

Internet Appendix for

Trade Credit and Cross-Country Predictable Firm Returns

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Figure IA.I

This figure shows the country-level correlations between the indices of industrial firms that we construct from Worldscope data and the MSCI indices where available for these countries.

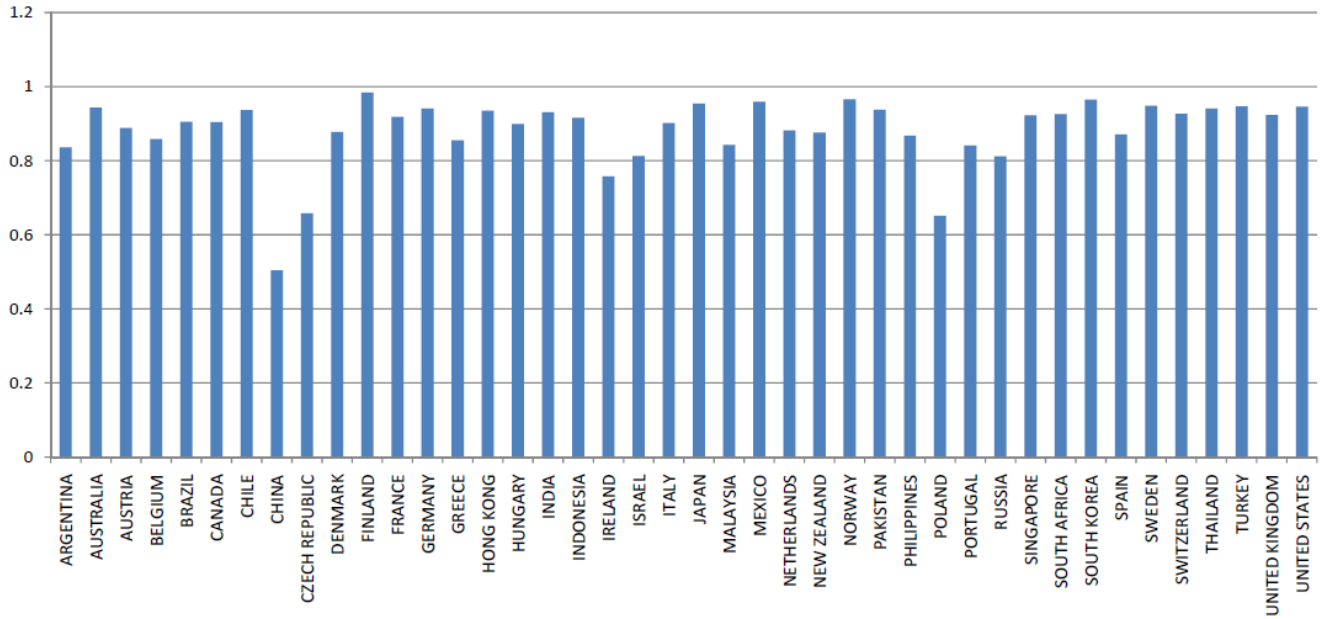


Table IA.I
Country-Level Trade Credit Summary Statistics for Producer Countries

In this table we show summary statistics for two trade credit measures. Panel A shows descriptive statistics of (unfiltered) accounts receivable turnover by producer country and year. Panel B of this table shows descriptive statistics for the time series of the value-weighted cross-sectional mean of firms' *net trade credit* in countries classified at least once as a producer and have firm-level balance sheet data on Worldscope. Panel C shows descriptive statistics for the cross section of producer country trade credit each year. The "filtered" column corresponds to the summary statistics on this dataset with observations of firm-level accounts receivable turnover higher than 50 (5000%) filtered out. The trade credit ratios in this table are calculated from annual firm-level sales, accounts receivable, and accounts receivable data from 1992 to 2009.

Panel A: Summary statistics of (unfiltered) accounts receivable turnover by producer country and year

	By country						By year				
	Mean	Median	Std Dev	Min	Max		Mean	Median	Std Dev	Min	Max
Argentina	0.265	0.237	0.091	0.164	0.566	1992	0.238	0.211	0.115	0.078	0.745
Australia	0.201	0.186	0.052	0.142	0.318	1993	0.456	0.223	1.157	0.081	7.063
Austria	0.267	0.195	0.180	0.163	0.912	1994	0.268	0.210	0.154	0.102	0.912
Belgium	0.216	0.209	0.052	0.131	0.376	1995	0.235	0.210	0.083	0.110	0.486
Canada	0.269	0.215	0.133	0.169	0.617	1996	0.245	0.213	0.091	0.110	0.536
Chile	5.120	0.224	13.481	0.183	52.269	1997	1.656	0.230	8.552	0.126	52.269
China	0.504	0.432	0.336	0.188	1.722	1998	0.482	0.226	1.404	0.126	8.760
Czech Republic	0.462	0.195	0.883	0.116	3.632	1999	1.020	0.236	4.466	0.128	27.412
Denmark	0.287	0.221	0.266	0.179	1.349	2000	0.363	0.245	0.572	0.117	3.632
Finland	0.202	0.199	0.025	0.165	0.239	2001	0.228	0.217	0.068	0.095	0.439
France	0.257	0.252	0.029	0.195	0.317	2002	0.373	0.220	0.946	0.083	5.956
Germany	0.246	0.250	0.050	0.181	0.351	2003	0.721	0.201	3.038	0.075	18.692
Hong Kong	0.264	0.239	0.092	0.154	0.536	2004	0.222	0.215	0.078	0.124	0.454
Hungary	0.179	0.171	0.036	0.139	0.299	2005	0.268	0.206	0.261	0.116	1.722
Indonesia	0.171	0.154	0.057	0.110	0.338	2006	0.218	0.214	0.078	0.130	0.617
Ireland	0.176	0.178	0.023	0.144	0.216	2007	0.270	0.222	0.203	0.146	1.349
Israel	0.311	0.309	0.048	0.265	0.481	2008	0.380	0.206	0.926	0.106	5.827
Italy	0.352	0.340	0.073	0.271	0.513	2009	0.325	0.204	0.645	0.021	4.097
Malaysia	0.464	0.391	0.316	0.196	1.596						
Mexico	0.507	0.194	1.361	0.021	5.956						
Netherlands	0.155	0.147	0.027	0.125	0.236						
New Zealand	0.696	0.167	1.580	0.119	5.827						
Norway	0.206	0.195	0.038	0.162	0.295						
Pakistan	0.136	0.121	0.058	0.075	0.285						
Philippines	1.308	0.248	4.342	0.135	18.692						
Poland	0.241	0.203	0.124	0.162	0.602						
Portugal	0.212	0.219	0.040	0.105	0.280						
Russia	0.315	0.234	0.189	0.136	0.759						
Singapore	0.286	0.261	0.060	0.206	0.408						
South Africa	0.209	0.176	0.088	0.122	0.438						
South Korea	0.224	0.209	0.054	0.157	0.340						
Spain	0.251	0.248	0.037	0.205	0.378						
Sweden	0.261	0.233	0.098	0.191	0.629						
Switzerland	0.212	0.213	0.015	0.189	0.244						
Thailand	0.191	0.162	0.076	0.106	0.365						
Turkey	0.597	0.220	1.614	0.162	7.063						
United Kingdom	0.181	0.182	0.020	0.156	0.224						

