

White Paper

Flash Series - October 2020

Why now is the right time for companies to adopt virtual cards



Address

dzcard International Ltd
139 Bangplee Industrial Estate Moo 17,
Bangna-Trad Road, Bangsaothong,
Samutprakan, 10570 Thailand



Phone

Thailand: +66 2 705 1939
Africa: +255 6 7346 4679
India: +91 124 492 98881
Malaysia: +60 3 9221 9388



Online

Email: contact@dzcard.com

Website: www.dzcard.com

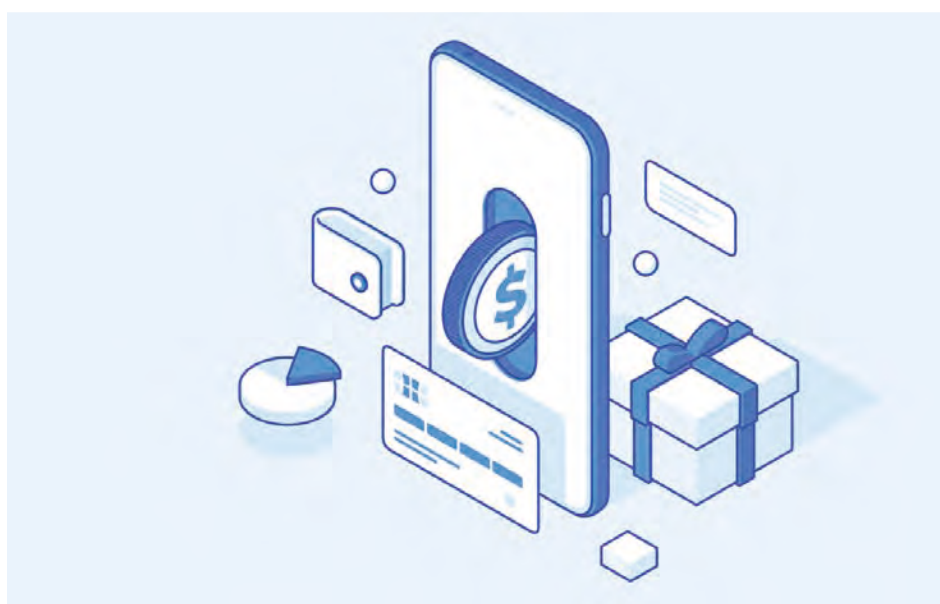
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01. Overview

Convenience & Security



01

The financial industry is going through a lot of changes, moving from the real world to the digital world.

The introducing of digital payments through e-wallets by non-financial players resulted in an explosion of C2B and C2C micropayments in what is called “closed-loop” environments.

Closed-loop environments have a limited scope (where and to who) and do not allow transactions on the internet. This document will explore how virtual card technology, as offered by dzSolutions, can

overcome the initial barriers and help the financial institutions to grow their user base.

Virtual bank cards are cards with a 16 digit number and a CVV number, carrying the Visa or MasterCard scheme, and they can be used to purchase items in the real world or on the internet. Their functionality and usage are the same as a real card, but instead of being a plastic card, virtual cards reside typically on an e-wallet on the customer’s phone.



What Is a Virtual Card?

A Virtual Card (or digital card) is just a temporary credit card number that is used to make online purchases or over the phone without having to input your real card number. Your Virtual Card is an online hosted, digital virtual representation of any plastic card or a generic identification method in Identity Management (IdM). A Virtual card, unlike a plastic card, doesn't require any physical representation in the first place as it is fully virtual and hosted online. Virtual cards can be used one time only or for a limited amount of time.

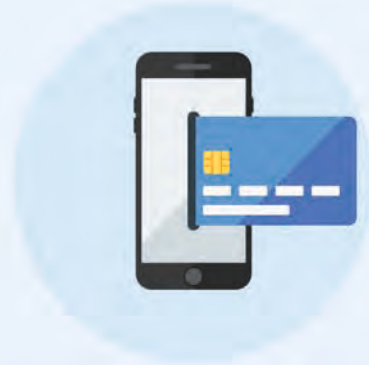
The generated virtual card numbers are linked to your existing banking card, so the charges appear on your regular monthly bank statement. At the checkout, the merchant receives the virtual card number, rather than your actual card number.

Virtual cards are designed to protect your actual account number from falling into the wrong hands. The disposable virtual card numbers provide extra security because the same card number is not being used online over and over again. This temporary number cannot be traced back to the original credit card or to the customers' identity. So online hackers or deceitful merchants are not able to get to the sensitive data.

Use Case Scenarios

Endless Possibilities

Reinventing Payment For a Virtual World



02

What's great about virtual cards?

Virtual cards can be more efficient and secure than physical cards. You don't have to remember where you store them like your physical cards or if you are exposed to the risk of having them stolen. To manage your virtual cards, you just have to retrieve their digital information online whenever you need them. A few crucial benefits of virtual cards that make them useful if used properly are:

- **Speed:** Virtual cards are easy to create. You can generate a virtual card almost instantaneously and

save it.

