

**MASTER OF SCIENCE IN**  
FINANCE

**MASTERS FINAL WORK**  
PROJECT

EQUITY RESEARCH:  
Xylem Inc.

ERNESTO SOLIS DE BARROS BARRETO

OCTOBER 2021

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**SUPERVISOR:**  
JOÃO CARVALHO DAS NEVES

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## Abstract

Xylem Inc. (“XYL”) engages in the design, manufacture, and servicing of engineered products and solutions for water and wastewater applications in the United States, Europe, the Asia Pacific, and internationally. Xylem’s business is split into three segments: Water Infrastructure, Applied Water, and Measurement & Control Solutions, with a 2020FY US\$8.75Bn in total assets and a market capitalization of US\$24.3Bn.

Xylem Inc. has a SELL recommendation, with a 2022YE of US\$96.4/share, translating into a downside potential of 28.6% or a potential annualized return of -15.5%, against the closing price of US\$135.1 on August 25<sup>th</sup>, 2021, with medium risk.

The current overvaluation of Xylem Inc’s shares is mainly due to i) a disconnect between its stock price, which has increased substantially over the past year, while its business is down massively, but also due to ii) inflationary market conditions.

Xylem has a business strategy that is focused on sustainability, which they believe is at the core of their competitive advantage and business model. The Measurement & Control Solutions (M&CS) segment, which became active only in 2016, focuses to strengthen innovation and technology to improve smart metering and efficiency, and consequently decrease non-revenue water. M&CS is expected to grow at a higher rate compared to Xylem’s other two business segments, reaching YoY 2022F growth of 10%.

In addition, Xylem has a solid financial position and has been consistently increasing dividends payments at an average rate of 13.1% over the past five years, even when net income has decreased YoY. The long-term target of \$3.5B in capital for deployment also makes credible the assumption of a buyback program or to continue to pay large dividend payouts in the near future.

Keywords: Xylem Inc; Industrials; Machinery; Water Infrastructure; Applied Water; Measurement & Control Solutions; Sustainability; Equity Research; Valuation; Mergers & Acquisitions

## Resumo

A Xylem Inc. (“XYL”) se dedica ao projeto, fabricação e manutenção de produtos e soluções de engenharia para aplicações de água e esgoto nos Estados Unidos, Europa, Ásia-Pacífico e internacionalmente. Os negócios da Xylem são divididos em três segmentos: Infraestrutura Hídrica, Água Aplicada e Soluções de Medição e Controle, com US\$ 8,75 bilhões no ano fiscal de 2020 e uma capitalização de mercado de US\$ 24,3 bilhões.

A Xylem Inc. tem uma recomendação de VENDA, com um ANO 2022 de US\$ 96,4/ação, traduzindo-se em um potencial negativo de 28,6% ou um retorno potencial anualizado de -15,5%, contra o preço de fechamento de US\$ 135,1 em 25 de agosto de 2021, com média risco.

A atual sobrevalorização das ações da Xylem Inc deve-se principalmente a i) uma desconexão entre o preço de suas ações, que aumentou substancialmente no ano passado, enquanto seus negócios caíram maciçamente, mas também devido a ii) condições inflacionárias do mercado.

A Xylem tem uma estratégia de negócios focada na sustentabilidade, que acredita estar no centro de sua vantagem competitiva e modelo de negócios. O segmento de Soluções de Medição e Controle (M&CS), que entrou em atividade apenas em 2016, tem como foco fortalecer a inovação e a tecnologia para melhorar a medição inteligente e a eficiência e, conseqüentemente, diminuir a água não faturada. Espera-se que a M&CS cresça a uma taxa maior em comparação com os outros dois segmentos de negócios da Xylem, atingindo um crescimento anual de 10% em 2022F.

Além disso, a Xylem tem uma posição financeira sólida e vem aumentando consistentemente os pagamentos de dividendos a uma taxa média de 13,1% nos últimos cinco anos, mesmo quando o lucro líquido diminuiu em relação ao ano anterior. A meta de longo prazo de US\$ 3,5 bilhões em capital para implantação também torna crível a suposição de um programa de recompra ou de continuar a pagar grandes dividendos em um futuro próximo.

Palavras-chave: Xylem Inc; Industriais; Máquinas; Infraestrutura Hídrica; Água Aplicada; Soluções de Medição e Controle; Sustentabilidade; Pesquisa de Ações; Avaliação; Fusões e Aquisições

# Acknowledgements

I would like to thank,

My parents, Priscila and Marcelo

My brother and sister, Lorenzo and Sofia

My grandmother, Blanca

To Professor João Carvalho das Neves, for all the important comments and availability.

# Index

1. Research Snapshot	1
2. Business Description	2
The Company	2
Mergers and Acquisitions	2
Financial highlights	2
Xylem's business segments	2
Strategy	7
Shareholder structure	8
Dividend policy	8
3. Management and Corporate Governance	9
The Board of Directors	9
The Executive Commission	9
Sustainability and ESG metrics	10
4. Industry Overview and Competitive Positioning	11
Industry	11
Key Drivers of Industry Profitability	11
Business segment competitors	13
Peer Identification (SARD)	14
Peer Identification (Industry Classification)	14
SWOT Analysis	14
Porter's 5 Forces	15
5. Investment Summary	18
Valuation methods	15
Investment risks	15
6. Valuation	19
WACC Method – Free Cash Flow to Firm	19
Adjusted Present Value (APV) Method	20
Market Based Valuation	20
7. Financial Analysis	21
Need for improved operational efficiency post-COVID-19	21
Stable capital structure	21
High debt level with well covered debt and interest payments	21
Need for improved operational profitability post-COVID-19	21
Solid cash generation	21
8. Investment Risks	22
Macroeconomic and Industry risks	22
Business and operational risks	22
Legal and Regulatory risks	23



## List of Figures

Figure 1A – 2022YE XYL PT	1
Figure 1B – 2-year weekly XYL stock vs. PT	1
Figure 2 – Financial highlights	1
Figure 3 – Shareholder return policy	1
Figure 4 – Global freshwater withdrawals since 1900, measured in cubic meters (m3)	1
Figure 5 - 52-week XYL return vs SPY	1
Figure 6 – XYL return vs SPY, since Oct.2011	2
Figure 7 – Xylem 2020FY major figures	2
Figure 8 – Xylem latest major M&A operations	2
Figure 9a – Water Infrastructure Revenue p/Market Application (2020FY)	2
Figure 9b – Water Infrastructure Segment YoY growth from 2016 to 2020FY	3
Figure 9c – WI's Revenue from 2015 to 2020FY	3
Figure 10a – Applied Water Revenue p/ Market Application (2020FY)	3
Figure 10b – Applied Water Segment YoY growth from 2016 to 2020FY	4
Figure 10c – Applied Water Segment Revenue from 2015 to 2020FY	4
Figure 11a – Measurement & Control Solutions Segment Revenue from 2015 to 2020FY	4
Figure 11b – M&CS Revenue per Market Application (2020FY)	4
Figure 11c – Measurement & Control Solutions Segment YoY growth from 2018 to 2020FY	5
Figure 12 – Xylem Inc's 2020 Revenue Distribution per Market Application	5
Figure 13 – Xylem Inc's 2020 total Revenue growth over the past 10 years	5
Figure 14 – Xylem Inc's Operating Income Margin by Segment from 2015 to 2020	5
Figure 15 – Xylem Inc's Cost of Revenue Growth from 2016 to 2020FY	6
Figure 16 – Xylem Inc's Business Strategy	6
Figure 17 – Xylem Inc's Revenue Distribution per Geographic Location	6
Figure 18 – Xylem Inc's Institutional Ownership	7
Figure 19 - Dividend per share (DPS) and Payout ratio	7
Figure 20 – Mr. Patrick Decker profile	8
Figure 21 – Xylem' CEO Total Direct Compensation Mix	9
Figure 22 – Xylem's CEO Compensation Benchmarking	9
Figure 23 – Xylem's CEO Compensation vs Earnings	9
Figure 24 – ISS Governance Pillars and Overall QualityScore	9
Figure 25 – XYL Sustainalytics ESG Risk rating compared to Machinery Industry peers	10
Figure 26 – Worldwide Water and wastewater treatment market size worldwide	11
Figure 27 – World GDP real growth (Annual percent change)	11
Figure 28 – Population Growth in the next century	11
Figure 29 – The Need for Water Infrastructure	12
Figure 30 – Forecasted Global Water Demand by 2030	12

Figure 31 – Water Stress by Country, 2040	12
Figure 32 – Growth rates of urban agglomerations by size class, 2018-2030 projections	12
Figure 33 – US Public Spending in Water Transportation and Infrastructure	13
Figure 34 – R&D Expenses (2015-2021F)	14
Figure 35 – XYL SWOT analysis	14
Figure 36 – Forces Driving Competition in the Industry	15
Figure 37 - XYL 2022YE PT (US\$/share)	18
Figure 38 - Valuation methods vs Current Price (US\$/share)	18
Figure 39 – U.S annual inflation rate (%)	18
Figure 40 - 2022YE PT with FCFF DCF (US\$/share)	19
Figure 41 – North America AMI Adoption Rates	19
Figure 42 – 10Y US yield	19
Figure 43 - 2022YE PT with APV (US\$/share)	20
Figure 44 - Market-Based Valuation, SARD approach (US\$/share)	20
Figure 45 - Market-Based Valuation, Industry Classification approach (US\$/share)	20
Figure 46 – Business Margins	21
Figure 47 – Capital structure ratios	21
Figure 48 – Debt to Equity	21
Figure 49 – Solvency indicators	21
Figure 50 – Risk Matrix	22
Figure 51 - Steel futures 2021 return (%)	22
Figure 52 – Freightos Baltic Index (FBX) Global Container Index, 2021 return (US\$)	22
Figure 53 – Natural Gas futures 2021 return (%)	22
Figure 54 - Brent Oil futures 2021 return (%)	22
Figure 55 - Investment recommendation system - Medium Risk	24
Figure 56 – Sensitivity Analysis	
Figure 57 – Monte Carlo simulation output	24

## List of Appendices

Appendix 1: Xylem Inc. business segment brands	25
Appendix 2: Ten largest Xylem Inc's shareholders	25
Appendix 3: U.S Institutional Investors XYL Ownership Change	26
Appendix 4: Number of companies in the corporate group per country	26
Appendix 5: Xylem Inc's Major Insider Trading Volume	26
Appendix 6: XYL 2025 Sustainability Goals	27
Appendix 7: Global Population and Water Withdrawal over the past century	27
Appendix 8: Xylem Inc's Competitors by Business Segment	27
Appendix 9: Income Statement	28
Appendix 10: Statement of Financial Position	28
Appendix 11: Cash Flow Statement	29
Appendix 12: Common-size Income Statement	29
Appendix 13: Common-size Statement of Financial Position	30
Appendix 14: Common-size Cash Flow Statement	30
Appendix 15: Key Financial Ratios	31
Appendix 16: Income Statement Forecast Assumptions	31
Appendix 17: Income Statement Forecast extra comments	32
Appendix 18: Financial Position Forecast Assumptions	32
Appendix 19: WACC Estimation – Current Scenario used in DCF	33
Appendix 20: WACC Estimation – Sticky Inflation Scenario	33
Appendix 21: WACC Estimation - Transitory Inflation Scenario	33
Appendix 22: GDP Growth and Stable Growth Model	34
Appendix 23: WACC Method	34
Appendix 24: Normalized FCFF for the terminal period	34
Appendix 25: Adjusted Present Value	35
Appendix 26: SARD Approach Peers	36
Appendix 27: Industry Classification Peers	37
Appendix 28: Sensitivity and Scenario Analysis – Current Scenario	38
Appendix 29: Sensitivity and Scenario Analysis – Sticky Inflation Scenario and no Growth	38
Appendix 30: Sensitivity and Scenario Analysis – Transitory Inflation and Larger Growth	38

## Abbreviations

A	AW	Applied Water business segment
	APV	Adjusted Present Value
B	Bn	Billion(s) (as in "US\$Bn")
	bps	Basis points
C	CAGR	Compound Annual Growth Rate
	CAPEX	Capital expenditure
	CAPM	Capital Asset Pricing Model
	CFO	Cash flow from operating activities
	CRP	Country Risk Premium
D	DCF	Discounted Cash Flow
E	EBIT	Earnings Before Interest and Taxes
	EBITDA	Earnings Before Interest, Taxes, Depreciation and Amortization
	ERP	Equity Risk Premium
	ESG	Environmental, Social, and Governance
	EV	Electric vehicle
F	F	Forecast (as in 2021F)
	FCFF	Free Cash Flow to the Firm
	FY	Fiscal Year (as in 2020FY)
G	GDP	Gross Domestic Product
I	IMF	International Monetary Fund
M	M	Million(s) (as in "US\$M")
	M&A	Mergers and Acquisitions
	M&CS	Measurement & Control Solutions business segment
N	NCWC	Non-Cash Working Capital
	NRW	Non-Revenue Water
O	OECD	Organization for Economic Co-operation and Development
P	PE	Price to Earnings Ratio
	PT	Price Target
R	R&D	Research & Development
	ROA	Return on Assets
	ROE	Return on Equity
	ROIC	Return on Capital Invested
	ROCE	Return on Capital Employed
	RF	Risk Free Rate
T	t	Corporate tax rate
U	US	United States of America
W	WACC	Weight Average Cost of Capital
	WI	Water Infrastructure Business Segment
X	XYL	Xylem Inc.
Y	YoY	Year-Over-Year

## 1. Research Snapshot

### Xylem Inc.: A case of disconnect between stock price and business performance.

We issue a **SELL recommendation** for Xylem Inc. ("XYL") with a **2022YE PT of US\$96.4/share**, using a DCF model, implying a **28.6% downside potential** from August 25<sup>th</sup>, 2021 closing price of US\$135.1, with **medium risk** (Figure 1).

XYL is the world's largest provider of water and wastewater treatment solutions worldwide and is an established player for each of its business segments. In 2020FY, XYL saw a **significant negative YoY revenue growth and YoY operating margins growth within the three segments it operates as a result of the COVID-19 pandemic**. Moving forward into 2021F, XYL management expects business to recover and return to pre-pandemic levels by focusing on **sustainability as its core strategy**, which they believe is at the center of their competitive advantage and business model.

### Good dividend due to strong cash generation, but not sustainable

Even with the COVID-19 pandemic severely affecting overall business operations, XYL paid **US\$1.04 dividend p/share on 2020FY, a 74% payout ratio and historical maximum**, from US\$0.97 p/share, or 43% in payout ratio, on FY2019. This is not considered sustainable when comparing to normal historical levels, so the **probability of a dividend cut is high**. XYL has a stable financial position and strong cash generation, **CFO 2020-2025F CAGR +5.3%, from US\$824M to US\$1,069M in 2023F** (Figure 2) – making credible a **dividend payout ratio of 43%**, forecasted using the 2015-2020FY average payout ratio, reflecting a decrease to pre-pandemic payout ratios (Figure 3).

### Increasing water demand outlook

Although with the global economy slowdown due to the COVID-19 pandemic, it is expected that water demand will substantially grow in the long run. Annual water consumption increased from 1.2Tn m<sup>3</sup> in 1950 to 4Tn m<sup>3</sup> in 2014. Water demand should continue to grow at a similar rate, and **global water consumption should increase to 6Tn m<sup>3</sup> by 2050**, with a 2014-2050 CAGR +1.2% (Figure 4).

Relatively to XYL business segments, the **Water and Wastewater Treatment Equipment market size** is projected to be worth **US\$88.5Bn by 2028**, registering a +5.8% CAGR 2021-2028F<sup>1</sup>. The market was valued at US\$63.4Bn in 2020. **Global smart water metering market** is projected to reach **US\$4.3Bn by 2027** from an estimated US\$834.3M in 2020, 2020-2027F CAGR +8.5%<sup>2</sup>.

### Disconnect between XYL stock price and its business performance

XYL stock price has increased 67.4% in the past 52 weeks compared to a 29.2% increase in the S&P500, **outperforming the market by 38.2%** (Figure 5).

**XYL saw a 2020FY -7.1% YoY revenue growth, -10.6% YoY gross profit growth, net income and EPS collapsed by -36.7% and -36.8%**, respectively. Debt also increased by about US\$1Bn, causing total debt to total capital to be equal to 51%. Therefore, with a whopping drop in sales, profit and EPS whilst at the same time increased risk (debt), **XYL stock price outperformance seems to not be tied to its fundamentals**.

Figure 1A – 2022YE XYL PT

<b>Price Target</b>	<b>US\$96.4</b>
Current Price (Aug.25)	US\$135.1
Downside	-28.6%
Annualized Return	-15.50%
Risk Uncertainty	<b>Medium Risk</b>
Bloomberg/Reuters Code	XYL:US/XYL:N
Market Cap (US\$)	24.34bN
Free Float (%)	98.9%
No. shares outstanding (#M)	180.1
YTD performance	35.5%
52-week range (US\$)	99.7 - 135.1

Figure 1B – 2-year weekly XYL stock price vs. PT



Source: Author Analysis

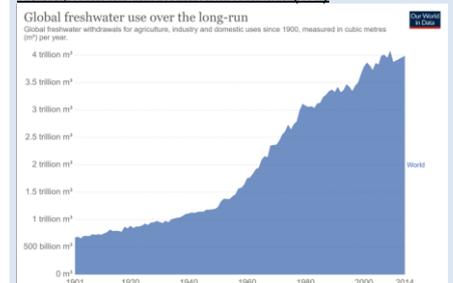
Figure 2 – Financial highlights

	2020	2021F	2025F
Revenues (US\$Bn)	4.876	5.282	6.427
EBITDA (US\$M)	613	880	1340
EBITDA Mg. (%)	12.6%	16.7%	20.8%
Net Profit (US\$M)	254	453	767
NPM (%)	5.2%	8.6%	11.9%
CFO (US\$M)	824	701	1069
CAPEX (US\$M)	183	220	186
Debt Ratio (%)	66%	64%	61%
Debt/EBITDA (x)	5.0	3.3	2.5
Int. Coverage (x)	4.8	7.9	7.2
ROIC (%)	6.9%	10.7%	17.4%
ROCE (%)	5.3%	9.2%	12.2%
ROE (%)	8.6%	14.3%	18.8%

Figure 3 – Shareholder return policy

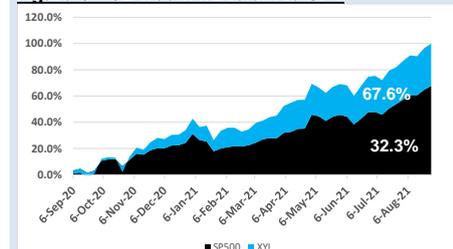
	2020	2021F	2025F
Dividend (US\$/sh.)	1.0	1.1	1.9
Payout ratio (%)	74.0	44.1	43.0
Div. yield (%)	1.0	1.1	1.8

Figure 4 – Global freshwater withdrawals since 1900, measured in cubic meters (m<sup>3</sup>)



Source: Global/International Geosphere Biosphere Program (IGBP)

Figure 5 – 52-week XYL return vs SPY



Source: Yahoo Finance

<sup>1</sup> Water and Wastewater Treatment Equipment Market Information by Treatment Type (Membrane Separation, Disinfection, Sludge treatment and Others), By Application (Municipal and Industrial) And Region - Forecast To 2028 – Market Research Future, October, 2020.

<sup>2</sup> Global Smart Water Meters Industry – Report Linker, May 2021

## 2. Business Description

### The Company

Xylem Inc. (“XYL”) is a **water technology company** that operates in more than **150 countries** through a number of **market-leading product brands** (Appendix 4). It was formed from ITT Corporation’s spinoff of several business segments, namely the Water & Wastewater, Residential & Commercial Water, Analytics and Flow Control businesses, on October 2011. XYL sells its products through a distribution network consisting of direct sales force and independent channel partners. XYL is also recognized as a **leading global water technology provider**, enabling customers to transport, treat, test and efficiently use water in multiple industries. It has approximately **16,700 employees worldwide** and a **market capitalization of US\$24.34Bn** (Figure 7). The company’s stock price considerably increased over the past 10 years, outperforming the SP500 index by more than 100% (Figure 6).

XYL is listed on the New York Stock Exchange (NYSE) with ticker XYL, but also in the London Stock Exchange (LSE), Deutsche Börse (DB), Xetra (XTRA), Ibovespa (BOVESPA), and the Mexican Stock Exchange (BMV).

### Mergers and Acquisitions

XYL has made some **major M&A operations**. It has acquired 15 companies, including five in the last five years. XYL **largest acquisition to date** was in 2016, when it acquired 100% of **Sensus Metering Systems**, a North Carolina-based energy management devices manufacturer, for **US\$1.7Bn**. XYL **second largest acquisition** was in 2018, when they acquired 100% of **Pure Technologies**, Alberta-based infrastructure management software developer, for **US\$415M**.

Other important acquisitions include PIMS Group, a UK-based submersible pumps manufacturer, for an estimated US\$57M; MJK Automation A/S, a Denmark-based water, sewage and control equipment manufacturer costing around US\$12.3M; and Heartland Pump Rental & Sales Inc., Illinois-based industrial pumps rental and leasing company for an approximate consideration of US\$29M (Figure 8).

### Financial highlights

XYL reported **revenue of US\$4.88Bn for 2020FY**, a decrease of **US\$373 million, or 7.1%**, from US\$5.25Bn reported in 2019. Moreover, it reached an **EBITDA value of US\$613.0M** and a **net income of US\$254.0M** for the same year (See Appendix 9).

### Xylem’s business segments

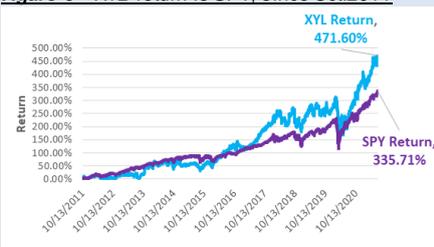
XYL business is split into three segments: **Water Infrastructure, Applied Water, and Measurement & Control Solutions (M&CS)**.

#### Water Infrastructure (WI)

WI offers two market applications: (i) Transport; (ii) Treatment of Water.