Panel B: Summary statistics of net trade credit time series by producer country

	Filtered					Unfiltered				
	Mean	Median	Std Dev	Min	Max	Mean	Median	Std Dev	Min	Max
Argentina	0.126	0.121	0.056	0.035	0.237	0.144	0.121	0.099	0.035	0.472
Australia	0.046	0.049	0.018	0.004	0.068	0.033	0.040	0.055	-0.089	0.150
Austria	0.149	0.096	0.164	0.056	0.741	0.149	0.096	0.164	0.056	0.741
Belgium	0.086	0.084	0.040	-0.008	0.150	0.086	0.084	0.040	-0.008	0.150
Canada	-0.015	-0.005	0.039	-0.107	0.035	-0.039	-0.010	0.157	-0.349	0.359
Chile	0.154	0.131	0.087	0.092	0.484	1.571	0.131	6.010	0.092	25.651
China	0.169	0.139	0.157	-0.058	0.649	-1.755	0.170	5.322	-18.952	0.649
Czech Republic	0.401	0.089	0.985	0.023	3.934	0.401	0.089	0.985	0.023	3.934
Denmark	0.143	0.147	0.030	0.092	0.218	0.067	0.147	0.333	-1.264	0.218
Finland	0.110	0.102	0.026	0.068	0.152	0.110	0.102	0.026	0.068	0.152
France	0.102	0.099	0.028	0.058	0.153	0.103	0.099	0.027	0.058	0.153
Germany	0.156	0.145	0.044	0.105	0.244	0.156	0.145	0.045	0.105	0.244
Hong Kong	0.081	0.127	0.099	-0.091	0.237	0.077	0.119	0.097	-0.091	0.237
Hungary	0.091	0.084	0.031	0.055	0.184	0.091	0.084	0.031	0.055	0.184
Indonesia	0.089	0.073	0.042	0.041	0.211	0.089	0.073	0.042	0.041	0.211
Ireland	0.075	0.074	0.023	0.039	0.125	0.075	0.074	0.023	0.039	0.125
Israel	0.189	0.188	0.046	0.135	0.346	0.189	0.188	0.046	0.135	0.346
Italy	0.140	0.151	0.041	0.068	0.237	0.140	0.151	0.041	0.068	0.237
Malaysia	0.211	0.207	0.080	0.097	0.421	0.105	0.207	0.495	-1.845	0.421
Mexico	0.075	0.078	0.055	-0.092	0.142	0.399	0.084	1.330	-0.092	5.724
Netherlands	0.067	0.068	0.011	0.047	0.087	0.067	0.068	0.011	0.047	0.087
New Zealand	0.032	0.065	0.123	-0.436	0.104	-1.209	0.059	5.246	-22.223	0.104
Norway	0.084	0.088	0.033	0.008	0.135	0.089	0.088	0.039	0.008	0.172
Pakistan	0.065	0.024	0.076	-0.004	0.242	0.065	0.024	0.076	-0.004	0.242
Philippines	0.065	0.063	0.042	-0.002	0.128	-0.051	0.050	0.391	-1.415	0.326
Poland	0.209	0.088	0.349	0.060	1.351	0.209	0.088	0.349	0.060	1.351
Portugal	0.083	0.089	0.033	-0.012	0.140	0.083	0.089	0.033	-0.012	0.140
Russia	0.193	0.160	0.136	0.046	0.537	0.193	0.160	0.136	0.046	0.537
Singapore	0.166	0.150	0.065	0.075	0.307	0.170	0.150	0.062	0.102	0.307
South Africa	0.060	0.045	0.062	-0.040	0.240	0.054	0.045	0.069	-0.074	0.240
South Korea	0.126	0.121	0.045	0.073	0.224	0.126	0.121	0.045	0.075	0.224
Spain	0.065	0.063	0.027	-0.007	0.113	0.065	0.063	0.027	-0.007	0.113
Sweden	0.141	0.132	0.040	0.064	0.223	0.163	0.134	0.101	0.064	0.534
Switzerland	0.137	0.142	0.019	0.103	0.164	0.137	0.142	0.019	0.103	0.164
Thailand	0.090	0.067	0.064	0.002	0.245	0.090	0.067	0.064	0.002	0.245
Turkey	0.121	0.123	0.026	0.068	0.170	0.426	0.123	1.296	0.068	5.617
United Kingdom	0.076	0.075	0.011	0.061	0.102	0.075	0.074	0.013	0.048	0.102

Panel C: Summary statistics of net trade credit for the cross-section of producer countries by year

