# HENKEL

Amazon Chargeback Analysis

## Get to know Team 6!



### Smridhi Mangla

Born and raised in India, I graduated in 2016 with my Bachelor's in Computer Science. To date, I have over 3 years of professional experience working as a Business Analyst. During this time I have been exposed to a variety of analytical tools and have worked within the industries aviation, retail, and financial services.



## Stephanie Wallace

Born and raised in Connecticut, I graduated from UCONN in 2010 with my Bachelor's in Actuarial Science & Mathematics and a Minor in Economics. With over 10 years of Financial Services and Insurance experience, I have spent the last 6 years working for Travelers as a Director supporting the **Business Performance** Analytics team within Risk Control.



## **Hanbo Shen**

Born and raised in China, I graduated in 2019 with my Bachelor's in Marketing Management. To-date, I have professional experience working for Lifeng in the marketing research department where I have utilized a variety of analytical tools to provide statistical insight and to perform competitive analysis.



## Xiaoyue Wang

Holding a Master's Degree in Arabic Language and Literature, I worked as both an international news journalist and a Tech column editor. With a career path shift to business analytics, I endeavor to combine data science with my qualitative and macroscopic analysis background to tell the relevant data-driven story with helpful business insights.



**Zhihao Jin** 

Born and raised in China, I graduated in 2018 with my Bachelor's in Economics and Finance. Following my undergraduate career, I embarked on a Master's in Financial Analysis which I completed in 2019. My professional experiences to date include time spent as a **Business Analyst working** for a Commercial Bank. Securities Company, and most recently, an insurance company.

## **Last Time**

- 95% of chargebacks driven by 4 key issue types:
  - o PO On-Time Accuracy (44%)
  - ASN Accuracy (22%)
  - Prep Bagging (22%)
  - Rejected PO Rate (6%)
- 93% of chargebacks fall within 2 vendor codes:
  - o DIAW7 (58%)
  - o SUNFQ (35%)
- Identified 4 major wholistic chargeback drivers; issue type, vendor code, fulfillment center (city & state), and brand/product

# Close to \$3M of Chargebacks Over Past 12 Months, 20% Reversed

#### **Rolling 12 Month Chargeback Breakout:**

Chargeback Status	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020	Sep 2020	<b>Grand Total</b>
Charged	\$76,496	\$82,118	\$91,885	\$134,246	\$80,082	\$140,647	\$219,234	\$248,122	\$375,854	\$311,183	\$208,513	\$351,655	\$2,320,034
Dispute denied	\$0	\$0	\$2	\$858	\$3,540	\$8,405	\$4,750	\$172	\$0	\$0	\$0	\$30,884	\$48,609
Reversed	\$197	\$2,091	\$4,429	\$4,582	\$1,809	\$13,104	\$131,134	\$134,762	\$20,660	\$30,258	\$25,261	\$35,317	\$403,605
Dispute approved	\$0	\$0	\$0	\$0	\$0	\$130	\$126,568	\$72,111	\$0	\$0	\$0	\$0	\$198,808
Chargebacks	\$76,693	\$84,208	\$96,316	\$139,686	\$85,432	\$162,284	\$481,685	\$455,166	\$396,514	\$341,442	\$233,774	\$417,856	\$2,971,056
Remaining Charges	\$76,496	\$82,118	\$91,887	\$135,103	\$83,622	\$149,051	\$223,984	\$248,294	\$375,854	\$311,183	\$208,513	\$382,539	\$2,368,643
Reversed Charges	\$197	\$2,091	\$4,429	\$4,582	\$1,809	\$13,233	\$257,701	\$206,872	\$20,660	\$30,258	\$25,261	\$35,317	\$602,413
% Reversed Charges	0%	2%	5%	3%	2%	8%	53%	45%	5%	9%	11%	8%	20%