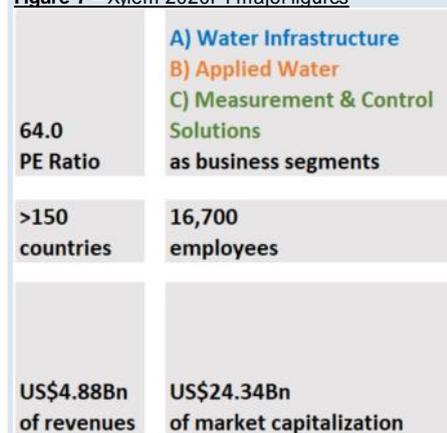
**Transport** offers equipment’s and services involved in **the efficient and safe transport of water** from sources such as rivers, aquifers, lake and oceans to treatment facilities, and then to users. Moreover, the Transport application also works with dewatering pumps equipment that helps to provide safe draining of groundwater and surface water. **The Transport market application is the largest revenue application stream for XYL, composed of 34% of its total revenue in 2020FY, with US\$1.68Bn (+0.7% CAGR 2015-2020FY)**. This is also accordingly to previous years, in 2019 and 2018, the Transport market application corresponded to 34% of XYL total revenue. **Transport accounts for 81% of revenues in this**

Figure 6 – XYL return vs SPY, since Oct.2011



Source: Author Analysis

Figure 7 – Xylem 2020FY major figures



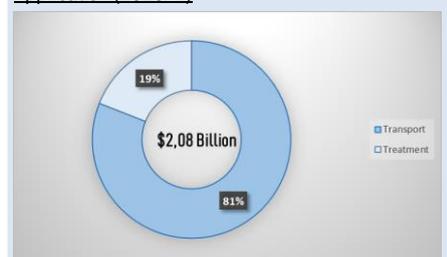
Source: XYL 10K and Yahoo Finance

Figure 8 – Xylem latest major M&A operations

Year	Acquisition	Value
2012	MJK Automation A/S	US\$13M
2012	Heartland Pump Rental & Sales Inc.	US\$29M
2013	PIMS Group	US\$57M
2013	MultiTrode Pty Ltd	US\$26M
2013	Conrad Pollmann Pumpenbau GmbH	US\$3M
2016	Tideland Signal Corporation	n/d
2016	Sensus USA Inc.	US\$1.7Bn
2017	Pure Technologies	US\$415M
2018	EmNet LLC	n/d

Source: Bloomberg

Figure 9a: Water Infrastructure Revenue p/Market Application (2020FY)



Source: XYL 2020 10K

segment (Figure 9a).

**Treatment of Water** includes equipment and services that treat water consumption and wastewater. XYL offers three main treatment solutions, biological treatment systems, filtration, and disinfection systems. Biological treatment systems offer treatment and mixing of solids in wastewater plants. Filtration provides clarifiers to clean both wastewater and water. Lastly, disinfection systems treat industrial process water, as well as both utility and public water and wastewater. **Treatment of Water accounted for 8% of XYL total revenue on 2020FY, with US\$400M (+4.8% CAGR 2015-2020FY).**

WI's major products are sold under the **Flygt, Godwin, Wedeco, Sanitaire, and Leopold** names (Appendix 1A). The end users are in two primary markets: **utility** and **industrial**. The utility market is the one with public and private entities that support water, wastewater, and storm water networks. The industrial market is where customers require similar water and wastewater infrastructure networks to support different industrial operations.

**WI's YoY revenue decreased US\$98M on 2020FY, or 4.5%,** compared to US\$2.18Bn in 2019 (Figure 9b). From this decline, US\$89M was due to organic weakness in the industrial end market, particularly in North America and the emerging markets being **heavily hit by the COVID-19 pandemic** during the year. In the utility end market, this organic decline revenue was also impacted negatively by the COVID-19 pandemic, particularly in the U.S, but this was partially offset by organic growth in Europe. The Transport application was what caused the most impact on this organic decline, where market conditions continued to deteriorate in 2020, such as dewatering applications, construction, mining, oil and gas. However, this decline in the Transport application was partially offset by a modest organic growth in the Treatment of Water application, **driven primarily by the emerging markets.**

Prior to 2017, the **Test market application was included in WI.** From 2016 to 2018, there was substantial growth in WI, whereas this **growth could not be sustained over the past 2 years** (Figure 9c). XYL estimates that the market size of WI market is US\$20Bn, retaining a **10.5% market share with US\$2.1Bn in sales** (CAGR +1.4% 2015-2020FY).

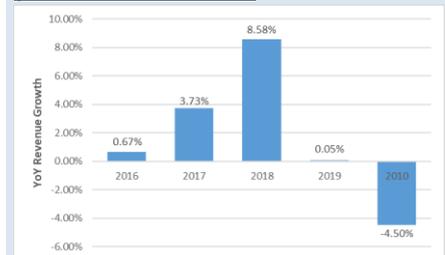
### Applied Water (AW)

**AW two primary market applications: (i) Residential & Commercial Building Services; (ii) Industrial Water.**

The Residential & Commercial Building Services market application revenue is composed of approximately **70% of Commercial end market sales** and approximately **30% of Residential end market sales.** Examples of these end markets are offices, hospitals, hotels, schools, restaurants, malls, residential homes and commercial buildings.

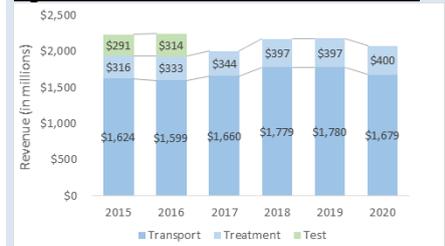
One the applications is in Heating, Ventilation, and Air Conditioning (**HVAC technology**), offering products such as pumps and valves that are used for water-driven heating and cooling systems. A second application is **wastewater removal** with sewage pumps. The third application here is the **supply of clean and potable water** for drinking and hygiene purposes. **Residential & Commercial Building Services comprised 56% of the revenues in this segment** (Figure 10a), equal

**Figure 9b - Water Infrastructure Segment YoY growth from 2016 to 2020FY**



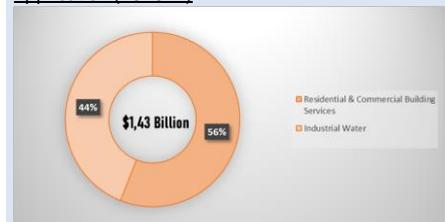
Source: XYL 2020 10K

**Figure 9c – WI's Revenue from 2015 to 2020FY**



Source: XYL 2020 10K

**Figure 10a - Applied Water Revenue p/Market Application (2020FY)**



Source: XYL 2020 10K

to **US\$804M** (+0.8% CAGR 2015-2020FY).

The Industrial Water market application supplies pumps to **source water** or for **water pressure purposes**, for manufacturing facilities that need to cool down machines for example. It also provides heat exchangers for power generation plants. **The Industrial Water application generated US\$630M on 2020FY** (+2.3% CAGR 2015-2020FY).

AW's end-users are Original Equipment Manufacturers (OEMs), car washes, food and beverage companies, clothing manufacturers, machine shops, chemical manufacturers, exploration and production firms, and developers and managers of industrial facilities. Its major products are sold under the **Goulds Water Technology, Bell & Gossett, A-C Fire Pump, Standard Xchange, Lowara, Jabsco, and Flojet** brand names (Appendix 1B). **For 2020FY, the Applied Water segment generated US\$1.43Bn, 30% of XYL total revenue** (+1.4% CAGR 2015-2020FY).

**AW's YoY revenue decreased US\$107M**, or 6.9%, compared to 2019 (Figure 10b). This weakness was present across all end markets and applications for this segment, with Industrial Water and Commercial Buildings services declining the most. These declines were primarily driven by the **COVID-19 pandemic**, as restricted activities slowed down the markets served, particularly in the U.S, emerging markets and Western Europe.

Over the past 2 years there was little to negative growth within this segment (Figure 10c). XYL estimates that the market size of the Applied Water market is US\$20Bn. XYL retains around **7% market share with US\$1.4Bn in sales**.

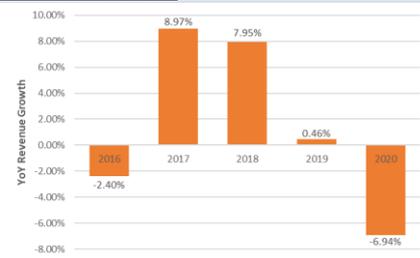
### Measurement & Control Solutions (M&CS)

**M&CS segment has four major market applications: (i) Water; (ii) Energy; (iii) (iv) Test and (v) Software as a Service.**

It became an **active business segment for XYL in 2016** and it provides **smart metering**, networked communications devices, as well as critical infrastructure technologies that allow customers to use their distribution networks for the delivery, monitoring, and control of water. It also offers **software and services**, including cloud-based analytics, remote monitoring, data management, leak detection, and pressure monitoring solutions. Automation, data management and decision support are at the core of the technology in this segment. These products enable their clients to automate and optimize meter reading, bill customers, detect and enable rapid response to changing and dangerous situations, and monitor flow rates.

M&CS sells its products under the **Pure, Sensus, Smith Blair, Visenti, WTW, and YSI** brand names (Appendix 1C). The Sensus meters brand is a **key player** in the **smart metering** sector and **leak detection** sector. These services provide tangible savings through improved meter accuracy, reduced theft and identification of leaks. Over the recent years, this has been attracting more attention as aging infrastructure and increasing regulations cause pressure on operating budgets. In short, this segment provides customers to remotely and continuously monitor their water usage.

**Figure 10b - Applied Water Segment YoY growth from 2016 to 2020FY**



Source: XYL 2020 10K

**Figure 10c - Applied Water Segment Revenue from 2015 to 2020FY**



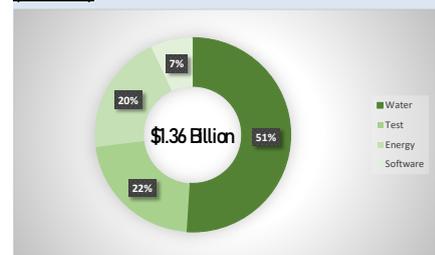
Source: XYL 2020 10K

**Figure 11a - Measurement & Control Solutions Segment Revenue from 2015 to 2020FY**



Source: XYL 2020 10K

**Figure 11b - M&CS Revenue per Market Application (2020FY)**



Source: XYL 2020 10K

**M&CS US\$1.36Bn 2020FY revenue, represented 28% of total XYL revenue (CAGR +2.1% 2017-2020).** M&CS revenue increased substantially from 2016 to 2019, from US\$132M to US\$1,36Bn mostly due to its M&A operations, such as Sensus and Pure (Figure 11a).

**Water was the market application that generated the most revenue within M&CS, with US\$689M (+6.4% CAGR 2017-2020FY),** that is 51% of the revenue (Figure 11b). Followed by Test market application with US\$306M or 22% (1.2% CAGR 2017-2020FY), then Energy with US\$276M or 20% (-2.2% CAGR 2017-2020FY) and finally Software as a Service with US\$92M or 7% (-8.0% CAGR 2017-2020FY). It is estimated that XYL has around **7% market share, in a US\$20Bn market.**

**M&CS YoY revenue decreased US\$168M, or 11%, YoY (Figure 11c).** Organic decline was driven by a weak utility end market primarily in the U.S, Middle East and India. This decline was also driven to a lesser extent by weakness in the industrial end market. Again, these organic revenues were significantly impacted by **COVID-19 pandemic, but also do to project timing.** Examples of project delays and lapped project deployments were in the water, energy and test applications primarily in the U.S and Middle East markets. The software as a service (SaaS) application also declined in revenue compared to the prior year, primarily in the U.S market.

**Transport and Residential & Commercial Building Services** market applications are key drivers of XYL revenue. These two applications accounted for **51% of XYL total 2020FY revenue (Figure 12).** Water, and then Industrial Water market applications follow as key drivers with 14% and 13%, respectively.

**In 2020FY, XYL generated US\$4.88Bn in total revenues, a YoY decrease of US\$373M, or 7.1%.** This decline reflects the significantly lower volumes, primarily in the U.S, Middle East and Latin American markets. Another factor that negatively impacted the revenue by US\$7M, was foreign currency translation, due to the weakening in value of multiple currencies against the U.S dollar. **Total YoY revenue growth has been decelerating since 2017 (Figure 13).**

**2020FY adjusted operating income was equal to US\$727M representing -27.8% YoY growth.** Since 2018, total operating income margin has been consistently decreasing, from 12.6% to 7.5%. Unfavorable volume, significant negative impact from the COVID-19 pandemic, cost inflation, and increased spending on strategic investments contributed mostly for this decrease in adjusted operating income.

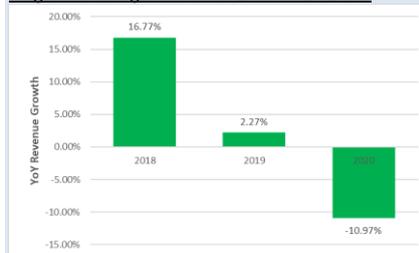
The situation is the same for all XYL three business segments (Figure 14).

**2020FY WI's operating income decreased US\$50M, or -12.6% YoY. Operating margin decreased from 16.8% to 15.3% YoY.**

**2020FY AW's operating income decreased US\$40M, or -15.7% YoY. Operating margin decreased from 15.6% to 14.3% YoY.**

**2020FY M&CS's operating loss increased US\$39M, or 58.2%, YoY. Operating margin decreased from -4.4% to -7.8% YoY.**

**Figure 11c - Measurement & Control Solutions Segment YoY growth from 2018 to 2020FY**



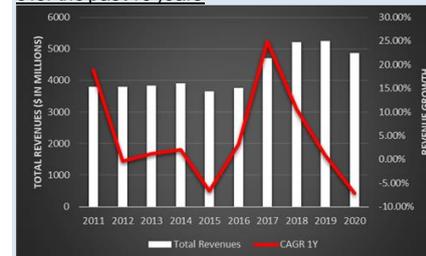
Source: XYL 2020 10K

**Figure 12 - Xylem Inc's 2020 Revenue Distribution per Market Application**



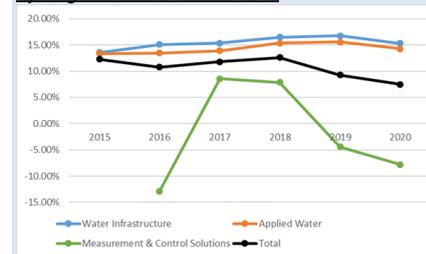
Source: XYL 2020 10K

**Figure 13 - Xylem Inc's 2020 total Revenue growth over the past 10 years**



Source: XYL 2020 10K

**Figure 14 - Xylem Inc's Operating Income Margin by Segment from 2015 to 2020**



Source: XYL 2020 10K

In 2020FY, **cost of revenue declined 5% YoY, SG&A expenses were down 1.3% YoY and R&D expenses down by 2% YoY**, this being not enough to cover the yearly losses. **Interest expense increased 15% YoY**, from US\$67M to US\$77M. This increase was primarily due to the **issuance of Xylem's Green Bond** and due to impact of changes in the tax law in Switzerland in 2019. XYL also benefited from a **decrease of 61% from the year-ago period in goodwill impairment charge**, this was down from US\$148M in 2019 to US\$58M.

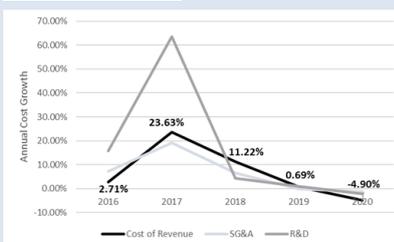
Since total revenue was down by 7.1%, **the decrease in operating costs of 4.9% was not enough to react to the lower volume of sales** (Figure 15), showing that management was not quickly enough to react to changing market conditions.

## Strategy

Xylem's business strategy consists of **five strategic pillars revolved around sustainability, which they believe is at the core of their competitive advantage and business model** (Figure 16):

- **Drive Customer Success.** In order to meet customer demands and needs, XYL provides a digital platform so that their clients can discover, select, get price quotes, and purchase their products and services. This is with the objective to enhance their customer base experience. So that customers can get the most out of XYL products, XYL focuses on providing services that ensure uptime, efficiency and resilience by building leadership positions in their services and solutions;
- **Growth in Emerging Markets.** Emergent markets such as in China, India, Africa and the Middle East offer growth and expansion opportunity. 75% of global population is located in emerging markets, where 80% of wastewater is untreated and around 785M people are without access to safe drinking water. However, this **market penetration into emerging markets has still not been accomplished in the recent past** (Figure 17). The percentage of the total revenue coming from International Places has actually declined over the last 5 years. European countries and the US accounted for 76% of the revenue stream in 2020FY.
- **Strengthen Innovation and Technology** strategic pillar seeks on building and enabling infrastructure such as hardware, networks and software applications for digital growth. With this, XYL expects to further strengthen their traditional core product offerings and deliver strategic with digital solutions & services.
- **Building a Culture of Continuous Improvement.** XYL is committed on eliminating business complexity by streamlining internal bureaucracy and expanding standard business platforms and processes. Moreover, another focus of this specific strategic pillar is to remove unnecessary costs across the value chain, in order to free up resources for growth. Building resilience and sustainability into the supply chain is also essential in XYL view, so that they are able to protect the ability to serve their clients.
- **Cultivate Leadership and Talent Development** This serves to build leadership for the future of the company. Incentives such as share-based compensation and organizational structure are examples of approaches that XYL uses to maximize employee value creation.

**Figure 15 - Xylem Inc's Cost of Revenue Growth from 2016 to 2020FY**



Source: XYL 2020 10K

**Figure 16 - Xylem Inc's Business Strategy**



Source: XYL 2020 10K

**Figure 17 - Xylem Inc's Revenue Distribution per Geographic Location over the last 5 years**



Source: XYL 2020 10K

## Shareholder structure

With a **free float of 98.9%**, XYL has **1,109 institutional holders owning 161.5M shares**, which is 90% of the total shares outstanding, approximately 180.1M. Institutions owned around 90% of XYL shares, whereas, the general public around 9%, and individual insiders 1% (Figure 18).

XYL ten largest shareholders own approximately 45% of the company. These large shareholders include **Vanguard Group Inc.**, **BlackRock Inc.**, and **Aristotle Capital Management LLC**. In Q12021, XYL largest ten shareholders increased their position by a total of 3.3M shares compared to Q42020 (See Appendix 2). However, for the same period, there was around a 3% decrease in XYL shares owned by institutional investors, a 70% increase in closed positions by funds, and PUT/CALL ratio increased by about 40%. Overall, this suggests **institutional negative short-term sentiment** over XYL stock (Appendix 3).

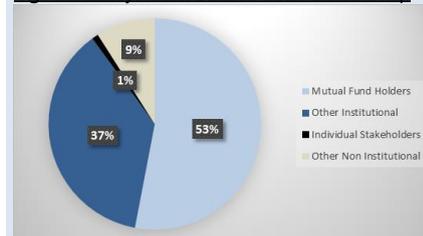
Around 170 ETFs hold XYL in 2020, with its biggest holder being the **SPDR S&P 500 ETF Trust (SPY)**, with 1.9M shares. Whilst the ETF with the most XYL exposure is the **Invesco S&P Global Water Index ETF**, having 9% of its portfolio allocated to it.

## Dividend Policy

XYL paid a dividend of **US\$1.04 per share for 2020FY**, divided into quarterly payments. This represents an increase of **+8.0% YoY** or a **+13.7% CAGR 2016-2020**. For 2021F, XYL expects to pay around **US\$1.11 per share in dividend**, and **decrease its pay-out ratio from 74% to 44%** which is in accordance with pre pandemic levels (Figure 19).

Although with the COVID-19 pandemic heavily affecting XYL business performance, **XYL management significantly increased its payout ratio and DPS in 2020FY**, showing that even in lower-earning years, XYL kept their ability to provide dividend payments to its shareholders.

Figure 18 - Xylem Inc's Institutional Ownership



Source: Thomson Reuters

Figure 19 – Dividend per share (DPS) and Payout ratio



Source: Author analysis

### 3. Management and Corporate Governance

#### The Board of Directors

Xylem Inc's board of Directors is composed by **10 independent directors and its President & CEO, Mr. Patrick K. Decker**. XYL CEO seems to have experience with international markets and the water industry (Figure 20).

**The independent Board Chair is Robert F. Friel**, being a director since 2012. He served as CEO of PerkinElmer Inc., a multinational corporation focused on human and environmental health, from 2008 to 2019. The board also includes 4 other individuals who have CEO experience. Shareholders are the ones who elect XYL directors by majority voting. The Board is divided between four Committees, **Audit & Finance; Nominating & Governance; Innovation & Technology; and the Leadership Development & Compensation Committee**.

XYL also maintains other practices to reflect a commitment to corporate governance. **They do not have a "poison pill"**, which may discourage institutional investors from buying into it due to dilution. Ineffective managers can also stay in place through poison pills. The independent directors hold executive sessions without management to discuss strategies.

**The average tenure of the Board is 6.3 years, with 64% of the Board having served between 7 and 10 years.** It can be considered then that the board of directors is quite experienced.

#### Business segments managers

**Colin Sabol** is ahead as **President of M&CS**. He has been working in XYL for the past 15 years and prior to that he worked 17 years at General Electric in their Water segment. Therefore, he looks qualified for the position.

**Matthew Pine** is currently serving as **President of AW** since early 2020. Before that, he worked for about 7 years at United Technologies, a company which was recently acquired by Raytheon Technologies. They researched and developed mostly industrial products such as aircraft engines, heating, ventilation, and air conditioning. Since the Applied Water segment works primarily with machinery and equipment systems, Matthew Pine also looks qualified and having experience within this specific field.

**Hayati Yarkadas** is the current **President of WI**. He has been working in the company for only 1 year and prior to that, he was not involved with the water industry but in the performance materials industry, working with products such as Latex, Rubber and Plastics. Therefore, the question remains whether the lack of experience in the field could present a management risk for XYL within their largest revenue stream business segment.

