INTRODUCTION

The Subscription Economy Index™ (SEI) is based on anonymized, aggregated, system-generated activity on the Zuora service, a comprehensive billing and finance platform for subscription-based businesses. It reflects the growth metrics of hundreds of companies around the world, and spans a number of industries including SaaS, media, telecommunications and corporate services.

The breadth and depth of the billing reflected in this study speak to the rapid ascent of the Subscription Economy. Gartner predicts that by 2020, more than 80% of software providers will have shifted to subscription-based business models. In addition, IDC predicts that by 2020 50% of the world’s largest enterprises will see the majority of their business depend on their ability to create digitally enhanced products, services and experiences.

Recurring revenue-based business models are not new, but they have exploded in recent years owing to cloud-enabled, pay-as-you-go services. As globalization has placed increasing margin strains on manufacturing and product sales, subscription-based businesses have benefited from stable and predictable revenue projections, data-driven insights from direct consumer relationships, and large economies of scale owing to relatively small fixed costs.

This study was conducted by Zuora Chief Data Scientist Carl Gold.
CHAPTER 1

THE SUBSCRIPTION ECONOMY INDEX VERSUS S&P 500 SALES GROWTH

Subscription business sales have grown substantially faster than two key public benchmarks -- S&P 500 sales and US retail sales. Overall, the Subscription Economy Index (SEI) reveals that subscription businesses grew revenues about 8 times faster than S&P 500 company revenues (15.2% versus 2.0%) and about 5 times faster than U.S retail sales (15.2% versus 3.4%) from January 1, 2012 to March 30, 2017.

The slowest period of growth for the SEI, in late 2012 and 2013, aligns with a similarly challenging time for the American economy during the gradual but tepid recovery from the Great Recession of 2008. According to the Federal Reserve Bank of St. Louis, growth in non-residential fixed investment suffered a discrete deceleration from $2,016 billion in Q2 of 2012 to $2,011 billion in Q3 of 2012. More recently, the U.S. GDP peaked in Q3 2016 at 3.5% and then sank to just 0.7% in Q1 of 2017. At the same time, the SEI growth rate also peaked in Q3 2016, and in the last 6 months the SEI has cooled slightly to an average annual growth rate of 16.1% from a breakneck pace of 21.6% in the previous six months. The SEI is still growing at around 80% of that Q3 2016 peak of 3.5%.

Analysis

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A comparison of SEI growth (left axis) versus American GDP growth (right axis). Note that the SEI generally tracked with the overall GDP slowdown at the end of 2016, but has since accelerated.
This figure demonstrates the two primary levers of growth in the Subscription Economy -- Average Revenue Per Account (ARPA) and net account growth. If the total billings number of a company goes up, that means at least one of two things must have happened -- either the number of accounts being billed went up, or the amount each account was billed went up.

Note that while the SEI has grown more or less continuously over the last five years, there have been periods when ARPA growth has slowed, and even reversed. There were two discrete periods when companies prioritized net account growth ahead of ARPA growth: 2012-2013, and late 2014 to mid-2015. At these times the total number of accounts grew rapidly, but revenue per account stagnated or sank.
Each of those periods was followed by a correctional phase when the net new accounts decreased, but the average revenue per account increased. Pricing in the Subscription Economy is a flexible, iterative process. Companies frequently experiment with a combination of set fees and usage-based models as they seek to "land and expand." Strategies prioritizing net new account growth will frequently drive growth with competitive pricing, and then later "switch levers" and attempt to drive ARPA by with usage-based billing and up-selling into larger accounts.

Note that the most recent two years, 2015-2017, appear to represent a "Goldilocks" period of both high net account growth and solid ARPA growth.
This figure shows the relative growth of B2B, B2C and B2A (Any) business model sub-indices. Each sub-index “branches” from the primary SEI as it achieves statistical significance relative to the overall data set, which we define as a minimum of 25 constituents. By starting each new sub-index branch with the value of the base index, they become easier to compare.

