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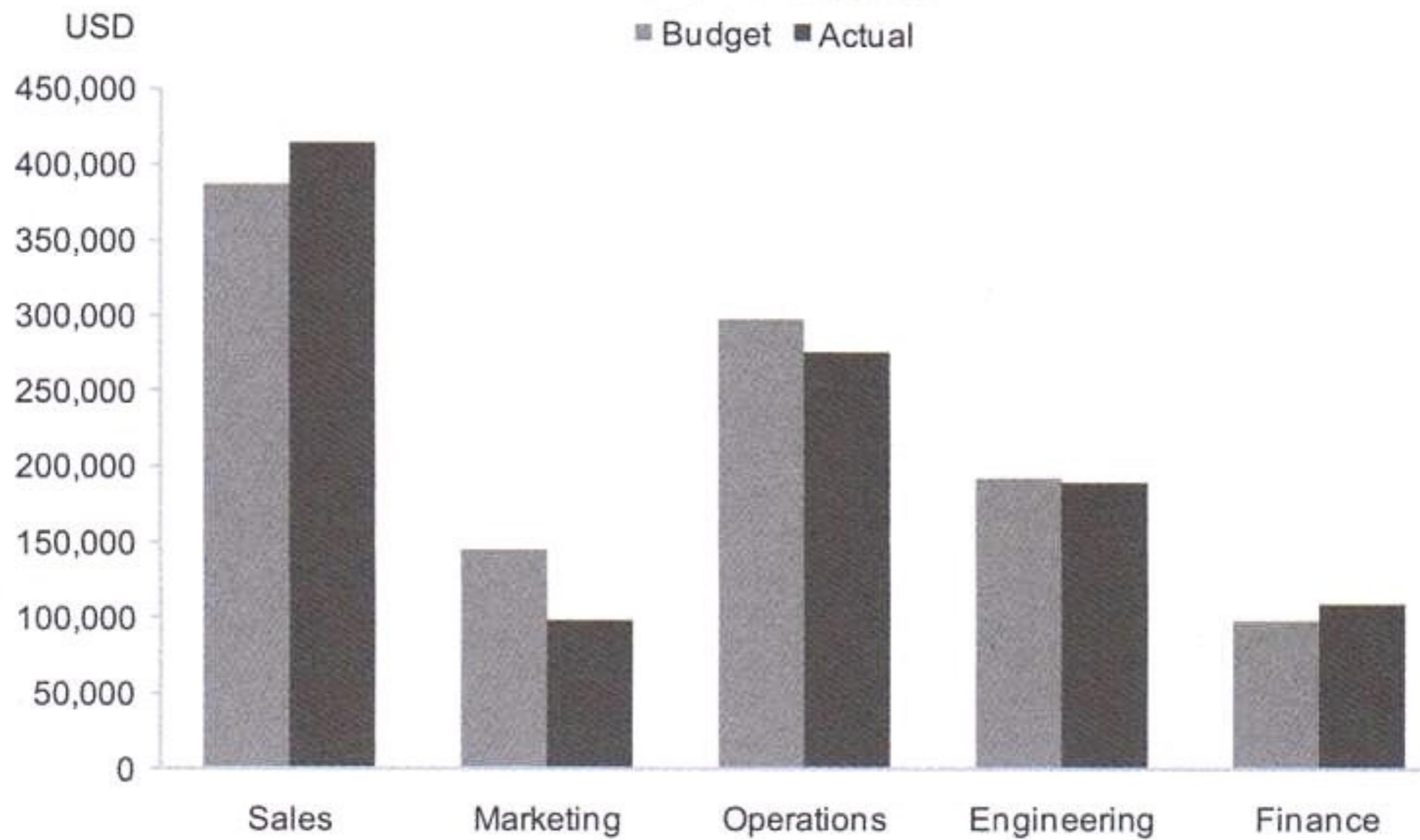
DESVIO

Profa. Raquel C. de Melo Minardi

- A análise de como um ou mais valores **desviam** de um **conjunto de referência** é a análise de desvio

2008 YTD Expenses

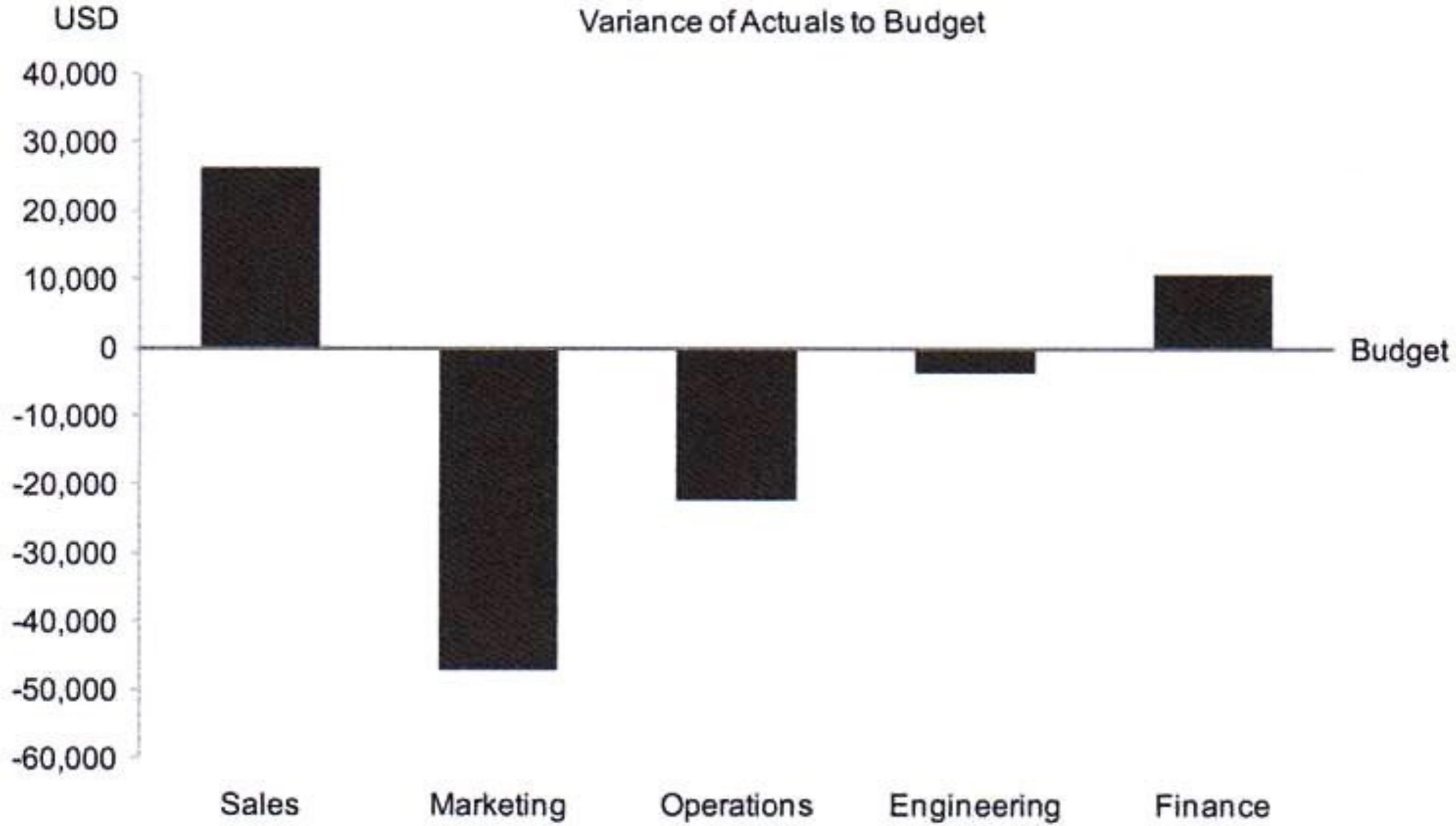
■ Budget ■ Actual



Exige que realizemos cálculos

2008 YTD Expenses

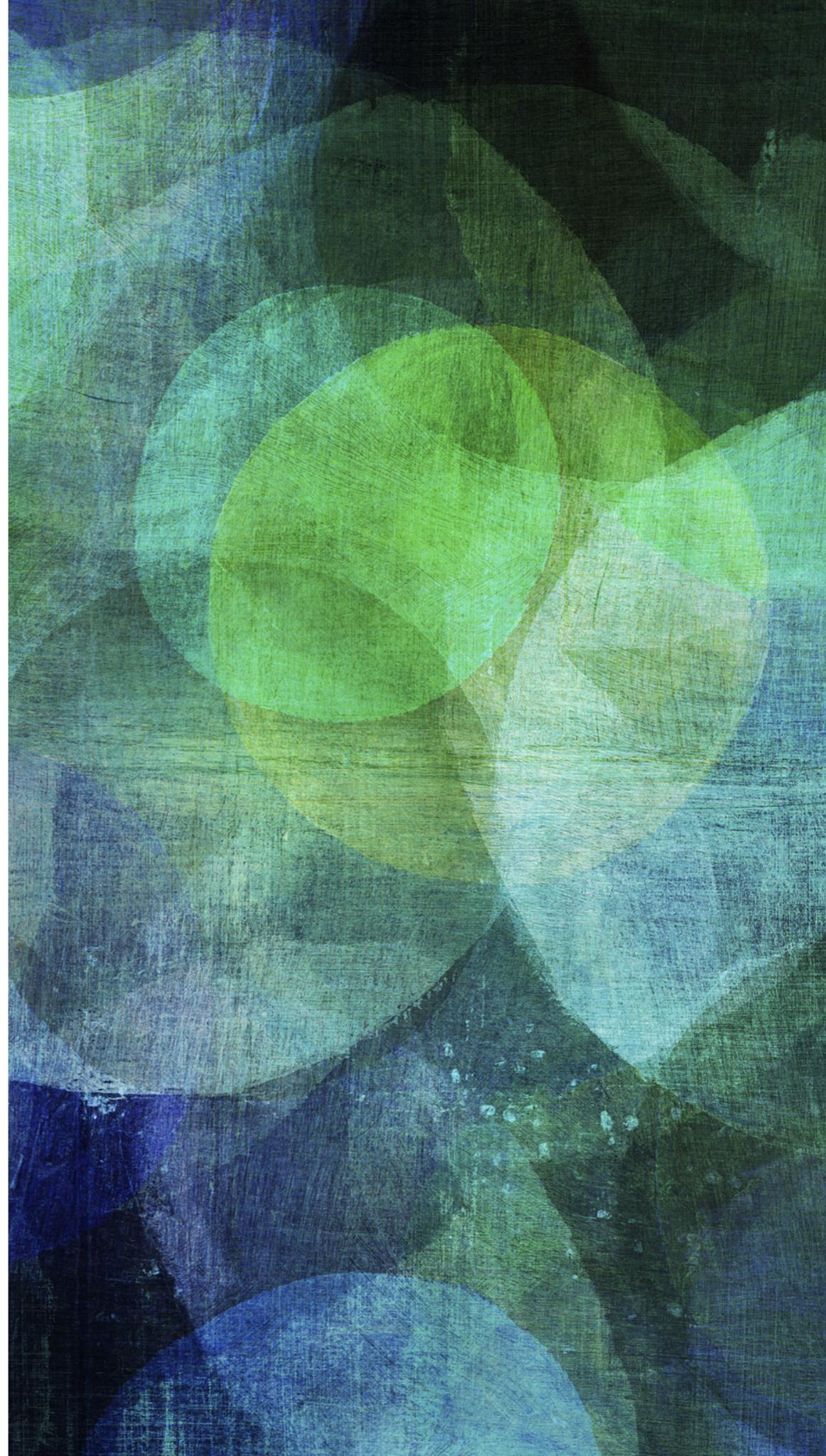
Variance of Actuals to Budget



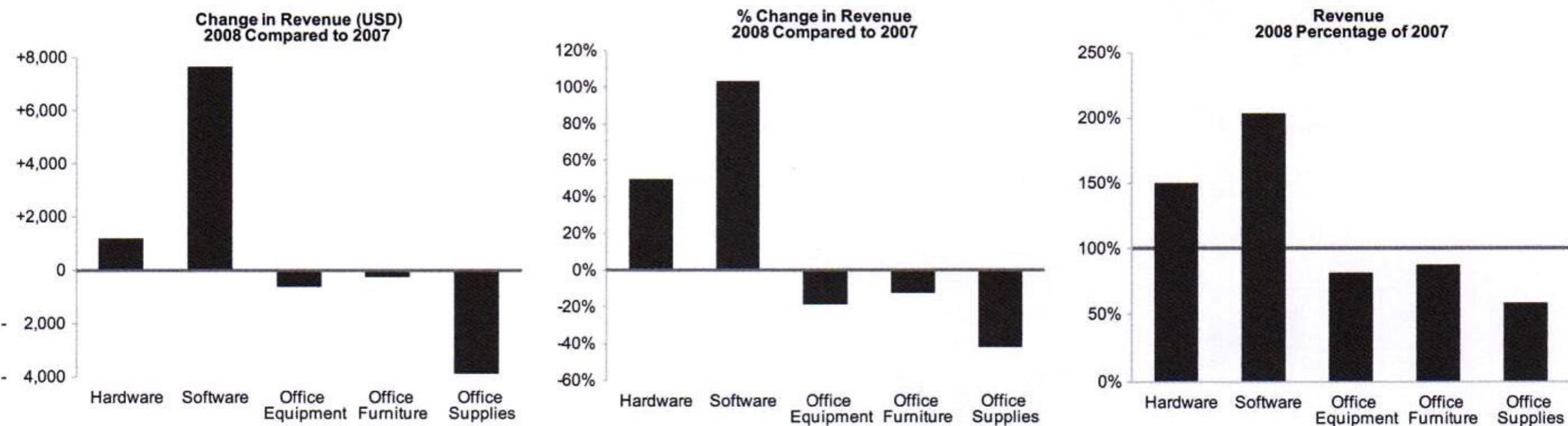
Diferenças explícitas

- Alguns exemplos de análises de desvio envolvem comparações com:
 - Alvo atual ou futuro
 - Mesmo valor no passado
 - Período imediatamente anterior
 - Norma ou padrão
 - Outros itens da mesma categoria

