VALUAMOS

INVESTMENT BANKING & PRIVATE EQUITY

Tasas mínimas de retorno para Colombia (COP) - Ri_{COP}

Año	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Rf (ventana de 50 años)	6,56%	6,70%	6,71%	6,66%	6,76%	6,69%	6,99%	6,89%	6,60%	6,12%	6,12%	6,05%
Rm (ventana de 50 años)	9,89%	9,84%	9,61%	10,09%	10,05%	9,73%	10,51%	10,80%	11,06%	10,24%	11,10%	13,55%
PRm (ventana de 50 años)	3,33%	3,14%	2,90%	3,42%	3,29%	3,04%	3,52%	3,91%	4,47%	4,12%	4,97%	7,51%
PRP	0,96%	3,12%	2,98%	2,71%	2,44%	2,64%	1,88%	1,84%	1,88%	3,29%	2,78%	2,54%
Tasa BanRep (última del año)	4,75%	3,25%	4,50%	5,75%	7,50%	4,75%	4,25%	1,75%	3,00%	12,00%	13,00%	9,50%
Tasa FED (última del año)	0,25%	0,25%	0,50%	0,75%	0,15%	2,50%	1,75%	0,25%	0,25%	4,50%	5,50%	4,50%

Tasas mínimas de retorno para Colombia (COP) - Ri_{COP} (VENTANA 50 AÑOS Rf y PRm)

