Operator white paper

Carrier billing spend limits

bango.com | sales@bango.com

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Carrier billing spend limits

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Executive summary

An operator choosing to implement spend limits should take into account consumer spend patterns in app stores and the end user pricing of today's popular apps and content.

This white paper uses real market data to show what happens to sales growth when different spend limits are applied.

It explains how blanket spend limits can dramatically impact the 20% of customers that drive 80% of spend. This paper also analyzes the real risk of customer over-spend and recommends practical steps to maximize spend without increasing risk.

Here's what you'll learn in this white paper:

- The varying spending behaviors of different customer categories
- The most common price points for digital goods across stores today
- How setting a spend limit too high does very little to control risk
- How protecting a consumer with spend limits can increase customer care costs
- How setting spend limits too low can lead to one third of customers failing to pay
- Recommendations for how operators can best manage spend limits

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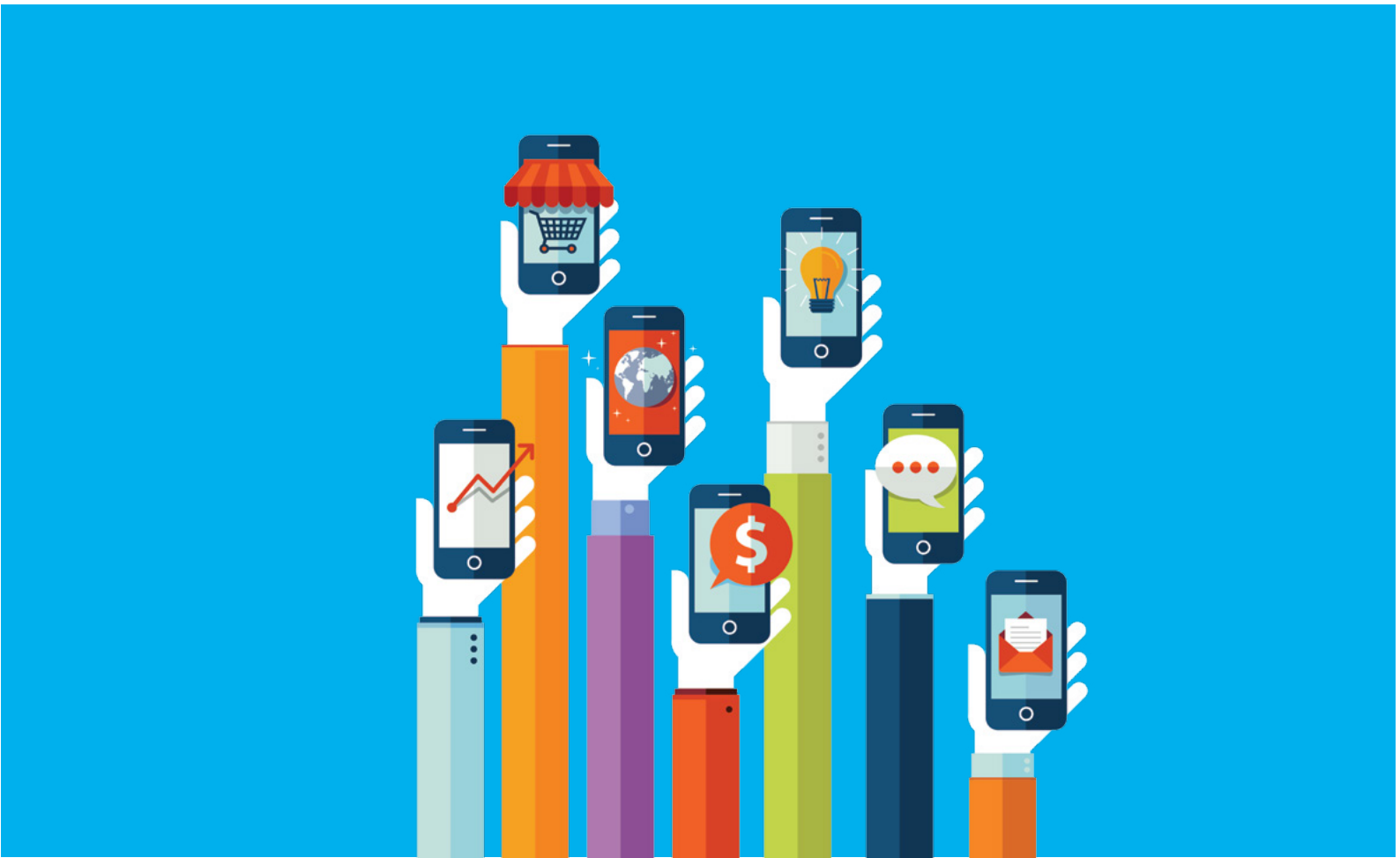
Making payments

The ideal

The perfect payment scenario is where customers can make as many payments as they wish, buying any number of products, at a range of prices. All payments are collected as intended and the products are delivered and work as expected. There are no blockages or surprises for the customer and therefore no refunds or reasons to contact the operator or store customer care team.

The money owed is then successfully collected from a well-funded operator pre-pay account, or from a reliable operator post-pay account at month end.



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The reality

In reality a few payments will go wrong. This can be for a number of reasons:

1. The product doesn't get delivered as expected, because of device or network issues. In most cases the customer will either be able to re-download directly from the store. In some cases this will generate customer care calls where the customer will call the seller, product developer or app store to obtain their product or a refund. Typically less than 1% of customers will request a refund on this basis.

