



pulsar*invest

EDUCATIONAL PUBLICLY LISTED COMPANIES AND COVID-19

INSTITUTIONAL, MAY 2020

pulsar*invest

LARGEST COMPANIES

BRAZILIAN COMPANIES

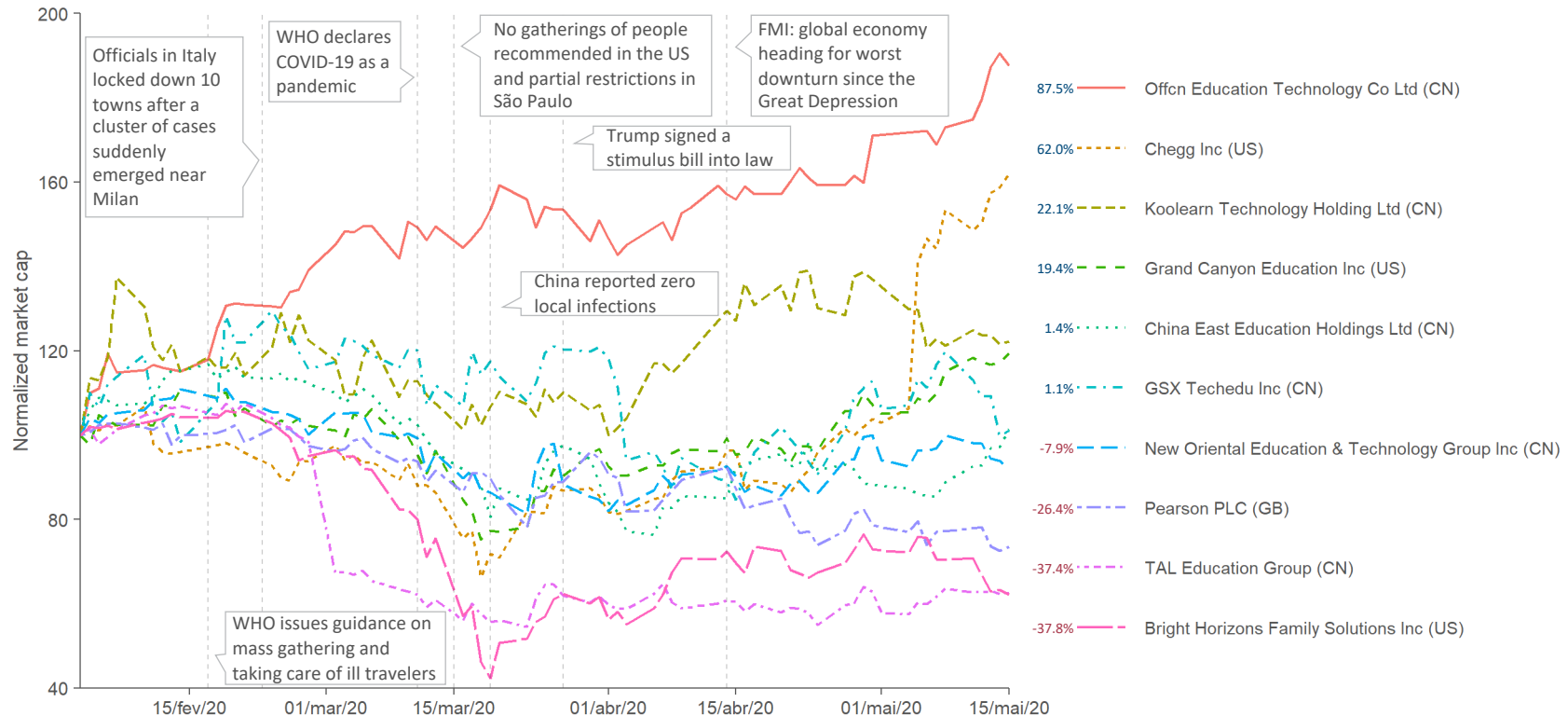
SELECTED COUNTRIES

SEGMENTS





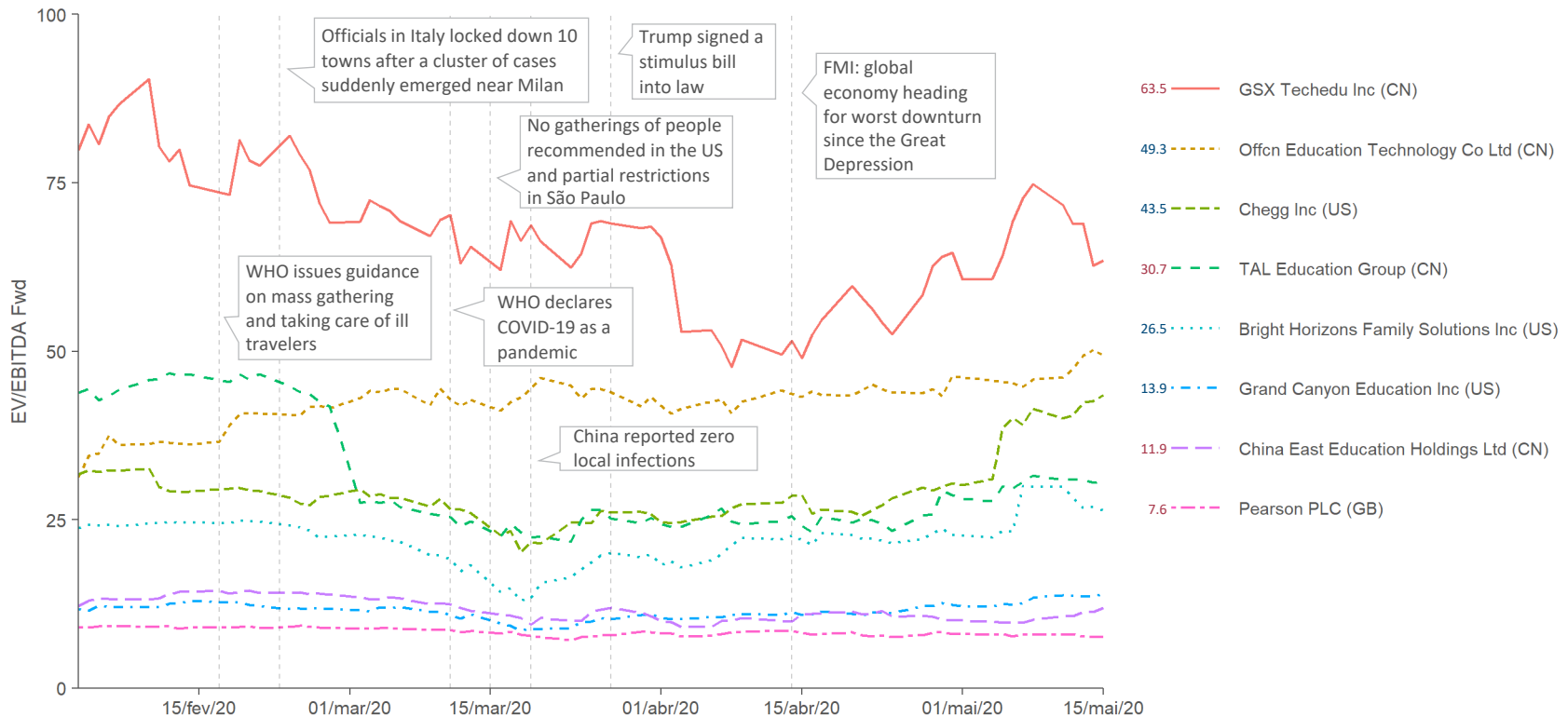
Stock price performance of the top 10 largest companies by market cap: top performers are focused on technology solutions



Source: Thomson Reuters, World Health Organization, The New York Times, and Pulsar analysis.
Note: market data from February 3rd, 2020 to May 15th, 2020.



The companies with the highest EV/EBITDA Fwd ratios are technology-based



Source: Thomson Reuters, World Health Organization, The New York Times, and Pulsar analysis.
Note: market data from February 3rd, 2020 to May 15th, 2020.

Largest companies overview (1/2)



Company name	Country	Market cap (USD bn)	Main segment	Description
Offcn Education Technology	China	24.6	Educational Support Services	Offcn Education Technology engages in the vocational education and recruitment examination training in the public sector. The company serves knowledge-based employment groups such as college students, university graduates, and professionals. It provides recruitment examination training for civil servants, institutions and teachers; vocational promotion examination training such as postgraduate entrance examinations, self-study exams, and undergraduate promotion; and professional skills training in information technology, finance and medical fields.
TAL Education Group	China	20.5	Exam Preparation and Tutoring	TAL Education Group operates as a holding company, which through its subsidiaries, engages in the provision of after-school tutoring programs for primary and secondary school students. Its services are delivered through small classes; personalized premium services, such as one-on-one tutoring; and online course offerings for primary and middle school students. The company was founded on August 2003 and is headquartered in Beijing, China.