#### The Executive Commission

XYL currently has different Executive Compensation guidelines in order to compensate its officers with **short and long-term compensation opportunities in order to enhance shareholder value** while avoiding excessive risk-taking. Stock Options for example vest in three equal annual installments with a 10-year term and cannot be exercised prior to vesting. This is good, since otherwise it can cause management to focus on short-term performance or to manipulate numbers to meet targets.

Figure 20 – Mr. Patrick Decker profile



**Patrick, J. Decker, 56**  
President & Chief Executive Officer  
Director since 2014

#### Qualifications, Attributes and Skills

Mr. Decker brings to XYL's Board valuable global leadership experience, expertise in strategy, business operations, sustainability, finance and risk management and extensive knowledge of emerging markets and relevant industries, including the water industry. He also brings deep experience leading and integrating transformative acquisitions and executing other strategic transactions.

#### Professional Experience

- President & CEO and Director of Harsco Corporation, a global industrial services company, from October 2012 to March 2014.
- Prior to joining Harsco, served in a number of leadership roles for Tyco International's Flow Control business, ultimately serving as President of Tyco Flow Control, a leader in industrial flow control solutions.
- Earlier in his career, held a number of progressively responsible financial leadership positions at Bristol-Myers Squibb Company, including nine years of service in Latin America and Asia.
- Started his career as an auditor for Price Waterhouse LLP, now PricewaterhouseCoopers, LLP.
- Serves on the advisory council for the Dean of the Kelley School of Business at Indiana University.
- Member of the Bipartisan Policy Center's Executive Council on Infrastructure.
- Member of the Energy and Environment Committee of the Business Roundtable.

A significant portion of the pay is performance-based by using products such as **Performance Share Units (PSUs)** that is based on performance criteria's such as **ROIC** and **Total Shareholder Return (TSR)**, and vests at the end of three years. This strategy serves then to align executive compensation with XYL growth.

**With regard to CEO compensation, US\$8.8M was paid in 2020FY**, which includes the base salary plus short-term incentives such as cash bonuses and stock options (Figure 21). The average compensation of CEOs for firms with a similar business mix, global presence, revenue size and market capitalization is around US\$10M (Figure 22). Therefore, **XYL CEO total compensation is about average** for companies of these similar characteristics in the US market.

As a metric for assessing XYL CEO's compensation, his total compensation linear growth was compared to XYL earnings linear growth (Figure 23). **His compensation has been consistent with company performance over the past years.**

### Insider Holding

XYL CEO, **Patrick Decker**, currently owns **0.13%** of the company translating into approximately US\$27.8M. Moreover, all three Presidents from the three main business segments of XYL also own between US\$150K and US\$2.7M in stock. Executives normally act like owners once they have a stake in the company in the form of equity ownership.

The SEC Form 4, Statement of Changes in Beneficial Ownership Overview, was used in order to **access important insider trading**. The Chief Accounting Officer for instance, McShane Geri-Michelle, sold on June 2021, 51% of the stocks she owned, at a price of US\$119.3. In the same month, David Flinton, the SVP and Chief Innovation Office sold 53% of the stocks he owned at a price of US\$118.8. Finally, to cite another important insider trading, Yarkadas Hayati, XYL President of Water Infrastructure sold 42% of his stocks on March 2021, at US\$104.28.

Other major insider trading transactions also pointed out that **over the past year, insiders have only sold shares** (Appendix 5). Therefore, it could be insinuated that employees believe that XYL stock price is overvalued and that it will depreciate over the short-term.

### Sustainability and ESG metrics

Regarding ESG, became a signatory to the **CEO Water Mandate** in 2017, a UN Global Compact initiative that mobilizes Sustainable Development goals such as water infrastructure and sanitation.

In 2020, **XYL issued a US\$1Bn Inaugural Green Bond** to fund projects and further link sustainability with business and financing strategies; in which the proceeds were allocated to green projects to help improve water accessibility, affordability, systems resilience and achieve the **2025 Sustainability Goals** (Appendix 6).

XYL shares are included, since 2015, in the **FTSE4Good Index**, which recognizes companies that have met stringent ESG practices but also in the **Dow Jones Sustainability World Index**. In 2020, XYL appointed Claudia Toussaint as Chief Sustainability Officer.

**Figure 21 - Xylem' CEO Total Direct Compensation Mix**



Source: XYL Proxy Statement

**Figure 22 - Xylem's CEO Compensation Benchmarking**



Source: XYL Proxy Statement

**Figure 23 - Xylem's CEO Compensation vs Earnings**



Source: Author Analysis

**Figure 24 - ISS Governance Pillars and Overall QualityScore**

Name	ISS Governance QualityScore	Audit	Board	Shareholder Rights	Compensation
CFX	2	3	6	2	1
FLS	1	7	2	2	2
XYL	4	7	3	4	6
HEX	4	3	1	6	2
ITT	1	5	1	1	2
IR	8	4	9	7	6

Source: Yahoo Finance - A decile score of 1 indicates lower governance risk, while a 10 indicates higher governance risk.

XYL ISS Governance QualityScore is 4 out of 10 (Figure 24). Moreover, XYL has an ESG rating of AAA from MSCI and a 16.1 Sustainalytics score for the industrial machinery industry (Figure 25), having the highest ESG capital as a percent of market capitalization of all large cap companies (>US\$9Bn).

**Figure 25 – XYL Sustainalytics ESG Risk Rating compared to Machinery Industry peers**

	Quality Score		INDUSTRY RANK
	Score	Category	
Xylem Inc (XYL)	16.1	Low	3 out of 488
Colfax Corporation (CFX)	34.8	High	246 out of 488
FlowsERVE Corporation (FLS)	32.8	High	200 out of 488
IDEX Corporation (IEX)	27.1	Medium	86 out of 488
ITT Inc. (ITT)	32.0	High	182 out of 488
Ingersoll Rand Inc. (IR)	30.1	High	140 out of 488

Negligible	Low	Medium	High	Severe
0-10	10-20	20-30	30-40	40+

**Source:** Sustainalytics – Absolute scale of 0-100, with a lower score signaling less unmanaged ESG Risk

## 4. Industry Overview and Competitive Positioning

### Industry

Xylem Inc. operates in the **water and wastewater industry**, which is part of the industrial sector. Its core activities are developing equipment, technologies, and delivering services that aim to supply, treat, and control clean water and wastewater through a network of infrastructures. Companies in such sector mainly generate revenues by producing and selling goods used in construction and manufacturing. It closely **follows the overall state of the economy**, since infrastructure and construction spending is strongly correlated with economic growth.

Due to such business nature, a **slowdown in global GDP growth would cause negative impact in revenues**. According to Fidelity Investments, current market capitalization of the U.S Industrial sector is about US\$5.8 trillion.

The global Water and wastewater treatment market size is today estimated to be around US\$285Bn, and is **projected to grow to US\$465Bn by 2028**, CAGR of 7.3% (Figure 26). Subsectors include water & waste water treatment, valves, infrastructure, industrial water treatment and pumps. Major growth drivers include **GDP growth, population growth, investment in sustainable water solutions, and regulatory pressures**.

### Key Drivers of Industry Profitability

#### A) World GDP Growth: Industrial Sector

From 2015 to 2019, the global economy grew at an average annual growth rate of 3.4%. However, due to the COVID-19 pandemic, **2020 World GDP growth rate was equal to -3.3%**.

In 2021, global economy is expected to have a significant rebound with IMF forecasting **2021F World GDP growth rate to be equal to 6%**. This growth is partially explained by quantitative easing from central banks, but also due to the high rate of vaccination, making many areas in the economy to re-open and lockdowns to cease.

In the long term, from 2023F ahead, **the annual Global GDP growth is expected to stabilize at 3.5-3.3%**. When comparing to advanced economies, this is estimated to stabilize at 1.5% (Figure 27). Therefore, XYL strategy to pursue business in emerging markets checks with GDP growth data.

#### B) Population Growth: Increasing Water Infrastructure Demand

According to The United Nations Population Fund, **world population will reach around 8.5Bn people by 2030** (Figure 28). Equilibrium will be attained only around 2100, forecasted at 11Bn people (CAGR +1.1% 2030-2100). Water is an essential asset for humans, and as world population grows, so will the demand for more water.

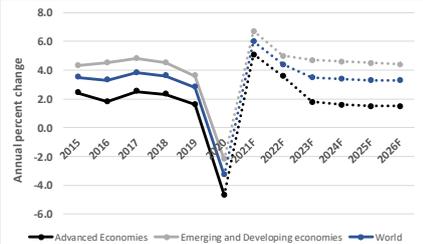
Over the past 40 years, water withdrawals, significantly lagged behind population growth (Appendix 7). With increasing population density, the demand for efficient water allocation and water productivity is rapidly increasing. This call for investment in water infrastructure, as **today's existing water business-as-usual approach will not meet demands for raw water in the future** (Figure 29).

**Figure 26 – Worldwide Water and wastewater treatment market size worldwide (2020-2028F)**



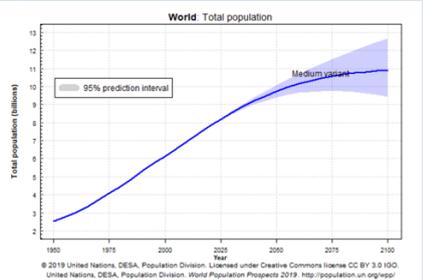
Source: Statista

**Figure 27 - World GDP real growth (Annual percent change)**



Source: IMF Economic Outlook (2021)

**Figure 28 - Population Growth in the next century**



Source: United Nations

C) Investment in Sustainable Water Solutions

97% of the world's water is located in the oceans, only 3% is fresh and around 70% of that is frozen. The majority of the remaining 30% is underground in aquifers, leaving a small fraction in lakes, rivers and the atmosphere. Much of the water in rivers is held in remote parts of the world, such as the Amazon. In addition, over **2 billion people live in countries experiencing growing high water stress**, which indicates substantial use of water resources, with impacts on resource sustainability and rising potential conflicts among users.

- **Emerging Markets:**

In emerging markets, one of the main issues is the number of people that do not have access the clean potable water, combined with a **gap between water supply and demand for industrial and agricultural needs**. By 2030, **China and India will demand 61% more water compared to 2005**, mainly for agricultural and industrial purposes. Other emergent regions follow such as **Sub-Saharan Africa with a significant water demand growth for municipal and domestic needs**, and the **Rest of Asia**, mainly for **agricultural purposes** (Figure 30).

Regions located in **emerging market countries**, and mainly in **developing ones** will have **significant water stress by 2040** (Figure 31). This is mainly caused by the growth in urbanization in these geographic locations. Africa and Asia account for nearly all current population growth. Therefore, sustainable development challenges will be **critical in large cities**, especially for lower and middle-income countries, where **population growth** and the **pace of urbanization** are is larger (Figure 32).

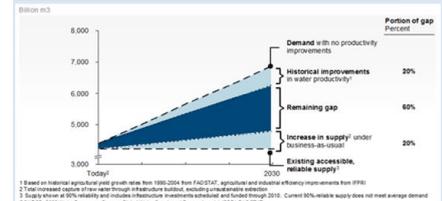
**China for example, has environment high on its political agenda**, investing in wastewater treatment and ecological restoration. These investments are expected to increase due to China's plans to address water pollution and its long-term plan to secure water supply, as stated in the Water Pollution Control Action Plan and Water Resources Development plan in 2015.

- **Developed Markets:**

The **water infrastructure among developed countries is aging and cost of maintenance is climbing rapidly**. Current water infrastructure in the United States dates back to the 19<sup>th</sup> and early 20<sup>th</sup> century. Old infrastructure may cause a variety of problems, for example, corroded pipelines may cause lead and copper leaching into drinking water. It can also cause an inefficient water cycle process due to the use of these outdated technologies.

Globally, **34% of all the water supplied becomes NRW**, which is the lost due to leaks in the pipes, unauthorized use, corruption or inefficiencies. In the U.S, leaks are accounted for lost amounts up to **US\$39Bn per year**. The American Water Works Association's (AWWA's) estimates that the cost of restoring underground pipes will total **at least US\$1 trillion over the next 25 years**. Furthermore, UEPA's 2018 Drinking Water Infrastructure Needs Survey and Assessment (DWINSA) found that the U.S drinking water utilities need **US\$473Bn in infrastructure investments over the next 20 years** for thousands of kilometers of pipe as well as thousands of new treatment plants, and other key assets to ensure compliance with the Safe Drinking Water Act of 1974.

Figure 29 - The Need for Water Infrastructure



Source: 2030 Water Resources Group

Figure 30 - Forecasted Global Water Demand by 2030

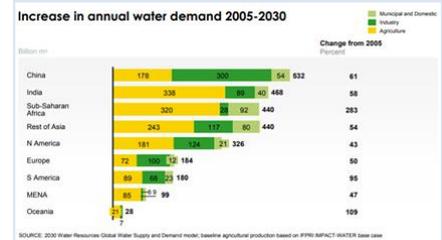
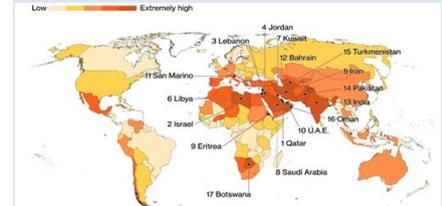
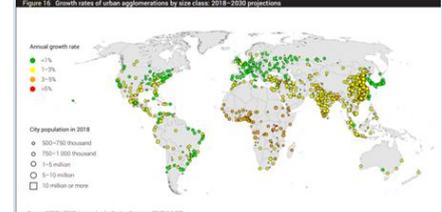


Figure 31 - Water Stress by Country, 2040



Source: World Resources Institute, 2015

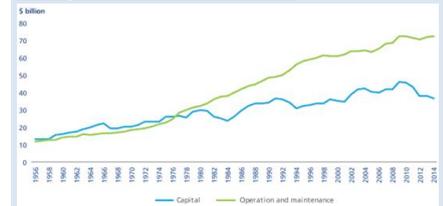
Figure 32 - Growth rates of urban agglomerations by size class, 2018-2030 projections



Source: UNDESA, 2018

Over the past 20 years, U.S public spending on transportation and water infrastructure has not been keeping up with needs. Water infrastructure operation and maintenance expenditures have risen over time, whereas spending on new infrastructure has declined in real terms (Figure 33). However, in 2021, U.S president Joe Biden, announced that a **bipartisan infrastructure deal including US\$579Bn** in new spending. Of these US\$579Bn, **US\$73Bn would go for water infrastructure**. This public spending is expected to benefit higher-end technology focused equipment and service firms such as Xylem Inc.

**Figure 33 – US Public Spending in Water Transportation and Infrastructure**



Source: Congressional Budget Office, "Public spending on transportation and water infrastructure, 1956 to 2014," table W-7, <https://www.cbo.gov/publication/48910>

Source: Congressional Budget Office

#### D) Regulatory Pressures

Governments are increasingly putting in place regulations to raise awareness and accomplish short and long-term goals. Governments, can for instance, **encourage alternative funding mechanisms through legislation**. In 2015, the US Congress passed a five-year transportation bill that lifted a ban on the issuance of tax-exempted bonds with loans for Water Infrastructure Finance and Innovation Act (WIFIA) projects. This allowed water infrastructure companies to raise money from the public while providing **tax incentives**.

Another example is the **Chinese 5-year wastewater plan**. Earlier in 2021, China published new guidelines for wastewater reuse, raising the proportion which must be reused to 25% by 2025. Still in China, the National Development and Reform Council (NDRC) intends to **reduce consumption and water use per unit GDP by 16% by 2025**. This provides an opportunity for companies offering innovative equipment and services that help drive water efficiency.

#### **Business segment competition**

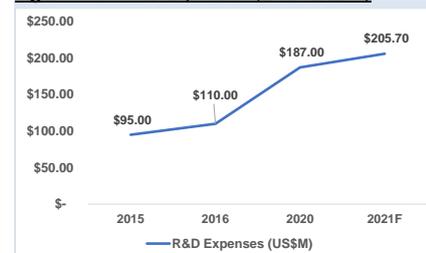
Xylem Inc. is positioned as the global leading pure-play water technology company. **The company is the only one to offer high-engineered water solutions for all steps in the water cycle**. Its extensive patent portfolio with **over 2,000 patents**, reputable brands, and strong dealer relationships create a certain economic moat and competitive advantage for Xylem.

For WI, Xylem has a **reputable brand** in the market, which is imperative in this industry, as the equipment performs critical functions. Therefore, while pricing is important, **customers are less likely to pursue cost savings by switching to cheaper and less trusted alternatives**. Due to these high switching costs, customers are loyal and sales are more resilient as a consequence. In the case of public utilities, **safety considerations** of such equipment's play an important role, as failures could create environmental hazards. This **risk-averse behavior in the water infrastructure industry** creates then an advantage for Xylem. **Key competitors** in this segment include **Danaher Corporation, KSB Inc., Sulzer Ltd., and Evoqua Water Technologies**.

Concerning AW, **key competitors** include **Pentair plc, and Franklin Electric Co.** It follows a similar dynamic to WI, as equipment perform vital operations. High switching costs, reputation for quality and reliability, and a strong portfolio of brands leads to revenue being recurring. XYL customers tend to replace XYL equipment's with XYL's brand, and this drives a **robust aftermarket revenue**. However, for WI, Xylem sells its products directly to customers, whereas **AW products is sold via distributors**. This can make the Applied Water segment vulnerable to competition in the long run.

Customers in the M&CS normally sign **long-term contracts** with Xylem, of up to 15-20 years. These contracts normally consist of equipment purchases in the first years, followed by a subscription fee. Long-term contracts contribute for recurring revenue in this segment. What brings value to M&CS are **intangible assets**, with R&D expenses having increased significantly (Figure 34). Moreover, strategic acquisitions have been made to quickly gain access to new innovative technologies and markets. **Key competitors here include Itron, Badger Meter, Danaher Corporation and Teledyn** (Appendix 8).

Figure 34 – R&D Expenses (2015-2021F)



Source: XYL 2020 10K

### Peer Identification (SARD)<sup>3</sup>

Most analysts use the industry classification as a proxy for company comparability. However, this does not necessarily possess the **same level of profitability, risk, or growth** and thus should not trade at the same multiple. The SARD approach can account for an infinite number of proxies while remaining independent from industry classifications. **This approach yields significantly more accurate valuation estimates than the industry classification approach.** The chosen variables in this case were return on **equity** (profitability), **Net debt/EBIT** (risk), **Market Cap** (risk and different levels of multiples), **EBIT-margin** (relevant for EV/sales multiples) and the **EPS Growth Forecast** (growth). The sample was taken from the S&P Global Market Intelligence, including only companies that trade in the US market (Appendix 26).

### Peer Identification (Industry Classification)

The industry classification approach was also used to select XYL peers. The peers were chosen as the closest 10 international companies according to Operating revenue (Turnover) of the subject company for the last available year (2020) amongst the standard peer group. The standard peer group is based on **NACE Rev. 2 industry classification: 2813 - Manufacture of other pumps and compressors** (Appendix 27).

### SWOT Analysis

Figure 35 – XYL SWOT analysis

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> <li><b>Market Position:</b> Xylem is the world largest provider of water and wastewater treatment solutions worldwide, and one of the leading providers of high end-tech industrial pumps and related equipment.</li> <li><b>Reputable Brand and High Customer Switching Costs:</b> Xylem has reputable brands across all three operational segments serving risk-averse clients due to the importance and critical functions these products serve.</li> <li><b>Far-Reachable Global Distribution Networks:</b> Consisting of direct sales force and independent channel partners serving a diverse customer base in approximately 150 countries.</li> <li><b>Diversified Product and Patent Portfolio:</b> Large product portfolio where it provides products and services to a large range of business segments, with over 2,000 patents.</li> <li><b>Sustainability at its Core:</b> Xylem approaches business sustainability as a way to generate economic and societal value.</li> </ul>	<ul style="list-style-type: none"> <li><b>Decreasing Revenues and Margins:</b> For all three business segments, FY2020 saw negative YoY revenue and operational margins growth rates due to the COVID-19 pandemic. As a result, Xylem saw a FY2020 revenue decrease of 7.1% comparing to FY2019.</li> <li><b>Cost Structure:</b> Management was ineffective to fully react to the COVID-19 pandemic and did not reduce operational costs enough to cover losses.</li> <li><b>Applied Water Products Supply Chain:</b> Instead of being sold directly to customers like the products/services from the Water Infrastructure and Measurement &amp; Control segments, this is sold via distributors, making it vulnerable to competition in the long-term.</li> </ul>
<ul style="list-style-type: none"> <li><b>Competition:</b> Xylem operates in a highly competitive environment. For each of its business segments, it competes with specific other companies on product and service performance, reliability and innovation, energy efficiency, brand reputation, product life cycle cost, timeliness of deliveries, effectiveness of distribution channels and pricing. The inability to compete effectively in these areas could negatively affect profits.</li> <li><b>Inflation:</b> Cost inflation may significantly impact operational income and margins. Inflation levels continue to rise in the United States. The PCE index climbed 3.4% year over year in May 2021, its biggest gain since 1992.</li> <li><b>Regional and Economics Influences:</b> As seen by the COVID-19 pandemic, company's operations are subject to prolonged macro-economic downturn including GDP, consumer confidence and global supply constraints. These factors may present customers and suppliers to delay or cancel purchase orders.</li> <li><b>Foreign Exchange Rates:</b> Xylem is exposed to fluctuations in foreign exchange rates as it operates in various parts of the world.</li> </ul>	<ul style="list-style-type: none"> <li><b>Emergent Markets:</b> Offer revenue growth and expansion for all three business segments. The need for serving water, sanitation needs in Asia, Africa and the Middle East still lacks behind developed countries. Moreover, water stress by 2040 will be the greatest for these areas.</li> <li><b>Historic Lows in Interest Rates:</b> Opportunity to expand or invest in new projects that are financed at a cheaper rate than previously.</li> <li><b>Growing Population and Urbanization:</b> This will substantially increase water demand for industrial, agricultural, municipal and domestic needs. Consequently, this will also call for more water measurement and solutions efficiency.</li> <li><b>Regulatory Pressures:</b> Governments are increasingly putting in place regulations to raise water awareness and accomplish short and long-term goals. In 2015, the US Congress passed a five-year transportation bill that lifted a ban on the issuance of tax-exempted bonds with loans for Water Infrastructure Finance and Innovation Act (WIFIA) projects.</li> </ul>

<sup>3</sup> J. Knudsen, S. Kold. Stick to the Fundamentals and Discover Your Peers.