Much like basic cohort analysis, this is an effort to display how the past effects the present. For example, while the B2B sub-index has experienced the sharpest growth trajectory in recent quarters, it is still clearly recovering from the trough period of 2012-2013. Both ARPA and net new accounts were depressed for B2B companies during this period of corporate retrenchment.
For B2B companies, growth rate is the leading indicator of a company’s success. In the software sector, for example, a company that grows less than 20% annually has a 92% chance of failure (McKinsey). Successful B2B companies must scale sales teams, add new product editions and upsell paths, pursue international markets and larger enterprise accounts, and optimize their business models by taking on usage-based pricing. Their biggest challenges include systems constraints and conflicting systems of record.

For B2C companies, net user growth is the key metric. Successful B2C companies increase subscriber acquisition rates with rapid pricing experimentation, increase retention and ARPA by tailoring offerings based on behavioral insights and willingness to pay, and increase capture rates by taming the complexity of electronic payments. Their challenges include relatively high churn rates owing to poor pricing and packaging decisions, fickle consumer behavior and/or lost revenue owing to poor payment and acquisition systems. The B2C companies in our study had the fastest growth rate in 2015, but have tapered more recently.

Over the past year (ending in March 2017), B2B and B2C companies in the SEI have growth rates of 20% and 9% respectively (this is a slight cooldown for B2C companies over the previous year). Growth in the B2A space, which in this index comprises many companies in the media and telecommunication industries, is currently at 14%.
SEI subindices for Corporate Services, Telecommunications, SaaS and Media. Each sub-index is launched starting from the value of the main SEI when 25 constituents are available. Note that not every SEI constituents falls into one of these categories. SaaS was the first sub-index; underperforming the main index in 2013-14 but recently caught up and exceeded the main index. Recently more sub-indices have launched and most are close to the performance of the main index.
Which industries are thriving in the Subscription Economy? As a subscription billing and finance SaaS company based in Silicon Valley, Zuora has a significant customer base of other software vendors -- both SaaS natives and on-premise vendors switching to recurring revenue models. As a result, SaaS was the first sub-index -- which underperformed the main index in 2013-14, but recently caught up and exceeded the main index. In the last 6 months (ending in March 2017), SaaS companies have been relatively unaffected by the slowdown in US GDP, while media and telecommunication companies have slowed slightly along with the broader market.

As Zuora’s client base has expanded and diversified, more sub-indices have launched. Most of these new sub-indices perform close to the performance of the main index. Early evidence suggests that corporate services are underperforming against the median growth rate, but later editions of this study will confirm this.

GROWTH RATES:
(LAST 12 MONTHS)

SaaS growth: 23%
Telecommunications growth: 9%
Media growth: 10%
Corporate Services growth: 5%
Size matters in the Subscription Economy. The sub-index made up of $100M+ constituents has
been the highest performing since its inception in 2014. In contrast to start-ups, these larger companies
have more resources, more distribution, more new acquisitions, more channels to grow. As a result, they
benefit from the network effects mentioned earlier in this study.

For start-ups, the real challenges appear to lie after the initial sub-million dollar “honeymoon”
growth period. As seen in the figure, the $1M to $20M revenue band has the most challenging growth
rate. After the first product has been defined and initial funding has been received, this is a time when most companies are defining the actual size of their market, which can vary widely. According to McKinsey, only 28 per-
cent of Internet-services companies reach $100 million in revenue.

Over the last 6 months, the largest companies grew at an acceler-
ated rate compared to the prior 6 months, while smaller companies all saw their growth rates decline slightly.

**AVERAGE ANNUAL GROWTH: (LAST 12 MONTHS)**

- <$1M: 18%
- $1M-$20M: 18%
- $20M-$100M: 14%
- $100M+: 28%
At its most basic level, churn refers to the proportion of total subscribers who leave during a given time period. Churn can result from any number of reasons: weak customer service, a poorly upgraded product, a better offer from the competition, business failure, etc.
In order for revenue to recur, customers must renew at a rate that outpaces churn, which can effectively determine the size of a company. Therefore, reducing churn by investing in high-quality services, sticky features, and customer success is fundamental to every subscription-based business strategy.