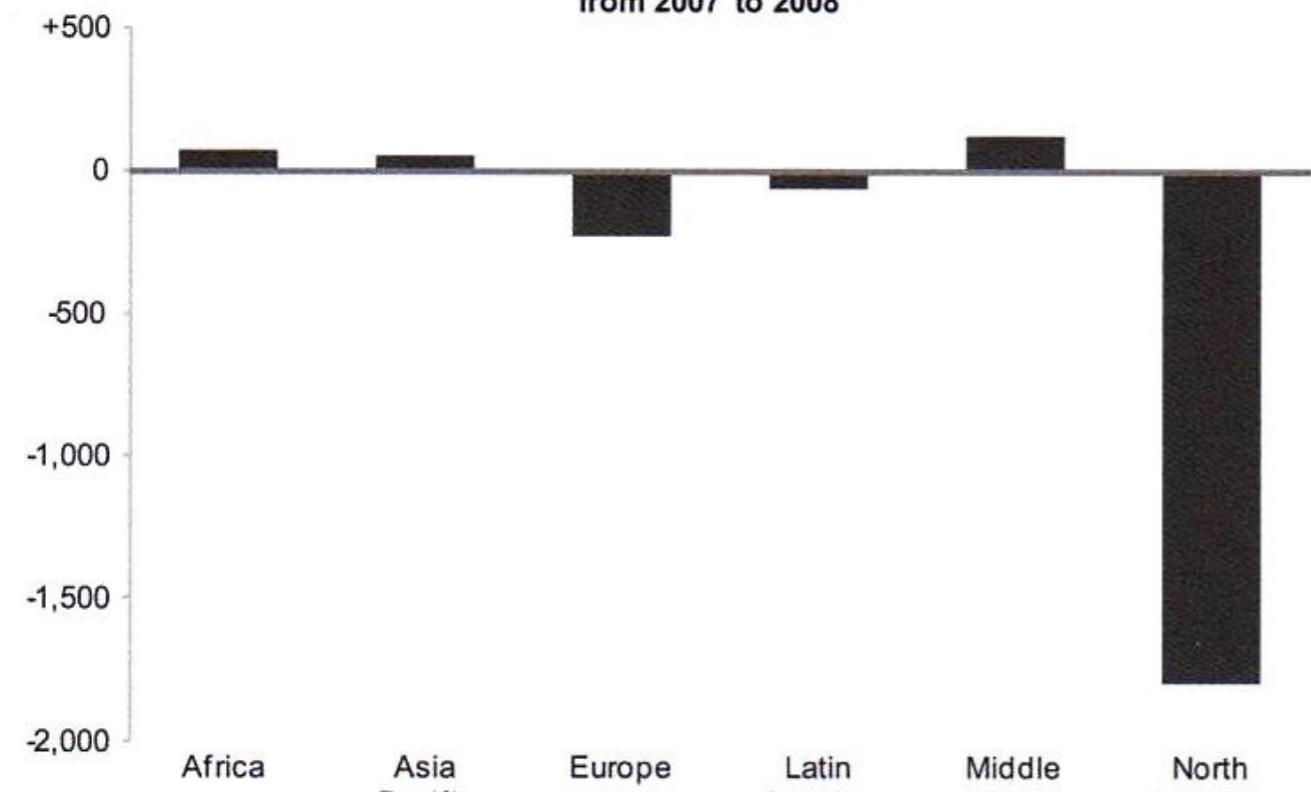
REPRESENTAÇÕES VISUAIS



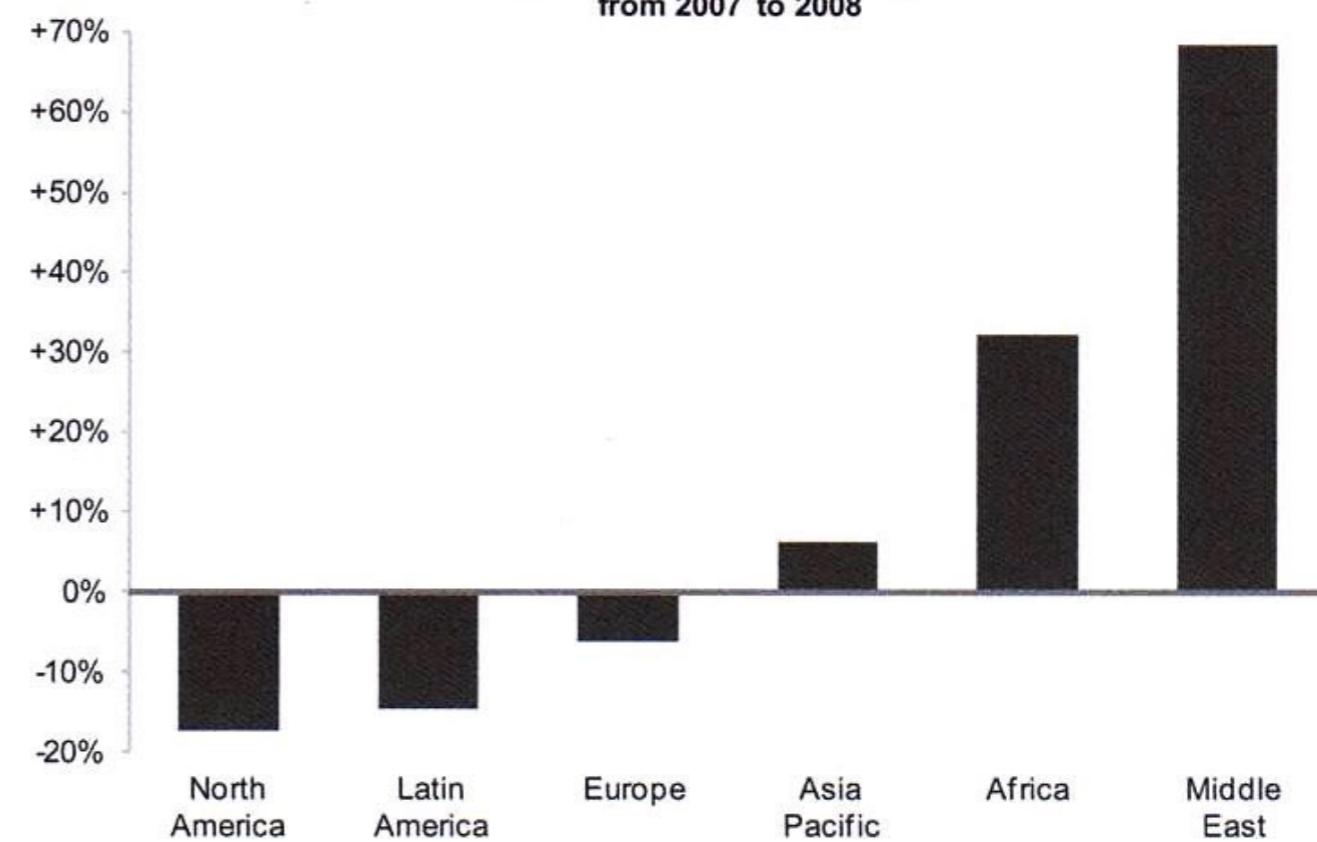
As melhores representações para análise de desvios são os gráficos de barras e linhas



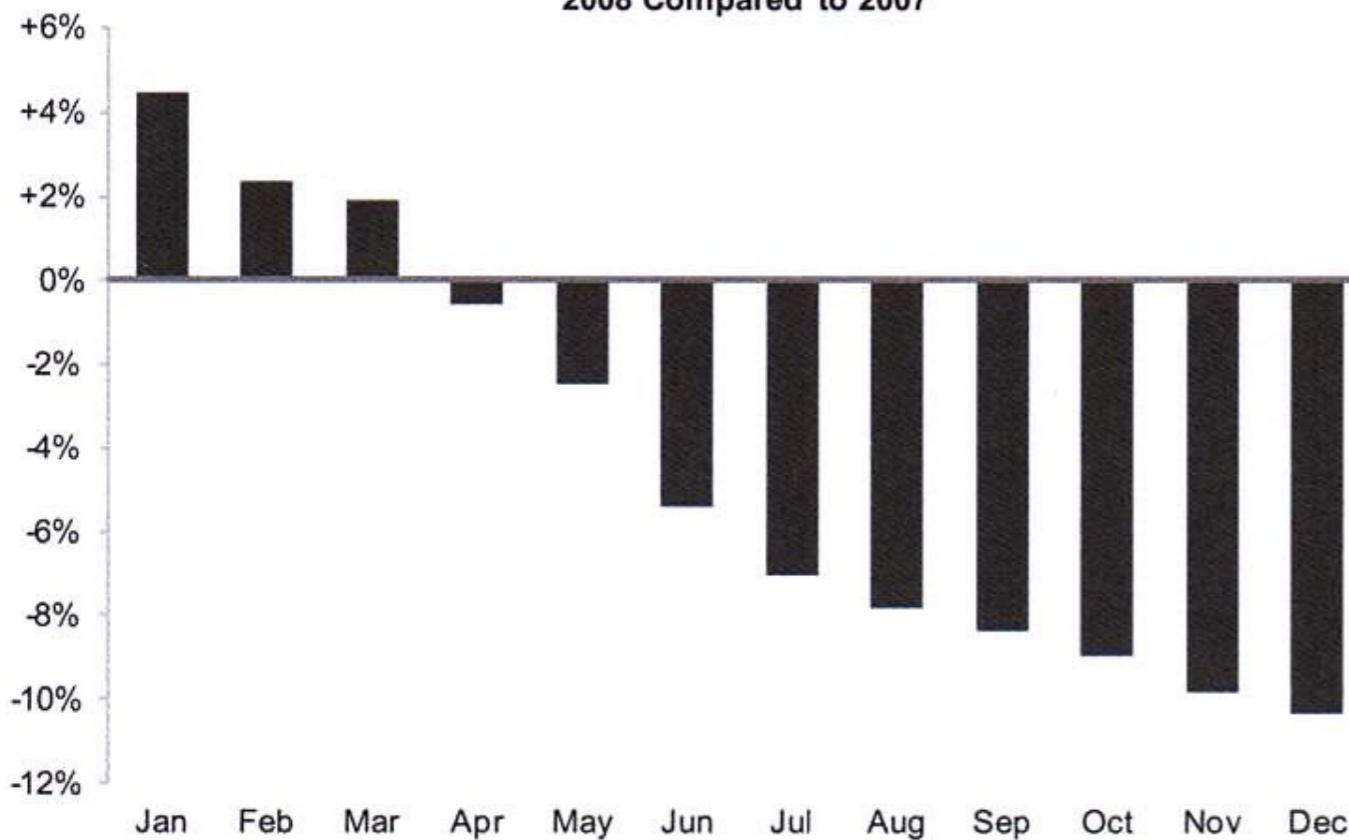
**Change in Headcount
from 2007 to 2008**



