



CONSUMER SECURITY AND PRIVACY ATTITUDES IN A POST-COVID WORLD

F-Secure research whitepaper for banks



CONTENTS

ONLINE SECURITY AND BANKING	3
DIGITALIZATION: THE BOOM AND THE GLOOM	3
YEARS OF CONSUMER RESEARCH	5
ONLINE ACTIVITIES INVOLVING MONEY ARE ON THE RISE	5
PROTECTING CHILDREN ONLINE WITH TECHNOLOGICAL SOLUTIONS	7
THREATS AND ATTACKS STILL AROUND	8
WORRY PROMPTING CHANGES IN ONLINE BEHAVIOR	9
SECURITY FEELS COMPLICATED	11
CONSUMERS WANT TO LEARN ABOUT ONLINE SECURITY	13
CONSUMERS ARE INTERESTED IN ACQUIRING SECURITY FROM THEIR BANK	14
HOW BANKS CAN BENEFIT FROM OFFERING DIGITAL SECURITY	15
REDUCE COMPLEXITY FOR YOUR CUSTOMERS WITH ALL-IN-ONE SECURITY	16
ABOUT F-SECURE	19

ONLINE SECURITY AND BANKING

Undoubtedly, banking and digital security go hand in hand. Consumers want to feel safe when they handle money online. Therefore, banks have a key role in educating their customers about cyber threats and safe online behavior.

The rising competition in the banking sector is compelling financial institutions to innovate with new value-added services and loyalty programs to improve customer retention. Offering actual tools to help customers protect their devices and digital identities

from online threats will boost the perceived value of banking services.

Digital transformation has changed people's online behaviors and attitudes towards security. Our research highlights what matters most to consumers, where they need help and what their purchase preferences are.

In this whitepaper, you will learn how the pandemic has impacted consumers' online security and privacy behavior and attitudes and how you can seize the new opportunities that have arisen.

DIGITALIZATION: THE BOOM AND THE GLOOM

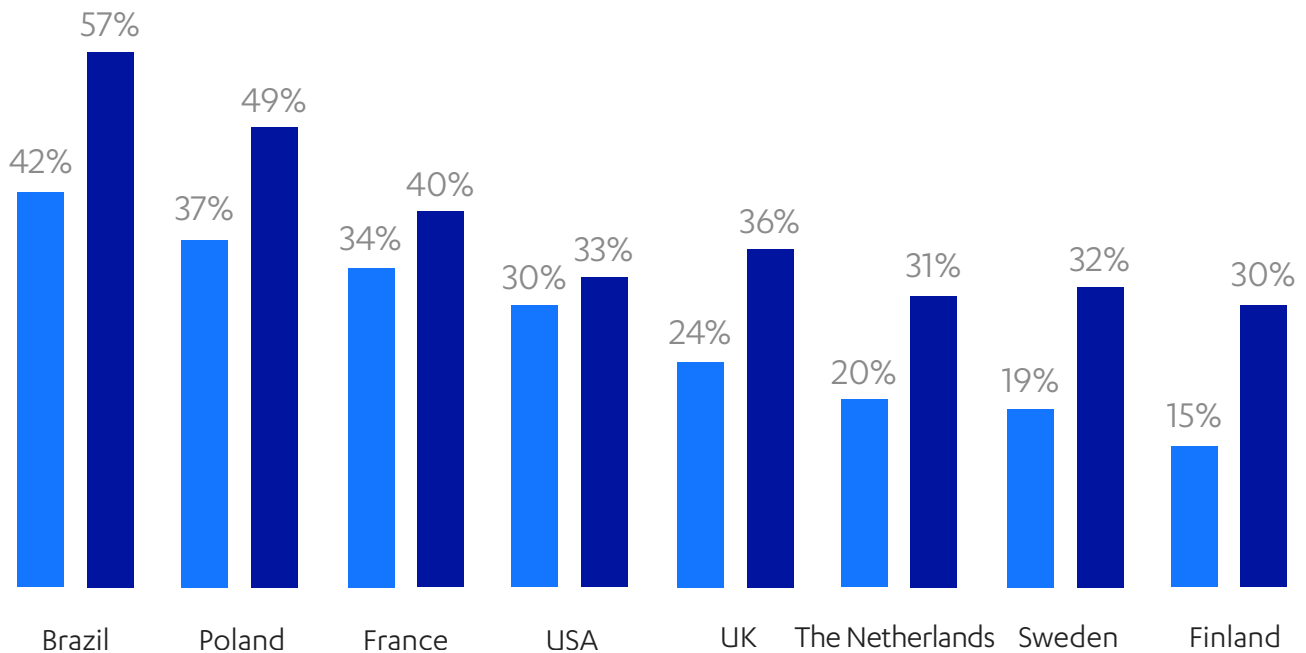
The COVID-19 pandemic triggered a global digitalization leap that changed our lives – the way we work, study, shop, and interact with each other. As countries went into lockdown, many consumers were prompted to learn new digital skills and were introduced to various technologies, products, and online services for the first time.

According to McKinsey*, consumers and companies covered a "decade in days" in terms of digital adoption. Online deliveries saw 10 years' worth of growth in just eight weeks. Telemedicine grew by 10 times in 15

days, and there were 20 times more participants on videoconferencing platforms in the space of three months.

The sudden masses of consumers using online services created opportunities for cyber criminals. With consumers' elevated levels of online exposure, and with more sensitive information being transacted online than ever before, attackers have more opportunities to digitally victimize people, especially given the glut of new and thus more vulnerable users.