In addition, reducing churn rates is an imperative not only because of the initial lost revenue, but because of cohort opportunity costs -- successful accounts grow larger over time. Unsurprisingly, churn rates are higher for B2C and lower for B2B. Digital B2C companies (including media) have large numbers of individual users who frequently churn due to payment challenges, credit card issues, lapsed interest or competition. B2B companies (which in the SEI is weighted more heavily towards software) benefit as their solutions become more embedded into stable, growing corporate accounts.

Average annual churn rates in the SEI are generally between 20 and 30 percent. Among the business models, churn is highest for B2C and lowest for B2B companies. For industries, churn is highest in media and lowest in SaaS. Over the past six months, B2C churn rates have lowered, while other verticals have seen their churn rates edge up slightly.

<table>
<thead>
<tr>
<th>CHURN RATES: (LAST 12 MONTHS)</th>
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<tbody>
<tr>
<td>B2B: 26%</td>
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<tr>
<td>B2C: 35%</td>
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<tr>
<td>B2A: 27%</td>
</tr>
<tr>
<td>Corporate Services: 35%</td>
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<tr>
<td>Telecommunications: 29%</td>
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<tr>
<td>SaaS: 25%</td>
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<tr>
<td>Media: 36%</td>
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</table>
The Subscription Economy Index now includes EMEA and North America specific sub-indexes, beginning in Q1 of 2017 with one year of history dating back to Q1 2016. In the last year EMEA and North America indices grew almost exactly the same amount: around 22%. However, in North America growth was faster in the first six months and cooled somewhat in the second 6 months. In EMEA, the first 6 months were extremely slow, followed by a much faster period in which it caught up with North America.

This acceleration in growth corresponded with generally higher growth rates across the Euro zone, as evidenced by a rise in Euro area GDP growth rate over the same period.
In short, the Subscription Economy in Europe is clearly on the ascent. Over the past six months, European subscription companies (a new SEI category) have caught up to their American counterparts’ growth rate of 22%. This is remarkable because European economic growth rates overall have lagged US growth rates for much of the past decade.
CONCLUSION

Recurring revenue-based businesses in the Subscription Economy are not guaranteed success, but if they focus relentlessly on extending average customer lifetimes by maximize ARPA and net account growth, while minimizing churn rates, they are more likely to achieve the same or faster growth rates covered in this study. Future studies in this series will consider best practices in three core subgroups: B2B, B2C, and large enterprises undergoing digital transformation.

Subscription Economy Index Methodology

The Subscription Economy Index (SEI) tracks the organic growth of subscription businesses by reflecting aggregated, anonymized, system-generated activity on the Zuora subscription management service between January 1, 2012 and March 30, 2017. To measure average organic recurring revenue growth, Zuora used a weighted average of system activity of over 365 constituents who had been live on the Zuora platform for at least two years. Because the SEI growth rate is computed as a weighted average, it reflects the typical growth rate of Zuora’s customers’ revenue, not the rate at which Zuora’s customer base is growing. Sub-indices of the SEI follow the same exclusions and must include a minimum of 25 constituents.

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FOOTNOTE / SOURCES

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https://fred.stlouisfed.org/series/PNFI

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McKinsey, “Grow Fast or Die Slow”
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Introduction

The Subscription Economy Index (SEI) measures the growth in the volume of business for subscription-based products and services. The SEI is based on anonymized, aggregated, system-generated activity on the Zuora billing service, and is intended to be indicative of the direction of the subscription economy as a whole. The SEI includes not only the main index but also a set of explanatory metrics that provide insight into the sources of growth (Growth Factors), as well as specialized indices focusing on particular business segments (Sub-Indices).

