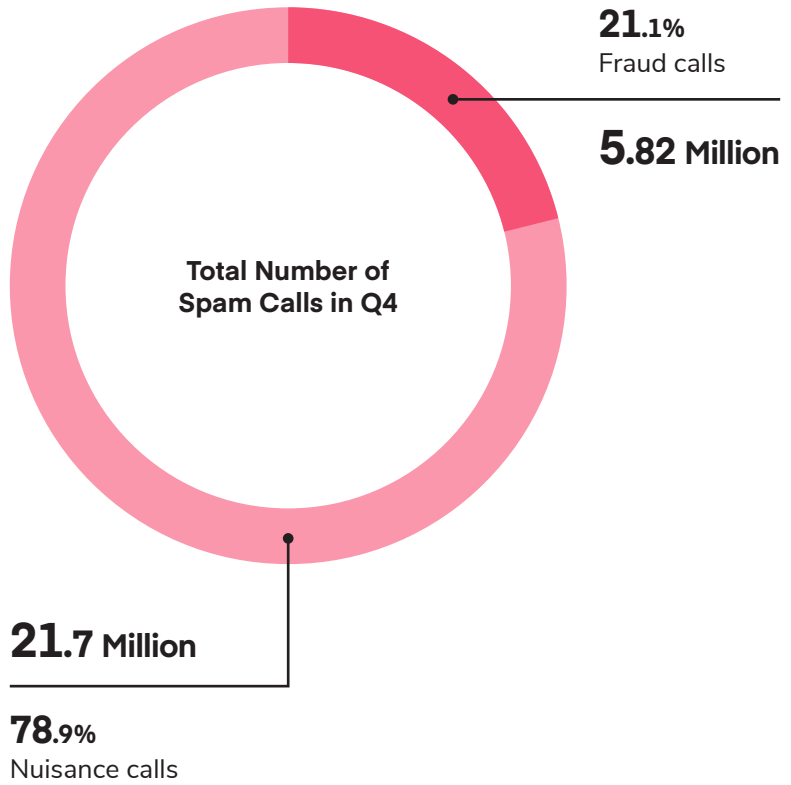
Source: Samsung Smart Call users in Mexico

Puerto Rico

PERIOD

Q4
Sep 2022 - Dec 2022

14.1%
Spam flag rate

One in seven calls from non-contacts is labeled as spam

11%
Nuisance calls

3.1%
Fraud calls

85.9%
Wanted calls

22% of all spam calls in Q4 were labeled as fraud
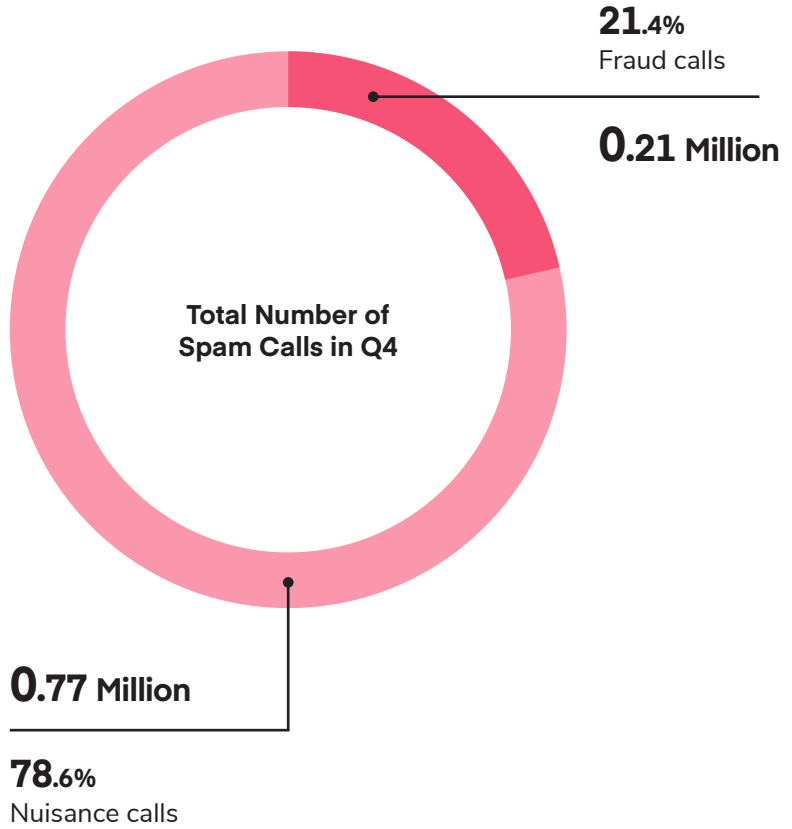
21.4%
Fraud calls

0.21 Million

Total Number of
Spam Calls in Q4

0.77 Million

78.6%
Nuisance calls

Spam ratios represent the number of unwanted calls from "non-contacts;" calls placed from numbers that are not in an individual's local address book.

Source:
Samsung Smart Call users in Puerto Rico
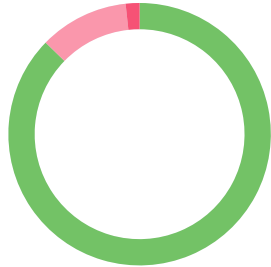
United States

PERIOD

Q4

Sep 2022 - Dec 2022

34.9%
Spam flag rate

One in three calls from non-contacts is labeled as spam

34%
Nuisance calls

0.9%*
Fraud calls

65.1%
Wanted calls

* Low due to network blocking

3% of all spam calls in Q4 were labeled as fraud
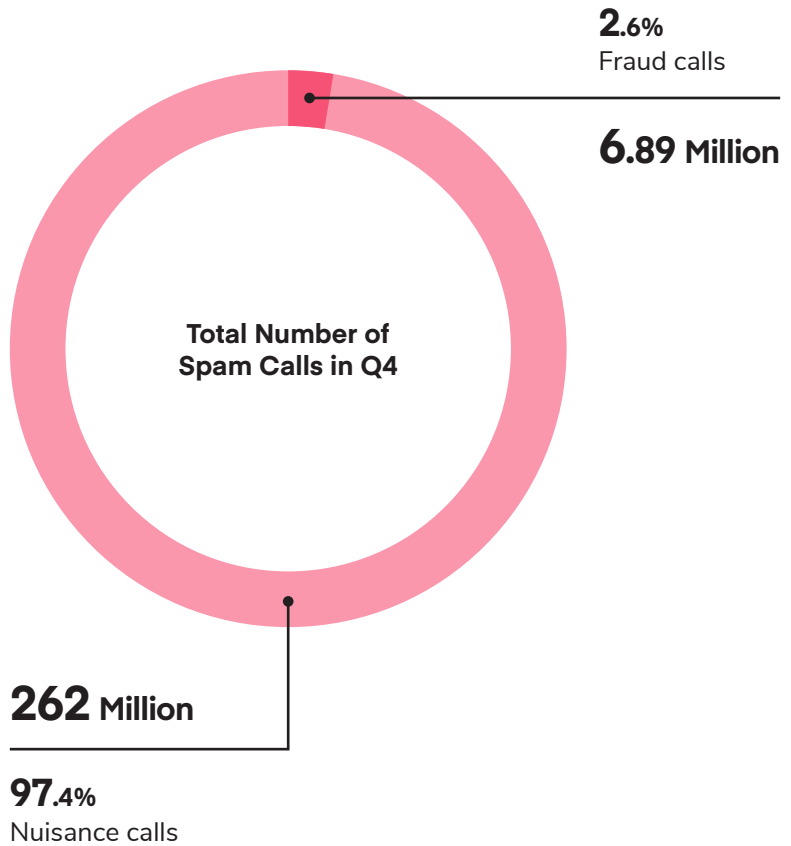
2.6%
Fraud calls

6.89 Million

Total Number of
Spam Calls in Q4

262 Million

97.4%
Nuisance calls

Spam ratios represent the number of unwanted calls from "non-contacts;" calls placed from numbers that are not in an individual's local address book.

Source:
Samsung Smart Call users in United States
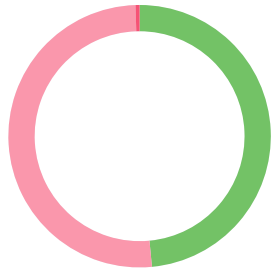
Australia

PERIOD

Q4
Sep 2022 - Dec 2022

23.6%
Spam flag rate

One in four calls from non-contacts is labeled as spam

21%
Nuisance calls

2.6%
Fraud calls

76.4%
Wanted calls

11% of all spam calls in Q4 were labeled as fraud

11%
Fraud calls

3.39 Million

Total Number of Spam Calls in Q4

27.5 Million

89%
Nuisance calls

Spam ratios represent the number of unwanted calls from "non-contacts;" calls placed from numbers that are not in an individual's local address book.
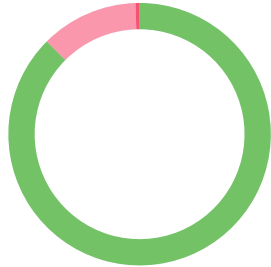
Source:
Samsung Smart Call users in Australia

Hong Kong

PERIOD

Q4

Sep 2022 - Dec 2022

48%
Spam flag rate

One in two calls from non-contacts is labeled as spam

38%
Nuisance calls

10%
Fraud calls

52%
Wanted calls

21% of all spam calls in Q4 were labeled as fraud

21.1%
Fraud calls

5.82 Million

Total Number of Spam Calls in Q4

21.7 Million

78.9%
Nuisance calls

Spam ratios represent the number of unwanted calls from "non-contacts;" calls placed from numbers that are not in an individual's local address book.

