Farebox recovery ratio

The **farebox recovery ratio** (also called **fare recovery ratio**, **fare recovery rate** or other terms) of a passenger transportation system is the fraction of operating expenses which are met by the fares paid by passengers. It is computed by dividing the system's total fare revenue by its total operating expenses.[1]

Fare structures

There are generally two types of fare structures: a simple, flat rate fare structure (pay a fixed fare regardless of time of day and/or travel distance) or a complex, variable rate fare structure (pay a variable fare depending on time of day and/or travel distance). A variable fare structure is typically associated with a higher recovery ratio, though it may simply be the case that such systems are implemented only on more profitable networks or modes such as commuter rail. Variable-rate fares require a higher initial investment in fare ticketing technologies such as the use of contactless smart cards, turnstiles or fare gates, automated ticket machines, as well as IT infrastructure.[2]

Farebox ratios around the world

The farebox recovery ratio is the ratio of fare revenue to total transport expenses for a given system.[1] These two figures can be found in the financial statements of the operators. Oftentimes the operator runs multiple modes of transport (e.g. subway and bus), and there is no data for individual modes (segment analysis). In this case the operator is considered as one system, or a group of modes are collectively considered one system.

Fare revenue is not the same as "transport" or "operational" revenue, as there are often secondary sources of revenue such as lockers and paid restrooms and advertisement revenue. Fare revenue is a subset of transport revenue, which is in turn part of total revenue along with "non-transport" or "non-operational" revenue.

Total "transport" or "operational" expenses are a part of total expenses along with "non-transport" or "non-operational" expenses. Total transport expenses may include expansion projects if they are paid for by the operator.

Asia

Please note that, the "operating ratio" (Japanese: Korean:) commonly published by some Asian systems is different from farebox recovery ratio even after inverting the number to turn cost per unit revenue into revenue per unit cost, as that figure includes all operating revenue instead of only the fare revenue.[3]

Country or Region	System	Ratio	Fare system	Year
Hong Kong	Mass Transit Railway (MTR)	106.76%	Mostly Distance based	2021[4]
Hong Kong	Hong Kong Tramway	48.80%	Flat rate	2021[5]
Hong Kong	Kowloon Motor Bus	100.05%	Route-specific	2021[6]
	Long Win Bus	77.91%	Route-specific	2021[6]
Hong Kong	Citybus	72.98%[7]	Route-specific	2021[8]
	New World First Bus	76.73%	Route-specific	2021[8]
Japan	JR Central Rail	245.95%	Distance based	FY2018[9]
Japan	JR East Rail	142.44%	Distance based	FY2018[9]
Japan	JR West Rail	132.38%	Distance based	FY2018[9]
Japan	JR Kyushu Rail	111.34%	Distance based	FY2018[9]
Japan	JR Shikoku Rail	69.84%	Distance based	FY2018[9]
Japan	JR Hokkaido Rail	59.18%	Distance based	FY2018[9]
Japan	JR Freight Freight rail	96.25%	Distance based	FY2018[9]
Japan	Sapporo Municipal Subway	220.79%	Distance based	FY2018[9]
	Sapporo Streetcar	104.31%	Flat rate	FY2018[9]
Japan	Hakodate Streetcar	82.87%	Distance based	FY2018[9]
Japan	Sendai Subway	159.68%	Mixed zonal and distance based	FY2018[9]
Japan	Tokyo Metro	161.55%	Distance based	FY2018[9]
Japan	Tokyo Toei rail services	74%[10]	Distance based	2015
	Tokyo Toei Subway	171.46%	Distance based	FY2018[9]
	Tokyo Toei Streetcar	83.39%	Flat rate	FY2018[9]
	Tokyo Toei elevated rail	109.84%	Flat rate	FY2018[9]
	Tokyo Toei other rails	136.81%	Distance based	FY2018[9]
Japan	Yokohama Municipal Subway	232.28%	Distance based	FY2018[9]
Japan	Meitetsu Railway	155.99%	Distance based	FY2018[9]
	Meitetsu Tramway	90.70%	Distance based	FY2018[9]
Japan	Nagoya Municipal Subway	167.24%	Distance based	FY2018[9]
Japan	Kintetsu Railway Rail	152.77%	Distance based	FY2018[9]
	Kintetsu Railway Cable	36.70%	Various	FY2018[9]
Japan	Nankai Electric Railway Rail	161.26%	Distance based	FY2018[9]
	Nankai Electric Railway Cable	31.12%	Flat rate	FY2018[9]
Japan	Keihan Electric Railway Rail	166.51%	Distance based	FY2018[9]
	Keihan Electric Railway Subway	29.05%	Distance based	FY2018[9]
Japan	Keihan Electric Railway Streetcar	73.08%	Distance based	FY2018[9]
	Keihan Electric Railway Cable	71.73%	Flat rate	FY2018[9]

