



First Capital Index

2019, January through June

Business Activity Index for Rochester, NY and Monroe County

A faded, grayscale image of the Rochester skyline, showing various buildings and a body of water in the foreground.

Produced and Published for the Greater Good by First Capital Business Solutions

Research Team

Hiram Hernandez, *Chief Executive Officer*, First Capital Business Solutions

Dr. James W. Maddison, *Research Associate*, Center for Popular Research, Education and Policy

Ken Signorelo, *President*, Results, Inc.

Joseph Civiletti, *Director of Accounting*, First Capital Business Solutions

Table of Contents

CONTENTS

Overview	1
Insights & Conclusions	1
Methodology	2
Available Data	2
Monthly Index Structure	2
Business Categories & Geographic Regions	3
Measurement & Results	3
Strengths and Threats to Validity	4
Comparable Studies	4
Strengths	4
Threats to Validity	5
First Capital Business Solutions	5
First Capital Index, 2018, Q1 & Q2.....	6
First Capital Index, 2019, Q1 & Q2.....	7
2019 vs 2018 Index Comparison	8
Appendix.....	9
Geographic Region Categories: Classification of Zip Codes.....	9
Business Categories: Classification of MCC Codes	9

OVERVIEW

The First Capital Index[®] measures sales using credit card processing data, specifically monthly total sales volume and total sales transactions, from a wide range of businesses. The dataset draws from hundreds of local businesses and divides into two sets of categories. One set is based on Merchant Category Codes (MCC)¹ data, and the other is geographic categories using zip code data within Monroe County². The Index serves as a tool to examine trends in consumer spending activity over time. Its goal is to help inform business decisions and public policy using these trends.

INSIGHTS & CONCLUSIONS

The First Capital Index captures valuable sales trends that confirms seasonal fluctuations within Monroe County. The sales trends are seen across the varying business categories and demonstrate how consumer behavior shifts throughout the year. This is an analysis of the credit card sales commercial activity between the first two quarters of 2018 and 2019 for Monroe County.

Sales trends vary month to month. Using December as a baseline, the index showed a reduction in sales in January with February and March showing a substantial rebound. April and June maintain a steady rate of sales, with May showing a substantial increase in line with what was seen during March. This data demonstrates a positive correlation between seasons changes and consumer spending. As the weather increases, consumer spending increases as well.

Sales trends also vary year to year. The index shows that 2019 stays consistent with 2018 in terms of seasonal variance and progression into the summer, but slightly outperforms 2018 in April and May. The Retail and Service business categories show substantial growth heading towards the middle of 2019. Despite the growth, the Retail business category underperformed compared to 2018. Conversely, the Service category overperformed by showing a greater growth going into summer 2019 than 2018. The Eating Places category saw the greatest variance from 2018, with a cumulative index dropping from 121% in 2018 to 97% in 2019.

All regions saw steady increases in sales leading towards the middle of 2019, with the Northwest outperforming all other regions, and Center City underperforming. The Northwest had the worst dip in January and the biggest gain in May, giving that region the most variance throughout the first half of 2019. Whereas, the Center City had the smallest fluctuations during the period.

The First Capital index shows a steady connection between seasonal changes and sales trends. It also demonstrates how sales trends vary throughout the year between an array of business categories. The data points collected throughout the 2018 and 2019 fiscal years demonstrate valuable sales trends within Monroe County.

¹ The Merchant Category Codes that make up each Category Index can be seen in the Appendix

² The zip codes that make up each geographic region and map can be seen in the Appendix

METHODOLOGY

The First Capital Index[®] is a measure of consumer spending growth and decline, broken down by business type and geographic region. This index shows the percentage change in credit card sales activity, which is measured using total sales volume and number of individual sales, from the current month to the previous month. The total volume and number of individual sales are combined with a weighted formula that determines the index value.

AVAILABLE DATA

First Capital Business Solutions provides credit card services to over 1,300 businesses across 120 Merchant Category Codes that accept credit cards from customers. As a result, we are able to conduct analytics on over \$375 million in sales and over 13 million transactions in annual business activity in the Retail, Restaurant, and Service industries. These data are from both debit and credit card point of sale transactions, and do not include cash transactions. The structure of the data we built our index from is as follows:

- **MCC** – The Merchant Classification Code, a universal set of codes all businesses that accept credit cards register under;
- **Location** – Targeting every zip code within Monroe county, categorized into appropriate geographic regions; and,
- **Processing Timeframe** – Using month-by-month data, ensuring that credit card processing data only includes a full month of processing by excluding months the merchant began or ended accepting credit cards.

