Factor construction rules matter

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Standard Factor construction rules revisited

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Theory & Practice Factor construction rules

O1 Value funds hold growth stocks according to F&F grids

02 Rapid growth in the number of stock indices

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O3 Value and growth weights are applied separately within size universe

O4 Passive portfolios are associated with active returns using a F&F model



Practical consequences

For factor investing, asset management (risk-based allocation) and performance measurement

How can we design persistent and independent risk factors ?









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Three important criteria to improve factor construction rules



Three important criteria to improve factor construction rules

Factor			27 (1 2 (1)		~ • • •	
construction	# Obs	Mean (in %)	SD (in %)	t-stat	Correlation Matrix	
		Panel A: Indep	pendent - 2x3	3 - NYSE		
SMB	618	0.136	1.651	2.045	1	
HML	618	0.164	1.962	2.078	0.98041***	1
		Panel B: Indep	pendent - 2x3	3 - Name		
SMB	618	0.151	2.102	1.783	1	
HML	618	0.204	2.411	2.105	0.97861***	1
		Panel C: Indep	pendent - 3x3	3 - NYSE		
SMB	618	0.4	4.105	2.421	1	
HML	618	-0.244	3.248	-1.869	-0.0184	1
		Panel D: Indep	pendent - 3x3	3 - Name		
SMB	618	0.705	7.601	2.304	1	
HML	618	-0.097	4.112	-0.585	0.0579	1





Three important criteria to improve factor construction rules







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Practical consequences

For factor investing, asset management (risk-based allocation) and performance measurement

How can we design persistent and independent risk factors ?







consequences **Risk factors DNS** Construction rules

- Risk-based allocation
- Performance measurement
- Factor persistence
 - Diversification and efficiency
 - Time dependence and seasonality





Source: Lambert, Fays, and Hübner (2018, WP)

consequences **Risk factors DNS Construction rules** • Time dependence and seasonality



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Thank you for your attention!

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