Retrieved from <https://www.cfainstitute.org/en/research/financial-analysts-journal/2017/stick-to-the-fundamentals-and-discover-your-peers>

## Porter's 5 Forces

Considering the Porter's 5 Forces Framework, the highest threat in the industry is the Bargaining power of suppliers (Figure 36).

### Bargaining power of buyers | WEAK (2)

Bargaining power of buyers is considered weak, because of the following factors:

- **The necessity of water to end users:** water infrastructure is vital for the day-to-day operations for both companies and individuals. Therefore, the buying power of even the largest customer is limited.
- **Large number of buyers:** buyer power is severely weakened by the number of buyers. As the need for water structure touches all companies and individuals, the pool of potential buyers is extremely large, which significantly weakens buyer power.
- **Limited choice of suppliers:** Due to the complexity and degree of capital needed to install water infrastructure, and also with securing the approvals of governmental agencies, most buyers have limited choices in deciding which supplier to choose. In remote regions for instance, there could only be one supplier available which decreases the power of buyers. Moreover, in urbanized areas, due to the associated costs and difficulty, it is very unlikely that individuals or businesses will integrate and supply their own water.
- **Long-term contracts:** common and may diminish the bargaining power of buyers due to the high costs that come with it.
- **Generally, no price sensitivity:** due to expensive and complex products and services, which makes it hard to be substituted. Nevertheless, there might be some pricing sensitivity regarding service fees once competitors might differentiate their service costs.

### Bargaining power of suppliers | MODERATE (3)

The overall impact of higher supplier bargaining power is that it lowers the overall profitability of Water Infrastructure companies. Below, some factors regarding the bargaining power of suppliers:

- **The lack of alternative services:** the transport of water to end-users is done almost exclusively via subterranean pipes, since via road or rail would be very expensive. This means that water infrastructure suppliers are extremely important. Furthermore, the legal requirements needed for water infrastructure quality is high, which account for high standards of cleanliness when transporting domestic drinking water for instance. This factors limits then the amount of suppliers there is in the market.
- **Switching Costs:** with a limited number of large suppliers, supplying regulated high-end water infrastructure equipment and services, switching costs are high for buyers.
- **Lack of differentiation:** Due to the nature of the water infrastructure industry, pumps and related water efficiency services are pretty standardized. This means that suppliers lose some bargaining power due to negotiations on factors such as price and project durations and schedules.
- **Complex industry:** High financial costs, specialist knowledge and complicated legal procedures in the water infrastructure industry also

**Figure 36 - Forces Driving Competition in the Water and Wastewater Infrastructure Industry**



decrease the bargaining power of suppliers.

- **Few suppliers have dominant positions:** Some large water utilities firms may control the water management services throughout all the water cycle allowing them to have considerable control of the supply chain, weakening the power of suppliers.

### **Threat of new entrants | WEAK (2)**

New entrants bring innovation, new ways of doing things and put pressure on existing companies through lower pricing strategy, reducing costs, and providing new value propositions to the customers. However, the threat of new entrants in the Water & Wastewater Treatment industry is weak, given that:

- **Extensive infrastructure requirements:** Significant capital is required to enter the industry. High fixed costs associated with managing high tech pumps, treatment facilities, pipelines, etc. Moreover, given the core business of the industry and due to the technologies, and R&D needs (for new technologies and products), small scale firm entry is unlikely.
- **Huge players in the market:** with strong M&A tendency, large established water infrastructure companies usually acquire smaller local water companies as a growth and diversification strategy.
- **Water scarcity and water pollution:** Both of which are emerging problems worldwide and present severe challenges for players. This limited supply of usable water is likely to reduce the likelihood of new entrants.
- **New entrants in developing countries:** More likely to appear where access to water utilities is not yet universal.
- **New entrants in big data tech and smart systems:** In developed countries, water infrastructure supply is widespread, which leaves little room for new entrants. However, opportunities arise to invest in big data tech and smart systems to improve efficiency and reduce expenditures.

### **Threat of substitute products or services | VERY WEAK (1)**

The threat of substitute products or services can be considered from low to medium, given that:

- **Technologies:** Already established high-end technologies in the water transport and applied water segments that are implemented and that are difficult to replicate and produce in scale. Moreover, companies providing this equipment's are already established in an oligopolistic manner, and offering a large range of high end engineered products.
- **High Switching Costs:** competitors may be capable of offering similar solutions at cheaper costs, however, this is offset by the customers switching costs due to equipment reliability and brand recognition.
- **Water Delivery:** new ways of providing water to the people though new transport technology is hard. Systems of pumps are already put in place in developed countries for instance since the 18th and early 19th century.
- **Threat in a niche market:** For measurements & efficient water management solutions, new services using big data, machine learning and A.I technologies may pose a threat.

### Industry rivalry | MODERATE (3)

The intensity of rivalry in the industry can be considered moderate, because:

- **Oligopoly:** Industry structure is usually a collection of geographically-defined oligopolies, where customers only have a limited number of companies offering water and wastewater infrastructures.
- **Water Demand:** Rivalry is likely to increase if access to water resources becomes scarcer, or if demand continues to climb but at a faster rate than expected. As world population and urbanization are increasing, rivalry is expected to increase considerably.
- **Competition** is largely based on product performance, reliability and innovativeness of products, services and solutions, application expertise and process knowledge, brand reputation, energy and water efficiency, product compliance with regulatory and environmental requirements, product lifecycle cost, scalability, timeliness of delivery, the proximity of service centers to customers, effectiveness of distribution channels and price.
- **Pricing:** Water infrastructure partially competes in pricing, but this is weakened by the high switching costs, reputation of the brand and risk-averseness of customers.

## 5. Investment Summary

XYL has a **SELL recommendation**, with a **2022YE PT of US\$96.4/share**, meaning a **downside potential of 28.6%**, or **annualized return of -15.5%**, against the closing price of US\$135.1 at August 25, 2021, with medium risk (Figure 37)

The current overvaluation of Xylem Inc's shares is mainly due to i) a disconnect between its stock price, which has increased substantially over the past year, while its business is down massively, but also due to ii) inflationary market conditions.

XYL worldwide integrated operating model provides an interesting exposure to the water infrastructure industry. The company is the only one to offer high-engineered water solutions for all steps in the water cycle, including the fast growing smart metering sector. **XYL YoY revenue has increased at 6.6% CAGR** in the 2016-2020 period and is expected to **increase at 5.2% CAGR in the projected years** (Appendix 9).

XYL has a solid financial position, with strong cash generation and long-term goal to have **US\$3.5Bn in capital for deployment** (Appendix 10). With this excess of cash, XYL would be able to do buybacks or engage in M&A. XYL is also committed in maintaining its dividend policy, where even in lower-earning years, it increased its dividend payout ratio to 74%.

### Valuation methods

Different absolute and relative methods were used to value XYL's stock price. These resulted in values that ranged from US\$79.6/share to US\$96.4/share (Figure 38).

The APV method resulted in a price target of US\$94.5/share. However, the **recommendation of this report is based on the WACC Method (DCF)**, with a price target of **US\$96.4/share**. A **sensitivity analysis** was also included in this report in order to see how XYL's stock price varies accordingly to 10bps changes in WACC and the perpetual growth rate, but also a **scenario analysis**, mainly to test different inflationary and risk free interest rate scenarios (Appendix 28/29/30).

The lowest PT obtained was from the relative valuation using the **SARD approach**, which created peer groups with similar fundamental drivers such as profitability, growth, and risk. This resulted in US\$79.6/share using EV/EBITDA, US\$75.8/share using EV/EBIT and US\$85.8 using P/E. Relative valuation using **industry classification peers** yielded larger price target results.

### Investment risks

Risks are mainly classified into **Macro**, **Operational** and **Legal risks**. Some risks management may be able to mitigate to a certain level, but others may also significantly impact business performance unannounced, such as the **COVID-19 pandemic**.

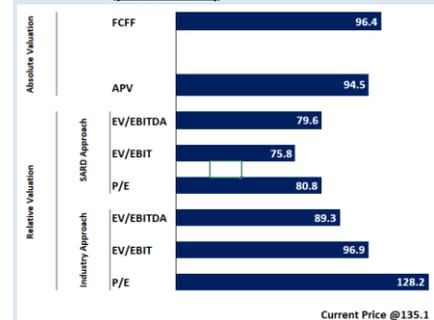
This report finds that the current **increasing inflationary scenario** in the U.S is one of the main risks for XYL in the short to medium term (Figure 39). Increasing price inflation primarily driven by certain commodities, freight and cost of labor may continue to affect XYL's operating costs, causing future margins expansion to not materialize.

Figure 37 – XYL 2022YE PT (US\$/share)



Source: Author Analysis

Figure 38 – Valuation methods vs Current Price (US\$/share)



Source: Author Analysis

Figure 39 – U.S annual inflation rate (%)



Source: Author Analysis

## 6. Valuation

### WACC Method – Free Cash Flow to Firm

XYL valuation was performed as a whole, since detailed information regarding each business segment was not provided in the 2020YE 10K statement. This approach yields a **2022YE PT of US\$96.4/share** (Appendix 23) meaning a downside potential of 39% against the current stock price of US\$135.1/share (Figure 40).

The main factors that influence this valuation are i) business segments revenue growth, ii) WACC rate assumptions and iii) the terminal value and the long-run sustainable growth rate.

### Business segments revenue growth

**WI is expected to grow in the high single digits for 2021F**, according to XYL Q1 2021 earnings call, reaching around US\$2.3Bn. This seems to be reasonable when comparing to pre-pandemic WI revenue growth. Revenue growth is then expected to gradually decrease after this pandemic rebound, and stabilizing at around 3-4% in 2025F. **The assumed growth for WI is 2020-2027F CAGR +4.6%** is in accordance to the Water and Wastewater Treatment Equipment market growth of 2021-2028F CAGR +5.8%. Key market drivers for WI include water scarcity, affordability, aging infrastructure, tightening of global regulations and sustainability.

**AW revenue growth is expected to be in the low teens for 2021F**, reaching around US\$1.6Bn. The assumption in this business segment is that there will be a **2020-2027F CAGR +5.2% growth**. Competitive advantages that provide solid foundation for growth for AW are an established footprint in developed markets, long-standing channel partners, iconic brands, and reputation for quality and reliability. Urbanization and a growing middle class in emerging markets present a key market drive for AW.

Finally, XYL management expects **2021F M&CS revenue growth to be around in the mid-single digits** due to supply challenges, mainly in the semi-conductors market. However, M&CS presents the largest potential growth of all three XYL business segments of **2020-2027F CAGR +6% growth** due to Advanced Metering Infrastructure (AMI) adoption accelerating, creating room for growth (Figure 41). This growth is lower compared to the **global smart water metering market growth of 2019-2024F CAGR +10.3% in order to be conservative due to the current worldwide semi-conductors supply constraint**. AMI partnerships drive revenue and margin expansion due to high recurring revenues from SaaS/NaaS technology, flow replacement, and utility expansion. Increasing demand for interoperable and integrated digital solutions, and, increased funding and regulations for aging infrastructure are other key drivers for M&CS.

### WACC rate assumptions

The discount of the FCFF followed the **WACC method given that historically, XYL maintained a stable capital structure** and therefore it is assumed that it will continue to do so in the future.

The estimated **Cost of Equity** comprises a **1.5% RFP** estimated by using the current 10Y US yield curve (Figure 42), a **5.5% ERP** computed by using Bloomberg's Expected Market Return of 10% and a **2% CRP** from Damodaran's country risk premium data from emerging markets. In 2020, XYL generated 53% of their revenue from non-U.S. operations, and in 2019, 51%. As XYL continues to grow their operations in the emerging markets and elsewhere outside of the U.S., XYL expects to continue to generate significant revenue from non-U.S. operations and that a substantial portion

Figure 40 – 2022YE PT with FCFF DCF (US\$/share)



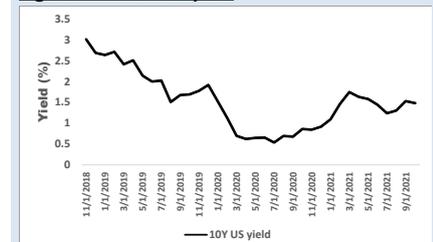
Source: Author Analysis

Figure 41 – North America AMI Adoption Rates



Source: IHS2020 Report

Figure 42 – 10Y US yield



Source: Yahoo finance

of cash will be predominately held outside of the U.S.

The computed **Cost of Debt was 5.5%** by dividing interest expense by total debt. A **6.8% WACC was estimated for XYL integrated business** (Appendix 19).

### Terminal value and long-run sustainable growth rate

The second stage from the DCF model consists of a perpetuity based on:

- a) **A normalized FCFF for the terminal period**, obtained through a linear regression over the regressed and the forecasted years. This is with the objective of flattening the business cycle effect, and to represent the expected level of mid-cycle cash flow from operations adjusted for unusual items (Appendix 24); and,
- b) **A long-run sustainable growth rate equal to the current 10Y US yield**. The Stable Growth Model sustainable growth rate was found to be equal to 3.1%, and therefore was not chosen since it is a larger value than the expected long-term U.S GDP growth rate. This would mean that XYL would grow faster than the U.S economy indefinitely, and this is not possible (Appendix 22).

### Adjusted Present Value (APV) Method

It is also possible to compute XYL Equity Value through the APV method, which highlights changing capital structure more easily than WACC-based models. It also works best for companies that **maintain the amount of debt**. APV also shows an investor the benefit of tax shields from tax-deductible interest payments (Appendix 25).

**XYL 2022YE PT with the APV method results in US\$94.5/share** (Figure 43).

### Market-Based Valuation

In addition to the previous absolute models, it was implemented a relative valuation methodology, through a SARD approach and industry classification peer group comparison of market multiples. The following multiples were used:

- A) SARD Approach Peer Group (Figure 44):
  - **The EV/EBITDA, with a peer average of 16.4x**. This results in a XYL EV of US\$15.2Bn, corresponding to an Equity value of US\$14.3Bn, or a **price target of US\$79.6/share in 2022YE**;
  - **The EV/EBIT, with a peer average of 21.5x**. This results in a XYL EV of US\$14.6Bn, corresponding to an Equity value of US\$13.7Bn, or a **price target of US\$75.8/share in 2022YE**;
  - **The P/E, with a peer average of 32.8x**. This results in a XYL to an Equity value of US\$14.5Bn, or a **price target of US\$80.8/share in 2022YE**
- B) Industry Classification Peer Group (Figure 45):
  - **The EV/EBITDA, with a peer average of 18.3x**. This results in a XYL EV of US\$17.0Bn, corresponding to an Equity value of US\$16.1Bn, or a **price target of US\$89.3/share in 2022YE**;
  - **The EV/EBIT, with a peer average of 27.1x**. This results in a XYL EV of US\$18.3Bn, corresponding to an Equity value of US\$17.4Bn, or a **price target of US\$96.9/share in 2022YE**;
  - **The P/E, with a peer average of 52.1x**. This results in a XYL to an Equity value of US\$23.1Bn, or a **price target of US\$128.1/share in 2022YE**

**Figure 43 – 2022YE PT with APV (US\$/share)**



Source: Author Analysis

**Figure 44 – Market-Based Valuation, SARD approach (US\$/share)**



Source: Author Analysis

**Figure 45 – Market-Based Valuation, Industry Classification approach (US\$/share)**



Source: Author Analysis

## 7. Financial Analysis

### Need for improved operational efficiency post-COVID-19

After the decrease of XYL sales from US\$5.21Bn to US\$4.88Bn over the 2018-2020 period, meaning a -3.2% CAGR after the COVID-19 pandemic, revenue should reach US\$6.43Bn at 2025F, with a CAGR of +5.7%. This is primarily due to growth in the water and wastewater equipment market where XYL is one of the main players internationally, but also to the global smart water metering market where there is a large expected growth. XYL operating efficiency has gone down over the years, with an Asset Turnover of 0.74x in 2018 and 0.59x in 2020FY. This will slightly, but not significantly, improve to 0.63x in 2025F.

Regarding EBIT Margin, it decreased from 11.8% to 7.5% in the 2016-2020 period and should recover towards 16.9% in 2025F. EBITDA is expected to reach 20.8% in 2025F (Figure 46).

### Stable capital structure

XYL capital structure is expected to be relatively stable. After increasing from 61% to 66% in the 2017-2020 period, the Debt Ratio is expected to decrease back to 61% in 2025F. Equity Multiplier has not varied substantially, remaining around 2.7 for the 2017-2025 period, and should be around 2.6 in 2025F (Figure 47).

### High debt level with well covered debt and interest payments

XYL debt to equity ratio is currently above 100%, equal to around 104%, which is considered high (Figure 48). Inexpensive senior notes were added in 2020FYm due 2028 and 2031, with 1.95% and 2.25% interest rates, respectively.

Given the decreasing business performance, XYL solvency ratios worsened, with a decrease in the Interest Coverage Ratio from 6.8x to 4.8x in the 2017-2020 period. This should also improve in the future due to expected business recovery, reaching 7.2x in 2025F. Moreover, the Debt-to-EBITDA ratio also worsened from 2.8x to 5.0x in the 2017-2020 period, but is expected to improve 2.5x in 2025F (Figure 49).

### Need for improved operational profitability post-COVID-19

Looking for profitability ratios, COVID-19 heavily affected the figures negatively.

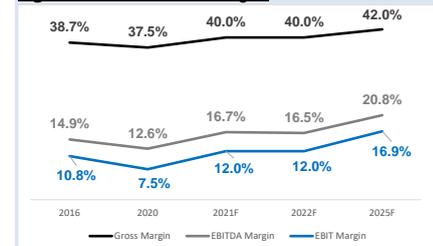
The Net Profit Margin decreased from 7.0% to 5.2% in 2016-2020 period, but is assumed to reach 11.9% in 2025F. Regarding ROE, XYL figures decreased from 13.2% to 8.6% in the 2016-2020 period, and is expected to increase to 18.8% in 2025F. Both ROIC and ROCE decreased during the analyzed period of 2016-2020, but are expected to increase in the forecasted period (Appendix 15).

### Solid cash generation

XYL Cash Ratio increased substantially, from 0.4x to 1.0x in the 2016-2020 period, and should reach 1.5x in 2025F assuming no major acquisition is completed using this excess of cash. The CFO improved from US\$497M to US\$824M over the 2016-2020 period, and to US\$1.1Bn in 2025F, meaning a +3.8% CAGR 2020-2025F (Appendix 11).

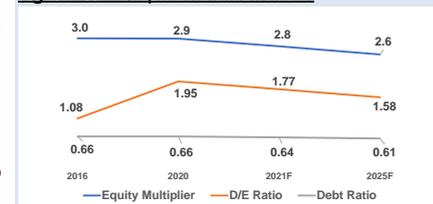
Solid cash generation is essential for XYL to maintain its large dividend payout.

Figure 46 – Business Margin



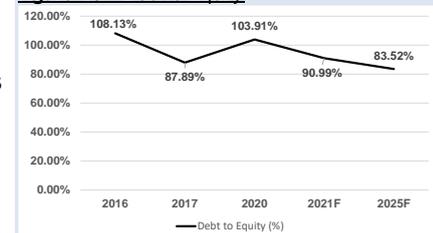
Source: Author Analysis

Figure 47 – Capital structure ratios



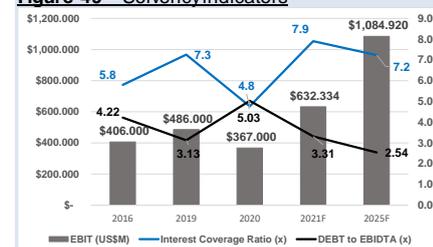
Source: Author Analysis

Figure 48 – Debt to Equity



Source: Author Analysis

Figure 49 – Solvency indicators



Source: Author Analysis

## 8. Investments Risks

XYL faces external and internal risks that have different probabilities to realize and or different degrees of impact. External risks include macroeconomic, regulatory, geopolitical, inflationary and financial risks. Internal risks are operation and business risks (Figure 50).

### Macroeconomic and Industry Risks

#### Industry and economic conditions (MI01)

XYL has sales in over 150 countries and competes in a wide range of geographic and product markets. Overall strength of customer's confidence in local and global macroeconomic conditions, industrial and private sector spending, strength of residential and commercial real estate markets, degree of funding in the public sector with respect to water infrastructure investments are macroeconomic examples of that may have material impact on XYL business, cash flows and financial condition.

#### Geopolitical, regulatory, economic, foreign exchange (MI02)

In 2020, 47% of XYL total revenue was from customers within the U.S. and 53% was from customers outside the U.S. 19% of XYL total revenues were generated in emerging. With that, it comes risks inherent in doing business globally. Examples of such risks may include governments imposing, increasing investment barriers, or other restrictions, disruption of operations from labor or political disturbances, foreign currency exchange rate fluctuations, instability and uncertainties arising from the global geopolitical environment and so on.

#### COVID-19 pandemic (MI03)

The COVID-19 pandemic may continue to have, an adverse impact on XYL employees, customers, supply chain, and operations. Moreover, it continues to curtail the movement of people, goods and services worldwide. The pandemic has also negatively affected XYL revenue growth. It has also caused significant volatility and uncertainty in the financial and capital markets. A further disruption of global financial markets or resulting economic downturn from it may reduce XYL ability to incur debt or access capital. It is a difficult task to estimate the length or severity of the COVID-19 pandemic or the associated economic downturn, impacts on XYL markets and other impacts to its business, financial position, and cash flows.