CYBER CRIME HAS INCREASED DURING THE PANDEMIC IN NEARLY ALL COUNTRIES



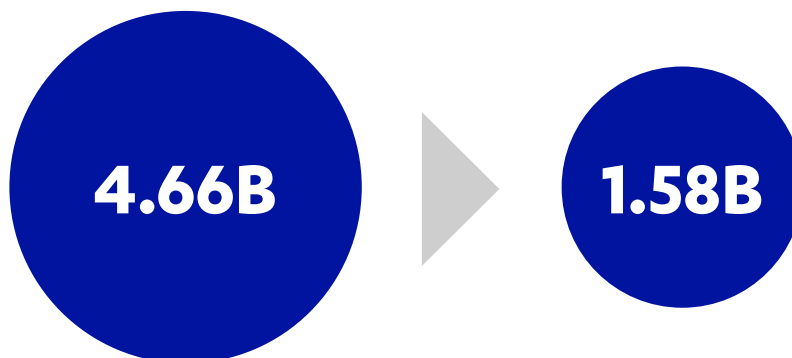
Recent research bears this out. According to F-Secure, the percentage of consumers reporting they experienced a security incident in the previous 12 months

jumped from 29% in 2020 to 34% in 2021. Put into the context of active internet users, 34 percent amounts to 1.58 billion victims of cyber crime.

CYBER CRIME INCREASED FROM 29% TO 34% IN ONE YEAR

Active internet users
globally in January 2021

Global number of **cyber crime victims** during past 12 months*



*Hypothetically, if 34% would represent the global share of victims of cyber crime

*Source: McKinsey, How COVID-19 is changing consumer behavior – now and forever, July 30, 2020
<https://www.mckinsey.com/industries/retail/our-insights/how-covid-19-is-changing-consumer-behavior-now-and-forever>

YEARS OF CONSUMER RESEARCH

Since 2014, F-Secure has surveyed consumers about their attitudes and behavior related to online security and privacy. Over four waves of research, we have interviewed over 27,000 consumers. In addition, we have conducted research related to specific themes such as identity protection and product packaging.

This report summarizes the findings of our latest study, conducted in June 2021, and compares those findings with those of our previous studies, conducted in 2015, 2018, and 2020. In these comparisons, we have used data from countries that were included in all studies: Brazil, France, Germany, the UK, and the USA.

F-SECURE CONSUMER SURVEYS

	"WAVE 1" (2014)	"WAVE 2" (2015)	"WAVE 3" (2018)	"WAVE 4" (2021)
Country coverage	6 countries: USA, UK, Germany, Brazil, Philippines	11 countries: USA, UK, Germany, France, Brazil, Sweden, Mexico, Argentina, Columbia, India, Italy	8 countries: USA, UK, Germany, France, Brazil, Mexico, Sweden, Japan	9 countries: USA, UK, Germany, France, Brazil, The Netherlands, Mexico, Sweden, Japan
Sample size	6 countries x 800 respondents - 4800 respondents	11 countries x 800 respondents - 8800 respondent	8 countries x 800 respondents - 6400 respondent	9 countries x 800 respondents - 7200 respondent

ONLINE ACTIVITIES INVOLVING MONEY ARE ON THE RISE

There's no doubt the pandemic accelerated the adoption of digital skills. Many of these new skills and behaviors can be expected to stick. F-Secure's latest research highlights certain behaviors that have seen increases since the onset of the pandemic.

One third of the respondents to our study said they have used their mobile phone or tablet to make **online purchases** one to three times a week. This is an increase from 18.3% in the pre-pandemic study of 2018. Online

purchases using a computer have climbed from 23% in 2018 to 31% in 2021.

Mobile banking is another area where a clear COVID effect is visible. In 2021, 47.4% of respondents had used their mobile phone or tablet for online banking one to three times a week, up from just 26.4% in 2018. While mobile banking has soared in popularity, desktop banking has also surged and increased from 32% in 2018 to 41% in 2021.

INCREASE IN MOBILE SHOPPING AND BANKING

Online purchases



18.3%
in 2018

33.3%
in 2021

Online banking



26.4%
in 2018

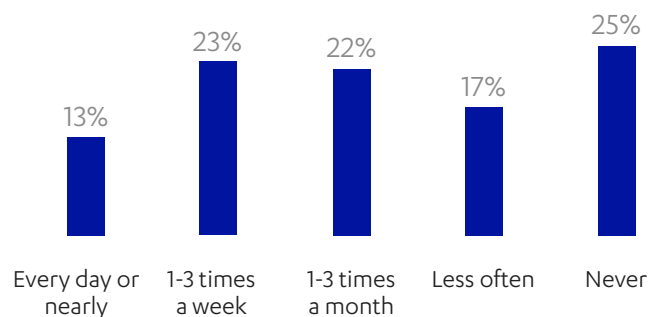


47.4%
in 2021

36% of the respondents use mobile payment (e.g., Apple Pay, PayPal One Touch, Samsung Pay etc.) every day, or at least one to three times a week. A heightened consumer interest in online shopping, banking, and mobile

payments has also resulted in greater awareness of digital security threats and the security solutions that combat these dangers.

USING MOBILE PAYMENT (E.G. APPLE PAY, PAYPAL ONE TOUCH, SAMSUNG PAY ETC.)



