HVM CAPITAL

@hvmcapital

www.hvmcapital.com

Valuing Taxi Medallions: A Simple Framework

Edition (1) June 1, 2015

CHAPTER 1

Clearing away the fog

HVM Capital, LLC (HVM) has decades of experience in taxicab and capital markets. We thought it might be valuable to publish a simple, step-by-step guide on how to value taxi medallions. As this industry is one of the most complex for the general public to understand, we saw a need to explain the flow of funds supporting taxi medallion values in a straight-forward and uncomplicated manner. Asset value, like beauty, is in the eyes of the buyer or beholder, as the case may be. But generally speaking, an asset value is based on the free cash it produces, the perception as to how many years that free cash will be generated, and a discount rate reflecting the perceived risk. Don't stop reading! This paper is about simplicity, and discounted cash flows will not be mentioned again.

What makes the taxi industry so complicated? Multiple layers of players in the food-chain make it difficult to see how revenue moves from drivers to medallion owners and understand the structure as a whole. Even with our deep expertise in this space, it is challenging to deliver a clear and easily understandable explanation (for deeper analysis of the taxi industry see reports at www.hvmcapital.com).

CHAPTER 2

Reviewing industry complexity

Just for a sense of the complexity – don't worry if your eyes start to glaze over, we will get to simplicity – here is a short description of the moving parts, accompanied by a schematic in Exhibit 1:

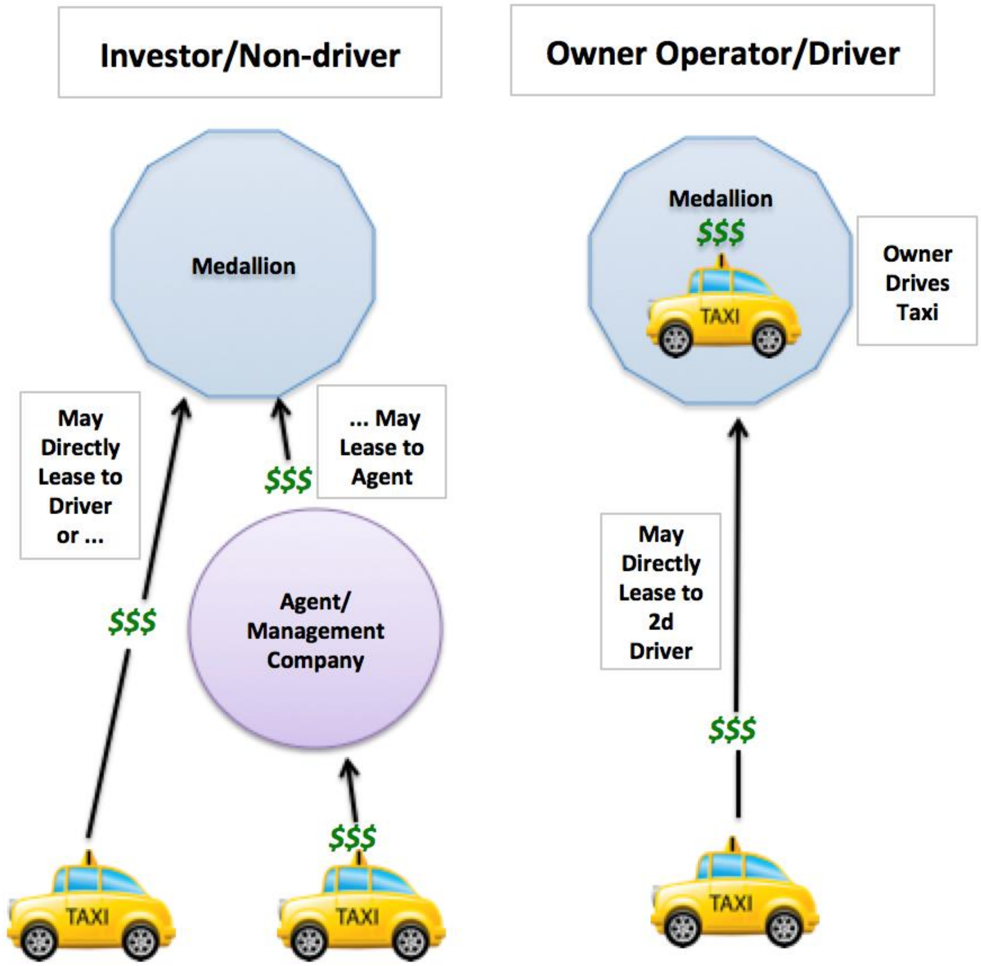
- Medallion owners are divided into non-driving investors – who often own multiple medallions that are either leased directly to drivers or to agents/managers – or an owner-operator who usually owns a single medallion and actually drives the taxi.

- A non-driving investor can be: a) purely passive, simply receiving a monthly fee from an agent, also known as a management company, to whom the medallion is leased; or b) active, managing the medallions in every respect and often leasing and managing those of other owners.
- An owner-operator often leases the medallion and vehicle to a second driver.
- Drivers can also be divided into yearly, monthly, weekly or daily shift categories all with different lease fee schedules.
- Drivers can lease a medallion or can lease both a medallion and a vehicle from the medallion owner.
- Drivers can also finance a vehicle through a management company in exchange for a multi-year lease commitment.
- Another point to understand is that the positions of managers, brokers and lenders can be interchangeable – often playing in all three roles at the same time.
- The fee structures – paid by drivers to either a manager or directly to a medallion owner – can be very different as well, but most cities have caps on lease fees.