#### Inflation (MI04)

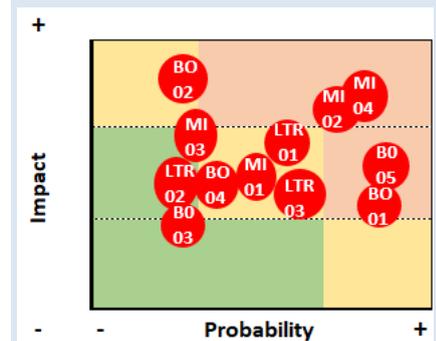
XYL operating costs are subject to fluctuations in commodities, raw materials, energy, freight prices, which may be driven by inflation. Prices in such classes mentioned before have skyrocketed and impose a major risk for XYL operations if inflation becomes "sticky" and not transitory as defended by the FED (Figures 51/52/53/54). **The annual inflation rate in the US reached a 13-year high of 5.4% reported in July 2021.**

### Business and Operational Risks

#### Competition and Innovation (BO1)

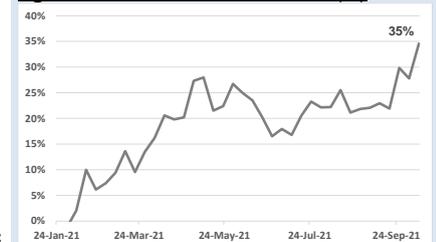
XYL future competitive position and future growth rate depend upon a number of factors, including its ability to successfully: (i) innovate, develop and maintain competitive products and business models, (ii) defend market share against an ever-expanding number of competitors, (iii) enhance product offerings by adding innovative

Figure 50 – Risk Matrix



Source: Author Analysis

Figure 51 – Steel futures 2021 return (%)



Source: Yahoo Finance

Figure 52 – Freightos Baltic Index (FBX) Global Container Index, 2021 return (US\$)



Source: Freightos

Figure 53 – Natural Gas futures 2021 return (%)



Source: Yahoo Finance

Figure 54 – Brent Oil futures 2021 return (%)



Source: Yahoo Finance

features and disruptive technology, (iv) win large contracts.

### **Cybersecurity (BO2)**

XYL business operations rely on information technology and communications networks, some of which are operated by third parties, including cloud-based service providers. Essentially all IT systems are susceptible to damage, disruption or shutdown due to cyber-attacks, including ransomware, computer viruses and security breaches.

### **Retain existing senior management (BO3)**

XYL success will continue to depend to an extent on its ability to retain and attract skillful employees in senior management positions. A failure to attract or retain highly engaged and skilled personnel could adversely affect XYL ability to meet and exceed the needs of its customers and operations.

### **Effectively integrate acquisitions (BO4)**

XYL plans to continue to pursue the acquisition of other companies, assets, and technologies that either complement or expand its existing business or improve their competitive position. Acquisitions involve a number of risks and may present financial, operational and managerial difficulties. Failure to successfully execute the growth strategy via acquisitions and successfully integrate these acquisitions could adversely affect its competitive position.

### **Weather conditions and climate change (BO5)**

The unpredictable nature of weather conditions, including heavy flooding, prolonged droughts and fluctuations in temperatures or weather patterns, including as a result of climate change, can positively or negatively impact portions of XYL business. Heavy flooding and rain events, may increase demand for some of XYL solutions that may help customers manage water and storm water overflows.

## **Legal, Regulatory and Tax**

### **Compliance environmental laws (LRT01)**

XYL business and operations are subject to and affected by many federal, state, local and foreign environmental laws and regulations, including those enacted in response to climate change concerns. Environmental laws and regulations may authorize large fines or criminal sanctions, but also facility or plant shutdowns to address violations. It may also may require installation of costly pollution control equipment or operational limits to emissions.

### **Intellectual property rights (LRT02)**

XYL owns numerous patents, trademarks, copyrights, trade secrets and other intellectual property. Current or future intellectual property rights may not be sufficiently broad or may be challenged or invalidated particularly given XYL international operations in countries where laws governing intellectual property rights are not highly enforced.

### **Changes in effective tax rates (LT03)**

Given the global presence of XYL business, a number of factors may increase future effective tax rates and tax expense. Factors include the the statutory tax rates and tax laws in the jurisdictions in which XYL conduct business; the resolution of tax issues arising from tax examinations by various tax authorities.

## Price Target Sensitivity

A simulation was performed with combined effects to assess the Price Target sensitivity to a different range of factors, and the strength of the investment recommendation against the benchmark (Figure 55).

### Cost of Capital (WACC) vs. Long-run sustainable growth rate (g)

The **long-run sustainable growth rate**, that is **set on 1.5% in the base case**, could lead to an increase (decrease) of PT in **~US\$1.7-1.6/share, for each increase (decrease) of 10bps** (all other things remain equal). The **WACC rate**, that is set on **6.8% in the base case**, could lead to an increase (decrease) of PT in **~US\$2.0-1.9/share, for each increase (decrease) of 10bps** (all other things remain equal) (Figure 56).

Figure 55 – Investment recommendation system - Medium Risk

Investment Recommendation	Threshold (annualized upside potential)
SELL	-5% ≤
REDUCE	>-5% & ≤5%
HOLD	>5% & ≤15%
BUY	>15% & ≤30%
STRONG BUY	>30%

Figure 56 – Sensitivity Analysis

Sensitivity Analysis of XYL's stock price to the growth rate and WACC used in the long-term												
WACC	Growth rate	Growth rate										
		1.10%	1.20%	1.30%	1.40%	1.50%	1.60%	1.70%	1.80%	1.90%		
6.36%	\$ 96.39	\$ 97.85	\$ 99.53	\$ 101.28	\$ 103.09	\$ 104.99	\$ 106.96	\$ 109.02	\$ 111.17	\$ 113.41	\$ 115.75	\$ 118.17
6.46%	\$ 95.87	\$ 97.48	\$ 99.15	\$ 100.90	\$ 102.71	\$ 104.59	\$ 106.56	\$ 108.61	\$ 110.75	\$ 112.96	\$ 115.24	\$ 117.59
6.56%	\$ 93.96	\$ 95.51	\$ 97.11	\$ 98.78	\$ 100.52	\$ 102.32	\$ 104.20	\$ 106.16	\$ 108.20	\$ 110.31	\$ 112.48	\$ 114.71
6.66%	\$ 92.12	\$ 93.61	\$ 95.15	\$ 96.75	\$ 98.41	\$ 100.14	\$ 101.94	\$ 103.81	\$ 105.76	\$ 107.77	\$ 109.84	\$ 111.97
6.76%	\$ 90.35	\$ 91.78	\$ 93.26	\$ 94.79	\$ 96.39	\$ 98.05	\$ 99.77	\$ 101.56	\$ 103.43	\$ 105.36	\$ 107.35	\$ 109.40
6.86%	\$ 88.64	\$ 90.01	\$ 91.43	\$ 92.91	\$ 94.44	\$ 96.03	\$ 97.68	\$ 99.40	\$ 101.18	\$ 103.01	\$ 104.89	\$ 106.83
6.96%	\$ 86.98	\$ 88.31	\$ 89.68	\$ 91.09	\$ 92.56	\$ 94.09	\$ 95.67	\$ 97.32	\$ 99.03	\$ 100.79	\$ 102.60	\$ 104.47
7.06%	\$ 85.39	\$ 86.66	\$ 87.98	\$ 89.34	\$ 90.75	\$ 92.22	\$ 93.74	\$ 95.31	\$ 96.95	\$ 98.63	\$ 100.36	\$ 102.14
7.16%	\$ 83.84	\$ 85.07	\$ 86.34	\$ 87.65	\$ 89.01	\$ 90.42	\$ 91.87	\$ 93.39	\$ 94.96	\$ 96.57	\$ 98.22	\$ 99.92

Other two scenario were tested:

A) **Scenario 2**, where inflation keeps increasing and becomes “sticky”, causing stagflation. Scenario 2 would result in a null perpetual growth rate, and a larger WACC, equal to 8.3%. **2022YE PT in this case is equal to US\$57.2** (Appendix 29).

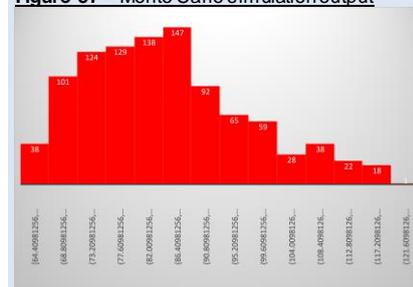
B) **Scenario 3**, where inflation has peaked and turns out to be “transitory”. GDP growth accelerates with the recovery after COVID-19. In this scenario, the perpetual growth rate is set to 2.5% (with GDP growth forecast adjusted upwards) and WACC, equal to 2.50%. **2022 YE PT for scenario 3 is equal to US\$95.1** (Appendix 30).

### Monte Carlo Simulation

As a complementary analysis on PT sensitivity, a **Monte Carlo Simulation using the DCFF model was performed**, by considering simultaneous changes in the following key value drivers: i) the Cost of Capital (WACC) and ii) the long-run sustainable growth rate (g).

From this analysis results a **mean value of US\$86.76**, consistent with the previously estimated PT, supporting the stated Sell recommendation (Figure 57).

Figure 57 – Monte Carlo simulation output



Source: Author Analysis

# Appendices

## Appendix 1: Xylem Inc. business segment brands

### 1a. WI:



### 1b. AW:



### 1c. M&CS:



Source: XYL 10K Statement

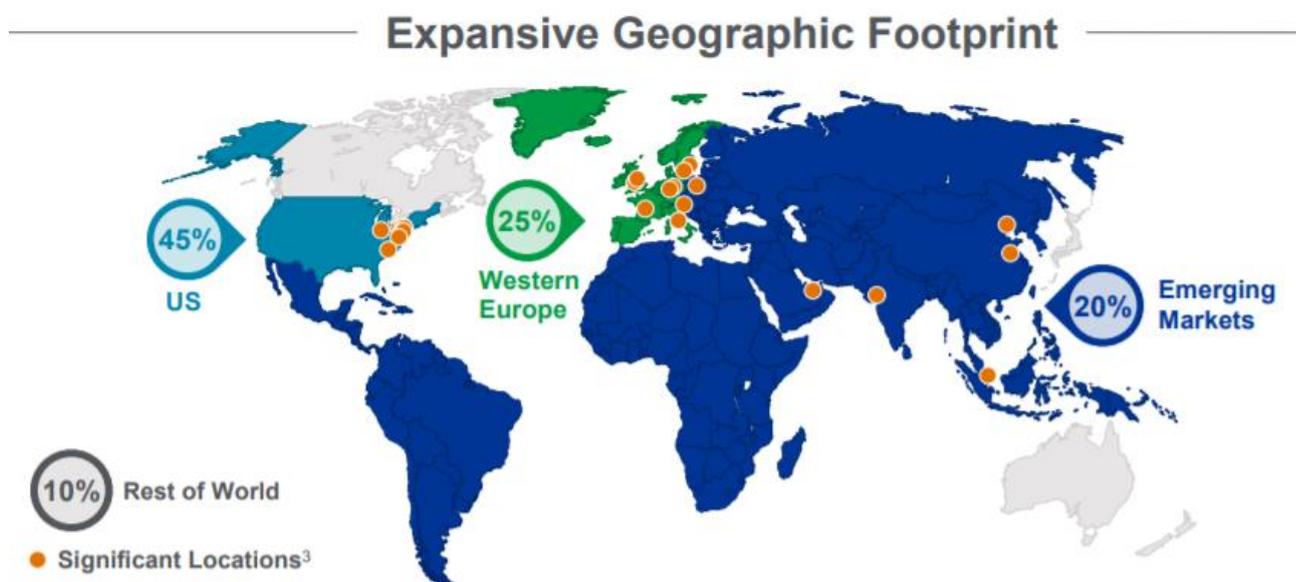
## Appendix 2: Ten largest Xylem Inc's shareholders

Fund	Shares Held or Principal Amt	Market Value	% of Portfolio	Change In Shares	% Ownership	Source	Date Reported	Qtr 1st Owned
VANGUARD GROUP INC	18,775,895	\$1,974,849,000	0.05	122,792	10.41%	13F	5/14/2021	Q4 2011
BLACKROCK INC	18,226,046	\$1,917,016,000	0.06	26,423	10.11%	13F	5/7/2021	Q4 2011
ARISTOTLE CAPITAL MANAGEMENT	9,973,843	\$1,049,049,000	2.14	900,703	5.53%	13F	5/17/2021	Q1 2020
STATE STREET CORP	8,244,469	\$867,153,000	0.05	76,166	4.57%	13F	5/17/2021	Q4 2011
IIMPAX ASSET MANAGEMENT GROUP	6,257,303	\$657,155,000	3.36	730,006	3.47%	13F	5/14/2021	Q3 2018
PARNASSUS INVESTMENTS	6,076,124	\$639,087,000	1.55	317,517	3.37%	13F	5/6/2021	Q3 2013
PICTET ASSET MANAGEMENT	4,338,382	\$456,311,000	0.55	263,021	2.41%	13F	5/17/2021	Q4 2011
BANK OF AMERICA CORP	3,122,281	\$328,402,000	0.04	86,729	1.73%	13F	5/14/2021	Q4 2011
GEODE CAPITAL MANAGEMENT	3,003,593	\$315,064,000	0.05	80,258	1.67%	13F	5/12/2021	Q4 2011
Invesco Ltd.	2,876,144	\$302,513,000	0.08	675,261	1.59%	13F	5/17/2021	Q4 2011
<b>Total</b>	<b>80,894,080</b>	<b>\$ 8,506,599,000.00</b>		<b>3,278,876</b>	<b>44.85%</b>			

### Appendix 3: U.S Institutional Investors XYL Ownership Change

Q1 2021	All 13F Filers	Prior	Change
Funds Holding:	721	713	1.12%
13F shares:	149.757 Million	154.663 Million	-3.17%
% Ownership	83.0328	85.8134	-3.24%
New Positions:	74	116	-36.21%
Increased Positions	281	260	8.08%
Closed Positions	56	33	69.70%
Reduced Positions	227	216	5.09%
PUT/CALL Ratio	0.75	0.54	38.89%

### Appendix 4: XYL Geographic Footprint



### Appendix 5: - Xylem Inc's Major Insider Trading Volume

Filing Date	Insider Name	Title	Trade Type	Price	Qty	Owned	ΔOwn	Value
10/6/2020	Flinton David	SVP and Chief Innovation	S - Sale+OE	\$86.05	-33,386	23,028	-59%	(\$2,872,846)
2/14/2020	Loranger Steven R	Dir	S - Sale	\$88.61	-30,000	114,251	-21%	(\$2,658,378)
12/31/2020	Toussaint Claudia S	SVP, GC, Corporate Secretary	S - Sale+OE	\$100.60	-21,923	49,066	-31%	(\$2,205,528)
6/8/2021	Flinton David	SVP	S - Sale	\$118.78	-13,966	12,333	-53%	(\$1,658,912)
9/15/2020	Loranger Steven R	Dir	S - Sale	\$83.95	-18,388	81,541	-18%	(\$1,543,623)
8/12/2020	Tambakeras Markos I	Dir	S - Sale	\$79.50	-19,000	93,038	-17%	(\$1,510,522)
3/12/2020	Flinton David	SVP	S - Sale+OE	\$74.14	-15,105	26,757	-36%	(\$1,119,942)
11/6/2020	Tarapore Kairus	SVP, CHRO	S - Sale+OE	\$91.15	-8,138	14,867	-35%	(\$741,780)
12/16/2020	Sabol Colin R	SVP	S - Sale+OE	\$98.31	-7,263	27,052	-21%	(\$714,007)
5/18/2021	Toussaint Claudia S	SVP,CSO,GC, Corp Sec	S - Sale+OE	\$117.47	-5,948	53,109	-10%	(\$698,679)

S - Sale: Sale of securities on an exchange or to another person.

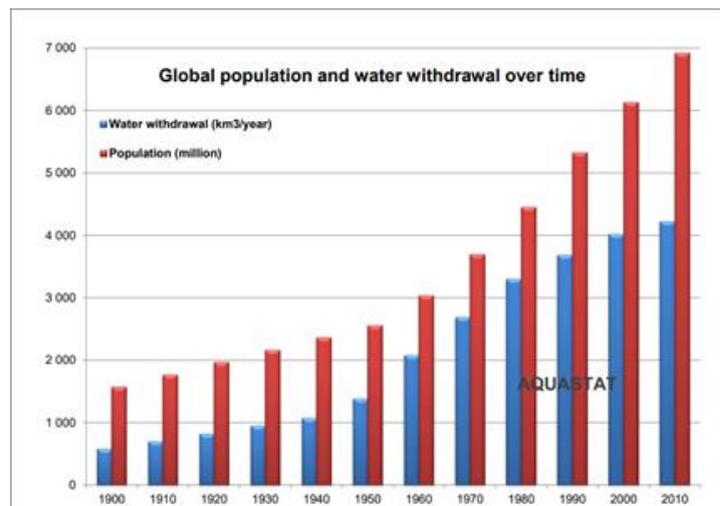
S - Sale+OE: Sale of securities on an exchange or to another person (after option exercise).

## Appendix 6: XYL 2025 Sustainability Goals

2025 Goals	Customers	Company	Communities
	Reduce over 3.5Bn m3 of nonrevenue water, equivalent to the domestic water use needs of over 55M people annually	Ensure 100 percent of Xylem employees have access to clean water and safe sanitation at work, at home and during natural disasters	Give 1 percent of their company profits to waterrelated causes and education
	Treat 13Bn m3 of water for reuse, equivalent to the domestic water use needs of over 197M people annually	Use 100 percent renewable energy at their major facilities	Provide paid time off for Xylem employees to volunteer 1 percent of their time
	Prevent over 7Bn m3 of polluted water from flooding communities or entering local waterways	Use 100 percent process water recycling at their major facilities	
	Provide access to clean water and sanitation solutions for at least 20M people living at the base of the global economic pyramid		

Source: XYL 2020 Sustainability Report

## Appendix 7: Global Population and Water Withdrawal over the past century



Source: AQUASTAT

## Appendix 8: Xylem Inc's Competitors by Business Segment

Xylem Inc's competitors for each segment		Water Infrastructure				Applied Water		Measurement & Control		
Ticker	XYL	DHR*	SUN	AQUA	KSB	PNR	FELE	TDY	ITRI	BMI
Headquarters	U.S	U.S	Switzerland	U.S	Germany	U.S	U.S	U.S	U.S	U.S
Market Cap. (US\$)	\$21.7B	\$197.7B	\$4.3B	\$3.8B	\$0.68B	\$11.6B	\$3.7B	\$20.1B	\$4.8B	\$2.9B
EV/EBITDA	25.4x	26.1x	12.9x	17.6x	3.8x	19.8x	19.7x	28.5x	23.5x	30.2x
P/E Ratio	71.7x	43.7x	52.7x	61.9x	N/A	28.4x	32.8x	40.0x	N/A	57.6x
Adjusted EBIT Margin	11.0%	24.4%	6.3%	9.3%	3.7%	16.7%	10.9%	17.60%	4.10%	15.4%
Debt/Capital	51.5%	34.5%	56.8%	64.3%	10.5%	31.7%	12.9%	50.3%	25.8%	2.1%
Dividend Yield	0.9%	0.3%	N/A	N/A	N/A	1.1%	0.9%	N/A	N/A	0.7%
ROIC	6.2%	6.3%	4.1%	5.8%	5.9%	10.0%	9.4%	6.5%	2.4%	11.5%
WACC (Bloomberg)	8.4%	8.0%								
Current Ratio	1.8x	2.1x	1.6x	2.1x	2.1x	1.5x	3.0x	6.6x	1.4x	2.8x
Interest Coverage Ratio	6.9x	30.4x	9.6x	3.6x	16.3x	24.0x	32.1x	11.7x	2.0x	11,126.0x