The businesses that are clients of First Capital Business Solutions are located in the Rochester, New York metropolitan area; throughout the mid-Atlantic region; and, in the Tampa Bay, Florida metropolitan area.

MONTHLY INDEX STRUCTURE

Credit card processing data for each business, using sales volume and number of sales, is considered for inclusion in an index for a given target month. If included, the sales of the business in the target month will be compared to the previous month. If sales increased, it will contribute towards the index a value greater than one. If sales decreased, the business will contribute towards the index a value less than one. All included businesses will be grouped to collectively show if the target month saw an increase in consumer spending (a number greater than one) or a decrease in consumer spending (a number below one). This process will be calculated first for businesses grouped by MCC category and second for businesses grouped by location. This process will be repeated for each month, building out a time series.

Not all businesses that fit a location or MCC category will be included in the Index. The index will only include businesses that processed the month before the comparison month, and also processed the month after the target month. The reason is because businesses will, from time to time, begin or end processing with First Capital Business Solutions, creating sales data that represents a partial month.

As an example, if the index is being calculated for June, and a business has sales data for June and May, but not for April, the business likely started processing in May. If the business were included in the index for June, it will contribute a large increase towards the index, but that is only because it processed for a

week or two in May and a full month for all of June. If instead the business processed in April, even if only for a few days or weeks, that will indicate that May sales data represents a full month, allowing for a proper comparison between May and the target month of June.

BUSINESS CATEGORIES & GEOGRAPHIC REGIONS

The First Capital Index[®] is then calculated into several sub-indexes, utilizing MCC Code and ZIP Code information to processes sales data. This results in the following sub-indexes:

Business Categories:

- **Retail Business Category Index:** Retail businesses which are operationally defined as places of business in which merchandise is sold primarily to final consumers;
- **Eating Places Business Category Index:** This index will be places where people pay to sit and eat meals that are cooked and served on the premises; and
- **Service Business Category Index:** This index will be businesses that perform work, but do not produce a tangible commodity.

Geographic Regions:

- **Center City Business District Index:** covering the downtown and surrounding areas;
- **Northeast Index:** from the Genesee River, extending to the eastern edge of the county;
- **Northwest Index:** covering the remaining half from the river to the west; and
- **South Index:** comprised of the remaining portion of Monroe County.

MEASUREMENT & RESULTS

The First Capital Index results show several types of information. The results use a number that does not represent a dollar amount or count of transactions. Instead, it's a relative number where the beginning of the index must always be 1.00 (a baseline) and all subsequent numbers are relative to the initial number.

First is the **Index Value**, which shows the growth or decline in credit card sales from the preceding month. For example, a value of 1.06 for March represents an increase of 6% compared to February. The formula for the index is as follows:

$$1.00 - [(Month Y - Month X) / Month X]$$

where: Month Y = preceding comparison month; Month X = calculated target month

The **Cumulative Index** shows the growth or decline since the beginning of the Index. For example, a Cumulative Index of 102% in August shows growth of 2% compared to December of the previous year.

Finally, the **Merch Ct** gives the number of merchants included in that particular month and category (based on the methodology outlined above in the section Monthly Index Structure).

STRENGTHS AND THREATS TO VALIDITY

The First Capital Index[®] Has several strengths and threats to validity based on its design and data set. Readers should carefully consider these factors. First, let's examine similar surveys and studies.

COMPARABLE STUDIES

The United States Department of Commerce releases a similar index called the Advance Monthly Sales for Food and Retail, which is a measure of consumer's personal consumption across retail industries and tracks growth or deceleration of personal consumption spending, which makes of two-thirds of the annual United States economy. The Association for Investment Management and Research Journal lists the *Advance Monthly Sales for Food and Retail Index* among the Top 10 vital economic indicators.

The *Advance Monthly Sales for Food and Retail index* released monthly by the United States Department of Commerce is a:

...stratified random sampling method is used to select 4,700 retail and food services firms whose sales are then weighted and benchmarked to represent the complete universe of over three million retail and food services firms.³

The United States Department of Commerce also recently partnered with MetLife to produce the *Small Business Index: The Voices of Small Business Owners*. This quarterly report is a summary of a survey of 1,000 small business owners. There are 10 questions in the survey. Rochester is not a target city in this survey.

