

## Top Investment Themes

Thematic investing focuses on a top-down investment approach that identifies companies with exposure to a specific theme, be it macroeconomic, long-term structural trend or specific target market. This type of investing has become even more widespread with the propagation of theme-based exchange-traded funds (or ETFs). These funds have exposure to companies that benefit from either technological, demographic or environmental trends. Some examples of themes, and ones that we have published about in the past, include renewable energy, water scarcity, electric vehicles or cannabis. In this edition, we look at the top thematic US ETFs from [www.etf.com](http://www.etf.com) and categorize them into separate theme buckets. From here, we illustrate capital flows for these separate themes over a three month, one and three year period, highlight the most common companies held among the ETFs within a specific theme and identify the most relevant US ETF(s) (for a Canadian product alternative, please reach out to your financial advisor).

While we highlight individual companies, we remind readers that this should not be viewed as a buy list, but an opportunity to learn more about each company and how their products or services contribute to said theme. We also remind investors that many of the emerging themes are inherently volatile, making diversification an important consideration. Themes like new methods of transportation, cannabis or robotics and artificial intelligence are in the early stages of development and, as such, can be extremely volatile. A basket approach, such as buying the ETF, may be more appropriate than a single security investment depending on your tolerance for risk.



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Theme	Overview	Theme Flows			Related PCS Reports	Select US ETFs	Top 10 Common Global Equity Holdings
		3 Yr	1 Yr	3 Mth			
<b>Natural Resources</b>	This theme offers investors interested in exposure to natural resources such as metals, agriculture, forestry, energy among others. Exposure to companies that extract resources (upstream) sold to producers (downstream) may shield investors from the possibility of raw material inflation, which may negatively impact the supply chain as a result of higher natural resource prices.	▼	▼	▼	<p>Forestry: See the Forest For the Tree – Interfor Corporation; <i>June 1, 2015</i></p> <p>Oil and Margins: What's Crude Got to Do with It?; <i>April 20, 2016</i></p> <p>LNG: LNG, what's taking so long?; <i>November 17, 2016</i></p> <p>Carbon Tax: Impact of a Carbon Tax; <i>February 22, 2017</i></p> <p>Lithium: The "White Gold" Rush; <i>March 24, 2017</i></p> <p>LNG Beneficiaries: LNG, Yeah You Know Me; <i>November 9, 2018</i></p>	<p>FlexShares Morningstar Global Upstream Natural Resources Index Fund (GUNR)</p> <p>VanEck Vectors Agribusiness ETF (MOO)</p> <p>iShares Global Timber &amp; Forestry ETF (WOOD)</p> <p>Global X Uranium ETF (URA)</p>	<p>Cameco Corp. (CCO-CA)</p> <p>Deere &amp; Company (DE)</p> <p>Nutrien Ltd. (NTR-CA)</p> <p>Archer-Daniels-Midland Co. (ADM)</p> <p>Exxon Mobil Corp. (XOM)</p> <p>Chevron Corp. (CVX)</p> <p>Barrick Gold Corp. (ABX-CA)</p> <p>Corteva Inc (CTVA)</p> <p>UPM-Kymmene Oyj (UPM-FI)</p> <p>Bayer AG (BAYN-DE)</p>
<b>Infrastructure</b>	Infrastructure spending helps boost productivity by building better roads to efficiently transport goods to consumers and improves convenience by building better communication infrastructure such as 5G. Infrastructure companies can provide anything from transportation, communication or electricity services and can manage infrastructure assets such as airports, marine ports, pipelines and railways. Investing in this space offers investors exposure to essential economic assets with a long operational life that provides sustainable cash flows and have solid diversification benefits.	▲	▲	▲	<p>Data Centres: Data Centres; <i>December 1, 2017</i></p> <p>OBOR: One Belt, One Road; <i>April 6, 2018</i></p> <p>5G: The Fifth Generation; <i>June 7, 2019</i></p>	<p>iShares Global Infrastructure ETF (IGF)</p> <p>FlexShares STOXX Global Broad Infrastructure Index Fund (NFRA)</p>	<p>Enbridge Inc. (ENB-CA)</p> <p>TC Energy Corp. (TRP-CA)</p> <p>Transurban Group Ltd. (TCL-AU)</p> <p>American Tower Corp. (AMT)</p> <p>Crown Castle International Corp. (CCI)</p> <p>National Grid PLC (NG-GB)</p> <p>Kinder Morgan Inc. (KMI)</p> <p>Aena SME SA (AENA-ES)</p> <p>NextEra Energy Inc. (NEE)</p> <p>Iberdrola SA (IBE-ES)</p>
<b>Robotics and Artificial Intelligence (AI)</b>	This category allows investors to gain exposure to robotics, automation and AI, particularly to companies that are creating/innovating on technologies impacting our lives and the supply chain that brings us everything we consume. Everything we do today, be it at home or work, needs to be automated from the simplest to the most difficult tasks. In contrast to the first two themes, while this ones is still in its early stages, robotics, automation and AI is expected to be part of our future for good.	▲	▼	▼	<p>Disruptive Tech: Disruptive Technologies by Sector; <i>October 22, 2015</i></p> <p>AI: Artificial Intelligence; <i>July 7, 2017</i></p>	<p>Global X Robotics &amp; Artificial Intelligence ETF (BOTZ)</p>	<p>NVIDIA Corp. (NVDA)</p> <p>Tesla Inc. (TSLA)</p> <p>Intuitive Surgical Inc. (ISRG)</p> <p>Xilinx Inc. (XLNX)</p> <p>Stratasys Ltd. (SSYS)</p> <p>Keyence Corp. (6861)</p> <p>Fanuc Corp. (6954)</p> <p>ABB Ltd. (ABBN-CH)</p> <p>AeroVironment Inc. (AVAV)</p> <p>Mitsubishi Electric Corp. (6503)</p>