- **Security:** Your virtual card information is securely stored on your phone or online. When you use your virtual cards, your virtual card number cannot be traced back to the original physical card or to your identity. So online hackers or deceitful merchants are not able to get to your sensitive data.
- **Control:** Virtual cards are easy to control. As Virtual card are digital numbers, you can save, freeze, delete, turn them on and off with just one click.



**Our Virtual Card
solution and
Transfer
Marketplace provide
efficient and cost-
effective ways for
companies to pay
their crew in real-
time, enabling them
to disburse wages at
more frequent
intervals. Money is
rapidly placed in the
hands of crew and
their families at a
time when they
urgently need it.**

Stuart Ostrow
President of ShipMoney

Use Case Scenarios

1. Temporary Workers Wage Payments

In the last five years, a growing number of highly innovative, digital-forward firms have discovered a better way to pay temporary workers wages. They are issuing virtual cards.

Many countries allow temporary workers (local and foreign) to work on projects like construction or to help companies to overcome a surge in demand for their products but unfortunately, many of those temporary workers do not have access to bank accounts. This poses many challenges for HR and accounting department as the only way to pay those workers is cash. Having a lot of cash in the company poses security risks for both the company and for the workers and many companies face a difficult choice. With the arrival of virtual cards, the company has now a new channel to pay its temporary staff: it can issue time-limited virtual cards on which the salaries can be a deposit. The receiver can withdraw cash, use the card to pay for any items (for

example groceries) or buy items online. The company has reduced the risk and exposure to a minimum as the card is not directly linked to the company bank account and after the card is depleted, the virtual card is automatically "invalidated". Payroll and accounting are more secure and the temporary workers have now the possibilities to purchase items online.

There are five primary benefits in paying temporary workers wage with digital cards:

1. Security and control

Virtual cards provide several layers of advanced security. The digital nature of the card restricts where, when, and how a card is used. One can limit the use of virtual cards can be limited by amount, country, frequency of use, start/end dates or times, and many other key variables.

2. Freedom of configuration

Virtual cards can give companies access to a modern card issuing process. Endlessly customizable, virtual cards wage payments can be designed to reflect unique business needs.

3. Better efficiency

Virtual cards are one of the fastest forms of payment available today. They can be instantly issued and presented for payment. Virtual cards, goods are released and delivered faster, enabling new business models like on-demand delivery services.

4. Control and automation

Virtual cards enable data-driven decisions that can streamline and automate different stages of the payment process. They give organizations deep visibility into their spending data.

5. Real-time notifications

Virtual cards convey real-time notifications as transactions are processed. These notifications provide companies with real-time, meaningful messages in support of their businesses.

Use Case Scenarios

2. One Off Payments/Transactions

A new report from Juniper Research found that the value of transactions processed by virtual cards will more than treble over the next 5 years; increasing from an anticipated \$1.6 trillion in 2020.

Companies involved in claim negotiations and settlements are moving away from cheques and money transfers towards the use of virtual cards to pay out the claim payments. They claim it cost them less money, get the payment to the client faster, and it is more convenient for the client. It also gives the client the freedom to use the virtual card for other purposes without the need to justify.



217%

Virtual card transaction growth between 2020 and 2025



11%

Growth in the number of B2B virtual card transactions in 2020 due to COVID-19 lockdowns



\$1Billion

Value of consumer virtual card transactions in 2025

Use Case Scenarios

3. Family Accounts

Virtual cards can assist parents in teaching your kids money skills for life. With a Virtual card, parents can help your kids build healthy money habits in all security. They will learn how to save and spend, track their money, and will grow into empowered and financially savvy adults while parents are controlling all aspect of their kids' money journey.

Many families face the problem their kids are playing on the internet, and many of those games require small payments. Some parents find out their bank card has been used to purchase items on the internet without their supervision nor consent, but as those purchases are genuine, they end up paying for the items.

Virtual cards offer an exciting alternative for parents who can give virtual cards to their kids to:

- top them up with a limited amount for their personal purchases, or
- assist them during individual purchases (for example a larger item to purchase at school).

The kids can buy things online, and their fun stops when the card is depleted.

In this scenario, the use of virtual cards has two main advantages:

- The young adults learn how to manage their finances without risking the parents master account.
- Kids cannot go over budget and dip in their parents master account.

Sachin Mehra

group executive, global commercial products at Mastercard

**While physical plastic
still stays relevant and is
seeing decent growth,
the part of the industry
that is growing faster is
the virtual card space.**

”

Use Case Scenarios

Companion Cards

Companion cards are virtual card that is tied to physical banking card, and which can be used for any purpose.



In today's market, there is a high demand for suitable payment services for a new customer segment which is comprised of young, tech-savvy, early adopters of technology, who own smartphones yet do not have substantial financial assets or tangible assets. These new customers are looking for a simple way to manage their cash or make purchases using a reloadable card with or without a checking account. Innovative companies are providing immediate access to the virtual card and digital payment services to the segment mentioned above.