	Filtered					Unfiltered				
	Mean	Median	Std Dev	Min	Max	Mean	Median	Std Dev	Min	Max
1992	0.119	0.109	0.112	-0.050	0.649	0.119	0.109	0.112	-0.050	0.649
1993	0.134	0.125	0.148	-0.052	0.854	0.303	0.125	0.939	-0.052	5.617
1994	0.168	0.113	0.240	-0.031	1.351	0.168	0.113	0.240	-0.031	1.351
1995	0.112	0.098	0.072	-0.042	0.307	0.112	0.098	0.072	-0.042	0.307
1996	0.115	0.112	0.056	0.010	0.267	0.119	0.113	0.056	0.010	0.267
1997	0.117	0.112	0.088	0.002	0.454	0.116	0.112	0.089	0.002	0.454
1998	0.109	0.099	0.105	-0.058	0.537	0.110	0.099	0.104	-0.058	0.537
1999	0.107	0.102	0.079	-0.091	0.301	0.740	0.094	4.222	-1.845	25.651
2000	0.222	0.099	0.634	0.002	3.934	0.224	0.110	0.635	-0.089	3.934
2001	0.109	0.102	0.061	0.007	0.276	0.107	0.109	0.069	-0.091	0.276
2002	0.113	0.111	0.069	-0.019	0.269	0.259	0.111	0.927	-0.197	5.724
2003	0.104	0.086	0.071	-0.022	0.359	0.105	0.086	0.072	-0.029	0.359
2004	0.104	0.089	0.066	-0.034	0.378	0.092	0.086	0.139	-0.626	0.378
2005	0.100	0.087	0.051	-0.035	0.218	-0.412	0.087	3.134	-18.952	0.472
2006	0.088	0.082	0.050	-0.107	0.172	0.037	0.082	0.260	-1.415	0.172
2007	0.103	0.094	0.080	-0.093	0.484	0.054	0.092	0.247	-1.264	0.484
2008	0.081	0.088	0.101	-0.436	0.234	-0.272	0.089	2.162	-13.052	0.234
2009	0.086	0.077	0.071	-0.092	0.267	-0.572	0.080	3.685	-22.223	0.359

Table IA.II
Customer Momentum Strategy, Portfolio Regressions (trade credit quintiles)

This table shows returns produced by the customer momentum strategy. We show the returns of indices derived from sorting firms into customer return quintiles, then further sorting each quintile into quintiles by trade credit (measured as accounts receivables turnover). In Panel a, One factor and two factor correspond to alphas obtained from regressing returns of these indices on the world market return and world market plus country momentum, respectively. Panel B shows four factor regression results which include world market, country momentum, global HML, and a constructed trade credit factor on the RHS. These results show percentage monthly (market capitalization-weighted) US Dollar denominated simple returns. T-statistics are shown in italics below the return estimates, and computed using the Newey-West method.

Panel A: One- and two--factor alpha

	One Factor (+MKT)						Two Factor (+MKT+MOM)					
	Low Trade Credit	2	3	4	High Trade Credit	Low - High	Low Trade Credit	2	3	4	High Trade Credit	Low - High
Bottom Customer	-0.144	0.250	0.028	-0.604	-1.370	1.226	-0.044	0.360	0.203	-0.584	-1.134	1.090
	<i>-0.351</i>	<i>0.655</i>	<i>0.060</i>	<i>-1.166</i>	<i>-2.364</i>	<i>2.770</i>	<i>-0.112</i>	<i>1.053</i>	<i>0.462</i>	<i>-1.201</i>	<i>-2.122</i>	<i>2.405</i>
2	-0.042	0.028	-0.055	0.412	-0.123	0.081	-0.003	0.120	0.000	0.477	-0.095	0.093
	<i>-0.099</i>	<i>0.075</i>	<i>-0.174</i>	<i>1.090</i>	<i>-0.250</i>	<i>0.175</i>	<i>-0.007</i>	<i>0.363</i>	<i>-0.001</i>	<i>1.324</i>	<i>-0.198</i>	<i>0.200</i>
3	0.712	0.524	0.105	0.204	0.034	0.678	0.807	0.574	0.192	0.189	0.092	0.715
	<i>1.933</i>	<i>1.626</i>	<i>0.323</i>	<i>0.707</i>	<i>0.078</i>	<i>1.461</i>	<i>2.233</i>	<i>1.823</i>	<i>0.574</i>	<i>0.643</i>	<i>0.190</i>	<i>1.417</i>
4	0.557	0.801	0.122	0.380	-0.633	1.190	0.513	0.831	0.098	0.371	-0.500	1.013
	<i>1.683</i>	<i>2.986</i>	<i>0.435</i>	<i>1.379</i>	<i>-1.489</i>	<i>2.773</i>	<i>1.666</i>	<i>2.993</i>	<i>0.319</i>	<i>1.332</i>	<i>-1.081</i>	<i>2.284</i>
Top Customer	1.163	0.693	0.550	0.289	0.120	1.043	1.226	0.795	0.640	0.427	0.226	0.999
	<i>2.669</i>	<i>1.770</i>	<i>1.378</i>	<i>0.669</i>	<i>0.194</i>	<i>2.216</i>	<i>2.640</i>	<i>2.082</i>	<i>1.563</i>	<i>0.942</i>	<i>0.348</i>	<i>2.184</i>
Top - Bottom	1.308	0.443	0.522	0.893	1.491		1.270	0.436	0.437	1.010	1.361	
	<i>2.484</i>	<i>1.041</i>	<i>0.922</i>	<i>1.565</i>	<i>1.932</i>		<i>2.261</i>	<i>1.020</i>	<i>0.760</i>	<i>1.694</i>	<i>1.769</i>	
Long low trade credit firms in top customer return countries, short high trade credit firms in bottom customer return countries					2.533		2.360					
					<i>3.885</i>		<i>3.640</i>					
Long high trade credit firms in top customer return countries, short low trade credit firms in bottom customer return countries					0.265		0.271					
					<i>0.348</i>		<i>0.343</i>					

Panel B: Four--factor alpha

Four Factor (+MKT+MOM+HML+TC)						
	Low Trade Credit	2	3	4	High Trade Credit	Low - High
Bottom	-0.322	0.140	0.138	-0.558	-1.149	0.826
Customer	-0.858	0.395	0.310	-1.167	-2.130	2.025
2	-0.065	0.005	-0.023	0.564	0.255	-0.320
	-0.186	0.018	-0.079	1.578	0.541	-0.760
3	0.711	0.493	0.163	0.161	0.463	0.248
	1.867	1.549	0.476	0.542	0.860	0.548
4	0.152	0.447	-0.155	0.532	-0.363	0.516
	0.496	1.818	-0.496	1.886	-0.823	1.504
Top Customer	1.043	0.653	0.542	0.384	0.465	0.579
	2.287	1.803	1.389	0.823	0.656	1.354
Top - Bottom	1.366	0.513	0.404	0.942	1.614	
	2.361	1.238	0.733	1.604	2.021	