Source:
Samsung Smart Call users in Hong Kong

ASIA/PACIFIC

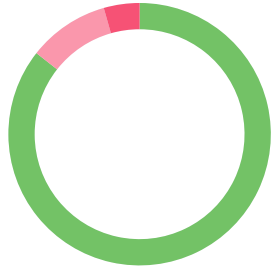# India

PERIOD

Q4

Sep 2022 - Dec 2022

12.7%
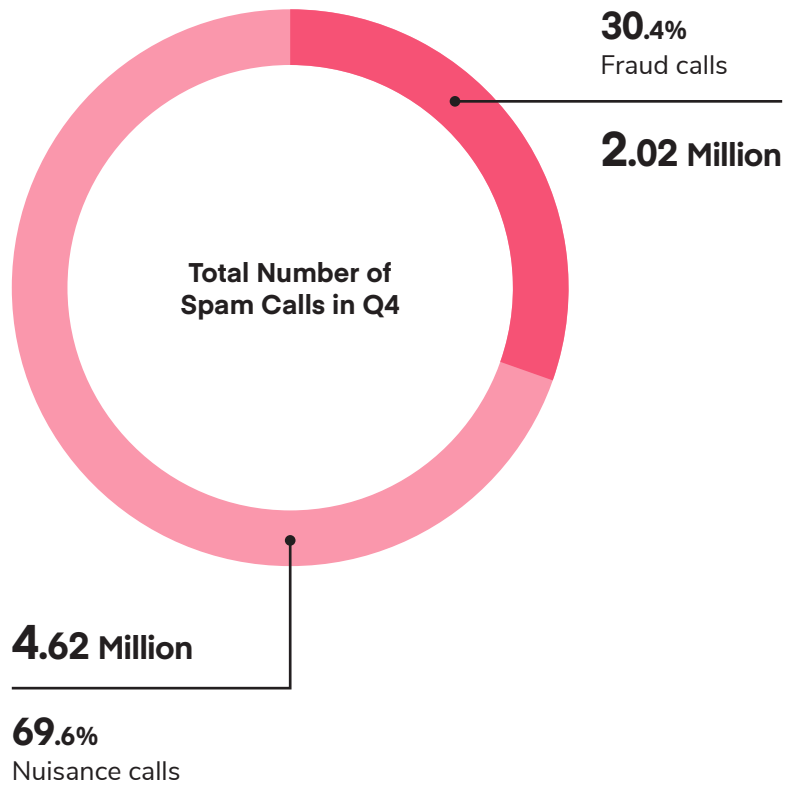Spam flag rate

One in eight calls from non-contacts is labeled as spam

11%
Nuisance calls

1.7%
Fraud calls

87.3%
Wanted calls

13% of all spam calls in Q4 were labeled as fraud
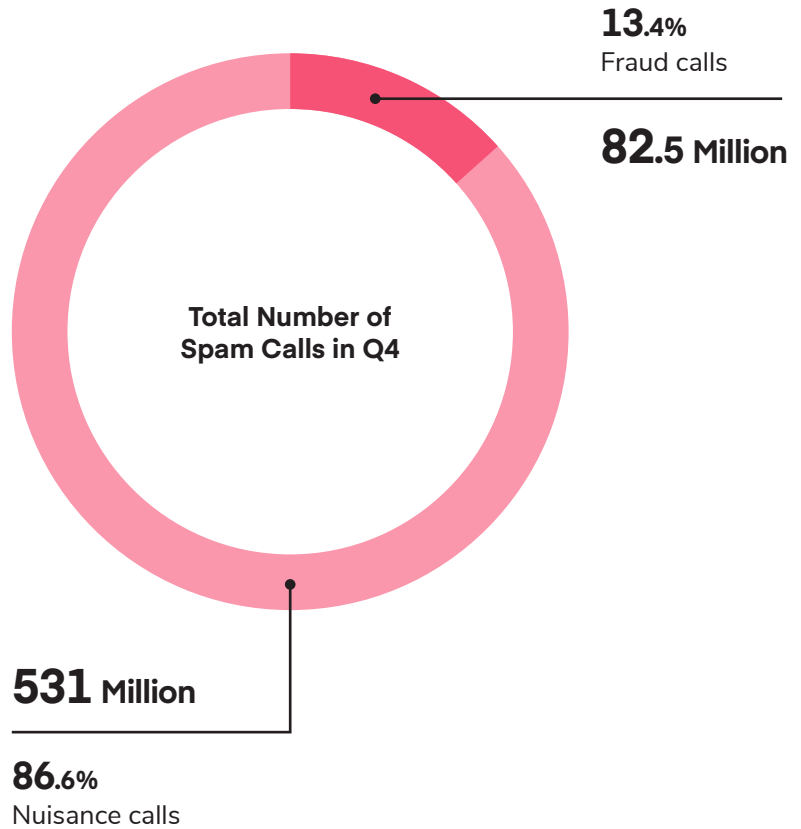
13.4%
Fraud calls

82.5 Million

Total Number of
Spam Calls in Q4

531 Million

86.6%
Nuisance calls

Spam ratios represent the number of unwanted calls from "non-contacts;" calls placed from numbers that are not in an individual's local address book.
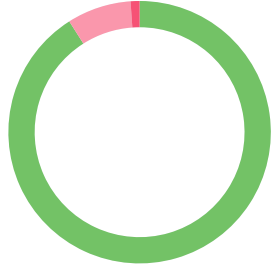
Source:
Samsung Smart Call users in India

Indonesia

PERIOD

Q4
Sep 2022 - Dec 2022

51.5%
Spam flag rate

One in two calls from non-contacts is labeled as spam

51%
Nuisance calls

0.5%
Fraud calls

48.5%
Wanted calls

1% of all spam calls in Q4 were labeled as fraud
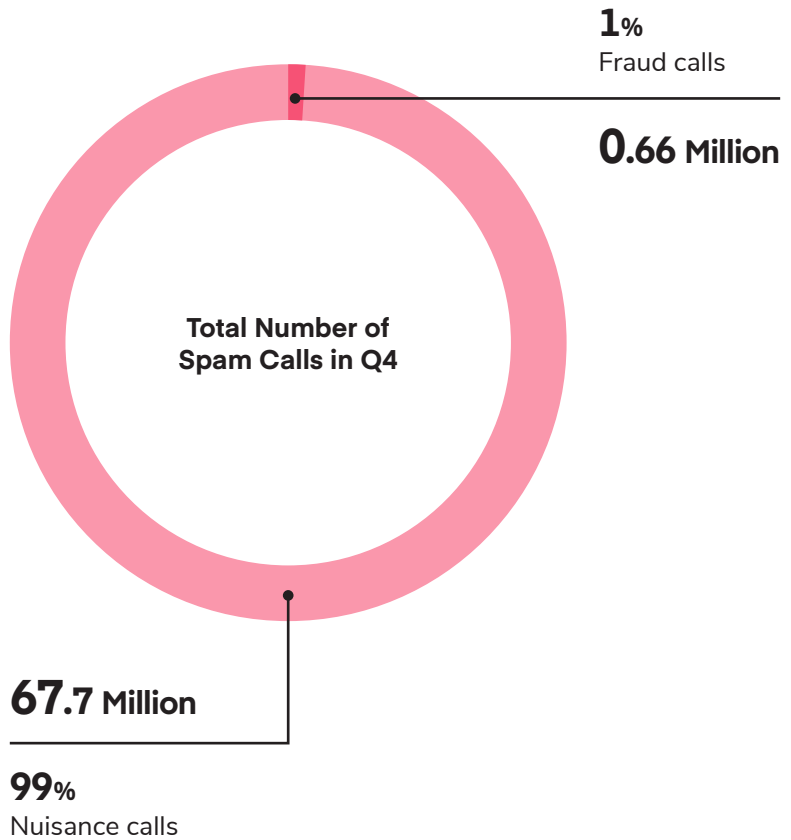
1%
Fraud calls

0.66 Million

Total Number of
Spam Calls in Q4

67.7 Million

99%
Nuisance calls

Spam ratios represent the number of unwanted calls from "non-contacts;" calls placed from numbers that are not in an individual's local address book.
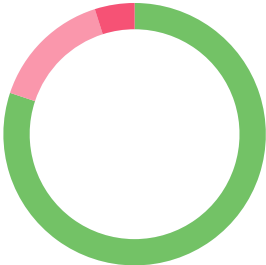
Source:
Samsung Smart Call users in Indonesia

Israel

PERIOD

Q4
Sep 2022 - Dec 2022

12.5%
Spam flag rate

12%
Nuisance calls

One in eight calls from non-contacts is labeled as spam

0.5%
Fraud calls

87.5%
Wanted calls

4% of all spam calls in Q4 were labeled as fraud
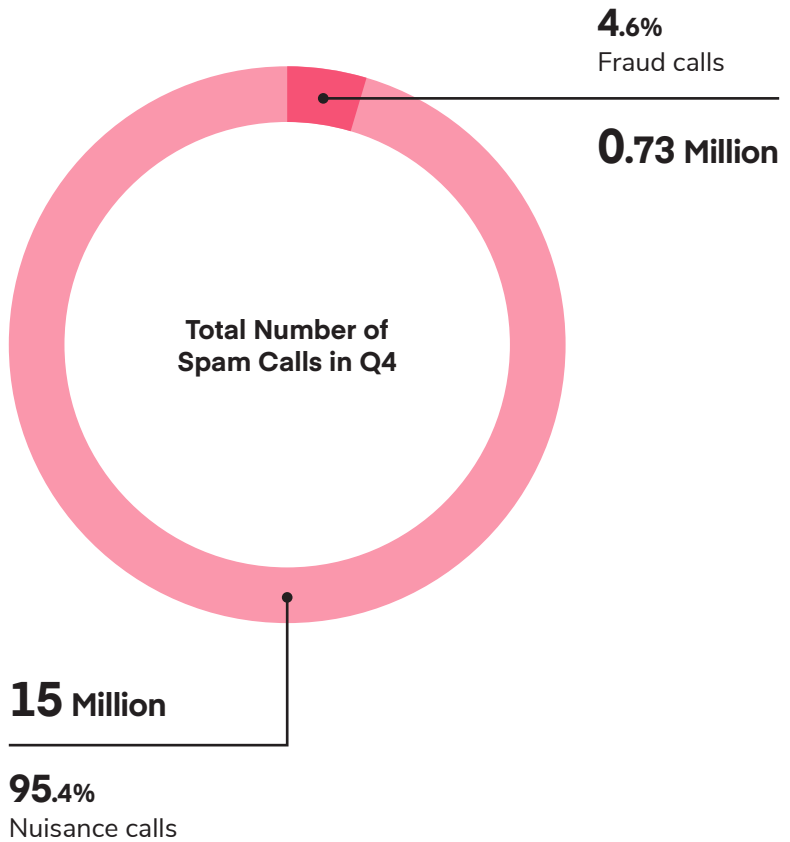
4.6%
Fraud calls

0.73 Million

Total Number of Spam Calls in Q4

15 Million

95.4%
Nuisance calls

Spam ratios represent the number of unwanted calls from "non-contacts;" calls placed from numbers that are not in an individual's local address book.

Source:
Samsung Smart Call users in Israel

Malaysia

Hiya

Q4
Sep 2022 - Dec 2022

14.4%
Spam flag rate

One in seven calls from non-contacts is labeled as spam

10%
Nuisance calls

4.4%
Fraud calls

85.6%
Wanted calls

30% of all spam calls in Q4 were labeled as fraud

30.4%
Fraud calls

2.02 Million

Total Number of Spam Calls in Q4

4.62 Million

69.6%
Nuisance calls

Spam ratios represent the number of unwanted calls from "non-contacts;" calls placed from numbers that are not in an individual's local address book.

Source:
Samsung Smart Call users in Malaysia

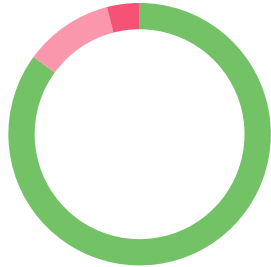# New Zealand

PERIOD

Q4

Sep 2022 - Dec 2022

9%
Spam flag rate

One in eleven calls from non-contacts is labeled as spam

7.9%
Nuisance calls

1.1%
Fraud calls

91%
Wanted calls

11% of all spam calls in Q4 were labeled as fraud
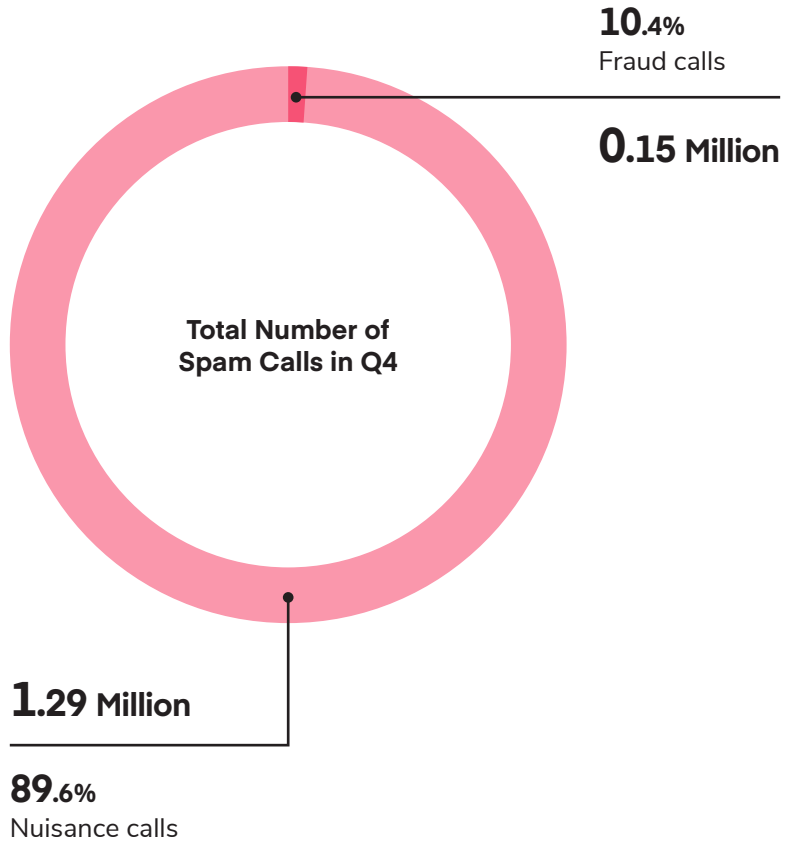
10.4%
Fraud calls

0.15 Million

Total Number of
Spam Calls in Q4

1.29 Million

89.6%
Nuisance calls

Spam ratios represent the number of unwanted calls from "non-contacts;" calls placed from numbers that are not in an individual's local address book.