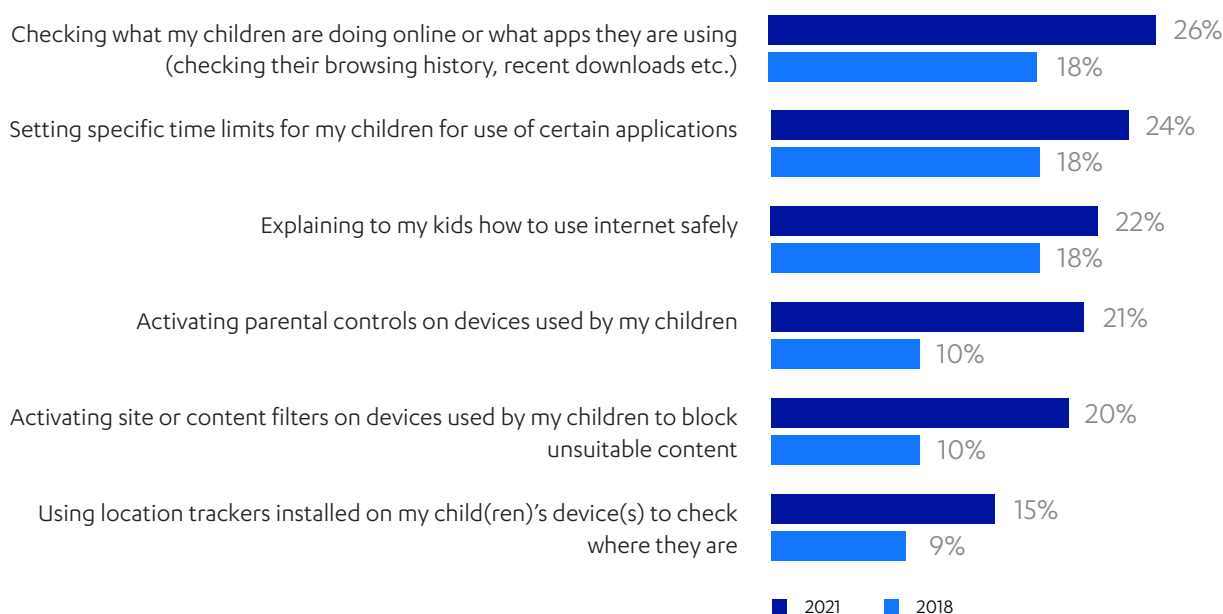


PROTECTING CHILDREN ONLINE WITH TECHNOLOGICAL SOLUTIONS

Remote learning and the need to keep kids entertained during lockdown have increased children's usage of digital devices. Our research also shows that **keeping children safe online** has become more important for consumers who have kids: Usage of parental controls and content filters has doubled from pre-pandemic levels.

Parents are increasingly monitoring their children's internet usage as shown in comparison of data from 2018 (18%) to 2021 (26%). Screen time limits have become a crucial tool for parents to maintain a healthy balance between children's online and offline activities. Even though digital parenting is on the rise, our research also shows that parents are spending more time explaining to their children how to use the internet safely.

GROWING IMPORTANCE OF KEEPING KIDS SAFE ONLINE

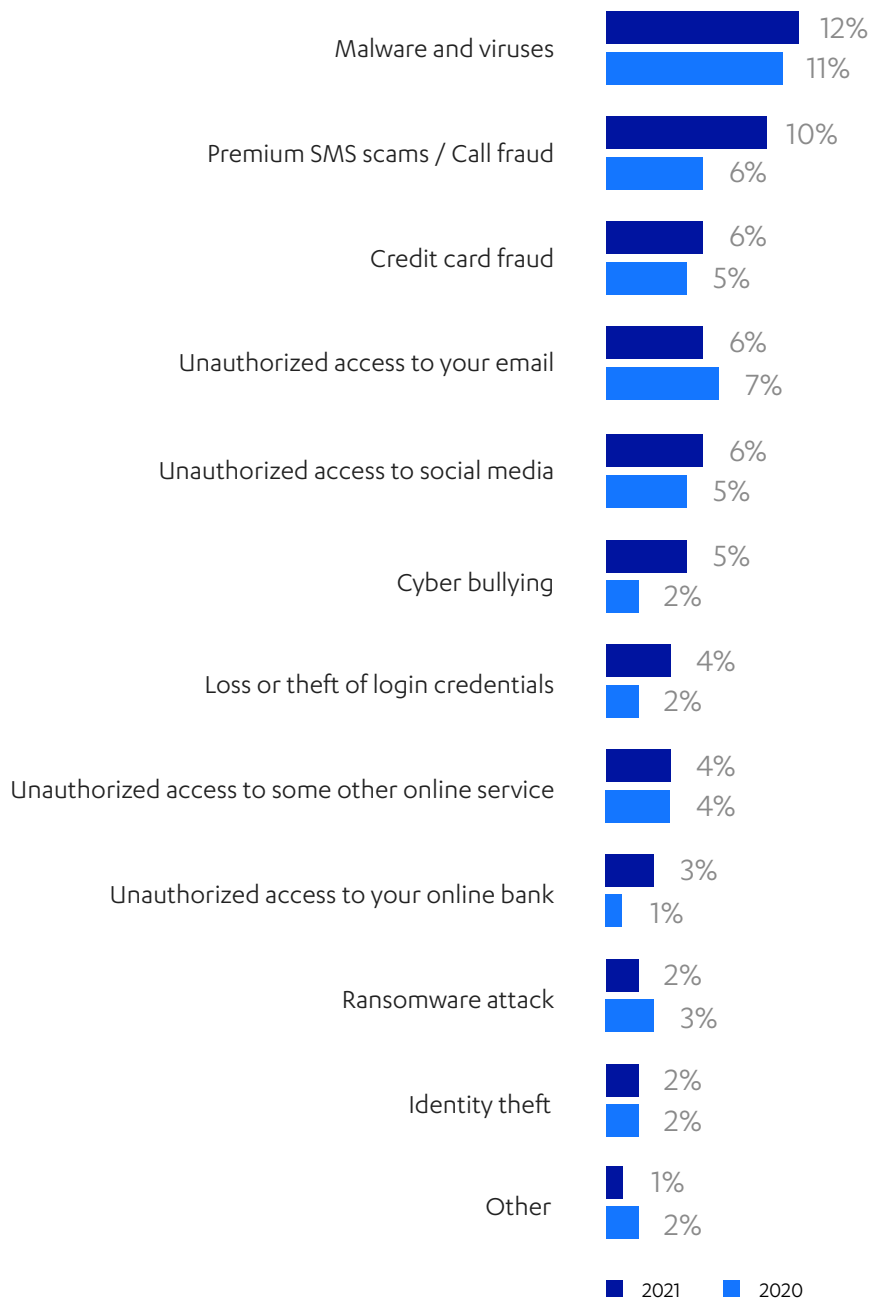


THREATS AND ATTACKS STILL ABOUND

Digitalization may have forced some consumers to learn new skills, but cyber criminals have been honing their tactics in the online world for decades. **Malware and**

viruses are still the most dominant threat, with new variants introduced daily. We see increases in threat categories nearly across the board.