As of 13/07/21

\*: also Measurement & Control competitor

adicionar adjusted EBIT para cada segment XYL no texto

Source: XYL 2020 10K

## Appendix 9: Income Statement

In Millions, excepts per share data Year Ended December 31,	HISTORICAL DATA						FORECASTS						CAGR 20-27	
	2015	2016	2017	2018	2019	2020	2021FY	2022FY	2023FY	2024FY	2025FY	2026FY		2027FY
<b>Revenue per Segment</b>														
<b>Water Infrastructure</b>	\$ 2,231.00	\$ 2,246.00	\$ 2,004.00	\$ 2,176.00	\$ 2,177.00	\$ 2,079.00	\$ 2,245.32	\$ 2,391.27	\$ 2,486.92	\$ 2,573.96	\$ 2,664.05	\$ 2,757.29	\$ 2,853.79	4.63%
Transport	\$ 1,624.00	\$ 1,599.00	\$ 1,660.00	\$ 1,779.00	\$ 1,780.00	\$ 1,679.00	\$ 1,813.32	\$ 1,931.19	\$ 2,008.43	\$ 2,078.73	\$ 2,151.48	\$ 2,226.79	\$ 2,304.72	4.63%
Treatment	\$ 316.00	\$ 333.00	\$ 344.00	\$ 397.00	\$ 397.00	\$ 400.00	\$ 432.00	\$ 460.08	\$ 478.48	\$ 495.23	\$ 512.56	\$ 530.50	\$ 549.07	4.63%
Test	\$ 291.00	\$ 314.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-
<b>Applied Water</b>	\$ 1,422.00	\$ 1,393.00	\$ 1,421.00	\$ 1,534.00	\$ 1,541.00	\$ 1,434.00	\$ 1,606.08	\$ 1,686.38	\$ 1,753.84	\$ 1,823.99	\$ 1,896.95	\$ 1,972.83	\$ 2,051.74	5.25%
Building Services	\$ 774.00	\$ 764.00	\$ 828.00	\$ 706.00	\$ 848.00	\$ 804.00	\$ 900.48	\$ 945.50	\$ 983.32	\$ 1,022.66	\$ 1,063.56	\$ 1,106.11	\$ 1,150.35	5.25%
Industrial Water	\$ 562.00	\$ 540.00	\$ 593.00	\$ 828.00	\$ 693.00	\$ 630.00	\$ 705.60	\$ 740.88	\$ 770.52	\$ 801.34	\$ 833.39	\$ 866.72	\$ 901.39	5.25%
Irrigation	\$ 86.00	\$ 89.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-
<b>Measurement &amp; Control Solutions</b>	\$ -	\$ 132.00	\$ 1,282.00	\$ 1,497.00	\$ 1,531.00	\$ 1,363.00	\$ 1,431.15	\$ 1,574.27	\$ 1,676.59	\$ 1,777.19	\$ 1,866.05	\$ 1,959.35	\$ 2,057.32	6.06%
Water	\$ -	\$ 74.00	\$ 573.00	\$ 692.00	\$ 768.00	\$ 689.00	\$ 723.45	\$ 795.80	\$ 847.52	\$ 898.37	\$ 943.29	\$ 990.46	\$ 1,039.98	6.06%
Energy	\$ -	\$ 43.00	\$ 266.00	\$ 338.00	\$ 337.00	\$ 276.00	\$ 289.80	\$ 318.78	\$ 339.50	\$ 359.87	\$ 377.86	\$ 396.76	\$ 416.60	6.06%
Test	\$ -	\$ -	\$ 325.00	\$ 344.00	\$ 327.00	\$ 306.00	\$ 321.30	\$ 353.43	\$ 376.40	\$ 398.99	\$ 418.94	\$ 439.88	\$ 461.88	6.06%
Software as a Service	\$ -	\$ 15.00	\$ 118.00	\$ 123.00	\$ 99.00	\$ 92.00	\$ 96.60	\$ 106.26	\$ 113.17	\$ 119.96	\$ 125.95	\$ 132.25	\$ 138.87	6.06%
<b>Total Revenue</b>	\$ 3,653.00	\$ 3,771.00	\$ 4,707.00	\$ 5,207.00	\$ 5,249.00	\$ 4,876.00	\$ 5,282.55	\$ 5,651.91	\$ 5,917.35	\$ 6,175.14	\$ 6,427.05	\$ 6,689.47	\$ 6,962.85	5.22%
Cost of Revenue (COGS)	\$ 2,249.00	\$ 2,310.00	\$ 2,856.00	\$ 3,181.00	\$ 3,203.00	\$ 3,046.00	\$ 3,169.53	\$ 3,391.15	\$ 3,491.24	\$ 3,581.58	\$ 3,727.69	\$ 3,799.62	\$ 3,899.20	3.59%
<b>Gross Profit</b>	\$ 1,404.00	\$ 1,461.00	\$ 1,851.00	\$ 2,026.00	\$ 2,046.00	\$ 1,830.00	\$ 2,113.02	\$ 2,260.77	\$ 2,426.11	\$ 2,595.56	\$ 2,699.36	\$ 2,889.85	\$ 3,063.66	7.64%
SG&A expenses	\$ 854.00	\$ 915.00	\$ 1,090.00	\$ 1,161.00	\$ 1,158.00	\$ 1,143.00	\$ 1,214.99	\$ 1,243.42	\$ 1,301.82	\$ 1,296.78	\$ 1,253.27	\$ 1,271.00	\$ 1,253.31	1.32%
R&D expenses	\$ 95.00	\$ 110.00	\$ 180.00	\$ 189.00	\$ 191.00	\$ 187.00	\$ 205.70	\$ 226.27	\$ 248.90	\$ 273.79	\$ 301.17	\$ 331.28	\$ 364.41	10.00%
Restructuring and asset impairment charges	\$ 6.00	\$ 30.00	\$ 25.00	\$ 22.00	\$ 63.00	\$ 75.00	\$ 60.00	\$ 60.00	\$ 60.00	\$ 60.00	\$ 60.00	\$ 60.00	\$ 60.00	-3.14%
Goodwill impairment charge	\$ -	\$ -	\$ -	\$ -	\$ 148.00	\$ 58.00	\$ -	\$ 53.50	\$ 53.50	\$ -	\$ -	\$ -	\$ -	-
<b>Operating Income</b>	\$ 449.00	\$ 406.00	\$ 556.00	\$ 654.00	\$ 486.00	\$ 367.00	\$ 632.33	\$ 677.57	\$ 761.90	\$ 962.99	\$ 1,084.92	\$ 1,227.57	\$ 1,385.93	20.90%
Interest expense	\$ 55.00	\$ 70.00	\$ 82.00	\$ 82.00	\$ 67.00	\$ 77.00	\$ 80.00	\$ 137.00	\$ 110.00	\$ 110.00	\$ 150.00	\$ 150.00	\$ 170.00	11.98%
Other non-operating expense, net	\$ -	\$ -	\$ -	\$ -	\$ 4.00	\$ 4.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-
Other non-operating income, net	\$ -	\$ 4.00	\$ 2.00	\$ 13.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-
Loss on sale of business	\$ -	\$ -	\$ 10.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-
Gain on sale of business	\$ 9.00	\$ -	\$ -	\$ -	\$ 1.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-
<b>Income before taxes</b>	\$ 403.00	\$ 340.00	\$ 466.00	\$ 585.00	\$ 416.00	\$ 285.00	\$ 552.33	\$ 540.57	\$ 651.90	\$ 852.99	\$ 934.92	\$ 1,077.57	\$ 1,215.93	23.03%
Income tax expense	\$ 63.00	\$ 80.00	\$ 136.00	\$ 36.00	\$ 15.00	\$ 31.00	\$ 99.42	\$ 97.30	\$ 117.34	\$ 153.54	\$ 168.29	\$ 193.96	\$ 218.87	32.21%
<b>Net Income</b>	\$ 340.00	\$ 260.00	\$ 330.00	\$ 549.00	\$ 401.00	\$ 254.00	\$ 452.91	\$ 443.27	\$ 534.56	\$ 699.45	\$ 766.63	\$ 883.61	\$ 997.06	21.57%
<b>Earnings per share:</b>														
Basic	\$ 1.88	\$ 1.45	\$ 1.84	\$ 3.05	\$ 2.23	\$ 1.41	\$ 2.51	\$ 2.46	\$ 2.97	\$ 3.88	\$ 4.26	\$ 4.91	\$ 5.54	21.58%
Diluted	\$ 1.87	\$ 1.45	\$ 1.83	\$ 3.03	\$ 2.21	\$ 1.40	\$ 2.50	\$ 2.45	\$ 2.95	\$ 3.86	\$ 4.23	\$ 4.88	\$ 5.51	21.61%
<b>Weighted average number of shares:</b>														
Basic	180.9	179.1	179.6	179.8	180.0	180.1	180.1	180.1	180.1	180.1	180.1	180.1	180.1	0.00%
Diluted	181.7	180.0	180.9	181.1	181.2	181.1	181.1	181.1	181.1	181.1	181.1	181.1	181.1	0.00%

## Appendix 10: Statement of Financial Position

In Millions, excepts per share amounts Year Ended December 31,	HISTORICAL DATA						FORECASTS						CAGR 20-27	
	2015	2016	2017	2018	2019	2020	2021F	2022F	2023F	2024F	2025F	2026F		2027F
<b>ASSETS</b>														
<b>Current Assets:</b>														
Cash and cash equivalents	\$ 680.00	\$ 308.00	\$ 414.00	\$ 296.00	\$ 724.00	\$ 1,875.00	\$ 1,807.91	\$ 1,844.19	\$ 1,930.79	\$ 2,598.36	\$ 2,915.97	\$ 3,260.58	\$ 3,678.85	10.11%
Receivables, less allowances for discounts, returns and cre	\$ 749.00	\$ 843.00	\$ 956.00	\$ 1,031.00	\$ 1,036.00	\$ 923.00	\$ 999.96	\$ 1,069.88	\$ 1,164.02	\$ 1,214.73	\$ 1,264.29	\$ 1,315.91	\$ 1,369.69	5.80%
Inventories	\$ 433.00	\$ 522.00	\$ 524.00	\$ 595.00	\$ 539.00	\$ 558.00	\$ 582.93	\$ 607.63	\$ 620.32	\$ 636.35	\$ 661.11	\$ 669.29	\$ 683.08	2.93%
Prepaid and other current assets	\$ 143.00	\$ 166.00	\$ 177.00	\$ 172.00	\$ 151.00	\$ 167.00	\$ 167.00	\$ 167.00	\$ 167.00	\$ 167.00	\$ 167.00	\$ 167.00	\$ 167.00	0.00%
<b>Total Current Assets</b>	\$ 2,005	\$ 1,839	\$ 2,071	\$ 2,094	\$ 2,450	\$ 3,523	\$ 3,558	\$ 3,689	\$ 3,882	\$ 4,616	\$ 5,008	\$ 5,412.78	\$ 5,898.62	7.64%
Property, plant and equipment, net	\$ 439.00	\$ 616.00	\$ 643.00	\$ 656.00	\$ 658.00	\$ 657.00	\$ 713.14	\$ 763.01	\$ 798.84	\$ 833.64	\$ 867.65	\$ 903.08	\$ 939.99	5.25%
Goodwill	\$ 1,584.00	\$ 2,632.00	\$ 2,768.00	\$ 2,976.00	\$ 2,839.00	\$ 2,854.00	\$ 2,854.00	\$ 2,800.50	\$ 2,747.00	\$ 2,747.00	\$ 2,747.00	\$ 2,747.00	\$ 2,747.00	-0.54%
Other intangible assets, net	\$ 435.00	\$ 1,201.00	\$ 1,168.00	\$ 1,232.00	\$ 1,174.00	\$ 1,093.00	\$ 1,071.00	\$ 1,056.00	\$ 1,047.00	\$ 1,048.00	\$ 1,052.00	\$ 1,043.80	\$ 1,035.60	-0.77%
Other non-current assets	\$ 194.00	\$ 186.00	\$ 210.00	\$ 264.00	\$ 589.00	\$ 623.00	\$ 674.94	\$ 722.14	\$ 756.05	\$ 788.99	\$ 821.18	\$ 854.70	\$ 889.63	5.22%
<b>Total Assets</b>	\$ 4,657.00	\$ 6,474.00	\$ 6,860.00	\$ 7,222.00	\$ 7,710.00	\$ 8,750.00	\$ 8,870.89	\$ 9,030.34	\$ 9,231.03	\$ 10,034.08	\$ 10,496.19	\$ 10,961.36	\$ 11,510.84	4.00%
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>														
<b>Current Liabilities:</b>														
Accounts Payable	\$ 338.00	\$ 457.00	\$ 549.00	\$ 586.00	\$ 597.00	\$ 569.00	\$ 580.02	\$ 620.58	\$ 638.90	\$ 655.43	\$ 682.17	\$ 695.33	\$ 713.55	3.29%
Accrued and Other current liabilities	\$ 407.00	\$ 521.00	\$ 551.00	\$ 546.00	\$ 628.00	\$ 787.00	\$ 787.00	\$ 787.00	\$ 787.00	\$ 787.00	\$ 787.00	\$ 787.00	\$ 787.00	0.00%
Short-term borrowings and current maturities of long-term	\$ 78.00	\$ 260.00	\$ -	\$ 257.00	\$ 276.00	\$ 600.00	\$ 600.00	\$ 612.00	\$ 600.00	\$ 600.00	\$ 500.00	\$ 500.00	\$ 500.00	-2.57%
<b>Total Current Liabilities</b>	\$ 823.00	\$ 1,238.00	\$ 1,100.00	\$ 1,389.00	\$ 1,501.00	\$ 1,956.00	\$ 1,967.02	\$ 2,019.58	\$ 2,025.90	\$ 2,042.43	\$ 1,969.17	\$ 1,982.33	\$ 2,000.55	0.32%
Long-term debt, net	\$ 1,196.00	\$ 2,108.00	\$ 2,200.00	\$ 2,051.00	\$ 2,040.00	\$ 2,484.00	\$ 2,315.98	\$ 2,149.21	\$ 2,022.44	\$ 2,500.00	\$ 2,900.00	\$ 3,100.00	\$ 3,400.00	4.59%
Accrued post-retirement benefits	\$ 335.00	\$ 408.00	\$ 442.00	\$ 400.00	\$ 445.00	\$ 519.00	\$ 560.00	\$ 602.00	\$ 645.00	\$ 688.00	\$ 733.00	\$ 778.00	\$ 823.00	6.81%
Deferred income tax liabilities	\$ 118.00	\$ 352.00	\$ 252.00	\$ 303.00	\$ 310.00	\$ 242.00	\$ 242.00	\$ 242.00	\$ 242.00	\$ 242.00	\$ 242.00	\$ 242.00	\$ 242.00	0.00%
Other non-current accrued liabilities	\$ 101.00	\$ 161.00	\$ 347.00	\$ 297.00	\$ 447.00	\$ 573.00	\$ 573.00	\$ 573.00	\$ 573.00	\$ 573.00	\$ 573.00	\$ 573.00	\$ 573.00	0.00%
<b>Total Liabilities</b>	\$ 2,573.00	\$ 4,267.00	\$ 4,341.00	\$ 4,440.00	\$ 4,743.00	\$ 5,774.00	\$ 5,658.00	\$ 5,585.79	\$ 5,508.34	\$ 6,045.43	\$ 6,417.17	\$ 6,675.33	\$ 7,038.55	2.87%
<b>Stockholders' Equity:</b>														
Common stock - par value \$0.01 per share:														
Authorized issued shares	\$ 2.00	\$ 2.00	\$ 2.00	\$ 2.00	\$ 2.00	\$ 2.00	\$ 2.00	\$ 2.00	\$ 2.00	\$ 2.00	\$ 2.00	\$ 2.00	\$ 2.00	0.00%
Capital in excess of par value	\$ 1,834.00	\$ 1,876.00	\$ 1,912.00	\$ 1,950.00	\$ 1,991.00	\$ 2,037.00	\$ 2,079.78	\$ 2,123.45	\$ 2,168.04	\$ 2,213.57	\$ 2,260.06	\$ 2,307.52	\$ 2,355.98	2.10%
Retained earnings	\$ 885.00	\$ 1,033.00	\$ 1,227.00	\$ 1,639.00	\$ 1,866.00	\$ 1,930.00	\$ 2,182.91	\$ 2,435.58	\$ 2,740.28	\$ 3,138.96	\$ 3,575.95	\$ 4,079.60	\$ 4,647.93	13.38%
Treasury stock cost	\$ 399.00	\$ 403.00	\$ 428.00	\$ 487.00	\$ 527.00	\$ 588.00	\$ 646.80	\$ 711.48	\$ 782.63	\$ 860.89	\$ 1,353.98	\$ 1,698.09	\$ 2,128.62	20.18%
Accumulated other comprehensive loss	\$ 238.00	\$ 318.00	\$ 210.00	\$ 336.00	\$ 375.00	\$ 413.00	\$ 413.00	\$ 413.00	\$ 413.00	\$ 413.00	\$ 413.00	\$ 413.00	\$ 413.00	0.00%
<b>Total stockholders' equity</b>	\$ 2,084.00	\$ 2,190.00	\$ 2,503.00	\$ 2,768.00	\$ 2,957.00	\$ 2,968.00	\$ 3,204.89	\$ 3,436.55	\$ 3,714.69	\$ 3,980.65	\$ 4,071.02	\$ 4,278.03	\$ 4,464.29	6.01%
Non-controlling interest	\$ -	\$ 17.00	\$ 16.00	\$ 14.00	\$ 10.00	\$ 8.00	\$ 8.00	\$ 8.00	\$ 8.00	\$ 8.00	\$ 8.00	\$ 8.00	\$ 8.00	0.00%
<b>Total equity</b>	\$ 2,084.00	\$ 2,207.00	\$ 2,519.00	\$ 2,782.00	\$ 2,967.00	\$ 2,976.00	\$ 3,212.89	\$ 3,444.55	\$ 3,722.69	\$ 3,988.65	\$ 4,079.02	\$ 4,286.03	\$ 4,472.29	5.99%
<b>Total liabilities and stockholders' equity</b>	\$ 4,657.00	\$ 6,474.00	\$ 6,860.00	\$ 7,222.00	\$ 7,710.00	\$ 8,750.00	\$ 8,870.89	\$ 9,030.34	\$ 9,231.03	\$ 10,034.08	\$ 10,496.19	\$ 10,961.36	\$ 11,510.84	4.00%

## Appendix 11: Cash Flow Statement

Year Ended December 31,	HISTORICAL DATA										FORECASTS				CAGR 20-27
	2015	2016	2017	2018	2019	2020	2021F	2022F	2023F	2024F	2025F	2026F	2027F		
<b>Operating Activities</b>															
Net Income	\$ 340.00	\$ 260.00	\$ 330.00	\$ 549.00	\$ 401.00	\$ 254.00	\$ 452.91	\$ 443.27	\$ 534.56	\$ 699.45	\$ 766.63	\$ 883.61	\$ 997.06	21.57%	
Adjustments to reconcile net income to net cash provided by operating activities:															
Depreciation	\$ 88.00	\$ 87.00	\$ 109.00	\$ 117.00	\$ 117.00	\$ 117.00	\$ 119.50	\$ 131.37	\$ 139.78	\$ 145.85	\$ 152.21	\$ 158.33	\$ 164.81	5.02%	
Amortization	\$ 45.00	\$ 64.00	\$ 125.00	\$ 144.00	\$ 140.00	\$ 134.00	\$ 128.00	\$ 121.00	\$ 115.00	\$ 105.00	\$ 102.00	\$ 114.20	\$ 114.20	-2.26%	
Deferred income taxes	\$ (9.00)	\$ 14.00	\$ (33.00)	\$ (47.00)	\$ (77.00)	\$ (31.00)	\$ (31.00)	\$ (31.00)	\$ (31.00)	\$ (31.00)	\$ (31.00)	\$ (31.00)	\$ (31.00)	0.00%	
Share-based compensation	\$ 15.00	\$ 18.00	\$ 21.00	\$ 30.00	\$ 29.00	\$ 26.00	\$ 26.00	\$ 26.00	\$ 26.00	\$ 26.00	\$ 26.00	\$ 26.00	\$ 26.00	0.00%	
Restructuring and asset impairment charges	\$ 6.00	\$ 30.00	\$ 25.00	\$ 22.00	\$ 63.00	\$ 75.00	\$ 60.00	\$ 60.00	\$ 60.00	\$ 60.00	\$ 60.00	\$ 60.00	\$ 60.00	-3.14%	
Goodwill impairment charge	\$ -	\$ -	\$ -	\$ -	\$ 148.00	\$ 58.00	\$ -	\$ 53.50	\$ 53.50	\$ -	\$ -	\$ -	\$ -	-	
Loss/gain from sale of business	\$ (9.00)	\$ -	\$ 10.00	\$ -	\$ (1.00)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-	
Other, net	\$ 12.00	\$ 6.00	\$ 19.00	\$ 9.00	\$ 9.00	\$ 46.00	\$ 16.83	\$ 16.83	\$ 16.83	\$ 16.83	\$ 16.83	\$ 16.83	\$ 16.83	-13.38%	
Payments for restructuring	\$ (14.00)	\$ (16.00)	\$ (28.00)	\$ (21.00)	\$ (30.00)	\$ (36.00)	\$ (36.00)	\$ (36.00)	\$ (36.00)	\$ (36.00)	\$ (36.00)	\$ (36.00)	\$ (36.00)	0.00%	
Contributions to postretirement benefit plans	\$ (25.00)	\$ (27.00)	\$ (33.00)	\$ (41.00)	\$ (19.00)	\$ (27.00)	\$ (27.00)	\$ (27.00)	\$ (27.00)	\$ (27.00)	\$ (27.00)	\$ (27.00)	\$ (27.00)	0.00%	
Change in assets and liabilities (net of acquisitions):															
Changes in receivables	\$ (24.00)	\$ (6.00)	\$ (79.00)	\$ (103.00)	\$ (23.00)	\$ 109.00	\$ (76.96)	\$ (69.92)	\$ (94.15)	\$ (50.71)	\$ (49.55)	\$ (51.62)	\$ (53.78)	-	
Changes in inventories	\$ 23.00	\$ (15.00)	\$ 27.00	\$ (97.00)	\$ 47.00	\$ (5.00)	\$ (24.93)	\$ (24.70)	\$ (12.69)	\$ (16.03)	\$ (24.76)	\$ (8.18)	\$ (13.79)	15.59%	
Changes in accounts payable	\$ 20.00	\$ 61.00	\$ 50.00	\$ 51.00	\$ 29.00	\$ (39.00)	\$ 11.02	\$ 40.56	\$ 18.32	\$ 16.53	\$ 26.74	\$ 13.16	\$ 18.22	-	
Changes in accrued liabilities	\$ (11.00)	\$ 13.00	\$ 28.00	\$ (6.00)	\$ 15.00	\$ 101.00	\$ 41.00	\$ 42.00	\$ 43.00	\$ 43.00	\$ 45.00	\$ 45.00	\$ 45.00	-10.91%	
Changes in accrued taxes	\$ (3.00)	\$ (13.00)	\$ 104.00	\$ -	\$ (13.00)	\$ 20.00	\$ 20.00	\$ 20.00	\$ 20.00	\$ 20.00	\$ 20.00	\$ 20.00	\$ 20.00	-	
Net changes in other assets and liabilities	\$ 10.00	\$ 21.00	\$ 11.00	\$ (21.00)	\$ 4.00	\$ 22.00	\$ 22.00	\$ 22.00	\$ 22.00	\$ 22.00	\$ 22.00	\$ 22.00	\$ 22.00	0.00%	
Net Cash - Operating activities	\$ 464.00	\$ 497.00	\$ 686.00	\$ 586.00	\$ 839.00	\$ 824.00	\$ 701.39	\$ 787.91	\$ 848.15	\$ 993.93	\$ 1,069.10	\$ 1,205.33	\$ 1,322.57	6.95%	
<b>Investing Activities</b>															
Capital expenditures	\$ (117.00)	\$ (124.00)	\$ (170.00)	\$ (237.00)	\$ (226.00)	\$ (183.00)	\$ (220.00)	\$ (181.24)	\$ (175.61)	\$ (180.65)	\$ (186.22)	\$ (193.75)	\$ (201.72)	1.40%	
Acquisitions of businesses and assets, net of cash acquired	\$ (18.00)	\$ (1,782.00)	\$ (33.00)	\$ (433.00)	\$ (18.00)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-	
Proceeds from sale of business	\$ -	\$ 1.00	\$ 1.00	\$ 22.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-	
Cash received from investments	\$ 1.00	\$ -	\$ 16.00	\$ 11.00	\$ 11.00	\$ 200.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-	
Cash paid for investments	\$ -	\$ -	\$ 10.00	\$ (11.00)	\$ (7.00)	\$ (200.00)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-	
Cash received from cross-currency swaps	\$ -	\$ -	\$ (11.00)	\$ -	\$ 9.00	\$ 12.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-	
Other, net	\$ 2.00	\$ 19.00	\$ 6.00	\$ 5.00	\$ -	\$ 2.00	\$ 2.00	\$ 2.00	\$ 2.00	\$ 2.00	\$ 2.00	\$ 2.00	\$ 2.00	0.00%	
Net Cash - Investing activities	\$ (132.00)	\$ (1,886.00)	\$ (181.00)	\$ (643.00)	\$ (231.00)	\$ (169.00)	\$ (218.00)	\$ (179.24)	\$ (173.61)	\$ (178.65)	\$ (184.22)	\$ (191.75)	\$ (199.72)	2.41%	
<b>Financing Activities</b>															
Short-term debt issued, net	\$ -	\$ 274.00	\$ -	\$ 335.00	\$ 281.00	\$ 359.00	\$ 292.49	\$ 267.06	\$ 297.23	\$ 418.27	\$ 318.34	\$ 433.58	\$ 432.59	2.70%	
Short-term debt repaid, net	\$ (3.00)	\$ (80.00)	\$ (282.00)	\$ (52.00)	\$ (254.00)	\$ (640.00)	\$ (600.00)	\$ (600.00)	\$ (600.00)	\$ (600.00)	\$ (600.00)	\$ (600.00)	\$ (600.00)	-0.92%	
Long-term debt issued, net	\$ -	\$ 1,540.00	\$ -	\$ 1.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 497.22	\$ 421.30	\$ 204.68	\$ 304.27	-	
Long-term debt repaid, net	\$ -	\$ (608.00)	\$ -	\$ (120.00)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-	
Repurchase of common stock	\$ (179.00)	\$ (4.00)	\$ (25.00)	\$ (59.00)	\$ (40.00)	\$ (61.00)	\$ (58.80)	\$ (64.68)	\$ (71.15)	\$ (178.26)	\$ (393.09)	\$ (344.11)	\$ (430.53)	32.20%	
Proceeds from exercise of employee stock options	\$ 21.00	\$ 24.00	\$ 16.00	\$ 7.00	\$ 13.00	\$ 20.00	\$ 16.83	\$ 16.83	\$ 16.83	\$ 16.83	\$ 16.83	\$ 16.83	\$ 16.83	-2.43%	
Excess tax benefit from share based compensation	\$ 2.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1.00	\$ 2.00	-	
Dividends paid	\$ (102.00)	\$ (112.00)	\$ (130.00)	\$ (152.00)	\$ (174.00)	\$ (188.00)	\$ (200.00)	\$ (190.61)	\$ (229.86)	\$ (300.77)	\$ (329.65)	\$ (379.95)	\$ (428.74)	12.50%	
Other, net	\$ (1.00)	\$ -	\$ -	\$ -	\$ (3.00)	\$ (2.00)	\$ (1.00)	\$ (1.00)	\$ (1.00)	\$ (1.00)	\$ (1.00)	\$ (1.00)	\$ (1.00)	-	
Net Cash - Financing activities	\$ (262.00)	\$ 1,034.00	\$ (421.00)	\$ (40.00)	\$ (177.00)	\$ 473.00	\$ (550.48)	\$ (572.39)	\$ (587.94)	\$ (147.70)	\$ (567.27)	\$ (668.97)	\$ (704.57)	-205.86%	
<b>Effect of exchange rate changes on cash</b>	\$ (53.00)	\$ (17.00)	\$ 22.00	\$ (21.00)	\$ (3.00)	\$ 23.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-	
Net change in cash and cash equivalents	\$ 17.00	\$ (372.00)	\$ 106.00	\$ (118.00)	\$ 428.00	\$ 1,151.00	\$ (67.09)	\$ 36.28	\$ 86.59	\$ 667.57	\$ 317.61	\$ 344.61	\$ 418.27	-13.46%	
Cash and cash equivalents at beginning of year	\$ 663.00	\$ 680.00	\$ 308.00	\$ 414.00	\$ 296.00	\$ 724.00	\$ 1,875.00	\$ 1,807.91	\$ 1,844.19	\$ 1,930.79	\$ 2,598.36	\$ 2,915.97	\$ 3,260.58	23.98%	
Cash and cash equivalents at end of year	\$ 680.00	\$ 308.00	\$ 414.00	\$ 296.00	\$ 724.00	\$ 1,875.00	\$ 1,807.91	\$ 1,844.19	\$ 1,930.79	\$ 2,598.36	\$ 2,915.97	\$ 3,260.58	\$ 3,678.85	10.11%	