Japan	Hankyu Railway	123%	Distance based	1991[11]
		169.74%		FY2018[9]
Japan	Hanshin Electric Railway	146.75%	Distance based	FY2018[9]
Japan	Osaka Municipal Transportation Bureau	137%	Distance based	1991[11]
	Osaka Metro Subway	208.51%	Distance based	FY2018[9]
	Osaka Metro APM/AGT	105.35%	Distance based	FY2018[9]
Japan	Kyoto Municipal Subway	201.04%	Distance based	FY2018[9]
Japan	Kobe Municipal Subway	169.52%	Distance based	FY2018[9]
Japan	Nishi-Nippon Railroad Rail	149.92%	Distance based	FY2018[9]
Japan	Fukuoka City Subway	205.38%	Distance based	FY2018[9]
Japan	Kitakyushu Monorail	144.15%	Tabular	FY2018[9]
Japan	Nagasaki Electric Tramway	105.11%	Flat rate	FY2018[9]
Japan	Kumamoto Tram	102.60%	Flat rate	FY2018[9]
Japan	Kagoshima Tram	98.36%	Flat rate	FY2018[9]
Japan	Okinawa Urban Monorail	187.55%	Distance based	FY2018[9]
Pakistan	Lahore Metrobus	37.2% [12]	Flat rate	2014
Taiwan	Taipei Mass Rapid Transit	87.64%	Distance based	2021[13]
Taiwan	Kaohsiung Mass Rapid Transit	52.57%	Distance based	2020[14]
Singapore	SMRT Corporation (Singapore)	101%	Distance based	2018[15]
China	Beijing Subway	22%	Flat rate[16]	2013[17]
		35.08%	Distance based	2021[18]
China	Shenzhen Metro	82.20%[19]	Distance based	2021[20]
China	Guangzhou Metro	77.05%[21][22]	Distance based	2021[21]

Europe

Country	Region / City	System	Ratio	Fare system	Year
Austria	Vienna	Vienna U-Bahn	49%	Flat rate	2008[23]
Germany	Berlin	Berliner Verkehrsbetriebe	70%	Zone based	2010[24]
Belgium	Brussels	Brussels Intercommunal Transport Company	35%		2007[25]
Czechia	Prague	Prague Integrated Transport	17%	Flat rate	2022[26]
Denmark	Copenhagen	Copenhagen Metro	93.5%	Zone based	2023[27]
France	Paris	Île-de-France Mobilités	29%	Flat rate for passes Distance based for tickets	2018[28]
Germany	Munich	Munich Transport and Tariff Association	70%	Zone based	2010[29]
Italy	Milan	Milan Transportation System	49%		2016[27]
	Rome	Rome Metro	36%		2007[25]
Netherlands	Amsterdam	Gemeentelijk Vervoerbedrijf Amsterdam	88%	Distance based	2018[30]
	Rotterdam	Rotterdamse Elektrische Tram	99%	Distance based	2018[31]
Poland	Warsaw	ZTM	37%		2019[32]
Spain	Catalonia	Metropolitan lines of Ferrocarrils de la Generalitat de Catalunya (Catalonia)	93%	Zone based	2014[33]
	Madrid	Madrid Metro	41%		2007[25]
Sweden	Stockholm	Storstockholms Lokaltrafik	52%	Flat rate	2017[34]
	Östergötland County	Östgötatrafiken	43%	Zone based	2023[35]
Switzerland	Zurich	Zürich S-Bahn	60%	Zone based	2014[27]
Finland	Helsinki	Helsinki Regional Transport Authority	49%[36]	Zone based	2019
Turkey	Istanbul	Metro Istanbul A.S.	90%	Flat rate	2019[37]
United Kingdom	London	London Underground	129.50%[38]	Zone based	2022-2023[38]
		London Overground and Docklands Light Railway	94%[39]	Zone based	2018–19[39]

