

Why We Micro Forecast

- In certain cases, using a more manual (Excel spreadsheet-based) approach to forecasting is appropriate. This is called a Micro Forecast
 - This is especially true for international or new domestic markets
 - These markets require a more nuanced approach due to:
 - Incomplete or missing market size and fare data
 - Forecast models calibrated to established domestic markets historical data
- Because a Micro Forecast does not include the entire network of flights, some system-level interactions and impacts will be missed

Micro Forecast Process



Build Schedule / Select Aircraft

- Build Schedule
 - Select good local schedule times
 - Review Other Airline schedules
 - High Utilization
 - Maximize connect opportunities
- Select Aircraft
 - Select smallest aircraft without weight restriction
 - Review Other Airline schedules

Build Connections

- Build Connections
 - Review Minimum Connect Time (MCT) and Maximum Connect Time
 - Select markets with high volume traffic and provide round-trip service
 - Consider Circuity

Build Market Size

- Sources uses to estimate O&D market sizes
 - Internal data based on similar route characteristics (proxy)
 - United States Department of Transportation (BTS)
 - DB1B, T100
 - World Tourism Organization (WTO)
 - International Air Transport Association (IATA)
 - United States International Air Travel Statistics (I-92)

Apply Growth / Stimulation

- Growth / Reduction Rates
 - Review macro economic factors
 - Historical and projected GDP
 - IATA forecasts growth rates from its survey of member airlines
- Service Stimulation
 - Introducing or reducing service in a market will increase or decrease passenger demand

Determine Market Share

- Market Share by O&D
 - Local market share estimated by
 - Stand alone QSI model spreadsheet
 - Seat share
 - Similar route characteristics (proxy)
 - Flow market share estimated by
 - Stand alone QSI model spreadsheet
 - Similar route characteristics (proxy)
- Using business judgment and knowledge of market behavior is required in determining market share

Spill / Recapture / Diversion

- Should use stand alone spreadsheets for best results

Apply Fares

- Sources used to estimate average fare for O&D
 - Internal data based on similar route characteristics (proxy)
 - United States Department of Transportation (BTS)
 - Published Fares
- Need to convert O&D fares to Onboard fares using prorate factors

Benchmark Results

- Benchmark
 - Compare Micro Forecast results to similar current routes
 - Load Factor, Yield, Revenue per Available Seat Mile (RASM)
 - Apply Stage Length Adjustment (SLA) is needed
 - To calculate cost and profit, best to have the Finance department “price out” forecast

Micro Forecast Spreadsheet Example

- Forecast LGA-AFS segment (fictional)

Traffic								
	<u>Market size</u> <u>(Pax PDEW)</u>	<u>Growth</u>	<u>Stimulation</u>	<u>Market size</u> <u>(Pax PDEW)</u>	<u>Onboard</u> <u>Share</u>	<u>Pax Adj</u> <u>Factor</u>	<u>Onboard</u> <u>Demand</u> <u>Pax Per</u> <u>Operation</u>	<u>Onboard Pax</u> <u>Per</u> <u>Operation</u>
<u>Local</u>								
LGA-AFS	266.8	4.7%	33%	372.2	20.2%	1.00	75.2	72.1
<u>On-Line Flow</u>								
BOS	71.3	4.7%	0%	74.7	0.4%	1.00	0.3	0.3
LAX	116.2	4.7%	0%	121.7	5.0%	1.00	6.1	5.8
MIA	70.5	4.7%	0%	73.8	12.5%	1.00	9.2	8.8
SFO	119.2	4.7%	0%	124.8	4.0%	1.00	5.0	4.8
YYZ	45.0	4.7%	0%	47.1	0.7%	1.00	0.3	0.3
							20.9	20.1
<u>Inter-Line Flow</u>								
BUF	2.6	4.7%	0%	2.7	10.0%	1.00	0.3	0.3
CLT	33.0	4.7%	0%	34.6	1.8%	1.00	0.6	0.6
							0.9	0.9
<u>Code-Share Flow</u>								
ORD	219.4	4.7%	0%	229.7	1.0%	1.00	2.3	2.2
MCO	228.4	4.7%	0%	239.1	1.5%	1.00	3.6	3.4
							5.9	5.6
Total Flow							27.7	26.6
Beyond LGA Interline Single Connects							14.0	14.0
Total Onboard PDEW							116.9	112.6

Micro Forecast Spreadsheet Example

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Revenue											
	O&D Fare	O&D Adj Factor	O&D Fare	Onboard Fare	Stage Length	Main Leg Prorate	O&D Revenue	Onboard Revenue	Onboard RPMS	UP / Down Revenue	UP / Down RPMS
Local											
LGA-AFS	\$410	1.27	\$519	\$519	4,048	1.00	\$37,391	\$37,391	291,835	\$0	0
On-Line Flow				Prorated			Prorated		Prorated		
BOS	\$326	1.27	\$412	\$375	187	0.91	\$118	\$107	1,159	\$11	54
LAX	\$417	1.27	\$528	\$311	2,475	0.59	\$3,077	\$1,815	23,611	\$1,262	14,436
MIA	\$326	1.27	\$412	\$301	1,090	0.73	\$3,648	\$2,663	35,813	\$985	9,643
SFO	\$478	1.27	\$605	\$351	2,586	0.58	\$2,894	\$1,679	19,377	\$1,216	12,378
YYZ	\$412	1.27	\$521	\$448	366	0.86	\$155	\$134	1,207	\$22	109
				\$319			\$9,893	\$6,399	81,167	\$3,495	36,621
Inter-Line Flow											
BUF	\$414	1.27	\$524	\$456	0	0.87	\$119	\$119	1,057	\$0	0
CLT	\$426	1.27	\$539	\$437	0	0.81	\$260	\$260	2,414	\$0	0
				\$442			\$379	\$379	3,471	\$0	0
Code-Share Flow											
ORD	\$288	1.27	\$364	\$317	0	0.87	\$698	\$698	8,916	\$0	0
MCO	\$333	1.27	\$421	\$366	0	0.87	\$1,261	\$1,261	13,923	\$0	0
				\$347			\$1,959	\$1,959	22,839	\$0	0
Total Flow							\$12,231	\$8,736	107,477	\$3,495	36,621
Beyond LGA Interline Single Connects	\$383	1.27	\$484	\$329	0	1.00	\$6,780	\$4,607	56,672	\$0	0
Total Onboard PDEW				\$450			\$56,402	\$50,734	\$455,984	\$3,495	\$36,621

Summary

- Micro Forecasting
 - Best estimate given limited data
 - Allows feedback from other internal groups
 - Allows fast and easy adjustment in iterative process
 - Using this standard approach allows for easy comparison of another Micro Forecast