New Oriental Education & Technology Group	China	18.6	Elementary and Secondary Schools	New Oriental Education & Technology Group, Inc. is a holding company, which engages in the provision of private educational services. It operates through the Language Training and Test Preparation Courses, and Others segments. The Others segment includes online education, content development and distribution, overseas study consulting services, pre-school education, primary and secondary school education, and study tour. The company was founded by Min Hong Yu and Yong Qiang Qian on August 2, 2001 and is headquartered in Beijing, China.
GSX Techedu	China	8.5	Exam Preparation and Tutoring	GSX Techedu, Inc. is a technology-driven education company. Its core expertise is in online K-12 courses, and online K-12 large-class after-school tutoring service provider in China. The company's K-12 courses cover all primary and secondary grades. It also offers foreign language, professional and interest courses. The company was founded by Xiang Dong Chen in June 2014 and is headquartered in Beijing, China.
Chegg Inc	USA	8.2	Educational Support Services	The Company helps students study for college admission exams, find the colleges, get grades and test scores while in school, and find internships that allow them to gain skills to help them enter the workforce after college. The Company matches domestic and international students with colleges, universities and other academic institutions (collectively referred to as colleges) in the US. It also offers eTextbooks library for rent and sale. The Company also has live tutors on its connected learning platform available to students online, anytime, anywhere through its Chegg Tutors service.