**Percentage Change in Headcount
from 2007 to 2008**



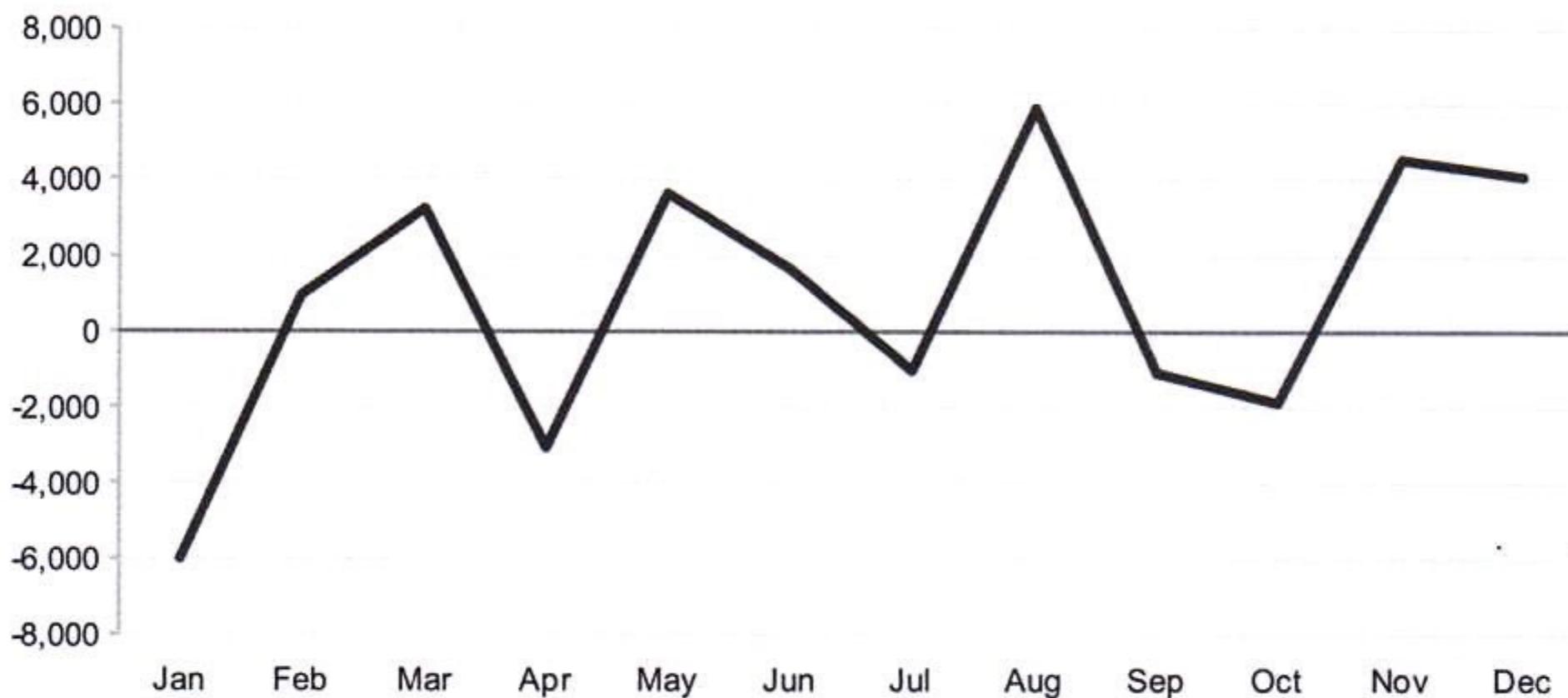
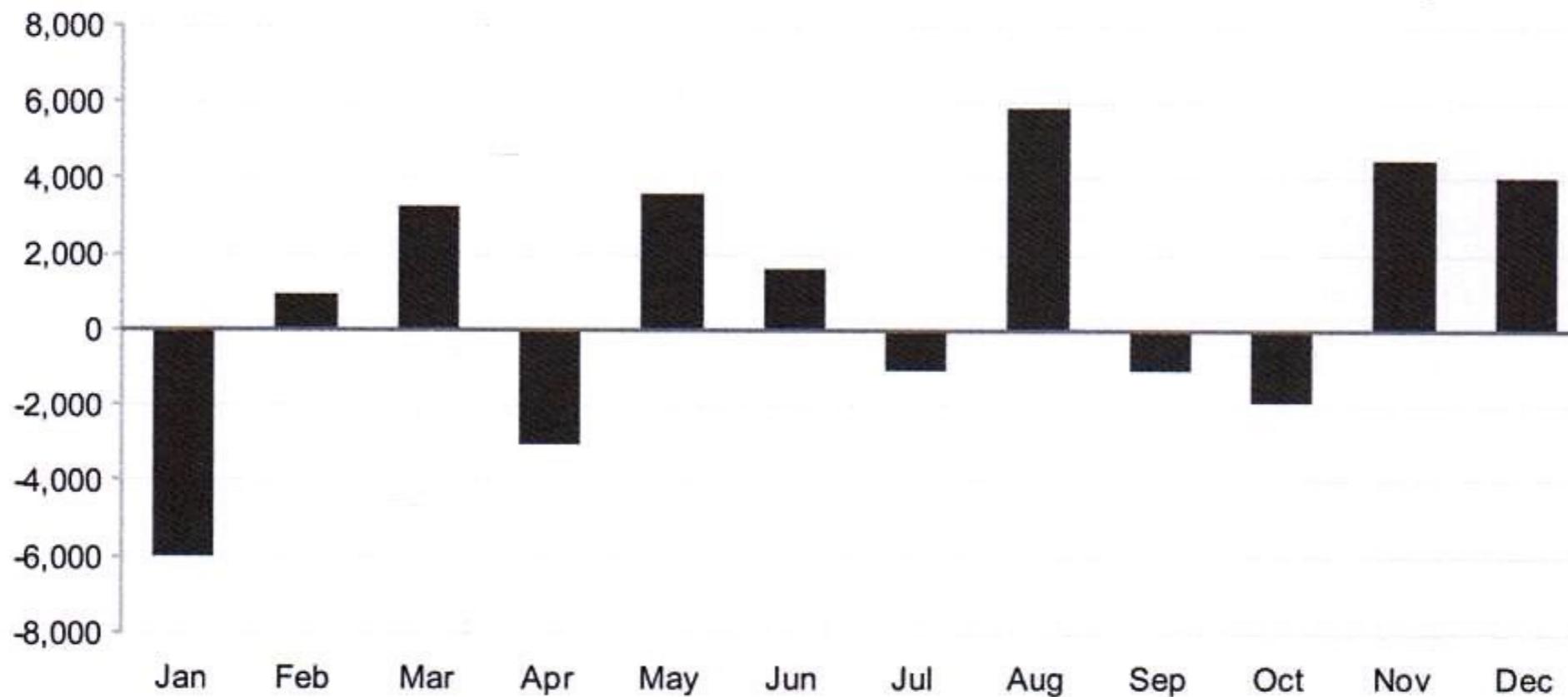
**Monthly Difference in Headcount
2008 Compared to 2007**



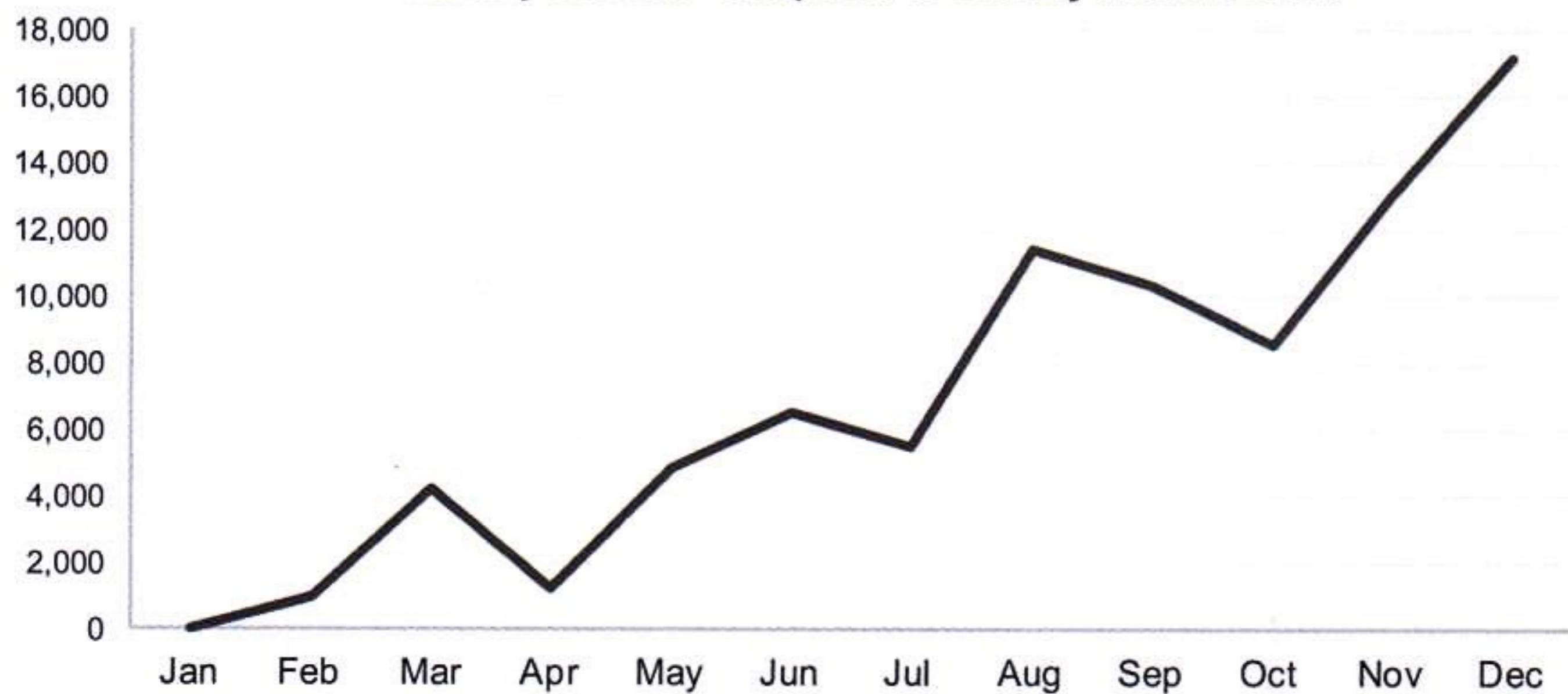
Barras são excelentes para
mostrar os desvios
individualmente

Mas não mostram claramente
as mudanças no tempo

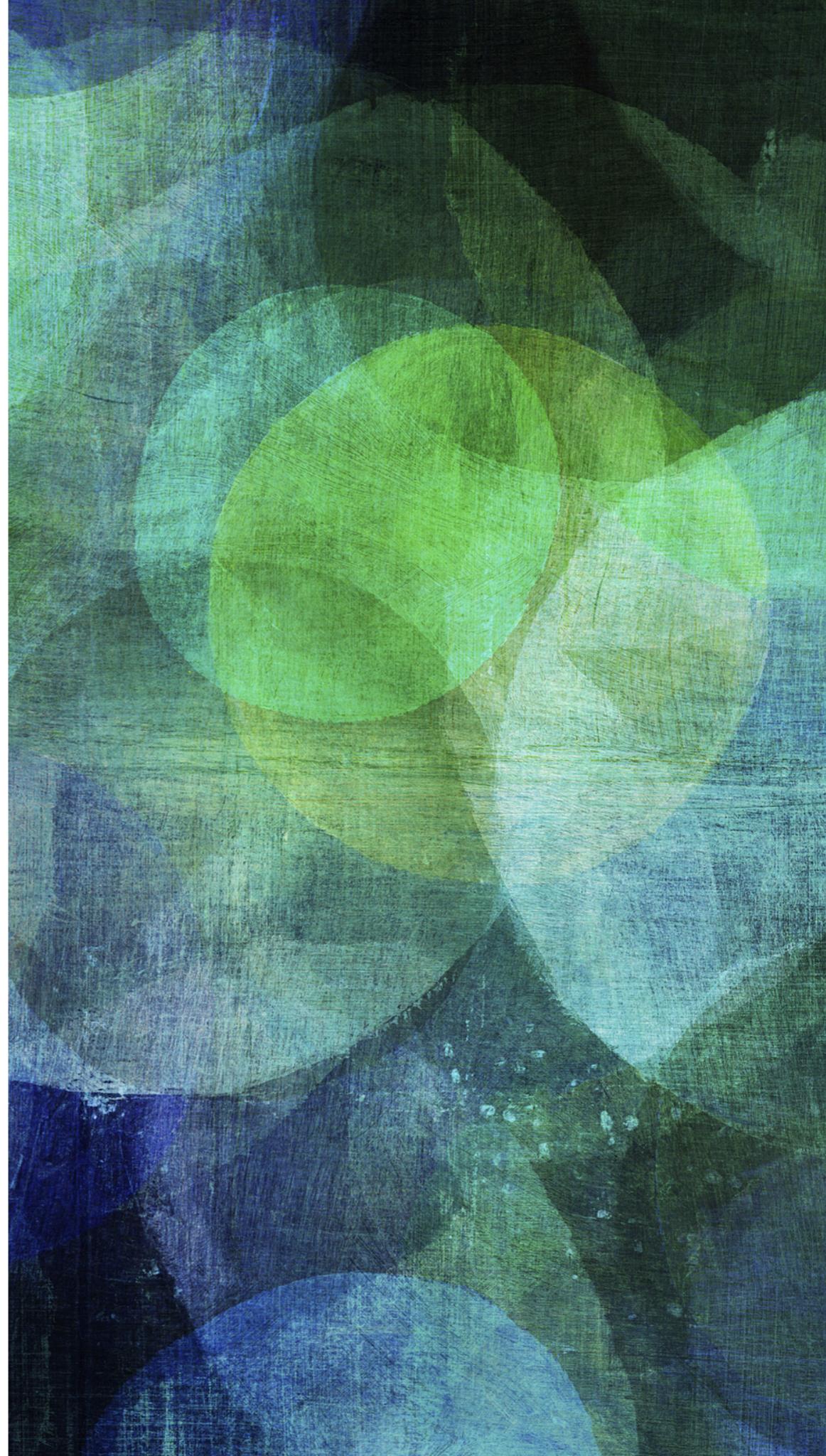
Revenue Difference in U.S. Dollars Compared to Last Year's Average



