Axioma Risk Monitor

Canada − 23 May 2017

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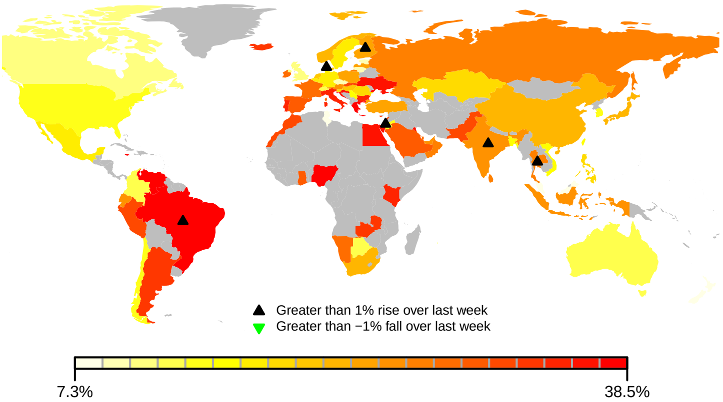
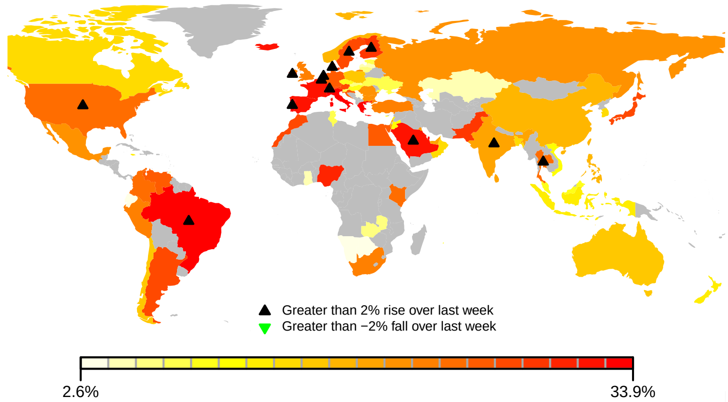
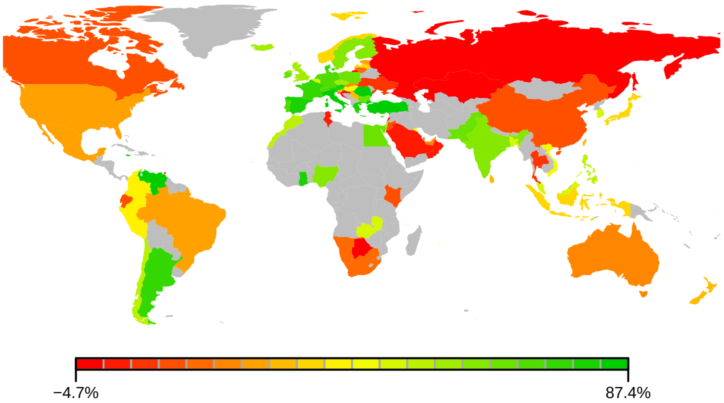
1. Global volatility hotspots