Long low trade credit firms in top customer return countries,	2.192
short high trade credit firms in bottom customer return countries	3.559
Long high trade credit firms in top customer return countries,	0.787
short low trade credit firms in bottom customer return countries	0.958

Table IA.III
Customer Momentum Strategy, Portfolio Regressions (trade credit terciles)

This table shows returns produced by the customer momentum strategy. We show the returns of indices derived from sorting firms into customer return quintiles, then further sorting each quintile into terciles by trade credit (measured as AR Turnover). Excess Return is the average return over the sample period in excess of the monthly US T-Bill rate. One factor, two factor and three factor correspond to alphas obtained from regressing returns of these indices on the world market return; world market plus country momentum; and world market plus country momentum plus global HML, respectively. The four factor regressions include a constructed trade credit factor on the RHS. These results show percentage monthly (market capitalization-weighted) US Dollar denominated simple returns. T-statistics are shown in italics below the return estimates, and computed using the Newey-West method.

Panel A: Excess return and one-factor alpha

	Excess Return				One Factor (+MKT)			
	Low Trade Credit	2	High Trade Credit	Low - High	Low Trade Credit	2	High Trade Credit	Low - High
Bottom Customer	0.402	0.132	-0.772	1.174	0.168	-0.127	-1.034	1.202
	<i>0.739</i>	<i>0.224</i>	<i>-1.088</i>	<i>3.299</i>	<i>0.433</i>	<i>-0.300</i>	<i>-1.906</i>	<i>3.389</i>
2	0.185	0.286	0.261	-0.075	0.007	0.083	0.014	-0.007
	<i>0.390</i>	<i>0.633</i>	<i>0.464</i>	<i>-0.206</i>	<i>0.018</i>	<i>0.259</i>	<i>0.036</i>	<i>-0.020</i>
3	0.783	0.488	0.470	0.313	0.615	0.269	0.204	0.411
	<i>1.775</i>	<i>1.088</i>	<i>0.837</i>	<i>0.840</i>	<i>1.779</i>	<i>0.979</i>	<i>0.598</i>	<i>1.190</i>
4	0.928	0.630	-0.049	0.977	0.732	0.430	-0.303	1.035
	<i>2.166</i>	<i>1.530</i>	<i>-0.085</i>	<i>2.762</i>	<i>2.756</i>	<i>1.902</i>	<i>-0.897</i>	<i>3.006</i>
Top Customer	1.063	0.849	0.459	0.604	0.853	0.611	0.177	0.676
	<i>2.080</i>	<i>1.539</i>	<i>0.660</i>	<i>1.774</i>	<i>2.178</i>	<i>1.580</i>	<i>0.351</i>	<i>2.075</i>
Top - Bottom	0.661	0.717	1.231		0.685	0.738	1.212	
	<i>1.593</i>	<i>1.528</i>	<i>2.125</i>		<i>1.651</i>	<i>1.572</i>	<i>2.087</i>	
Long low trade credit firms in top customer return countries, short high trade credit firms in bottom customer return countries			1.835				1.888	
			<i>3.570</i>				<i>3.700</i>	
Long high trade credit firms in top customer return countries, short low trade credit firms in bottom customer return countries			1.231				1.212	
			<i>2.125</i>				<i>2.087</i>	

Panel B: Two- and three-factor alpha

	Two Factor (+MKT+MOM)				Three Factor (+MKT+MOM+HML)			
	Low Trade Credit	2	High Trade Credit	Low - High	Low Trade Credit	2	High Trade Credit	Low - High
Bottom Customer	0.281	0.019	-0.922	1.203	0.107	-0.027	-1.013	1.120
2	0.796	0.047	-1.862	3.320	0.312	-0.064	-1.921	2.996
3	0.073	0.161	0.039	0.035	0.009	0.138	0.152	-0.144
4	0.202	0.561	0.102	0.096	0.026	0.478	0.357	-0.390
Top Customer	0.690	0.319	0.261	0.429	0.638	0.288	0.340	0.298
2	2.054	1.099	0.712	1.217	1.876	0.960	0.714	0.821
3	0.727	0.393	-0.256	0.983	0.457	0.278	-0.193	0.650
4	2.805	1.578	-0.694	2.797	1.642	1.120	-0.504	1.860
Top - Bottom	0.945	0.683	0.325	0.620	0.897	0.584	0.368	0.530
	2.353	1.764	0.618	1.868	2.218	1.524	0.643	1.548
	0.664	0.664	1.247		0.791	0.611	1.381	
	1.566	1.385	2.102		1.810	1.234	2.256	
Long low trade credit firms in top customer return countries, short high trade credit firms in bottom customer return countries			1.868				1.910	
Long high trade credit firms in top customer return countries, short low trade credit firms in bottom customer return countries			3.583				3.547	
			1.247				1.381	
			2.102				2.256	

Panel C: Four-factor alpha

Four Factor (+MKT+MOM+HML+TC)				
	Low Trade Credit	2	High Trade Credit	Low - High
Bottom	0.006	-0.017	-0.912	0.917
Customer	0.017	-0.040	-1.841	2.857
2	-0.052	0.149	0.295	-0.347
	-0.161	0.520	0.834	-1.104
3	0.548	0.300	0.519	0.029
	1.611	0.994	1.277	0.112
4	0.363	0.278	-0.079	0.442
	1.524	1.099	-0.215	1.533
Top Customer	0.836	0.578	0.454	0.382
	2.157	1.530	0.787	1.221
Top - Bottom	0.830	0.595	1.365	
	1.897	1.196	2.219	
Long low trade credit firms in top customer return countries, short high trade credit firms in bottom customer return countries			1.748	3.372
Long high trade credit firms in top customer return countries, short low trade credit firms in bottom customer return countries			1.365	2.219