Source: Thomson Reuters and Wall Street Journal.
Note: market cap as of May 15th, 2020.

Largest companies overview (2/2)



Company name	Country	Market cap (USD)	Main segment	Description
Bright Horizons Family Solutions	USA	6.0	Child Day Care Services	Provider of childcare, early education and other services. The Company provides services under multi-year contracts with employers offering childcare and other dependent care solutions as part of their employee benefits packages. Its segments include full-service center-based care services, back-up dependent care services and other educational advisory services. Full-service center-based care segment includes center-based childcare, preschool and elementary education.
Grand Canyon Education Inc	USA	4.5	Colleges, Universities, and Professional Schools	Engaged in the provision of postsecondary education, the Company is a regionally accredited university. It offers certificate programs, which consist of a series of courses focused on a particular area of study for both the post-baccalaureate and post-graduate students. The company was founded in November 2003.
China East Education Holdings Ltd	China	4.1	Other Technical and Trade Schools	It is a China-based investment holding company principally involved in the operation of vocational education institutions. New East Culinary Education segment provides culinary training programs. Xinhua Internet Technology Education segment provides information technology-related training. Wontone Automotive Education segment provides auto repair skill training. Omick Education of Western Cuisine and Pastry segment offers a variety of courses, including baking, deserts, western cuisines, bartending and barista training. Wisezone Data Technology (DT) Education segment provides practical skills programs to junior college and university students. Cuisine Academy segment provides culinary skill trainings.
Koolearn Technology Holding	China	4.0	Language Schools	It is a company mainly engaged in the provision of online education courses. The College segment primarily involved in college test preparation, overseas test preparation, and English language learning. The K-12 segment offers after-school tutoring courses and courses designed for standardized college and high school entrance exams. The Pre-school segment offers online educational contents through apps.
Pearson PLC	United Kingdom	3.9	Book Publishers	The Company delivers learning through providing a range of educational products and services to institutions, governments, professional bodies and individual learners. The Company provides content, assessment and digital services to schools, colleges and universities, as well as professional and vocational education to learners to help increase their skills and employability prospects.

Source: Thomson Reuters and Wall Street Journal.
 Note: market cap as of May 15th, 2020.