2. The product doesn't live up to expectation. In most cases this happens within the first few minutes of purchase and the customer simply cancels the purchase or requests a refund directly through the store. In a few cases the payment was made too long ago or the customer does not understand how to cancel the payment via the store – this can result in a customer care call. In this case the customer typically contacts the product developer or app store, but in some instances they may contact their Mobile Network Operator. Typically less than 0.1% of customers will request a refund on this basis.

3. The customer doesn't have sufficient credit on their pre-pay account, causing the payment to fail. Many customers will simply top up their pre-pay account and try again, confirming a strong desire to buy. Bango currently sees 64% of failed payments re-tried within 24 hours of insufficient credit being reported.

4. Some customers will default on their mobile phone contract and fail to settle their monthly post-pay mobile charges. PwC published that the average bad debt expense in the USA, as a percentage of total post-paid revenues, was 1.8%. This covers voice, SMS and data in addition to the cost of apps and content purchased using Direct Carrier Billing. The operator needs to account for these risks in their financial models and revenue shares. This is where credit card style trust levels make most sense, so that new customers have lower spend limits, while customers proven to pay their monthly bill receive higher spend capabilities.

5. The user claims to be unaware of payments made to their mobile account. They get "bill shock", resulting in customer care calls and refunds. This can be aggravated where children are blamed. Bango's infographic "Bill shock? more like bill stretch" reveals that only around 1 in 16,000 payment transactions are reported as unauthorized child spend, meaning it's important to keep a sense of proportion over this relatively small risk.

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Customers, products and spend

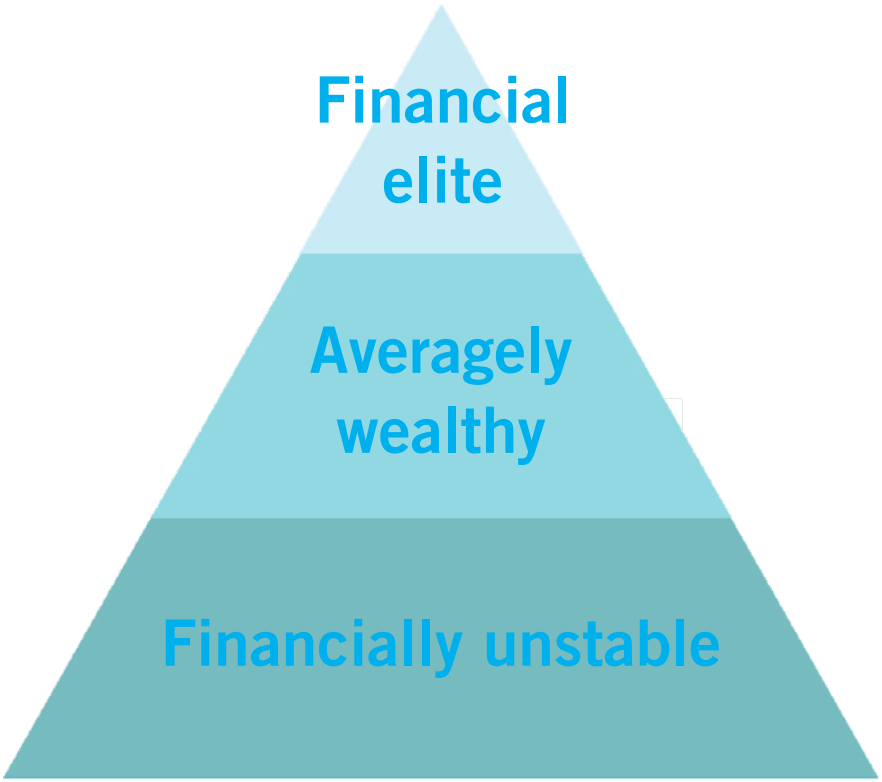
Customers

It's vital to understand the varying spending behaviors of different customer categories. Spending power varies, and is closely linked to whether a mobile account is pre-pay or a post-pay contract. By default pre-paid users will only be able to purchase when they have available funds and therefore present no risk to the operator. Pre-pay customers with insufficient funds are often encouraged to top up their mobile account and try to purchase again.

A small number of post-pay customers will have large spending power – they are a digital elite and as such are typically low risk. High spenders in this group are ideal customers and operators should consider individual credit risk and/or spend limits.

The next tier could be termed moderately wealthy. This group are relatively low risk and a high spend limit normally works well.

The final group are those with low spending power. They are the higher risk group and can be more easily over stretched with a smaller number of payments. This group is most likely to require spend limits and controls, but those limits must be much lower than with other groups. A low spending limit to accommodate this group will significantly impact sales from the higher, more financially able groups.