Industry Name	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Advertising	16,66%	16,88%	18,30%	19,35%	21,39%	16,05%	16,56%	14,48%	16,91%	22,40%	24,71%	24,04%
Aerospace/Defense	15,57%	15,83%	16,15%	18,07%	20,92%	14,63%	15,66%	14,60%	16,56%	21,76%	21,29%	20,98%
Air Transport	14,29%	14,79%	15,52%	16,59%	18,84%	13,44%	13,60%	13,68%	15,37%	20,50%	20,84%	19,72%
Apparel	15,30%	15,39%	15,89%	17,41%	19,50%	14,05%	14,14%	13,19%	15,07%	20,52%	20,29%	18,55%
Auto & Truck	15,59%	16,20%	16,84%	18,13%	20,45%	15,60%	16,16%	14,78%	16,49%	21,47%	21,96%	23,08%
Auto Parts	16,03%	16,12%	17,02%	19,08%	20,97%	15,42%	15,73%	15,20%	17,72%	22,64%	22,79%	22,88%
Bank (Money Center)	13,94%	14,60%	15,42%	16,19%	18,28%	13,01%	13,06%	11,97%	13,42%	18,67%	18,32%	15,99%
Banks (Regional)	13,48%	14,10%	15,21%	15,75%	18,03%	12,44%	12,81%	11,22%	12,37%	18,00%	17,43%	14,68%
Beverage (Alcoholic)	15,11%	15,74%	16,17%	18,10%	19,79%	13,89%	15,33%	13,88%	16,28%	21,62%	20,81%	21,62%
Beverage (Soft)	15,02%	15,38%	16,37%	18,59%	18,86%	12,93%	13,46%	12,54%	14,52%	19,45%	18,91%	16,71%
Broadcasting	16,44%	16,98%	18,10%	19,05%	20,55%	14,90%	14,36%	13,65%	15,95%	21,36%	21,18%	20,44%
Brokerage & Investment Banking	14,69%	14,97%	15,98%	16,67%	18,76%	13,41%	13,39%	11,98%	13,20%	18,84%	18,46%	16,48%
Building Materials	14,78%	15,31%	16,14%	17,87%	19,87%	14,23%	14,50%	13,86%	16,19%	21,55%	21,22%	20,69%
Business & Consumer Services	15,31%	15,77%	16,40%	18,42%	20,32%	14,63%	15,80%	13,28%	15,18%	21,17%	21,22%	21,20%
Cable TV	16,54%	16,47%	16,89%	18,41%	20,97%	15,17%	15,37%	14,13%	15,66%	21,10%	20,93%	20,82%
Chemical (Basic)	14,98%	16,01%	16,07%	17,97%	20,18%	14,75%	15,01%	13,85%	15,82%	21,27%	21,06%	20,44%
Chemical (Diversified)	16,13%	15,85%	17,38%	18,50%	21,27%	15,85%	14,65%	14,50%	17,05%	21,52%	21,28%	20,71%
Chemical (Specialty)	15,24%	15,47%	16,35%	18,39%	20,34%	14,85%	15,26%	14,24%	16,16%	21,41%	21,25%	20,73%
Coal & Related Energy	15,91%	16,63%	17,16%	18,09%	20,54%	15,01%	15,62%	13,43%	15,21%	20,45%	20,10%	20,12%
Computer Services	15,73%	16,08%	16,71%	18,48%	20,57%	15,18%	15,37%	14,21%	16,10%	21,57%	21,75%	21,59%
Computers/Peripherals	14,59%	15,79%	16,63%	18,86%	20,83%	15,50%	17,06%	15,24%	17,37%	22,20%	23,14%	23,12%
Construction Supplies	14,91%	15,06%	16,29%	17,61%	19,76%	14,67%	15,01%	13,69%	15,58%	20,85%	20,71%	19,42%
Diversified	14,57%	14,83%	16,01%	16,67%	18,62%	13,31%	13,24%	12,07%	13,73%	19,40%	19,22%	17,11%
Drugs (Biotechnology)	16,36%	16,24%	16,91%	18,99%	21,10%	15,02%	16,78%	15,21%	17,92%	23,42%	23,57%	24,58%
Drugs (Pharmaceutical)	15,40%	15,70%	16,31%	18,57%	20,46%	14,82%	15,66%	14,17%	15,99%	21,06%	21,02%	21,14%
Education							16,31%	14,06%	15,55%	20,35%	19,95%	19,18%
Educational Services	16,30%	15,91%	17,74%	18,52%	19,86%	14,49%						
Electrical Equipment	15,30%	15,90%	16,45%	18,63%	20,51%	14,95%	15,37%	14,07%	15,73%	21,25%	21,74%	22,05%
Electronics (Consumer & Office)	15,19%	15,71%	16,19%	18,30%	20,01%	14,66%	15,69%	14,12%	15,82%	20,66%	21,86%	21,54%
Electronics (General)	14,97%	16,06%	16,61%	19,11%	21,10%	15,65%	16,92%	15,10%	17,02%	22,18%	22,79%	23,80%
Engineering/Construction	14,89%	15,28%	16,26%	17,51%	19,57%	14,10%	14,76%	12,37%	14,26%	19,50%	19,24%	17,32%
Entertainment	16,67%	16,35%	16,98%	19,37%	20,72%	15,11%	16,60%	14,70%	16,46%	22,25%	22,85%	22,84%
Environmental & Waste Services	16,03%	16,76%	17,94%	20,77%	21,71%	16,32%	15,37%	13,55%	14,41%	20,41%	20,27%	19,30%
Farming/Agriculture	14,86%	15,03%	15,99%	17,58%	19,50%	13,95%	13,82%	13,27%	14,84%	19,81%	19,31%	17,83%
Financial Svcs.	14,01%	14,71%										
Financial Svcs. (Non-bank & Insurar	14,16%	14,57%	15,25%	16,10%	18,43%	13,19%	13,06%	11,84%	13,35%	18,90%	18,69%	16,33%
Food Processing	14,81%	15,11%	15,81%	17,32%	19,39%	13,98%	14,18%	13,31%	15,05%	20,27%	19,92%	18,42%
Food Wholesalers	14,43%	15,15%	15,37%	16,66%	18,52%	13,57%	13,96%	12,20%	13,95%	19,28%	19,11%	16,59%
Furn/Home Furnishings	15,06%	15,43%	16,74%	18,32%	20,20%	14,50%	15,55%	14,08%	16,26%	21,43%	21,05%	20,60%
Green & Renewable Energy			16,28%	17,27%	19,58%	14,07%	14,00%	12,92%	14,54%	20,34%	19,70%	18,21%
Healthcare Equipment	16,44%	16,31%										
Healthcare Products	15,43%	15,53%	16,61%	18,93%	20,71%	15,08%	16,38%	14,86%	16,74%	22,10%	22,33%	22,87%
Healthcare Support Services	15,15%	15,75%	17,36%	19,70%	20,88%	14,66%	15,30%	13,39%	14,97%	20,53%	20,15%	18,65%
Heathcare Information and Techno	16,58%	17,44%	18,08%	19,52%	20,94%	15,56%	18,04%	16,35%	18,11%	23,62%	23,80%	24,46%
Heavy Construction	15,27%	15,69%										
Homebuilding	15,17%	15,64%	16,51%	18,41%	20,37%	15,09%	14,29%	15,23%	17,74%	19,92%	20,55%	17,51%
Hospitals/Healthcare Facilities	14,12%	14,77%	16,13%	16,64%	19,32%	14,17%	14,36%	13,05%	15,03%	19,86%	20,30%	19,20%
Hotel/Gaming	15,45%	15,43%	16,21%	17,42%	19,54%	14,33%	14,50%	13,14%	14,62%	19,90%	19,87%	18,06%

Tasas mínimas de retorno para Colombia (COP) - Ri_{COP} (VENTANA 50 AÑOS Rf y PRm)