STRENGTHS

One strength of the First Capital Index is the use of empirical point-of-sale data over a period of time. The other studies described above and similar studies tend to use subjective or survey data. This makes the Index more robust than a 10-question survey of small-business owners. The index is supported with longitudinal empirical point-of-sale data from businesses.

Another strength of the Index is its focus on relative changes in credit card spending over time. This avoids attempting to report dollar amount estimates. Reporting dollar amounts requires extrapolating a small amount of data across a given population, adding to the number of assumptions and estimates needed for the study. Business owners tend to be more interested in relative changes in order to gauge upward or downward trends.

The population of First Capital Business Solutions customers is a robust sample among companies in Monroe County, and the intention is for this number to grow (while rescaling the index to maintain reliability). The Index is also more than retail and food service, and thus **represents more than two thirds of the local economy**. It also provides geographic and industry-specific indicators of economic trends of First Capital Business Solutions customers.

³ U.S. Census Bureau, "Advance Monthly Sales for Retail and Food Services, December 2017", Release Number: CB18-05, https://www.census.gov/retail/marts/www/marts_current.pdf.

THREATS TO VALIDITY

The First Capital Index[®] is not a randomized sample because the companies in the index are First Capital Business Solutions clients, and this potentially introduces selection bias. This selection bias will lead to issues like leaving out credit card spending at large national retailers. However, the clients chosen are a random sampling among current First Capital Business Solutions clients.

The index controls for a full month of processing, and this introduces a one-month lag for new businesses before their credit card sales data begins to be reflected in the index. This weakness is minor because the index is best used as a longitudinal measure of economic development, rather than a snapshot in time.

FIRST CAPITAL BUSINESS SOLUTIONS

First Capital Business Solutions is a credit card processor in Rochester, New York specializing in comprehensive payment processing solutions for businesses accepting credit cards, including point-of-sale payment processing. First Capital Business Solutions has unique access to point-of-sale trend data that can provide data about economic activity in the greater Rochester metropolitan area.

These data can be analyzed in myriad ways to provide business owners, policy makers, and other key stakeholders with valid and reliable information about business activity trends in neighborhoods across the metropolitan area. This analysis can be used as one source of information to make business and policy decisions from a data-driven context.

First Capital Business Solutions has access to vital data analytics at the individual transaction level, such as customer age, zip code, gender, etc... but this data is only accessible to individual merchants. This level of data is available on our credit card processing platform as an extra service.

First Capital Index, 2018 -- By Business Category

	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18
Eating Places													
Index	1.00	0.81	1.03	1.19	0.95	1.05	0.99						
Cumm Index	100%	81%	103%	123%	116%	122%	121%						
Merch Ct	142	144	149	150	148	145	146						
Retail													
Index	1.00	0.76	1.12	1.29	0.86	1.37	0.83						
Cumm Index	100%	76%	112%	144%	124%	170%	141%						
Merch Ct	139	143	147	151	153	153	153						
Service													
Index	1.00	1.08	0.99	1.06	0.99	1.04	1.05						
Cumm Index	100%	108%	99%	105%	104%	108%	114%						
Merch Ct	110	121	126	123	129	128	132						