Panel B: Regression with foreign sales interaction

	Low Foreign Sales				High Foreign Sales			
	Low Trade Credit	2	High Trade Credit	Low - High	Low Trade Credit	2	High Trade Credit	Low - High
Bottom Customer	0.622	0.332	0.126	0.495	0.521	-0.170	-1.242	1.763
2	3.049	1.632	0.531	2.218	1.946	-0.698	-3.740	5.650
3	0.762	0.626	0.474	0.288	-0.449	0.259	0.158	-0.606
4	4.674	3.518	2.227	1.390	-2.136	1.397	0.652	-2.387
Top Customer	0.529	0.276	0.496	0.033	1.153	0.519	0.650	0.504
	3.076	1.485	2.200	0.153	4.928	2.688	2.747	1.935
	0.666	0.612	0.752	-0.086	1.278	0.617	-0.330	1.608
	3.706	3.184	3.380	-0.396	5.506	3.068	-1.242	5.929
Top - Bottom	1.003	1.150	0.522	0.481	0.974	0.508	0.616	0.359
	5.189	5.322	2.076	1.985	3.682	2.233	1.953	1.110
	0.381	0.818	0.396		0.453	0.678	1.858	
	1.358	2.753	1.145		1.204	2.032	4.070	

Long low trade credit firms in top customer return countries,	0.877	2.216
short high trade credit firms in bottom customer return countries	2.859	5.221
Long high trade credit firms in top customer return countries,	-0.100	0.094
short low trade credit firms in bottom customer return countries	-0.307	0.229

Table IA.V**Customer Momentum Strategy, Panel Regressions, Conditional on Volume**

This table shows the estimates of the ‘within’ and ‘across’ customer return quintile long-short portfolio returns for firms classified by their customer performance and trade credit level, conditional on volume and foreign sales level. The pooled regression setup in Table IV is further augmented with interactions on the ratio of total stock trading volume to total equity market capitalization in the producer country. We interact the high trading volume dummy with the firm dummies included in Table IV to estimate return differences for firms with high levels of foreign sales. This table shows results with interactions for high foreign sales and high trading volume. Table V of the paper shows results for the same specification, but with all control variables. These include lagged values of firm size (ranked within each country in each month), cash to assets, short-term debt to assets, net debt to assets, accounts receivables to sales (trade credit measure), equity market value to book value, multinational firm dummy, firm return, customer country index return, domestic industry return, country return, contemporaneous world market return, and industry and country fixed effects. There are 694,899 firm-months in this panel regression. T-statistics (clustered by month-country-industry) are shown in italics below the coefficient estimates.

	Low Volume				High Volume			
	Low Trade Credit	2	High Trade Credit	Low - High	Low Trade Credit	2	High Trade Credit	Low - High
Bottom	-1.696	-1.147	-3.281	1.584	2.707	1.108	1.182	1.525
Customer	<i>-4.911</i>	<i>-3.334</i>	<i>-7.556</i>	<i>3.960</i>	<i>6.921</i>	<i>3.188</i>	<i>2.455</i>	<i>3.319</i>
2	-2.639	-0.322	-1.754	-0.885	1.305	0.877	2.715	-1.410
	<i>-7.974</i>	<i>-1.241</i>	<i>-5.615</i>	<i>-2.463</i>	<i>5.190</i>	<i>3.403</i>	<i>7.640</i>	<i>-3.924</i>
3	0.359	-0.446	0.149	0.211	1.808	1.716	1.290	0.518
	<i>1.146</i>	<i>-1.631</i>	<i>0.469</i>	<i>0.609</i>	<i>5.392</i>	<i>6.266</i>	<i>3.674</i>	<i>1.331</i>
4	-0.470	-0.376	-2.240	1.770	3.049	1.833	2.233	0.816
	<i>-1.453</i>	<i>-1.441</i>	<i>-6.979</i>	<i>4.863</i>	<i>9.185</i>	<i>6.128</i>	<i>5.262</i>	<i>1.946</i>
Top Customer	0.233	-0.404	-0.904	1.137	1.553	1.704	2.290	-0.737
	<i>0.677</i>	<i>-1.318</i>	<i>-1.940</i>	<i>2.493</i>	<i>3.936</i>	<i>5.373</i>	<i>5.422</i>	<i>-1.613</i>
Top - Bottom	1.929	0.744	2.377		-1.154	0.596	1.108	
	<i>3.959</i>	<i>1.616</i>	<i>3.731</i>		<i>-2.076</i>	<i>1.266</i>	<i>1.733</i>	

Long low trade credit firms in top customer return countries,	3.514	0.371
short high trade credit firms in bottom customer return countries	<i>6.344</i>	<i>0.596</i>
Long high trade credit firms in top customer return countries,	0.792	-0.417
short low trade credit firms in bottom customer return countries	<i>1.365</i>	<i>-0.724</i>

Table IA.VI

Customer Momentum Strategy, Panel Regression, Conditional on Financial Stress

This table shows the estimates of the ‘within’ and ‘across’ customer return quintile long-short portfolio return for firms classified by their customer performance and trade credit level, conditional on financial stress level. The pooled regression setup in Table III is further augmented with interactions for emerging market financial stress, defined as any period where the IMF World Economic Outlook Financial Stress Indicator for an emerging market is above 1. This flags 65 out of 195 months in our sample as financial stress periods. We interact the financial stress indicator with the firm dummies included in Table III to estimate performance differences in and out of periods of financial stress with all of the control variables. Table VI of the paper shows results for the same specification, but with all control variables. These include lagged values of firm size (ranked within each country in each month), cash to assets, short-term debt to assets, net debt to assets, accounts receivables to sales (trade credit measure), equity market value to book value, multinational firm dummy, firm return, customer country index return, domestic industry return, country return, contemporaneous world market return, and industry and country fixed effects. There are 1,200,585 firm-months in this panel regression. T-statistics (clustered by month-country-industry) are shown in italics below the coefficient estimates.