TRADITIONAL MALWARE AND FINANCIAL MOTIVES DOMINATE THE THREAT LANDSCAPE



With cyber crime primarily motivated by money, **threats related to finances and financial accounts** are on an upward trend. These include stealing credit card information and cryptocurrency, bank account fraud, and theft of personal information that can be monetized in identity scams, account takeover, or by selling to others.

The complexity of today's threat landscape and the creativity of cyber criminals make it difficult for the average consumer on their own to stay protected. And the fallout from cyber crime can have lasting consequences: Attackers can exploit critical personal information in crimes taking place months or even years later, which can cause long-term stress, anxiety, and financial harm to the victims.

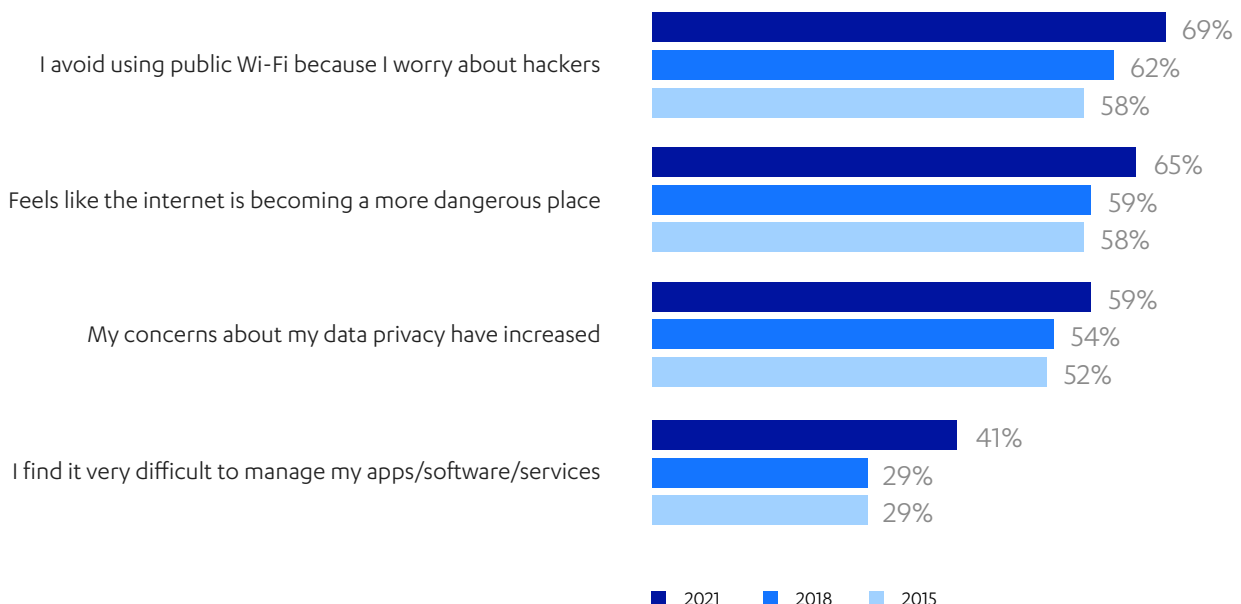
WORRY PROMPTING CHANGES IN ONLINE BEHAVIOR

Digital transformation has impacted the way consumers perceive technology. 65% of survey respondents feel like the internet is becoming a more dangerous place, compared to 62% in 2018. And as their dependency on devices and connectivity has increased, almost two thirds of consumers find themselves increasingly worrying about online security and privacy, even if nothing is wrong. **The most tech-savvy segment is the most**

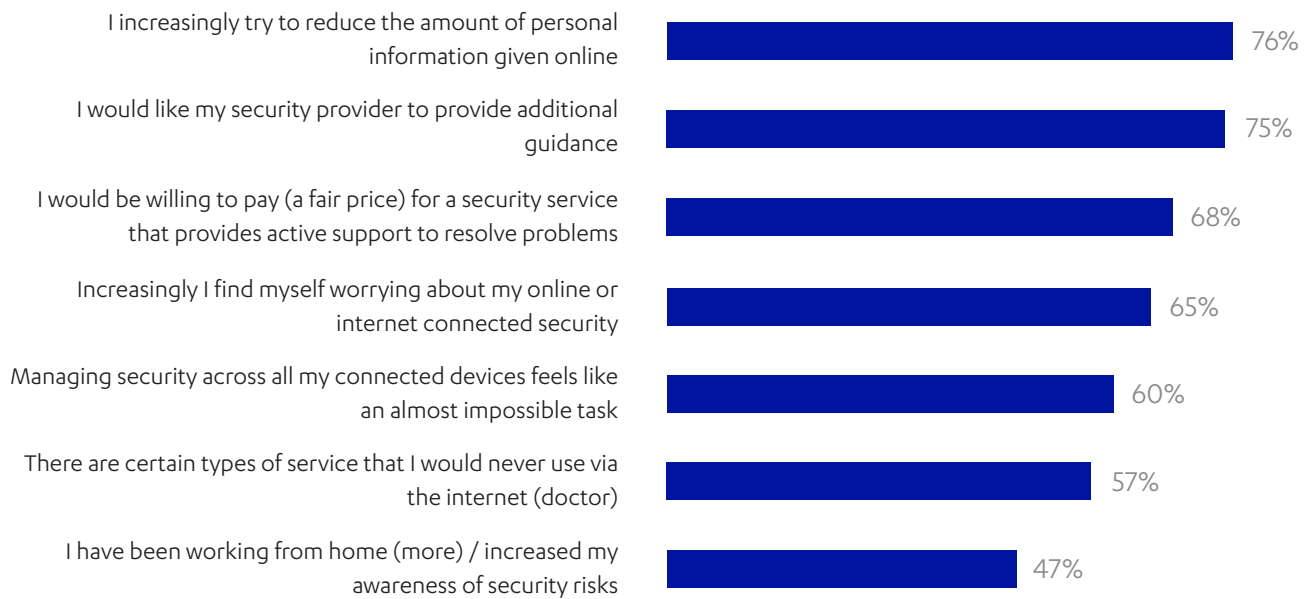
concerned (80%) – they know about the threats and risks of the digital world.