Source:
Samsung Smart Call users in New Zealand
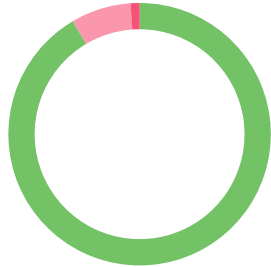
ASIA/PACIFIC

Philippines

PERIOD

Q4

Sep 2022 - Dec 2022

19.9%
Spam flag rate

One in five calls from non-contacts is labeled as spam

15%
Nuisance calls

4.9%
Fraud calls

80.1%
Wanted calls

25% of all spam calls in Q4 were labeled as fraud
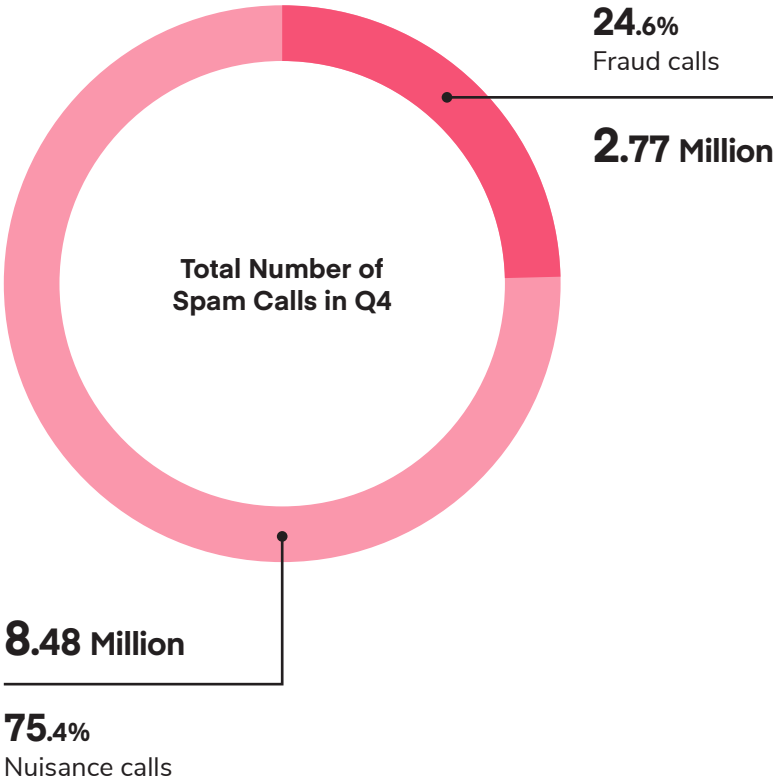
24.6%
Fraud calls

2.77 Million

Total Number of
Spam Calls in Q4

8.48 Million

75.4%
Nuisance calls

Spam ratios represent the
number of unwanted calls
from "non-contacts;" calls
placed from numbers that
are not in an individual's
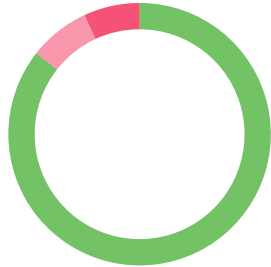local address book.

Source:
Samsung Smart Call users
in Philippines

Singapore

PERIOD

Q4
Sep 2022 - Dec 2022

15% Spam flag rate

One in seven calls from non-contacts is labeled as spam

11% Nuisance calls

4% Fraud calls

85% Wanted calls

27% of all spam calls in Q4 were labeled as fraud
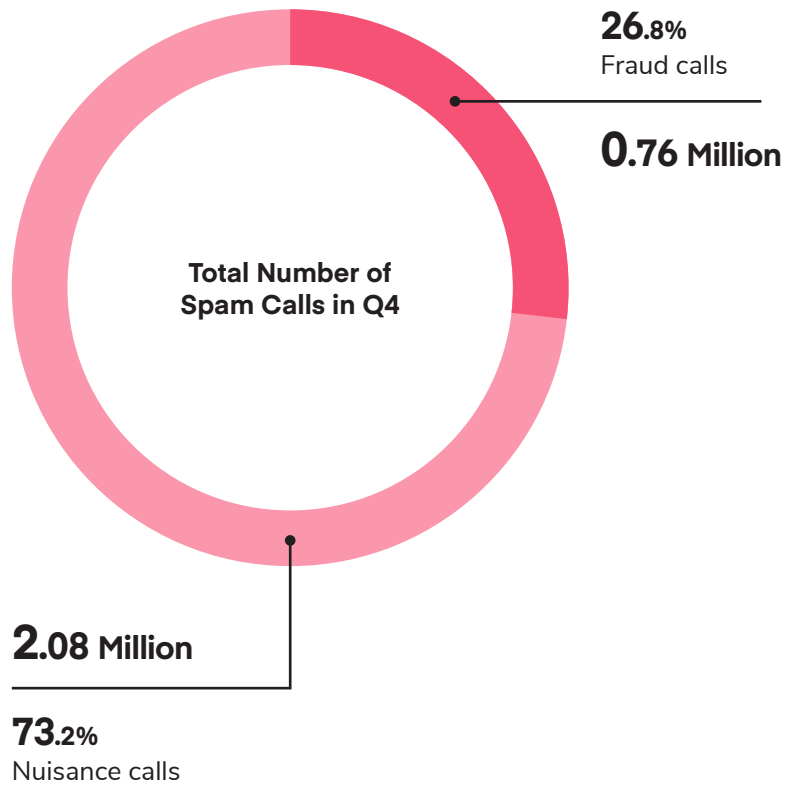
26.8% Fraud calls

0.76 Million

Total Number of Spam Calls in Q4

2.08 Million

73.2% Nuisance calls

Spam ratios represent the number of unwanted calls from "non-contacts;" calls placed from numbers that are not in an individual's local address book.
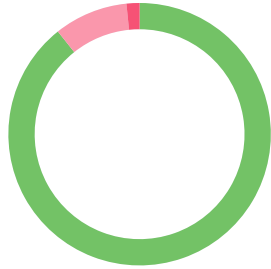
Source:
Samsung Smart Call users in Singapore

Thailand

PERIOD

Q4

Sep 2022 - Dec 2022

8.5%
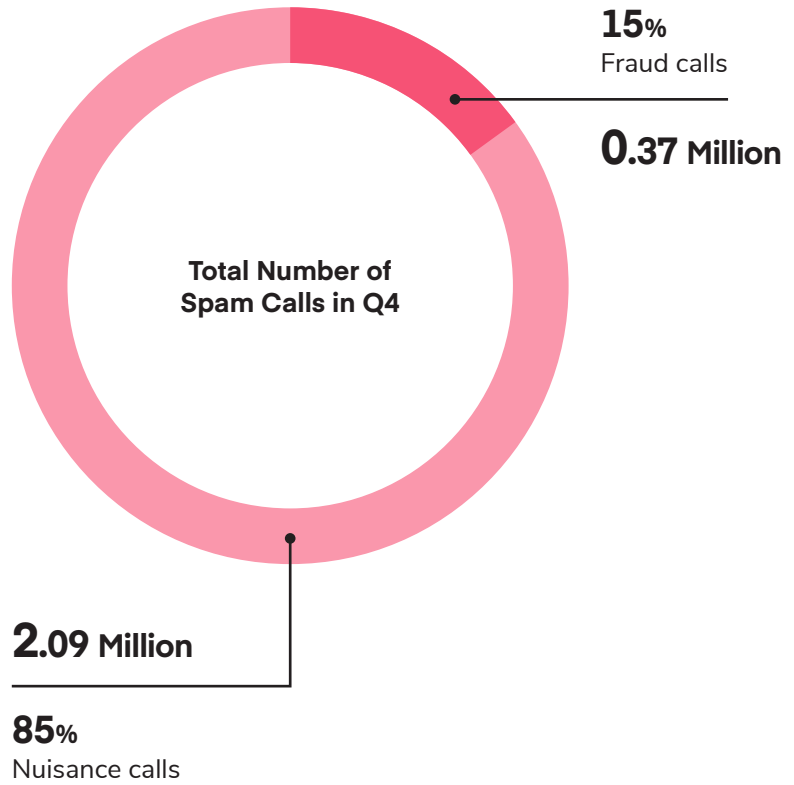Spam flag rate

One in twelve calls from non-contacts is labeled as spam

7.4%
Nuisance calls

1.1%
Fraud calls

91.5%
Wanted calls

12% of all spam calls in Q4 were labeled as fraud
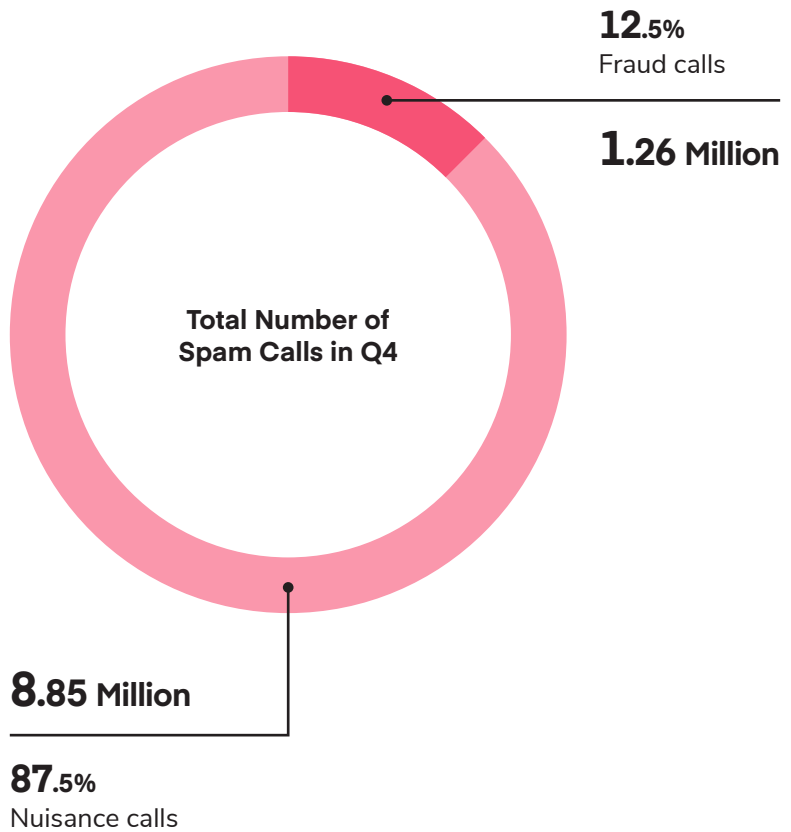
12.5%
Fraud calls

