

Part 2: Annual GrubHub KPI and P&L summary from 2016 to 2020

	2020	2019	2018	2017	2016
P&L					
Net income (in thousands)	(\$155,861)	(\$18,566)	\$78,481	\$98,983	\$49,557
Percentage Change	-739%	-124%	-21%	100%	
Select KPIs					
Active Diners	31,417,000	22,621,000	17,688,000	14,462,000	8,174,000
Percentage Change	39%	28%	22%	77%	
Daily Average Grubs	622,700	492,300	435,900	334,000	274,800
Percentage Change	26%	13%	31%	22%	
Gross Food Sales (in millions)	\$8,669	\$5,914	\$5,057	\$3,784	\$2,998
Percentage Change	47%	17%	34%	26%	

The declining Profit and Loss of GrubHub Inc. are driven by structural problems for the five years from 2016 to 2020. The elevated positive performance of Key Performance Indicators (KPIs) or Key Business Metrics expressed in the SEC filings contribute little to understanding revenue performance. There is a disconnect between the selected KPIs because their performance is positive and elevated, but the Net Income P&L doubled in 2016 and then fell dramatically afterward. Also, the rate of change is volatile in the Net Income P&L compared to the three KPIs. More importantly, we should expect a positive correlation of the KPIs to rise with Net Income P&L or the KPIs to fall with Net Income P&L. Instead, we have a negative correlation.

Key Performance**Description****Indicators (KPIs)**

Active Diners	The number of unique diner accounts from which an order has been placed in the past twelve months through the Company's platform. Active Diners from the GrubHub Platform are included from the Merger Date of Seamless, which is August 8, 2013.
Daily Average Grubs	The number of revenue-generating orders placed on the platform is divided by the number of days for a given period.
Gross Food Sales	The total value of food, beverages, taxes, prepaid gratuities, and any delivery fees processed through the Company's platform.

In addition, the SEC filing admits to double counting for the Active Diners KPI[±], which may exaggerate the volume of customers. Moreover, the business model is not difficult to copy, so there is no shortage of competitors for GrubHub. Hence, feature engineering the dataset to find the appropriate drivers or P&L is more critical. The dampened low-level P&L and recent downtrend need better KPIs to focus on customer satisfaction. If I had access to internal data, then customer repeat rate, the average ticket order size, and the lifetime value of the customer, i.e., LTV would be my first pass of the dataset. In other words, satisfied customers will likely return to GrubHub and order more. Annual surveys of repeat customers would also express their satisfaction because it costs less to keep existing customers than to acquire new ones.

[±] "Some of our diners could have more than one account if they were to set up multiple accounts using a different e-mail address for each account. As a result, it is possible that our Active Diners metric may count certain diners more than once during any given period." Page 29 in <https://www.bamsec.com/filing/156459021009522?cik=1594109>

In summary, GrubHub's performance in the past summary is positioning itself as an acquisition target given its competitive environment with UberEATS, DoorDash, Postmates, and many more. If I had access to more data about the restaurant industry, then I would like to feature engineer some explanatory variables of GrubHub's revenue performance in the past 5 years. Nonetheless, the restaurants as intermediaries and the delivery drivers to which GrubHub outsources their business risk can simultaneously select GrubHub and its competitors. For example, there are few to no obstacles for restaurant owners and delivery drivers in picking both GrubHub and UberEATS simultaneously for daily operations. Therefore, the KPIs need better feature engineering, such as the empirical, not rationalized method in Part 1 of my case study, and to focus on the overall theme of customer satisfaction above its competitors.