Industry Name	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Household Products	15,24%	15,53%	16,86%	18,37%	20,15%	14,59%	15,08%	14,33%	16,34%	21,57%	21,35%	20,38%
Information Services	16,39%	15,23%	16,70%	18,59%	21,03%	16,27%	15,84%	15,79%	17,50%	23,50%	22,15%	21,86%
Insurance (General)	14,13%	14,56%	15,19%	16,55%	18,74%	13,33%	13,24%	12,54%	13,96%	19,05%	19,04%	16,49%
Insurance (Life)	14,12%	14,96%	15,50%	16,67%	19,08%	13,77%	14,14%	12,95%	14,33%	19,75%	19,55%	18,53%
Insurance (Prop/Cas.)	14,57%	14,61%	14,92%	15,98%	18,57%	13,31%	13,13%	12,68%	14,81%	19,77%	19,74%	16,71%
Investments & Asset Management	14,03%	14,70%	15,45%	15,93%	18,02%	12,60%	12,30%	11,11%	13,08%	18,48%	18,14%	15,99%
Machinery	15,37%	16,01%	16,75%	18,83%	20,84%	15,25%	15,66%	14,34%	16,06%	21,49%	21,76%	22,16%
Metals & Mining	16,06%	15,90%	16,80%	18,38%	20,59%	15,31%	15,51%	13,75%	16,39%	21,86%	21,99%	22,37%
Office Equipment & Services	14,96%	14,93%	15,94%	17,73%	19,49%	14,29%	14,43%	14,24%	16,02%	21,15%	20,72%	18,89%
Oil/Gas (Integrated)	15,86%	16,08%	17,12%	18,58%	20,01%	14,40%	15,01%	14,34%	15,92%	21,10%	21,47%	20,79%
Oil/Gas (Production and Exploratioı	16,84%	17,08%	18,28%	20,25%	22,19%	16,71%	16,31%	15,30%	17,74%	22,06%	22,55%	20,57%
Oil/Gas Distribution	14,77%	15,42%	16,32%	18,24%	20,45%	15,21%	14,65%	13,28%	14,93%	20,11%	19,92%	17,34%
Oilfield Svcs/Equip.	15,76%	15,65%	16,53%	18,76%	20,20%	15,26%	15,51%	14,01%	15,95%	20,45%	20,28%	18,81%
Packaging & Container	14,63%	15,07%	15,72%	17,00%	19,41%	13,69%	13,96%	13,26%	15,35%	20,24%	20,20%	18,74%
Paper/Forest Products	14,54%	14,71%	15,64%	17,03%	19,08%	13,81%	14,03%	13,06%	15,06%	19,96%	19,56%	17,46%
Power	14,17%	14,71%	15,53%	16,71%	18,85%	13,57%	13,42%	12,30%	13,83%	19,10%	18,90%	16,97%
Precious Metals	16,47%	17,34%	18,38%	18,99%	20,78%	16,32%	15,91%	14,30%	16,76%	22,44%	23,21%	21,84%
R.E.I.T.			15,71%	16,70%	18,82%	13,31%	12,74%	12,96%	14,48%	19,01%	18,97%	16,79%
Real Estate (Development)	14,96%	14,05%	16,15%	17,28%	19,21%	13,77%	14,03%	12,00%	13,27%	19,03%	18,48%	16,66%
Real Estate (General/Diversified)	14,87%	15,30%	16,09%	17,68%	19,59%	14,22%	14,40%	12,68%	14,12%	19,61%	19,56%	17,79%
Real Estate (Operations & Services)	14,60%	15,14%	15,71%	16,75%	18,98%	14,11%	13,82%	12,71%	14,57%	19,98%	19,57%	17,76%
Recreation	15,05%	16,17%	16,62%	18,80%	20,17%	14,07%	14,50%	13,50%	14,98%	20,55%	20,91%	20,52%
Reinsurance	15,26%	15,95%	17,25%	18,15%	20,17%	15,22%	15,01%	14,57%	17,00%	20,84%	21,39%	20,96%
Restaurant/Dining	15,05%	16,17%	16,76%	18,49%	20,51%	14,89%	15,19%	13,95%	15,66%	21,23%	21,47%	20,44%
Retail (Automotive)	14,28%	14,63%	15,81%	17,29%	19,25%	13,97%	14,14%	13,19%	14,68%	19,82%	19,53%	17,69%
Retail (Building Supply)	14,23%	15,97%	18,25%	18,98%	20,75%	14,40%	15,66%	14,69%	16,71%	20,37%	20,23%	18,25%
Retail (Distributors)	14,60%	14,85%	15,71%	17,34%	19,23%	13,56%	13,78%	11,94%	13,48%	19,19%	18,90%	16,99%
Retail (General)	15,08%	15,70%	16,16%	18,22%	20,23%	14,95%	14,79%	13,42%	14,75%	19,85%	21,07%	20,75%
Retail (Grocery and Food)	14,95%	15,48%	16,46%	17,20%	19,76%	15,04%	14,18%	12,34%	14,05%	19,78%	19,66%	18,79%
Retail (Online)	16,48%	20,30%	18,32%	19,94%	21,72%	15,85%	16,81%	16,34%	18,94%	24,83%		
Retail (Special Lines)	15,97%	16,00%	17,10%	18,51%	20,09%	14,73%		13,83%	15,90%	21,04%	21,31%	20,41%
Rubber& Tires	14,85%	15,73%	16,50%	17,56%	19,89%	13,91%	14,07%	13,50%	16,16%	21,14%	21,08%	19,43%
Semiconductor	15,68%	17,01%	17,18%	19,66%	21,42%	15,91%	17,79%	16,20%	18,59%	24,20%	25,12%	26,23%
Semiconductor Equip	15,83%	16,17%	17,55%	19,41%	20,65%	15,29%	17,53%	17,49%	20,52%	25,36%	26,38%	28,38%
Shipbuilding & Marine	14,47%	14,74%	16,13%	17,37%	19,33%	14,42%	14,03%	13,18%	15,59%	20,85%	20,44%	18,89%
Shoe	15,46%	15,61%	16,28%	17,75%	20,01%	14,78%	14,83%	13,85%	16,09%	20,85%	20,08%	17,88%
Software (Entertainment)			17,02%	19,73%	22,55%	16,22%	17,97%	15,41%	17,67%	24,81%	25,36%	25,79%
Software (Internet)	15,88%	17,16%	17,92%	20,21%	21,63%	16,47%	14,61%	13,74%	16,11%	21,59%	21,98%	22,65%
Software (System & Application)	16,48%	16,81%	17,21%	19,62%	21,63%	16,08%	16,81%	15,81%	17,79%	23,18%	24,08%	25,79%
Steel	15,06%	15,21%	16,11%	17,14%	19,44%	14,53%	14,76%	13,78%	15,96%	21,41%	21,47%	20,16%
Telecom (Wireless)	14,77%	15,60%	16,74%	17,70%	19,89%	14,76%	14,29%	13,14%	15,08%	19,97%	20,32%	19,66%
Telecom. Equipment	15,88%	16,34%	17,04%	19,19%	21,24%	15,67%	16,78%	14,85%	16,58%	22,17%	22,90%	23,18%
Telecom. Services	14,80%	15,10%	16,13%	17,19%	19,55%	14,01%	14,47%	12,90%	14,82%	19,84%	19,93%	18,51%
Thrift	14,28%	14,51%										
Tobacco	14,15%	15,09%	15,79%	16,37%	18,39%	12,70%	14,54%	12,78%	15,11%	19,74%	18,98%	16,01%
Transportation	14,54%	14,96%	15,72%	17,57%	19,83%	14,87%	14,68%	13,33%	15,02%	20,36%	20,09%	19,00%
Transportation (Railroads)	14,76%	15,55%	17,23%	19,47%	22,34%	15,87%	16,23%	13,60%	15,06%	21,05%	20,65%	19,68%
Trucking	14,36%	14,93%	16,46%	17,53%	19,47%	13,95%	14,14%	13,55%	14,95%	20,29%	19,58%	15,91%
Unclassified			16,65%	17,85%								
Utility (General)	13,13%	13,40%	14,44%	15,80%	18,24%	13,09%	13,03%	12,80%	13,68%	19,59%	19,36%	17,73%
Utility (Water)	14,44%	15,40%	16,38%	18,08%	20,54%	14,93%	14,50%	12,66%	13,46%	18,88%	18,61%	16,71%