#### **Key Definitions**

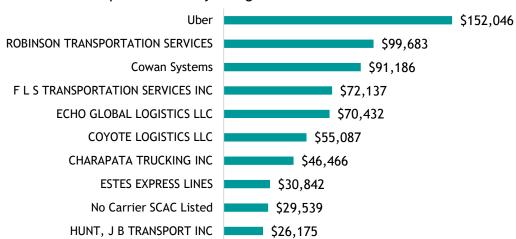
- Chargebacks: summation of financial charges with a chargeback status of either "Charged", "Dispute Denied", "Reversed", and "Dispute Approved".
- Reversed Charges: summation of financial charges with a chargeback status of either "Reversed" or "Dispute Approved".
- Remaining Charges: Chargebacks minus Reversed Charges.
- Subsequent analyses will focus on the create date time period from Oct 2019 to Sep 2020 unless otherwise noted.

# \$900K+ Chargeback Dollars Due to Not Filled PO On-Time Accuracy Sub-Type

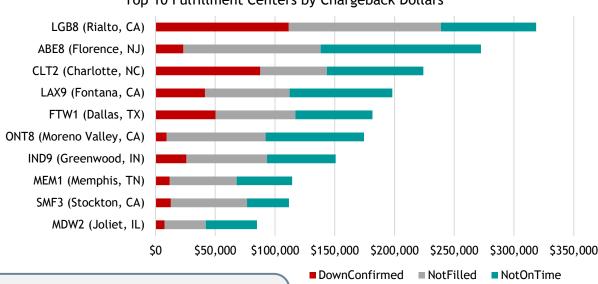
#### PO On-Time Key Breakout:

Issue Sub-Type	% Chargebacks	Chargebacks	% Issues	Issues	Avg. \$ / Issue
NotFilled	43%	\$938,993	13%	3,589	\$261.63
NotOnTime	39%	\$860,995	81%	22,294	\$38.62
DownConfirmed	18%	\$403,206	<b>6</b> %	1,614	\$249.82
Grand Total	100%	\$2,203,193	100%	27,497	\$80.12

Top 10 Carriers by Chargeback Dollars for Not On-Time



Top 10 Fulfillment Centers by Chargeback Dollars



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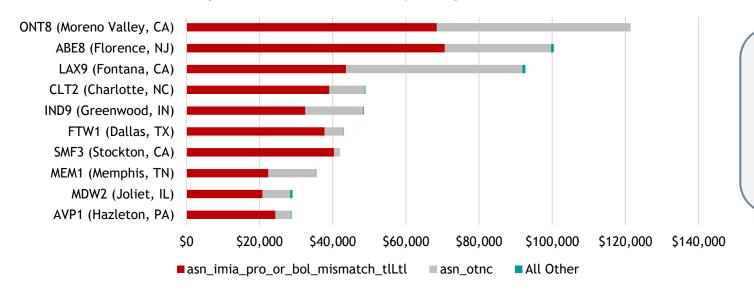
- <u>Uber:</u> LAX9 (Fontana, CA), LGB8 (Rialto, CA), ABE8 (Florence, NJ)
- Robinson Transportation Services: ONT8 (Moreno Valley, CA), CLT2 (Charlotte, NC), FTW1 (Dallas, TX)
- Cowan Systems: LAS1 (Henderson, NV)

# Two Sub Issues Drive Close to 100% ASN Accuracy Chargeback Dollars

#### **ASN Accuracy Key Breakout:**

Issue Sub-Type	% Chargebacks	Chargebacks	% Issues	Issues	Avg. \$ / Issue
asn_imia_pro_or_bol_mismatch_tlLtl	65%	\$423,001	53%	4,563	\$92.70
asn_otnc	35%	\$225,685	46%	4,012	\$56.25
asn_imia_unit_count_mismatch	0%	\$1,600	1%	46	\$34.79
asn_imia_invalid_expiration_date	0%	\$1,561	0%	12	\$130.10
asn_imia_missing_expiration_date	0%	\$327	0%	29	\$11.28
asn_imia_invalid_or_missing_arn	0%	\$6	0%	1	\$5.53
Grand Total	100%	\$652,180	100%	8,663	\$75.28

Top 10 Fulfillment Centers by Chargeback Dollars



Top two issue sub-types have relatively consistent frequency, with "mismatch carrier appointment data" 65% higher from an average dollar per issue perspective.