Many consumers report that their concerns about online security have prompted them to make changes in their online behavior. 76% increasingly try to reduce the amount of personal information they give when filling in online registration forms or when making online purchases. 69% avoid connecting to public WiFi.

SECURITY AND PRIVACY CONCERNS INCREASING



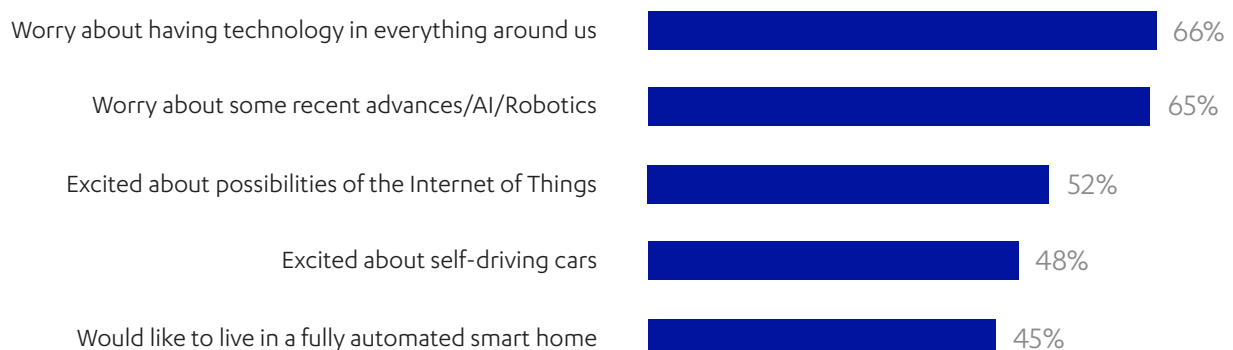
NEW ONLINE SECURITY ATTITUDES MEASURED IN 2021



Although people are excited about certain technologies, worry also emerges as a dominant emotion. Two thirds of respondents often worry about the degree to which technology is being integrated into everything around

us. 65% worry about recent technological advances, such as the long-term implications of artificial intelligence or robotics.

WORRY DOMINATES THE RELATIONSHIP TO TECHNOLOGY



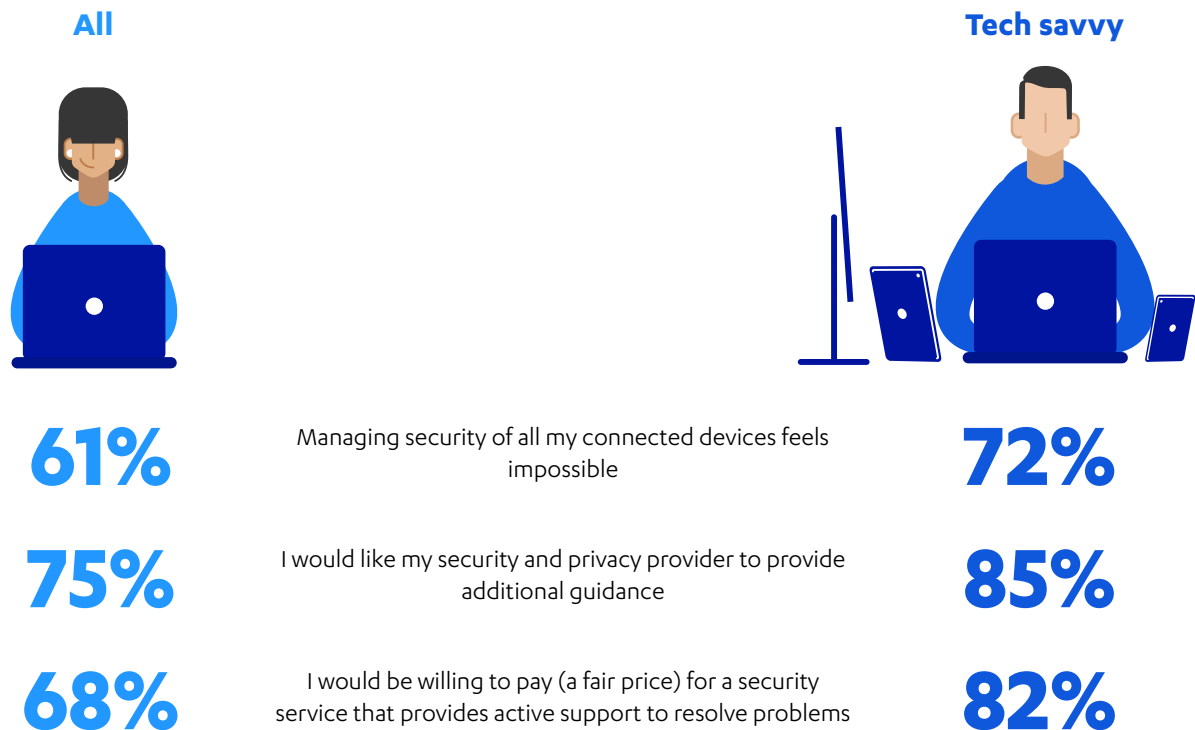
SECURITY FEELS COMPLICATED

When it comes to consumers' relationship with security, the **feeling of being overwhelmed is increasing**. 61% say that trying to manage security across all their connected devices feels like an almost impossible task.