First Capital Index, 2018 -- By Region

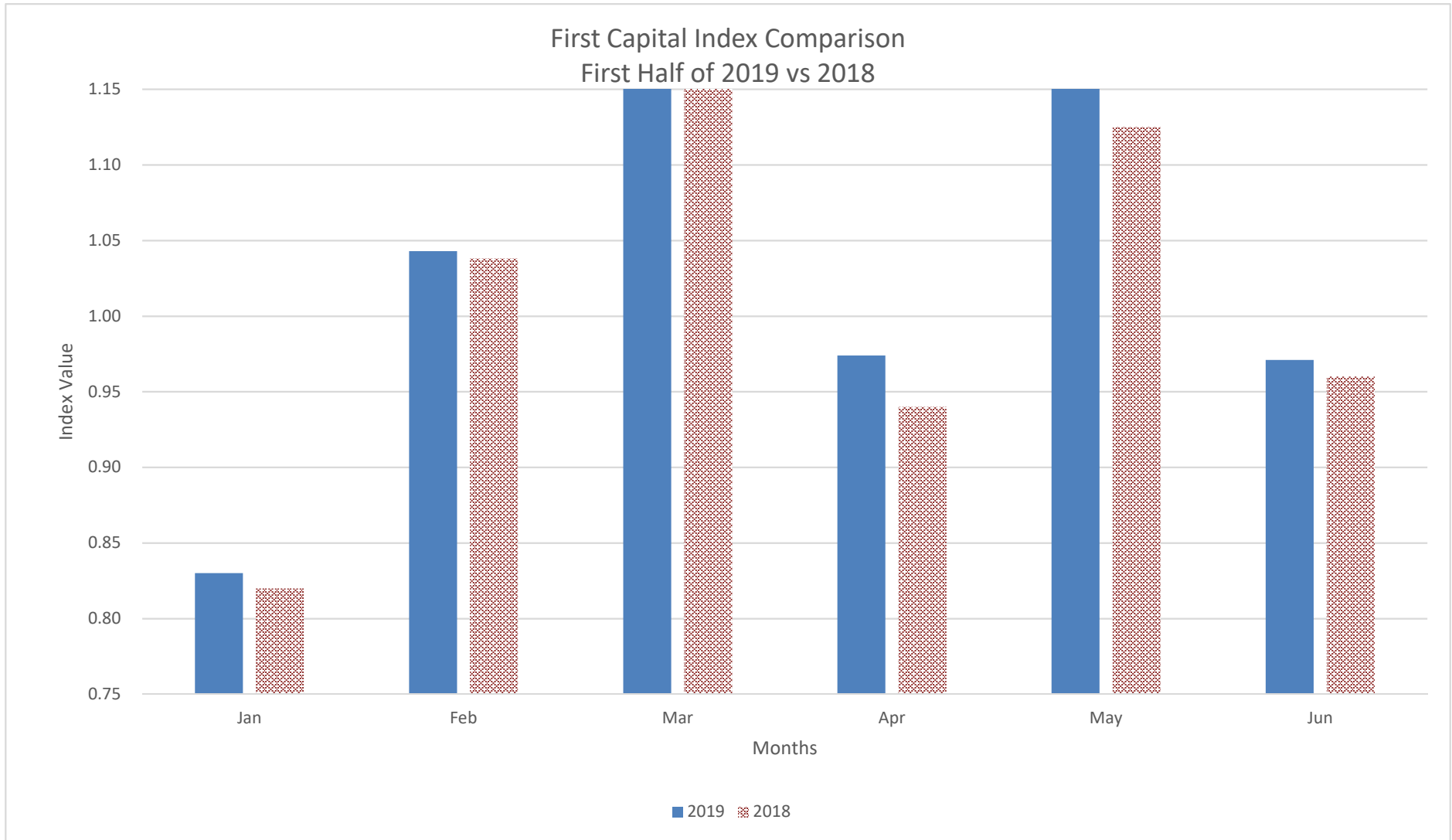
	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18
Center City													
Index	1.00	0.87	1.04	1.18	0.93	1.03	1.02						
Cumm Index	100%	87%	104%	122%	113%	117%	119%						
Merch Ct	141	143	152	153	156	154	158						
Northeast													
Index	1.00	0.84	0.98	1.21	0.92	1.13	0.93						
Cumm Index	100%	84%	98%	119%	110%	124%	116%						
Merch Ct	71	72	76	73	80	81	83						
Northwest													
Index	1.00	0.76	1.06	1.19	0.95	1.37	0.90						
Cumm Index	100%	76%	106%	125%	119%	163%	147%						
Merch Ct	104	110	116	120	117	112	112						
South													
Index	1.00	0.85	1.08	1.20	0.97	1.07	0.96						
Cumm Index	100%	85%	108%	129%	125%	134%	129%						
Merch Ct	81	82	88	88	87	89	87						

First Capital Index, 2019 -- By Business Category

	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19
Eating Places													
Index	1.00	0.80	1.05	1.24	0.89	1.04	1.01						
Cumm Index	100%	80%	84%	104%	93%	97%	97%						
Merch Ct	141	141	145	145	138	138	137						
Retail													
Index	1.00	0.73	1.06	1.22	1.10	1.35	0.92						
Cumm Index	100%	73%	77%	95%	104%	140%	129%						
Merch Ct	134	134	133	131	126	129	132						
Service													
Index	1.00	1.09	1.02	1.15	0.96	1.13	0.99						
Cumm Index	100%	109%	111%	127%	122%	138%	136%						
Merch Ct	115	115	115	113	109	109	108						