Monthly Revenue Compared to January in U.S. Dollars

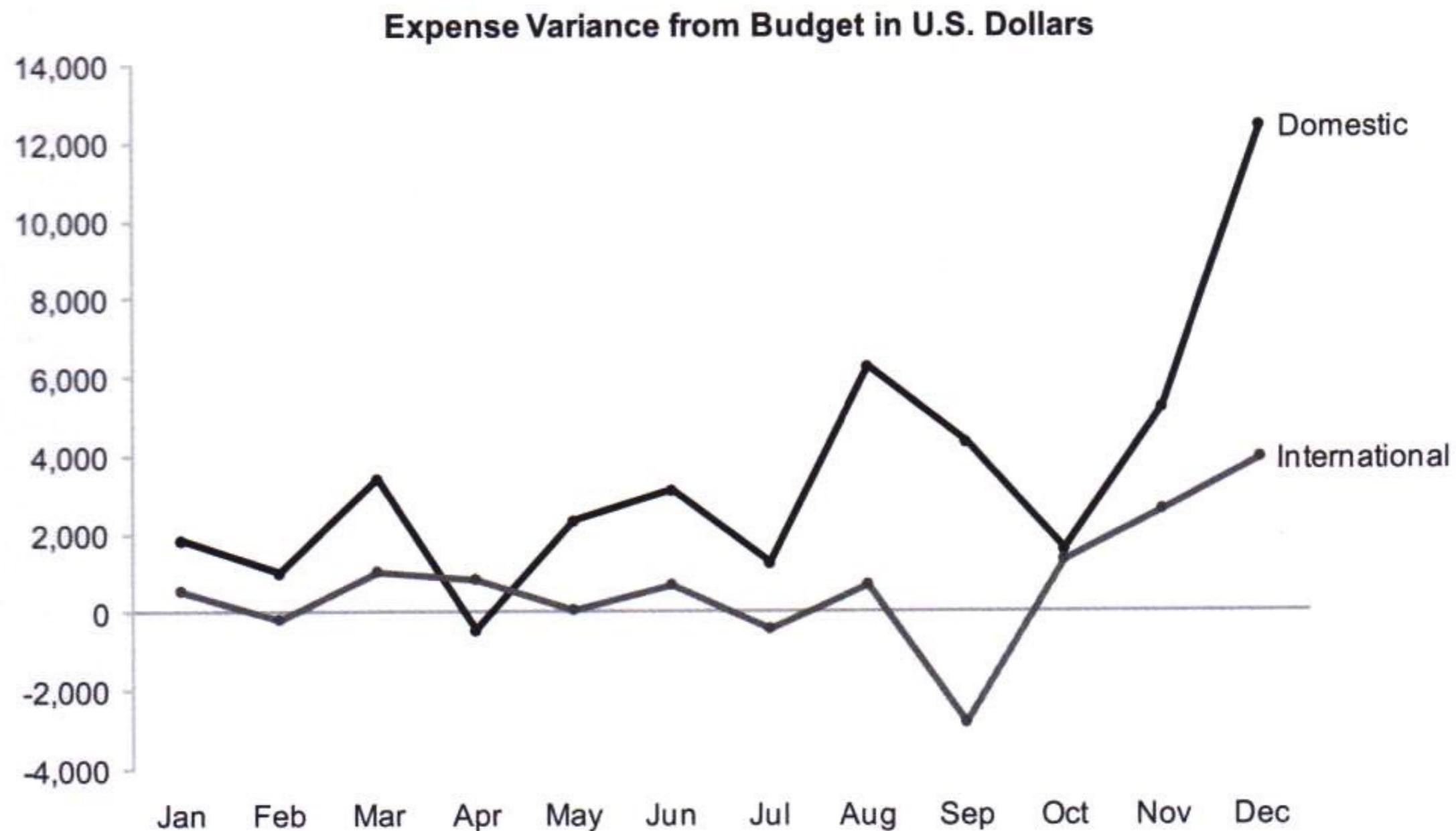


BOAS PRÁTICAS

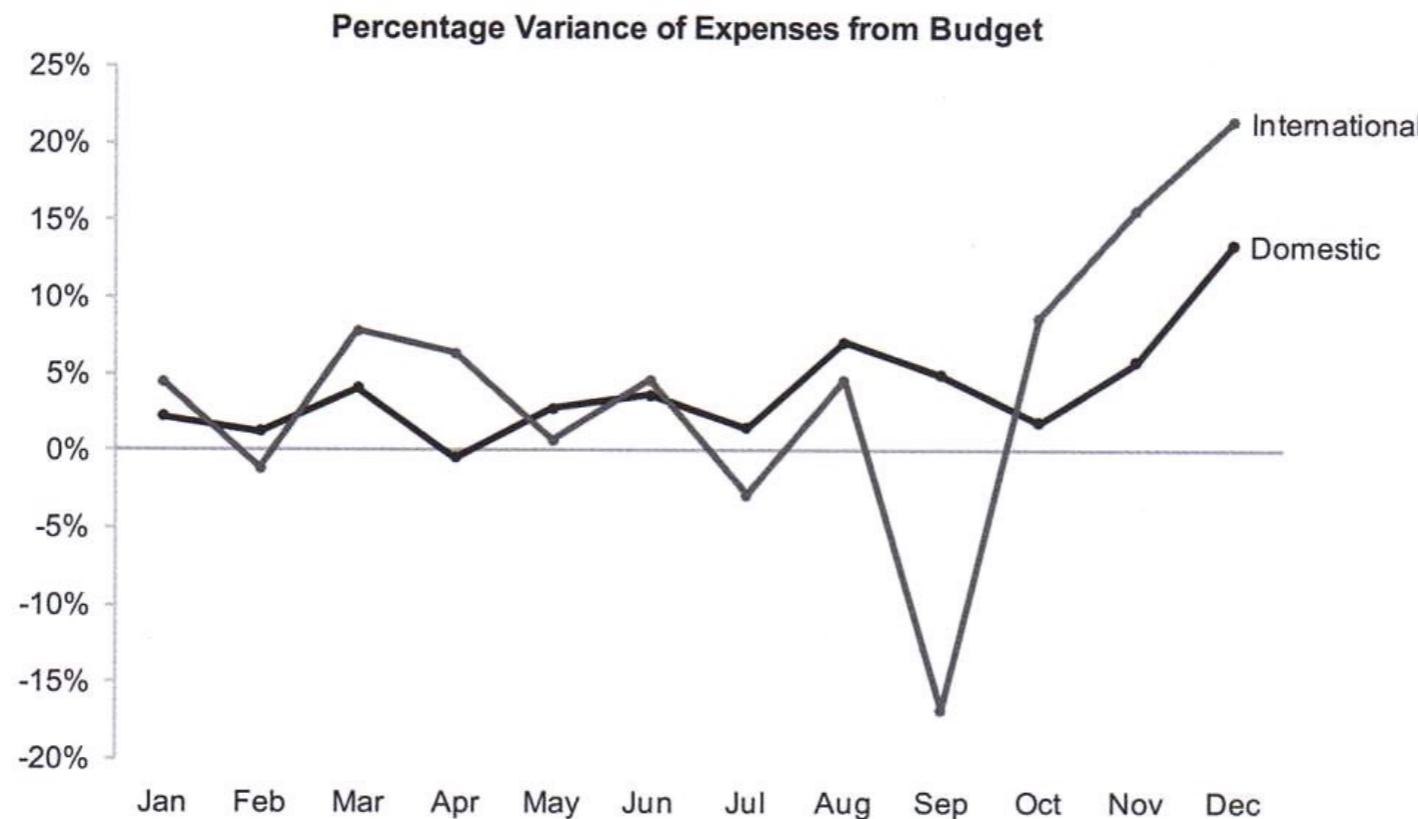
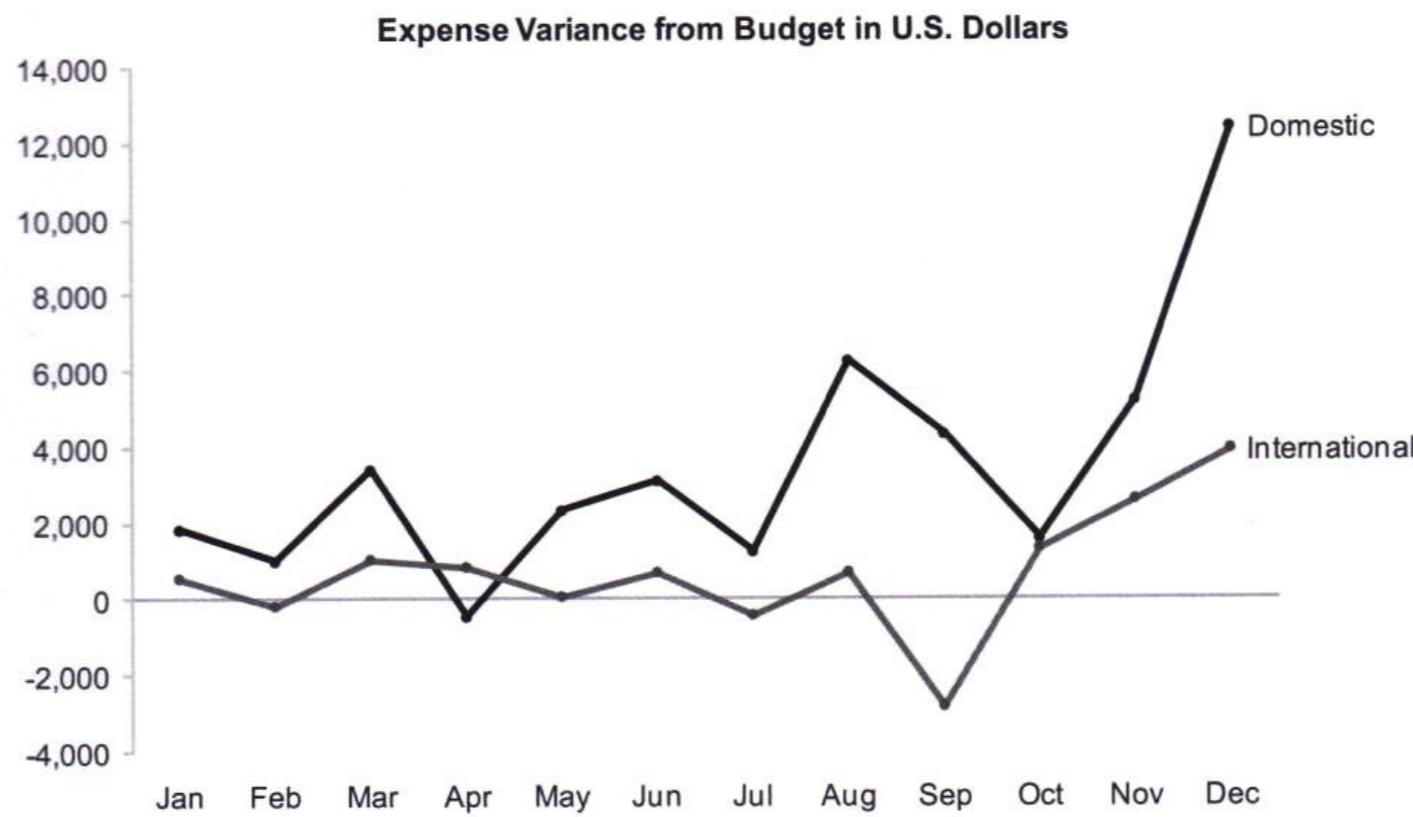


