

The consumer view on central bank digital currencies



Introduction

Recent developments in major economies, including pilots of the digital Yuan by the People's Bank of China, the European Central Bank's decision to proceed with a digital Euro and forthcoming research by the Boston Fed on a digital Dollar, all highlight how the potential launch of a major Central Bank Digital Currency (CBDC) is coming closer and closer.

Recent research by the Bank of International Settlements shows 86% of central banks are actively researching the potential for CBDCs, 60% were experimenting with the technology and 14% were deploying pilot projects. The deeper digitization of all aspects of society, driven by the Coronavirus crisis, is accelerating these developments around the world.

However, until now, **there has been little research into whether consumers are actually ready for a CBDC.** This gap has led some policymakers to question whether central banks should be in the business of offering consumer-focused retail financial products at all. That is why we wanted to find out what consumers around the world think about CBDCs and how they would react to the launch of a digital currency in their own country.

To find out, we conducted a study with independent research company PureProfile, who interviewed 902 adults aged 18-plus in Germany, Singapore, South Africa, the United Arab Emirates, the UK, US, France, Hong Kong, Sweden and Norway using an online methodology in July 2021.

Our survey is perhaps the first global consumer study in this area. The findings make for fascinating reading and show how consumers would be receptive to the launch of CBDCs while highlighting major shifts in attitudes to existing forms of payment as well as what they would like to see from a CBDC.

The results of this research will feed into Guardtime's ongoing work on CBDC.

We believe the introduction of CBDCs could upend the global economic order. The technology can bring a multitude of benefits such as more efficient trade, greater financial access for millions of people, and a reduction in financial crime. But there are important technological barriers to overcome regarding scalability, security and privacy.

It is on these points that Guardtime is working with several central banks around the world in exploring the development of Central Bank Digital Currencies (CBDCs). We have developed KSI Cash, a breakthrough digital cash, payment and settlement infrastructure designed to meet the scalability, reliability, and security requirements of the next quarter century.

Adoption of CBDC-s

Our survey found broad, global willingness to use a digital currency at and similar enthusiasm for using a digital currency in specific scenarios.

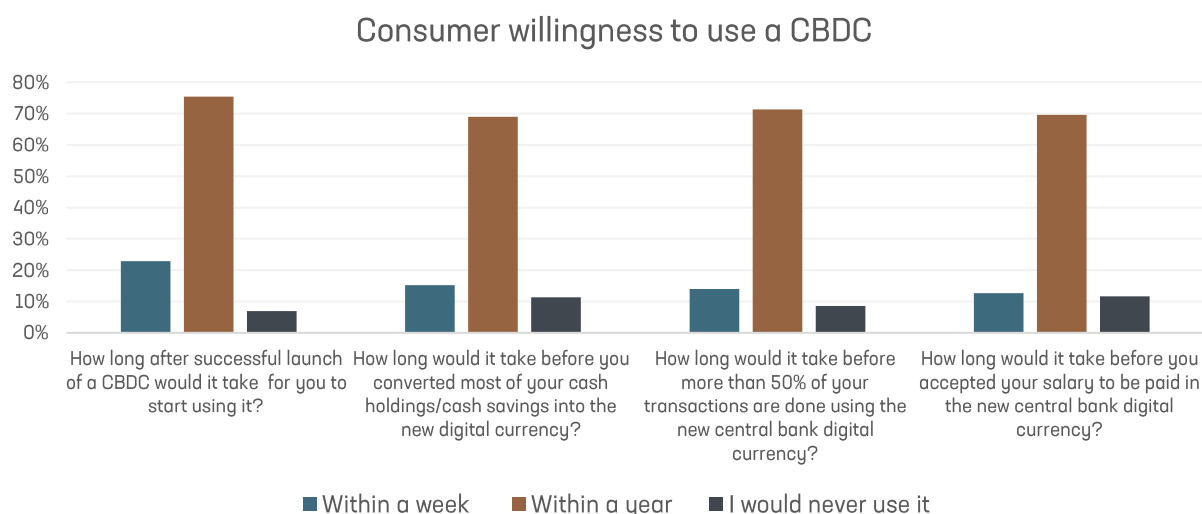
We asked consumers to assess whether they would use a digital currency issued by their country. Nearly two-thirds (64%) of adults would be likely to use a digital currency at launch, with 33% saying they would be very likely to use one. Just 10% of those questioned said they would definitely not use a CBDC at launch.