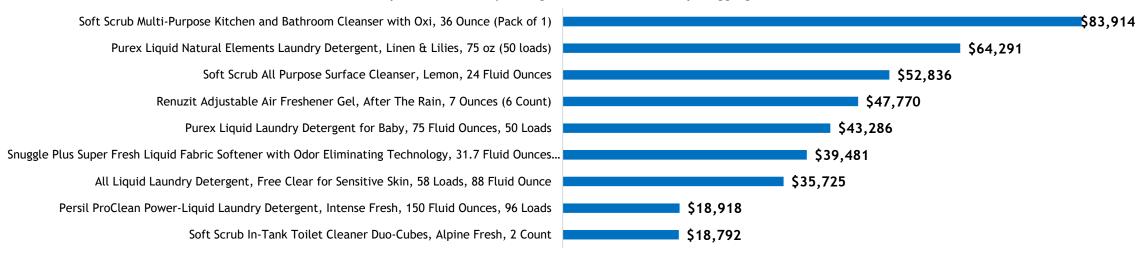
# 64% of Prep-Bagging Chargebacks Driven by 10 Products

#### Prep-Bagging Key Breakout:

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	Brand	% Chargebacks	Chargebacks	% Issues	Issues	Avg. \$ / Issue			
	SOFT SCRUB	29%	\$192,688	19%	2,193	\$87.87			
	PUREX	22%	\$146,345	26%	2,971	\$49.26			
	PERSIL	16%	\$106,489	23%	2,680	\$39.73			
	ALL DETERGENT	11%	\$70,404	10%	1,202	\$58.57			
	SNUGGLE	10%	\$65,597	<b>7</b> %	771	\$85.08			
	RENUZIT	<b>9</b> %	\$57,115	12%	1,346	\$42.43			
	ZOUT	4%	\$26,890	4%	479	\$56.14			
	Grand Total	100%	\$665,527	100%	11,642	\$57.17			

Amazon charges on average \$0.50 per bag per item; when fulfilling high-volume or frequently shipped orders, this cost quickly adds up.