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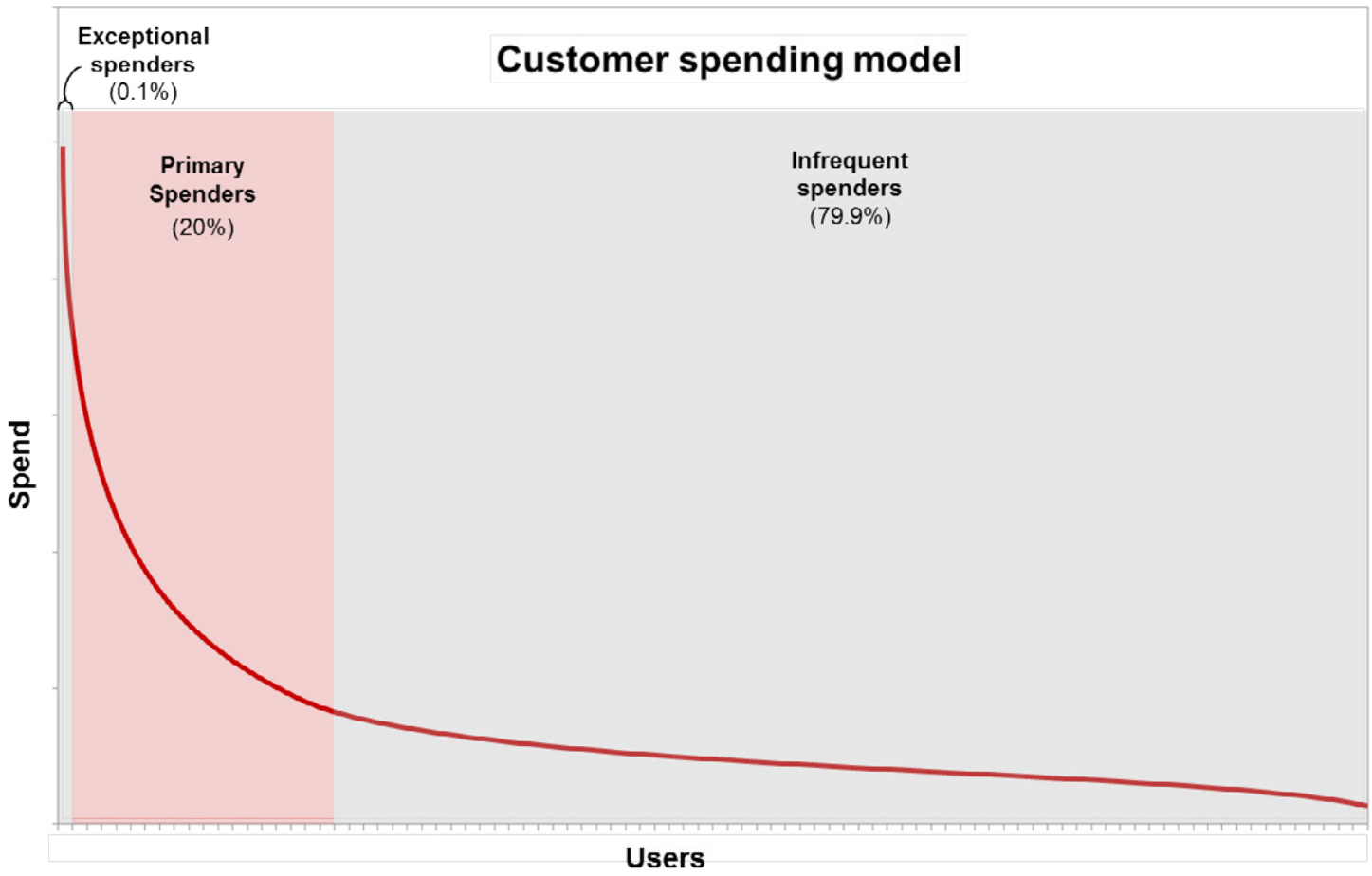
Spending patterns

Understanding the basic customer types and their spending patterns is crucial to delivering the optimal purchase experience and maximizing revenues.



Exceptional spenders

Bango's payment data shows that only the very top 0.1% of app store customers will spend more than $400 USD in a month. This small number of customers represents the highest risk. They can be very vocal and result in high customer care costs, multiple refunds and risk of bad debt or litigation. These are the customers that spend limits are designed to protect.

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Primary spenders

The next 20% of customers provide the bulk of the purchases, accounting for around 80% of spend. Most of these customers spend between $20 USD and $100 USD per month in the app store or from in-app content, without problems. These are the most loyal customers and tend to know what they are doing; they are familiar with the app store and how to purchase. Revealingly, fewer than 0.2% of these customers will contact customer support or request refunds each month.

Infrequent spenders

The remaining 80% of customers are casual or infrequent spenders, paying between $0.01 USD and $20 USD per month, typically accounting for around 20% of spend. Many make only one purchase, which is often their first and only purchase to date. These customers are much less familiar with buying from an app store or within an app.

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Digital goods are no longer cheap

In examining customer payment patterns it is important to understand how much things cost today. App store purchases are rarely “micropayments” and the $0.99 price point is in heavy decline. The freemium model has come to the fore, with monetization from in-app content, a growing number of apps now bundle in-app purchases into packs or sell blocks of in-app currency, which has significantly increased prices while sales continue to grow.

A good example of this is “Clash of Clans” by Supercell – one of the highest earning apps in the market today. The app is free to download from the app store, but offers in-app purchases to help players build villages and quickly arm their clans. Players purchase “Gems”, the in-app currency, in one of five different volumes:

1. Pile of Gems at $4.99 for 500 Gems is the cheapest option
2. Bag of Gems is $9.99 for 1,200 Gems
3. Sack of Gems is $19.99 for 2,500 Gems
4. Box of Gems is $49.99 for 6,500 Gems
5. Chest of Gems is $99.99 for 14,000 Gems is the most expensive but best value

With these prices it is easy for the most cautious of players to pay a considerable amount per month. Buying one Pile of Gems – the cheapest option - per week may see the customer exceed $20 in that month.

