5 Payments Insights

for the Subscription Economy

adyen

wherever people pay

Contents

Thanks to

The moment of truth

The payment is the moment of truth in the customer relationship, where the costs of customer acquisition are converted into revenue. Yet, up to a few years ago, payments was widely regarded as a commodity - something that businesses would plug in when they needed, and look for ways to drive down its costs in order to save money. But recently, something interesting has happened. Partnering in many cases with Adyen, the world's most innovative companies have begun to rethink payments as a strategic driver of improved customer experience and increased revenue.

In practice, this means taking a granular approach to improving the payment flow. Instead of focusing only on obvious areas like the design of the checkout, these companies are making gains of 1% here, 0.5% there, in areas in which many businesses do not consider, such as taking a data-driven approach to retrying failed transactions.

For the world's most well-known recurring and subscription businesses, Netflix, Spotify, and LinkedIn among them, the results have been twofold. On the one hand, the emphasis on getting payments right is improving the customer experience, as signup becomes easier and fewer transactions fail without warning. And the other side is the business benefit, with better approval rates leading to millions in additional revenue.

This guide is a selection of insights from some of these businesses, combined with data and insights from Adyen, that will give you the right areas to focus on in order to improve the customer experience, and grow revenue for your business too.

Pieter van der Does
CEO, Adyen

Changing commerce with subscription businesses

Whether in transport, food delivery, music, movies, or even shaving, there is a vast change sweeping the world of commerce. Disrupting all industries it touches, from retail to digital content, and everything in between, the rise of the subscription and recurring economy is a major, and seemingly unstoppable, shift in the way we buy.

The examples are numerous. In transport, this new economy is giving access to ride services at the tap of a button, led by a new range of companies such as Uber, BlaBlaCar, Grab, and Lyft. In food delivery, companies such as Foodora, Just Eat, Delivery Hero, HelloFresh, and more, mean that we can outsource our grocery shopping or get local meals delivered to our door at our convenience. And in the cosmetics and grooming industries, the success of companies such as The Dollar Shave Club, Althea, and Birchbox are disrupting traditional business models that have been around for decades. Such is the pace of change that, since 2012, sales in subscription businesses have been growing an estimated nine times faster than sales of companies in the S&P 500.

In this new world of commerce, a key touchpoint of the customer relationship is payments. In fact, payments is a cornerstone of the customer relationship in two key areas:

1. Providing a fast, easy signup process. Leading businesses maximize success at the checkout by removing all possible points of failure in the signup process, not just through checkout design, but also a number of back-end tools.

2. Delivering uninterrupted access for as long as your customer wishes. That is to say, ensuring no disruption for reasons related to payments, regardless of whether it is a technical reason, or an issue on the customer side, such as temporary insufficient funds.

How payments increases customer lifetime value

For your business to be successful, customer acquisition costs need to be exceeded by customer lifetime value within as short an amount of time as possible. In order to make this happen, subscription businesses normally ensure their product is sticky and user engagement is strong. However, one often under-invested in area in which subscription businesses can make significant gains is payments. The graph below shows how payments fits in to customer lifetime value for subscription businesses.

"At Spotify, we have moved away from a standard view of payments as a cost-base only. In fact, payments sit within the growth and conversion team, as we see it as a key driver of Customer Lifetime Value."

Federico Pezzotti **Spotify**

How payments fit in to the recurring and subscription customer lifecycle*

*and where you can make gains

Lifetime value

Lifetime value exceeds customer acquisition cost

Profit

$ 0

Each repeat transaction will increase the LTV

Customer acquisition cost

Success

Transaction

8-9% saved

Dunning
Account Updater
Billing cycles
Retry logic

10% failed*

Intent to purchase — Signup & validation — Success — Failed

Bad user experience
Missing payment options
Non-optimal fraud settings

*Global average

On average globally, two thirds of shopping carts are abandoned at the checkout - a figure that has been increasing over the past few years a m-commerce has become more popular. Therefore, seamlessly converting your prospect at this step is essential. In addition, uninterrupted payments are crucial to customer retention. On a global average across industries and geographies, approximately 10 percent of transactions fail for reasons ranging from insufficient funds, to lost or stolen cards or technical failure.

However, of that 10 percent, 8-9 percent can be saved with the right techniques and tools - resulting in up to millions in increased revenue for large businesses, happier customers, and increased LTV. This guide will walk you through tools and techniques to optimize both of these areas.