pulsar*invest

LARGEST COMPANIES

BRAZILIAN COMPANIES

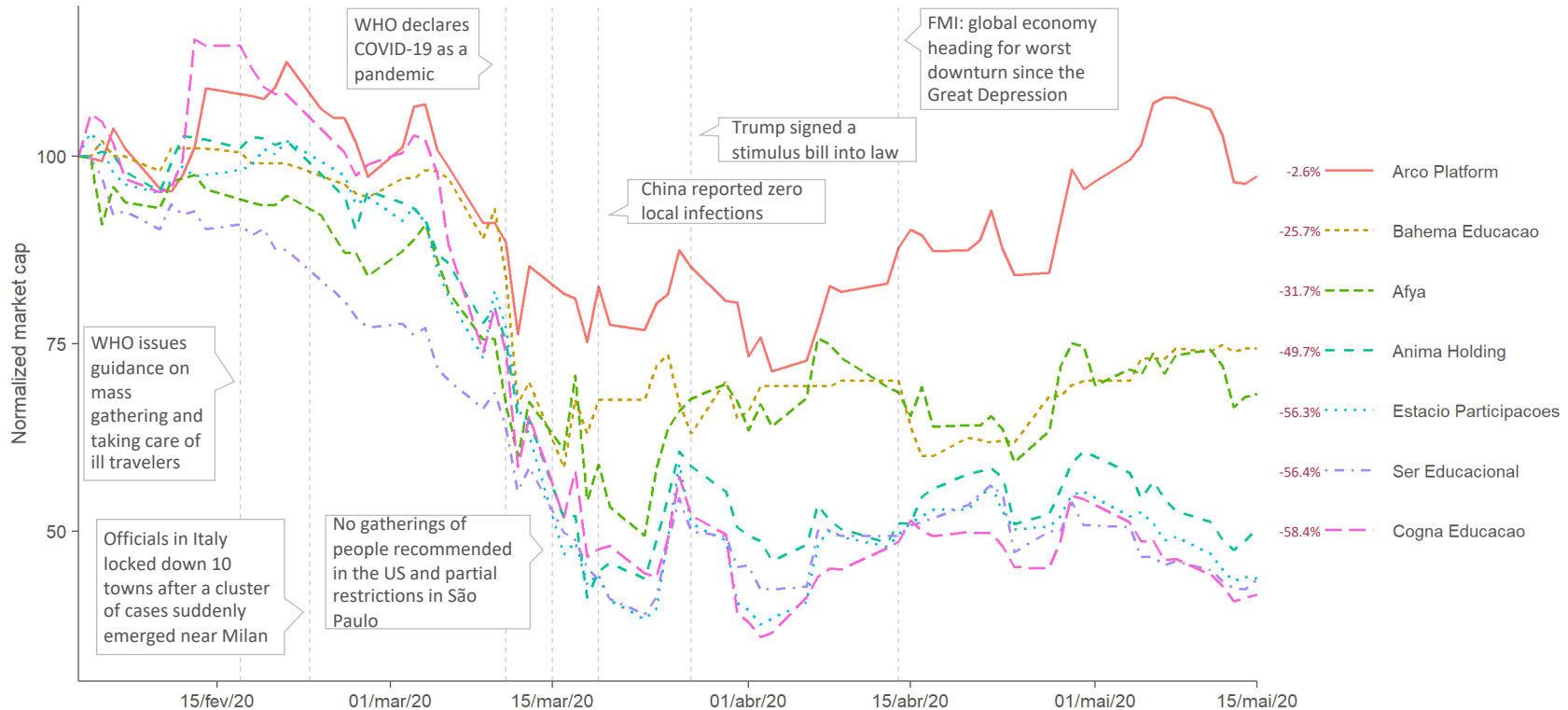
SELECTED COUNTRIES

SEGMENTS





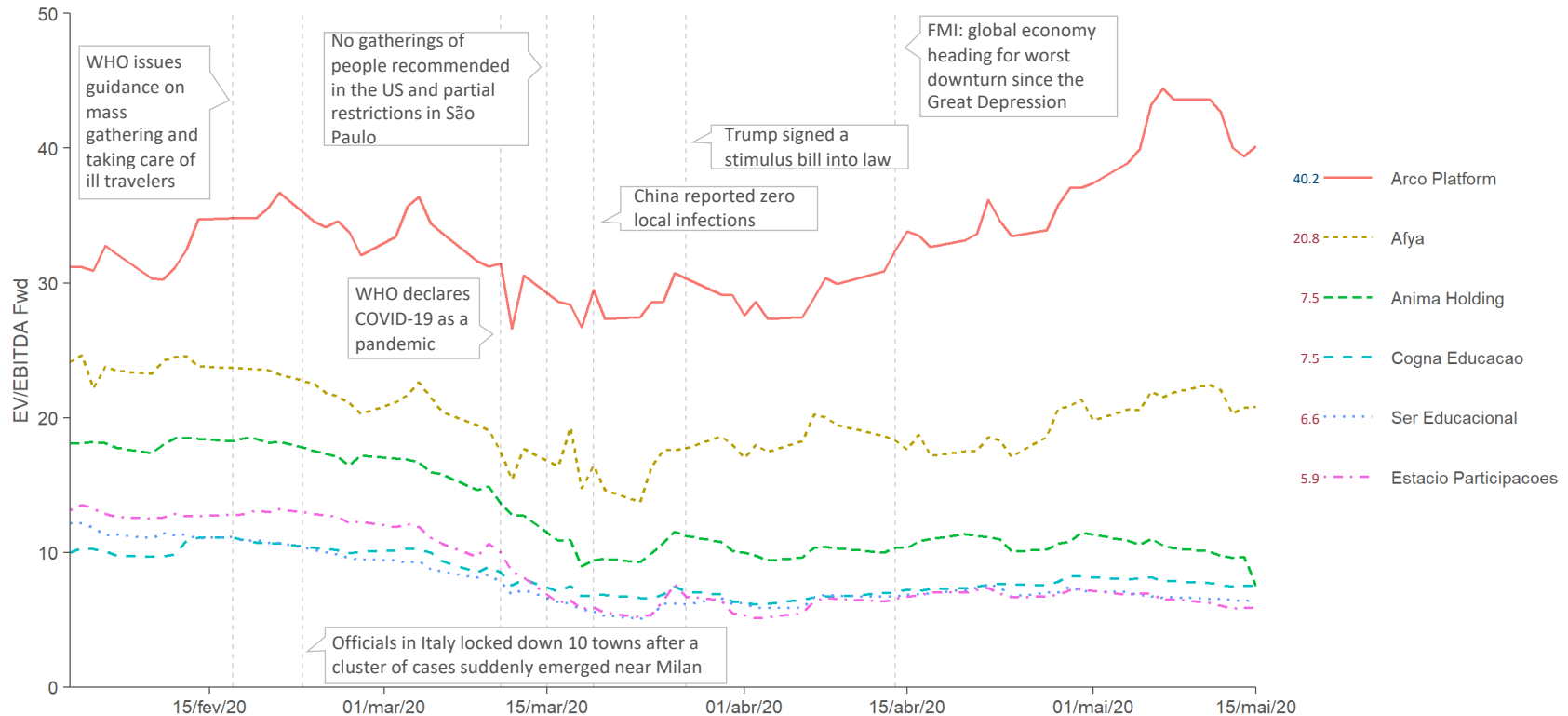
Brazil overview: with all the companies losing value in the period, the combined return weighted by market cap was -52%



Source: Thomson Reuters, World Health Organization, The New York Times, and Pulsar analysis.
Note: market data from February 3rd, 2020 to May 15th, 2020.



Brazil overview: only Arco managed to increase its EV/EBITDA Fwd multiple since the crisis began



Source: Thomson Reuters, World Health Organization, The New York Times, and Pulsar analysis.
Note: market data from February 3rd, 2020 to May 15th, 2020.