Revealingly, the $4.99 Pile of Gems is not the most popular, highest selling option. In fact the $9.99 Bag of Gems sells twice as many units per day as the smaller, cheaper Pile of Gems, earning Supercell four times the revenue.

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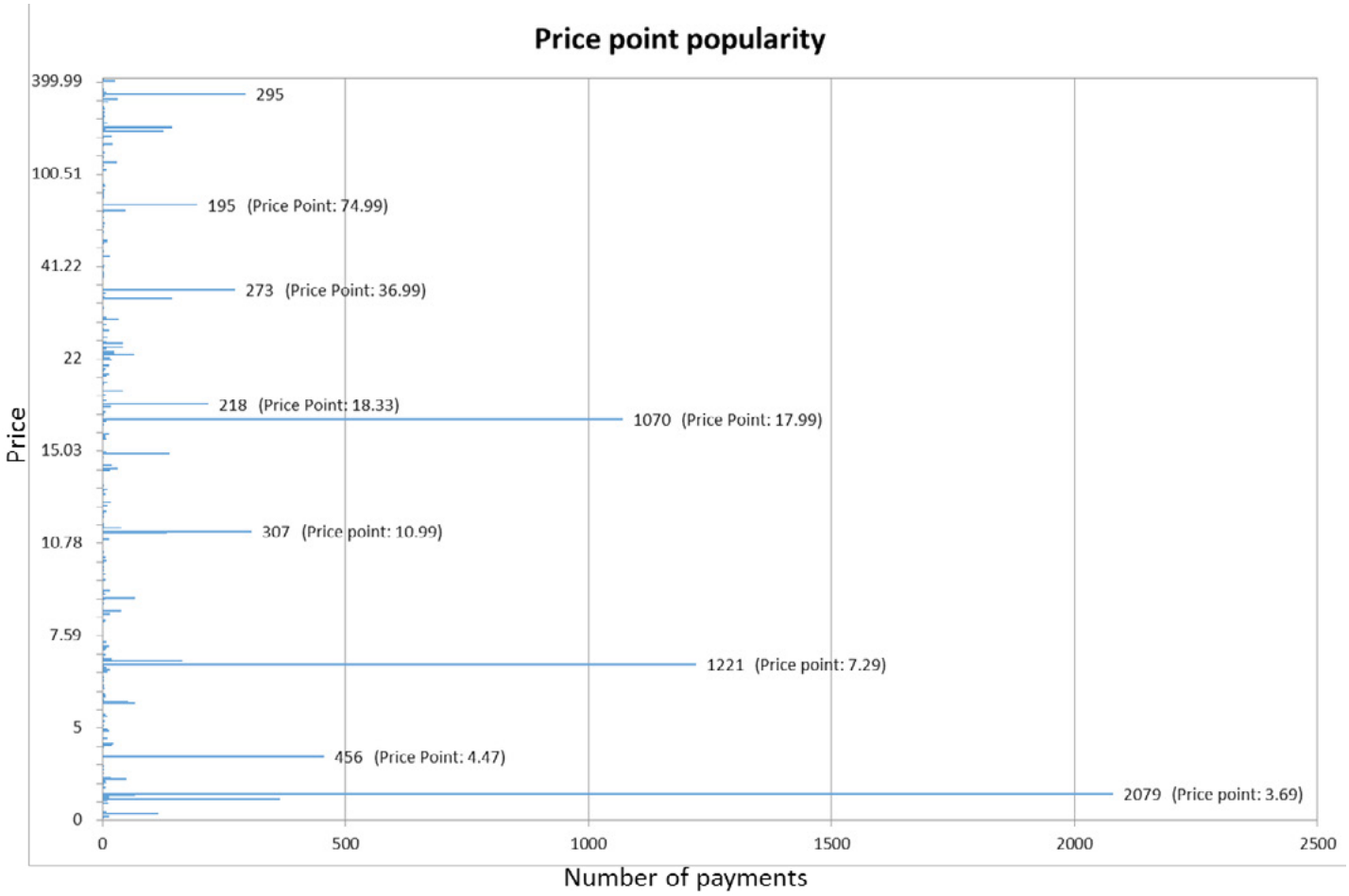
With the top three Gem products costing $19.99 and above, it's easy to see how the more loyal Clash of Clans players can spend large sums each month and hit operator imposed spend limits.

The following graph reveals common price points for a major global app store (converted to US dollars). Note that the third most popular price point is $17.99. Bango often sees payments for products costing in excess of $100 USD.



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Spending limits

Operators and app stores often look to impose spend llimits in an attempt to minimize liability and control exposure to risk. Some more regulated markets mandate spending limits, for example PhonepayPlus in the UK. As a result, one or more of the following spend limits are typically configured, either as part of the operator's billing system or within the Bango Payment Platform.