Maximizing the signup process

The goal of signup is to give your customer access to your product or service as quickly as possible. Making the payment step flawless is a key part of this proposition.

When optimizing the signup, most businesses think about how to minimize its steps – asking as little information as possible from a customer in order to make the process as easy as possible.

While this is a crucial part of optimizing the process, what goes on under the hood also delivers significant gains. This section will take a look at two areas in which you can make measurable improvements – by adding subscription-enabled payment methods, and optimizing risk management.
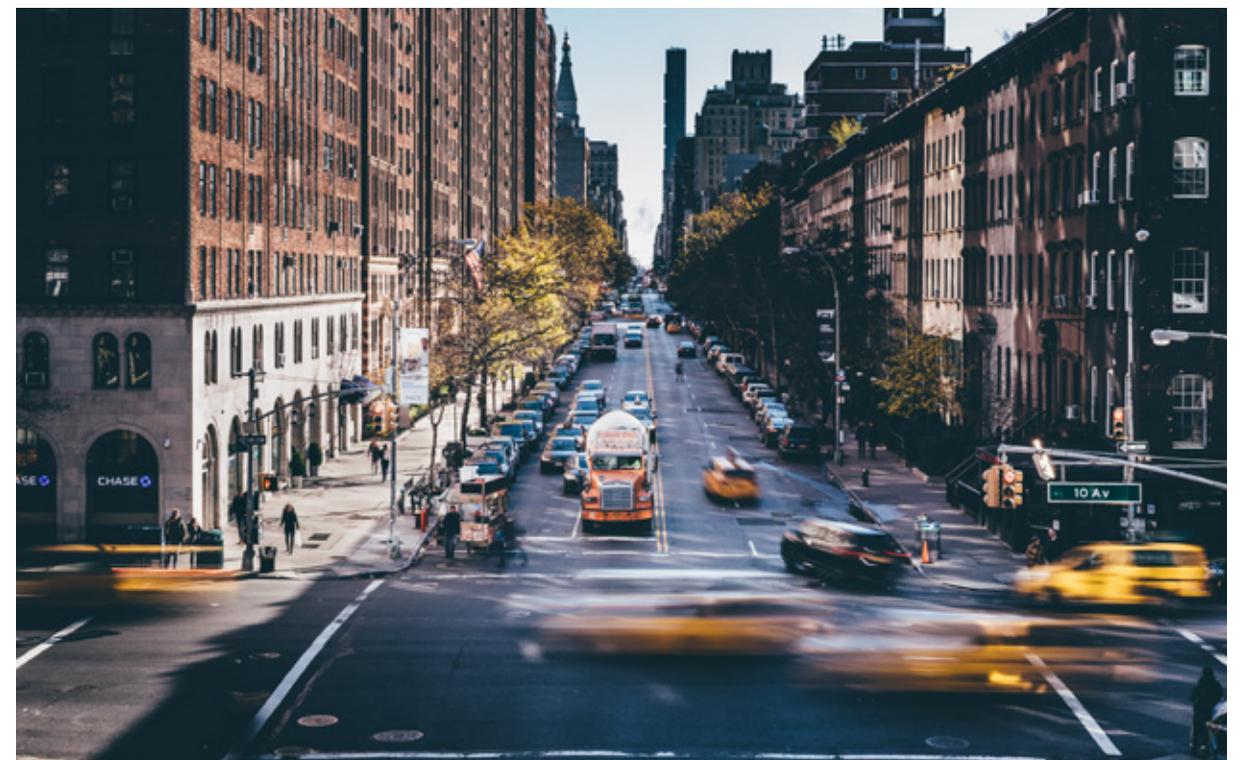
> **"We have found SEPA Direct Debit to be extremely popular in Germany and Austria and it is the payment method favored by our local customers when signing up to DAZN. This is a good reminder that payment methods that might seem alternative to us are actually the norm in local markets."**
>
> David Francesconi **DAZN**

Offer local and prepaid payment methods

1 If you are in North America, the U.K., or Australia, the majority of transaction volume will be cards. However, many of your customers on a global level do not use cards as their primary way to pay. Furthermore, in some markets, regulations mandating 3D Secure make recurring payments unfeasible, as this creates an extra step in the payment flow.

In order to capture these enormous untapped markets, it is crucial to offer local and prepaid payment methods.