1.26 Million

Total Number of Spam Calls in Q4

8.85 Million

87.5%
Nuisance calls

Spam ratios represent the number of unwanted calls from "non-contacts;" calls placed from numbers that are not in an individual's local address book.
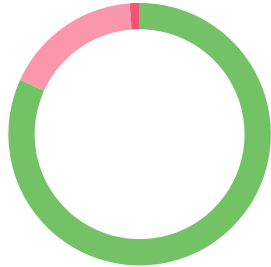
Source:
Samsung Smart Call users in Thailand

Turkey

PERIOD

Q4
Sep 2022 - Dec 2022

hiya

14.4%
Spam flag rate

One in seven calls from non-contacts is labeled as spam

7.5%
Nuisance calls

6.9%
Fraud calls

85.6%
Wanted calls

48% of all spam calls in Q4 were labeled as fraud
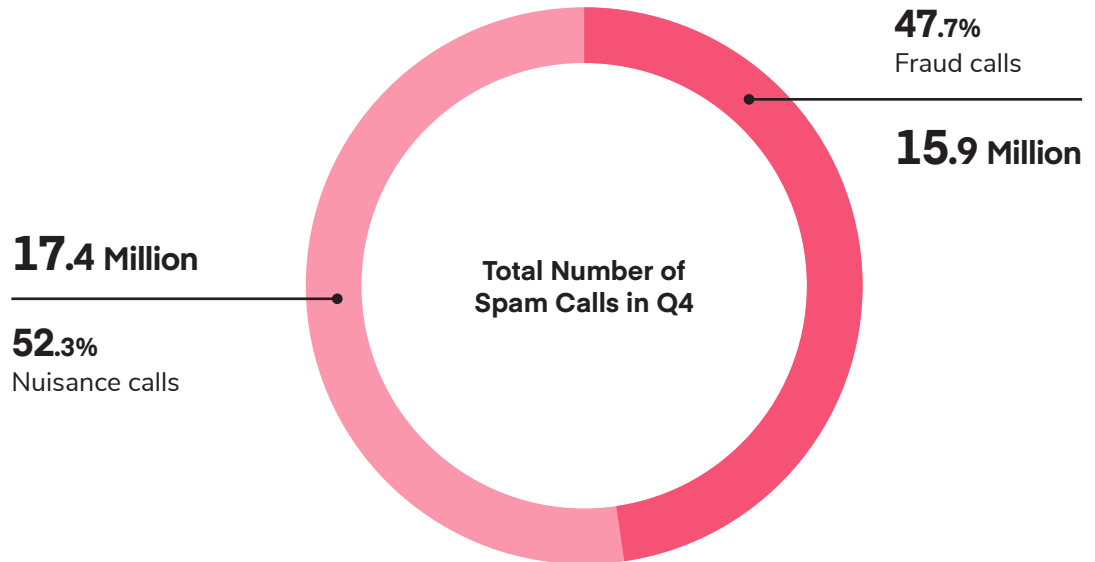
47.7%
Fraud calls

15.9 Million

17.4 Million

Total Number of
Spam Calls in Q4

52.3%
Nuisance calls

Spam ratios represent the number of unwanted calls from "non-contacts;" calls placed from numbers that are not in an individual's local address book.

Source:
Samsung Smart Call users in Turkey
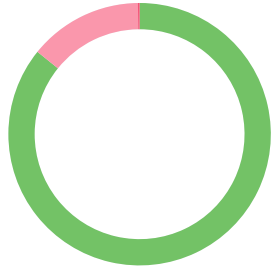
EUROPE

Austria

PERIOD

Q4
Sep 2022 - Dec 2022

10.7%
Spam flag rate

One in ten calls from non-contacts is labeled as spam

9.1%
Nuisance calls

1.6%
Fraud calls

89.3%
Wanted calls

15% of all spam calls in Q4 were labeled as fraud

15%
Fraud calls

0.37 Million

Total Number of Spam Calls in Q4

2.09 Million

85%
Nuisance calls

Spam ratios represent the number of unwanted calls from "non-contacts;" calls placed from numbers that are not in an individual's local address book.
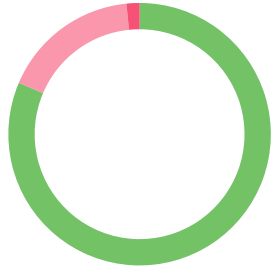
Source:
Samsung Smart Call users in Austria

Belgium

hiya

PERIOD

Q4

Sep 2022 - Dec 2022

18.2%
Spam flag rate

**One in six calls from
non-contacts is labeled as spam**

■ **17%**
Nuisance calls

■ **1.2%**
Fraud calls

● **81.8%**
Wanted calls

**7% of all spam calls in Q4 were
labeled as fraud**
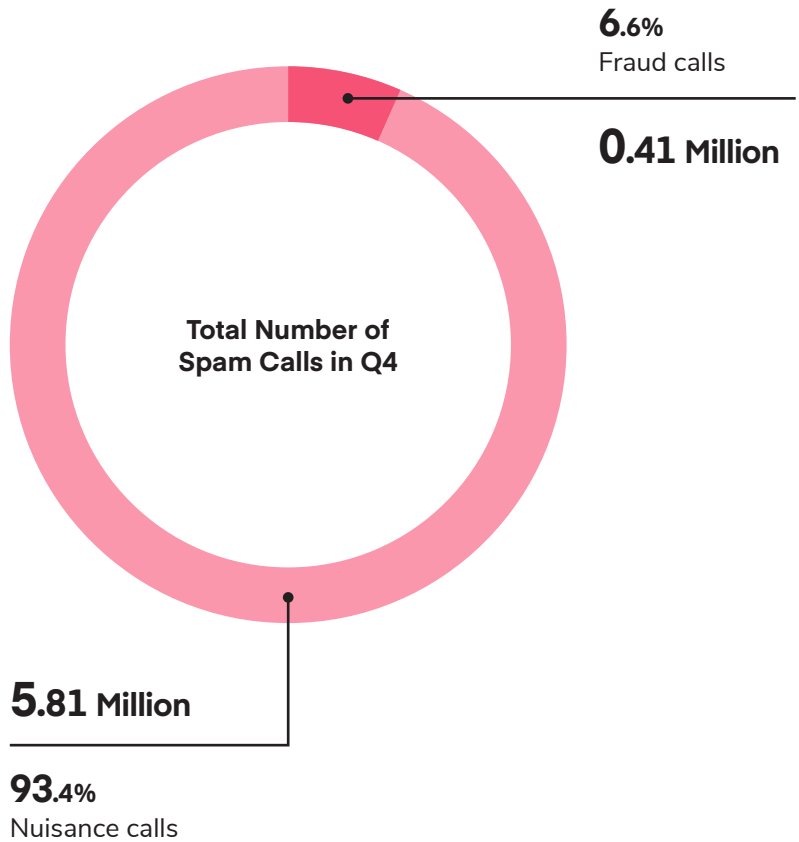
6.6%
Fraud calls

0.41 Million

**Total Number of
Spam Calls in Q4**

5.81 Million

93.4%
Nuisance calls

Spam ratios represent the
number of unwanted calls
from "non-contacts;" calls
placed from numbers that
are not in an individual's
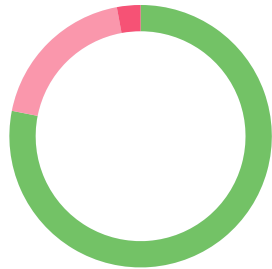local address book.

Source:
Samsung Smart Call users
in Belgium

Czech Republic

PERIOD

Q4
Sep 2022 - Dec 2022
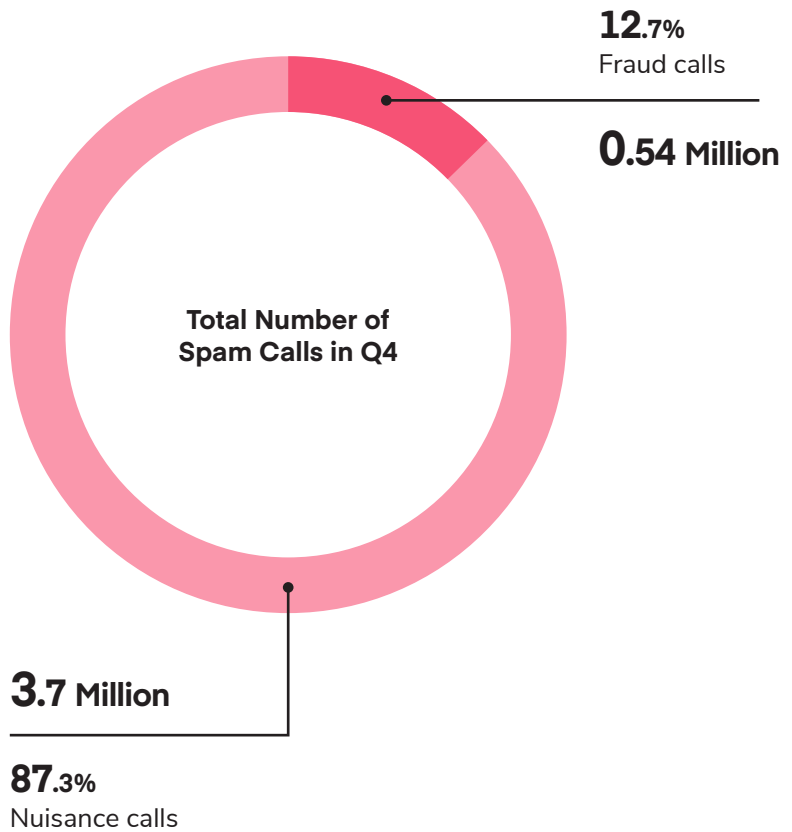
14.2%
Spam flag rate

One in seven calls from non-contacts is labeled as spam

14%
Nuisance calls

0.2%
Fraud calls

85.8%
Wanted calls

14% of all spam calls in Q4 were labeled as fraud
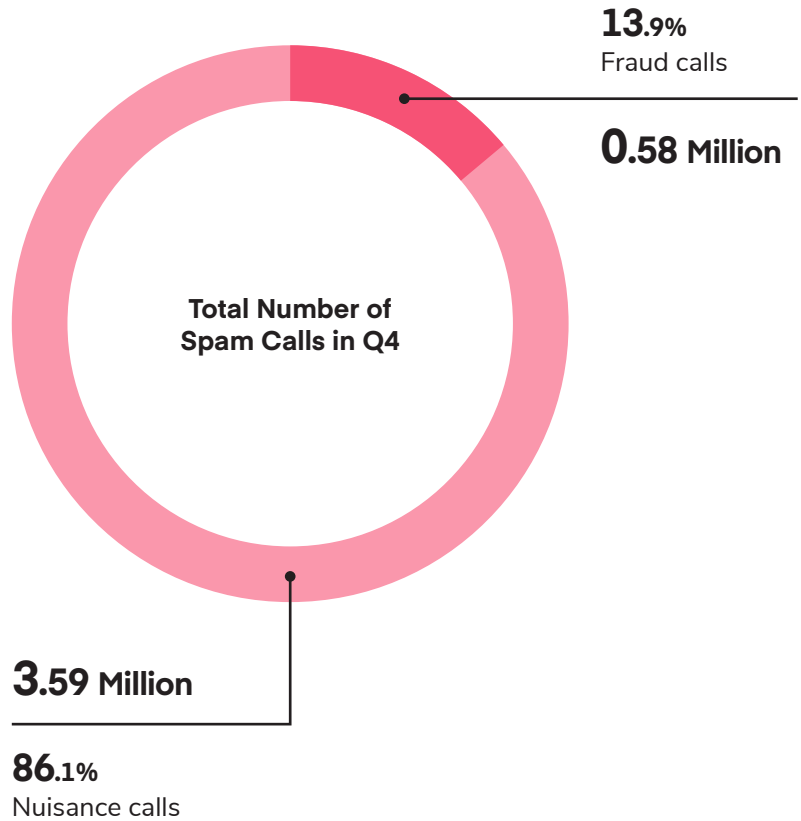
13.9%
Fraud calls

0.58 Million

Total Number of Spam Calls in Q4

3.59 Million

86.1%
Nuisance calls

Spam ratios represent the number of unwanted calls from "non-contacts;" calls placed from numbers that are not in an individual's local address book.

