FORUM POUR L'INVESTISSEMENT RESPONSABLE

KEDGE BUSINESS SCHOOL

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Solving the SRI puzzle? A note on the mainstreaming of ethical investment

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Post Crisis Finance Research Network
From crisis to viability: finance reconsidered

The ongoing economic, social and environmental crisis has revealed the need to redefine the function of finance. Academic finance bears significant responsibility in this process addressing the interaction between finance and society. As a response, many private actors have broadened their definition of 'value' in order to include environmental and social elements into their management and asset allocation practices. Such practices, however, appear incompatible with the current theoretical and methodological foundations of academic mainstream finance, which is heavily influenced by logical positivism and the methodological individualism hypothesis based on the maximization of the shareholder utility function. Academic finance focuses on the micro level and emphasizes econometric modelling rather than adopting a longer-run view incorporating the lessons from economic history. This paradox challenges us to reconsider the epistemological and theoretical foundations of modern finance, and, in particular, the dominant role played by shareholders. It is our responsibility to question the idea that social welfare and ethics are simply the result of shareholders value maximization and to enrich finance research, particularly with perspectives and contributions from other social sciences. In particular, we argue that there is a need to turn the order upside down: economy and finance must be embedded in environmental and social welfare in order to confront the challenges we face, rather than the other way around. Should we promote another character, as a substitute to the shareholder? How might we (re)define the concept of value? The network will serve as an interdisciplinary forum for the rethinking of academic finance, with a view to carving out sustainable paths for financial research and practices in the 21st century.

Themes of interest include:

- (Re)defining value(s) and wealth
- Alternatives to shareholder value maximization and promote a long term and sustainable perspective.
- Critical perspectives in accounting
- Economic history and finance
- Finance and comparative capitalism
- Finance and the Global South
- Financialization, networks and interconnectivity
- New metaphors for the study of post crisis finance
- Rethinking education in finance
- Social banking and finance

Keywords: ethics; financialization; critical perspectives, crisis, sustainability, social impact finance, networks

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L'ISR et la recherche en finance

Le 'puzzle' empirique

- Impact défavorable des filtres sur la frontière d'efficience
- RSE et compétitivité des firmes
- Résultats inconclusifs (Revelli and Viviani, 2015)

Une controverse à dépasser?

- Ontologie sociale: le réalisme critique (Downward, 2016)
- La financiarisation comme structure productrice de données?
- L'hypothèse de l'intégration ('*mainstreaming*')

L'hypothèse d'intégration (*mainstreaming*)

"a double process of upstreaming ethical stocks into conventional indices and portfolios, and downstreaming conventional stocks into ethical indices and portfolios"

- L'intégration par l'amont (*upstreamin*g) reflète l'inclusion des constituents des indices ISR dans les indices conventionnels
- L'intégration par l'aval (*downstreaming*) reflète les enjeux méthodologiques du filtrage
- Opérationalisation: nullité des écarts de performance ISR vs. portefeuilles conventionnels

Données et méthodologie

Données

- 24 indices conventionnels, islamiques, ISR
- 5 marchés développés: USA, GB, Japon, Canada, Australie
- 3 marchés émergents: Brésil, Inde, Afrique du Sud
- Indices MSCI hors dividendes

Méthodologie

- Statistiques descriptives + rendements glissants
- Test bivarié sur les différentiels de ratios de Sharpe annualisés
- Test multivarié sur les différentiels de ratios de Sharpe annualisés (Leung and Wong, 2008)
- Modèle d'évaluation des actifs (EGARCH avec clusters ICSS)
- Test sur les différences entre alfas