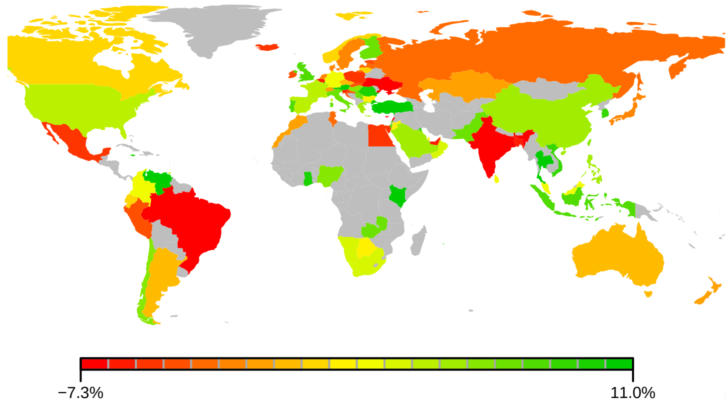
2. Global correlation hotspots



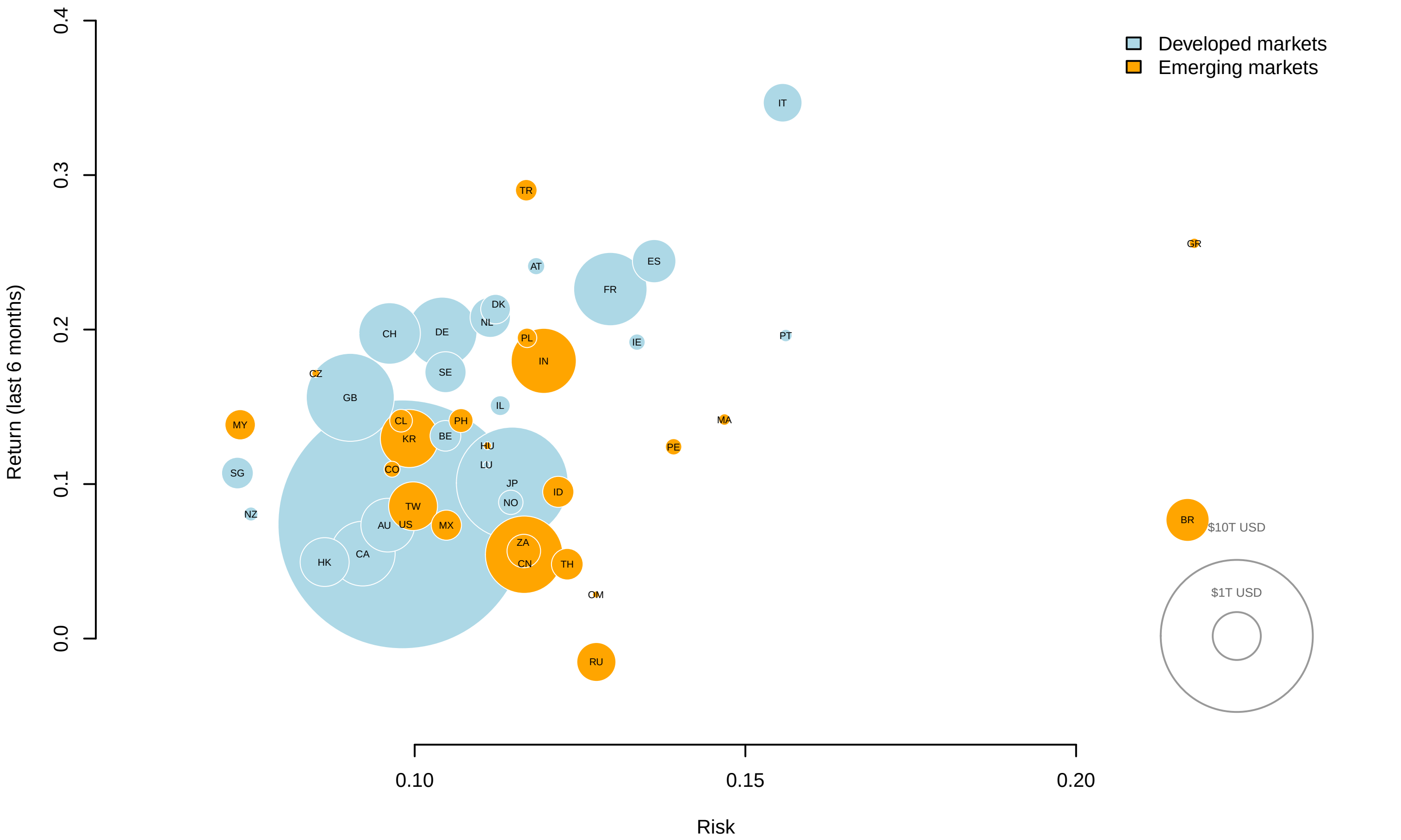
3. Global market returns (6 months)



4. Global market returns (1 week)



5. Global Market Risk and Return



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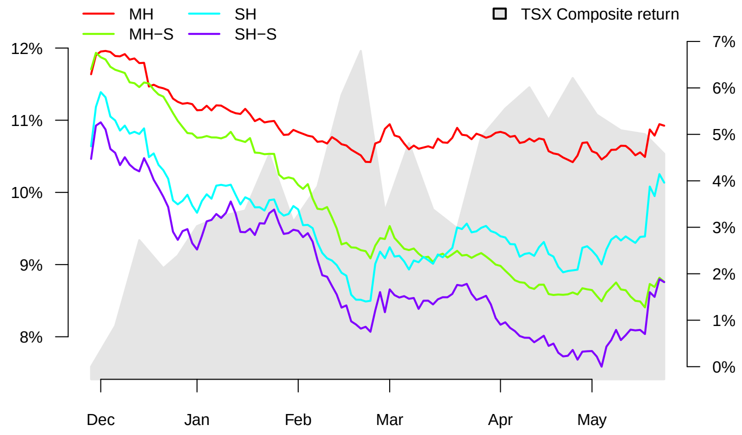
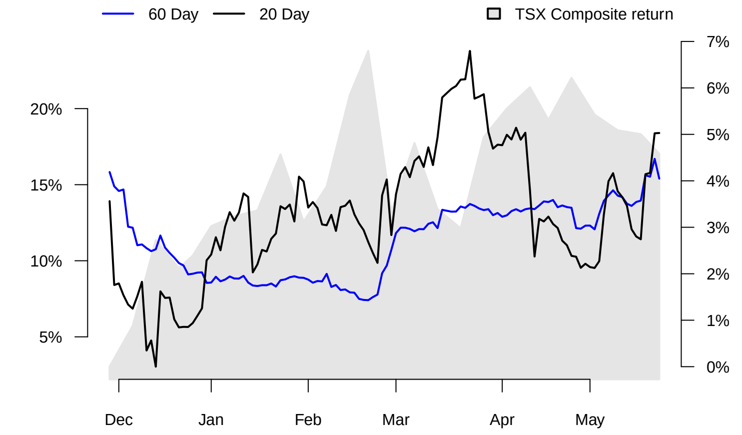
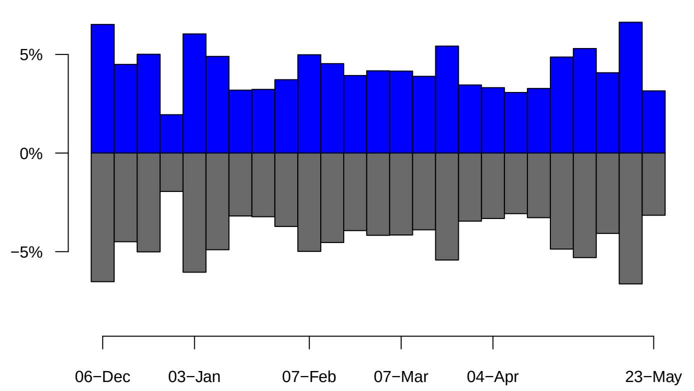
6. TSX Composite predicted risk