Some people are scared to use their real card to purchase items on some internet webshops as they fear their card details will become available on the dark web. Their solution is to create a virtual (credit/debit) card and manage the virtual card (limits and other items). When using the virtual card to purchase items, the person knows the card is isolated from his real card and in the worst case, if compromised, the hacker has no access to the master account.

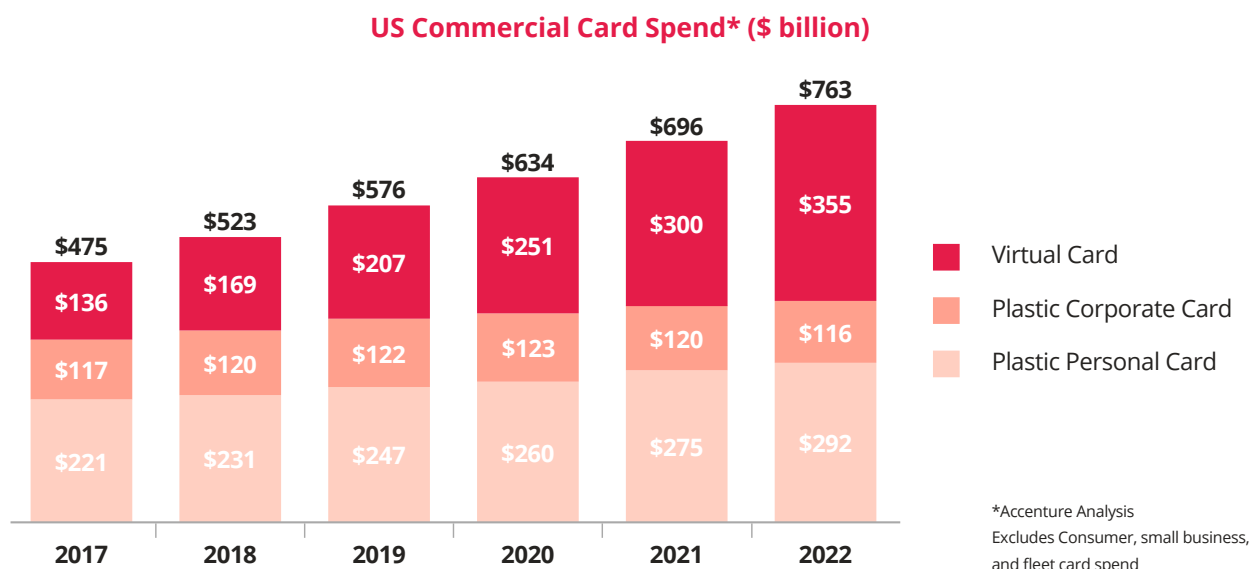
Use Case Scenarios

Corporate Spending

Several fintech startups and financial institutions are harnessing the flexibility of virtual cards to develop virtual card solution for businesses. Virtual cards are more secure and take pain and paperwork out of handling employees' expenses and purchases.

Virtual Cards provide more accurate, detailed data on employees spending, allowing managers to control expenses by reducing the risk of overspend. Virtual cards work seamlessly with other software programs such as ERP that businesses use. These virtual card solutions:

- offer account reconciliation of purchases and payments;
- provide full automation of expense reports;
- give a better insight into possible fraud; and
- grant real-time monitoring of company spending.



69% of CFOs expect use of virtual card payments to increase over the next three years, primarily due to their potential to manage the growth in corporate spend by:

- Automating transaction processing (80% of CFOs).
- Reducing processing costs (65%).
- More seamlessly integrating with vendor/supplier systems and processes (63 %).
- Improving information acquisition (62 %).

Conclusion

Getting over Security Concerns and Perceived Barriers

03

Getting a virtual card is as easy as getting 2 sets of numbers (the 16 digit card number and the 3 digit CVV) through email or by SMS. Not many people will try to remember the 2 sets of numbers. They will write it down somewhere convenient (as a note) or leave it as an SMS on their phone while worrying about the security of the card and potential malicious use of this “virtual card” by hackers.

To mitigate this perception and concerns, an additional layer of security, offered by dzcard to its virtual cards users, is responsible to “secure” the newly issued card onto the user’s phone. The security mechanism runs conveniently on any smartphone and simple feature phones. Once the virtual card is secured on the mobile phone, the user can activate the “virtual card”, display the card (front and back as if a real card) and use the virtual card to purchase goods. The activation of the card also creates additional graphical security elements on the

“graphical” virtual card, allowing the card to be used for micropayments as supported by Master Card QR services.

Virtual cards issued through dzcard and dzcard solutions simplify the creation, activation and use through a set of wizards that enable the full customer control over the virtual card.

The dzcard companion security application has a unique option to manage virtual cards. It encrypts, stores and decrypts virtual card information, so the sensitive card information is safe for preying eyes in the case of a lost or stolen mobile phone.

Additionally, the client can opt-in for an additional layer of security: a changing CVV number (the 3 digits) each time the client uses the card. The new CVV number will be displayed inside the e-wallet installed on the mobile phone. This will significantly reduce the risk of fraudulent use of the card and loss of money.



Securing Everyday Lives In A Connected World



White Paper
www.dzcard.com