Source:
Samsung Smart Call users in Czech Republic

Denmark

PERIOD

Q4
Sep 2022 - Dec 2022

18.6%
Spam flag rate

One in six calls from non-contacts is labeled as spam

17%
Nuisance calls

1.6%
Fraud calls

81.4%
Wanted calls

8% of all spam calls in Q4 were labeled as fraud
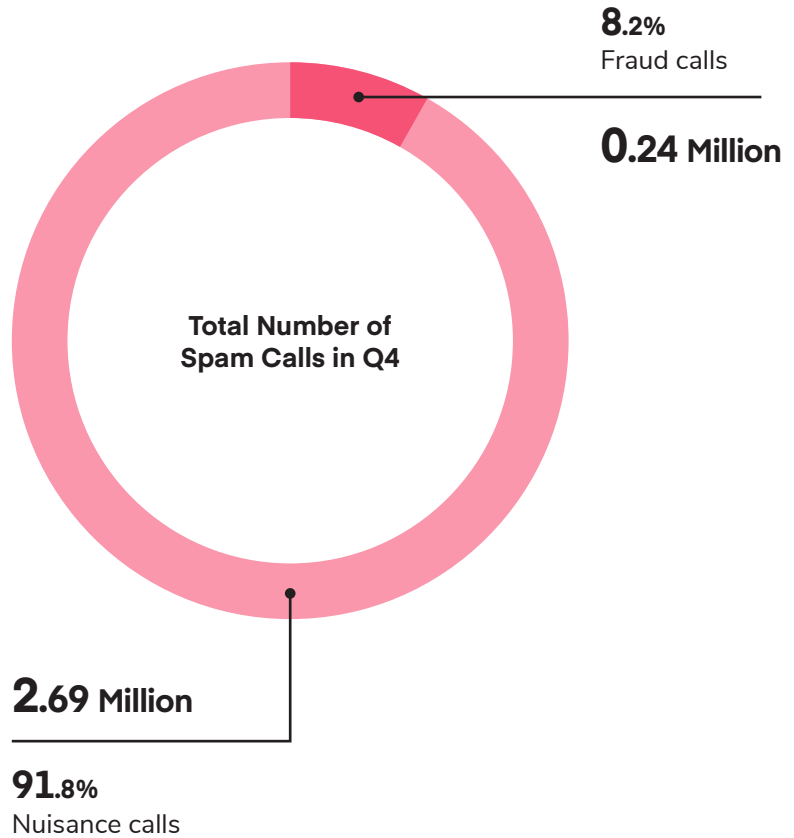
8.2%
Fraud calls

0.24 Million

Total Number of Spam Calls in Q4

2.69 Million

91.8%
Nuisance calls

Spam ratios represent the number of unwanted calls from "non-contacts;" calls placed from numbers that are not in an individual's local address book.
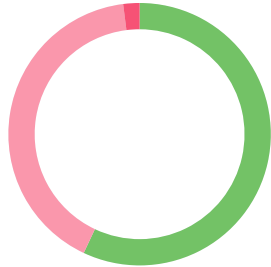
Source:
Samsung Smart Call users in Denmark

Finland

PERIOD

Q4
Sep 2022 - Dec 2022

hiya

21.9%
Spam flag rate

One in five calls from non-contacts is labeled as spam

● **19%**
Nuisance calls

● **2.9%**
Fraud calls

● **78.1%**
Wanted calls

13% of all spam calls in Q4 were labeled as fraud

12.7%
Fraud calls

0.54 Million

Total Number of
Spam Calls in Q4

3.7 Million

87.3%
Nuisance calls

Spam ratios represent the
number of unwanted calls
from "non-contacts;" calls
placed from numbers that
are not in an individual's
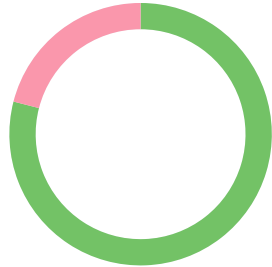local address book.

Source:
Samsung Smart Call users
in Finland

France

PERIOD

Q4

Sep 2022 - Dec 2022

43% Spam flag rate

41% Nuisance calls

Nearly one in two calls from non-contacts is labeled as spam

2% Fraud calls

57% Wanted calls

5% of all spam calls in Q4 were labeled as fraud

4.7% Fraud calls
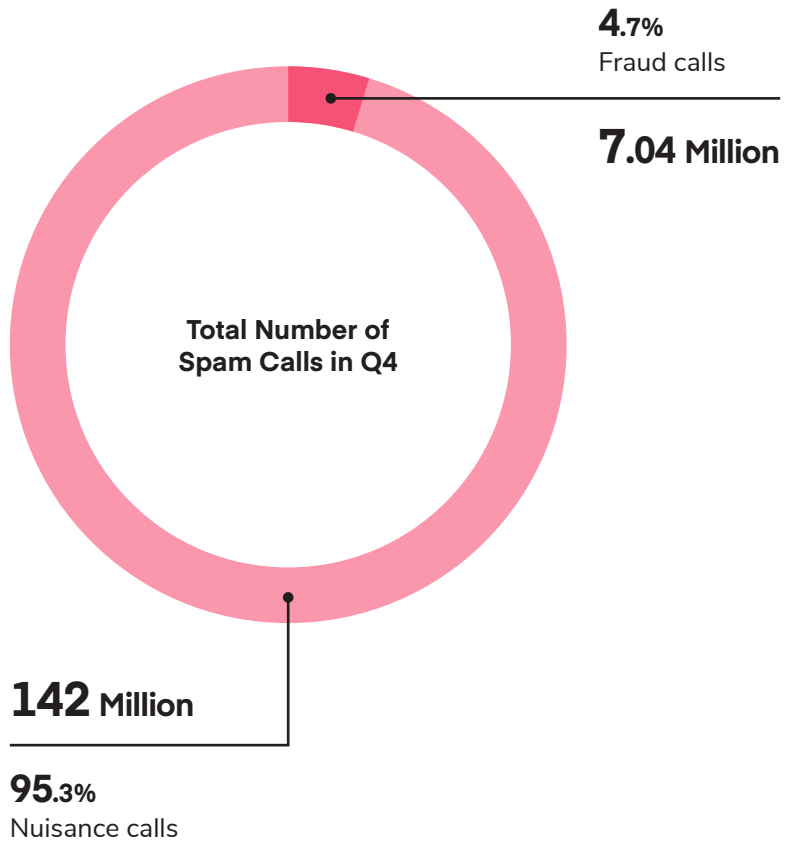
7.04 Million

Total Number of Spam Calls in Q4

142 Million

95.3% Nuisance calls

Spam ratios represent the number of unwanted calls from "non-contacts;" calls placed from numbers that are not in an individual's local address book.
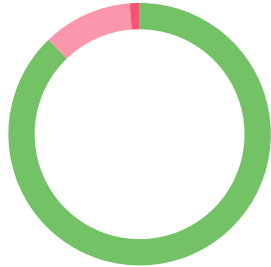
Source:
Samsung Smart Call users in France

EUROPE

Germany

PERIOD

Q4
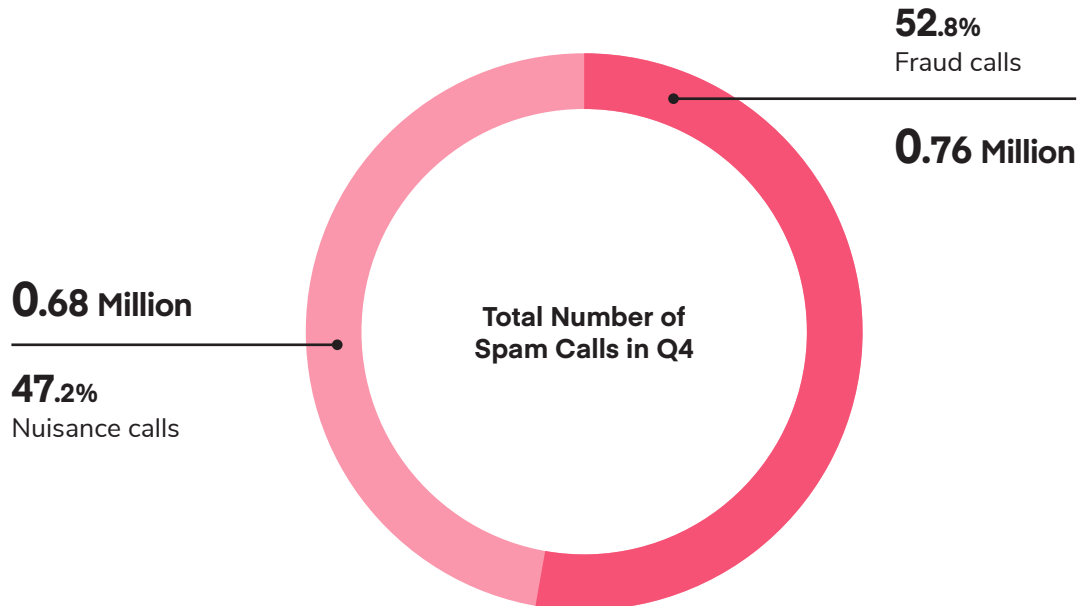**Sep 2022 - Dec 2022**

21%
Spam flag rate

One in five calls from non-contacts is labeled as spam

21%
Nuisance calls

79%
Wanted calls

All unwanted calls flagged as spam

Hiya uses a single 'spam' warning for both nuisance and fraud calls.

Total Number of Spam Calls in Q4
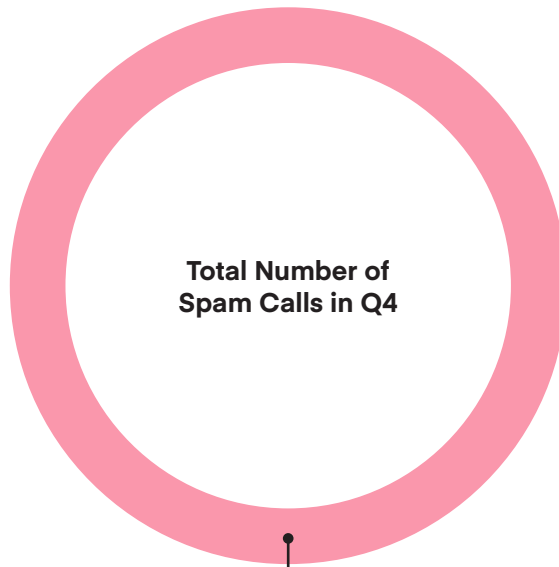
31.9 **Million**

100%
Nuisance calls

Spam ratios represent the number of unwanted calls from "non-contacts;" calls placed from numbers that are not in an individual's local address book.
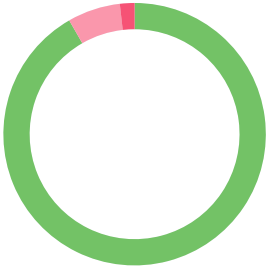
Source:
Samsung Smart Call users in Germany

EUROPE

Greece

PERIOD

Q4
Sep 2022 - Dec 2022

12.2%
Spam flag rate

One in eight calls from non-contacts is labeled as spam

11%
Nuisance calls

1.2%
Fraud calls

87.8%
Wanted calls

53% of all spam calls in Q4 were labeled as fraud

52.8%
Fraud calls

0.76 Million

0.68 Million

47.2%
Nuisance calls

Total Number of
Spam Calls in Q4

Spam ratios represent the number of unwanted calls from "non-contacts;" calls placed from numbers that are not in an individual's local address book.