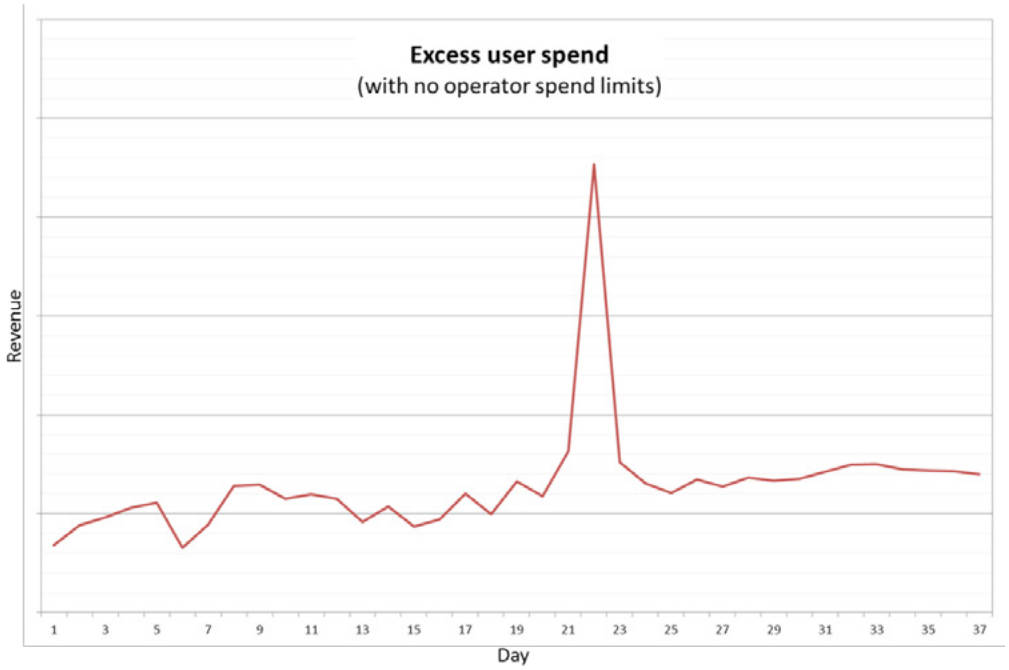
1. Monthly spend limit – for example $250 USD per month
2. Daily spend limit – for example $100 USD per day
3. Individual transaction limit – for example a $50 USD per individual transaction limit

In many instances, spend limits are correctly targeted at the customers that pose the highest risk, the exceptional spenders. However, some operators take a "one size fits all" approach and set very low limits that significantly restrict customer spend.

Setting spend limits too high

Setting a spend limit that is too high does very little to control risk or protect revenue as intended. It fails to capture out-of-control spenders that are most likely to complain of bill shock, fail to pay their bill, cancel their operator contracts or become uncollectable bad debts.

In the following example one user is seen spending excessively with an operator that has not set any spend limits.



Carrier billing spend limits

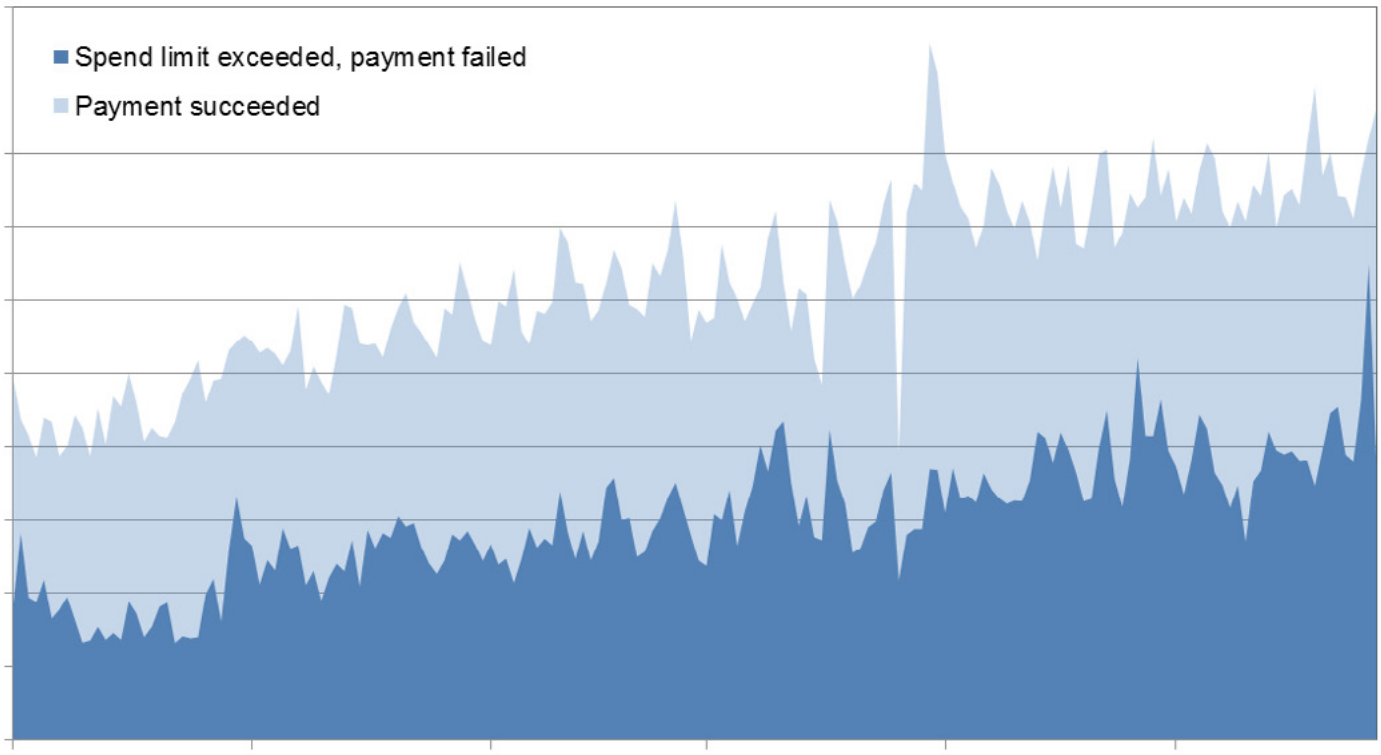
Bango technology quickly detects this behavior, blocks further spending and alerts the operator and store. Where no spend limit is set, Bango typically records between 0 and 5 excessive spend spikes such as this per month, per operator. Because these excessive spending behaviors are limited to a very small number of customers, the resulting customer care costs are normally low.