	Low EM Stress				High EM Stress			
	Low Trade Credit	2	High Trade Credit	Low - High	Low Trade Credit	2	High Trade Credit	Low - High
Bottom	1.733	1.701	1.105	0.628	-2.218	-2.969	-4.480	2.262
Customer	<i>7.431</i>	<i>7.987</i>	<i>4.554</i>	<i>2.965</i>	<i>-6.299</i>	<i>-7.551</i>	<i>-9.490</i>	<i>5.809</i>
2	1.386	1.673	1.841	-0.455	-2.185	-2.448	-2.885	0.701
	<i>8.801</i>	<i>9.389</i>	<i>9.039</i>	<i>-2.500</i>	<i>-5.588</i>	<i>-6.870</i>	<i>-7.045</i>	<i>1.877</i>
3	1.778	1.680	1.326	0.453	-1.164	-1.878	-1.186	0.022
	<i>7.690</i>	<i>8.088</i>	<i>5.184</i>	<i>2.131</i>	<i>-2.908</i>	<i>-5.381</i>	<i>-3.066</i>	<i>0.061</i>
4	1.985	1.856	1.694	0.291	-1.148	-1.770	-3.490	2.342
	<i>9.038</i>	<i>9.183</i>	<i>7.235</i>	<i>1.433</i>	<i>-3.348</i>	<i>-5.646</i>	<i>-8.650</i>	<i>6.755</i>
Top Customer	1.842	1.469	1.617	0.225	-0.400	-0.363	-1.801	1.401
	<i>10.067</i>	<i>7.470</i>	<i>6.376</i>	<i>1.032</i>	<i>-1.102</i>	<i>-0.917</i>	<i>-3.874</i>	<i>3.539</i>
Top - Bottom	0.109	-0.232	0.512		1.818	2.606	2.679	
	<i>0.368</i>	<i>-0.799</i>	<i>1.460</i>		<i>3.593</i>	<i>4.671</i>	<i>4.041</i>	

Long low trade credit firms in top customer return countries,	0.737	4.080
short high trade credit firms in bottom customer return countries	<i>2.425</i>	<i>6.850</i>
Long high trade credit firms in top customer return countries,	-0.116	0.417
short low trade credit firms in bottom customer return countries	<i>-0.336</i>	<i>0.715</i>

Table IA.VII
Customer Momentum Strategy, Panel Regression, Conditional on NBER Recessions

This table shows the estimates of the ‘within’ and ‘across’ customer return quintile long-short portfolio return for firms classified by their customer performance and trade credit level, conditional on recessionary periods. The pooled regression setup in Table III is further augmented with interactions for an indicator for NBER recession months. In Panel A, we interact the recession indicator with the firm dummies included in Table III, to estimate performance differences in and out of periods of economic recession with all controlling variables other than fixed effects included. These include the firm-level variables lagged values of firm size (ranked within each country in each month), cash to assets, short-term debt to assets, net debt to assets, accounts receivables to sales (trade credit measure), equity market value to book value, multinational firm dummy, firm return, customer country index return, domestic industry return, country return, and contemporaneous world market return. The row and columns “*With FE*” show results with all controlling variables plus industry and country fixed effects. Panel B shows results for the same specification, with no additional controlling variables. There are 1,200,585 firm-months in this panel regression. T-statistics (clustered by month-country-industry) are shown in italics below the coefficient estimates.

Panel A: Regression with interaction for NBER recession periods, with controls

		Not Recession				Recession					
		Low Trade Credit	2	High Trade Credit	Low - High		Low Trade Credit	2	High Trade Credit	Low - High	
					<i>With FE</i>					<i>With FE</i>	
Bottom		0.092	-0.256	-0.803	0.895	0.949	0.190	0.546	-1.910	2.100	2.125
Customer		<i>0.482</i>	<i>-1.297</i>	<i>-3.262</i>	<i>4.576</i>	<i>5.087</i>	<i>0.430</i>	<i>1.358</i>	<i>-4.015</i>	<i>5.144</i>	<i>5.163</i>
	2	-0.250	-0.217	0.031	-0.281	-0.235	1.269	1.885	0.633	0.635	0.682
		<i>-1.596</i>	<i>-1.274</i>	<i>0.160</i>	<i>-1.625</i>	<i>-1.370</i>	<i>2.263</i>	<i>3.759</i>	<i>1.186</i>	<i>1.350</i>	<i>1.463</i>
	3	0.274	0.102	0.332	-0.058	0.005	2.067	0.487	-0.326	2.394	2.370
		<i>1.428</i>	<i>0.589</i>	<i>1.579</i>	<i>-0.324</i>	<i>0.026</i>	<i>2.154</i>	<i>0.614</i>	<i>-0.418</i>	<i>3.393</i>	<i>3.424</i>
	4	0.536	0.236	-0.208	0.744	0.811	1.204	0.908	-0.478	1.682	1.687
		<i>2.703</i>	<i>1.275</i>	<i>-0.996</i>	<i>4.364</i>	<i>4.806</i>	<i>2.476</i>	<i>2.160</i>	<i>-0.935</i>	<i>3.663</i>	<i>3.683</i>
Top		0.759	0.567	0.337	0.421	0.458	1.386	0.801	0.456	0.930	0.962
Customer		<i>4.350</i>	<i>3.051</i>	<i>1.448</i>	<i>2.170</i>	<i>2.489</i>	<i>2.280</i>	<i>1.303</i>	<i>0.679</i>	<i>1.707</i>	<i>1.800</i>
		0.667	0.823	1.140			1.196	0.255	2.366		
Top -		<i>2.680</i>	<i>3.247</i>	<i>3.560</i>			<i>1.627</i>	<i>0.356</i>	<i>2.930</i>		
Bottom	<i>With</i>	0.624	0.802	1.114			1.218	0.310	2.381		
	<i>FE</i>	<i>2.507</i>	<i>3.165</i>	<i>3.477</i>			<i>1.658</i>	<i>0.431</i>	<i>2.939</i>		
					<i>With FE</i>		<i>With FE</i>				
Long low trade credit firms in top customer return countries,					1.562	1.572	3.296	3.343			
short high trade credit firms in bottom customer return countries					<i>5.465</i>	<i>5.575</i>	<i>4.355</i>	<i>4.443</i>			
Long high trade credit firms in top customer return countries,					0.245	0.165	0.265	0.256			
short low trade credit firms in bottom customer return countries					<i>0.849</i>	<i>0.589</i>	<i>0.338</i>	<i>0.326</i>			

Panel B: Regression with interaction for NBER recession periods, without controls