Brazilian companies overview (1/2)



Company name	Market cap (USD bn)	Main segment	Description
Arco Platform Ltd	2.8	Educational Support Services	The Company develops educational solutions focuses on content, educational technology, supplemental programs and specialized services. It serves to more than 1,360,000 students and over 5,400 private schools throughout the whole Brazilian territory, including all segments of education, from kindergarten to high school. It provides platforms that integrate the student engagement in the educational ecosystem, tools and methods.
Afya Ltd	1.9	Educational Support Services	Afya Ltd. is a medical education group in Brazil. It delivers an end-to-end physician-centric ecosystem that serves and empowers students to be lifelong medical learners through their medical residency preparation, post-graduate programs and continuing medical education activities. The company operates through the following two segments: Education Services and Residency Preparatory & Specialization Programs. The Education Services segment provides educational services through undergraduate and graduate courses related to medicine, other health sciences and other undergraduate programs. The Residency Preparatory & Specialization Programs segment provides residency preparatory courses and medical post-graduate specialization programs, delivering printed and digital content, an online medical education platform and practical medical training. Afya was founded on March 22, 2019.
Cogna Educacao SA	1.4	Colleges, Universities, and Professional Schools	Formerly Kroton Educacional SA, it is a Brazil-based company active in the private education sector. The Company focuses on developing primary and secondary schools, post-secondary and undergraduate programs, as well as vocational courses. The Company's activities are divided into three business segments: in-class higher education, which offers port-secondary programs on campus; Distance learning higher education (EAD), which provides port-secondary programs via online platform, and Basic education, which includes own and managed primary schools, collection and development of teaching materials, school management advisory, as well as educational support tools, among others.
Estacio Participacoes SA	1.3	Colleges, Universities, and Professional Schools	The Company focuses on developing post-secondary education institutions. Its services range comprises on-campus and distance learning with graduate and Master of Business Administration (MBA) programs, vocational courses, exam preparation, short-duration courses, as well as business trainings for professionals, among others. The Company's courses offer development in the legal, management, humanities, health and technology areas. Its educational network comprises universities, campuses, distance learning centers and colleges.

Brazilian companies overview (2/2)



Company name	Market cap (USD bn)	Main segment	Description
Anima Holding SA	0.4	Colleges, Universities, and Professional Schools	Formerly known as GAEC Educacao SA, Anima Holding SA engages in the administration of educational institutions. It operates through the Education and Other Business segment. The Education segment activities include the provision of education services by offering elementary school and high school courses, college degrees and professional specialization courses, including undergraduate, postgraduate, masters, doctorate, and extension degrees. The Other Business segment focuses on the development of corporate leaders and companies through congresses, forums, seminars, specialization courses, in-company courses, publishing books, and magazines.
Ser Educacional SA	0.3	Colleges, Universities, and Professional Schools	The Company focuses on developing post-secondary, vocational and higher education institutions. The Company provides undergraduate, graduate, master's degree and doctoral degree courses, Master of Business Administration (MBA) programs and vocational trainings. In addition, it manages research institutes that develop educational, scientific, political, economic and social projects. The Company also organizes national and international conferences in various areas, such as business administration, law, tourism, communications, information technology, health and education.
Bahema Educacao SA	0.03	Elementary and Secondary Schools	The company develops projects and activities in the areas of pre-school education, early childhood education, basic education (elementary to high school); projects and activities of free courses, including pre-university courses, as well as tutoring and teaching sports, dance and the arts and other activities related to sports and culture; provision of support services to educational institutions and educators, including administrative services, training, qualification, consulting, advisory, evaluation and other educational services; all other activities inherent to the provision of educational services and conducting research and preparing studies and investment projects in the area of education, among others. It is active locally.