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<b>Clean Energy</b>	Governments have set renewable energy targets, consumers are installing solar panels at home and effectively living "off the grid" and renewable sources of energy are becoming more affordable to build and consume. Allocating capital to clean energy gives investors exposure to companies that are in some way participating in the production of energy from renewable sources such as wind, solar or biofuels and exposure to companies building these assets or providing services and technology to help store and use this energy.	▲	▲	▲	Solar: The Solar Generation – SunPower Corp.; <i>July 3, 2015</i> Ethanol: Sugar, Sugar, Honey, Honey, You're My Ethanol Girl.; <i>December 7, 2015</i> Energy storage: Full Charge; <i>February 7, 2020</i>	iShares Global Clean Energy ETF (ICLN) Invesco Solar ETF (TAN)	Enphase Energy Inc. (ENPH) Tesla Inc. (TSLA) SolarEdge Technologies Inc. (SEDG) Vestas Wind Systems A/S (VWS-DK) Sunrun Inc. (RUN) First Solar Inc. (FSLR) Ormat Technologies Inc. (ORA) Siemens Gamesa Renewable Energy SA (SGRE-ES) Pattern Energy Group Inc. (PEGI) Northland Power Inc. (NPI-CA)
<b>Water</b>	Water scarcity is a critical issue since only 1% of global water supply is readily available freshwater to use for drinking and irrigation. Investors interested in water conservation may be drawn to this theme, which focuses on investing in companies that purify and conserve water for use by homes and businesses. These companies may include utilities, water technology providers or desalination plant builders.	▲	▲	▲	Water: Thirst For Water; <i>May 20, 2016</i>	Invesco Water Resources ETF (PHO)	American Water Works Company Inc. (AWK) Xylem Inc. (XYL) Danaher Corp. (DHR) Essential Utilities Inc. (WTRG) Geberit AG (GEBN-CH) Ecolab Inc. (ECL) Veolia Environnement SA (VIE-FR) Pentair PLC (PNR) Roper Technologies Inc. (ROP) IDEX Corp. (IEX)
<b>Cannabis</b>	Cannabis is legal nationally in Uruguay and Canada, and many countries have expressed an interest in the medical, if not also the recreational, side of the business. Cannabis companies can either be growers, sell value-add marijuana products, develop medicines or provide auxiliary services to the cannabis industry.	▲	▲	▲	Marijuana: Getting Into the Weeds; <i>March 1, 2019</i>	ETFMG Alternative Harvest ETF (MJ)	GW Pharmaceuticals PLC Sponsored ADR (GWPH) Canopy Growth Corp. (WEED-CA) Aphria Inc. (APHA-CA) Cronos Group Inc. (CRON-CA) OrganiGram Holdings Inc. (OGI-CA) Aurora Cannabis Inc. (ACB-CA) Tilray Inc. (TLRY) MediPharm Labs Corp. (LABS-CA) Corbus Pharmaceuticals Holdings Inc. (CRBP) Innovative Industrial Properties (IIPR)