The index itself is an indicator that increases (or decreases) at the same percentage rate as the average volume of activity observed in tenants on the Zuora service. Such tenants are known as constituents of the index, for reasons that will be made clear below. Like many financial and economic indicators, the precise value of the index is nominal and defined by convention. In particular, the SEI is defined to have a value of 100 on the historical date January 1st, 2012. After that time, each percentage change in the index corresponds to the same percentage change in the activity volume of an average constituent. So when the index climbed from 100 to 105, it means that on average the constituents of the SEI had increased their activity volume by 5% over that time. When the index later climbs from 110 to 115, that corresponds to only 115/110 = 4.5% growth.

The SEI as a Measure of Organic Growth

As will be described in detail below, the SEI is designed so that it measures the organic growth of the constituents in the index and not the growth in the number of constituents. At its simplest, that means that the addition of constituents to the SEI does not make it go up, in and of itself. Because the index grows at a rate that is the weighted average of the growth rates of the constituents, adding constituents to the SEI only dilutes the weight assigned to all the other constituents. For that reason, adding constituents only makes the index go up if the new constituents’ growth rates are higher than the average growth rate of the pre-existing cohort. Similarly, when constituents leave the SEI that does not necessarily cause the index to go down. A constituent leaving the pool may be associated with contraction in that constituent prior to departure if the tenant leaves the Zuora service due to business failure at the owner company, but that is not necessarily the case.

The SEI also removes the impact of non-organic growth in the system activity. Non-organic growth, for these purposes, means any increase in the activity in the Zuora service that is not reflective of the changes in the underlying fundamentals of the company owning the tenant in question. The most common cases of non-organic changes in activity are account migration from another billing system to the Zuora service and voluntary decommissioning of a tenant by a company that was using the billing service. In contrast, declines in activity resulting from business failure remain part of the index calculation. These issues will be described in more detail below.

Criteria for Index Constituents

Borrowing a term from stock market indices, a tenant on the Zuora service that produces activity used for calculating the SEI is referred to as an index constituent. Not every tenant on the Zuora billing system will be an index constituent at any given time. The criteria for inclusion is simply a minimum length of time that a tenant must have been live on the Zuora billing system: The main purpose of this minimum is removing the effect of non-organic activity growth from the index calculation, as described above. Other considerations are removal of seasonality, and ignoring high rates of activity growth from insignificant base values. As described below, most companies using the Zuora billing service become index constituents after approximately two years live on the system. A total of 353 constituents met the criteria and were used to calculate the SEI when it was first released in 2016.

Burn-In Period

In order to remove the effect of account migration from other billing systems, a minimum burn-in period of one year is applied to every tenant on the Zuora billing system. That means that the first year of system activity for a constituent is simply ignored and never used as part of any calculation. The one year burn-in period also removes whatever growth comes immediately after a new company launch, when Zuora is the original billing system for a new product. This is sensible because high growth rates measuring growth from an insignificant base level are usually not sustainable in the long run. The burn-in period for a constituent may be longer than one year whenever there is known or suspected to be significant account migration from other systems even after this time. Note however that Zuora does not have perfect information about these events, and some migration of accounts from another billing platform may not be excluded (however, any extreme outliers will be removed as an outlier, as described below.)
Calculation Period

As will be described in more detail below, revenue for the SEI is measured in a one year rolling window. The purpose of the one year window is to remove the impact of seasonality. After the burn-in period, the next year of system activity for a constituent is used to establish the baseline for the measurement of future growth. As a result, a typical tenant using the Zuora service is first used as an index constituent when their one quarter growth is calculated one year and 5 quarters after they went live on Zuora system.

Removal of Index Constituents

Decommissioning of tenants and the causes are tracked in the Zuora CRM system. System activity for a tenant is suspended from the SEI calculation beginning in whatever quarter their decommissioning is noted, and whenever the reason is other than business failure. Business failure decommissionings are allowed to remain in the SEI throughout the decommissioning as this reflects organic contraction on the tenant activity, while voluntarily decommissioning tenants are removed as that is a case of non-organic change in the activity. Note that this may fail to exclude migration of accounts from the Zuora system that preceded the acknowledgement of decommissioning; such migration off the Zuora system would appear as negative growth and may influence the SEI calculation (however, any extreme points will be removed as an outlier, as described below.)