pulsar*invest

LARGEST COMPANIES

BRAZILIAN COMPANIES

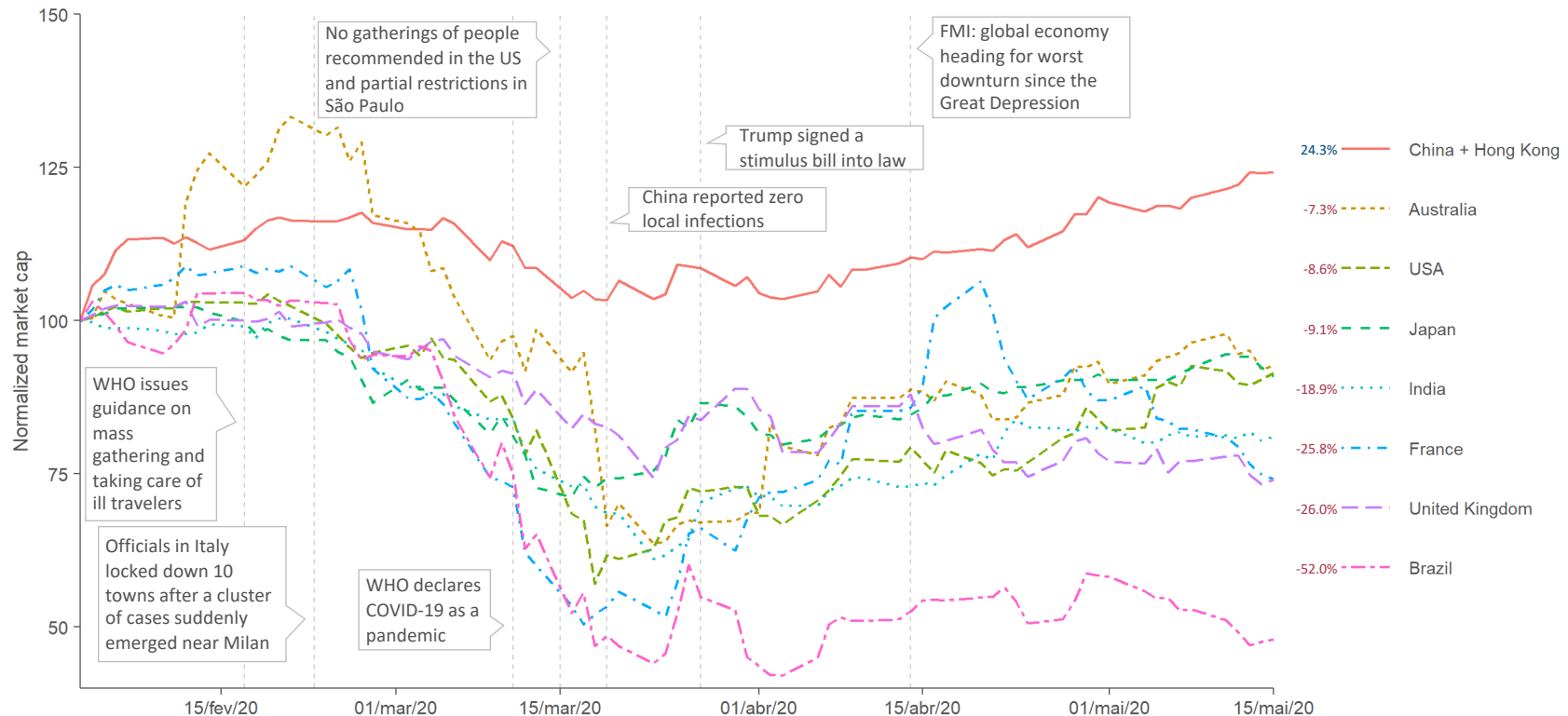
SELECTED COUNTRIES

SEGMENTS





From the selected countries, China is the only one whose companies were not affected by the crisis on average. Brazil is the worst performer



Source: Thomson Reuters, World Health Organization, The New York Times, and Pulsar analysis.
Note: 206 companies considered. Market data from February 3rd, 2020 to May 15th, 2020.

Selected countries overview



Country	Listed companies	Total market cap (USD in billions)	Companies' tickers
China and Hong Kong	66	118.3	000526.SZ; 000719.SZ; 002261.SZ; 002607.SZ; 002638.SZ; 0032.HK; 0382.HK; 0667.HK; 0839.HK; 1082.HK; 1317.HK; 1525.HK; 1565.HK; 1569.HK; 1593.HK; 1598.HK; 1756.HK; 1758.HK; 1765.HK; 1769.HK; 1773.HK; 1775.HK; 1797.HK; 1851.HK; 1871.HK; 1890.HK; 1935.HK; 1969.HK; 2001.HK; 2779.HK; 300235.SZ; 300282.SZ; 300359.SZ; 300654.SZ; 3978.HK; 600661.SS; 600825.SS; 601858.SS; 601928.SS; 6068.HK; 6169.HK; 8055.HK; 8160.HK; 8417.HK; AACG.OQ; AMBO.A; BEDU.N; COE.N; DAO.N; DL.N; EDU.N; FEDU.N; GFHG.L; GSX.N; HLG.OQ; LAIX.N; NEW.N; ONE.N; REDU.OQ; RGS.G.PK; RTE.AX; RYB.N; STG.N; TAL.N; TEDU.OQ; WAFU.OQ
USA	48	38.2	AMCT.PK; APEI.OQ; ASPU.OQ; ATGE.N; BFAM.N; BOXL.OQ; CHGG.N; CLCN.PK; CNGO.PK; DREM.PK; EDMCQ.PK; EDUC.OQ; ELRN.PK; ESINQ.PK; EVCI.PK; GHC.N; GPX.N; GWOX.PK; HMHC.OQ; HQGE.PK; HTSF.PK; ISTE.PK; LAUR.OQ; LEAI.PK; LINC.OQ; LOPE.OQ; LRN.N; LTRE.PK; MMTS.PK; NAUH.PK; NNWS.PK; OTED.PK; PBYA.PK; PCSV.PK; PEDH.PK; PRDO.OQ; PS.OQ; RST.N; SADL.PK; SCHL.OQ; SCIL.PK; SIBE.PK; STRA.OQ; TIGE.PK; TWOU.OQ; UTI.N; VCMP.PK; ZVO.OQ
Brazil	7	8.0	AFYA.OQ; ANIM3.SA; ARCE.OQ; BAH3.SA; COGN3.SA; SEER3.SA; YDUQ3.SA
Japan	32	7.6	2152.T; 2179.T; 2464.T; 3998.T; 4319.T; 4645.T; 4668.T; 4678.T; 4705.T; 4714.T; 4718.T; 4720.T; 4735.T; 4745.T; 6065.T; 6096.T; 6187.T; 6200.T; 7030.T; 7073.T; 7074.T; 7075.T; 9470.T; 9471.NG; 9610.T; 9696.T; 9733.T; 9760.T; 9769.T; 9778.T; 9783.T; 9795.T
United Kingdom	7	5.6	BLPU.L; LTGL.L; PSON.L; RM.L; TRBG.L; WEY.L; WIL.L
Australia	17	3.4	1752.HK; 3PL.AX; AKG.AX; GEM.AX; ICT.AX; IEL.AX; JAN.AX; KME.AX; KNM.AX; OLL.AX; RCL.AX; RDH.AX; SF1.AX; SIT.AX; TNK.AX; UCW.AX; VPC.AX
France	4	1.8	ALMIII.PA; EFEP.EUA; LAGA.PA; MLSIL.EUA
India	25	0.6	ACEI.BO; APTA.NS; ARIA.BO; CARP.NS; CARU.NS; EDSO.NS; GLOL.NS; GOLR.BO; GREY.BO; HUMM.BO; IECE.BO; JOIN.BO; NAVN.NS; NIIT.NS; NOVA.BO; SCHA.NS; SHAI.BO; SIDR.BO; SYLH.BO; THEA.NS; USME.NS; VANA.BO; VGEL.BO; VJTF.BO; ZEEE.NS