Données

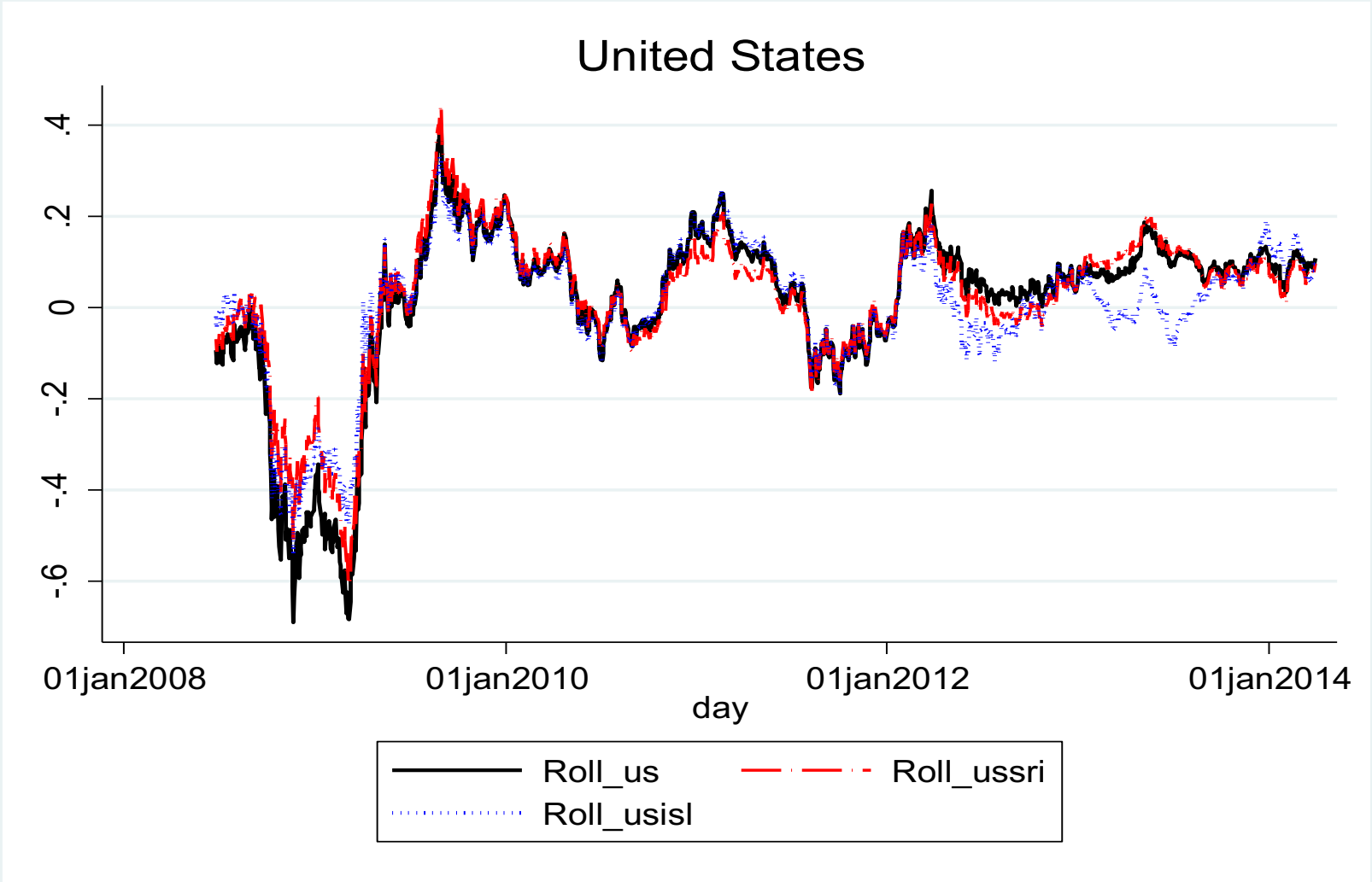
Market	Country	Indxe type	Index name	Ticker
Developed	Australia	Conventional	MSCI Australia	MXAU
		Islamic	MSCI Australia Islamic	MIAU
		SRI	MSCI Australia SRI	MXAUSI
	Canada	Conventional	MSCI Canada	MXCA
		Islamic	MSCI Canada Islamic	MICA
		SRI	MSCI Canada SRI	MXCASI
	Japan	Conventional	MSCI Japan	M3JP
		Islamic	MSCI Japan Islamic	MIJP
		SRI	MSCI Japan SRI	MXJPSI
	U-K	Conventional	MSCI United Kingdom	M3GB
		Islamic	MSCI United Kingdom Islamic	MIGB
		SRI	MSCI United Kingdom SRI	MXGBSI
	United-States	Conventional	MSCI USA	MXUS
		Islamic	MSCI USA Islamic	MIUS
		SRI	MSCI USA SRI	MXUSSI
Emerging	Brazil	Conventional	MSCI Brazil	MXBR
		Islamic	MSCI Brazil Islamic	MIBRO
		SRI	MSCI Brazil ESG	MXBRSI
	India	Conventional	MSCI India	MXIN
		Islamic	MSCI India Islamic	MIIN
		SRI	MSCI India ESG	MXINSI
	South Africa	Conventional	MSCI South Africa	M3ZA
		Islamic	MSCI South Africa Islamic	MIZA
		SRI	MSCI South Africa ESG	M3ZASI