Local payment methods
In many key markets around the world, China, Germany, and Russia among them, credit cards are not the most popular payment method. However, a number of key local payment methods such as QIWI in Russia, Alipay in China, and SEPA Direct Debit in Europe, both support recurring and subscription payments, and are used by significant numbers of your potential customers.

Prepaid methods
For markets in which 3D Secure is mandated, or popular payment methods do not support recurring functionality, some subscription businesses are tweaking their models to create prepaid options. Typically, this involves a longer period of access than a regular monthly subscription – where businesses need to optimize the balance between the length of time and a transaction amount that is reasonable for the maximum number of subscribers.

> **"Merchants should question whether the notion of "one payment equals one month of product" works for all customers. For example, some customers prefer to pay for a full year of service, while others may part-pay throughout the month."**
>
> Federico Pezzotti **Spotify**

What Adyen offers - local payment methods
In Europe, Adyen has built functionality that enables customers in markets including Germany, Austria, and the Netherlands, to make the initial transaction with their preferred local payment method, with subsequent transactions occurring with SEPA Direct Debit. Furthermore, Adyen supports all key payment methods globally, from Boletos in Brazil to cash-based payment methods in Southeast Asia, giving your business enormous flexibility to offer prepaid options in the manner your customers prefer.

Payment method	Market opportunity	Functionality
SOFORT / Giropay / SEPA Direct Debit	50% share of online payments in Germany	The shopper makes the initial transaction with the payment method of their choice, with subsequent transactions happening with SEPA Direct Debit.
EPS / SEPA DD	60% share in Austria	
iDEAL / SEPA DD	80% share in the Netherlands	

Recurring payments with wallets

Adyen enables you to support recurring and subscription payments for a number of wallets, including Qiwi, Alipay, and PayPal, with others to follow.

Payment method	Market opportunity	Functionality
QIWI	16 million+ users in Russia	
Alipay	400 million users in China	The customer authorizes the wallet to make transactions on a repeat basis.
PayPal	192 million active customer accounts globally	

Combat card testing and reseller fraud

2 Subscription-based businesses are particularly susceptible to two broad types of fraud – card testing and reseller fraud.

Card testers

Card testing is where fraudsters test stolen card details to see if they can be used to make subsequent transactions. Subscription businesses are popular with this kind of fraudster because they often offer easy signup processes and low transaction values to test the cards of new subscribers. These factors make it easy for organized criminals to set up servers and scripts to take a mass-produced approach to card testing – finding out whether (up to millions) of stolen card details can be used to make subsequent physical goods purchases online.

Card testers can be identified by the following characteristics:
1. On page behavior that is too rapid to be humanly possible (such as going through the checkout and entering strings of credit card numbers in seconds).
2. A high number of unique credit cards per shopper entity, which are often connected by multiple data points such as IP address, machine, email address, or other defining characteristic.
3. Leveraging virtual machines, proxies, TOR nodes, or other tools to obscure identity that normal customers don't use.

Resellers

Reseller fraud is where fraudsters sign up for trial periods and then sell them on to unsuspecting consumers for small amounts of money. This delivers a negative customer experience and damages brand perception in the process.

Be careful what you block

The traditional approach to minimizing fraud is stopping suspicious transactions. But the consequences of simply blocking all suspicious transactions is an issue that should not be underestimated, as you will also block good customers. In the U.S. alone, risk checks prevent an estimated $4 billion fraud, while simultaneously blocking legitimate transactions worth $8.6 billion.

> "Traditional KYC on-boarding requirements can act as barriers to conversion and can frustrate customers. Subscription businesses can get smarter on metrics used to identify customers during checkout and normal customer interactions, with subtle transactional and device identifiers providing confidence on customer identity."
>
> Federico Pezzotti **Spotify**

The below table lays out a number of risk tools and techniques used by subscription and recurring businesses