Failure to pay the operator phone bill and consequent bad debt is a major concern where no spend limit, or an excessively high spend limit, is set. However Bango's data reveals that less than 0.2% of bad debt is a result of excessive end user spend.

Setting spend limits too low

Introducing spend limits that are too low will impact the 20% of "primary spenders" that generate the majority of earnings. The lower the spend limit, the greater the impact.

The following example shows data taken from one operator that imposes a $100 spend limit. It shows that around one third of all customers fail to pay, although in most cases the customer has funds available on their pre or post pay account. Bango data also shows that more than 73% of users in this category repeatedly return to retry their payment over the course of several days.



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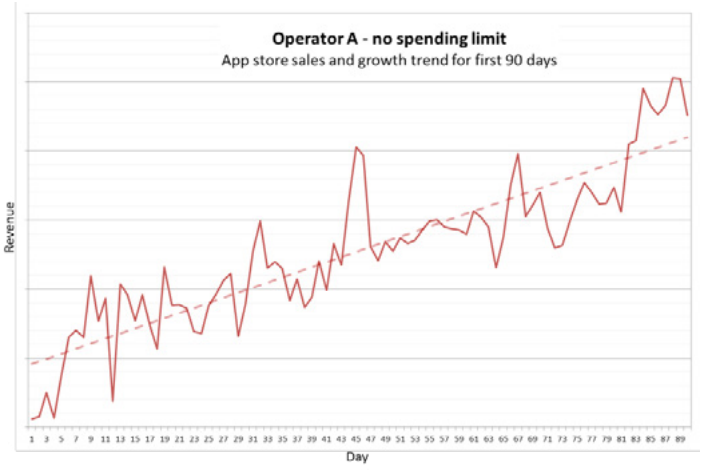
Preventing these customers from buying products does three things:

1. Reduces monthly earnings
2. Causes customer dissatisfaction and increases complaints, leading to increased customer care costs as top spenders call to complain or request their spend limits are increased. This in turn increases frustration and dissatisfaction, generating bad word-of-mouth and social standing
3. Forces carrier billing customers to use credit cards. As customers encounter operator spend limits, many will simply register a credit card in order to continue and pay. For example, a top customer looking for the best value deal that wants to buy a Box or Chest of Gems in Clash of Clans may hit a $25 daily spend limit and be forced to pay on a credit card

Once a customer has registered their credit card details with a store they are unlikely to switch back to using carrier billing – from an operator perspective they are lost customers. If the customers are part of the top 20% primary spenders group, this can amount to millions of dollars of lost revenue per month, with little prospect of recovery.

Market proof

The following charts represent four comparable operators that are currently processing on-bill payments across a range of major app stores. They show the app store sales growth for the first 90 days, and an indication of the trend.



Operator A has no spending limits and shows a good sales growth.

There are no significant increases recorded to either refunds or customer care calls.

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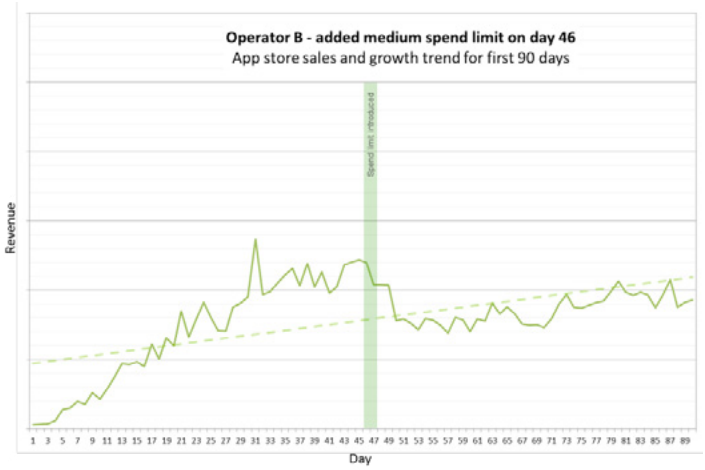
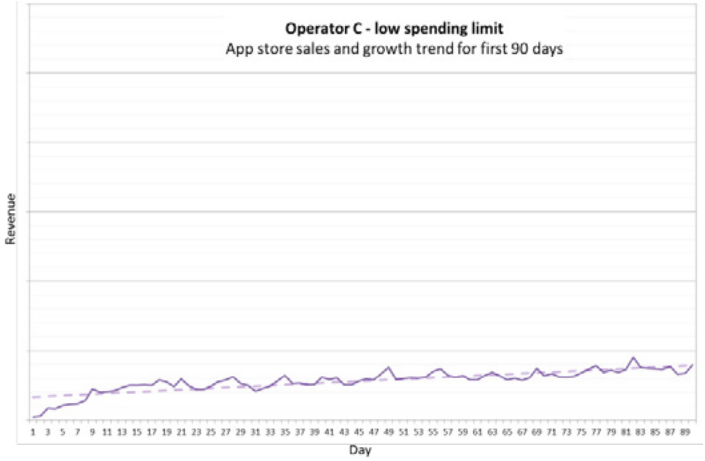