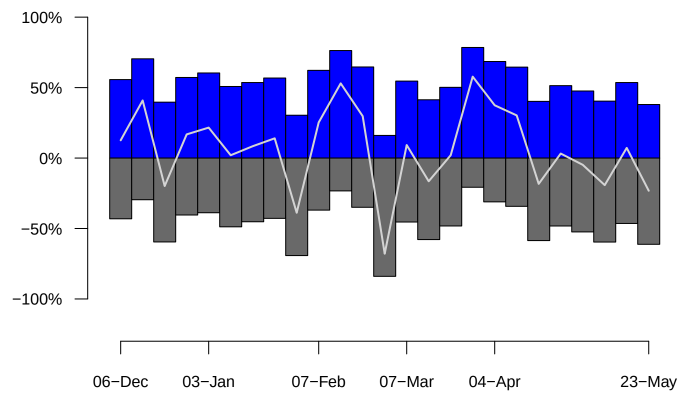
7. Rolling average asset correlations



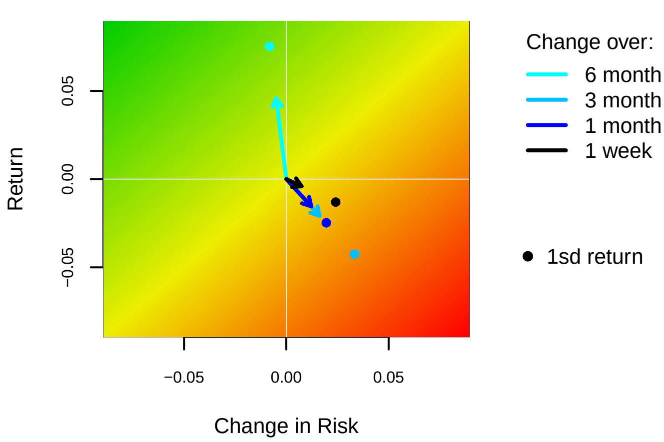
8. Weekly asset return dispersion



9. Weekly asset return proportion up/down



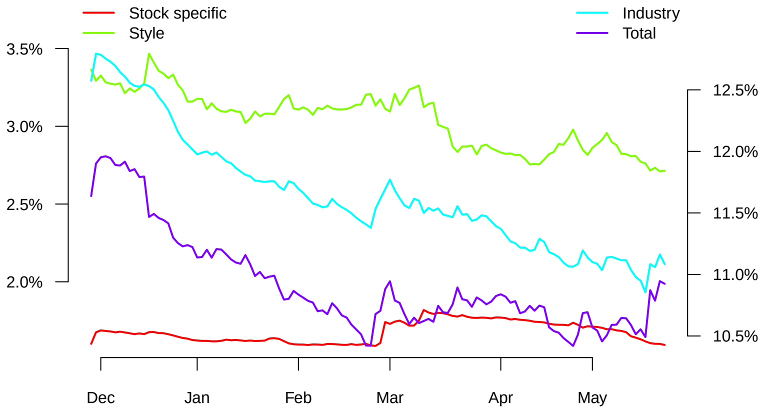
10. Risk Watch − TSX Composite



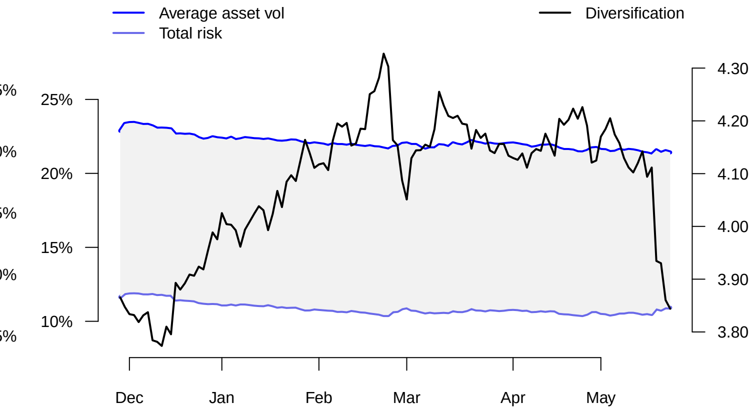
11. Risk change decomposition

	1 week	1 month	3 months	6 months
Factor level				
Initial risk	9.39	8.92	8.51	10.64
Portfolio composition	0.00	−0.03	−0.03	0.00
Stock characteristics	0.12	0.33	0.58	0.72
Stock specific volatility	−0.01	−0.02	−0.01	−0.03
Factor volatility	0.43	0.91	0.91	−0.76
Factor correlations	0.21	0.02	0.16	−0.42
Total change	0.75	1.22	1.62	−0.50
Final risk	10.14	10.14	10.14	10.14
Stock level				
Initial risk	9.39	8.92	8.51	10.64
Portfolio composition	0.00	−0.03	−0.03	0.00
Stock volatility	0.18	0.65	0.60	−0.78
Stock correlations	0.57	0.60	1.04	0.28
Total change	0.75	1.22	1.62	−0.50
Final risk	10.14	10.14	10.14	10.14