Top 10 Products by Chargeback Dollars for Prep-Bagging



## 18% of Rejected PO Rate Chargebacks Driven by All Mighty Pacs Laundry Detergent

#### Rejected PO Rate Key Breakout:

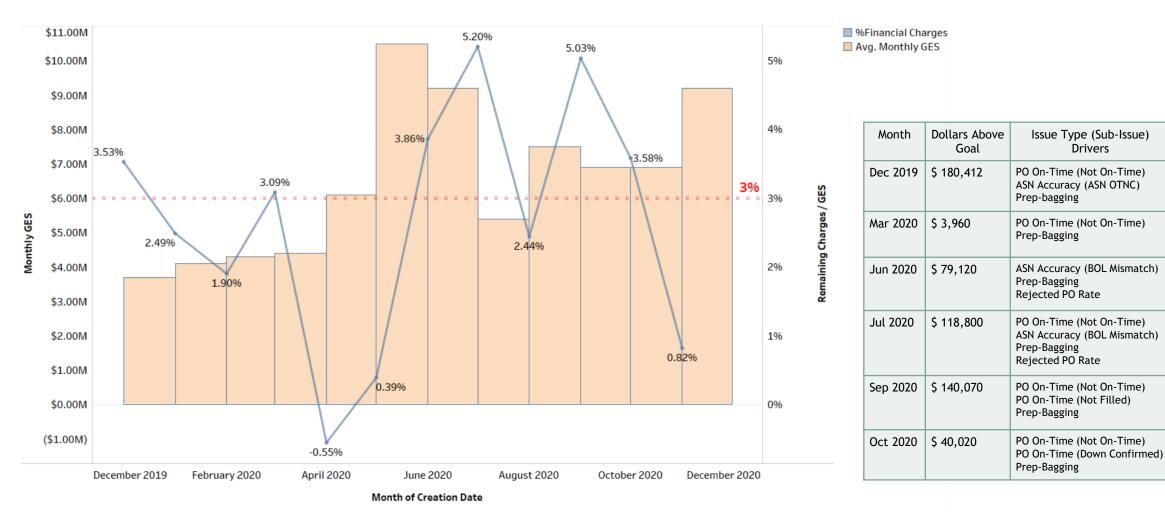
Vendor code	Brand	% Chargebacks	Chargebacks	% Issues	Issues	Avg. \$ / Issue
	ALL DETERGENT	42%	\$222,042	14%	705	\$314.95
SUNFQ	SNUGGLE	8%	\$43,150	14%	701	\$61.56
	SUNFQ Total	50%	\$265,193	28%	1,406	\$188.61
	PERSIL	19%	\$100,276	19%	959	\$104.56
	PUREX	11%	\$58,554	14%	690	\$84.86
	20 MULE TEAM	7%	\$35,487	13%	665	\$53.36
DIAW7	SOFT SCRUB	5%	\$28,024	13%	663	\$42.27
DIAWY	COMBAT	5%	\$25,079	<b>7</b> %	357	\$70.25
	RENUZIT	3%	\$16,265	5%	251	\$64.80
	ZOUT	0%	\$549	0%	24	\$22.87
	<b>DIAW7 Total</b>	50%	\$264,234	72%	3,609	\$73.22
Grand Total		100%	\$529,427	100%	5,015	\$105.57

ALL Detergent averages close to \$315 per issue; which is two times as high as the overall average for this issue type.

Top 10 Products by Chargeback Dollars for Rejected PO Rate



## 6 Months Greater Than 3% Goal



## Recommendations for Chargeback Avoidance / Minimization

#### PO On-Time Accuracy:

- Track % of confirmed products that arrive within the purchase window; if the trailing four week average is greater than 90%, Amazon will waive this chargeback on any orders not delivered on-time within the current week. Analyze carriers in conjunction with this metric to re-evaluate go-forward utilization.
- Put a few days allowance on receive dates when filling out purchase orders.
- Request Amazon provides carrier information for more than just "Not On-Time" issue sub-type.

#### **ASN Accuracy:**

• Ensure an ASN is submitted on a recently shipped order before it reaches the fulfillment center by verifying recent orders in Vendor Central. If missing upon review, submit one manually before Amazon receives the shipment to avoid an ASN related chargeback.

## Prep-Bagging:

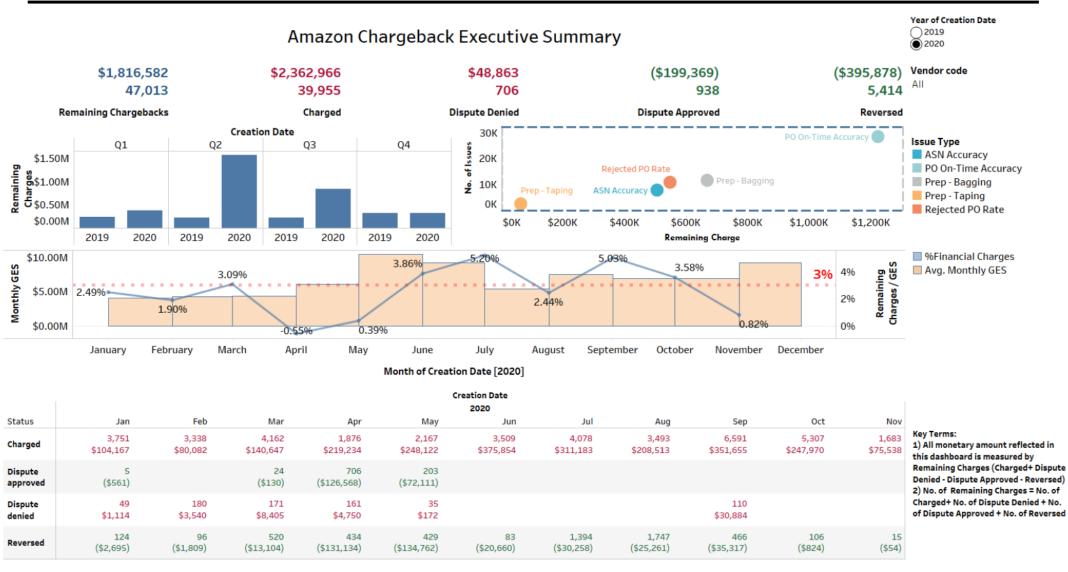
 Verify Soft Scrub multi-purpose and all-purpose liquid cleansers, Purex liquid laundry detergents, and Renuzit adjustable air freshener gel follow Amazon prep-bagging specifications.