Tool or technique	What it does	Use case
Device fingerprinting and relational mapping	These techniques: a) Collect unique attributes from a device, which are logged and analyzed during repeat visits. b) Combine this with multiple attributes including device data to create a relational map of attributes behind seemingly unrelated transactions.	Useful to spot fraudsters who attempt to change their profile or card details while using the same device, and/or identify individual shopper entities behind seemingly unrelated transactions.
Behavioral analytics	Spots behavior that is not humanly possible, such as (multiple) shoppers going from front-page to checkout in seconds, or entering 16 digits individually in a half a second.	Relevant to identify which purchase attempts to add extra security filters, such as CVV/AVS, 3D Secure, and so on.
CVV/AVS	**AVS** (Address Verification System) is a system used to verify the address of the cardholder. The system checks the card billing address provided by the cardholder, with the address on file at the card company. **CVV** (Card Verification Value) is the security code printed on the back of the card, which is not encoded on the magnetic stripe and therefore can't generally be stolen through skimming.	Useful as an extra layer of security at the checkout. It is worth noting that AVS is supported mainly in the U.S., Canada and the U.K.
Velocity checks	Checks historical shopping patterns of a customer to spot unusual purchase behavior.	Useful to spot sudden changes in transaction volume or value that may be an indication of fraud.
Analyzing user behavior after signup	Quantify how much of your fraud is card testing and how much is reseller (through identifying whether the account is being used).	Consider your approach to the potential subscriber who has purchased the free trial. For example, is there a way to convert to a genuine customer?

"Do not underestimate this area – constantly analyze, adjust, revise and iterate your fraud strategy. We review results of fraud filters on a weekly basis, and we also listen to customer support feedback to formulate our hypotheses and adjust our approaches."

David Francesconi DAZN

Automated account creation

Previously the domain of advanced professional fraudsters, readily available software means relative amateurs can automate the creation of thousands of emails and user accounts. This makes card testing even easier, as each attempt will come from a unique account, made from a unique email, seemingly coming from a separate IP address.

Many risk mitigation platforms work under the assumption that a transaction exists in isolation, and therefore lack any way to identify this kind of fraud. More advanced risk systems cluster transactions based on the user's login credentials or credit card number. However, fraud-sters use a multitude of techniques to circumvent these kinds of clusters, usually by using new compromised credit card numbers and changing devices and login identities.

What Adyen offers: RevenueProtect

RevenueProtect is Adyen's built-in risk management system, created to handle the high-velocity, automated fraud that subscription businesses commonly experience.

Designed to maintain the optimal balance between fraud defense and conversions, RevenuePro-tect employs a range of standard tools such as velocity, referral and other transactional fraud checks, combined with advanced features such as device finger-printing, relationship mapping logic, behavioral analytics, geolocational heuristics, Dynamic 3D Secure, and built-in Case Management.

By using linkable attributes that are difficult for fraudsters to refresh, such as device finger-printing and delivery addresses, RevenueProtect is able to track fraudsters even as they change devices, networks, and identities.

Increasing customer retention

Once your customer is signed up and validated, delivering an uninterrupted service for as long as they wish is crucial. And increasing customer retention by minimizing payment failure is a key part of this effort.

Involuntary churn - where customers unintentionally have their subscription canceled due to payment failure - is a hidden, yet essential, component to optimizing growth. The first step toward saving these customer relationships is dunning – communicating to your customers to ensure the collection of payments. In fact, if 10 percent of transactions fail, a sophisticated approach to dunning may save up to half of these failed transactions. But besides dunning, under the hood there are a number of other tools and strategies that you can use to save the other 5 percent, including the following:

- Account Updater
- Retrying failed transactions
- Fine-tuning your billing intervals

Deliver uninterrupted service with Account Updater

3 A key cause of subscription payment failure is when cards expire, are lost, or changed for other unforeseen reasons. When this happens, they are often reissued with different expiration dates, CVV, or card numbers. This can trigger a decline in the next payment, often without the business or customer immediately realizing it.

Fortunately, there are tools to help. The card networks offer services – Account Updater for Visa, Automatic Billing Updater for Mastercard, and Card Refresher for Amex – that enable you to maintain an uninterrupted service by updating card-on-file account information.

With these services, card update requests are sent to the card networks, which gather relevant updates from participating issuers daily. The updated card details are then sent back.

These tools provide three key benefits:

- They ensure unbroken access to a shopper's payment data, which translates into an uninterrupted revenue flow and increased authorization rates.
- By minimizing disruptions to recurring and subscription payments, they provide a smooth payment experience, and reduce the chance of service cancelation.
- Normally when an on-file card stops working, you will need to reach out to the cardholder for card information. Account Updater decreases costs associated with customer service.