Source:
Samsung Smart Call users in Greece

Hungary

PERIOD

Q4
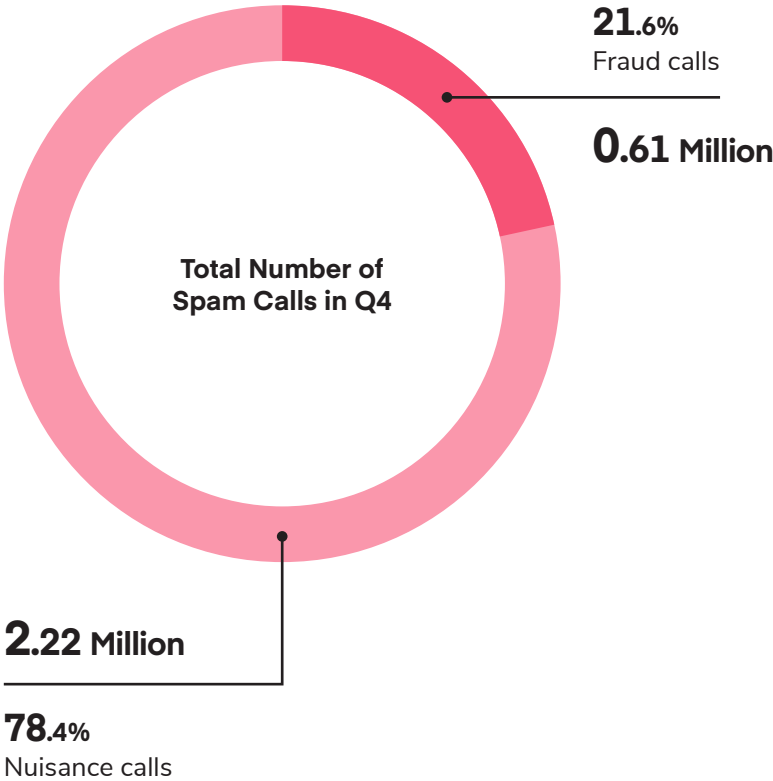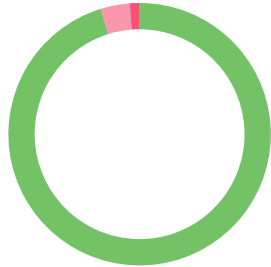**Sep 2022 - Dec 2022**

8.30%
Spam flag rate

One in eleven calls from non-contacts is labeled as spam

6.5%
Nuisance calls

1.8%
Fraud calls

91.70%
Wanted calls

22% of all spam calls in Q4 were labeled as fraud

21.6%
Fraud calls

0.61 Million

Total Number of Spam Calls in Q4

2.22 Million

78.4%
Nuisance calls

Spam ratios represent the number of unwanted calls from "non-contacts;" calls placed from numbers that are not in an individual's local address book.

Source:
Samsung Smart Call users in Hungary

EUROPE

Ireland

PERIOD

Q4
Sep 2022 - Dec 2022

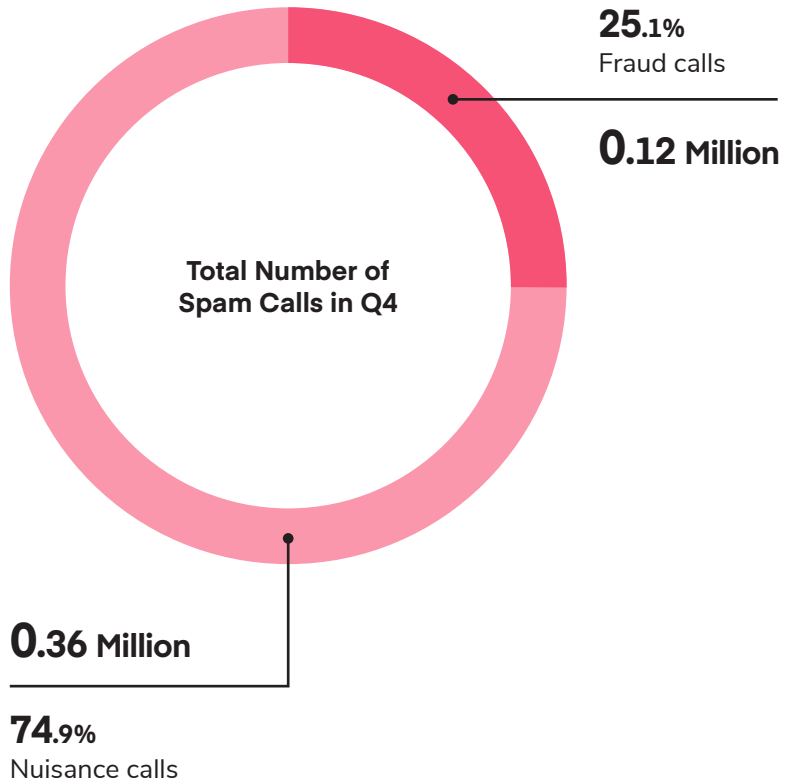**4.8%**
Spam flag rate

One in twenty calls from non-contacts is labeled as spam

3.6%
Nuisance calls

1.2%
Fraud calls

95.2%
Wanted calls

25% of all spam calls in Q4 were labeled as fraud

25.1%
Fraud calls

0.12 Million

Total Number of Spam Calls in Q4

0.36 Million

74.9%
Nuisance calls

Spam ratios represent the number of unwanted calls from "non-contacts;" calls placed from numbers that are not in an individual's local address book.

Source:
Samsung Smart Call users in Ireland

Italy

PERIOD

Q4
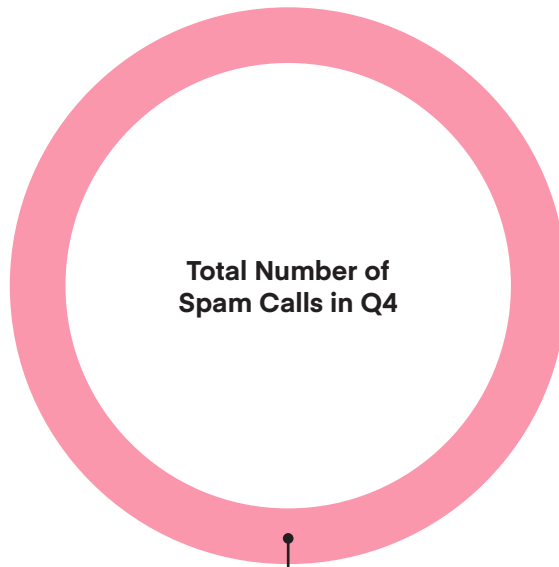**Sep 2022 - Dec 2022**
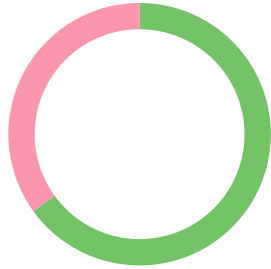
35.11%
Spam flag rate

35.11%
Nuisance calls

**One in three calls from
non-contacts is labeled as spam**

64.89%
Wanted calls

All unwanted calls flagged as spam
Hiya uses a single 'spam' warning for both nuisance and fraud calls.

**Total Number of
Spam Calls in Q4**

96.3 Million

100%
Nuisance calls

Spam ratios represent the number of unwanted calls from "non-contacts;" calls placed from numbers that are not in an individual's local address book.
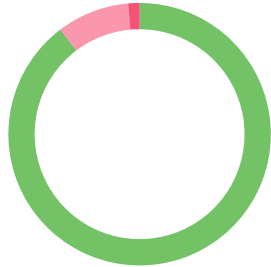
Source:
Samsung Smart Call users in Italy

Netherlands

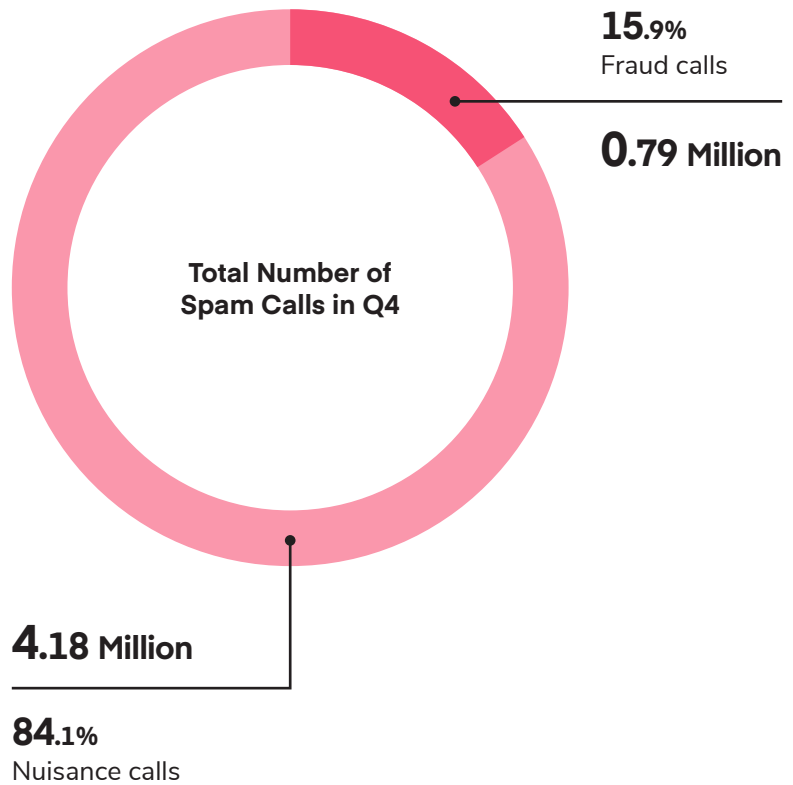**10.3%**
Spam flag rate

One in ten calls from non-contacts is labeled as spam

8.9%
Nuisance calls

1.4%
Fraud calls

89.7%
Wanted calls

13% of all spam calls in Q4 were labeled as fraud

15.9%
Fraud calls

0.79 Million

Total Number of Spam Calls in Q4

4.18 Million

84.1%
Nuisance calls

Spam ratios represent the number of unwanted calls from "non-contacts;" calls placed from numbers that are not in an individual's local address book.