Post-Live Invoice Conversion

Usually the migration of accounts and invoices from another billing system to Zuora occurs before or immediately after a tenant goes live on the platform. Occasionally a company converts accounts and invoices to the system at a later date. Whenever such a conversion is known to occur, the corresponding quarter(s) of system activity will be removed from the SEI calculation for those companies. The data points for those companies will be filled as necessary with the average of the quarters before and after the conversion. Note that Zuora does not always have complete information about these events and it possible that some post-live revenue conversion may go into the index calculation and would appear as growth (however, any extreme points will be removed as an outlier, as described below.)

Multi-Tenant and Multi-Entity

In cases where a single parent company operates either multiple entities or multiple tenants in the Zuora system, the system activity for each entity or tenant is treated as a separate constituent for purposes of SEI calculations including burn-in, calculation and churn. A separate tenant is the specific case of multiple entities operating with fully separate product catalogues, databases etc. The base date for beginning the burn in period on a tenant or child entity is the later of the customer go-live date and the earliest date for which system activity for the tenant or entity is first processed.

Calculating Constituent Growth

Once a tenant on the Zuora service becomes an index constituent its activity is calculated every quarter with a one year rolling window. Many subscription businesses’ activity are subject to seasonality, although the precise nature of the seasonal effect varies significantly. Using a one year window for SEI calculations removes the effect of seasonality. This means that if the SEI increases (or decreases) over any quarter it is because that quarter was better (or worse) than the same quarter one year prior, not the quarter immediately preceding it.

The activity measure for SEI calculation is the one year prior total of Invoice Item amounts generated from recurring and usage Rate Plan Charge objects in the Zuora object model database. One time charges are excluded from the calculation, as the SEI is intended to reflect the growth in recurring activity. Whether Invoice Items are for recurring, usage or one time activity is given by the Rate Plan Charge object linked to the Invoice Items in the model. Note also that any activity a constituent makes that is outside the Zuora system is ignored by the SEI calculation. A consequence of this is that in cases where a division of a large corporation uses Zuora for a single product line then that constituent is treated as if it were a small company, independent of the larger organization.

Once the activity of a tenant in the SEI has been calculated, the growth calculation for the SEI is the quarterly change in the one year trailing activity expressed as a percentage. That is, the quarterly growth for a constituent is calculated as:

\[ G^Q_{\text{constituent}} = \frac{A^Q_{\text{constituent}}}{A^{Q-1}_{\text{constituent}}} - 1 \]

where \(A^Q_{\text{constituent}}\) represents the one year trailing activity ending with the quarter denoted \(Q\) and, and \(A^{Q-1}_{\text{constituent}}\) is the same but for the year ending with the prior quarter.

Average Growth and Updating the Index

The increase/decrease of the SEI over any period in time is the average of the growth in activity for constituents who make up the SEI at that time. However, the average growth used is not the simple average (or mean) – rather it is amount weighted average, subject to certain constraints.

Outlier Removal

The first step taken in calculating the average is to remove outliers, those constituents in the SEI having the largest increases or decreases in activity for each quarter. Outliers are defined as the top and bottom 5% of companies in the SEI. The actual number to remove is rounded up to the nearest whole number, so for example if there were 100 constituents in the index then the top and bottom 5 companies are removed, but if there are 101 in the index then the top and bottom 6 companies would be removed. Removing outliers helps to insure that even if such companies’ system activity remains in the SEI and do in fact do have extreme changes in their activity, then those changes will not influence the index.