Given a successful launch and proof that the digital currency is working well, three quarters (75%) of adults would start using a CBDC within one year of its launch. And only 7% of adults would never use it. We then asked a series of questions focused on more specific use-cases: Around one in three adults (33%) would be willing to convert their savings into a CBDC within a month and another 36% would do so within one year (69% in total). Just 11% say they would never convert savings into a CBDC.

Up to 30% would be happy to have their salary paid in a CBDC within a month with another 40% following within one year (70% in total). Around 12% would never accept being paid in a CBDC.

The study found that consumers would not necessarily want to ditch cash - however 31% of adults said they would be willing to carry out more than half of their transactions through CBDCs within a month of a successful launch with another 40% willing to do so within one to six months (71% in total).

The table below shows the percentage of respondents willing to use a CBDC in various scenarios within one month and one year of its launch, as well as who say they would never use a CBDC.

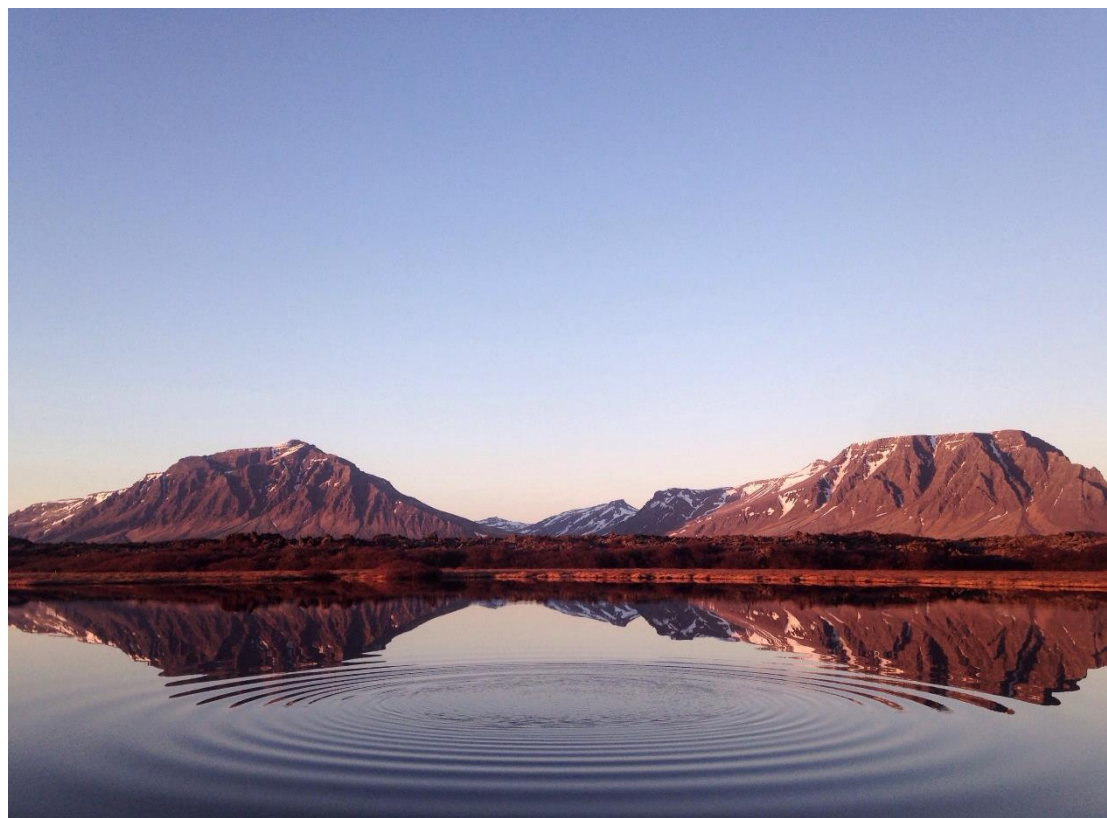


We also asked consumers to indicate what attributes of a CBDC they would find most important, ranking them.