Tasas mínimas de retorno para Colombia (COP) - Ri_{COP}

Año	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
Rf (ventana de 10 años)	4,27%	4,88%	4,71%	4,58%	3,86%	1,97%	4,13%	4,40%	2,40%	0,12%	1,46%	0,27%
PRm (ventana de 10 años)	7,34%	7,61%	7,25%	6,89%	8,42%	12,98%	13,44%	13,75%	16,40%	12,44%	11,91%	12,71%
Rm (ventana de 10 años)	3,07%	2,73%	2,54%	2,31%	4,56%	11,01%	9,31%	9,35%	14,00%	12,32%	10,44%	12,45%
PRP	0,96%	3,12%	2,98%	2,71%	2,44%	2,64%	1,88%	1,84%	1,88%	3,29%	2,78%	2,78%
Tasa BanRep (última del año)	4,75%	3,25%	4,50%	5,75%	7,50%	4,75%	4,25%	1,75%	3,00%	12,00%	13,00%	9,50%
Tasa FED (última del año)	0,25%	0,25%	0,50%	0,75%	0,15%	2,50%	1,75%	0,25%	0,25%	4,50%	5,50%	4,50%

Tasas mínimas de retorno para Colombia (COP) - Ri_{COP} (VENTANA 10 AÑOS Rf y PRm)