Of the 10 percent average, implementing Account Updater can reduce involuntary churn by 2-3 percent. However, issuers are not always consistent in their implementations of Visa and Mastercard programs and businesses should take steps to protect themselves against any inconsistency. For instance, when a card number is changed, you should continue to use the previous card number until you begin to see declines.

What Adyen offers: Adyen Account Updater
Adyen offers the Account Updater service in all the regions where the service is available - Canada, the U.K., Ireland, Italy, Greece and the U.S. This includes several integration options such as single and bulk update requests triggered by the merchant. We also offer lightweight integration with automated update logic based on lifecycle events, such as payment refusal, upcoming card expiry date, and so on.

> "Once they have entrusted us with their payment method, we don't want our customers to be making a purchase decision every month, or even at other intervals such as when they change cards. We want to provide uninterrupted service where payments run smoothly in the background, and that is where tools such as Account Updater come in."
>
> Thierry Locard **Netflix**

Take a data-driven approach to retries

4 In addition to card expiration, transactions fail for a number of technical and non-technical reasons that will not be picked up by Account Updater. For these situations, a percentage can be saved through retrying the transaction.

Technical versus non-technical retries

Retrying failed transactions should be approached according to the reason for the failure. For example, if a transaction fails due to technical reasons, Adyen data shows that the best practice is to retry immediately.

However, if a transaction fails due to non-technical reasons, such as insufficient funds, it may be better to retry over a longer-term period – or better yet, to look at the pay cycles of the market, and retry immediately after the date that people receive their salary. Understanding and optimizing these factors on a per market basis is crucial to your success.

The below list outlines some of the key reasons provided by the issuing banks that transactions fail, and how to approach your retry strategy.

> **"We monitor retry effectiveness and optimize per market, according to information such as the pay cycle of that market. We see that we are optimizing when the first retry is much more effective."**
>
> Thierry Locard **Netflix**

| Reason	Advice	Observation
Do not honor	Retry on short and long term	Around 5-7% success rate when retried immediately
Insufficient funds	Retry on long term	Time your strategy according to pay cycles in the market
Incorrect details	Prompt customers for correct information	Zero success without prompting for correct details
Expired/Lost	Use Account Updater	A simple fix to save lost revenue
Technical issues	Retry immediately	Up to 70% success rate on retry

It should be further noted that excessively retrying failed transaction attempts can lead to issues with the card networks. Furthermore, while you may be able to continue to make incremental gains by retrying over long periods of time, the success rate inevitably decreases.

Therefore a smart approach is to test to see what you can save while staying compliant with the card networks, and continuously fine-tune. The below graph shows retry success rates against the amount of retries made with a selection of data from the Adyen platform. It is important to note that for most businesses the vast majority of successful retries occur in the first few attempts.

Retry success versus number of retries

Authorization rate

Number of retry attempts on the same transaction
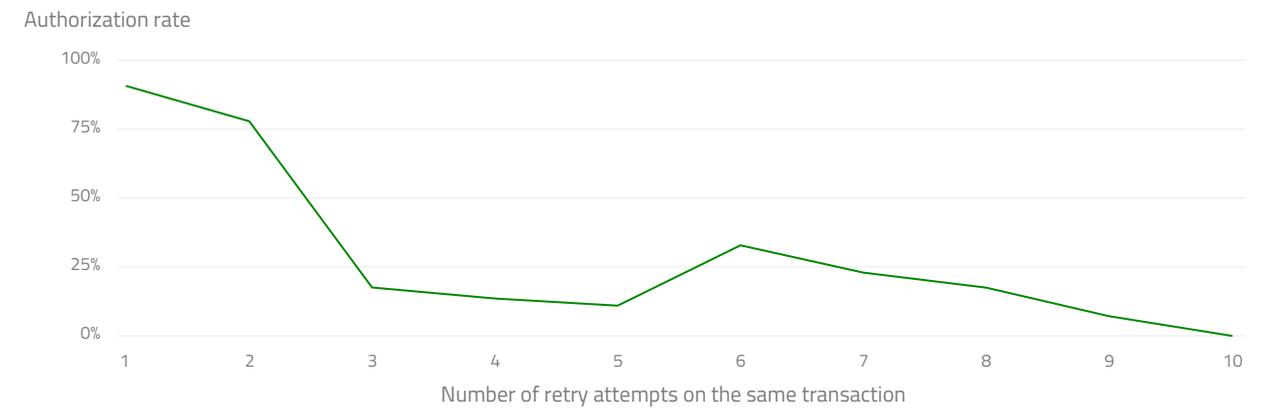
What Adyen offers: Auto Retries
For technical failures caused by occurrences such as bank outages, Adyen selectively retries transactions through alternative connections in the same region. Our raw data helps businesses target retries that are technically focused, and our inferred refusal reasons also establish logic for non-immediate retries.