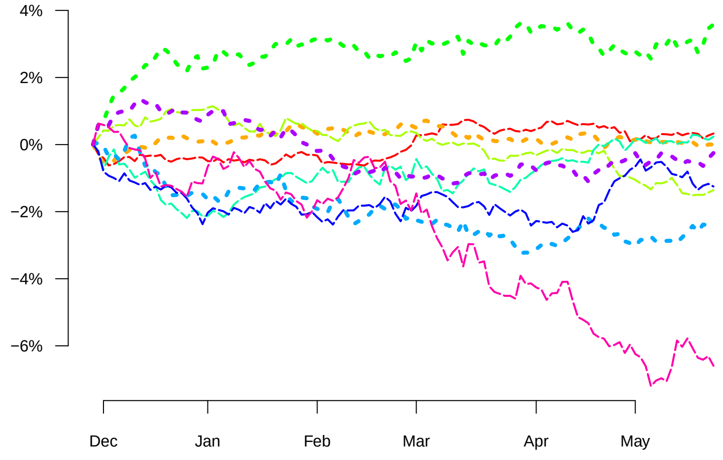
12. Components of TSX Composite risk



13. TSX Composite diversification



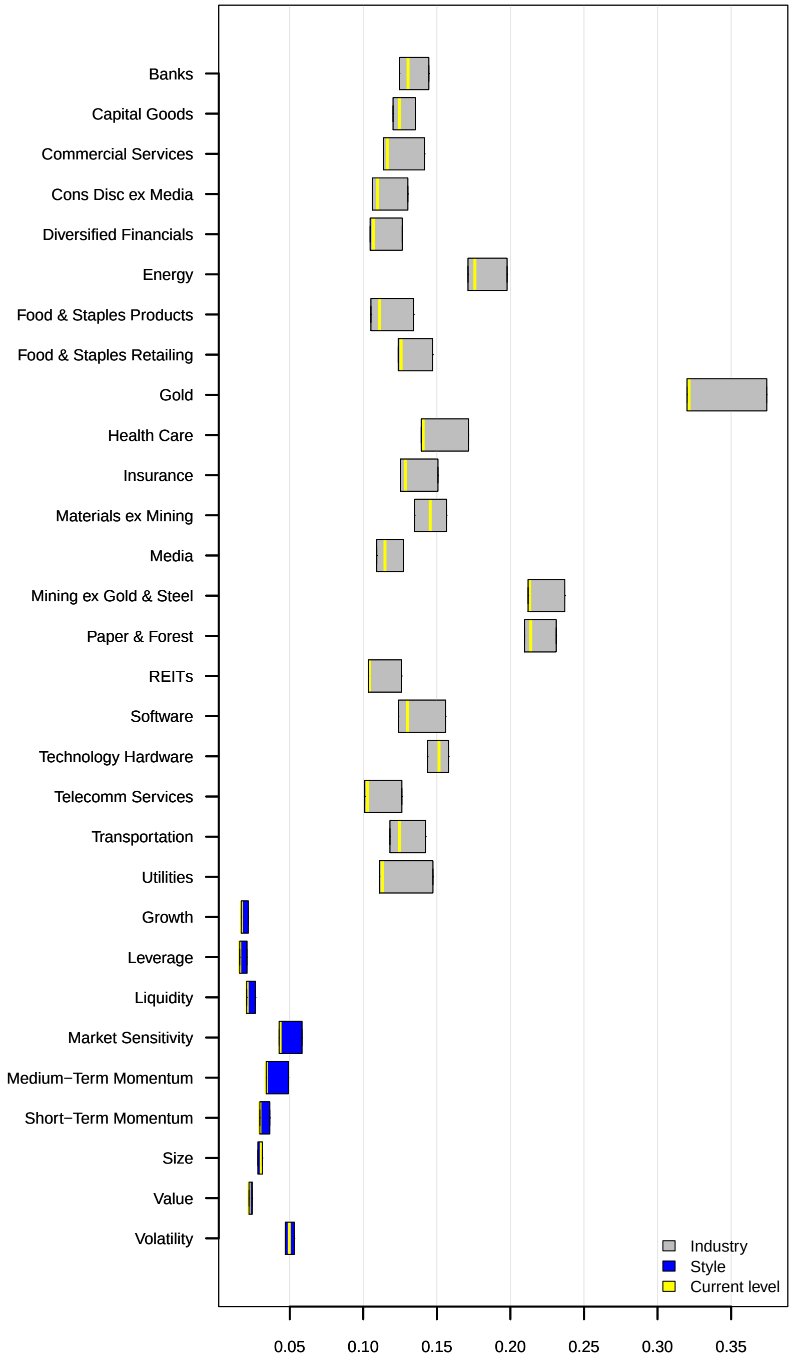
14. Style factor performance



15. Style factor returns

	1w	1m	3m	6m
Growth	0.00	−0.22	0.76	0.33
Leverage	−0.06	0.11	−0.31	0.00
Liquidity	0.12	−1.18	−1.79	−1.36
Mkt Sensitivity	0.50	0.91	0.89	3.58
MT Momentum	0.18	0.28	0.94	0.24
ST Momentum	0.32	0.18	−0.39	−2.30
Size	−0.45	0.49	0.31	−1.25
Value	0.24	0.53	0.44	−0.25
Volatility	−0.87	−0.86	−6.12	−6.59

16. Factor volatility range (6 month)



17. Style correlations

	Growth	Leverage	Liquidity	Mkt Sensitivity	MT Momentum	ST Momentum	Size	Value	Volatility
Volatility	−0.06	−0.03	0.19	0.06	−0.05	−0.25	0.12	0.14	1.00
Value	−0.17	−0.15	0.25	0.32	−0.00	−0.11	0.07	1.00	0.14
Size	0.11	0.13	−0.13	−0.08	−0.02	−0.05	1.00	0.07	0.12
ST Momentum	0.01	−0.05	−0.27	−0.18	0.05	1.00	−0.05	−0.11	−0.25
MT Momentum	−0.02	−0.11	−0.06	−0.12	1.00	0.05	−0.02	−0.00	−0.05
Mkt Sensitivity	−0.05	−0.01	0.29	1.00	−0.12	−0.18	−0.08	0.32	0.06
Liquidity	−0.08	−0.13	1.00	0.29	−0.06	−0.27	−0.13	0.25	0.19
Leverage	0.24	1.00	−0.13	−0.01	−0.11	−0.05	0.13	−0.15	−0.03
Growth	1.00	0.24	−0.08	−0.05	−0.02	0.01	0.11	−0.17	−0.06