Table 2 Descriptive statistics

	Mean	Std. Dev.	Skewness	Kurtosis	J-B Stat	Q(40)	ARCH LM	ADF	N
Developed markets									
Australia	0.00	1.97	-0.77***	10.25***	394.16***	61.24**	559.51***	-39.56***	1628
AustraliaSRI	0.01	1.89	-0.57***	9.40***	319.74***	52.86*	497.46***	-40.11***	1628
AustraliaISL	0.01	2.14	-0.51***	8.34***	277.38***	56.32**	619.22***	-38.66***	1628
Canada	0.00	1.78	-0.73***	11.58***	402.13***	164.25***	480.20***	-38.33***	1628
CanadaSRI	0.02	1.77	-0.45***	11.34***	327.98***	166.53***	477.62***	-38.75***	1628
CanadaISL	0.00	2.07	-0.39***	10.76***	303.38***	177.95***	555.66***	-38.95***	1628
Japan	-0.01	1.56	-0.15***	8.30***	201.26***	71.91***	392.46***	-45.99***	1628
JapanSRI	0.00	1.63	0.03	8.29***	194.28***	65.68***	389.36***	-45.88***	1628
JapanISL	0.00	1.58	-0.04	8.18***	191.71***	70.20***	427.11***	-46.23***	1628
UK	0.00	1.73	-0.04**	10.61***	252.25***	127.92***	427.35***	-40.79***	1628
UKSRI	0.02	1.84	0.08	10.81***	250.23***	123.38***	449.17***	-40.29***	1628
UKISL	0.01	1.82	0.26***	10.48***	250.21***	114.60***	415.21***	-42.32***	1628
US	0.02	1.49	-0.30***	11.86***	302.43***	104.87***	460.03***	-44.95***	1628
USSRI	0.03	1.44	0.00	10.66***	250.23***	102.30***	427.80***	-45.36***	1628
USISL	0.02	1.44	0.12	12.15***	280.83***	92.25***	449.16***	-45.07***	1628
Emerging markets									
Brazil	0.00	2.42	0.12	13.02***	235.08***	129.41***	447.42***	-35.01***	1356
BrazilSRI	0.02	2.39	0.35**	14.47***	230.97***	138.63***	411.39***	-32.39***	1219
BrazilISL	-0.02	2.59	0.09	11.30***	215.76***	123.94***	403.62***	-35.27***	1356
India	-0.01	2.03	0.56***	13.24***	327.95***	85.53***	66.68***	-34.28***	1356
IndiaSRI	0.04	1.90	0.92***	16.24***	409.59***	108.58***	61.23***	-33.12***	1219
IndiaISL	-0.01	1.98	0.56***	14.66***	353.23***	103.23***	50.14***	-34.62***	1356
South Africa	0.03	2.08	-0.03	7.57***	139.86***	64.08***	317.43***	-34.80***	1356
South AfricaSRI	0.06	2.11	0.04	7.37***	121.81***	82.35***	264.85***	-32.61***	1219
South AfricaISL	0.01	2.22	0.03	8.01***	148.37***	70.06***	345.81***	-34.86***	1356

Note: (***), (**) and (*) denote significance at the 1%, 5% and 10% level, respectively. JB Stat indicates the Jarque-Bera statistics, Q(40) statistic is the Ljung-Box test up to 40 lags. ARCH LM indicates the Lagrange multiplier test for conditional heteroskedasticity with 10 lags. SRI and ISL denote 'socially responsible investment' and 'Islamic finance', respectively.