Industry Name	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
Advertising	13,93%	14,51%	15,69%	15,68%	19,89%	22,56%	21,87%	17,69%	24,24%	26,17%	28,57%	24,98%
Aerospace/Defense	12,92%	13,60%	13,81%	14,81%	19,24%	17,42%	19,49%	17,97%	23,15%	24,26%	21,39%	19,91%
Air Transport	11,74%	12,70%	13,26%	13,82%	16,36%	13,11%	14,05%	15,78%	19,40%	20,52%	20,45%	17,83%
Apparel	12,68%	13,22%	13,58%	14,37%	17,27%	15,34%	15,48%	14,60%	18,48%	20,56%	19,30%	15,88%
Auto & Truck	12,94%	13,92%	14,42%	14,86%	18,59%	20,95%	20,82%	18,40%	22,91%	23,41%	22,81%	23,40%
Auto Parts	13,35%	13,86%	14,58%	15,50%	19,31%	20,29%	19,68%	19,40%	26,78%	26,91%	24,54%	23,07%
Bank (Money Center)	11,43%	12,53%	13,17%	13,55%	15,59%	11,54%	12,62%	11,68%	13,29%	15,03%	15,16%	11,63%
Banks (Regional)	11,00%	12,09%	12,99%	13,25%	15,24%	9,49%	11,95%	9,89%	10,01%	13,03%	13,28%	9,47%
Beverage (Alcoholic)	12,50%	13,52%	13,82%	14,84%	17,67%	14,75%	18,63%	16,24%	22,27%	23,85%	20,39%	20,97%
Beverage (Soft)	12,42%	13,21%	14,00%	15,17%	16,39%	11,24%	13,67%	13,03%	16,75%	17,36%	16,39%	12,83%
Broadcasting	13,73%	14,60%	15,51%	15,48%	18,73%	18,41%	16,05%	15,71%	21,23%	23,09%	21,16%	19,02%
Brokerage & Investment Banking	12,12%	12,86%	13,66%	13,88%	16,24%	12,99%	13,48%	11,71%	12,62%	15,55%	15,45%	12,45%
Building Materials	12,20%	13,15%	13,80%	14,68%	17,79%	15,96%	16,43%	16,19%	21,97%	23,65%	21,26%	19,43%
Business & Consumer Services	12,69%	13,55%	14,03%	15,05%	18,40%	17,42%	19,87%	14,81%	18,81%	22,52%	21,26%	20,28%
Cable TV	13,82%	14,16%	14,46%	15,05%	19,32%	19,36%	18,72%	16,85%	20,31%	22,29%	20,64%	19,65%
Chemical (Basic)	12,38%	13,76%	13,74%	14,75%	18,21%	17,85%	17,77%	16,18%	20,82%	22,79%	20,92%	19,01%
Chemical (Diversified)	13,44%	13,62%	14,89%	15,10%	19,73%	21,82%	16,82%	17,73%	24,67%	23,56%	21,37%	19,46%
Chemical (Specialty)	12,62%	13,29%	13,99%	15,03%	18,43%	18,23%	18,44%	17,10%	21,87%	23,23%	21,31%	19,50%
Coal & Related Energy	13,24%	14,30%	14,69%	14,83%	18,71%	18,80%	19,39%	15,16%	18,92%	20,34%	18,91%	18,49%
Computer Services	13,07%	13,82%	14,30%	15,09%	18,75%	19,42%	18,72%	17,03%	21,69%	23,72%	22,36%	20,92%
Computers/Peripherals	12,02%	13,56%	14,23%	15,35%	19,11%	20,55%	23,21%	19,50%	25,68%	25,58%	25,28%	23,46%
Construction Supplies	12,32%	12,93%	13,93%	14,51%	17,63%	17,56%	17,77%	15,78%	20,07%	21,54%	20,17%	17,33%
Diversified	12,01%	12,73%	13,69%	13,88%	16,05%	12,62%	13,10%	11,92%	14,26%	17,23%	17,05%	13,50%
Drugs (Biotechnology)	13,65%	13,96%	14,47%	15,44%	19,49%	18,83%	22,44%	19,43%	27,39%	29,23%	26,19%	25,88%
Drugs (Pharmaceutical)	12,77%	13,49%	13,95%	15,15%	18,60%	18,09%	19,49%	16,94%	21,35%	22,17%	20,84%	20,17%
Education							21,20%	16,68%	19,96%	20,07%	18,59%	16,92%
Educational Services	13,60%	13,67%	15,20%	15,12%	17,77%	16,89%						
Electrical Equipment	12,68%	13,66%	14,07%	15,19%	18,67%	18,57%	18,72%	16,70%	20,55%	22,75%	22,34%	21,69%
Electronics (Consumer & Office)	12,58%	13,50%	13,85%	14,97%	17,98%	17,54%	19,58%	16,82%	20,83%	20,99%	22,59%	20,85%
Electronics (General)	12,37%	13,80%	14,22%	15,52%	19,48%	21,11%	22,82%	19,16%	24,57%	25,54%	24,55%	24,58%
Engineering/Construction	12,30%	13,12%	13,91%	14,44%	17,37%	15,51%	17,10%	12,63%	15,92%	17,51%	17,09%	13,85%
Entertainment	13,94%	14,05%	14,54%	15,70%	18,96%	19,17%	21,97%	18,21%	22,82%	25,73%	24,68%	23,01%
Environmental & Waste Services	13,35%	14,41%	15,37%	16,64%	20,33%	23,53%	18,72%	15,45%	16,39%	20,24%	19,26%	17,14%
Farming/Agriculture	12,27%	12,90%	13,67%	14,48%	17,27%	14,96%	14,62%	14,79%	17,74%	18,45%	17,24%	14,70%
Financial Svcs.	11,49%	12,63%										
Financial Svcs. (Non-bank & Insura	11,62%	12,51%	13,02%	13,49%	15,79%	12,21%	12,62%	11,37%	13,09%	15,71%	15,95%	12,20%
Food Processing	12,22%	12,98%	13,52%	14,31%	17,12%	15,05%	15,58%	14,89%	18,41%	19,81%	18,53%	15,68%
Food Wholesalers	11,87%	13,01%	13,13%	13,87%	15,92%	13,58%	15,00%	12,24%	14,97%	16,86%	16,82%	12,64%
Furn/Home Furnishings	12,45%	13,25%	14,33%	14,99%	18,24%	16,94%	19,20%	16,73%	22,19%	23,29%	20,88%	19,28%
Green & Renewable Energy			13,93%	14,28%	17,38%	15,39%	15,10%	13,95%	16,81%	20,03%	18,06%	15,32%
Healthcare Equipment	13,73%	14,02%										
Healthcare Products	12,79%	13,34%	14,21%	15,40%	18,94%	19,05%	21,39%	18,58%	23,70%	25,27%	23,57%	23,05%
Healthcare Support Services	12,54%	13,53%	14,87%	15,91%	19,19%	17,53%	18,53%	15,07%	18,14%	20,58%	19,01%	16,05%
Heathcare Information and Techn	13,86%	15,00%	15,50%	15,79%	19,27%	20,80%	25,78%	22,14%	27,99%	29,82%	26,66%	25,69%
Heavy Construction	12,65%	13,48%										