Consumers ranked privacy on transactions as the most important attribute of a CBDC, followed by ease of use and CBDCs not costing more to use. Being able to use CBDC internationally and being able to use it when there's no internet connection was also seen as important.

The table below shows the ranking of attributes of CBDCs based on responses from consumers.

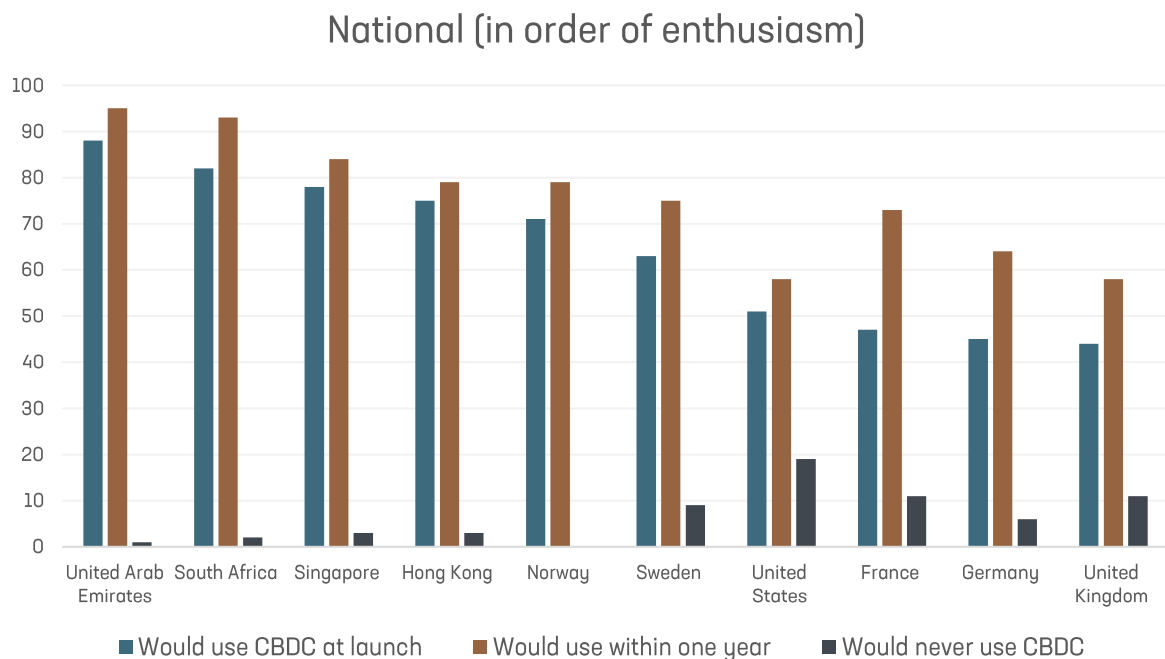
ATTRIBUTE	RANKING
Privacy	1
Ease of use	2
No additional costs	3
Ability to use internationally	4
Ability to use without internet connection	5
Ability to use on smartphone and at payment terminals	6
More secure than other digital payments	7
Transaction completed instantaneously	8
Take the form of a dedicated physical device	9



Regional differences

We did find significant variation in enthusiasm for CBDC use between countries. More than 75% of adults in Singapore, South Africa, the UAE and Hong Kong would use a CBDC at launch, while less than 50% of German, French, UK respondents have the same willingness.

Nevertheless, the percentage of respondents willing to start using a CBDC within a year of its launch exceeded 58% in all countries, with no country having more than 20% of adults saying they would never use a CBDC.



A similar split emerged in consumer rankings of CBDC attributes. Privacy was the most important attributes for adults in Germany, France, the UK and US, whereas respondents from Singapore, South Africa, the UAE, Hong Kong and Scandinavia ranked international use as their top concern.

The Coronavirus effect on payment methods

Use of cash and cheques has dropped during the Coronavirus crisis, the study shows.