18. Change in style correlations (6 month)

	Growth	Leverage	Liquidity	Mkt Sensitivity	MT Momentum	ST Momentum	Size	Value	Volatility
Volatility	−0.01	−0.02	0.02	−0.00	0.11	0.02	−0.02	−0.00	0.00
Value	0.02	−0.00	0.00	−0.00	0.06	−0.04	0.04	0.00	−0.00
Size	−0.01	0.01	−0.02	0.01	0.06	−0.01	0.00	0.04	−0.02
ST Momentum	0.04	0.03	−0.01	0.00	−0.03	0.00	−0.01	−0.04	0.02
MT Momentum	0.04	0.01	0.03	0.03	0.00	−0.03	0.06	0.06	0.11
Mkt Sensitivity	−0.01	0.00	−0.01	0.00	0.03	0.00	0.01	−0.00	−0.00
Liquidity	0.05	−0.01	0.00	−0.01	0.03	−0.01	−0.02	0.00	0.02
Leverage	0.01	0.00	−0.01	0.00	0.01	0.03	0.01	−0.00	−0.02
Growth	0.00	0.01	0.05	−0.01	0.04	0.04	−0.01	0.02	−0.01

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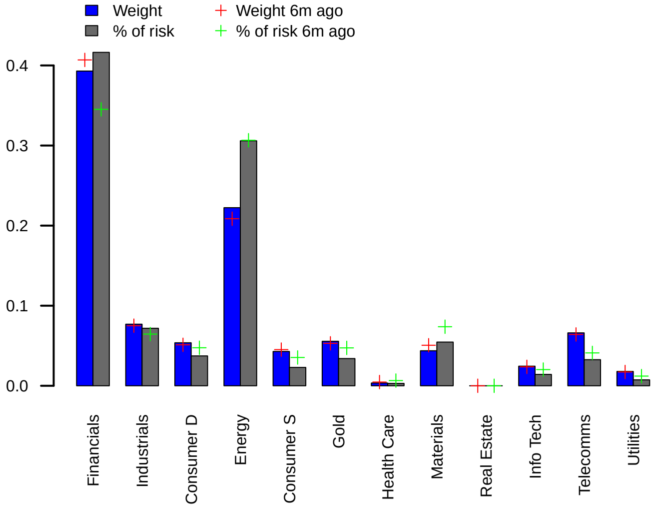
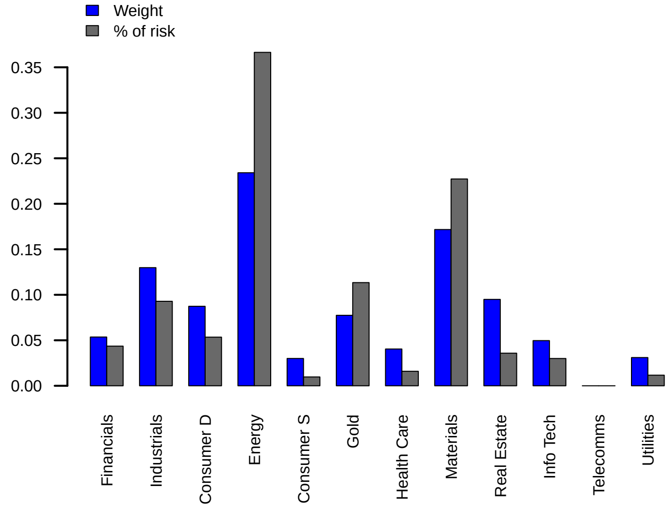
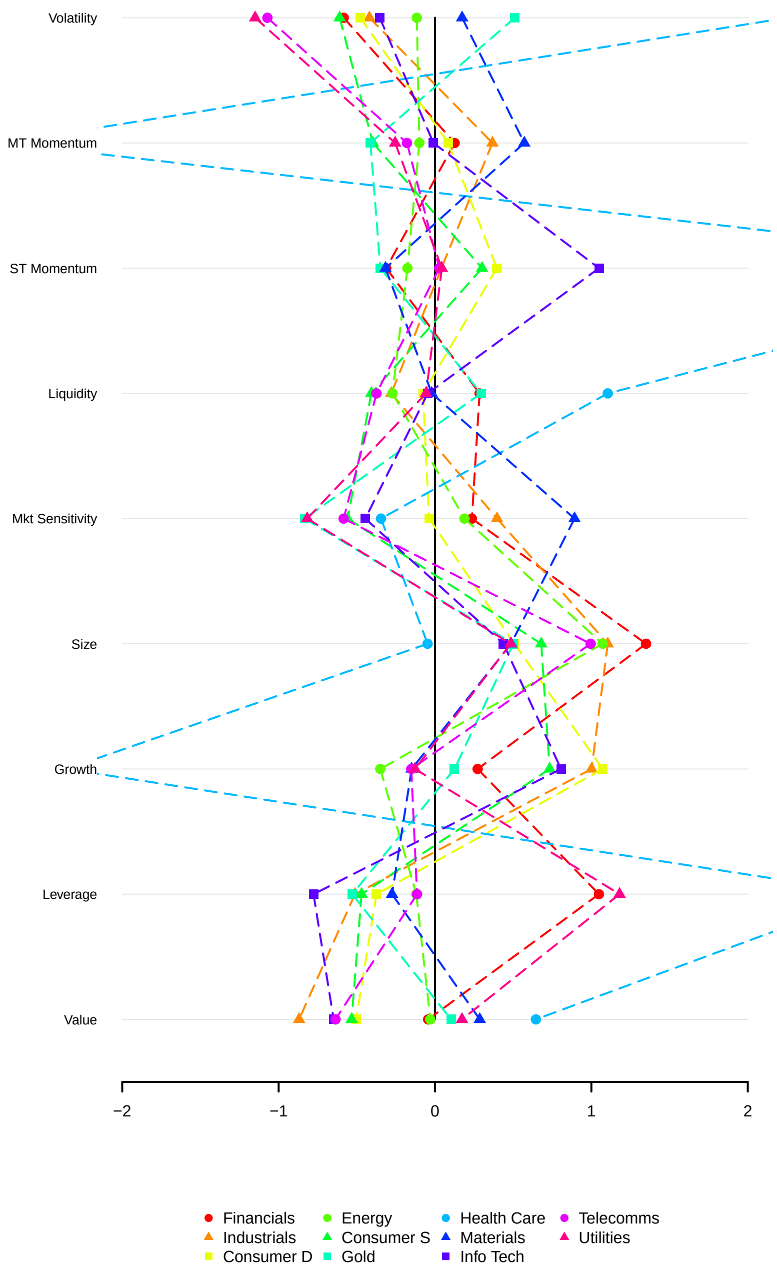
19. TSX 60 sector weights and % of risk