VALUAMOS

INVESTMENT BANKING & PRIVATE EQUITY

Tasas mínimas de retorno para Colombia (COP) - Ri_{COP} (VENTANA 10 AÑOS Rf y PRm)

Industry Name	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Homebuilding	12,56%	13,43%	14,13%	15,05%	18,48%	19,08%	15,86%	19,48%	26,84%	18,78%	19,85%	14,16%
Hospitals/Healthcare Facilities	11,59%	12,68%	13,79%	13,85%	17,02%	15,74%	16,05%	14,26%	18,35%	18,60%	19,33%	16,96%
Hotel/Gaming	12,82%	13,25%	13,86%	14,38%	17,32%	16,33%	16,43%	14,49%	17,06%	18,71%	18,41%	15,08%
Household Products	12,62%	13,34%	14,43%	15,02%	18,17%	17,26%	17,96%	17,33%	22,44%	23,70%	21,52%	18,92%
Information Services	13,68%	13,08%	14,29%	15,16%	19,40%	23,35%	19,96%	20,80%	26,08%	29,47%	23,21%	21,37%
Insurance (General)	11,60%	12,50%	12,97%	13,79%	16,22%	12,72%	13,10%	13,03%	14,99%	16,17%	16,68%	12,47%
Insurance (Life)	11,58%	12,85%	13,24%	13,87%	16,69%	14,32%	15,48%	14,03%	16,14%	18,26%	17,75%	15,85%
Insurance (Prop/Cas.)	12,00%	12,54%	12,73%	13,41%	15,98%	12,64%	12,81%	13,38%	17,66%	18,32%	18,13%	12,83%
Investments & Asset Managemen	11,50%	12,62%	13,20%	13,37%	15,22%	10,08%	10,62%	9,62%	12,22%	14,46%	14,78%	11,65%
Machinery	12,74%	13,76%	14,33%	15,33%	19,13%	19,67%	19,49%	17,34%	21,56%	23,46%	22,39%	21,87%
Metals & Mining	13,38%	13,67%	14,38%	15,03%	18,78%	19,87%	19,10%	15,93%	22,62%	24,57%	22,87%	22,22%
Office Equipment & Services	12,36%	12,82%	13,62%	14,59%	17,25%	16,17%	16,24%	17,10%	21,45%	22,45%	20,20%	16,45%
Oil/Gas (Integrated)	13,19%	13,82%	14,66%	15,16%	17,98%	16,57%	17,77%	17,35%	21,14%	22,30%	21,77%	19,59%
Oil/Gas (Production and Exploratio	14,10%	14,69%	15,67%	16,28%	21,01%	24,96%	21,20%	19,64%	26,83%	25,17%	24,05%	19,23%
Oil/Gas Distribution	12,19%	13,24%	13,96%	14,93%	18,59%	19,54%	16,82%	14,81%	18,04%	19,35%	18,51%	13,87%
Oilfield Svcs/Equip.	13,10%	13,45%	14,15%	15,28%	18,24%	19,68%	19,10%	16,55%	21,21%	20,35%	19,29%	16,31%
Packaging & Container	12,06%	12,94%	13,43%	14,09%	17,15%	14,01%	15,00%	14,77%	19,34%	19,72%	19,12%	16,21%
Paper/Forest Products	11,98%	12,62%	13,36%	14,12%	16,69%	14,44%	15,19%	14,28%	18,45%	18,90%	17,76%	14,07%
Power	11,63%	12,62%	13,26%	13,90%	16,37%	13,59%	13,57%	12,46%	14,59%	16,32%	16,38%	13,26%
Precious Metals	13,76%	14,92%	15,76%	15,44%	19,04%	23,54%	20,15%	17,26%	23,75%	26,30%	25,44%	21,34%
R.E.I.T.			13,43%	13,89%	16,33%	12,63%	11,76%	14,05%	16,63%	16,05%	16,52%	12,96%
Real Estate (Development)	12,37%	12,05%	13,81%	14,29%	16,87%	14,30%	15,19%	11,74%	12,82%	16,11%	15,49%	12,76%
Real Estate (General/Diversified)	12,28%	13,14%	13,75%	14,56%	17,40%	15,93%	16,15%	13,38%	15,49%	17,84%	17,76%	14,62%
Real Estate (Operations & Service	12,03%	13,00%	13,42%	13,93%	16,55%	15,52%	14,62%	13,44%	16,91%	18,96%	17,78%	14,58%
Recreation	12,45%	13,90%	14,22%	15,31%	18,20%	15,39%	16,43%	15,33%	18,18%	20,67%	20,61%	19,16%