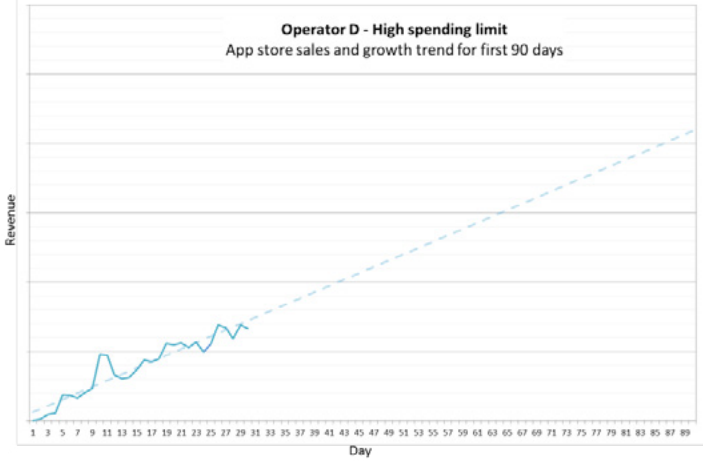
Operator B started with no spending limits but introduced a $100 monthly limit at around day 50.

A clear dip in sales can be seen at this point and sales after this point don't recover.

The growth trend is noticeably impacted.



Operator C has a low $25 monthly spend limit from day one. Their sales and growth trend are both clearly limited in comparison to the others above.



Operator D is a new operator implementing a relatively high $200 monthly spend limit.

Their sales and growth trend are very similar to operator A, which has no limit.

Customer care calls and refunds are low.

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Recommendations?

An operator choosing to implement spend limits should do so wisely, taking into account consumer spend averages and the actual prices of popular apps and content. Naturally this will vary by country.

For the first month set a spend limit as high as possible. This allows detailed monitoring of the most popular price points and customer spending patterns. Using Bango Dashboard it's easy to see where normal spend stops and excessive spend takes over. A spend limit can quickly be added and the results compared. Adjustments can be made over the following days to balance maximum earnings against refunds, social impact, customer satisfaction and customer care cost.

Crucially, operators should avoid spend limits that impact the 20% of customers that drive 80% of spend.

Where a spend limit is required, Bango currently recommends the following ranges for established mobile markets:

1. Monthly spend limits between $200 USD and $500 USD
2. Daily spend limits between $100 USD and $250
3. One-time spend limits between $70 and $150 USD

Bango recommends a monthly spend limit. Where additional protection is required, a daily spend limit is recommended. One-time spend limits are not recommended if daily spend limits are used.

Ensure the payment platform features smart velocity limits. This is designed to distinguish out of character purchasing from normal spend behavior and restrict the one, high-risk customer, without unilateral barring or blocking all users.

It's important to understand what customers are buying, along with the most popular price points and spend frequency. This enables the adaption and evolution of spend limits. Bango Dashboard is a specialist system enabling you to track, aggregate and analyze payment activity, quickly revealing price trends.

Also operators should consider credit profile based spend limits, based on the ability of each customer to pay, rather than a one size fits all model.

Carrier billing spend limits

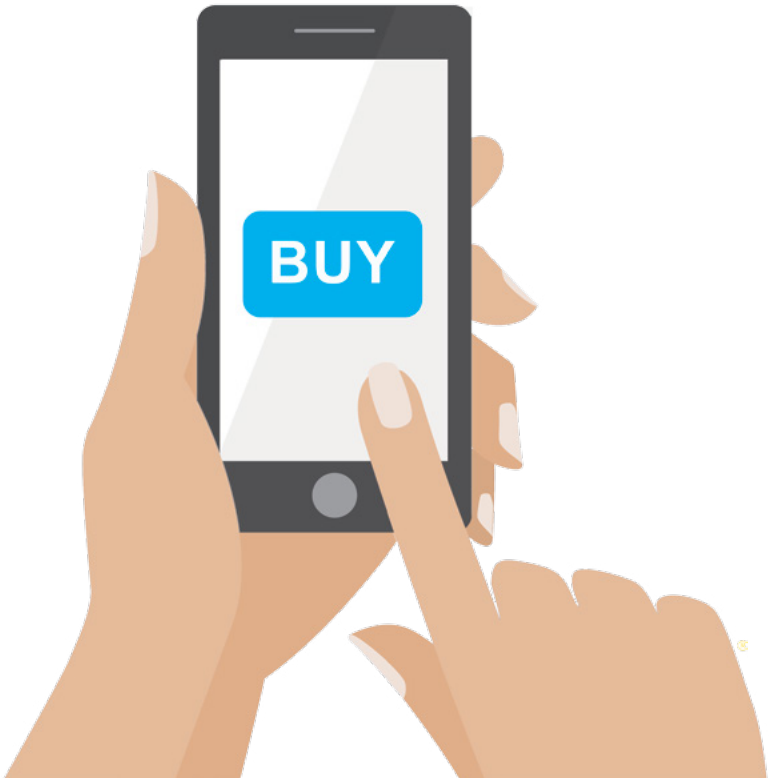
Plan to grow operator billed sales quickly; operators won't get them back later, particularly if customers choose credit card payment. Ensure carrier billing is at the heart of all mobile payments, in order to retain ownership of the customer relationship.