Interestingly, even **the most tech-savvy segment struggles with protecting all their devices**. In this

segment, 72% feel that managing security of their devices feels almost impossible. The tech-savvy segment is also the most interested in getting additional guidance from their security provider and the most willing to pay for a security service with active support.

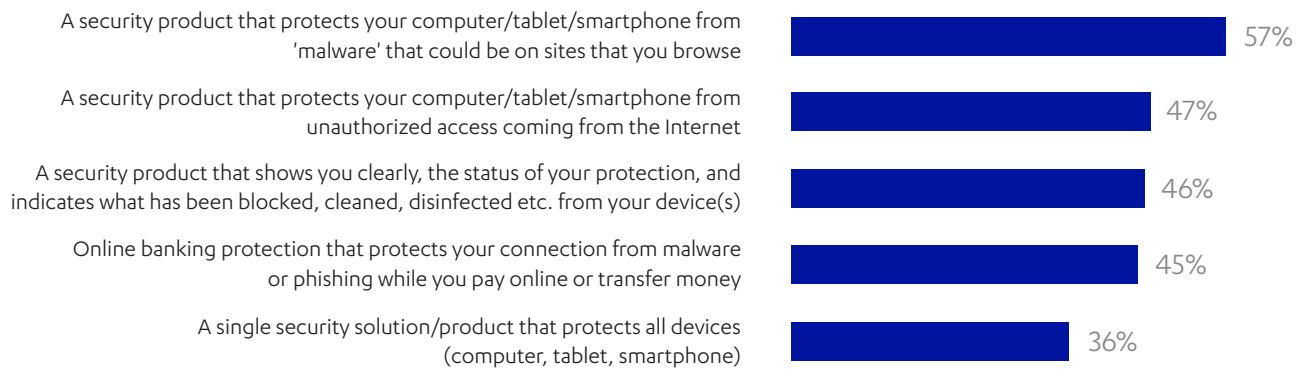
SECURITY ATTITUDES OF ALL RESPONDENTS VS. TECH SAVVY CONSUMERS



Basic security solutions remain attractive among consumers. Survey respondents seem to understand the value of core security product benefits, such as browsing protection, protection from unauthorized access and banking protection.

Elevated worries and the struggle to protect all connected devices are highlighted in consumers' interest in all-in-one security: 36% find a single security solution that protects all devices an attractive offering.

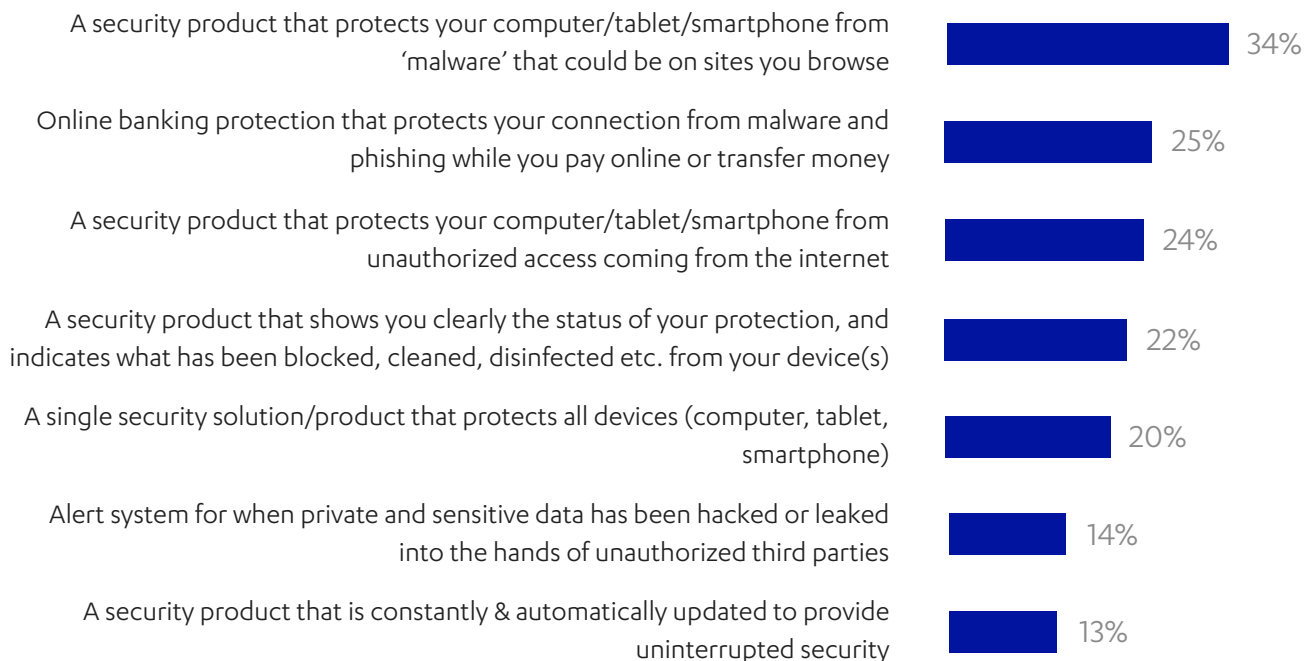
THE MOST APPEALING BENEFITS IN A SECURITY SOLUTION



As online banking and shopping have spiraled, **banking protection** that secures the network connection from malware and phishing has become an attractive feature

to 45% of consumers. **Banking protection is the second most popular feature in a security solution that consumers are willing to pay for.**

BENEFITS CONSUMERS ARE WILLING TO PAY FOR





CONSUMERS WANT TO LEARN ABOUT ONLINE SECURITY

Growing concerns about the internet's dangers and data privacy have led to more people spending time researching security solutions and security threats in

2021 (44%) than in 2018 (39%). However, there is a vast gap between all consumers (44%) and the tech savvy segment (74%).