Fine-tune your billing intervals

5 Simply billing your subscriber at regular intervals after the day of signup may be tempting, as it is the easiest thing to do, but it will cost you in conversion.

Factors such as market, time of day, day of week, and day of month can have a significant impact on transaction success rates. In the U.S. for example, the majority of customers are paid bi-weekly, resulting in an uplift of successful payments at both the beginning and the middle of each month. Whereas in the U.K. players tend to be paid monthly, and there is only one spike at the beginning of the month.

By analyzing transaction success rates across individual markets, you can make data-driven decisions about the optimal time to bill subscribers. Also, you may consider asking your customers at what intervals and what time of the week or month they prefer to be billed.

As an example, the following data from the Adyen platform shows the percentage of refusals due to insufficient funds across multiple markets. In addition, specific times of the day or day of week/month can also lead to higher retry success rate.

> **"Retention is obviously our primary goal and equally the optimum outcome for that would be a successful authorization on the first rebill attempt. But if you're looking for one key metric to base your rebill strategy around, country is definitely the most important and where you'll find the most consistent trends in behavior."**
>
> Alastair Morris **Jagex**

Refusals due to insufficient funds

Austria — avg 54%, 60%, 41% (3, 10, 17, 24, 31)
Denmark — 9%, 7%, 5%
France — 48%, 38%, 19%
Netherlands — 0.38%, 0.21%, 0.14%
Poland — 67%, 60%, 53%
Sweden — 66%, 44%, 29%
United Kingdom — 42%, 36%, 32%
United States — 67%, 63%, 56%
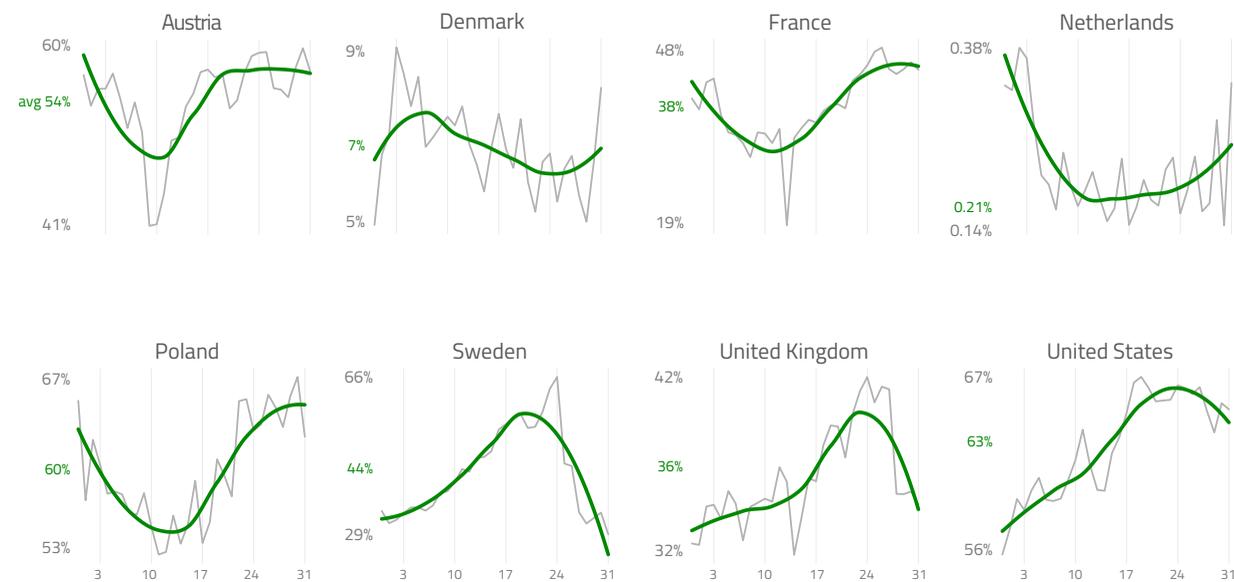
Also the time of the billing requires attention. For example, globally, we have found that nighttime hours have a lower success rate by 2% due to issuing banks tightening their risk system. And you should always be aware of specific local situations – for example Mexico does not process overnight. Below shows that in the U.S., issuing banks are most likely to authorize retries in the morning, and less likely after midnight.