## Appendix 12: Common-size Income Statement

In Millions, excepts per share data	HISTORICAL DATA										FORECASTS			
	2015	2016	2017	2018	2019	2020	2021F	2022F	2023F	2024F	2025F	2026F	2027F	
<b>Revenue per Segment</b>														
<b>Water Infrastructure</b>	61.07%	59.56%	42.57%	41.79%	41.47%	42.64%	42.50%	42.31%	42.03%	41.68%	41.45%	41.22%	40.99%	
Transport	44.46%	42.40%	35.27%	34.17%	33.91%	34.43%	34.33%	34.17%	33.94%	33.66%	33.48%	33.29%	33.10%	
Treatment	8.65%	8.83%	7.31%	7.62%	7.56%	8.20%	8.18%	8.14%	8.09%	8.02%	7.98%	7.93%	7.89%	
Test	7.97%	8.33%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
<b>Applied Water</b>	38.93%	36.94%	30.19%	29.46%	29.36%	29.41%	30.40%	29.84%	29.64%	29.54%	29.52%	29.49%	29.47%	
Building Services	21.19%	20.26%	17.59%	13.56%	16.16%	16.49%	17.05%	16.73%	16.62%	16.56%	16.55%	16.54%	16.52%	
Industrial Water	15.38%	14.32%	12.60%	15.90%	13.20%	12.92%	13.36%	13.11%	13.02%	12.98%	12.97%	12.96%	12.95%	
Irrigation	2.35%	2.36%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
<b>Measurement &amp; Control Solutions</b>	0.00%	3.50%	27.24%	28.75%	29.17%	27.95%	27.09%	27.85%	28.33%	28.78%	29.03%	29.29%	29.55%	
Water	0.00%	1.96%	12.17%	13.29%	14.63%	14.13%	13.70%	14.08%	14.32%	14.55%	14.68%	14.81%	14.94%	
Energy	0.00%	1.14%	5.65%	6.49%	6.42%	5.66%	5.49%	5.64%	5.74%	5.83%	5.88%	5.93%	5.98%	
Test	0.00%	0.00%	6.90%	6.61%	6.23%	6.28%	6.08%	6.25%	6.36%	6.46%	6.52%	6.58%	6.63%	
Software as a Service	0.00%	0.40%	2.51%	2.36%	1.89%	1.89%	1.83%	1.88%	1.91%	1.94%	1.96%	1.98%	1.99%	
<b>Total Revenue</b>	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	
Cost of Revenue (COGS)	61.57%	61.26%	60.68%	61.09%	61.02%	62.47%	60.00%	60.00%	59.00%	58.00%	58.00%	56.80%	56.00%	
<b>Gross Profit</b>	38.43%	38.74%	39.32%	38.91%	38.98%	37.53%	40.00%	40.00%	41.00%	42.00%	42.00%	43.20%	44.00%	
SG&A expenses	23.38%	24.26%	23.16%	22.30%	22.06%	23.44%	23.00%	22.00%	22.00%	21.00%	19.50%	19.00%	18.00%	
R&D expenses	2.60%	2.92%	3.82%	3.63%	3.64%	3.84%	3.89%	4.00%	4.21%	4.43%	4.69%	4.95%	5.23%	
Restructuring and asset impairment	0.16%	0.80%	0.53%	0.42%	1.20%	1.54%	1.14%	1.06%	1.01%	0.97%	0.93%	0.90%	0.86%	
Goodwill impairment charge	0.00%	0.00%	0.00%	0.00%	2.82%	1.19%	0.00%	0.95%	0.90%	0.00%	0.00%	0.00%	0.00%	
<b>Operating Income</b>	12.29%	10.77%	11.81%	12.56%	9.26%	7.53%	11.97%	11.99%	12.88%	15.59%	16.88%	18.35%	19.90%	
Interest expense	1.51%	1.86%	1.74%	1.57%	1.28%	1.58%	1.51%	2.42%	1.86%	1.78%	2.33%	2.24%	2.44%	
Other non-operating expense, net	0.00%	0.00%	0.00%	0.00%	0.08%	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Other non-operating income, net	0.00%	0.11%	0.04%	0.25%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Loss on sale of business	0.00%	0.00%	0.21%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Gain on sale of business	0.25%	0.00%	0.00%	0.00%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
<b>Income before taxes</b>	11.03%	9.02%	9.90%	11.23%	7.93%	5.84%	10.46%	9.56%	11.02%	13.81%	14.55%	16.11%	17.46%	
Income tax expense	1.72%	2.12%	2.89%	0.69%	0.29%	0.64%	1.88%	1.72%	1.98%	2.49%	2.62%	2.90%	3.14%	
<b>Net Income</b>	9.31%	6.89%	7.01%	10.54%	7.64%	5.21%	8.57%	7.84%	9.03%	11.33%	11.93%	13.21%	14.32%	

## Appendix 13: Common-size Statement of Financial Position

In Millions, excepts per share amounts Year Ended December 31,	HISTORICAL DATA								FORECASTS				
	2015	2016	2017	2018	2019	2020	2021F	2022F	2023F	2024F	2025F	2026F	2027F
<b>ASSETS</b>													
Current Assets:													
Cash and cash equivalents	14.60%	4.76%	6.03%	4.10%	9.39%	21.43%	20.38%	20.42%	20.92%	25.90%	27.78%	29.75%	31.96%
Receivables, less allowances for discounts, returns and allowances	16.08%	13.02%	13.94%	14.28%	13.44%	10.55%	11.27%	11.85%	12.61%	12.11%	12.05%	12.00%	11.90%
Inventories	9.30%	8.06%	7.64%	8.24%	6.99%	6.38%	6.57%	6.73%	6.72%	6.34%	6.30%	6.11%	5.93%
Prepaid and other current assets	3.07%	2.56%	2.58%	2.38%	1.96%	1.91%	1.88%	1.85%	1.81%	1.66%	1.59%	1.52%	1.45%
<b>Total Current Assets</b>	<b>43.05%</b>	<b>28.41%</b>	<b>30.19%</b>	<b>28.99%</b>	<b>31.78%</b>	<b>40.26%</b>	<b>40.11%</b>	<b>40.85%</b>	<b>42.06%</b>	<b>46.01%</b>	<b>47.72%</b>	<b>49.38%</b>	<b>51.24%</b>
Property, plant and equipment, net	9.43%	9.51%	9.37%	9.08%	8.53%	7.51%	8.04%	8.45%	8.65%	8.31%	8.27%	8.24%	8.17%
Goodwill	34.01%	40.65%	40.35%	41.21%	36.82%	32.62%	32.17%	31.01%	29.76%	27.38%	26.17%	25.06%	23.86%
Other intangible assets, net	9.34%	18.55%	17.03%	17.06%	15.23%	12.49%	12.07%	11.69%	11.34%	10.44%	10.02%	9.52%	9.00%
Other non-current assets	4.17%	2.87%	3.06%	3.66%	7.64%	7.12%	7.61%	8.00%	8.19%	7.86%	7.82%	7.80%	7.73%
<b>Total Assets</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>													
Current Liabilities:													
Accounts Payable	13.14%	10.71%	12.65%	13.20%	12.59%	9.85%	10.25%	11.11%	11.60%	10.84%	10.63%	10.42%	10.14%
Accrued and Other current liabilities	15.82%	12.21%	12.69%	12.30%	13.24%	13.63%	13.91%	14.09%	14.29%	13.02%	12.26%	11.79%	11.18%
Short-term borrowings and current maturities of long-term debt	3.03%	6.09%	0.00%	5.79%	5.82%	10.39%	10.60%	10.96%	10.89%	9.92%	7.79%	7.49%	7.10%
<b>Total Current Liabilities</b>	<b>31.99%</b>	<b>29.01%</b>	<b>25.34%</b>	<b>31.28%</b>	<b>31.65%</b>	<b>33.88%</b>	<b>34.77%</b>	<b>36.16%</b>	<b>36.78%</b>	<b>33.78%</b>	<b>30.69%</b>	<b>29.70%</b>	<b>28.42%</b>
Long-term debt, net	46.48%	49.40%	50.68%	46.19%	43.01%	43.02%	40.93%	38.48%	36.72%	41.35%	45.19%	46.44%	48.31%
Accrued post-retirement benefits	13.02%	9.56%	10.18%	9.01%	9.38%	8.99%	9.90%	10.78%	11.71%	11.38%	11.42%	11.65%	11.69%
Deferred income tax liabilities	4.59%	8.25%	5.81%	6.82%	6.54%	4.19%	4.28%	4.33%	4.39%	4.00%	3.77%	3.63%	3.44%
Other non-current accrued liabilities	3.93%	3.77%	7.99%	6.69%	9.42%	9.92%	10.13%	10.26%	10.40%	9.48%	8.93%	8.58%	8.14%
<b>Total Liabilities</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>
Stockholders' Equity:													
Common stock - par value \$0.01 per share:													
Authorized issued shares	0.10%	0.09%	0.08%	0.07%	0.07%	0.07%	0.06%	0.06%	0.05%	0.05%	0.05%	0.05%	0.04%
Capital in excess of par value	88.00%	85.00%	75.90%	70.09%	67.10%	68.45%	64.73%	61.65%	58.24%	55.50%	55.41%	53.84%	52.68%
Retained earnings	42.47%	46.81%	48.71%	58.91%	62.89%	64.85%	67.94%	70.71%	73.61%	78.70%	87.67%	95.18%	103.93%
Treasury stock cost	19.15%	18.26%	16.99%	17.51%	17.76%	19.76%	20.13%	20.66%	21.02%	24.09%	33.19%	39.62%	47.60%
Accumulated other comprehensive loss	11.42%	14.41%	8.34%	12.05%	12.64%	13.88%	12.85%	11.99%	11.09%	10.35%	10.12%	9.64%	9.23%
<b>Total stockholders' equity</b>	<b>100.00%</b>	<b>99.23%</b>	<b>99.36%</b>	<b>99.50%</b>	<b>99.66%</b>	<b>99.73%</b>	<b>99.75%</b>	<b>99.77%</b>	<b>99.79%</b>	<b>99.80%</b>	<b>99.80%</b>	<b>99.81%</b>	<b>99.82%</b>
Non-controlling interest	0.00%	0.77%	0.64%	0.50%	0.34%	0.27%	0.25%	0.23%	0.21%	0.20%	0.20%	0.19%	0.18%
<b>Total equity</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>
<b>Total liabilities and stockholders' equity</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

## Appendix 14: Common-size Cash Flow Statement

Year Ended December 31,	HISTORICAL DATA								FORECASTS				
	2015	2016	2017	2018	2019	2020	2021F	2022F	2023F	2024F	2025F	2026F	2027F
<b>Operating Activities</b>													
Net Income	9.31%	6.89%	7.01%	10.54%	7.64%	5.21%	8.57%	7.84%	9.03%	11.33%	11.93%	13.21%	14.32%
Adjustments to reconcile net income to net cash provided by operating activities:													
Depreciation	2.41%	2.31%	2.32%	2.25%	2.23%	2.40%	2.26%	2.32%	2.36%	2.37%	2.37%	2.37%	2.37%
Amortization	1.23%	1.70%	2.66%	2.77%	2.67%	2.75%	2.42%	2.14%	1.94%	1.70%	1.59%	1.71%	1.64%
Deferred income taxes	-0.25%	0.37%	-0.70%	-0.90%	-1.47%	-0.64%	-0.59%	-0.55%	-0.52%	-0.50%	-0.48%	-0.46%	-0.45%
Share-based compensation	0.41%	0.48%	0.45%	0.58%	0.55%	0.53%	0.49%	0.46%	0.44%	0.42%	0.40%	0.39%	0.37%
Restructuring and asset impairment charges	0.16%	0.80%	0.53%	0.42%	1.20%	1.54%	1.14%	1.06%	1.01%	0.97%	0.93%	0.90%	0.86%
Goodwill impairment charge	0.00%	0.00%	0.00%	0.00%	2.82%	1.19%	0.00%	0.95%	0.90%	0.00%	0.00%	0.00%	0.00%
Loss/gain from sale of business	-0.25%	0.00%	0.21%	0.00%	-0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Other, net	0.33%	0.16%	0.40%	0.17%	0.17%	0.94%	0.32%	0.30%	0.28%	0.27%	0.26%	0.25%	0.24%
Payments for restructuring	-0.38%	-0.42%	-0.59%	-0.40%	-0.57%	-0.74%	-0.68%	-0.64%	-0.61%	-0.58%	-0.56%	-0.54%	-0.52%
Contributions to postretirement benefit plans	-0.68%	-0.72%	-0.70%	-0.79%	-0.36%	-0.55%	-0.51%	-0.48%	-0.46%	-0.44%	-0.42%	-0.40%	-0.39%
Change in assets and liabilities (net of acquisitions):													
Changes in receivables	-0.66%	-0.16%	-1.68%	-1.98%	-0.44%	2.24%	-1.46%	-1.24%	-1.59%	-0.82%	-0.77%	-0.77%	-0.77%
Changes in inventories	0.63%	-0.40%	0.57%	-1.86%	0.90%	-0.10%	-0.47%	-0.44%	-0.21%	-0.26%	-0.39%	-0.12%	-0.20%
Changes in accounts payable	0.55%	1.62%	1.06%	0.98%	0.55%	-0.80%	0.21%	0.72%	0.31%	0.27%	0.42%	0.20%	0.26%
Changes in accrued liabilities	-0.30%	0.34%	0.59%	-0.12%	0.29%	2.07%	0.78%	0.74%	0.73%	0.70%	0.70%	0.67%	0.65%
Changes in accrued taxes	-0.08%	-0.34%	2.21%	0.00%	-0.25%	0.41%	0.38%	0.35%	0.34%	0.32%	0.31%	0.30%	0.29%
Net changes in other assets and liabilities	0.27%	0.56%	0.23%	-0.40%	0.08%	0.45%	0.42%	0.39%	0.37%	0.36%	0.34%	0.33%	0.32%
<b>Net Cash - Operating activities</b>	<b>12.70%</b>	<b>13.18%</b>	<b>14.57%</b>	<b>11.25%</b>	<b>15.98%</b>	<b>16.90%</b>	<b>13.28%</b>	<b>13.94%</b>	<b>14.33%</b>	<b>16.10%</b>	<b>16.63%</b>	<b>18.02%</b>	<b>18.99%</b>
<b>Investing Activities</b>													
Capital expenditures	-3.20%	-3.29%	-3.61%	-4.55%	-4.31%	-3.75%	-4.16%	-3.21%	-2.97%	-2.93%	-2.90%	-2.90%	-2.90%
Acquisitions of businesses and assets, net of cash acquired	-0.49%	-47.26%	-0.70%	-8.32%	-0.34%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Proceeds from sale of business	0.00%	0.03%	0.02%	0.42%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Cash received from investments	0.03%	0.00%	0.34%	0.21%	0.21%	4.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Cash paid for investments	0.00%	0.00%	0.21%	-0.21%	-0.13%	-4.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Cash received from cross-currency swaps	0.00%	0.00%	-0.23%	0.00%	0.17%	0.25%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Other, net	0.05%	0.50%	0.13%	0.10%	0.00%	0.04%	0.04%	0.04%	0.03%	0.03%	0.03%	0.03%	0.03%
<b>Net Cash - Investing activities</b>	<b>-3.61%</b>	<b>-50.01%</b>	<b>-3.85%</b>	<b>-12.35%</b>	<b>-4.40%</b>	<b>-3.47%</b>	<b>-4.13%</b>	<b>-3.17%</b>	<b>-2.93%</b>	<b>-2.89%</b>	<b>-2.87%</b>	<b>-2.87%</b>	<b>-2.87%</b>
<b>Financing Activities</b>													
Short-term debt issued, net	0.00%	7.27%	0.00%	6.43%	5.35%	7.36%	5.54%	4.73%	5.02%	6.77%	4.95%	6.48%	6.21%
Short-term debt repaid, net	-0.08%	-2.12%	-5.99%	-1.00%	-4.84%	-13.13%	-11.36%	-10.62%	-10.14%	-9.72%	-9.34%	-8.97%	-8.62%
Long-term debt issued, net	0.00%	40.84%	0.00%	0.02%	0.00%	20.20%	0.00%	0.00%	0.00%	8.05%	6.56%	3.06%	4.37%
Long-term debt repaid, net	0.00%	-16.12%	0.00%	-2.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Repurchase of common stock	-4.90%	-0.11%	-0.53%	-1.13%	-0.76%	-1.25%	-1.11%	-1.14%	-1.20%	-2.89%	-6.12%	-5.14%	-6.18%
Proceeds from exercise of employee stock options	0.57%	0.64%	0.34%	0.13%	0.25%	0.41%	0.32%	0.30%	0.28%	0.27%	0.26%	0.25%	0.24%
Excess tax benefit from share based compensation	0.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Dividends paid	-2.79%	-2.97%	-2.76%	-2.92%	-3.31%	-3.86%	-3.79%	-3.77%	-3.88%	-4.87%	-5.13%	-5.68%	-6.16%
Other, net	-0.03%	0.00%	0.00%	0.00%	-0.06%	-0.04%	-0.02%	-0.02%	-0.02%	-0.02%	-0.02%	-0.01%	-0.01%
<b>Net Cash - Financing activities</b>	<b>-7.17%</b>	<b>27.42%</b>	<b>-8.94%</b>	<b>-0.77%</b>	<b>-3.37%</b>	<b>9.70%</b>	<b>-10.42%</b>	<b>-10.13%</b>	<b>-9.94%</b>	<b>-2.39%</b>	<b>-8.83%</b>	<b>-10.00%</b>	<b>-10.12%</b>
<b>Effect of exchange rate changes on cash</b>													
Net change in cash and cash equivalents	0.47%	-9.86%	2.25%	-2.72%	8.15%	3.10%	-1.27%	0.64%	1.46%	10.81%	4.94%	5.15%	6.01%
Cash and cash equivalents at beginning of year	18.15%	18.03%	6.54%	7.95%	5.64%	14.85%	35.49%	31.99%	31.17%	31.27%	40.43%	43.59%	46.83%
<b>Cash and cash equivalents at end of year</b>	<b>18.61%</b>	<b>8.17%</b>	<b>8.80%</b>	<b>5.68%</b>	<b>13.79%</b>	<b>38.45%</b>	<b>34.22%</b>	<b>32.63%</b>	<b>32.63%</b>	<b>42.08%</b>	<b>45.37%</b>	<b>48.74%</b>	<b>52.84%</b>