All



44%

spend time researching online security solutions and security threats

Tech savvy

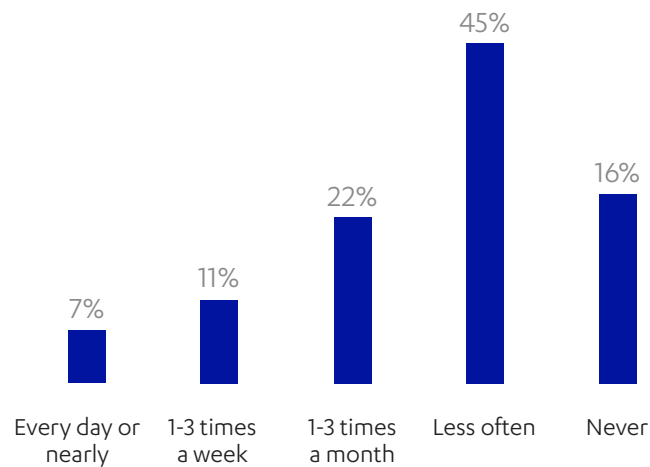


74%

Regardless of their increased security awareness, consumers still practice risky behaviors online. This suggests that there is **a need for additional cyber security education.** When it comes to websites

that include their credit card or bank details, 45% of consumers change their password less often than once a month and 16% have never changed their password.

CHANGING MY PASSWORD ON SITES THAT HAVE MY CREDIT CARD OR BANK DETAILS



Ransomware is one of the most concerning threats for consumers. 51% say they know what ransomware is; this awareness has risen from 47% in 2018. Ransomware attacks are often featured in the news, but it might not be clear for consumers how to protect themselves in

practice. Therefore, it makes sense for security providers to include online security education in their services and offer solutions that protect against threats like ransomware.

CONSUMERS ARE INTERESTED IN ACQUIRING SECURITY FROM THEIR BANK

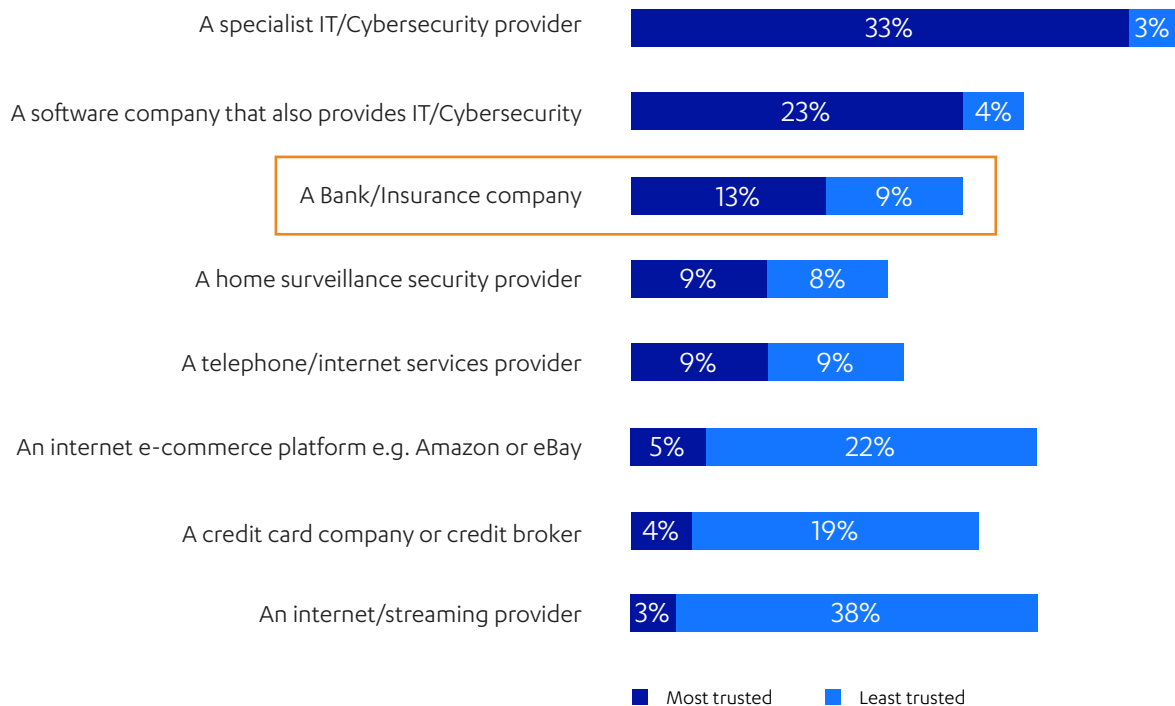
Specialist IT companies and cyber security providers are expectedly the most trusted providers of security, but **banks and insurance companies** are the next best alternative for acquiring security solutions. Compared to, for example, streaming companies, the credibility of banks as security providers is high.

Regardless of free options available on the consumer security market, 60% of respondents pay for their main security and privacy solutions or use a combination of free and paid solutions. Willingness to pay for security is even higher within the tech savvy segment (70%).