EXPRESSES OS DESVIOS COMO PERCENTUAIS

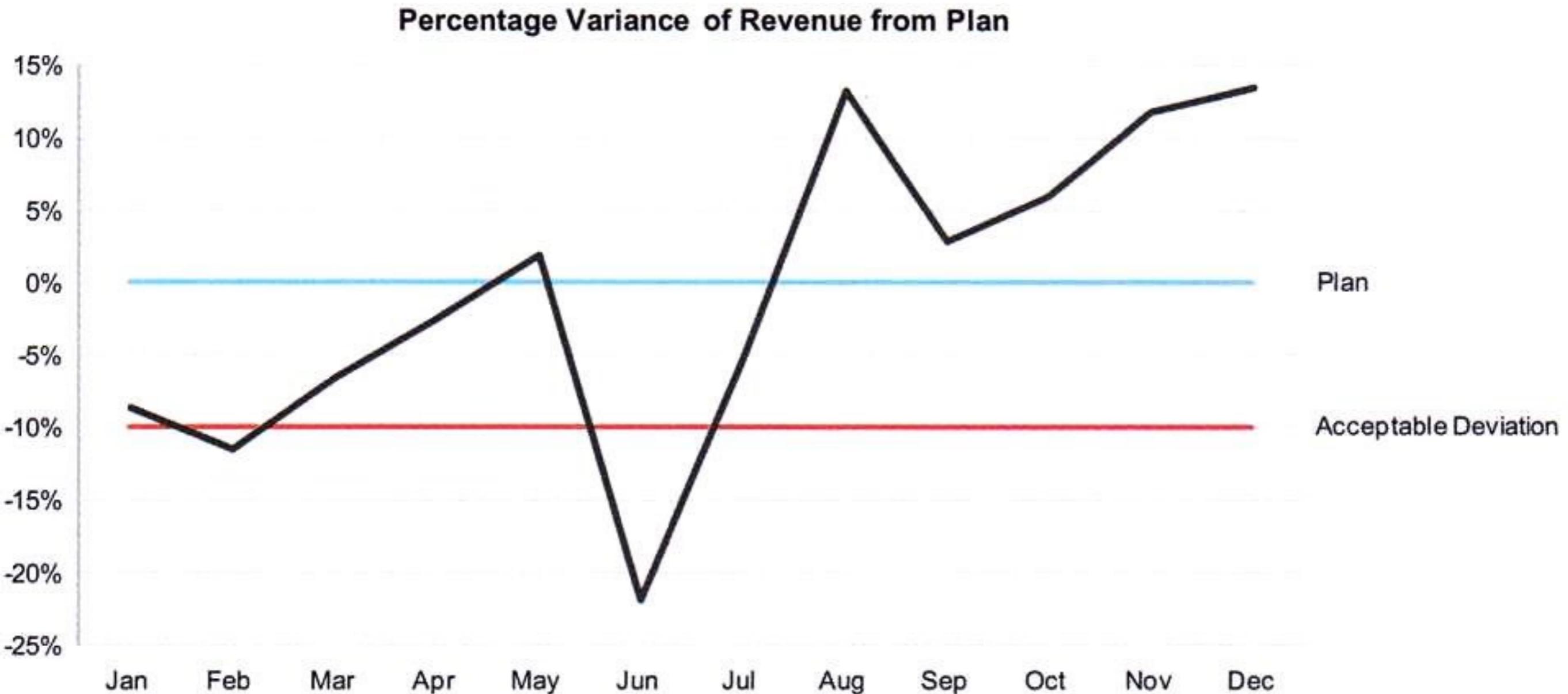
- Em alguns casos, expressar os desvios como percentuais traz uma visão completamente diferente dos dados



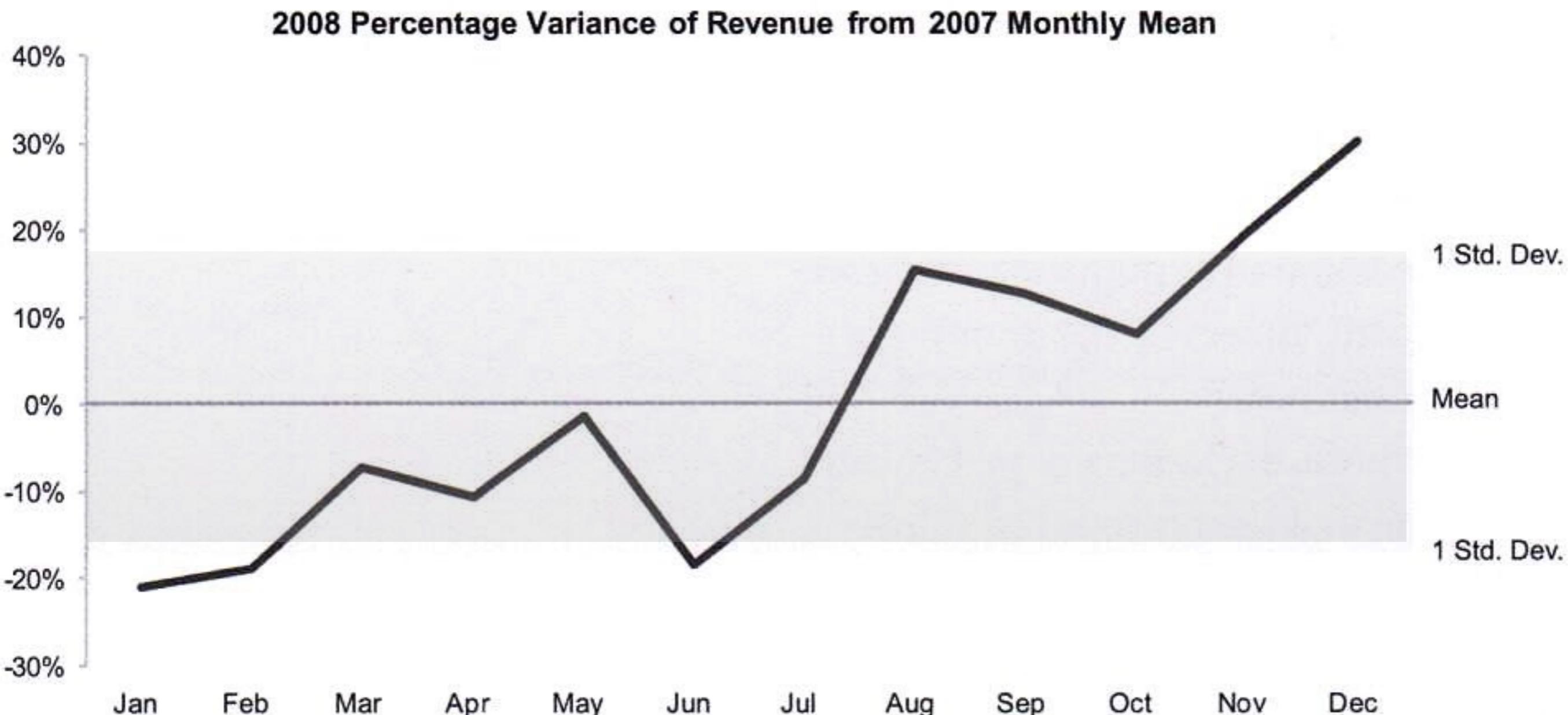
EXPRESSES OS DESVIOS COMO PERCENTUAIS



COMPARE OS DESVIOS COM VALORES DE REFERÊNCIA



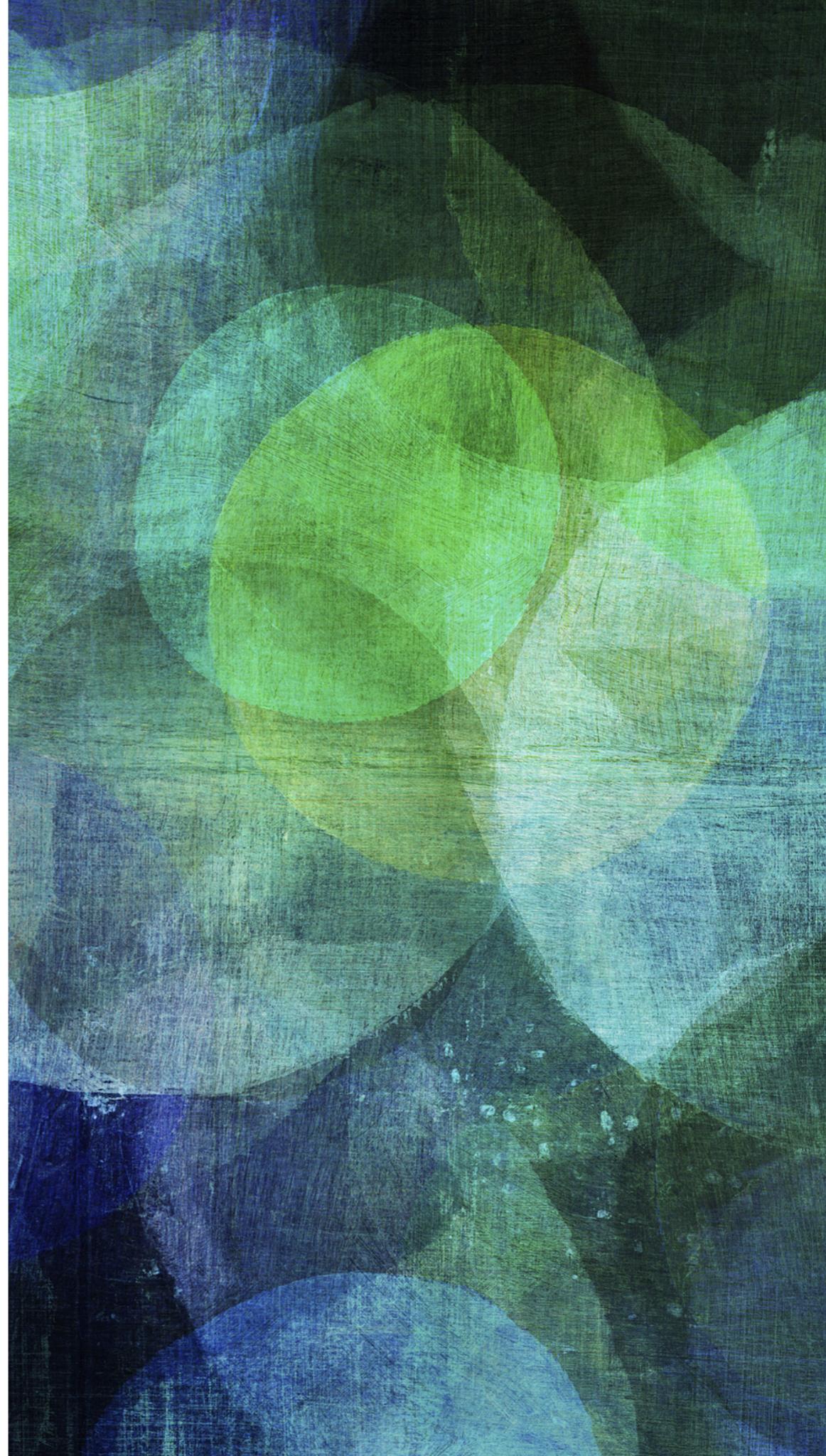
COMPARE OS DESVIOS COM VALORES DE REFERÊNCIA