First Capital Index, 2019 -- By Region

	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19
Center City													
Index	1.00	0.86	1.05	1.19	0.97	1.04	1.02						
Cumm Index	100%	86%	90%	107%	104%	108%	111%						
Merch Ct	143	143	149	148	137	139	139						
Northeast													
Index	1.00	0.85	1.01	1.25	0.94	1.23	0.93						
Cumm Index	100%	85%	86%	107%	101%	124%	115%						
Merch Ct	72	72	72	74	72	70	69						
Northwest													
Index	1.00	0.77	1.09	1.23	0.96	1.33	0.97						
Cumm Index	100%	77%	83%	103%	99%	131%	127%						
Merch Ct	101	101	100	101	99	102	102						
South													
Index	1.00	0.84	1.02	1.22	1.04	1.10	0.96						
Cumm Index	100%	84%	86%	104%	109%	120%	115%						
Merch Ct	82	82	80	74	72	74	75						



First Capital Index, First Half of 2019 vs 2018 -- All Regions and Categories Combined

	Jan	Feb	Mar	Apr	May	Jun
2019	0.83	1.04	1.21	0.97	1.18	0.97
2018	0.82	1.04	1.19	0.94	1.13	0.96

APPENDIX

GEOGRAPHIC REGION CATEGORIES: CLASSIFICATION OF ZIP CODES

- **Center City Business District:** 14604, 14605, 14607, 14608, 14609, 14611, 14613, 14614, 14619, 14620, 14621
- **Northeast:** 14445, 14526, 14580, 14617, 14618, 14622, 14625
- **Northwest:** 14420, 14464, 14468, 14514, 14559, 14606, 14612, 14615, 14616, 14624, 14626
- **South:** 14428, 14450, 14467, 14472, 14506, 14511, 14534, 14543, 14546, 14586, 14623

BUSINESS CATEGORIES: CLASSIFICATION OF MCC CODES

Retail Businesses	
4457 - Boat Rentals and Leases	5571 - Motorcycle Dealers
4468 - Marinas, Marine Service, and Supplies	5599 - Miscellaneous Auto Dealers
5013 - Motor vehicle supplies and new parts	5611 - Men's and Boy's Clothing and Accessories Stores
5045 - Computers, Computer Equipment, Software	5621 - Women's Ready-to-Wear Stores
5072 - Hardware Equipment and Supplies	5651 - Family Clothing Stores
5094 - Precious Stones and Metals, Watches and Jewelry	5655 - Sports Apparel, Riding Apparel Stores
5099 - Durable Goods, Not Elsewhere Classified	5691 - Men's and Women's Clothing Stores
5131 - Piece Goods, Notions, and Other Dry Goods	5697 - Tailors, Seamstress, Mending, and Alterations
5193 - Florists' Supplies, Nursery Stock and Flowers	5712 - Home Furnishings (Except Appliances)
5198 - Paints, Varnishes, and Supplies	5713 - Floor Covering Stores
5231 - Glass, Paint, and Wallpaper Stores	5718 - Fireplace, Fireplace Screens, and Accessories Stores
5251 - Hardware Stores	5722 - Household Appliance Stores
5261 - Nurseries – Lawn and Garden Supply Store	5732 - Electronic Sales
5310 - Discount Stores	5733 - Music Stores, Instruments, Sheet Music
5331 - Variety Stores	5734 - Computer Software Stores
5399 - Misc. General Merchandise	5912 - Drug Stores and Pharmacies
5411 - Grocery Stores, Supermarkets	5921 - Package Stores – Beer, Wine, and Liquor
5422 - Meat Provisioners – Freezer and Locker	5931 - Used Merchandise and Secondhand Stores
5441 - Candy, Nut, and Confectionery Stores	5932 - Antique Shops
5462 - Bakeries	5940 - Bicycle Shops – Sales and Service
5499 - Misc. Food Stores, Specialty Markets, etc...	5941 - Sporting Goods Stores
5511 - Auto Dealers (New and Used) Sales, Service, etc...	5942 - Book Stores
5521 - Auto Dealers (Used Only)	5943 - Stationery Stores, Office and School Supplies
5532 - Automotive Tire Stores	5944 - Watch, Clock, Jewelry, and Silverware Stores
5533 - Automotive Parts, Accessories Stores	5945 - Hobby, Toy, and Game Shops
5542 - Automated Fuel Dispensers	5947 - Card Shops, Gift, Novelty, and Souvenir Shops
5561 - Recreational and Utility Trailers, Camp Dealers	5949 - Sewing, Needle, Fabric, and Price Goods Stores
	5970 - Artist's Supply and Craft Shops
	5971 - Art Dealers and Galleries

