

CASE STUDY TOPIC:

# Why MCC codes do not help (much) with payment categorization

While speaking with potential clients, we have heard many times: “We have MCCs, so we also have payment categorization, and it works fine”. However in our experience it is slightly more complicated than that. We decided to provide some insight into the power of strictly MCC based categorization and its limits. But before we get started with MCCs, let us clarify why we believe high quality and accuracy categorization matters and why everyone working with it should care.

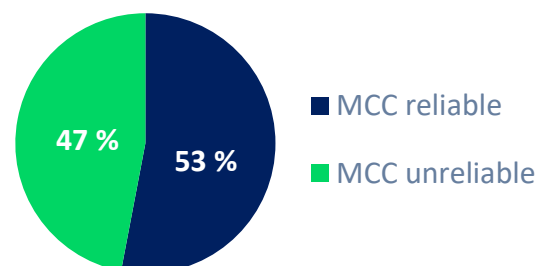
Categorization is important for credit risk scoring and it is the basis for Personal Finance Management (PFM) tools. This is why PFMs are finding their way into banking applications and are becoming a banking standard. PFMs are only as good as the quality of underlying data, and even 80% data coverage is by far not enough to provide clients data insights and become useful.

## What is an MCC code?

The Merchant Category Code is the four-digit code listed in ISO 18245. An MCC is used to classify a business by the types of goods or services it provides. It sounds simple and is exactly what one needs when considering payment categorization.

Yet when we compared our categorization with MCCs we saw that only 53% of transactions could be easily and reliably categorized based on their MCC code.

### Reliability of MCC based categorization



Source: Tapix database 2020

Why is the reliability so low? Let us have a look at the most frequent problems we identified that make MCC usage more difficult than at first glance.

## 1. Too wide or too narrow category

We found out that many MCCs are either very specific or too general. What does this mean?

On one hand, there are MCCs that include various PFM like categories. A good example is MCC “5912 - Drug Stores and Pharmacies” that includes drug stores and pharmacies and few other businesses.

### Transactions falling under MCC “Drug Stores and Pharmacies”

TRANSACTION	MCC CODE	CORRECT PFM CATEGORY
Boots	5912 - Drug Stores and Pharmacies	Drugstore
TETA drogerie		Drugstore
Farmacia Nordpharm		Pharmacy
Farmacia Apoteca		Pharmacy
Dr Max		Pharmacy
Sensiblu		Pharmacy
Mary Kay		Beauty

On the other hand, many airlines, car rentals, hotels chains, and casinos have their own MCC. This does not produce categorization errors; one just needs to treat them separately.

### MCCs assigned to individual companies

MCC	COMPANY
3001	American Airlines
3007	Air France
3008	Lufthansa
3011	AeroFlot
3504	Hilton
3509	Marriott

## 2. MCC is not suitable to be used in categorization

Sometimes MCC captures different aspects of purchase behaviour that we want to capture in categorization and thus is not directly usable. As in the case of MCCs “7399 - Business Services”, “5999 - Miscellaneous & Specialty Retail Stores” that actually covers transactions falling under travel, health, sport, etc; or “5968 – Subscriptions” that contains regular payments of any type including commuting, news, music etc.

### Transactions falling under MCC “5999 - Miscellaneous & Specialty Retail Stores”

TRANSACTION	MCC CODE	CORRECT PFM CATEGORY
Alcohol planet	5999 - Miscellaneous & Specialty Retail Stores	Groceries
Allegro		Shopping Online
Douglas		Beauty
eBay		Shopping Online
Kickstarter		Professional Services
TIDAL		Free time
Walmark		Health

## 3. Franchises and Chains – The Lottery of Codes

One would think that large chains are from the categorization perspective “quick wins” – correctly assigned MCC covering many branches / transactions allowing easy systematic categorization. But it is not that easy since franchises are often independent and selection of a consistent MCC is not a business priority. See the overview of the most frequent MCCs assigned to transactions in various Starbucks branches across Europe.

### MCCs belonging to Starbucks branches

MCC	MCC DESCRIPTION
5812	Eating Places and Restaurants
5814	Quick Payment Service-Fast Food Restaurants
7278	Buying and Shopping Services and Clubs
5541	Service Stations (with or without Ancillary Services)
5499	Miscellaneous Food Stores-Convenience Stores and Specialty Markets
5811	Caterers - Prepare & Delivery

## 4. Wrong Code All-Together

MCCs do not have an impact on retailers’ businesses and they are not visible to the end clients. This has direct impact on the effort put into the correct and accurate selection of MCC. Also, sometimes it may be difficult to decide which MCC fits the most to retailer’s business:

### Examples of incorrect MCC

RETAILER	MCC	CORRECT PFM CATEGORY
Douglas	8931 - Accounting, Auditing, and Bookkeeping Services	Beauty
McDonald's	6513 - Real Estate Agents and Managers - Rentals; Property Management	Food And Drink
PAUL	5994 - News Dealers & Newsstands	Food And Drink
Adidas	5811 - Caterers - Prepare & Delivery	Sport
Nike	5812 - Eating Places and Restaurants	Sport
Tesco	5462 - Bakeries	Groceries
ASDA	6011 - Financial Institutions--Automated Cash Disbursements	Groceries

## Conclusion?

While reading this article one may find more questions than answers. One key takeaway for me is that MCCs were designed for different uses other than for PFM (or Credit Risk) categorization. But keeping in mind a single purpose for categorization, such as PFM, each client may require a slightly different structure of categories as well as keep flexibility to build different use cases on top of categorized data. So how does one deal with that?

### TapiX categorization and tags

RETAILER	CATEGORY	TAGS
Aquacentrum Agricola	Freetime	Freetime Activity, Water Park, Wellness
JuiceBrothers	Groceries	Bio, Healthy Food And Farm Products, Groceries - Other, Healthy Lifestyle, Sustainable
Tesco	Groceries	Hyper-Supermarket
Spotify	Freetime	Movies / Games / Music, Online Freetime, Shopping Online, Subscription

We have chosen to assign all data to 22 categories where every retailer has exactly one category. On top of that we use 350 additional tags where every retailer may have several tags at the same time. This helps us to cover the complexity of categorization and maintain flexibility for various use cases across many clients. If you are interested to learn more, visit us at [www.tapix.io](http://www.tapix.io) or ping us a message.