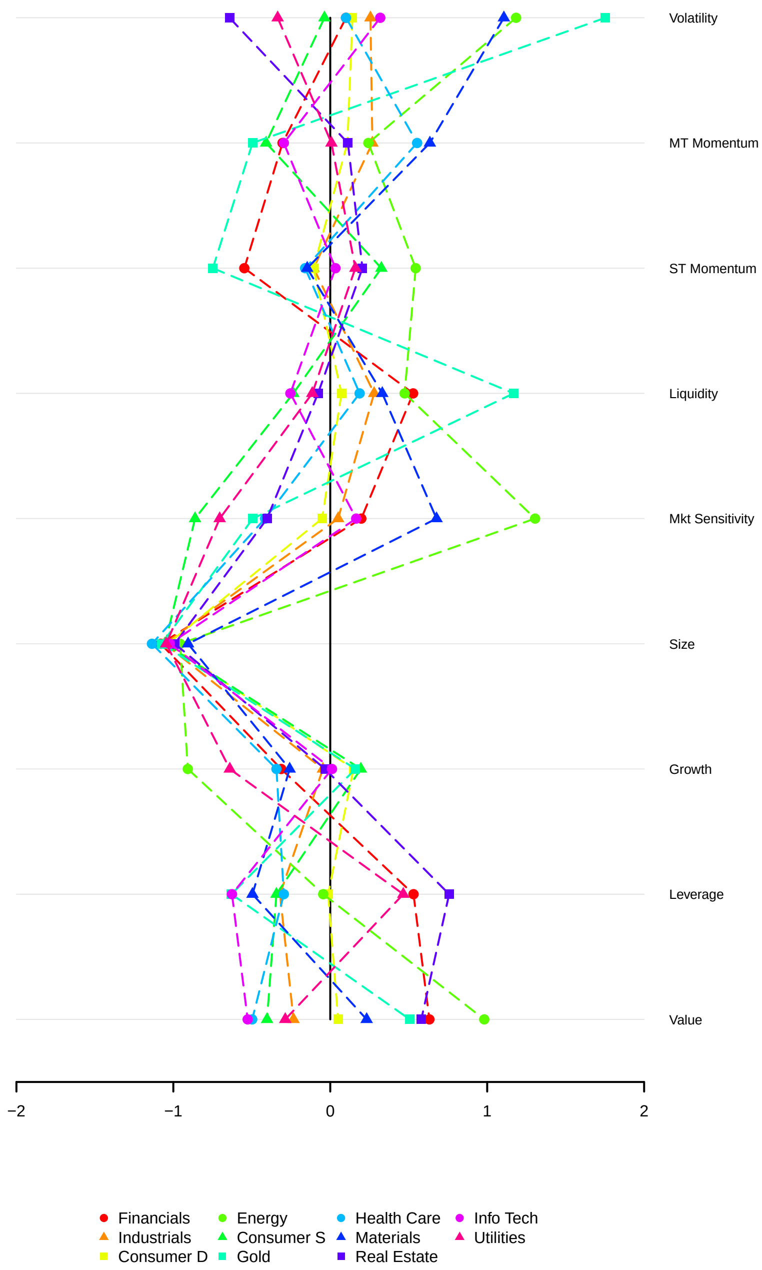
20. TSX SmallCap sector weights and % of risk