North America

Canada

Canada Farebox recovery rate

Region	Operator	Fare Revenue ($000s, CAD)	Operating Expenses ($000s, CAD)	Ratio	Fare System	Year
Nationwide	VIA Rail	$408,400	$812,500	50.3%[40]	Distance & demand based	2023[41]
Brampton	Brampton Transit	$125,102	$233,752	53.5%[40]	Flat rate	2024[42]
Calgary	Calgary Transit	$147,400[43]	$437,900	33.7%[40]	Flat rate	2023[44]
Edmonton	Edmonton Transit System	$123,841	$623,513	19.9%[40]	Flat rate	2024[45]
Mississauga	MiWay	$101,400[46]	$215,800[46]	47%	Flat rate	2024[47]
Montreal	Société de transport de Montréal			46%	Flat rate	2016[48]
Ottawa	OC Transpo	$289,773	$724,386	40.0%[40]	Flat rate	2024[49]
Quebec City	Réseau de transport de la Capitale			39%	Flat rate	2011[47]
Greater Toronto and Hamilton Area	GO Transit	$429,200	$1,816,900	23.6%[40]	Distance based	2023[50]
Toronto	Toronto Transit Commission	$937,934	$2,392,245	39.2%[40]	Flat rate	2023[51]
Vancouver	TransLink			43.7%	Zone based; transition to distance based upcoming	2022[52]
Victoria	BC Transit (Victoria regional transit system)			28.4%	Flat rate	2022[53]
Winnipeg	Winnipeg Transit	$92,544	$218,985	42.3%[40]	Flat rate	2024[54]
Regional Municipality of York	York Region Transit	$75,000[55]	$304,291	24.6%[40]	Flat rate	2024[56]