More than two out of five adults worldwide (41%) have used cash less as a means of payment during the crisis with 18% saying their use of cash has fallen dramatically. Around 29% say they have reduced their usage of cheques with 17% cutting back dramatically.

Cash hasn't gone into total decline - around 26% of those questioned say they are using cash more while 33% say their use of cash is unchanged.

Nearly half (49%) said they are making more use of mobile payments while 48% are making more use of debit cards and 47% are using credit cards more. Around 46% said they are now increasingly using electronic bank transfers.

The table below shows how usage of different payment methods has changed during the Coronavirus crisis.

PAYMENT METHOD	INCREASED USE	DECREASED USE
Cash	26%	41%
Debit cards	48%	10%
Credit cards	47%	10%
Mobile payments	49%	9%
Cheques	16%	29%
Electronic bank transfers	46%	8%



Analysis

Over the coming years, central banks will likely spend billions designing, building and launching CBDCs across the world. However, they should not make the assumption that “if you build it, they will come.” Consumers already face a bewildering array of choices in the retail financial services space, coupled with a growing skepticism toward government.

In policy and academic debates over CBDC, little attention has thus far been paid to the question of consumer interest. The Bank of International Settlements has conducted extensive annual surveys of central bankers’ own views on CBDC, charting the dramatic growth in the number of central banks working on launching retail CBDCs. But this gives little indication as to whether these CBDC projects will succeed with users.

Our study is an important first step in filling this void. The results of our consumer survey present a positive surprise – a majority of users across all surveyed countries is willing to start using a CBDC. They are willing to use CBDC for the core of their personal economic lives – conducting most of their spending in CBDC, receiving their salary in CBDC and moving their cash savings and holdings to CBDC.

In several countries, a whopping 90+ percent of those surveyed would be willing to use a CBDC within a year of its issuance. In only one country (the US) did the percent of respondents who would never use a CBDC exceed 20 percent.

Our questions on payment methods confirms what others have reported and speculated upon – the pandemic has accelerated the decline in use of legacy payment means (cash and cheques) while massively accelerating all forms of electronic payment (credit and debit cards, mobile payment, online bank payments). This strengthens the business case for CBDC: in its absence, the role of sovereign-guaranteed money as a means of payments will further decline in coming years.

However, these results need to be taken with a degree of caution. The public discussion on CBDC is only beginning, and no real political debate on the issuance of a CBDC has taken place in any major country. This means that consumer opinion is largely unformed, and major players (banking and consumer associations, privacy watchdogs) have yet to take a strong stand. Our results point to several potential areas of concern, including privacy, the flow of business and holdings from commercial banks to CBDC, and the usefulness of CBDC in addressing current consumer pain points, such as cross border transactions.

This work is only a starting point in understanding consumer and market sentiment on CBDC. There are many questions we did not explore (for instance, how consumers would weight using a CBDC vs e-payment solutions and cryptocurrencies), and we covered only a few countries. In coming months, we will be publishing further results in this area.

About Guardtime and KSI Cash

Guardtime is a systems engineering and cryptography company founded with the mission of making the world's information universally reliable. The company's products and services are in use by governments across the world and in the health, aerospace, banking, telecommunications, energy, insurance and compliance sectors.

Guardtime was originally founded to support Estonia in its quest for zero-trust systems and has a long-term collaboration with the Government of Estonia. Guardtime's invention, KSI, replaces trust with digital truth - formally verifiable mathematical proof of the integrity of data, networks, system, and processes, without reliance on keys, secrets, or centralized trust authorities. KSI technology enables applications to be built with truth inherent in their design, delivering value wherever there is digital.

KSI Cash is a comprehensive infrastructure for digital money, payments, compliance monitoring and real-time reporting fit-for-purpose for a digital economy.

KSI Cash has been built from the ground up as a purpose-built digital currency system. The platform is based on proven technology that has been in operation for the past decade and new fundamental research into money and payments systems. The result is an approach to digital money that outperforms all existing approaches in terms of speed, scalability, security, privacy and efficiency.

For more information, visit our website: guardtime.com/ksi-cash