	Not Recession				Recession			
	Low Trade Credit	2	High Trade Credit	Low - High	Low Trade Credit	2	High Trade Credit	Low - High
Bottom	1.000	0.637	-0.045	1.045	-3.774	-3.411	-5.879	2.104
Customer	<i>5.059</i>	<i>3.235</i>	<i>-0.186</i>	<i>5.009</i>	<i>-6.498</i>	<i>-5.659</i>	<i>-9.444</i>	<i>4.309</i>
2	0.610	0.643	0.799	-0.189	-2.786	-2.188	-3.576	0.790
	<i>4.251</i>	<i>4.026</i>	<i>4.188</i>	<i>-1.085</i>	<i>-4.028</i>	<i>-3.543</i>	<i>-5.435</i>	<i>1.380</i>
3	1.176	1.041	1.166	0.009	-1.921	-3.429	-4.348	2.427
	<i>6.913</i>	<i>6.662</i>	<i>5.684</i>	<i>0.054</i>	<i>-1.863</i>	<i>-3.982</i>	<i>-4.934</i>	<i>3.079</i>
4	1.465	1.167	0.619	0.846	-2.814	-3.083	-4.730	1.916
	<i>7.940</i>	<i>6.733</i>	<i>3.000</i>	<i>4.708</i>	<i>-4.351</i>	<i>-5.374</i>	<i>-6.769</i>	<i>3.369</i>
Top Customer	1.634	1.440	1.055	0.578	-2.754	-3.283	-3.661	0.907
	<i>10.114</i>	<i>8.231</i>	<i>4.575</i>	<i>2.845</i>	<i>-4.057</i>	<i>-4.519</i>	<i>-4.805</i>	<i>1.486</i>
Top - Bottom	0.634	0.802	1.100		1.020	0.128	2.217	
	<i>2.482</i>	<i>3.046</i>	<i>3.304</i>		<i>1.142</i>	<i>0.136</i>	<i>2.252</i>	

Long low trade credit firms in top customer return countries,	1.678	3.124
short high trade credit firms in bottom customer return countries	<i>5.793</i>	<i>3.392</i>
Long high trade credit firms in top customer return countries,	0.056	0.113
short low trade credit firms in bottom customer return countries	<i>0.183</i>	<i>0.118</i>

Table IA.VIII
Customer Momentum Strategy, Panel Regression - Results with Changing Customer Set

This table shows the estimates of the ‘within’ and ‘across’ customer return quintile long-short portfolio returns for firms classified by their customer performance and trade credit level, at three threshold levels for inclusion in a producer’s major customer index (importing at least 3%, 5%, or 7% of the producer’s total exports). Panel A shows the results when the customer country index is equal-weighted. Panel B shows the results when the customer country index is export-weighted. The results are from the same baseline pooled regression specification in Table III. This table shows results for panel regressions without controls and with all controlling variables including country and industry fixed effects. T-statistics (clustered by month-country-industry) are shown in italics below the coefficient estimates.

Panel A: Regressions with equal-weighted customer indexes, at 3%, 5%, and 7% thresholds

		Without Controls				With All Controls			
		Low Trade Credit		High Trade Credit		Low Trade Credit		High Trade Credit	
Long Top Customer	Short Bottom Customer	Low Trade Credit	High Trade Credit	Low Trade Credit	High Trade Credit	Low Trade Credit	High Trade Credit	Low Trade Credit	High Trade Credit
	3%	0.625	1.444	0.322	1.142	0.485	1.099	0.306	0.920
		<i>2.484</i>	<i>5.259</i>	<i>1.041</i>	<i>3.473</i>	<i>2.101</i>	<i>4.400</i>	<i>1.157</i>	<i>3.154</i>
Threshold	5%	0.681	1.857	0.063	1.238	0.739	1.837	0.214	1.312
	(Baseline)	<i>2.561</i>	<i>6.394</i>	<i>0.205</i>	<i>3.794</i>	<i>2.963</i>	<i>6.688</i>	<i>0.788</i>	<i>4.281</i>
	7%	0.832	1.840	0.293	1.301	0.912	1.817	0.454	1.358
		<i>3.189</i>	<i>6.381</i>	<i>0.997</i>	<i>4.082</i>	<i>3.552</i>	<i>6.443</i>	<i>1.629</i>	<i>4.390</i>

Panel B: Regressions with export-weighted customer indexes, at 3%, 5%, and 7% thresholds

		Without Controls				With All Controls			
		Low Trade Credit		High Trade Credit		Low Trade Credit		High Trade Credit	
Long Top Customer	Short Bottom Customer	Low Trade Credit	High Trade Credit	Low Trade Credit	High Trade Credit	Low Trade Credit	High Trade Credit	Low Trade Credit	High Trade Credit
	3%	0.379	1.333	-0.397	0.557	0.370	1.259	-0.312	0.577
		<i>1.440</i>	<i>4.505</i>	<i>-1.312</i>	<i>1.679</i>	<i>1.520</i>	<i>4.647</i>	<i>-1.175</i>	<i>1.925</i>
Threshold	5%	0.356	1.421	-0.244	0.822	0.417	1.396	0.008	0.987
		<i>1.284</i>	<i>4.529</i>	<i>-0.785</i>	<i>2.390</i>	<i>1.579</i>	<i>4.735</i>	<i>0.030</i>	<i>3.099</i>
	7%	0.419	1.265	-0.314	0.531	0.395	1.071	-0.189	0.486
		<i>1.513</i>	<i>4.033</i>	<i>-1.022</i>	<i>1.559</i>	<i>1.577</i>	<i>3.793</i>	<i>-0.694</i>	<i>1.570</i>

Table IA.IX
Customer Momentum Strategy, Panel Regression – Net Trade Credit as Trade Credit Measure

This table shows the estimates of the ‘within’ and ‘across’ customer return quintile long-short portfolio return for firms classified by their customer performance and trade credit levels (*measured as net trade credit*), conditional on foreign sales level. The pooled regression setup in Table III is augmented with interactions on the ratio of firm foreign sales to total sales level. In Panel A, we interact the high foreign sales dummy with the firm dummies included in Table III, to estimate performance differences for firms conditional on foreign sales activity levels, with all controlling variables other than fixed effects included. These include the firm-level variables firm size (ranked within each country in each month), cash to assets, short-term debt to assets, net debt to assets, net trade credit ratio (trade credit measure), equity market value to book value, multinational firm dummy, lagged firm return, lagged customer country index return, lagged domestic industry return, and lagged country return. World market return is included to adjust for market risk. The row and columns “*With FE*” show results with all controlling variables plus industry and country fixed effects. Panel B shows results for the same specification, with no controlling variables. There are 692,346 firm-months in this panel regression. T-statistics (clustered by month-country-industry) are shown in italics below the coefficient estimates.