#### Rejected PO Rate:

• Maintain inventory records and make sure to accept what orders you can and backorder the orders you cannot fulfill; Amazon asks that you accept or backorder at least 80% of an order to avoid the chargeback.

11/30/2020 Team 6 10

## **Dashboard View #1**



## **Dashboard View #2**

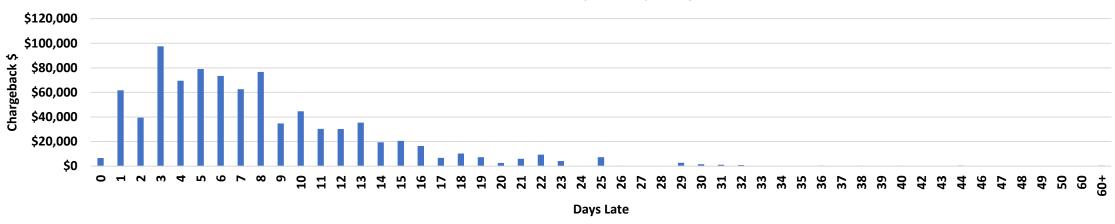
#### Month, Year of Creation Date Chargeback Root Cause Report Remaining Charges **Related Carriers** Related Fulfillment Centers Related Products Related Sub-Issue Types **Remaining Charges** \$3,300K 462 94 135 10 \$2,697,551 Vendor code **Geographic Distribution of Fulfillment Center** Carriers Not On Time ✓ (AII) ✓ DIAW7 ✓ DIKIA **ESTES EXPRESS LINES** ✓ G3FSW \$364 (\$1,417) 0 ✓ HEXY5 ✓ HEZSS \$33 Status Cowan Systems ✓ (AII) COYOTE LOGISTICS LLC ✓ Charged \$845 ✓ Dispute approved FLS TRANSPORTATION SERVICES INC ✓ Dispute denied ✓ Reversed \$20K \$30K \$40K \$50K \$60K \$90K \$100K \$110K © 2020 Mapbox © OpenStreetMap Remaining Charges Issue type Subtypes of Non-Compliance **Products** ✓ (AII) ✓ ASN Accuracy ✓ PO On-Time Accuracy 25K PO On-Time Accuracy B0787CVDCT ✓ Prep - Bagging NotOnTime 1500 B0195WQFI0 ✓ Prep - Taping 20K **BOOZCCUTXY** ✓ Rejected PO Rate 0 B000RPXSDY 15K Prep - Bagging 1000 B014REP50U BOONI088TE Notes: B00UZJFMCW 10K In the carrier graph, size of the B01NBJZ2F8 triangle represents for avg. days 500 late; in the fulfillment center map, **B016BAOKK8** 5K **ASN Accuracy** size of dots represents for the Prep - Tapin B000KL1LDE asn\_imia\_pro\_or\_bol\_mismatch\_tlLtl amount of remaining charges; in B07RJ7KTB7 all other graphs, size of shape Rejected PO Rate represents for remaining charges SN Accuracy per item of issue. asn imia missing expiration date \$0K \$20K \$40K \$60K \$80K \$100K \$120K \$140K \$160K \$180K \$200K \$220K \$240K \$260K \$300K \$500K \$600K \$700K \$800K \$900K \$100K \$200K \$400K **Remaining Charges** Remaining Charges