21. TSX 60 sector style exposures



22. TSX SmallCap sector style exposures



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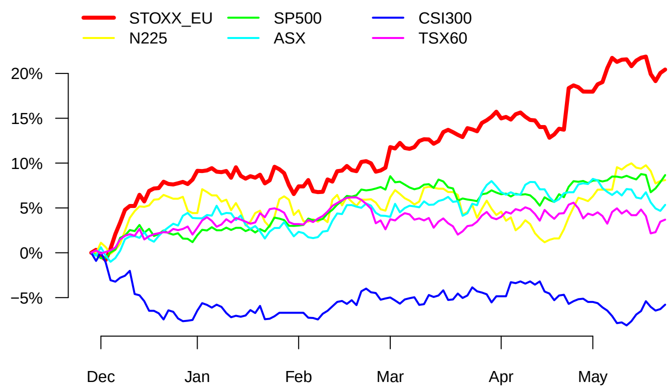
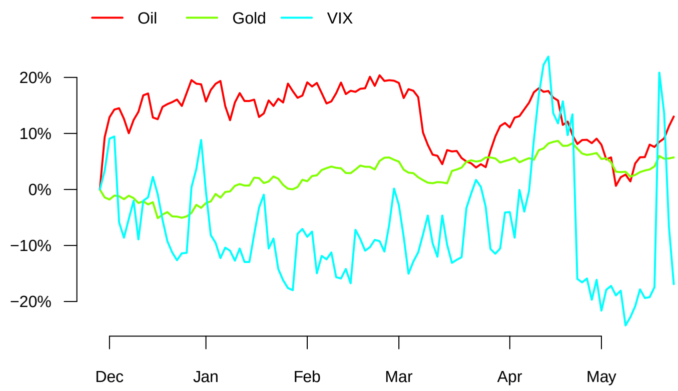
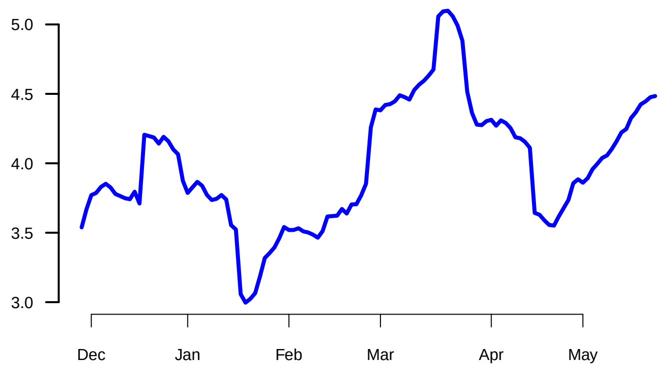
23. Returns for popular benchmarks



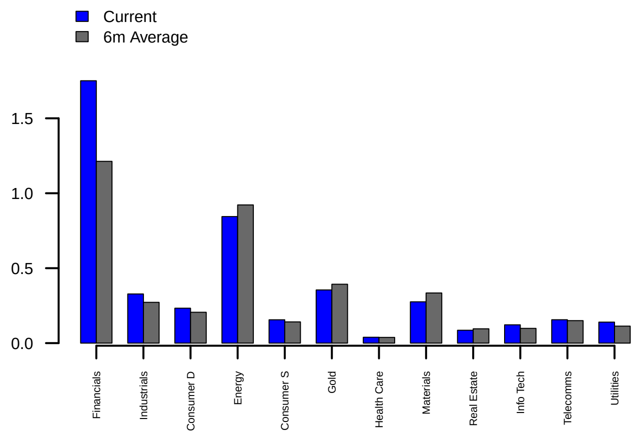
24. Returns for popular indicators



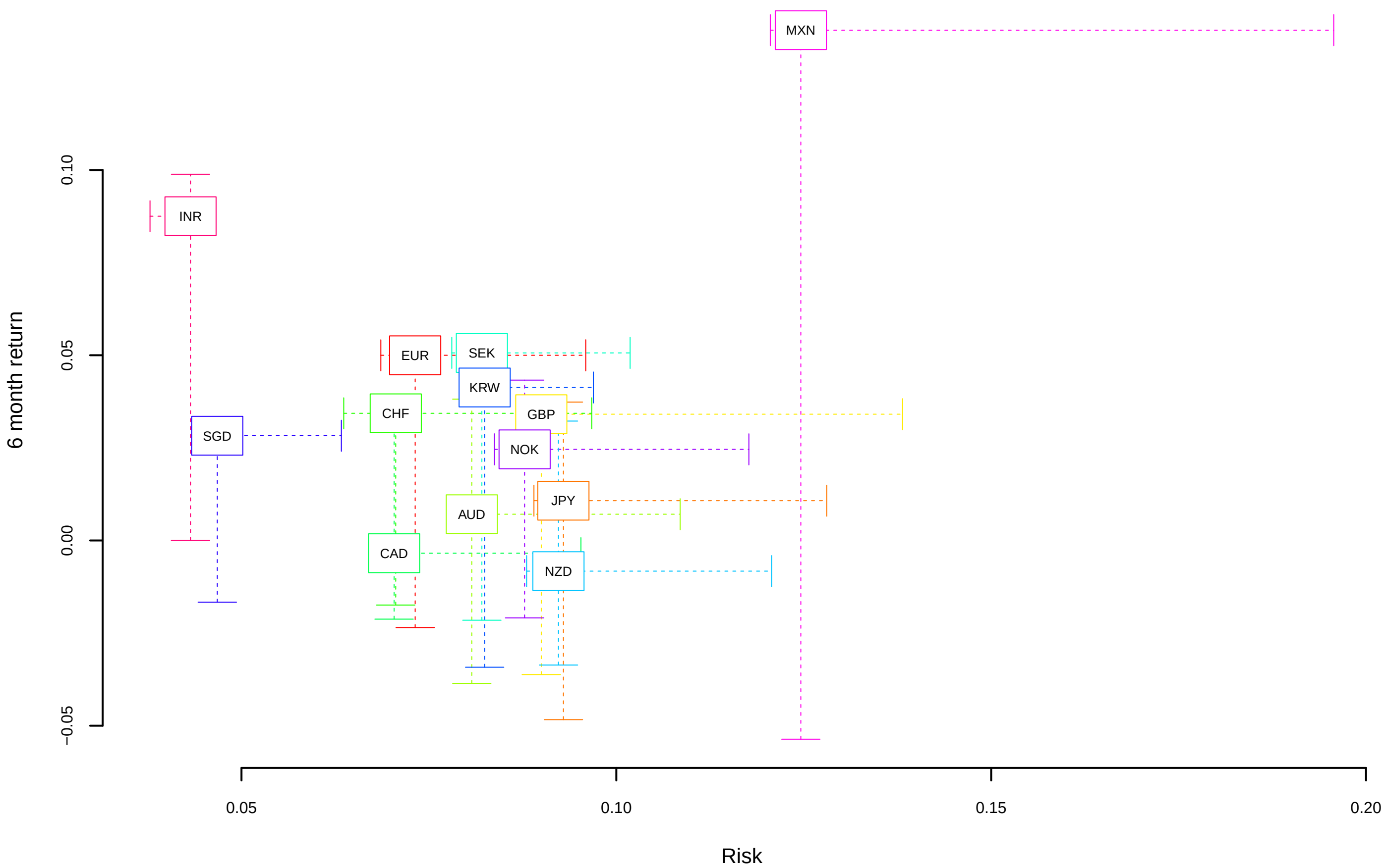
25. TSX Composite rolling ADV (USD billions)