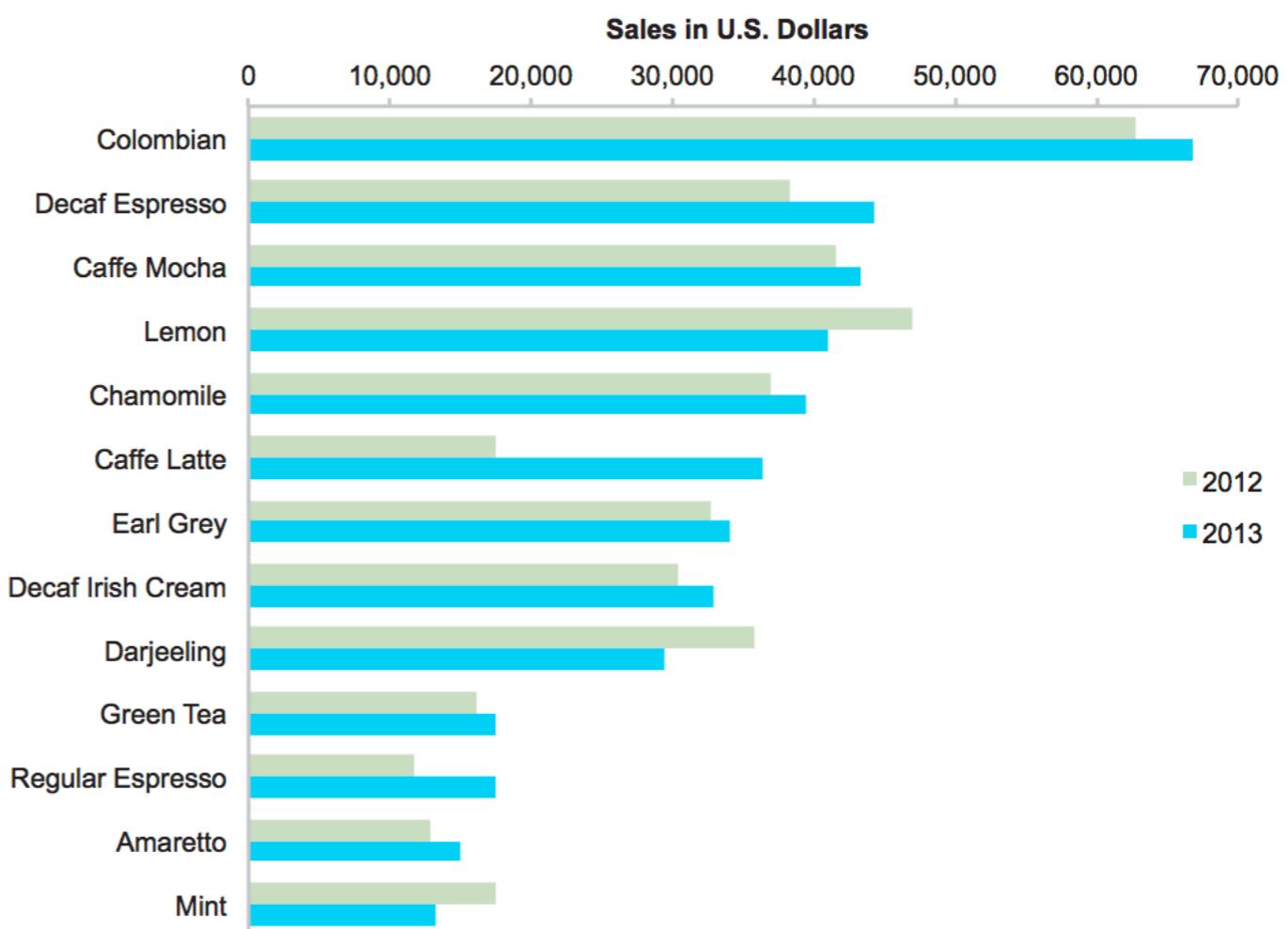
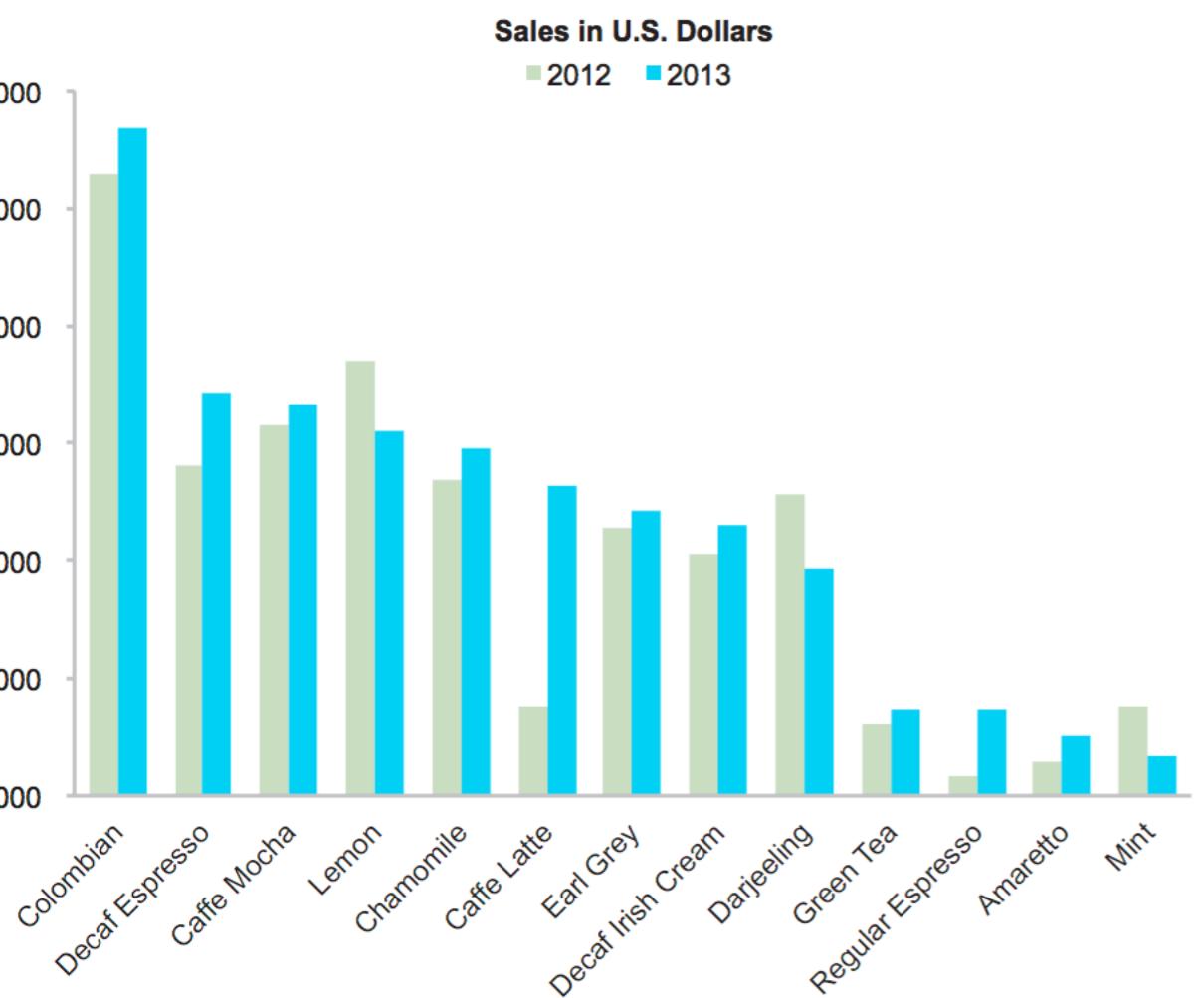


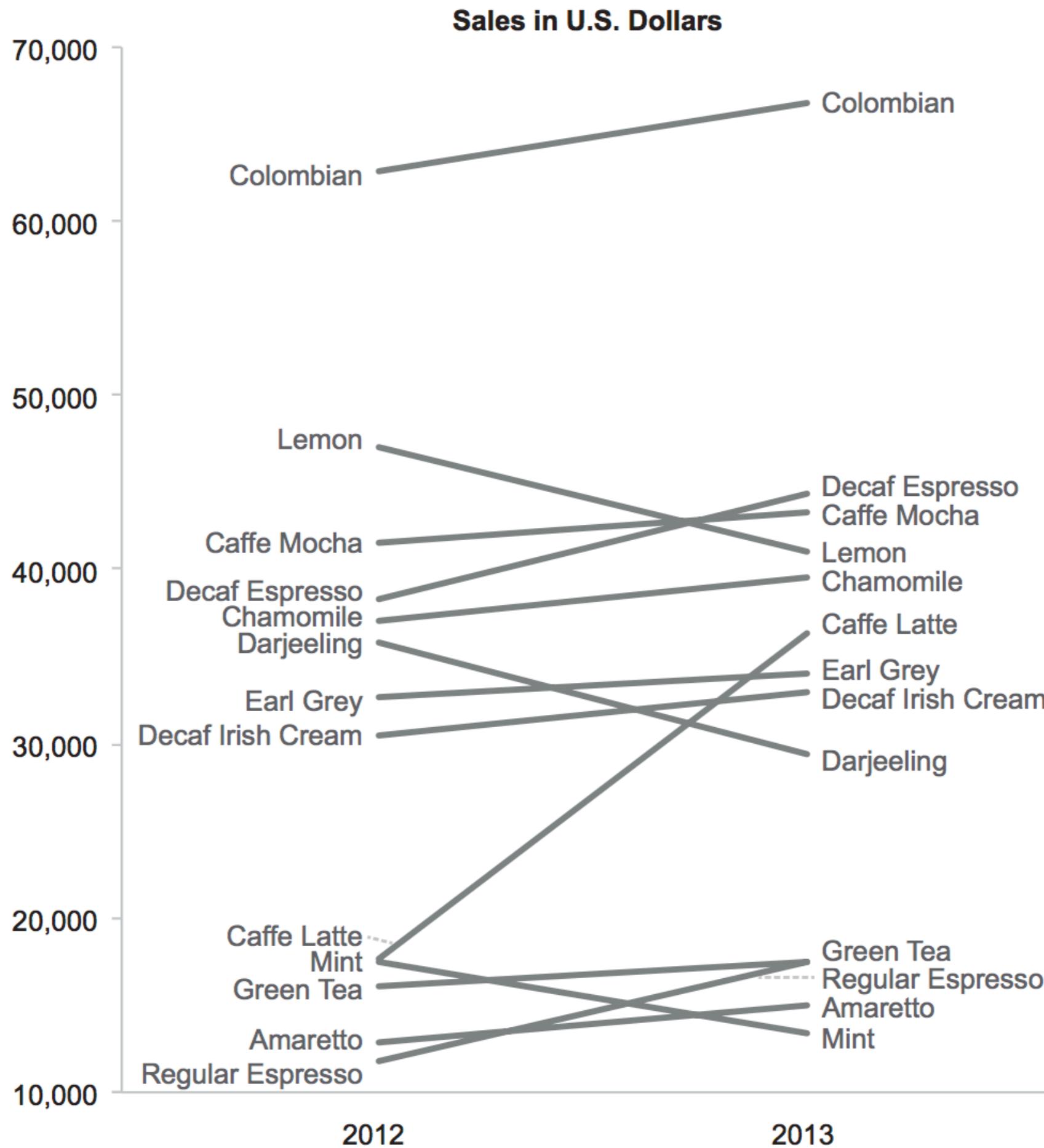
Use cores de fundo para destacar referência como por exemplo um desvio padrão abaixo ou acima

EXEMPLO PRÁTICO: MOSTRANDO DESVIOS SOBRE DOIS PONTOS NO TEMPO

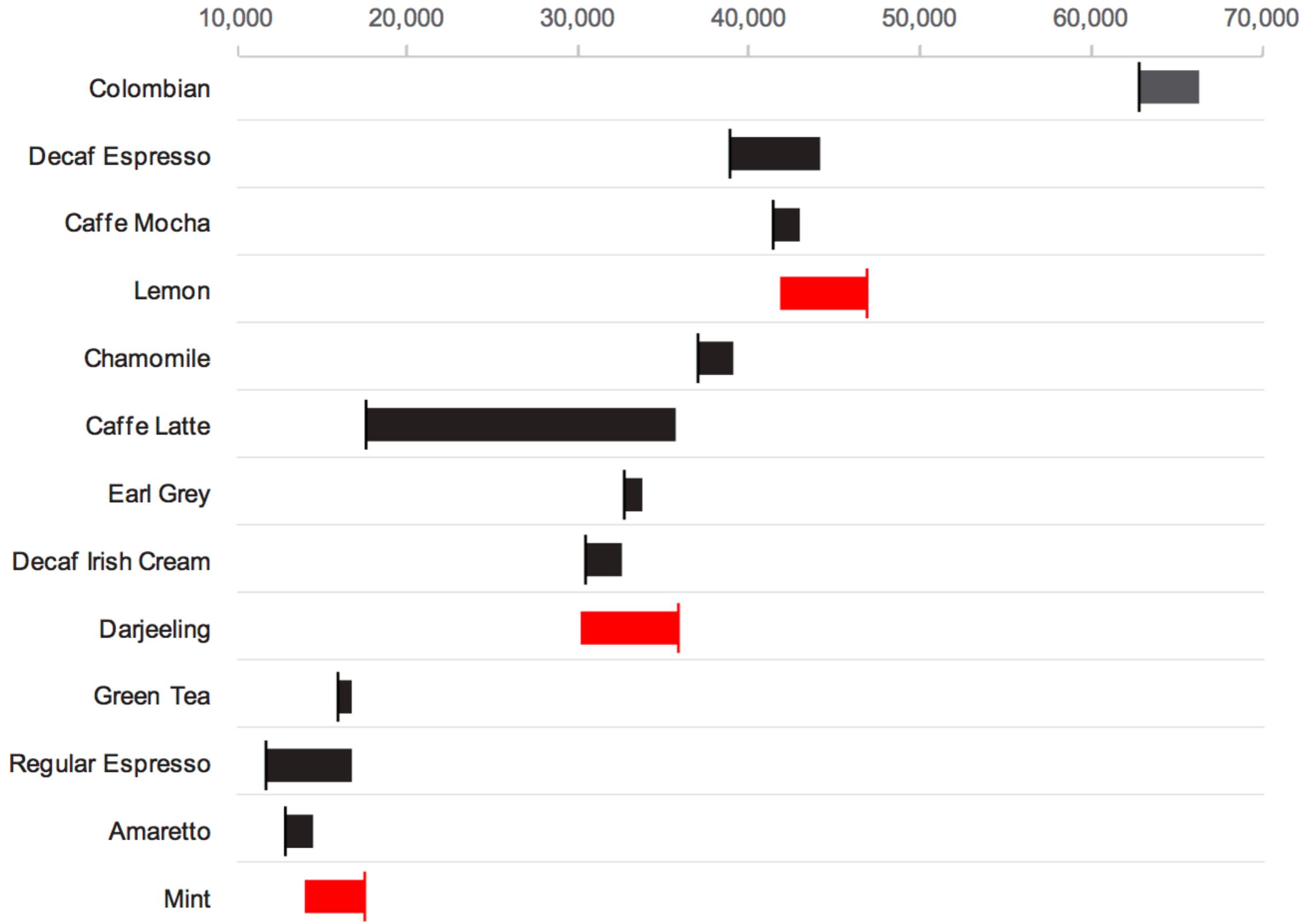
Displaying Change Between Two Points in Time. Stephen Few, Perceptual Edge Visual Business Intelligence Newsletter April/May/June 2014