# APPENDIX

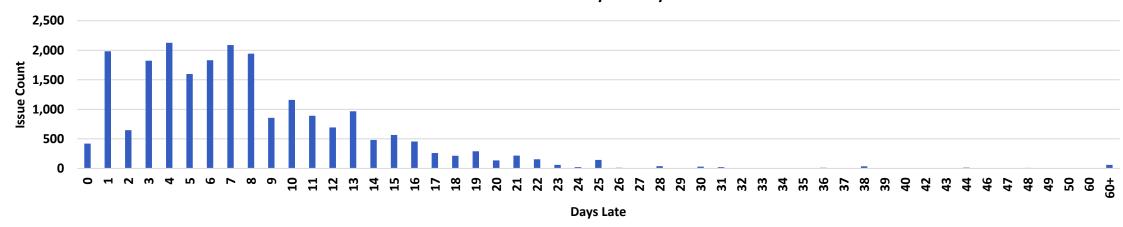
Additional Analytical Views

# PO On-Time Accuracy - Not On-Time: Days Late Distribution

#### Not On-Time Distribution of Days Late by Chargeback \$



#### Not On-Time Distribution of Days Late by Issue Count



# PO On-Time Accuracy - Not On-Time: Intersection Fulfillment Center with Carrier

#### Intersection of Top 10 Fulfillment Centers with Top 10 Carriers:

		Top 10 Carriers								
Top 10 Fulfillment Centers	Uber	Cowan Systems	ROBINSON TRANSPORTATION SERVICES	ECHO GLOBAL LOGISTICS LLC	F L S TRANSPORTATION SERVICES INC	COYOTE LOGISTICS LLC	CHARAPATA TRUCKING INC	No Carrier SCAC Listed	HUNT, J B TRANSPORT INC	ESTES EXPRESS LINES
ONT8 (Moreno Valley, CA)	\$0	\$0	\$24,353	\$0	\$1,801	\$23,638	\$29,671	\$36	\$0	\$64
CLT2 (Charlotte, NC)	\$15,251	\$11,162	\$18,776	\$5,823	\$5,181	\$4,526	\$3,632	\$5,482	\$3,404	\$34
FTW1 (Dallas, TX)	\$6,103	\$2,598	\$13,094	\$24,048	\$1,029	\$484	\$30	\$6,867	\$1,777	\$419
AVP1 (Hazleton, PA)	\$1,947	\$3,901	\$10,108	\$2,216	\$6,804	\$0	\$1,725	\$720	\$0	\$1,499
IND9 (Greenwood, IN)	\$6,130	\$5,632	\$8,714	\$8,677	\$6,978	\$4,923	\$1	\$2,438	\$0	\$1,012
ABE8 (Florence, NJ)	\$22,637	\$12,691	\$7,804	\$11,708	\$27,265	\$8,226	\$797	\$3,690	\$8,957	\$356
MDW2 (Joliet, IL)	\$3,401	\$2,091	\$3,434	\$4,603	\$5,167	\$4,005	\$8,029	\$3,202	\$0	\$5,109
LAS1 (Henderson, NV)	\$1,314	\$45,394	\$116	\$273	\$381	\$0	\$0	\$1,600	\$0	\$706
LAX9 (Fontana, CA)	\$53,235	\$0	\$0	\$7,674	\$7,774	\$0	\$161	\$1,776	\$0	\$798
LGB8 (Rialto, CA)	\$35,130	\$4,426	\$0	\$2,061	\$4,480	\$6,573	\$443	\$404	\$0	\$332