Make sure you have a great customer care solution. Expect a few complaints and queries from customers that have spent more than they expected, then deal with them quickly and efficiently to keep the customer happy. A key principle is that it's better to refund a small number of customers than to limit the majority.

Implement a customer self-help solution allowing the most loyal customers to:

1. View their monthly purchase statement online or to receive monthly email statements. These should show the full details of products purchased from each store, along with the price, developer/vendor, date and time. This builds customer confidence and prevents bill shock
2. Access online help tools that allow a customer to contact the relevant developer or store in order to resolve product issues or to contact their operator where necessary
3. Set up real-time email or text alerts when a payment is made. This helps customers to confirm their purchases and alerts them to others making payments on their account, particularly children
4. Configure their personal monthly, daily or per-purchase spending limit, within a defined minimum and maximum. The customer is best placed to set their own budgets each month or day
5. Trigger alerts as spend limits are reached or exceeded.

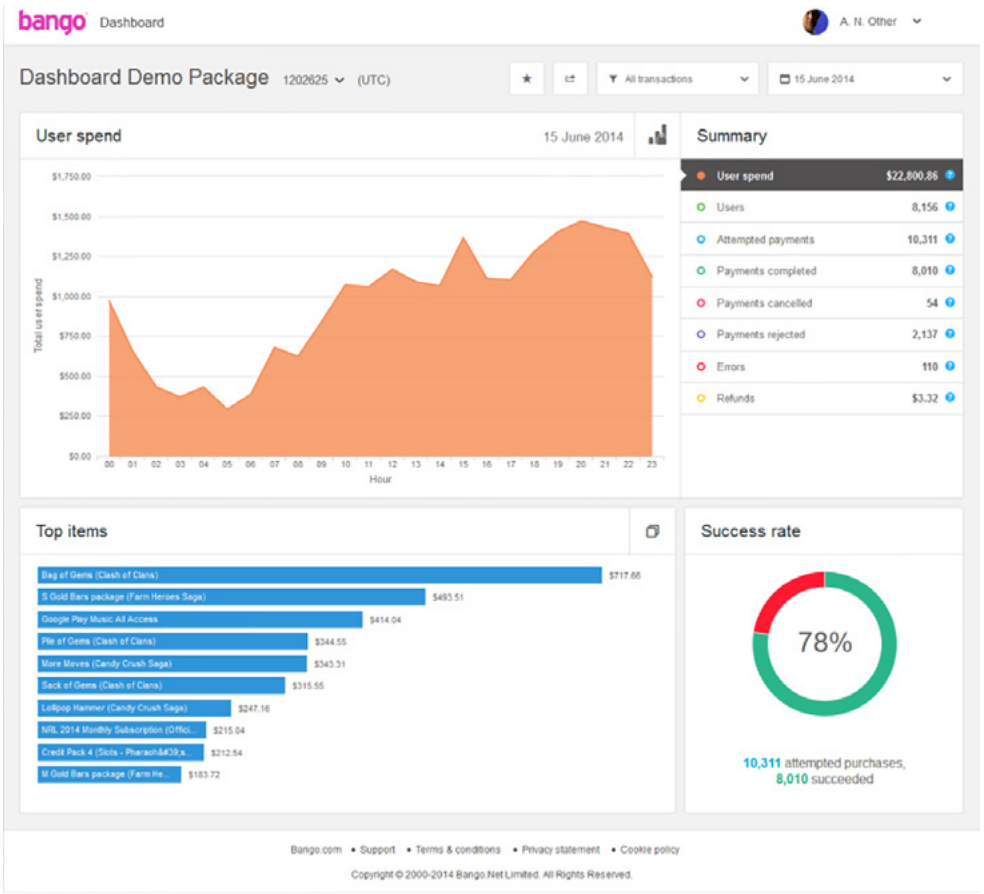
Talk to Bango for more details on how to do this: sales@bango.com



Carrier billing spend limits

Generate incremental income

Regularly monitor and measure your customers monthly and daily spend across each store. Bango includes Dashboard as part of all app store billing solutions for operators. Bango Dashboard gives you detailed facts about the apps your subscribers are buying, the prices they are paying and the stores they are using, all in real-time. Determine where your exceptional spenders end and your primary customers begin, then carefully configure spend limits just above that point.



The Bango Payment Platform processes millions of transactions for the leading app stores. It has been specifically designed to deliver the highest payment revenues by:

- Maximizing successful transactions through automatic authentication and one-click payment.
- Minimizing refunds, customer care costs and payment risk from fraud, consent issues and uncollectable or bad debt.

This can be measured using Bango Dashboard and controlled by a range of online tools.

Carrier billing spend limits

About Bango

In the era of mobile technology, collecting payments has emerged as a central and complex challenge. Bango powers payment on the mobile web, providing users with a massively smooth payment experience.

Bango's pervasive presence across the web creates a platform effect for partners, identifying hundreds of millions of users and maximizing the number of one-click payments. Global leaders plugging into Bango include Amazon, BlackBerry, Samsung, Firefox Marketplace, Google Play, Windows Phone Store and major mobile brands.

For further information about the Bango Payment Platform visit: http://bango.com

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