pulsar*invest

LARGEST COMPANIES

BRAZILIAN COMPANIES

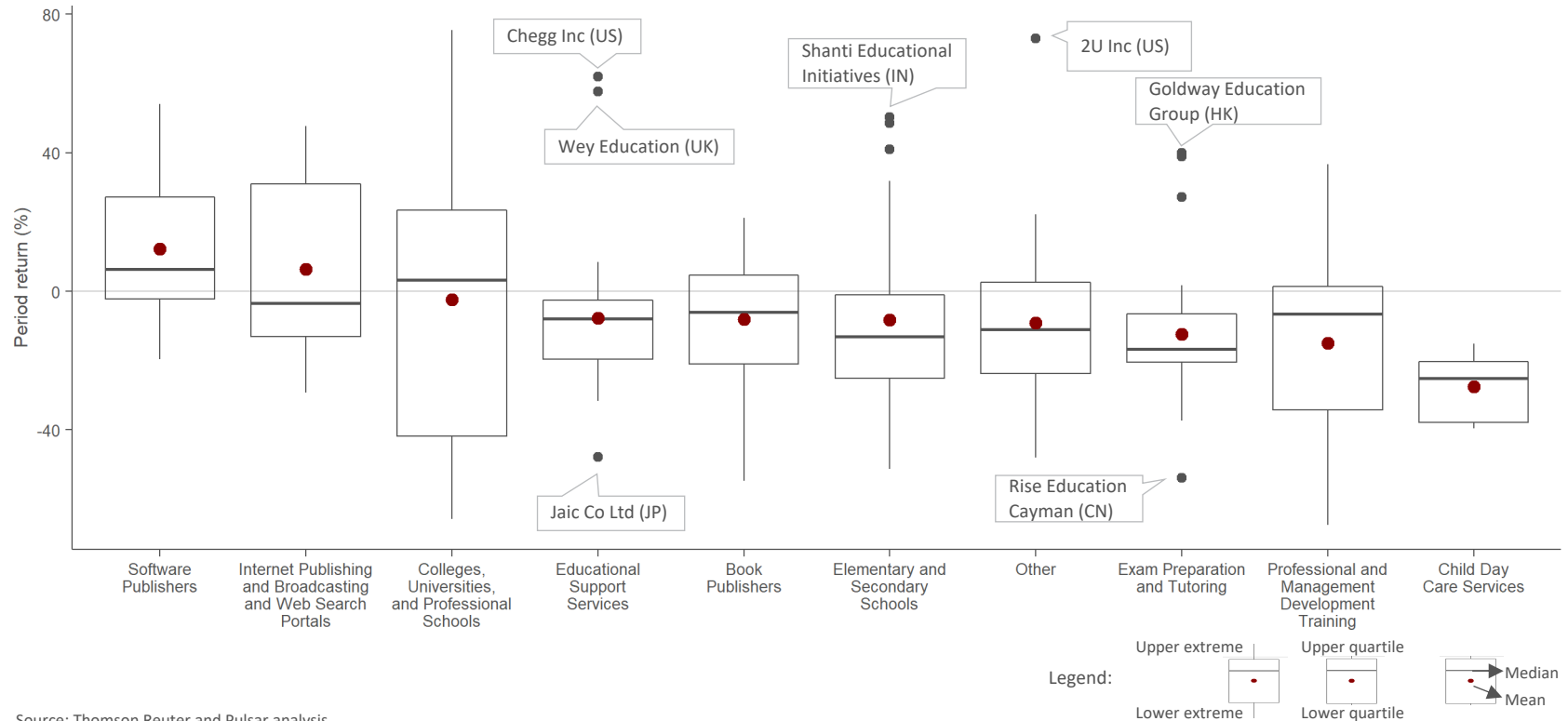
SELECTED COUNTRIES

SEGMENTS





The only segments with positive average returns in the period are technology-related



Source: Thomson Reuter and Pulsar analysis.