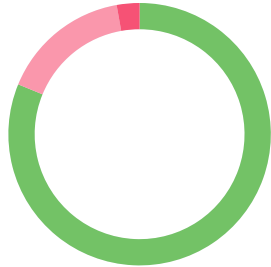Source:
Samsung Smart Call users in Netherlands

EUROPE

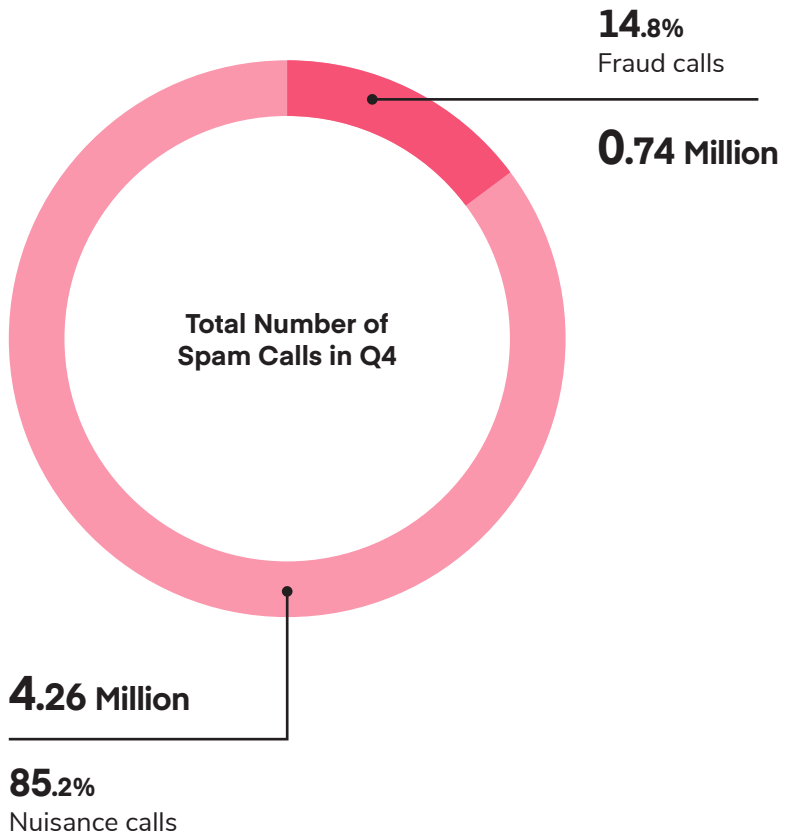# Norway

PERIOD

Q4
Sep 2022 - Dec 2022

18.8%
Spam flag rate

**One in six calls from
non-contacts is labeled as spam**

■ **16%**
Nuisance calls

■ **2.8%**
Fraud calls

● **81.2%**
Wanted calls

15% of all spam calls in Q4 were labeled as fraud

14.8%
Fraud calls

0.74 Million

Total Number of
Spam Calls in Q4

4.26 Million

85.2%
Nuisance calls

Spam ratios represent the
number of unwanted calls
from "non-contacts;" calls
placed from numbers that
are not in an individual's
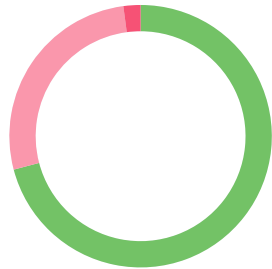local address book.

Source:
Samsung Smart Call users
in Norway

Poland

PERIOD

Q4
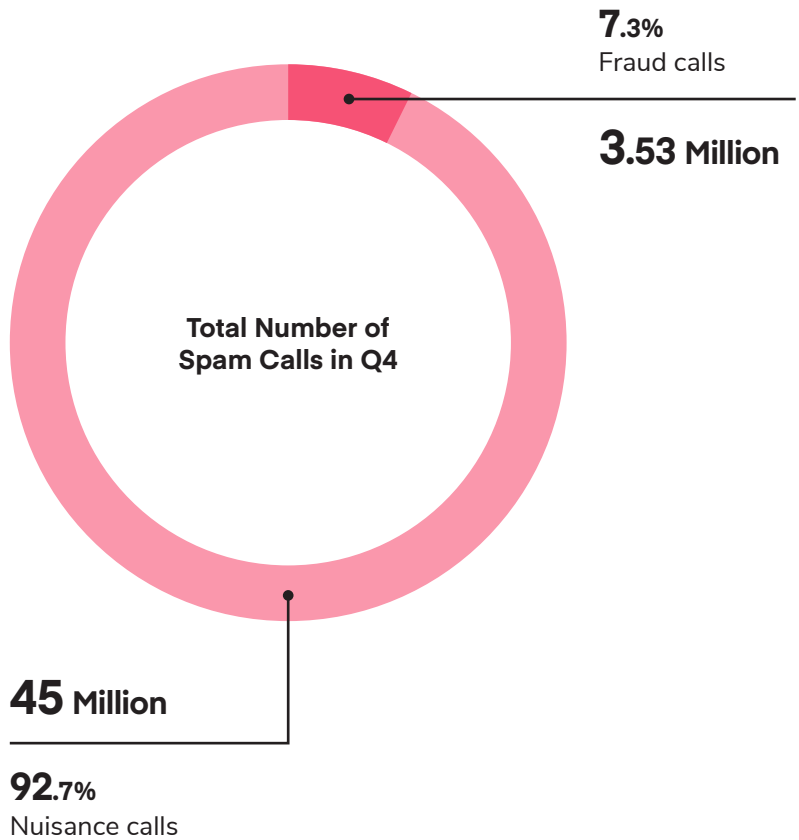**Sep 2022 - Dec 2022**

29.1%
Spam flag rate

One in three calls from non-contacts is labeled as spam

27%
Nuisance calls

2.1%
Fraud calls

70.9%
Wanted calls

7% of all spam calls in Q4 were labeled as fraud

7.3%
Fraud calls

3.53 Million

Total Number of Spam Calls in Q4

45 Million

92.7%
Nuisance calls

Spam ratios represent the number of unwanted calls from "non-contacts;" calls placed from numbers that are not in an individual's local address book.
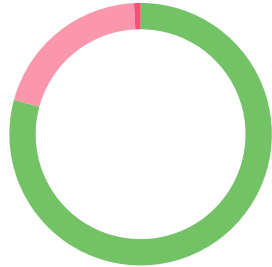
Source:
Samsung Smart Call users in Poland

Portugal

hiya

PERIOD

Q4
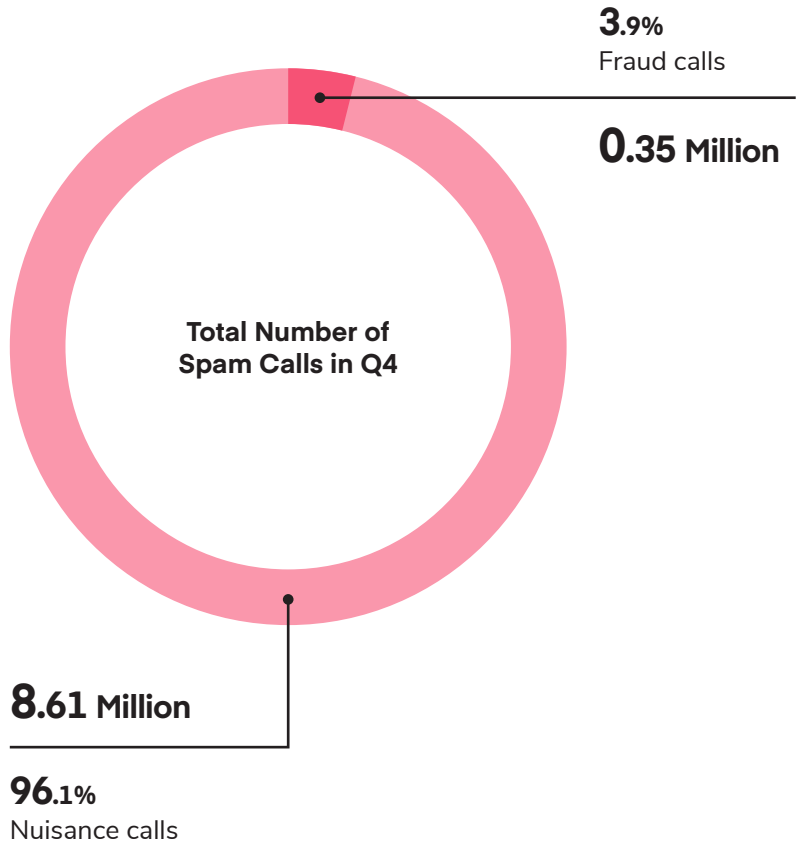**Sep 2022 - Dec 2022**

20.8%
Spam flag rate

One in five calls from non-contacts is labeled as spam

20%
Nuisance calls

0.8%
Fraud calls

79.2%
Wanted calls

4% of all spam calls in Q4 were labeled as fraud

3.9%
Fraud calls

0.35 Million

Total Number of Spam Calls in Q4

8.61 Million

96.1%
Nuisance calls

Spam ratios represent the number of unwanted calls from "non-contacts;" calls placed from numbers that are not in an individual's local address book.
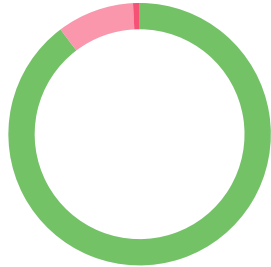
Source:
Samsung Smart Call users in Portugal

EUROPE

Slovakia

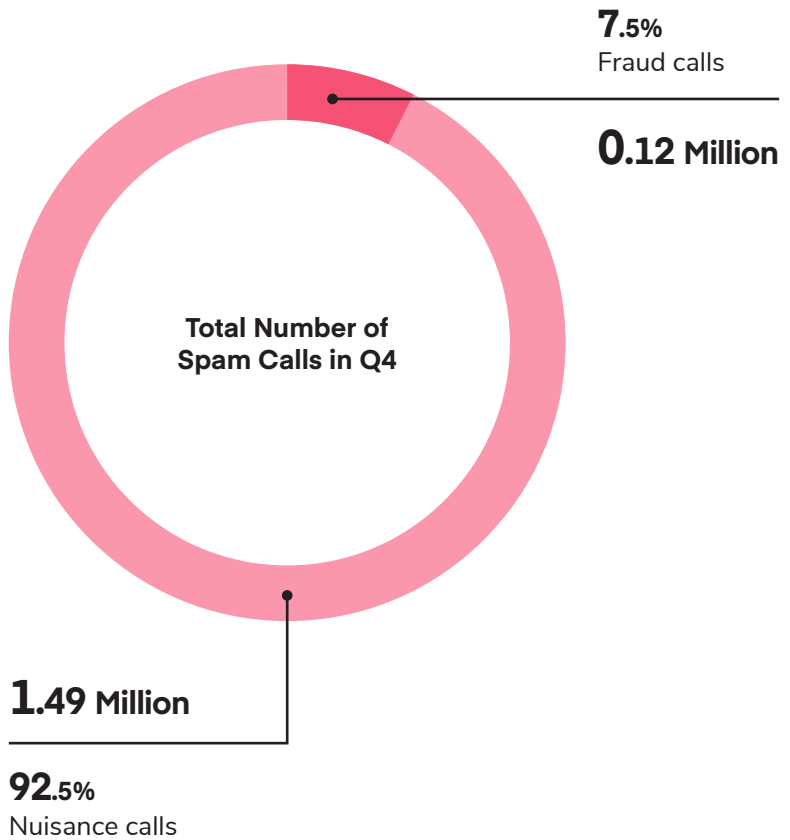**PERIOD**

Q4
Sep 2022 - Dec 2022

10.3%
Spam flag rate

**One in ten calls from
non-contacts is labeled as spam**

9.5%
Nuisance calls

0.8%
Fraud calls

89.7%
Wanted calls

**8% of all spam calls in Q4 were
labeled as fraud**

7.5%
Fraud calls

0.12 Million

Total Number of
Spam Calls in Q4

1.49 Million

92.5%
Nuisance calls

Spam ratios represent the
number of unwanted calls
from "non-contacts;" calls
placed from numbers that
are not in an individual's
local address book.