Reinsurance	12,64%	13,71%	14,77%	14,87%	18,20%	19,55%	17,77%	17,88%	24,53%	21,51%	21,60%	19,88%
Restaurant/Dining	12,45%	13,90%	14,34%	15,10%	18,67%	18,35%	18,25%	16,41%	20,32%	22,69%	21,77%	19,01%
Retail (Automotive)	11,74%	12,56%	13,51%	14,29%	16,93%	15,04%	15,48%	14,60%	17,26%	18,48%	17,70%	14,47%
Retail (Building Supply)	11,69%	13,72%	15,64%	15,43%	19,01%	16,58%	19,49%	18,17%	23,59%	20,12%	19,16%	15,39%
Retail (Distributors)	12,03%	12,75%	13,43%	14,32%	16,89%	13,54%	14,53%	11,61%	13,47%	16,60%	16,37%	13,29%
Retail (General)	12,48%	13,49%	13,82%	14,92%	18,29%	18,57%	17,20%	15,16%	17,47%	18,58%	20,93%	19,54%
Retail (Grocery and Food)	12,35%	13,29%	14,08%	14,23%	17,64%	18,89%	15,58%	12,56%	15,26%	18,37%	17,97%	16,28%
Retail (Online)	13,77%	17,50%	15,71%	16,07%	20,35%	21,84%	22,54%	22,13%	30,61%	33,45%		
Retail (Special Lines)	13,30%	13,75%	14,64%	15,11%	18,08%	17,79%		16,13%	21,05%	22,13%	21,45%	18,97%
Rubber& Tires	12,26%	13,52%	14,12%	14,47%	17,82%	14,80%	15,29%	15,34%	21,87%	22,42%	20,96%	17,34%
Semiconductor	13,02%	14,63%	14,71%	15,89%	19,94%	22,04%	25,11%	21,79%	29,51%	31,57%	29,43%	28,61%
Semiconductor Equip	13,16%	13,90%	15,03%	15,72%	18,87%	19,80%	24,45%	24,87%	35,56%	35,03%	32,09%	32,19%
Shipbuilding & Marine	11,91%	12,65%	13,79%	14,35%	17,04%	16,65%	15,19%	14,57%	20,10%	21,56%	19,61%	16,45%
Shoe	12,83%	13,41%	13,92%	14,60%	17,97%	17,96%	17,29%	16,18%	21,67%	21,55%	18,86%	14,78%
Software (Entertainment)			14,57%	15,94%	21,51%	23,18%	25,59%	19,89%	26,61%	33,39%	29,94%	27,89%
Software (Internet)	13,22%	14,76%	15,36%	16,26%	20,22%	24,07%	16,72%	15,90%	21,74%	23,76%	22,85%	22,69%
Software (System & Application)	13,77%	14,46%	14,74%	15,86%	20,23%	22,66%	22,54%	20,86%	27,01%	28,53%	27,25%	27,88%
Steel	12,45%	13,06%	13,78%	14,19%	17,19%	17,06%	17,10%	16,01%	21,26%	23,23%	21,78%	18,56%
Telecom (Wireless)	12,19%	13,40%	14,32%	14,57%	17,81%	17,90%	15,86%	14,48%	18,49%	18,93%	19,36%	17,72%
Telecom. Equipment	13,21%	14,05%	14,59%	15,57%	19,68%	21,17%	22,44%	18,56%	23,19%	25,50%	24,79%	23,56%
Telecom. Services	12,22%	12,97%	13,79%	14,23%	17,34%	15,18%	16,34%	13,89%	17,69%	18,53%	18,54%	15,81%
Thrift	11,73%	12,45%										
Tobacco	11,61%	12,96%	13,50%	13,67%	15,73%	10,42%	16,53%	13,60%	18,60%	18,24%	16,55%	11,68%
Transportation	11,98%	12,85%	13,43%	14,48%	17,73%	18,29%	16,91%	14,93%	18,31%	20,08%	18,87%	16,64%
Transportation (Railroads)	12,18%	13,36%	14,75%	15,76%	21,22%	21,93%	21,01%	15,56%	18,45%	22,16%	20,06%	17,75%
Trucking	11,80%	12,82%	14,08%	14,46%	17,23%	14,95%	15,48%	15,45%	18,09%	19,89%	17,81%	11,50%
Unclassified			14,25%	14,67%								
Utility (General)	10,68%	11,48%	12,32%	13,29%	15,52%	11,85%	12,52%	13,65%	14,10%	17,79%	17,34%	14,53%
Utility (Water)	11,88%	13,23%	14,02%	14,82%	18,72%	18,52%	16,43%	13,33%	13,44%	15,67%	15,78%	12,83%