Weighting by Volume of Activity

In addition to reflecting what happens to a “typical” constituent, the SEI is meant to reflect the amount of growth in the overall Subscription Economy outside of the Zuora service and the opportunities that are available to creators of and investors in Subscription Economy companies. For this reason, the weighted average used in the SEI growth calculation is weighted by the total amount of activity each tenant has, so that companies with higher activity take more weight in the average. (Note the weighting is by the baseline amount of activity for each constituent, but not the growth in activity that is being averaged.) This is similar to the way that stock market indices are weighted by the market capitalization of their constituents and for the same reason: the indices are meant to represent the overall size of the market and the opportunity available to investors, so it is weighted more towards larger entities.

However, complete reliance on amount weighting may fail to reflect what is typical if a few very large constituents dominate the activity measured by the SEI. For this reason the weight of any single constituent in the weighted average is limited to 5% of the total. In case any constituent would take more than 5% of the average weight in the SEI (or an SEI sub-index) based on their total amount of activity, then that weight is capped at 5% and the remaining weight is distributed proportionally to the other constituents in the pool; the process is iterated until all constituent weights are at or below 5%.

Minimum Number of Constituents

Taken together, the outlier removal and weighting method determine the minimum number of constituents for calculating the SEI or any sub-index of the SEI (for which the same rules apply.) Capping weights at 5% implies there must be no less than twenty constituents. However, the twenty constituents must be available after outlier rejection, described above. The number of constituents to remove for the top and bottom 5 percentiles is rounded up to the nearest whole number, so that for more than twenty constituents the two highest and two lowest activity growth numbers are removed from the average. This means the minimum possible number of constituents to calculate the SEI or one of its sub-indices according to these rules is twenty four, and the SEI uses a minimum of twenty five for simplicity.

Index Update

Given the growth of all constituents over the prior quarter and the weights to use in the average, the average growth is simply the sum of all the constituents’ growth rates multiplied by their weight (note that all the weights add up to one, so this is a proper weighted average.) One plus the average growth rate is then multiplied by the prior index level to arrive at the new index level. That is,

$$SEI^Q = SEI^{Q-1} \times (1 + G^Q)$$

where $SEI^Q$ is the new index level, $SEI^{Q-1}$ is the index level after the last quarterly update, and $G^Q$ is the average constituent growth over the most recent quarter.

Growth Factors

The SEI measures the amount of growth in the Subscription Economy, but a single indicator does not give insight into what is driving it. A related set of metrics help to explain the sources of that growth. These metrics are called the Growth Factors of the SEI. Like the percentage change in activity used in the SEI calculation, the Growth Factors are averages of percentage changes in other activity based measurements. Unlike the SEI, the Growth Factors are not used to update an index – they are simply provided as explanatory information each quarter. The growth factors use a simple two step decomposition to explain why the SEI went up (or down) in any given quarter.
ARPA and Net Account Growth

If the total amount of a company’s activity go up that means at least one of two things must have happened: Either the number of accounts generating the activity went up, or the amount of activity for existing accounts went up. The total of invoice item amounts is analogous to the accounting measure of revenue, so it is referred to using the accounting term Average Revenue Per Account or ARPA. This is the first level of the SEI Growth Factor decomposition: overall activity growth is decomposed into growth in ARPA and growth in the number of accounts. The latter is referred to as Net Account Growth, to distinguish it from specifically new (added) accounts. Changes in ARPA are closely related to upsells and downsells: If ARPA is growing, then upsells and price increase must be outweighing downsells and discounts.

To calculate the growth factors for ARPA and Net Account growth, the number of accounts with activity in the past year is measured on each quarter end date for all the constituents. ARPA is calculated simply as annual activity divided by the number of accounts. Next, the quarterly percent changes in ARPA and the number of accounts is calculated for all constituents (similar to the calculation for quarterly percent change in overall annual activity, described above.) Finally, the averages of ARPA growth and Net Account Growth are calculated using the same weights as the SEI (overall activity weighting, subject to constraint.) These averages are the Growth Factors for ARPA and Net Account Growth. When combined with the SEI change for any time period, these show whether SEI growth (or declines) was driven by increases/decreases in activity on existing accounts or by changes in the overall number of accounts, or both.