Notes: 205 companies (those with market cap above US\$10 mm as of May 15th, 2020) considered from 28 different countries. Segment classifications based on the North American Industry Classification System (NAICS). Market data from February 3rd, 2020 to May 15th, 2020.

Segments overview (1/2)



Segment	Listed companies	Total market cap (USD in billions)	Companies' tickers
Exam Preparation and Tutoring	25	33.5	REDU.OQ; TAL.N; KME.AX; 4714.T; NEW.N; 4645.T; 7030.T; 4735.T; 9769.T; 4705.T; 2179.T; 9696.T; 9778.T; 4720.T; 002638.SZ; 4745.T; 1082.HK; 4668.T; 9733.T; 9760.T; GSX.N; 068930.KQ; 133750.KQ; 1769.HK; 8160.HK
Colleges, Universities, and Professional Schools	37	31.6	RDH.AX; LAUR.OQ; COGN3.SA; SEER3.SA; YDUQ3.SA; ANIM3.SA; STI.PS; AKG.AX; SDOJ.J; GHC.N; STG.N; PRDO.OQ; ATGE.N; FEU.PS; MIND.KL; CEU.PS; SEDU.KL; 1969.HK; 1569.HK; STRA.OQ; 2779.HK; IPO.PS; 1525.HK; 1935.HK; 1756.HK; LOPE.OQ; 0382.HK; 1593.HK; 1890.HK; APEI.OQ; LINC.OQ; PROE.MC; 0839.HK; 1765.HK; 2001.HK; 1851.HK; ZVO.OQ
Elementary and Secondary Schools	28	30.4	RYB.N; COHJ.J; EVO.NZ; HLG.OQ; ADHJ.J; ZEEE.NS; BAH3.SA; 1317.HK; FEDU.N; BEDU.N; SISB.BK; 8437.TWO; 1598.HK; OVER.SI; ATVEXAb.ST; 1775.HK; 1758.HK; EDU.N; ACADE.ST; 600661.SS; 1565.HK; 1752.HK; 6169.HK; 1773.HK; AMBO.A; CARP.NS; LRN.N; SHAI.BO
Educational Support Services	27	24.0	7073.T; AFYA.OQ; AACG.OQ; ONE.N; VJTF.BO; ASPU.OQ; 2152.T; 300282.SZ; TRBG.L; 4319.T; 9795.T; 4718.T; 215200.KQ; 225330.KQ; DL.N; 6764.TWO; 4678.T; IEL.AX; 3PL.AX; ARCE.OQ; 3978.HK; 9783.T; 6068.HK; 002261.SZ; 6294.TWO; WEY.L; CHGG.N
Other	30	17.0	WIL.L; SIT.AX; MBA.TO; APTA.NS; 7074.T; RM.L; SAA1V.HE; ALMII.PA; 019680.KS; LTGL.L; 040420.KQ; NIIT.NS; PSTG.KL; ICT.AX; 300359.SZ; 5481.TWO; 1871.HK; 6187.T; RLSE.SI; 7075.T; 035290.KQ; 0667.HK; IBC.HM; UTI.N; ENG.ST; 0032.HK; 096240.KQ; 600825.SS; 1797.HK; TWOU.OQ
Book Publishers	27	14.7	PRS.MC; SCHA.NS; BLPU.L; PSON.L; LAGA.PA; NAVN.NS; SAHO.KL; SCHL.OQ; SADL.PK; LKL.NR; SE-ED.BK; 9471.NG; 601858.SS; 9470.T; NINEm.BK; 300654.SZ; CNGO.PK; EDUC.OQ; 000719.SZ; 601928.SS; 134060.KQ; GWOX.PK; 100220.KS; GYLDb.CO; 053290.KQ; 289010.KQ; 095720.KS
Software Publishers	12	7.9	LAIX.N; DESr.AT; RTE.AX; PS.OQ; NTX.MC; RST.N; 300235.SZ; KAHOOT-ME.OL; OLL.AX; DCBO.TO; DAO.N; RCL.AX

Source: Thomson Reuters.
Note: market cap as of May 15th, 2020.

Segments overview (2/2)



Segment	Listed companies	Total market cap (USD in billions)	Companies' tickers
Child Day Care Services	5	6.6	TNK.AX; BFAM.N; MIND.SI; 6065.T; GEM.AX
Professional and Management Development Training	8	1.0	8055.HK; GPX.N; 6200.T; 2464.T; 067280.KQ; EFEP.EUA; 8105.HK; TEDU.OQ
Internet Publishing and Broadcasting and Web Search Portals	6	0.5	JAN.AX; 060240.KQ; 6096.T; 072870.KQ; VRE.L; 3998.T



pulsar*invest

www.pulsar.com.br