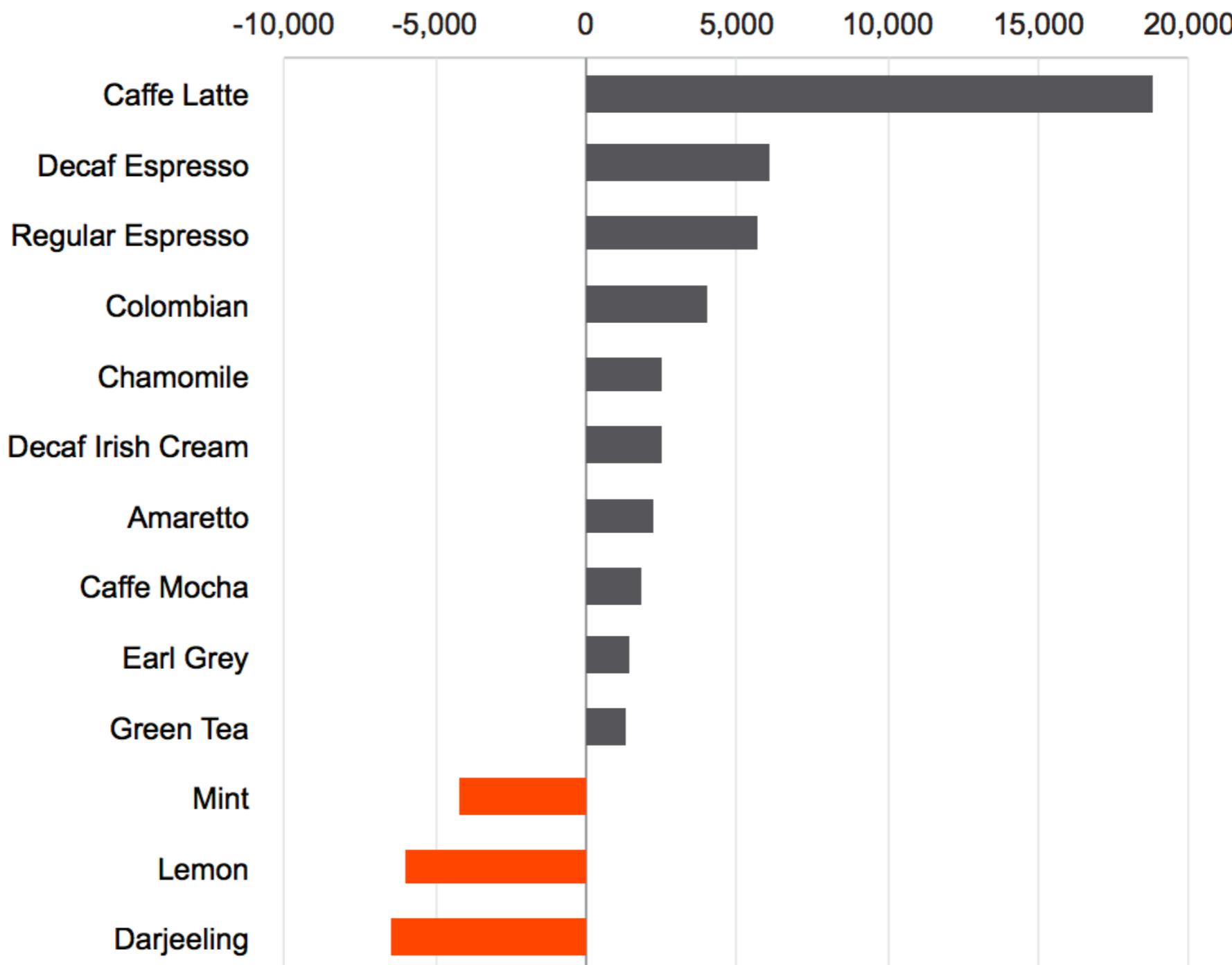


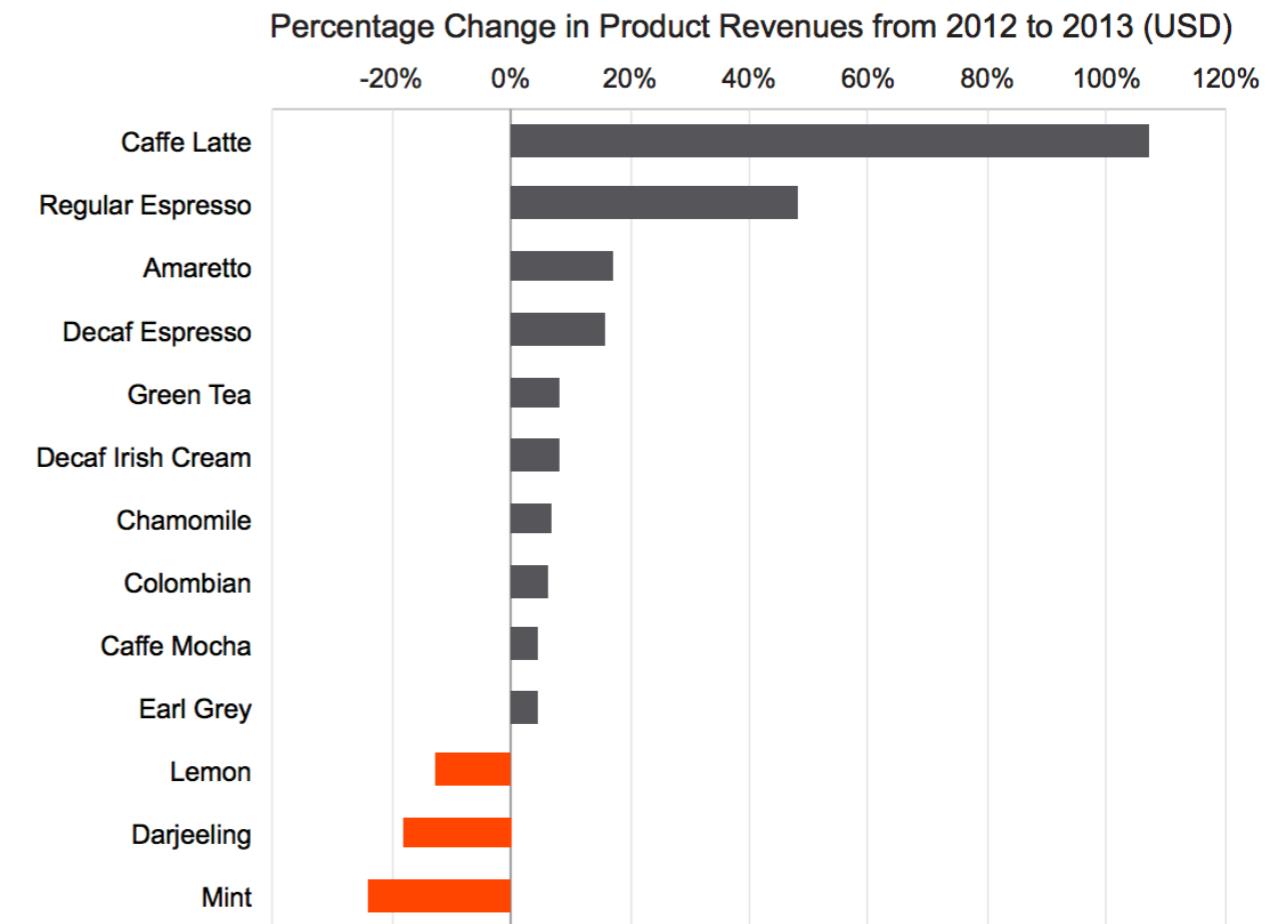
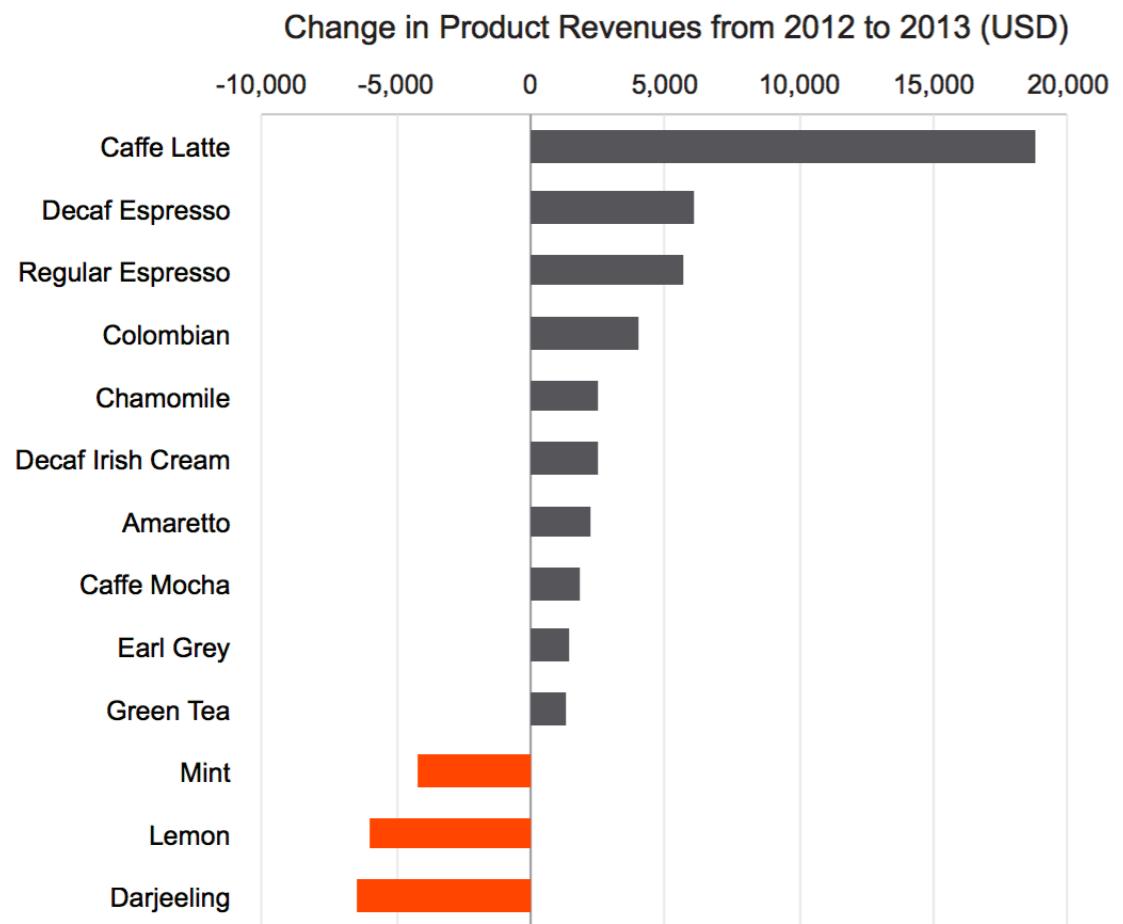


Change in Product Revenues from 2012 to 2013 (USD)