Source:
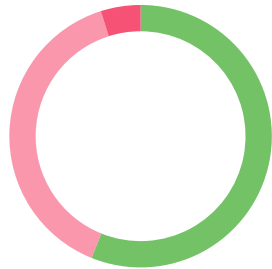Samsung Smart Call users
in Slovakia

EUROPE

Spain

PERIOD
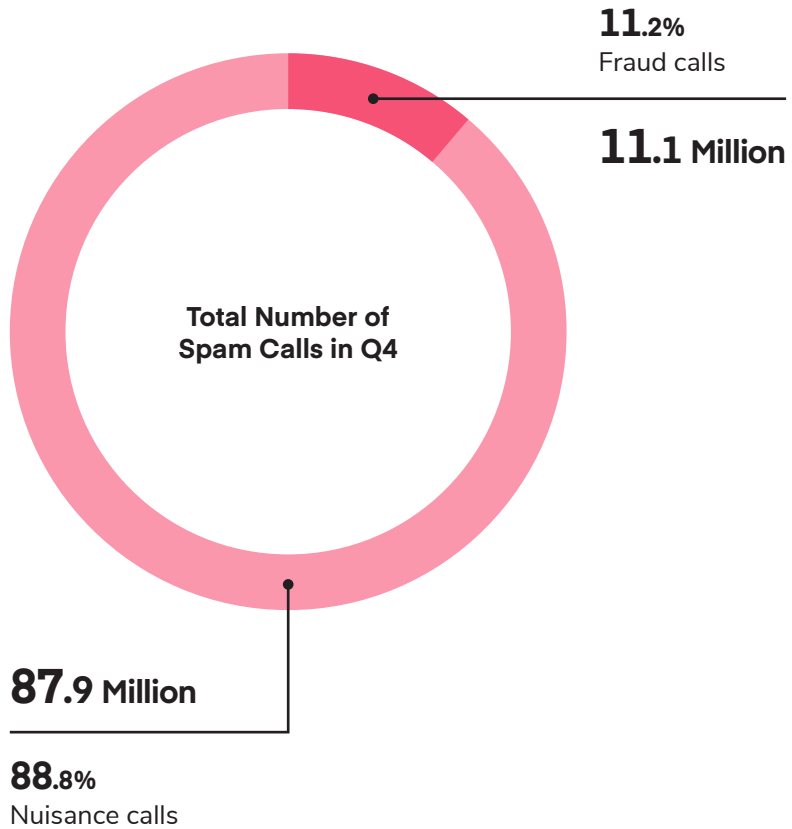
Q4
Sep 2022 - Dec 2022

43.9%
Spam flag rate

Nearly one in two calls from non-contacts is labeled as spam

39%
Nuisance calls

4.9%
Fraud calls

56.1%
Wanted calls

11% of all spam calls in Q4 were labeled as fraud

11.2%
Fraud calls

11.1 Million

Total Number of Spam Calls in Q4

87.9 Million

88.8%
Nuisance calls

Spam ratios represent the number of unwanted calls from "non-contacts;" calls placed from numbers that are not in an individual's local address book.
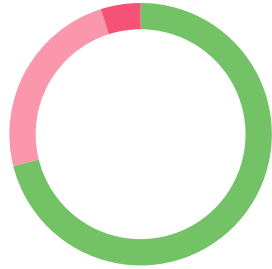
Source:
Samsung Smart Call users in Spain

Sweden

Q4

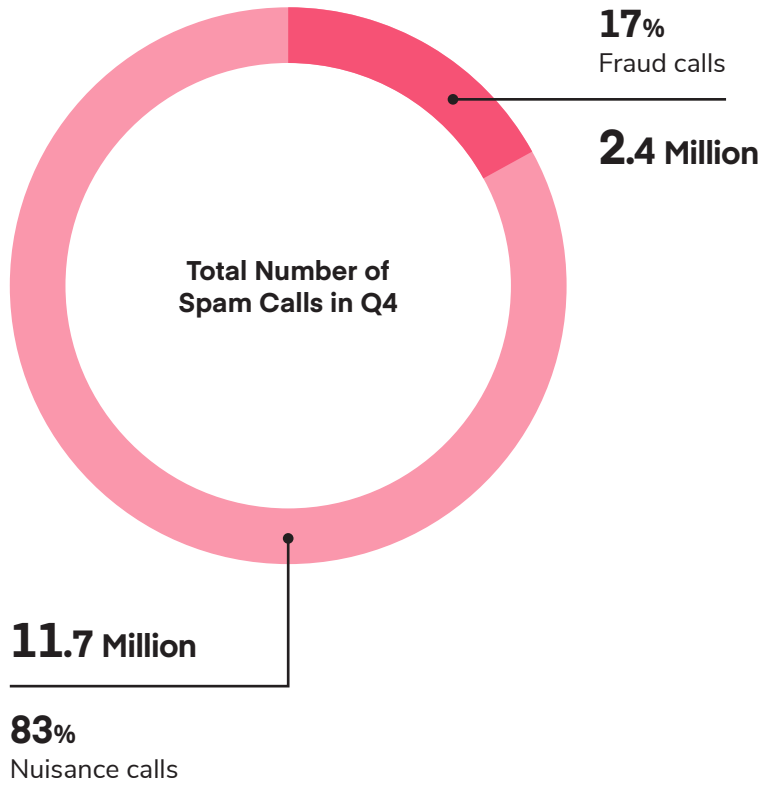**Sep 2022 - Dec 2022**

hiya

28.9%
Spam flag rate

One in four calls from non-contacts is labeled as spam

24%
Nuisance calls

4.9%
Fraud calls

71.1%
Wanted calls

17% of all spam calls in Q4 were labeled as fraud

17%
Fraud calls

2.4 Million

Total Number of Spam Calls in Q4

11.7 Million

83%
Nuisance calls

Spam ratios represent the number of unwanted calls from "non-contacts;" calls placed from numbers that are not in an individual's local address book.

Source:
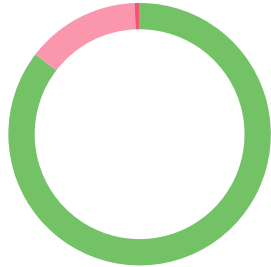Samsung Smart Call users in Sweden

Switzerland

hiya

PERIOD

Q4

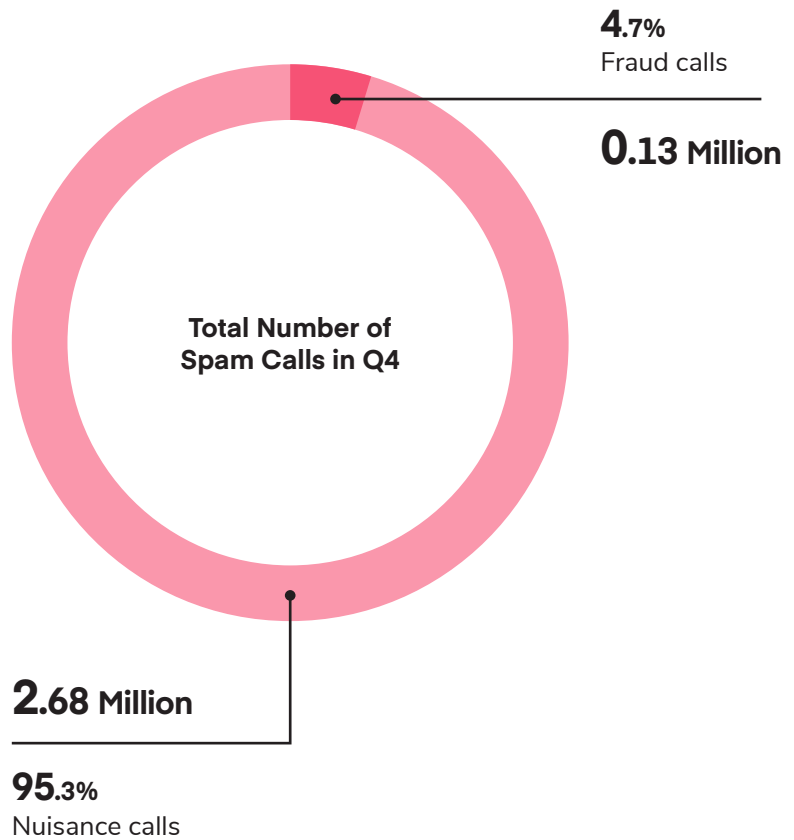**Sep 2022 - Dec 2022**

14.6%
Spam flag rate

14%
Nuisance calls

One in seven calls from
non-contacts is label as spam

0.6%
Fraud calls

85.4%
Wanted calls

**5% of all spam calls in Q4 were
labeled as fraud**

4.7%
Fraud calls

0.13 Million

Total Number of
Spam Calls in Q4

2.68 Million

95.3%
Nuisance calls

Spam ratios represent the
number of unwanted calls
from "non-contacts;" calls
placed from numbers that
are not in an individual's
local address book.

Source:
Samsung Smart Call users
in Switzerland

United Kingdom

PERIOD

Q4
Sep 2022 - Dec 2022

hiya

28%
Spam flag rate

One in four calls from non-contacts is labeled as spam

15%
Nuisance calls

13%
Fraud calls

72%
Wanted calls

47% of all spam calls in Q4 were labeled as fraud

46.7%
Fraud calls

34.5 Million

39.3 Million

Total Number of
Spam Calls in Q4

53.3%
Nuisance calls

Spam ratios represent the number of unwanted calls from "non-contacts;" calls placed from numbers that are not in an individual's local address book.
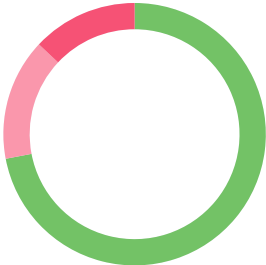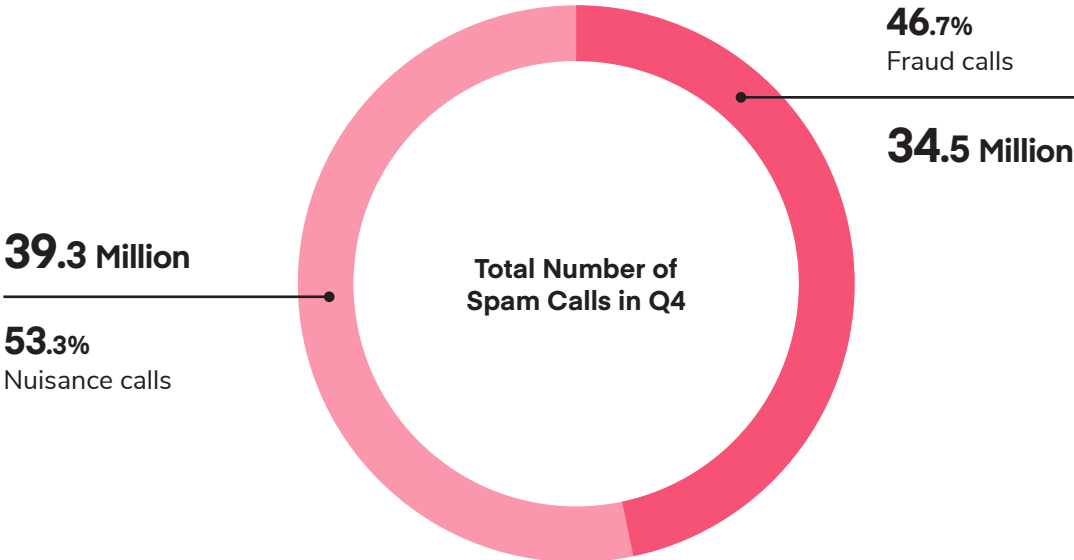
Source:
Samsung Smart Call users in United Kingdom

hiya

ABOUT HIYA

Hiya is trusted by global businesses, carriers and consumers to provide secure, engaging connections and stop unwanted calls. Built on the world's leading Voice Security Platform, Hiya connects businesses with their customers, helps carriers secure their networks, and protects people from spam and fraud calls.

Hiya's leading SaaS applications, Hiya Connect and Hiya Protect, improve the voice experience with trust, identity and intelligence. Powering services like AT&T Call Protect, Rogers Spam Call Detect and Samsung Smart Call, Hiya Protect outsmarts sophisticated scammer with machine-trained trust models and makes voice more intelligent via real-time, global analytics. With a reach of hundreds of millions of users worldwide, Hiya Connect enables enterprises to deliver an unsurpassed, differentiated customer experience through secure and branded calls, and optimizes business results with call performance intelligence.