Panel A: Regression with foreign sales interaction, with controls

		Low Foreign Sales				High Foreign Sales					
		Low Trade Credit	2	High Trade Credit	Low - High	Low Trade Credit	2	High Trade Credit	Low - High		
					<i>With FE</i>				<i>With FE</i>		
Bottom		0.306	-0.266	-0.551	0.857	0.871	-0.236	-0.414	-2.010	1.774	1.805
Customer		<i>1.562</i>	<i>-1.492</i>	<i>-2.728</i>	<i>4.510</i>	<i>4.621</i>	<i>-0.863</i>	<i>-1.613</i>	<i>-6.089</i>	<i>6.277</i>	<i>6.691</i>
	2	0.111	0.049	0.344	-0.233	-0.260	-0.404	-0.184	-0.053	-0.352	-0.333
		<i>0.585</i>	<i>0.274</i>	<i>1.717</i>	<i>-1.221</i>	<i>-1.375</i>	<i>-1.766</i>	<i>-0.921</i>	<i>-0.223</i>	<i>-1.514</i>	<i>-1.434</i>
	3	0.126	0.159	-0.158	0.284	0.317	0.381	-0.092	0.641	-0.260	-0.256
		<i>0.622</i>	<i>0.889</i>	<i>-0.773</i>	<i>1.412</i>	<i>1.597</i>	<i>1.602</i>	<i>-0.460</i>	<i>2.534</i>	<i>-1.076</i>	<i>-1.064</i>
	4	0.332	0.312	1.597	-1.265	-1.210	0.707	-0.115	-0.485	1.192	1.216
		<i>1.904</i>	<i>1.869</i>	<i>7.831</i>	<i>-6.447</i>	<i>-6.205</i>	<i>2.972</i>	<i>-0.551</i>	<i>-1.754</i>	<i>4.584</i>	<i>4.693</i>
Top		0.419	1.071	0.089	0.330	0.317	1.081	0.409	0.422	0.659	0.730
Customer		<i>2.074</i>	<i>5.925</i>	<i>0.383</i>	<i>1.504</i>	<i>1.489</i>	<i>4.138</i>	<i>1.669</i>	<i>1.404</i>	<i>2.446</i>	<i>2.767</i>
		0.113	1.337	0.640			1.317	0.823	2.432		
Top -		<i>0.409</i>	<i>5.485</i>	<i>2.159</i>			<i>3.763</i>	<i>2.645</i>	<i>6.009</i>		
Bottom	<i>With</i>	0.062	1.268	0.616			1.268	0.771	2.343		
	<i>FE</i>	<i>0.224</i>	<i>5.200</i>	<i>2.077</i>			<i>3.627</i>	<i>2.481</i>	<i>5.847</i>		
					<i>With FE</i>		<i>With FE</i>				
Long low trade credit firms in top customer return countries,					0.970	0.933	3.091	3.073			
short high trade credit firms in bottom customer return countries					<i>3.491</i>	<i>3.369</i>	<i>8.019</i>	<i>8.299</i>			
Long high trade credit firms in top customer return countries,					-0.217	-0.255	0.658	0.538			
short low trade credit firms in bottom customer return countries					<i>-0.733</i>	<i>-0.875</i>	<i>1.769</i>	<i>1.457</i>			

Panel B: Regression with foreign sales interaction, without controls

	Low Foreign Sales				High Foreign Sales			
	Low Trade Credit	2	High Trade Credit	Low - High	Low Trade Credit	2	High Trade Credit	Low - High
Bottom Customer	0.721	0.247	0.101	0.620	0.224	0.090	-1.570	1.794
2	3.402	1.239	0.437	2.950	0.802	0.368	-4.881	5.900
3	0.671	0.485	0.787	-0.117	-0.297	0.282	0.409	-0.706
4	3.924	2.909	3.619	-0.566	-1.358	1.519	1.741	-2.823
Top Customer	0.552	0.502	0.133	0.419	0.699	0.487	1.259	-0.560
	2.943	2.949	0.609	2.039	3.106	2.645	5.153	-2.244
	0.481	0.572	1.947	-1.467	1.263	0.445	-0.031	1.294
	2.513	3.098	8.825	-6.772	5.458	2.234	-0.114	4.675
	0.748	1.609	0.488	0.261	1.286	0.657	0.612	0.675
Top - Bottom	3.580	8.205	1.985	1.131	4.960	2.852	2.054	2.337
	0.028	1.361	0.387		1.062	0.566	2.182	
	0.093	4.865	1.152		2.785	1.691	4.999	

Long low trade credit firms in top customer return countries,	0.648	2.857
short high trade credit firms in bottom customer return countries	2.084	6.917
Long high trade credit firms in top customer return countries,	-0.233	0.388
short low trade credit firms in bottom customer return countries	-0.717	0.947

Table IA.X

Comparing the number of producer firms in this paper with Fama and French (2012) and Hou, Karolyi and Kho (2011).

	This paper	FF-2012	HKK-2011
Number of total countries in initial dataset	43 (37 producers) ¹	23 (advanced economies only)	49
Date range covered	January 1993 to March 2009	November 1989 to March 2011	July 1981 to December 2003
Number of total firms comprising producer set	33,915 ²	-	50,000
Number of firms with market capitalization data, and market cap above USD1M	32,430	-	-
Number of firms with basic Worldscope coverage	32,378 (with trade credit data coverage)	-	39,000
Number of firms in final producer set in default empirical specification with complete data coverage (for all controls included in Table III)	15,627	-	~27,000
Number of firms with foreign sales field coverage	9,367	-	-

¹ Estonia, Egypt, Colombia, Greece, Luxembourg, Morocco, Peru, Sri Lanka, Taiwan, Venezuela, and Zimbabwe never appear in the producer and customer sets or have significant data gaps, and are not included in the count of 43 countries.

² Customer countries never appearing in producer set: USA (~11,000 firms), Japan (~4,000), Brazil (~250), India (~900), Saudi Arabia, and Slovakia. Saudi Arabia and Slovakia do not have the necessary firm-level data coverage.