When asked why consumers pay for security and privacy software or applications, 27.6% cited **trust as the primary reason**. 13.7% said the paid version included an important feature that the free version lacked.

Consumers' valuation of security and desire to have banks as security providers creates a business opportunity for you. Adding digital security and privacy services to your portfolio will strengthen the value of your banking services and improve customer retention.

SECURITY PROVIDERS CONSUMERS TRUST THE MOST



HOW BANKS CAN BENEFIT FROM OFFERING DIGITAL SECURITY

It is not a coincidence that cyber crime and fraud related to personal finances, credit cards and bank accounts have spiraled simultaneously as digital acceleration and consumer online activity involving money have surged.

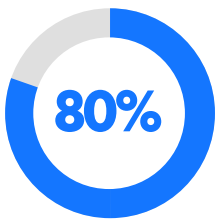
Consumers are becoming more anxious about online security and the impact of their online activity. Consequently, they are more willing to pay for security services such as banking protection, which continues to be one of the highest valued features in a security solution they look for.

Consumers are turning to trusted sources, such as banks, for help. You are in a perfect position to protect your customers and stand out from competitors.

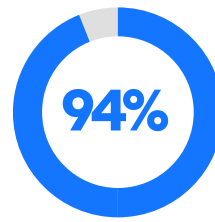
Customers using security services are generally more satisfied and loyal. Our survey of customers of a European bank offering security as a loyalty benefit showed that a security benefit heightened the loyalty towards the bank for 80% of customers, while 94% felt they were getting more value from their bank.*

* F-Secure case study: A survey to 500+ customers of a European bank that offers F-Secure TOTAL as a loyalty benefit.

F-SECURE CASE STUDY: A SECURITY OFFERING STRENGTHENS CUSTOMER LOYALTY*



feel the security benefit increases their loyalty towards the bank



feel they are getting more value from their bank due to the security benefit

Educating customers about online security will benefit you and your customers. When customers are more knowledgeable about security, your costs related to cyber crime and fraud will be lower.

Giving your customers actual tools to protect their online actions will help them remain loyal. With our F-Secure TOTAL solution, offering security will be easy for you.

REDUCE COMPLEXITY FOR YOUR CUSTOMERS WITH ALL-IN-ONE SECURITY

Increased dependence on technology has impacted our attitudes about security and privacy. Worries about digital threats have grown, and security feels complicated. In a world filled with uncertainty, consumers want an easy-to-use solution to protect every aspect of their digital life.

Today's complex threat landscape requires protective layers beyond traditional antivirus. F-Secure TOTAL is

the most simple and comprehensive security, privacy, and identity protection solution on the market. Your customers will only need one app to protect their whole family.

F-Secure TOTAL includes protection against malware and viruses, safe browsing, banking protection, privacy protection, WiFi security, digital parenting, identity monitoring and a password manager.

ONE APP, LESS INSTALLATIONS



Typical situation today: 10-20 installations

VS.



F-Secure: 4 installations

* F-Secure case study: A survey to 500+ customers of a European bank that offers F-Secure TOTAL as a loyalty benefit.

COMPLETE SECURITY, PRIVACY AND IDENTITY PROTECTION FOR YOUR CUSTOMERS



BROWSING & BANKING PROTECTION

Let users explore the internet with worry-free online banking and shopping



PRIVACY PROTECTION

Stop trackers and ensure your customers' online privacy



PROTECTION ON THE GO

Protect phones, tablets, PCs and Macs everywhere, even on public Wi-Fi



MALWARE PROTECTION

Keep your customers' devices safe from viruses, trojans, spyware and ransomware with award-winning virus protection



MONITORING OF PERSONAL INFORMATION

Protect your customers' identities with industry-leading breach detection and underground web monitoring



PERSONAL INFORMATION BREACH ALERTS

Real-time alerts and guidance for your customers when their personal information has been a part of a breach or data leak



STRONG PASSWORD MANAGEMENT

Allows your customers to create and synchronize passwords across all their devices



FAMILY RULES

Lets parents set healthy online boundaries for their children at home and on the go



CYBERHELP

Get personal assistance in resolving even complex identity theft incidents.
You are not alone

Offer our award-winning security, privacy and identity protection in a single application or select the protection features to match your desired value propositions. Choose to offer as-is, or customize with your own name and branding.

Reduce complexity for your customers – and yourself. Respond to real consumer concerns and attract new customers with a broad, compelling security offering. We have launched thousands of solutions with our partners around the globe and know just how to make it easy for you. Get in touch with us to learn more.

HOW TO POSITION SECURITY WITH FINANCIAL SERVICES

Examples how you can add value to your offering with security and privacy services

LOYALTY BENEFIT

ONLINE BANKING WITH SECURITY

- Protect your phones and computers and your digital life from online threats
- Extra layer of security for online shopping and banking



LOYALTY BENEFIT

IDENTITY PROTECTION WHEN SHOPPING ONLINE

- Protect your identity online with 24/7 monitoring
- Receive alerts and guidance in case of a breach
- Create strong and unique passwords to lower your risk



PREMIUM LOYALTY BENEFIT

COMPLETE SECURITY AND PRIVACY ONLINE

- Protect your phones and computers and your digital life from online threats
- Extra layer of security for online shopping and banking
- Store your passwords securely, get breach alerts and help in case a hacker has stolen your information



ABOUT F-SECURE

F-Secure makes every digital moment more secure, for everyone. We deliver brilliantly simple, frictionless security experiences that make life easier for the tens of millions of people we protect and our 170 service provider partners.

For more than 30 years, we've led the cyber security industry, inspired by a pioneering spirit born out of a shared commitment to do better by working together.

f-secure.com/banks