United States

Region	System Operator	Fare Revenue	Operating Expenses	Ratio	Fare System	Year
Nationwide	Amtrak	$2,991,500,000	$3,626,800,000	81.1%	Distance & demand based	2024[57]
Montgomery County MD, DC	RideOn	$5,276,327	$178,136,970	3%	Flat Rate	2023[58]
Northern Virginia, DC	VRE (Virginia Railway Express)	$28,000,000	$190,000,000	15%	Distance based	2023[59]
Boston, MA-NH-RI	MBTA	$545,414,783.00	$1,556,792,859.00	20.5%	Flat rate[60]	2023[61]
New York-Newark, NY-NJ-CT	NYC Ferry			29%	Flat Rate	2017[62]
	MTA Bus	$95,403,036.00	$712,036,903.00	13.40%		2020[63]
	MTA Long Island Rail Road	$272,532,791.00	$1,464,445,571.00	18.61%	Zone based[64]	2020[63]
	MTA Metro-North	$243,671,760.00	$1,207,182,081.00	20.19%	Distance based[64]	2020[63]
	MTA New York City Transit	$2,018,495,902.00	$8,258,335,723.00	24.44%	Flat rate[64]	2020[63]
	MTA Staten Island Railway			11%	Flat rate	2019[64]
	PATH	$73,263,022.00	$448,244,536.00	16.34%	Flat rate[65]	2020[63]
	NYCDOT	$1,342,638.00	$144,618,026.00	0.93%	Free (Staten Island Ferry)	2020[63]
	NJTransit	$743,742,067.00	$2,325,547,904.00	31.98%	Zone based on most Buses and all commuter trains Flat Rate on some buses and all light rails[65]	2020[63]
	Bee-Line Bus System	$18,698,988.00	$161,250,867.00	11.60%		2020[63]
Chicago, IL-IN	CTA	$236,301,686.00	$1,436,453,698.00	16.45%	Flat rate[66]	2020[63]
	METRA	$102,350,491.00	$710,195,494.00	14.41%	Zone based[65]	2020[63]
Atlanta, GA	Metropolitan Atlanta Rapid Transit Authority	$100,300,226.00	$492,839,897.00	20.35%	Flat rate[65]	2020[63]
Portland, OR-WA	TriMET	$94,456,931.00	$518,451,362.00	18.22%	Flat rate[65]	2020[63]
Baltimore, MD	MTA	$102,029,183.00	$805,145,982.00	12.67%	Variable[67]	2020[63]
San Diego, CA	SDMTS	$78,709,562.00	$291,553,478.00	27.00%	Flat rate[65]	2020[63]
Houston, TX	Houston Metro	$37,305,222.00	$587,595,095.00	6.35%		2020[63]
Miami, FL	County of Miami-Dade (Transportation & Public Work)	$47,456,089.00	$553,336,216.00	8.58%	Flat rate[65]	2020[63]
Denver-Aurora, CO	RTD	$76,264,572.00	$623,982,843.00	12.22%	Zone Based[68]	2020[63]
Pittsburgh, PA	PRT	$79,071,495.00	$434,687,600.00	18.19%		2020[63]

Dallas-Fort Worth-Arlington, TX	DART	$43,547,629.00	$569,628,198.00	7.64%	Flat rate[69]	2020[63]
Honolulu, HI	City and County of Honolulu (Department of Transportation Services)	$46,815,334.00	$278,447,442.00	16.81%		2020[63]
San Francisco-Oakland, CA	SFMTA	$153,699,058.00	$903,485,983.00	17.01%	Flat rate[70]	2020[63]
	BART	$341,586,797.00	$681,983,690.00	50.09%	Distance based[71]	2020[63]
	AC Transit	$66,561,904.00	$501,047,399.00	13.28%		2020[63]
	Oakland Airport Connector			96%	Flat rate	2015–2016[72]
Minneapolis-St. Paul, MN-WI	Metro Transit	$40,804,932.00	$413,038,880.00	9.88%	Flat rate with rush hour and express surcharges[65]	2020[63]
Los Angeles-Long Beach-Anaheim, CA	Orange County Transportation Authority	$42,450,631.00	$268,394,220.00	15.82%		2020[63]
	LA Metro	$199,728,314.00	$1,841,473,552.00	10.85%	Flat rate[65]	2020[63]
	Long Beach Transit	$10,201,475.00	$92,339,794.00	11.05%		2020[63]
Phoenix-Mesa, AZ	Valley Metro	$21,292,051.00	$208,489,994.00	10.21%		2020[63]
San Antonio, TX	VIA Metropolitan Transit	$15,033,510.00	$222,032,078.00	6.77%	Flat rate[65]	2020[63]
St. Louis, MO-IL	St. Louis Metro	$30,986,092.00	$282,175,101.00	10.98%		2020[63]
San Jose-Sunnyvale-Santa Clara, CA	VTA	$28,886,823.00	$403,260,461.00	7.16%		2020[63]
Buffalo, NY	NFTA	$34,814,699.00	$141,163,925.00	24.66%		2020[63]
Salt Lake City-West Valley City, UT	UTA	$32,521,480.00	$319,885,004.00	10.17%		2020[63]
Austin-Round Rock- San Marcos, TX	CapMetro	$15,298,332.00	$229,551,099.00	6.66%	Flat rate[65]	2020[63]
Charlotte, NC-SC	CATS	$21,018,416.00	$162,317,729.00	12.95%		2020[63]
Detroit–Warren–Dearborn, MI	DDOT	$13,954,074.00	$101,100,585.00	13.80%	Flat rate[65]	2020[63]
Miami–Fort Lauderdale–West Palm Beach, FL	BCT	$13,814,362.00	$158,832,625.00	8.70%		2020[63]
Milwaukee–Waukesha, WI	MCTS	$16,739,398.00	$141,752,155.00	11.81%		2020[63]
Orlando–Kissimmee–Sanford, FL	Lynx	$13,596,128.00	$139,097,081.00	9.77%	Flat rate[65]	2020[63]
Sacramento, CA	SacRT	$21,517,225.00	$173,873,225.00	12.38%		2020[63]
Cleveland–Elyria, OH	RTA	$26,194,783.00	$259,797,759.00	10.08%	Flat rate[65]	2020[63]