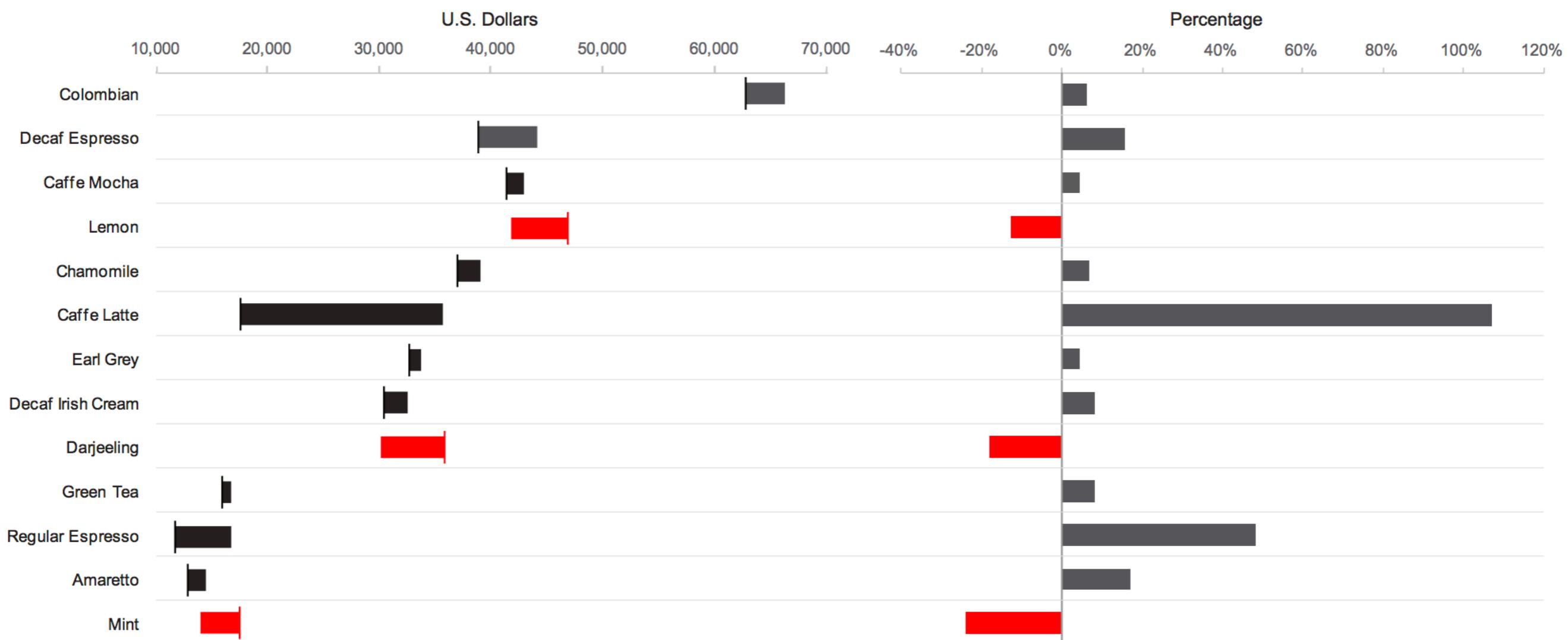


Change in Product Revenues from 2012 to 2013 (USD)

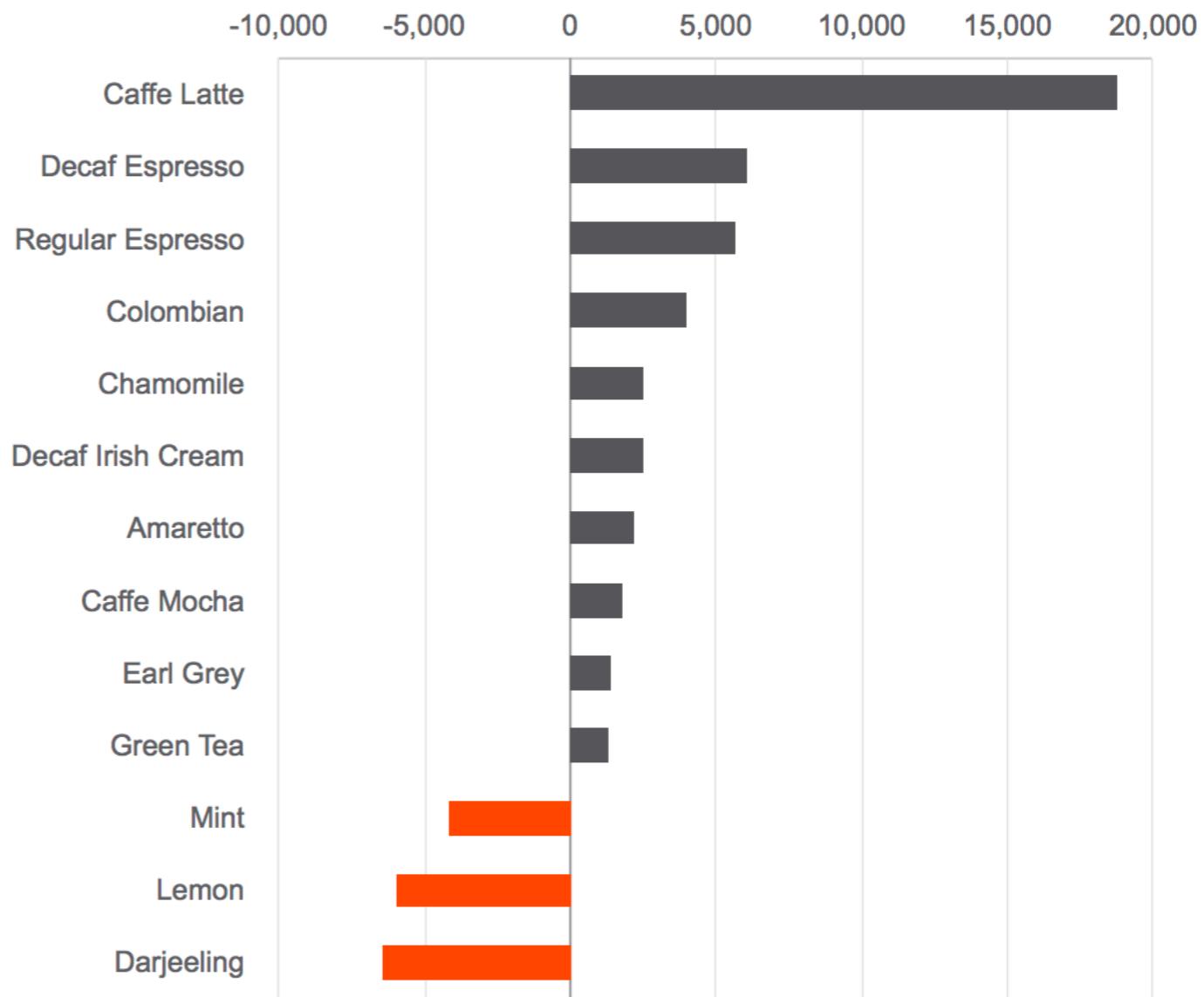
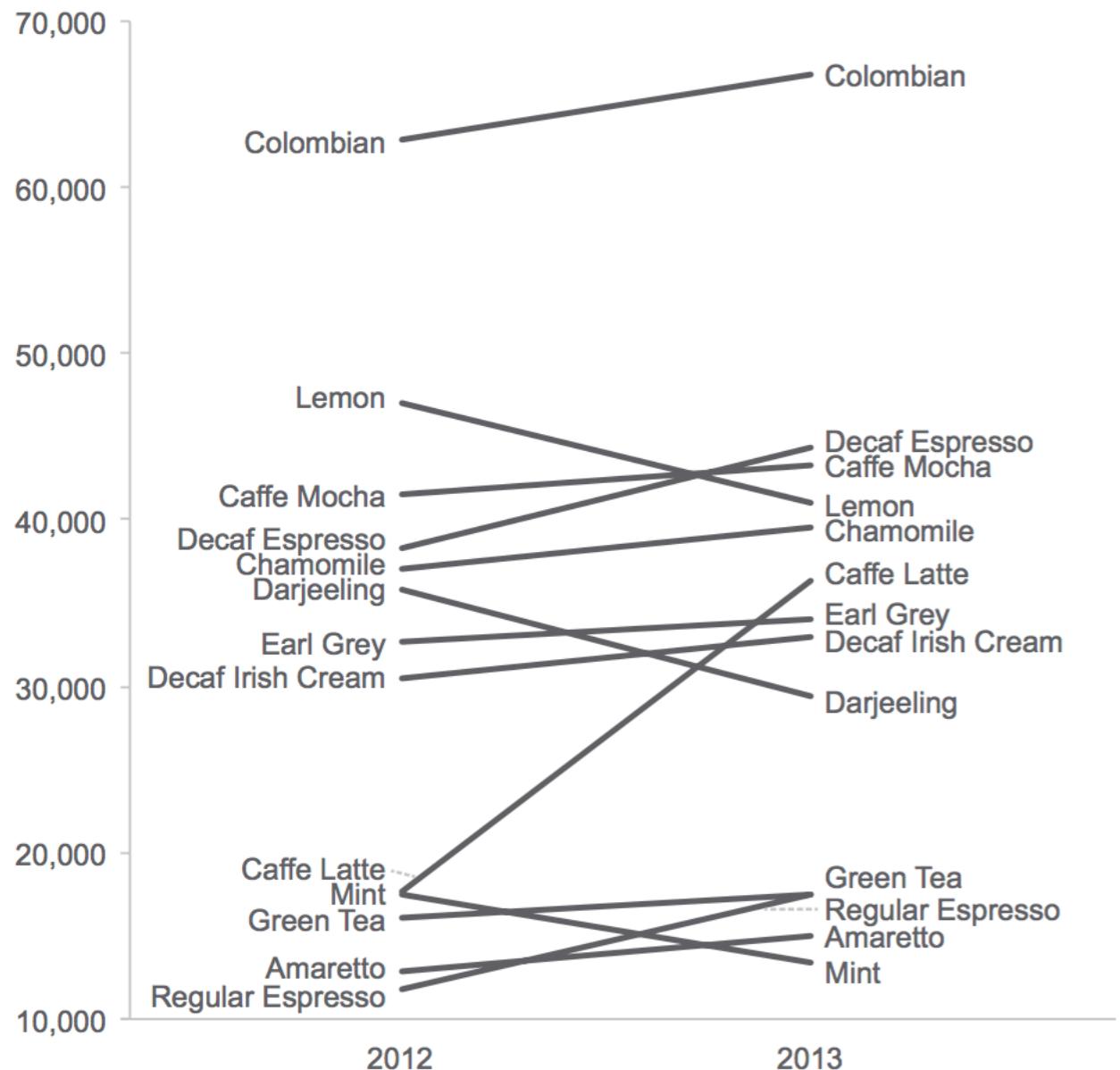




Change in Product Revenues from 2012 to 2013



Change in Product Revenues from 2012 to 2013 (USD)



Feature	Line Graph	Range Bar Graph	Deviation Bar Graph
Easy to compare magnitudes of change	Good	Satisfactory	Excellent
Easy to compare directions of change	Good	Excellent	Excellent
Easy to compare values at the same point in time	Excellent	Good	N/A
Easy to compare rates of change	Good ¹	Poor	Excellent ²
Easy to spot changes in rank	Excellent	Satisfactory	N/A

¹ Quantitative scale must be switched from linear to logarithmic

² Quantitative scale must directly express the rate of change

FINALIZAMOS OS RELACIONAMENTOS QUANTITATIVOS CLÁSSICOS

Featured Relationships	Value-Encoding Objects			
	Points	Lines	Bars	Boxes
Time Series Values display how something changed through time (yearly, monthly, etc.)	Yes (as a <i>dot plot</i> , when you don't have a value for every interval of time)	Yes (to feature overall trends and patterns and to support their comparisons)	Yes (vertical bars only, to feature individual values and to support their comparisons)	Yes (vertical boxes only, to display how a distribution changes through time)
Ranking Values are ordered by size (descending or ascending)	Yes (as a <i>dot plot</i> , especially when the quantitative scale does not begin at zero)	Yes (as a <i>bumps chart</i> , to show how rankings change through time)	Yes	Yes (to display a ranked set of distributions)
Part-to-Whole Values represent parts (proportions) of a whole (for example, regional portions of total sales)	No	Yes (to display how parts of a whole have changed through time)	Yes	No
Deviation The difference between two sets of values (for example, the variance between actual and budgeted expenses)	Yes (as a <i>dot plot</i> , especially when the quantitative scale does not begin at zero)	Yes (when also featuring a time series)	Yes	No
Distribution Counts of values per interval from lowest to highest (for example, counts of people by age intervals of 10 years each)	Yes (as a <i>strip plot</i> , to feature individual values)	Yes (as a <i>frequency polygon</i> , to feature the overall shape of the distribution)	Yes	Yes (when comparing multiple distributions)
Correlation Comparison of two paired sets of values (for example, the heights and weights of several people) to determine if there is a relationship between them	Yes (as a <i>scatter plot</i>)	No	Yes (as a <i>table lens</i> , especially when your audience is not familiar with <i>scatter plots</i>)	No