Note that for a single tenant in the SEI the following relationship holds exactly:

\[(1 + G^Q) = (1 + G^Q_{ARPA}) \times (1 + G^Q_{#of Accounts})\]

where \(G\) indicates the percentage growth of the measurement indicated for some quarter. Also, for low levels of growth it is approximately true that:

\[G^Q_{ARPA} = G^Q_{#of Accounts} + G^Q_{#of Accounts}\]

Meaning, when the growth is small the total growth is close to the sum of the two components. However, the SEI growth factors are averages over many constituents and the multiplicative relationship shown above will only be approximately correct. This is because an average of a product of two sets of measurements is not the same as the product of the averages of the same two sets of measurements – the relationship is nonlinear. The additive relationship is even less accurate for the Growth Factors, as it involves one more level of approximation. So the growth of the SEI is not simply the sum of the ARPA and Net Account Growth Factors, though it will often be close. And comparing these two Growth Factors still gives a powerful explanation into what caused the SEI to grow in any given quarter.

Account Growth and Churn

The net change in the number of accounts can be further decomposed into two components: addition of new accounts, and loss or churn of existing accounts. These additional growth factors provide insight into what is driving net changes in the number of accounts. This extra level of decomposition is important because new account additions and losses to churn are driven by two different processes: New additions are the result of marketing and sales efforts; while churns are driven by satisfaction/dissatisfaction of the existing customer base. Companies calculate growth and churn of accounts in many different ways. The SEI growth factors use a simple calculation that makes results comparable across the wide variety of companies in the SEI, and is consistent with the calculation of the SEI main index and the other Growth Factors. The definition are as follows:

1. New account additions are defined as any account that had activity in the last quarter, but had no activity the prior year (the prior four quarters.)
2. The Account Growth rate is defined as the number of new accounts added in a quarter divided by the number of accounts at the start of the quarter.
3. Churns are defined as an account that had no activity in the last year (4 quarters), but last had activity in the quarter prior to that. To explain churn another way, suppose an account had activity in Q2 some year; if Q2 of the next year passes and the account has not had activity again at all in that year, then the account is considered a churn at in Q3 (up to one year and one quarter after the last activity.)
4. The churn rate is defined as the number of churns in a quarter divided by the number of accounts at the start of the quarter.

Many companies use different definitions for these metrics, and those choices are often made based on the typical customer lifespan, re-signup behavior etc. Naturally, any definition applied to a diverse pool of companies will not be perfectly suited to every type of tenant in the zuora service. The SEI definitions were chosen to remove the effects of seasonality and for consistency with the annual activity calculations used by the SEI.
Relationship to Revenue based Retention

Many subscription companies report revenue based retention and churn, and it is also common to include the impact of upsells in this metric. This is useful because this one metric captures much about the health of the existing customer base. To calculate an amount that is analogous to revenue based retention including upsells from the SEI Growth Factors start by noting that account based retention is simply 100% minus account based churn. So the SEI analog to revenue based retention including upsells is calculated by multiplying the account based retention by one plus ARPA growth. That is:

\[ R = (1.0 - C) \times (1 + G_{ARPA}) \]

where \( C \) is the churn rate and \( G_{ARPA} \) is the ARPA growth rate as described above.

Sub-Indices

In addition to providing insight about the direction of the Subscription Economy overall, it is useful to know about the differences between various categories of companies. To support this, the SEI method is also applied to specific subsets of the constituents. Borrowing terminology from stock market indices these constituent groups and their associated measurements are known as sub-indices. Once the classifying criteria for a sub-index are defined, the same methodology is applied to that pool of constituents as is used for the main SEI. The only requirement for creating an SEI sub-index is that the category must have to the minimum number of 25 constituents, as described above.

A variety of classifications are used to define sub-indices. Examples include the Business Model, Industry, Vertical, and Revenue Band. Additional classifications may be applied in the future, or combinations of classifications. These classifications are provided by the data vendor Inside View and applied to the billings system measurements via Zuora’s CRM system.