26. TSX Composite ADV by sector



27. Currency risk and return vs USD



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Explanatory notes

1. Global volatility hotspots
Volatility for global markets measured by the Axioma World short horizon fundamental model based on Axioma model estimation universe (USD perspective).
2. Global correlation hotspots
Average asset correlation for global markets measured using the Axioma World short horizon fundamental model based on Axioma model estimation universe (USD perspective).
3. Global market returns (6 months)
Total market return in local currency over the last 6 months based on the Axioma estimation universe.
4. Global market returns (1 week)
Total market return in local currency over the last week based on the Axioma estimation universe.
5. Global market risk and return
Total return over the last 6 months vs current market volatility estimated by Axioma short horizon world model, based on the Axioma estimation universe. Circle size represents market cap.
6. TSX Composite predicted risk
Forecast risk estimate for the TSX Composite measured by the four Axioma Canadian model variants. MH = medium horizon, SH = short, −S = statistical model.
Right hand axis shows TSX Composite return.
7. Rolling average asset correlations
Average correlation amongst TSX Composite stocks over trailing 20 and 60 day window. Right hand axis shows TSX Composite return.
8. Weekly asset return dispersion
Cross sectional volatility of weekly asset returns over TSX Composite stocks.
9. Weekly asset return proportion up/down
Weekly count of number of stocks with positive returns vs number of stocks with negative returns for TSX Composite stocks.
10. Risk watch − TSX Composite
Change in TSX Composite risk vs total return over indicated period. Risk is measured by Axioma short horizon Canadian model. A one standard deviation move based on risk forecast at the time is indicated by the colored dot.
11. Risk change decomposition
Breakdown of the causes of change in TSX Composite risk over 1 week, 1 month, 3 months and 6 months. For more details contact your Axioma representative.
12. Components of TSX Composite risk
TSX Composite stock specific risk and risk from industry, measured daily over the last 6 months using Axioma medium horizon model. Does not include covariance between industry, style, sector, country or market.
13. TSX Composite diversification
Diversification is measured as the ratio of weighted average asset variance to total TSX Composite variance, measured by the Axioma medium horizon Canadian model.
14. Style factor performance
Cumulative performance of the Axioma Canadian fundamental model style factors over the last 6 months
15. Style factor returns
Return of the Axioma Canadian fundamental model style factors over the last 1 week, 1 month, 3 months and 6 months.
16. Factor volatility range
The range in volatility for style and industry factors in the Canadian medium horizon fundamental model over the last 6 months. Current volatility is indicated by the yellow line.
17. Style correlations
Correlations between style factors from the Canadian medium horizon fundamental model
18. Change in style correlations (6 month)
The change in correlation between style factors from the Canadian medium horizon fundamental model over the last 6 months.
19. TSX Composite sector weights and % of risk
The weight and contribution to risk of top level sectors in the TSX Composite index. Risk is measured using the Axioma medium horizon fundamental model.
20. TSX Small Cap country weights and % of risk
The weight and contribution to risk of countries in the TSX Small Cap index. Risk is measured using the Axioma medium horizon fundamental model.
21. TSX Composite sector style exposures
The weighted average exposure to Axioma Canadian style factors for top level sectors in the TSX Composite index.
22. TSX Small Cap country style exposures
The weighted average exposure to Axioma Canadian style factors for countries in the TSX Small Cap index.
23. Returns for popular benchmarks
Cumulative returns in local currency over the last 6 months for popular global equity benchmarks as measured by a corresponding ETF. Each of these benchmarks are registered trademarks of their respectiv
24. Returns for popular indicators
Cumulative returns over the last 6 months for WTI, spot gold and VIX. VIX is a registered trademark of the Chicago Board Options Exchange.
25. TSX Composite rolling ADV (USD billions)
Daily sum of 20−day average USD daily trading value for assets in TSX Composite.
26. TSX Composite ADV by sector
Current and 6 month average 20−day average USD daily trading value for assets in TSX Composite, split by top level sector.
27. Currency risk and return vs USD
Currency volatility and 6−month return vs USD. Dotted lines show range in return and volatility over the last 6 months.

Country legend

AT=Austria,AU=Australia,BE=Belgium,BR=Brazil,CA=Canada,CH=Switzerland,CL=Chile,CN=China,CO=Colombia,CZ=Czech Republic,DE=Germany,DK=Denmark,ES=Spain,FR=France
GB=United Kingdom,GR=Greece,HK=Hong Kong,HU=Hungary,ID=Indonesia,IE=Ireland,IL=Israel,IN=India,IT=Italy,JP=Japan,KR=Korea,LU=Luxembourg,MA=Morocco,MX=Mexico
MY=Malaysia,NL=Netherlands,NO=Norway,NZ=New Zealand,OM=Oman,PE=Peru,PH=Philippines,PL=Poland,PT=Portugal,RU=Russian Federation,SE=Sweden,SG=Singapore
TH=Thailand,TR=Turkey,TW=Taiwan,US=United States,ZA=South Africa

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