5972 - Stamp and Coin Stores
5975 - Hearing Aids – Sales, Service, and Supply Stores
5992 - Florists
5993 - Cigar Stores and Stands
5995 - Pet Shops, Pet Foods, and Supplies Stores
5996 - Swimming Pools – Sales, Service, and Supplies
5999 - Miscellaneous and Specialty Retail Stores
7641 - Furniture, Furniture Repair, and Refinishing

Travel & Entertainment

7011 - Lodging – Hotels, Motels, Resorts, etc...
7032 - Sporting and Recreational Camps
7033 - Trailer Parks and Camp Grounds
7297 - Massage Parlors
7922 - Theatrical Producers (Except Motion Pictures)
7929 - Bands, Orchestras, and Misc Entertainers
7941 - Commercial Sports, Athletic Fields, etc...
7991 - Tourist Attractions and Exhibits
7992 - Golf Courses – Public
7994 - Video Game Arcades/Establishments
7996 - Amusement Parks, Carnivals, Circuses, etc...
7997 - Clubs: Recreation, Athletic, Country, etc...
7999 - Recreation Services (Not Elsewhere Classified)

Eating Places

5812 - Eating places and Restaurants
5814 - Fast Food Restaurants

Service Businesses

1520 - General Contractors-Residential and Commercial
1711 - Air Conditioning Contractors, Full Service
1750 - Carpentry Contractors
1771 - Contractors – Concrete Work
1799 - Contractors – Not Elsewhere Classified
4121 - Taxicabs and Limousines
4215 - Courier Services – Air or Ground, Freight forwarders
4225 - Public warehousing, Storage
4789 - Transportation Services, not elsewhere classified
4899 - Cable and other pay television
5541 - Service Stations (with or without ancillary services)
5811 - Caterers
5935 - Wrecking and Salvage Yards
6300 - Insurance Sales, Underwriting, and Premiums

6513 - Real Estate Agents and Managers - Rentals
7210 - Laundry, Cleaning, and Garment Services
7216 - Dry Cleaners
7221 - Photographic Studios
7230 - Barber and Beauty Shops
7251 - Repair Shops, Shoe Shine Parlors, Hat Cleaning Shops
7261 - Funeral Service and Crematories
7276 - Tax Preparation Service
7277 - Counseling Service – Debt, Marriage, Personal
7296 - Clothing Rental – Costumes, Formal Wear, Uniforms
7298 - Health and Beauty Shops
7299 - Misc. Personal Services (not elsewhere classifies)
7311 - Advertising Services
7379 - Computer Maintenance/Repair
7523 - Automobile Parking Lots and Garages
7531 - Automotive Body Repair Shops
7534 - Tire Re-treading and Repair Shops
7538 - Automotive Service Shops
7542 - Car Washes
7549 - Towing Services
7622 - Radio Repair Shops
7631 - Watch, Clock, and Jewelry Repair
7692 - Welding Repair
7699 - Repair Shops and Related Services –Misc
7829 - Motion Pictures and Production/Distribution
7832 - Motion Picture Theaters
8011 - Doctors and Physicians (Not Elsewhere Classified)
8021 - Dentists and Orthodontists
8041 - Chiropractors
8042 - Optometrists and Ophthalmologists
8043 - Opticians, Opticians Goods and Eyeglasses
8049 - Podiatrists and Chiropodists
8062 - Hospitals
8099 - Medical Services and Health Practitioners
8111 - Legal Services and Attorneys
8299 - Schools and Educational Services
8398 - Charitable and Social Service Organizations
8911 - Architectural – Engineering and Surveying Services
8931 - Accounting, Auditing, and Bookkeeping Services
8999 - Professional Services (not elsewhere defined)