Metodología para el cálculo del costo del patrimonio desapalancado
Ajustado para Colombia – Pesos Colombianos (COP)

Para el cálculo de Ku se usa el Modelo de Fijación de precios de mercado (CAPM[1]) de (Sharpe, 1964) y (Lintner, 1965), ajustado por riesgo país.:

$$Ku = R_f + \beta u(RP_M) \qquad (1)$$

Donde R_f es la rentabilidad de los títulos libres de riesgo reportada por Damodaran cómo media geométrica de 50 años, βu es el beta desapalancado de cada sector industrial en países emergentes, reportado por Damodaran. RP_M la prima de riesgo promedio del mercado, entendida cómo la diferencia entre la rentabilidad del índice S&P500 y la rentabilidad de los T-Bonds.

Damodaran obtiene βu usando el promedio sectorial de betas (βe) de empresas transadas, usando a Hamada (1972) (Rubinstein, 1973), (Bowman, 1979), (Fernandez, 2006) y (Sarmiento-Sabogal & Sadeghi, 2014):

$$\beta u = \sum_{j=1}^{J} \frac{\beta e_j}{(1 + (D_j/E_j)(1-\tau)} \qquad (2)$$

Dado que en la operacionalización de la ecuación (1) se usa la rentabilidad histórica de los bonos del tesoro de los Estados Unidos (T-Bonds), se hace necesario el siguiente ajuste para reflejar el riesgo país de Colombia (CRP):

$$Ri_{USD} = R_f + \beta u(RP_M) + CRP \qquad (3)$$

Finalmente, para ajustar a las expectativas de devaluación en Colombia, se ajusta la ecuación (3) usando las tasas de referencia de los bancos centrales de Colombia (BanRep) y USA (FED) para incorporar este efecto:

$$Ri_{COP} = (1 + Ri_{USD})\frac{(1+BanRep)}{(1+FED)} - 1 \qquad (4)$$

Fuentes de información

Rf: Damodaran - Historical Returns on Stocks, Bonds and Bills - United States
PRm: Damodaran - Historical Returns on Stocks, Bonds and Bills - United States
Betas sectoriales: Damodaran - Levered and Unlevered Betas by Industry – Emerg Mkt
PRP: Damodaran - Risk Premiums for Other Markets
Tasa BanRep: https://www.banrep.gov.co/es/estadisticas/tasas-interes-politica-monetaria
Tasa FED: https://www.global-rates.com/interest-rates/central-banks/central-bank-america/fed-interest-rate.aspx

[1] Por sus siglas en inglés: Capital Asset Pricing Model.

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