Rendements glissants – 6 mois



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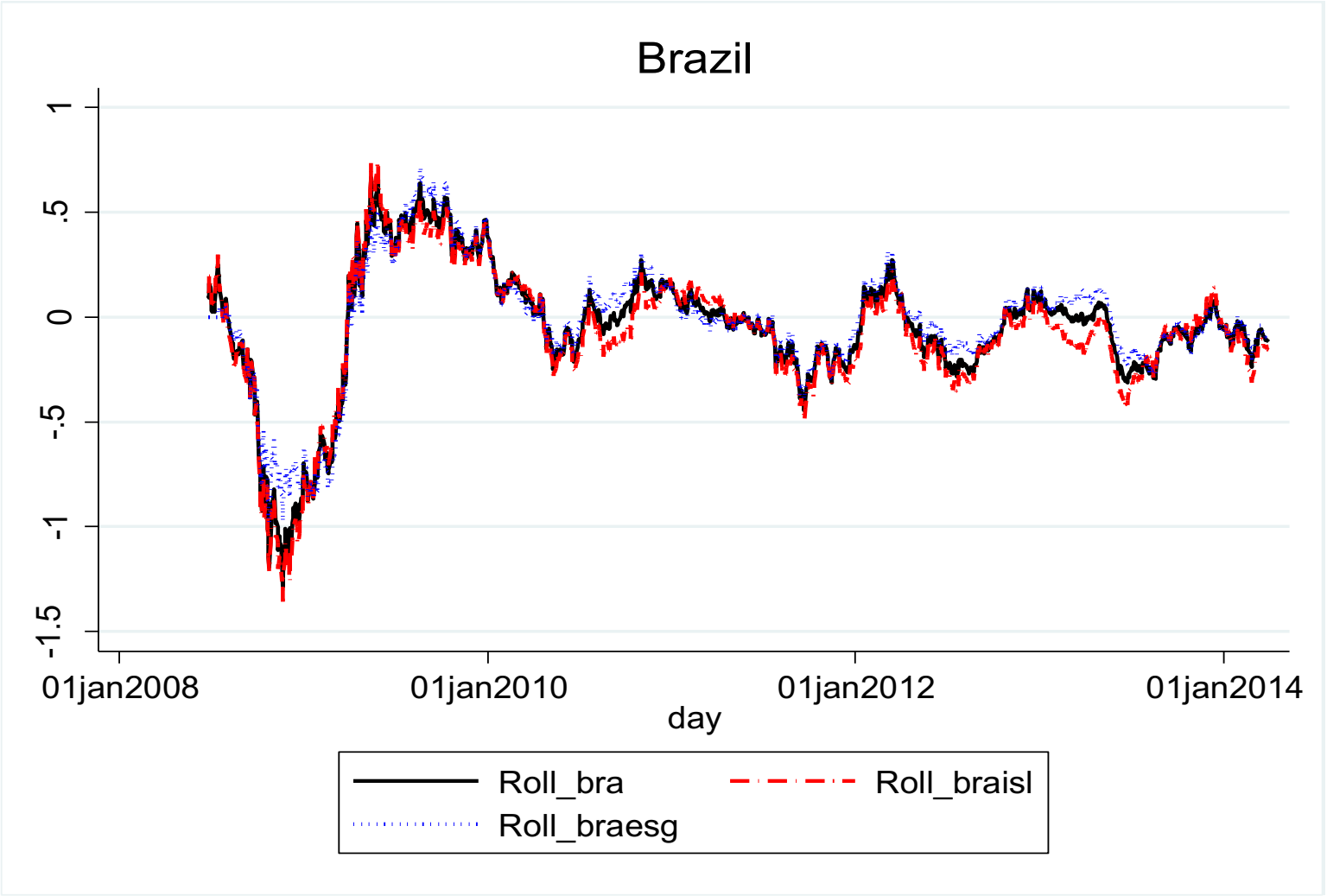

Test multivarié sur les ratios de Sharpe

Considérons le vecteur kx1 des ratios de Sharpe des k portefeuilles observés:

$$\mu(\theta) = \left(\frac{\mu_1}{\sigma_1}, \ldots, \frac{\mu_k}{\sigma_k}\right)'$$

Définissons la matrice C *k-1* $\times$ *k* suivante:

$$C = \begin{pmatrix} 1 & -1 & 0 & \ldots & 0 & 0 \\ 0 & 1 & -1 & \ldots & \ldots & 0 \\ 0 & 0 & 1 & -1 & \ldots & 0 \\ \ldots & \ldots & \ldots & \ldots & \ldots & \ldots \\ 0 & \ldots & \ldots & \ldots & 1 & -1 \end{pmatrix}$$

L'hypothèse d'égalité des k ratios de Sharpe s'écrit $H0:C\mu\vartheta=0$ versus $H0:C\mu\vartheta\neq0$.