The time of day may impact authorization rates

Authorization rate

Hour of the day
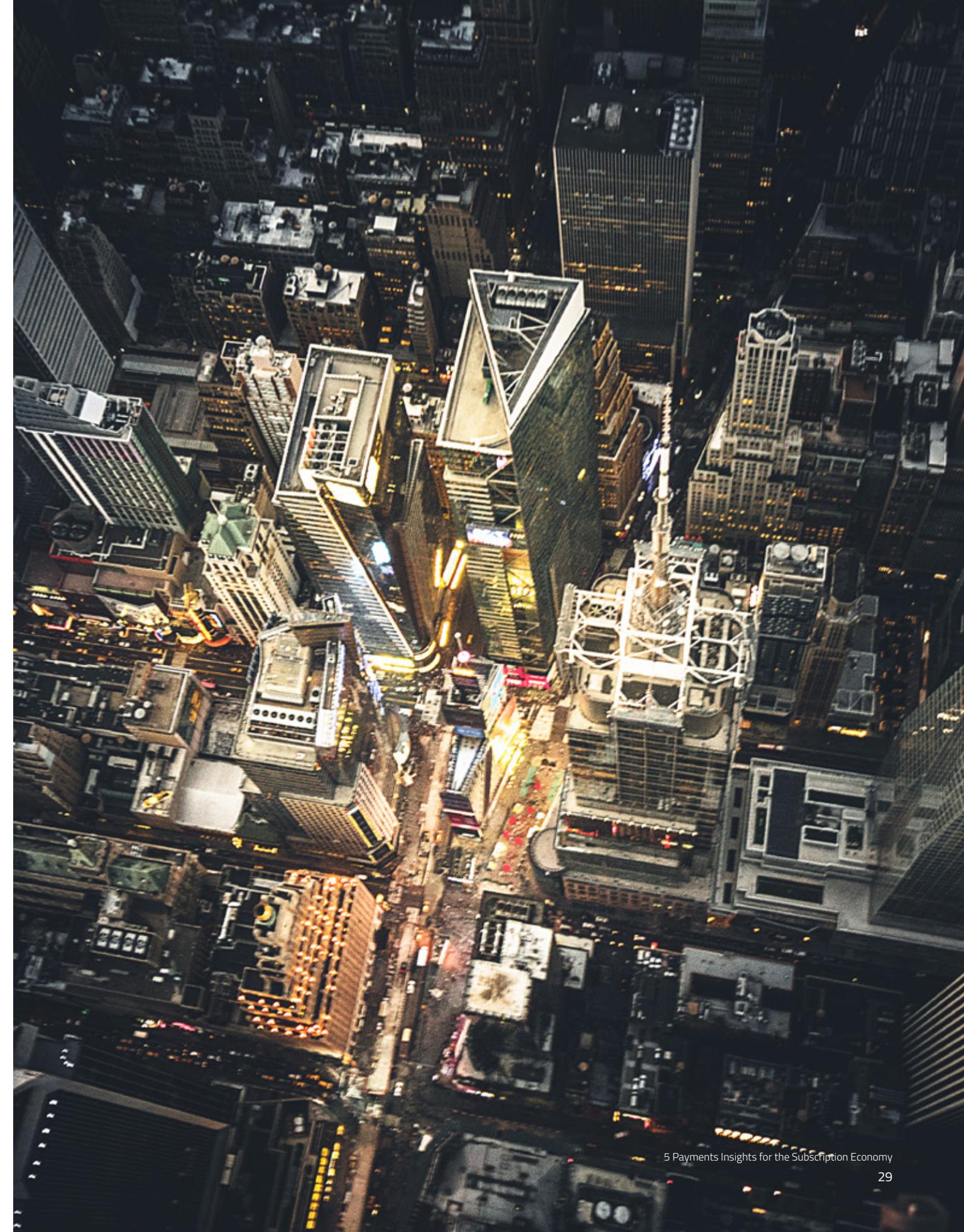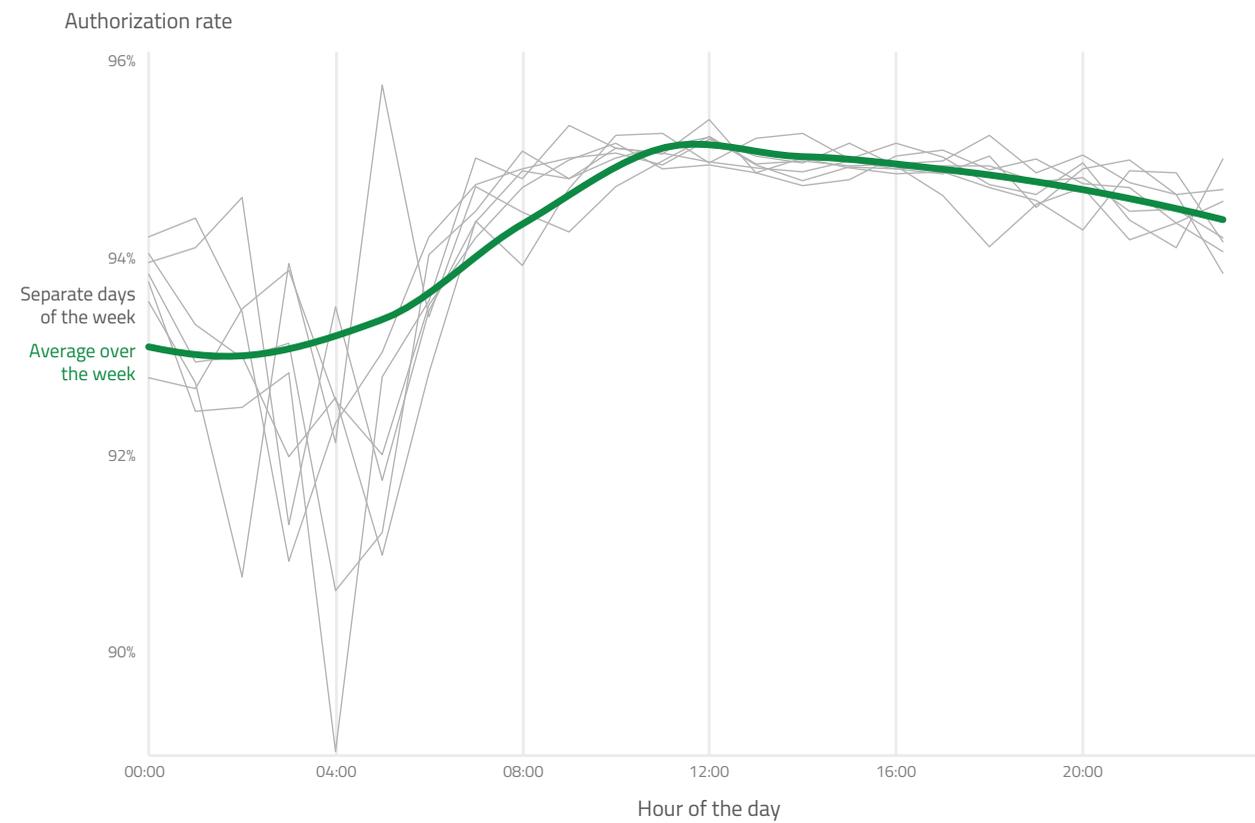
About Adyen

Adyen is a technology company that provides businesses with a single solution to accept payments anywhere in the world. The only provider of a modern end-to-end infrastructure connecting merchants directly to Visa, Mastercard, and all key payment methods globally, Adyen delivers frictionless payments across online, mobile, and in-store. Headquartered in Amsterdam and San Francisco, with offices across North America, South America, Europe, Asia and Australia, Adyen serves more than 4,500 businesses, including 7 of the 10 largest U.S. Internet companies. Customers include Facebook, Uber, Airbnb, Netflix, Spotify, Dropbox, Evernote, Booking.com, Yelp, Vodafone, Superdry, Mango, Crocs, O'Neill, SoundCloud, KLM and JustFab.

Subscription management partners

Adyen offers integrations to key subscription management systems worldwide, including Aria, Demandware, Magento, and Zuora. Businesses using these platforms with Adyen can benefit from a wide range of Adyen functionality including RevenueProtect, our built-in risk management system, and RevenueAccelerate, a suite of data-driven optimization tools including Dynamic Card Validation, Account Updater, and Auto Retries.