Washington, DC-VA-MD	Washington Metropolitan Area Transit Authority	$492,953,775.00	$2,028,885,121.00	24.30%	Distance based[73]	2020[63]
	Montgomery County, Maryland	$13,387,860.00	$127,225,668.00	10.52%		2020[63]
Seattle, WA	King County Metro bus			8.9%	Flat[74]	2022[75]
	Washington State Ferries			51%	Route Based	2023[76]
	Sound Transit Express Bus	$14,403,774	$144,174,454	10%	Zone & distance based	2023[77]
	Sound Transit Link Light Rail	$32,358,465	$205,314,451	16%	Zone & distance based	2023[77]
	Sound Transit Sounder Regional Rail	$4,966,273	$65,649,821	8%	Zone & distance based	2023[77]
	Pierce Transit	$54,164,161	$127,654,974	42%	Flat rate	2021[78]
Albany-Schenectady, NY	CDTA	$20,804,704.00	$93,755,632.00	22.19%		2020[63]
Harrisburg, PA	Capital Area Transit	$2,398,430	$20,278,765	17%	Flat rate	2022[79]
Las Vegas-Henderson, NV	Las Vegas Monorail			56%	Flat rate	2016[71]
	RTC	$51,823,479.00	$227,523,119.00	22.78%		2020[63]
Philadelphia, PA-NJ-DE-MD	SEPTA	$353,276,517.00	$1,301,894,928.00	27.14%	Flat rate[65]	2020[63]
	PATCO	$15,542,809	$63,349,398	25%	Distance based	2023[80]
Orlando, FL	SunRail			7%	Distance based	2018[81]
	Peninsula Corridor Joint Powers Board (Caltrain)			70%	Zone based	2019[82]
	Santa Clara Valley Transportation Authority			10%	Express surcharges	2016[83]
	Southern California Regional Rail Authority (Metrolink)			34%	Distance based	2019[84]

Oceania

Country	Region	System	Ratio	Fare system	Year
Australia	Canberra	ACTION	6.3%	Flat rate	2024[85]
Australia	Brisbane	Translink (Queensland)	24%	Zone & time based	2013[86]
Australia	Perth	Transperth	23%	Zone & time based	2013[86]
Australia	Adelaide	Adelaide Metro	21%	Zone & time based	2013[86]
Australia	Darwin	Transport in Darwin	10%	Zone & time based	2013[86]
Australia	Hobart	Transport in Hobart	22%	Zone & time based	2013[86]
Australia	Melbourne	Melbourne	30%	Zone & time based	2014[87]
Australia	Sydney	Sydney Trains	20%	Distance based	2016[88]
Australia	Sydney	Metropolitan Bus System	25%	Distance based	2016[88]
Australia	Sydney	Sydney Ferries	32%	Distance based	2016[88]
New Zealand	Auckland	Auckland	44%	Zone based	2012–13[89]
New Zealand	Christchurch	Christchurch	35%	Zone based	2012–13[89]
New Zealand	Dunedin	Dunedin	60%	Zone based	2015–16[89]
New Zealand	Hamilton	Hamilton	34%	Flat rate	2012–13[89]
New Zealand	Wellington	Wellington	57%	Zone based	2012–13[89]

South America

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