Table 4 Comparison of Sharpe ratios

		Difference in Sharpe ratios	Bivariate	Multivariate
Developed markets				
Australia	AutraliaSRI	-0.02242576	0.2199	0.1605
Australia	AutraliaISL	-0.01407701	0.579	
AustraliaSRI	AustraliaISL	-0.008348751	0.8286	
Canada	CanadaSRI	-0.03838294	0.02713**	0.07703
Canada	CanadaISL	-0.004731154	0.8409	
CanadaSRI	CanadaISL	-0.03365179	0.2786	
Japan	JapanSRI	-0.01324861	0.2899	0.4058
Japan	JapanISL	-0.01838352	0.2541	
JapanSRI	JapanISL	0.005134909	0.7579	
US	USSRI	-0.01915111	0.1591	0.3702
US	USISL	0.006339753	0.8482	
USSRI	USISL	-0.02549086	0.4891	
UK	UKSRI	-0.0480802	0.01894**	0.05543
UK	UKISL	-0.02952456	0.502	
UKSRI	UKISL	-0.01855564	0.6952	
Emerging markets				
Brazil	BrazilSRI	-0.03391768	0.111	0.2531
Brazil	BrazilISL	0.0291521	0.1282	
BrazilSRI	BrazilISL	-0.06306979	0.09775	
India	IndiaSRI	-0.02947522	0.1185	0.202
India	IndiaISL	0.01076973	0.6261	
IndiaSRI	IndiaISL	-0.04024494	0.1148	
South Africa	South AfricaSRI	-0.04060419	0.09037	0.06267
South Africa	South AfricaISL	0.04701576	0.02066**	
South AfricaSRI	South AfricaISL	-0.08761995	0.02621**	

Note: the third column reports the value of the difference in Sharpe ratios across different type of indices. The fourth and fifth column report the p value of bivariate and trivariate tests for the equality of Sharpe ratios as described in section 2.2.1., respectively. (**) indicated significance at the 5% level.

Estimation des alfas: E-GARCH et dummies ICSS

- Filtrage initial GARCH (1,1)
- Identification de pics de volatilité endogène (Bacmann & Dubois, 2002)
- Insertion des dummies dans l'équation de variance d'un modèle E-GARCH:

$$(r_t - r_{ft}) = \alpha + \beta(r_{mt} - r_{ft}) + \varepsilon_t \qquad \text{with} \qquad \varepsilon_t = z_t\sqrt{h_t}$$

$$Log(Var[\,\varepsilon_t|\varepsilon_{t-1}|]) = Log(\sigma_t^2) = Log(h_t)$$

$$= \omega + d_1 D_1 + \cdots + d_n D_n + \gamma Z_{t-1} + \theta(|Z_{t-1}| - E|Z_{t-1}|)$$

$$+ \varphi Log(h_{t-1})$$

- Trois spécifications: sans dummies, avec dummies, avec dummies significatives
- Comparaison des alphas par une statistique de test Z

Test sur les alphas

Table 6 Difference in alphas

		Difference	Z statistic
Developed markets			
Australia	AutraliaSRI	0.00	-0.08
Australia	AustraliaISL	0.01	0.20
AustraliaSRI	AustraliaISL	0.02	0.28
Canada	CanadaSRI	0.01	0.32
Canada	CanadaISL	-0.01	-0.23
CanadaSRI	CanadaISL	-0.02	-0.49
Japan	JapanSRI	-0.02	-0.27
Japan	JapanISL	0.00	0.06
JapanSRI	JapanISL	0.02	0.33
US	USSRI	0.01	0.40
US	USISL	-0.01	-0.50
USSRI	USISL	-0.02	-0.85
UK	UKSRI	-0.02	-0.51
UK	UKISL	-0.01	-0.23
UKSRI	UKISL	0.01	0.18
Emerging markets			
Brazil	BrazilSRI	-0.01	-0.20
Brazil	BrazilISL	0.03	0.40
BrazilSRI	BrazilISL	0.04	0.58
India	IndiaSRI	0.01	0.10
India	IndiaISL	0.04	0.52
IndiaSRI	IndiaISL	0.03	0.41
South Africa	South AfricaSRI	0.00	0.02
South Africa	South AfricaISL	0.02	0.21
South AfricaSRI	South AfricaISL	0.01	0.38

Note: column three reports the pairwise difference in alphas across index types. Column four reports the value of the Z statistic. No statistical significance is detected.

Conclusions

- Le “match nul” entre tenants et contempteurs d’une surperformance des fonds ISR reflète l’intégration de l’investissement éthique dans une réalité financiarisée

- Hypothèse soutenue par une batterie de tests menée sur la période 2008-2014

- Questionnements:

1. Travail quantitatif: descendre au niveau micro pour analyser les constituents des indices
2. Travail qualitatif: comprendre le modèle réel d’allocation des actifs utilisé par les gérants de portefeuille
3. Travail conceptuel: redéfinir la valeur pour ré-encastrer les décisions financières dans les contraintes de soutenablité