Medallion investor/non-driver owners can collect payments under all of these different scenarios. They can collect lease payments directly from drivers or, more rarely, can share the revenue with the drivers. In this scenario, the medallion owner hires the drivers, bears the costs of vehicle depreciation and maintenance, insurance, workers compensation, the carrying costs of the garage where vehicles are parked and maintained and the labor costs of running such an operation. Alternatively, investor owners can collect lease payments from agent/management companies and not have to do or pay for anything. Owner operators/drivers are full time taxi drivers, and bear the costs of their vehicles, insurance, maintenance, depreciation and gasoline, and if they lease to a second driver, they incur additional insurance and workers compensation costs.

The fee structures are very different depending on the city. These fees are dictated by the local municipal rules and regulations.

Exhibit 1 Taxi Medallion Cash Flows



Okay, you get the picture on complexity. Our goal is to bypass this myriad of moving parts and cut to the chase. You will see in Chapter 3 that all of the scenarios described lead to the same bottom line. This is a critical take-away from this paper.

CHAPTER 3

Passive or self-managed medallions – bottom line cash flow the same

Let's begin with a real estate analogy. Mr. Doctor and Mr. Carpenter each makes a cash purchase of a 3-family investment property in Boston at the same purchase price. Mr. Doctor works full-time and outsources the management of the property to a management company. Mr. Carpenter opts to manage the property and perform all of the maintenance and repairs himself.

By the end of the year, Mr. Doctor receives $10,000 from the management company, representing his free cash flow.

Mr. Carpenter has $16,000 at the end of the year. However, the fair market value of his own labor is $6,000. Thus, when comparing the outcomes for Mr. Doctor and Mr. Carpenter, the bottom line result of $10,000 in *free cash flow* for the year is the same after all true operational expenses (including fair market value of ones own labor and time) are taken into account.

Mr. Doctor is an illustration of our medallion investor/non-driver owner and Mr. Carpenter is an illustration of our medallion owner-operator/driver. As you can see, at the end of the day, they both end up at the same "bottom line."

CHAPTER 4

A safe investment?

Taxicab medallions had been one of the safest investments in the USA for over 70 years – steady appreciation in excess of all traditional asset classes. The reason for this historic appreciation and security was that the industry was a monopoly – highly regulated by local municipalities, with a cap on the number of medallions and new competition prohibited. Many cities have not changed their caps since the 1930's despite the population growing significantly over those decades. Taxicab medallion owners enjoyed this protected monopoly with all the attendant economic upside.

Table 1 outlines peak sales values of medallions, reached in the first half of 2014 and the free cash flow and return on asset before debt service.

TABLE 1

	New York	Chicago	Boston
Peak price of medallion sold 2014	$1,300,000	$375,000	$700,000
Free cash flow before debt service	$42,000 [1]	$10,500[2]	$20,000[3]
Return on investment (ROI)	3.2%	2.8%	2.9%

[1] based on owner receiving $3,500 per month from the agents/management garages

[2] based on owner receiving $875 per month from the agents/management garages

[3] based on maximum allowable lease fees of $500 per week minus $6,000 annual insurance cost

From the above table, we can see the cash returns were roughly 3% across the board. This is a return normally associated with a low-risk asset – like US Treasury Bonds.

CHAPTER 5

Technology, the rise of Uber and other Transportation Network Companies (TNCs)

TNCs entered the taxicab market and turned the industry upside-down by giving consumers an alternative at the taxicab price point for the first time in 70 years. This alternative is not only competitively priced but a high quality option in the market place.

Medallion investors eventually realized taxis were no longer the only game in town. Prospective medallion buyers became unwilling to accept only a 3% return on investment given the unprecedented risk introduced to this market. At the same time investors are demanding higher cash returns, TNCs are eroding medallion cash flows by grabbing significant-and-rising market share – the formula for a downward medallion price spiral.

As of this writing, New York medallion owners receive $3,000 monthly ($36,000 annually), down from $3,500. In Chicago, they receive $700 monthly ($8,400 annually), down from $875. In Boston, $14,800 is received annually, down from $20,000. The down-trend of free cash flow continues with declining trips per taxi shift and higher frequency of idle taxis (off the road entirely) for the first time in years.

Given increased uncertainty in medallion markets, and the ongoing exponential growth of the TNCs, investors now look at the returns on this type of asset as bearing similar risk to other "risk asset classes" for which return expectations are higher. The stock market has historically delivered ROI near 10% and private equity near 14%.

Using the historical return profiles of these other risk assets as a barometer for what might be required to draw taxi medallion investors back into illiquid markets, and the free cash flow taxi medallions now produce, we can calculate a range for fair market value of taxi medallions, summarized in Table 2.

TABLE 2

	New York	Chicago	Boston
May 2015 free cash flow before debt service	$36,000	$8,400	$14,800
Value of taxi medallion at required ROI:			
10%	$360,000	$84,000	$148,000
12%	$300,000	$70,000	$123,333
14%	$257,143	$60,000	$105,714

CONCLUSION – and now for the rest of the story

The arrival of Transportation Network Companies has produced a decline in taxi ridership and accompanying drop in medallion values. TNC driver networks are increasing as fast as ever, leaving no reason to expect the medallion cash flow declines to abate anytime soon. Introducing more competition into any market dilutes earnings for existing owners. When the market begins as a tightly controlled monopoly like the taxi medallion industry, the impact is more dramatic. In the end, for a taxi medallion to retain *any* value, medallion-bearing taxis will have to generate more cash flow than the TNC vehicles with which they now compete. Otherwise, there will be no medallion free cash flow and therefore zero value.