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<b>Emerging Markets</b>	Emerging markets (such as India, Mexico, Russia, Pakistan, and Saudi Arabia) have been a popular investment area since the onset of this century as these markets have been a symbol for economic growth, outperforming their developed market peers. Investors here are looking to participate in the growing middle class in these markets, and investing in companies that serve this segment of the population; or, simply participate in local economic growth by buying companies that serve that market through the products or services they offer.	▼	▼	▼	EM: Contagion or Opportunity?; <i>September 21, 2018</i> China: Canary in the Coal Mine; <i>January 11, 2019</i> China: Year of the Pig: Better Fortunes to Come?; <i>February 6, 2019</i>	Columbia Emerging Markets Consumer ETF (ECON)	Tencent Holdings Ltd. (700-HK) Airports of Thailand Public Co. Ltd. (AOT-TH) Alibaba Group Holding Ltd. Sponsored ADR (BABA) Transneft PJSC Pref. (TRNFP-RU) Ultrapar Participacoes SA Sponsored ADR (UGP) Hindustan Unilever Ltd. (500696-IN) China Gas Holdings Ltd. (384-HK) Tenaga Nasional Bhd (5347-MY) CCR SA (CCRO3-BR) Grupo Aeroportuario del Pacifico SAB de CV Sponsored ADR (PAC)
<b>Gaming and E-Sports</b>	This theme exposes investors to companies involved in the development of video games, e-sports (skilled video gamers playing competitively in front of physical or virtual audiences) and related hardware/software. Investors in this space expect the gaming industry and e-sports, to continue to grow through innovation and increasing mainstream popularity.	▲	▲	▲		VanEck Vectors Video Gaming and eSports ETF (ESPO)	Activision Blizzard Inc. (ATVI) Sea Ltd. (Singapore) Sponsored ADR (SE) NVIDIA Corp. (NVDA) Electronic Arts Inc. (EA) Ubisoft Entertainment SA (UBI-FR) Bilibili Inc. Sponsored ADR (BILI) NetEase Inc. Sponsored ADR (NTES) Take-Two Interactive Software Inc. (TTWO) Tencent Holdings Ltd. (700-HK) NEXON Co. Ltd. (3659)
<b>Blockchain Technology</b>	Blockchain technology was the main driver behind the bitcoin craze, but its uses are not limited to cryptocurrencies. Blockchain is a digital ledger that records transactions in a completely decentralized and cryptographically secure way, recording every transaction that happened on the network since its creation. This new architecture allows digital assets to be transferred between two parties in a secure and verifiable environment. Given that the architecture is an open source code, other parties can make changes for it to be applicable to other	▲	▼	▼		Amplify Transformational Data Sharing ETF (BLOK)	NVIDIA Corp. (NVDA) Microsoft Corp. (MSFT) International Business Machines Corp. (IBM) Taiwan Semiconductor Manufacturing Co. Ltd. Sponsored ADR (TSM) Accenture PLC (ACN) Square Inc. (SQ) Oracle Corp. (ORCL) Advanced Micro Devices Inc. (AMD) Intel Corp. (INTC)



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	digital assets such as legal, health care or mortgage documents. Investors looking to participate in the integration of blockchain technology within different industries may be interested in this theme.						Amazon.com Inc. (AMZN)
<b>Demographic Trends</b>	This theme gives investors the chance to gain exposure to companies benefitting from certain demographic trends such as increased spending by millennials, an ageing population and healthier lifestyles. Companies in this theme can include social media, food, clothing, travel, education, financial services, hospitals, senior housing, health care, pharmaceutical and medical device companies.	▲	▲	▲	<p>AMZN Acquires WFM: Cleanup in Aisle Four; <i>June 23, 2017</i></p> <p>Income: A Golden Age For Income; <i>November 9, 2017</i></p> <p>Social Media: The New Social; <i>September 7, 2018</i></p> <p>Millenials: Millennial Education and Advice FTW; <i>February 1, 2019</i></p>	<p>Global X Millennials Thematic ETF (MILN)</p> <p>The Long-Term Care ETF (OLD)</p> <p>Global X Health &amp; Wellness Thematic ETF (BFIT)</p>	<p>DexCom Inc. (DXCM)</p> <p>Chr. Hansen Holding A/S (CHR-DK)</p> <p>Welltower Inc. (WELL)</p> <p>Ventas Inc. (VTR)</p> <p>Hain Celestial Group Inc. (HAIN)</p> <p>Sprouts Farmers Markets Inc. (SFM)</p> <p>Healthpeak Properties Inc. (PEAK)</p> <p>Fresenius Medical Care AG &amp; Co. KGaA (FME-DE)</p> <p>NIKE Inc. (NKE)</p> <p>Lululemon Athletica Inc. (LULU)</p>
<b>New Methods of Transportation</b>	New methods of transportation for either passenger or freight such as electric vehicles (EVs), autonomous vehicles (AVs) or drones have been in the headlines for quite some time. This theme allows investors to gain exposure to companies that are either producing new ways of transportation or are along the value chain such as lithium miners, lithium-ion battery producers, smart vehicles or electric infrastructure businesses.	▲	▲	▼	<p>IoT: A Connected World; <i>February 2, 2018</i></p> <p>Space Tourism: Want to Travel to Space? "Planet" Now!; <i>June 1, 2018</i></p>	iShares Self-Driving EV and Tech ETF (IDRV)	<p>Tesla Inc. (TSLA)</p> <p>NVIDIA Corp. (NVDA)</p> <p>Alphabet Inc. (GOOGL)</p> <p>Intel Corp. (INTC)</p> <p>Toyota Motor Corp. (7203)</p> <p>Aptiv PLC (APTIV)</p> <p>Analog Devices Inc. (ADI)</p> <p>Daimler AG (DAI-DE)</p> <p>AeroVironment Inc. (AVAV)</p> <p>Boeing Company (BA)</p>

Source: www.etf.com, Morningstar, Raymond James Ltd.

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