## Appendix 15: Key Financial Ratios

	HISTORICAL					FORECASTS						
	2016	2017	2018	2019	2020	2021F	2022F	2023F	2024F	2025F	2026F	2027F
<b>Efficiency Ratios</b>												
Asset Turnover	0.68	0.71	0.74	0.70	0.59	0.60	0.63	0.65	0.64	0.63	0.62	0.62
Inventory Turnover	4.8	5.5	5.7	5.6	5.6	5.6	5.7	5.7	5.7	5.7	5.7	5.8
Return on Operating Assets (ROOA)	13.5%	16.9%	26.4%	17.6%	8.5%	12.8%	12.2%	14.1%	16.5%	15.9%	17.0%	17.6%
Equity Multiplier	3.0	2.7	2.6	2.6	2.9	2.8	2.6	2.5	2.5	2.6	2.6	2.6
Days Sales in Inventory (DSI)	75.4	66.8	64.2	64.6	65.7	65.7	64.1	64.2	64.0	63.5	63.9	63.3
Fixed Asset Turnover Ratio (FAT)	7.1	7.5	8.0	8.0	7.4	7.7	7.7	7.6	7.6	7.6	7.6	7.6
Days Working Capital	86.3	60.9	58.7	57.5	94.2	109.1	105.3	108.7	130.9	159.4	176.5	192.1
Working Capital Turnover Ratio	4.2	6.0	6.2	6.3	3.9	3.3	3.5	3.4	2.8	2.3	2.1	1.9
Days Cash on Hand	124.4	142.4	97.2	202.8	564.7	535.1	505.8	500.0	687.4	782.5	856.3	960.0
Capital Intensity Ratio	1.7	1.5	1.4	1.5	1.8	1.7	1.6	1.6	1.6	1.6	1.6	1.7
Sales to Equity Ratio	1.7	1.9	1.9	1.8	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Inventory to Sales Ratio	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2
Sales to Fixed Assets Ratio	7.1	7.5	8.0	8.0	7.4	7.7	7.7	7.6	7.6	7.6	7.6	7.6
Investment Turnover Ratio	0.8	1.0	1.0	1.0	0.8	0.9	0.9	0.9	0.9	0.9	0.8	0.8
Sales to Operating Income Ratio	9.3	8.5	8.0	10.8	13.3	8.4	8.3	7.8	6.4	5.9	5.4	5.0
<b>Coverage Ratios</b>												
Debt Service Coverage Ratio	-0.59	-1.97	-3.80	-1.91	-0.57	-1.05	-1.13	-1.27	-1.60	-1.81	-2.05	-2.31
Cash Flow Coverage Ratio	0.21	0.31	0.25	0.36	0.27	0.24	0.29	0.32	0.32	0.31	0.33	0.34
Asset Coverage Ratio	0.70	0.83	0.82	1.07	1.12	1.23	1.36	1.53	1.55	1.54	1.58	1.60
Interest Coverage Ratio	5.8	6.8	8.0	7.3	4.8	7.9	4.9	6.9	8.8	7.2	8.2	8.2
Debt to Capital Ratio	0.52	0.47	0.45	0.44	0.51	0.48	0.45	0.41	0.44	0.46	0.46	0.47
<b>Liquidity Ratios</b>												
Adjusted Working Capital	\$ 387.00	\$ 380.00	\$ 494.00	\$ 350.00	\$ 125.00	\$ 215.86	\$ 269.93	\$ 358.45	\$ 408.66	\$ 456.23	\$ 502.87	\$ 552.22
Current Ratio	1.5	1.9	1.5	1.6	1.6	1.8	1.8	1.8	2.3	2.7	2.7	2.9
Quick Ratio	0.9	1.2	1.0	1.2	1.4	1.4	1.4	1.4	1.9	2.1	2.1	2.3
Cash Ratio	0.2	0.4	0.2	0.5	1.0	0.9	0.9	1.0	1.3	1.5	1.6	1.8
Z-Score	4.1	4.2	4.3	4.0	3.3	3.5	3.6	3.7	3.6	3.5	3.5	3.5
Average Inventory Period	75.4	66.8	64.2	64.6	65.7	65.7	64.1	64.2	64.0	63.5	63.9	63.3
Days Payable Outstanding (DPO)	72.2	70.2	67.2	68.0	68.2	66.8	66.8	66.8	66.8	66.7	66.8	66.8
Sales to Working Capital Ratio	4.2	6.0	6.2	6.3	3.9	3.3	3.5	3.4	2.8	2.3	2.1	1.9
Cash to Current Liabilities Ratio	0.2	0.4	0.2	0.5	1.0	0.9	0.9	1.0	1.3	1.5	1.6	1.8
Working Capital to Debt Ratio	0.2	0.2	0.2	0.2	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Cash Flow Adequacy Ratio	0.3	0.4	0.4	0.5	0.4	0.4	0.4	0.5	0.5	0.4	0.5	0.5
Sales to Current Assets Ratio	2.1	2.3	2.5	2.1	1.4	1.5	1.5	1.5	1.3	1.3	1.2	1.2
Cash to Working Capital Ratio	0.8	1.1	0.6	2.1	15.0	8.4	6.8	5.4	6.4	6.4	6.5	6.7
Inventory to Working Capital Ratio	1.3	1.4	1.2	1.5	4.5	2.7	2.3	1.7	1.6	1.4	1.3	1.2
Net Debt	\$ 2,060.00	\$ 1,786.00	\$ 2,012.00	\$ 1,592.00	\$ 1,209.00	\$ 1,108.07	\$ 917.02	\$ 691.65	\$ 501.64	\$ 484.03	\$ 339.42	\$ 221.15
<b>Profitability Ratios</b>												
Gross Profit Margin	38.7%	39.3%	38.9%	39.0%	37.5%	40.0%	40.0%	41.0%	42.0%	42.0%	43.2%	44.0%
Profit Margin	6.9%	7.0%	10.5%	7.6%	5.2%	8.6%	7.8%	9.0%	11.3%	11.9%	13.2%	14.3%
Earnings Before Interest and Taxes (EBIT)	\$ 406,000	\$ 556,000	\$ 654,000	\$ 486,000	\$ 367,000	\$ 632,334	\$ 677,575	\$ 761,899	\$ 962,993	\$ 1,084,920	\$ 1,227,570	\$ 1,385,932
Earnings Before Interest, Taxes, Depreciation, and Amortization (EBITDA)	\$ 561,000	\$ 782,000	\$ 928,000	\$ 740,000	\$ 613,000	\$ 879.84	\$ 929.95	\$ 1,016.68	\$ 1,213.84	\$ 1,339.13	\$ 1,500.10	\$ 1,664.95
EBITDA Margin	14.9%	16.6%	17.8%	14.1%	12.6%	16.7%	16.5%	17.2%	19.7%	20.8%	22.4%	23.9%
Return on Equity (ROE)	11.9%	12.2%	19.8%	13.6%	13.6%	14.1%	14.2%	14.5%	17.6%	18.8%	20.7%	22.3%
Return on Assets (ROA)	4.0%	4.8%	7.6%	5.2%	2.9%	5.1%	4.9%	5.8%	7.0%	7.3%	8.1%	8.7%
Operating Margin Ratio	10.8%	11.8%	12.6%	9.3%	7.5%	12.0%	12.0%	12.9%	15.6%	16.9%	18.4%	19.9%
Return on Net Assets	25.9%	32.3%	47.7%	39.8%	32.5%	48.8%	42.9%	46.2%	56.3%	57.9%	62.8%	66.8%
Invested Capital	\$ 4,836.00	\$ 4,959.00	\$ 5,358.00	\$ 5,021.00	\$ 4,729.00	\$ 4,854.01	\$ 4,889.44	\$ 4,951.29	\$ 5,037.30	\$ 5,122.88	\$ 5,196.75	\$ 5,274.80
Effective Tax Rate	23.5%	29.2%	6.2%	3.6%	10.9%	18.0%	18.0%	18.0%	18.0%	18.0%	18.0%	18.0%
Net Operating Profit After Tax (NOPAT)	\$ 310.47	\$ 393.73	\$ 613.75	\$ 468.48	\$ 327.08	\$ 518.51	\$ 555.61	\$ 624.76	\$ 789.65	\$ 889.63	\$ 1,006.61	\$ 1,136.46
Return on Invested Capital (ROIC)	6.4%	7.9%	11.5%	9.3%	6.9%	10.7%	11.4%	12.6%	15.7%	17.4%	19.4%	21.5%
Return on Capital Employed (ROCE)	7.8%	9.7%	11.2%	7.8%	5.4%	9.2%	9.7%	10.6%	12.0%	12.7%	13.7%	14.6%
Goodwill to Assets Ratio	40.7%	40.3%	41.2%	36.8%	32.6%	32.2%	31.0%	29.8%	27.4%	26.2%	25.1%	23.9%
Return on Debt Ratio (ROD)	11.0%	15.0%	23.8%	17.3%	8.2%	15.5%	16.1%	20.4%	22.6%	22.5%	24.5%	25.6%
Operating Cash Flow Margin	13.2%	14.6%	11.3%	16.0%	16.9%	13.3%	13.9%	14.3%	16.1%	16.6%	18.0%	19.0%
Cash Return on Assets Ratio	8.9%	10.3%	8.3%	11.2%	10.0%	8.0%	8.8%	9.3%	10.3%	10.4%	11.2%	11.8%
Cash Earnings Per Share (Cash EPS)	\$ 2.77	\$ 3.82	\$ 3.26	\$ 4.66	\$ 4.58	\$ 3.89	\$ 4.37	\$ 4.71	\$ 5.52	\$ 5.94	\$ 6.69	\$ 7.34
Cash Turnover Ratio (CTR)	12.2	11.4	17.6	7.3	2.6	2.9	3.1	3.1	2.4	2.2	2.1	1.9
<b>Valuation Ratios</b>												
Dividend Yield	1.3%	1.1%	1.3%	1.2%	1.0%	1.1%	1.0%	1.3%	1.7%	1.8%	2.1%	2.4%
Price to Earnings Ratio	34.5	37.0	21.3	35.4	71.6	40.2	41.0	34.0	26.0	23.7	20.6	18.2
Price to Sales Ratio	2.4	2.6	2.2	2.7	3.7	3.4	3.2	3.1	2.9	2.8	2.7	2.6
Free Cash Flow to Equity (FCFE)	\$ 3,123.00	\$ 1,130.00	\$ 1,331.00	\$ 1,600.00	\$ 2,991.00	\$ 1,813.88	\$ 1,836.21	\$ 1,921.00	\$ 2,690.07	\$ 2,594.96	\$ 2,637.34	\$ 2,851.15
Dividend Per Share	\$ 0.63	\$ 0.72	\$ 0.85	\$ 0.97	\$ 1.04	\$ 1.11	\$ 1.06	\$ 1.28	\$ 1.67	\$ 1.83	\$ 2.11	\$ 2.38
Dividend Payout Ratio	43.1%	39.4%	27.7%	43.4%	74.0%	44.2%	43.0%	43.0%	43.0%	43.0%	43.0%	43.0%
Book Value Per Share	12.3	14.0	15.5	16.5	16.5	17.8	19.1	20.7	22.1	22.6	23.8	24.8
Price to Book Ratio	4.1	4.9	4.2	4.8	6.1	5.7	5.3	4.9	4.6	4.5	4.3	4.1
Price to Cash Flow Ratio	18.0	17.8	19.9	16.9	22.1	25.9	23.1	21.4	18.3	17.0	15.1	13.8
Enterprise Value (EV)	\$11,015.00	\$13,998.80	\$13,699.00	\$15,812.00	\$19,399.10	\$19,298.17	\$19,107.12	\$18,881.75	\$18,691.74	\$18,674.13	\$18,529.52	\$18,411.25
Free Cash Flow to Firm (FCFF)	\$ 422.53	\$ 447.07	\$ 518.95	\$ 592.58	\$ 610.62	\$ 450.15	\$ 567.68	\$ 610.41	\$ 804.64	\$ 905.05	\$ 1,033.74	\$ 1,159.41
Free Cash Flow (FCF)	\$ 373.00	\$ 516.00	\$ 349.00	\$ 613.00	\$ 641.00	\$ 481.39	\$ 606.67	\$ 672.54	\$ 813.27	\$ 882.88	\$ 1,011.57	\$ 1,120.85
PEG Ratio (taken from Bloomberg)	N/A	1.6	1.3	1.7	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
Free Cash Flow to Sales Ratio	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2
<b>Solvency Ratios</b>												
Long Term Debt to Total Assets	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3
Long Term Debt to Equity	1.0	0.9	0.7	0.7	0.8	0.7	0.6	0.5	0.6	0.7	0.7	0.8
Debt to Equity Ratio	1.1	1.7	1.6	1.6	1.9	1.8	1.6	1.5	1.6	1.6	1.6	1.6
Total Debt / Total Capital	0.5	0.5	0.5	0.4	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.5
Debt Ratio	0.7	0.6	0.6	0.6	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Debt to EBITDA	4.2	2.8	2.5	3.1	5.0	3.3	3.0	2.6	2.6	2.5	2.4	2.3
Financial Leverage Index	3.0	2.7	2.6	2.6	2.9	2.9	2.8	2.6	2.5	2.6	2.6	2.6
Interest Expense to Debt Ratio	3.0%	3.7%	3.6%	2.9%	2.5%	2.7%	5.0%	4.2%	3.5%	4.4%	4.2%	4.4%

## Appendix 16: Income Statement Forecast Assumptions

In Millions, except per share data	YoY Growth										Comments	
	2016	2017	2018	2019	2020	2021F	2022F	2023F	2024F	2025F		2026F
<b>Revenue per Segment</b>												
Water Infrastructure	0.7%	-10.8%	8.6%	0.0%	-4.5%	8.0%	6.5%	4.0%	3.5%	3.5%	3.5%	3.5%
Transport	-1.5%	3.8%	7.2%	0.1%	-0.7%	8.0%	6.5%	4.0%	3.5%	3.5%	3.5%	3.5%
Treatment	5.4%	3.3%	15.4%	0.0%	0.8%	8.0%	6.5%	4.0%	3.5%	3.5%	3.5%	3.5%
Test	-2.0%	2.0%	8.0%	0.1%	-0.9%	12.0%	5.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Applied Water	-1.3%	8.4%	-14.7%	20.1%	-5.2%	12.0%	5.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Industrial Water	-3.9%	9.8%	39.6%	-16.3%	-9.1%	12.0%	5.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Impingement												
Measurement & Control Solutions	871.2%	16.8%	2.3%	11.0%	4.1%	5.0%	10.0%	6.5%	6.0%	5.0%	5.0%	5.0%
Water	674.3%											

## Appendix 17: Income Statement Forecast extra comments

### 2021F

"Xylem forecasts full-year 2021 revenue in the range of \$5.16 to \$5.28 billion,"

"The Company's adjusted earnings outlook excludes projected restructuring and realignment costs of approximately \$50 to \$60 million for the year."

"Xylem Inc expected \$80M in Interest expense for 2021"

"Earnings per share is now expected to be in the range of \$2.50 to \$2.70."

Sandra E. Rowland, Xylem Inc. - Senior VP & CFO: "This includes high single-digit growth in Water Infrastructure."

Sandra E. Rowland, Xylem Inc. - Senior VP & CFO: "This includes low teens growth in Applied Water"

Sandra E. Rowland, Xylem Inc. - Senior VP & CFO: "This includes mid-single-digits growth in M&CS. Supply challenges may slow shipments until later this year"

"Xylem now expects full year organic revenue growth to be in the range of 5 to 7 percent, and 8 to 10 percent on a reported basis."

"We expect to be delivering mid-single-digit growth in the back half of the year and into 2021."

### 2024F forward

Xylem Inc. long-term financial target: Revenue growth of 4% to 6%.

Xylem Inc. long-term financial target: EPS Growth in the Mid-Teens

## Appendix 18: Financial Position Forecast Assumptions

In Millions, excepts per share amounts	YoY Growth										Comments		
Year Ended December 31,	2016	2017	2018	2019	2020	2021F	2022F	2023F	2024F	2025F	2026F	2027F	
<b>ASSETS</b>													
Current Assets:													
Cash and cash equivalents	-120.8%	25.6%	-39.9%	59.1%	61.4%	-3.7%	2.0%	4.5%	25.7%	19.0%	19.6%	11.4%	Forecasted using revenue growth, and adjusted for new long-term debt issued, also in order to balance the BS
Receivables, less allowances for discounts, returns and credit	11.2%	11.8%	7.3%	0.5%	-12.2%	7.7%	6.5%	8.1%	4.2%	3.9%	3.9%	3.9%	Same growth as forecasted revenue growth
Inventories	17.0%	0.4%	11.9%	-10.4%	3.4%	4.3%	4.1%	2.0%	2.5%	3.7%	1.2%	2.0%	Based on historical average inventory turnover
Prepaid and other current assets	12.9%	6.2%	-3.9%	-12.9%	9.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	Equals to the previous period value
Total Current Assets	-9.0%	11.2%	1.1%	14.5%	30.5%	1.0%	3.5%	5.0%	15.9%	7.8%	7.5%	8.2%	
Property, plant and equipment, net	28.7%	4.2%	2.0%	0.3%	-0.2%	7.9%	6.5%	4.5%	4.2%	3.9%	3.9%	3.9%	Forecasted using historical average Net PPE/Revenue ratio
Goodwill	39.8%	4.9%	7.0%	-4.8%	0.1%	0.0%	-1.9%	-1.9%	0.0%	0.0%	0.0%	0.0%	As of December 31, 2020 the remaining goodwill balance in Xylem reporting unit after recording the goodwill impairment charge was \$113 million. This was then assumed to be charged in the future in two periods, with each \$56.5 million
Other intangible assets, net	63.8%	-2.8%	5.2%	-4.9%	-7.4%	-2.1%	-1.4%	-0.9%	0.1%	0.4%	-0.8%	-0.8%	Intangible Assets, 1 + Purchases, 1 - Amortization, 1 // (Purchases 2021 + \$106 from Xylem's 10K, and thereafter assuming Purchases = \$106)
Other non-current assets	-4.3%	11.4%	20.5%	55.2%	5.5%	7.7%	6.5%	4.5%	4.2%	3.9%	3.9%	3.9%	Forecasted using straight line as opposed to growing with revenue since these items are unrelated to operations
Total Assets	28.1%	5.6%	5.0%	6.3%	11.9%	1.4%	1.8%	2.2%	8.0%	4.4%	4.2%	4.8%	
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>													
Current liabilities:													
Accounts Payable	26.0%	16.8%	6.3%	1.8%	-4.9%	1.9%	6.5%	2.9%	2.5%	3.9%	1.9%	2.6%	Forecasted using the historical average Accounts Payable/CDGS ratio
Accrued and Other current liabilities	21.9%	5.4%	-0.9%	13.1%	20.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	Forecasted using straight line as opposed to growing with revenue since these items are unrelated to operations
Short-term borrowings and current maturities of long-term debt	70.0%		100.0%	6.9%	54.0%	0.0%	2.0%	-2.0%	0.0%	-29.0%	0.0%	0.0%	Debt Obligations Schedule from the 10K
Total Current liabilities	33.9%	23.5%	20.8%	7.5%	23.3%	0.0%	2.6%	0.9%	0.8%	-3.7%	0.7%	0.9%	
Long-term debt, net	43.3%	4.2%	-7.3%	-0.5%	17.9%	-7.3%	-7.8%	-6.3%	19.1%	11.8%	6.5%	8.8%	Using the Senior Notes debt repayment schedule from the 10K (assuming no other notes are issued).
Accrued post-retirement benefits	27.9%	7.7%	-10.3%	10.3%	14.3%	7.3%	7.0%	6.7%	6.3%	6.1%	5.8%	5.5%	Forecasted using the schedule from 10K
Deferred income tax liabilities	66.5%	-39.7%	16.8%	2.3%	-28.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	Equals to the previous period value
Other non-current accrued liabilities	37.3%	53.6%	-16.8%	33.6%	22.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	Equals to the previous period value
Total Liabilities	39.7%	1.7%	2.2%	6.4%	17.9%	-2.1%	-1.3%	-1.4%	8.9%	5.8%	3.9%	5.2%	
Stockholders' Equity:													
Common stock - par value \$0.01 per share:	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	Equals to the previous period, as this has been historically the case
Authorized/Issued shares:	2.2%	1.9%	1.9%	2.1%	2.3%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	Equal to its past period value
Retained earnings	14.3%	15.8%	25.1%	12.2%	3.3%	11.6%	10.4%	11.1%	12.7%	12.2%	12.3%	12.2%	Retained Earnings, 1 = Retained Earnings, 1 + Net Income, 2 - Dividends Paid, 1
Treasury stock cost	1.0%	5.8%	12.1%	7.6%	10.4%	9.1%	9.1%	9.1%	18.6%	23.0%	20.3%	20.2%	From 2020 to 2022 equals to its own average historical growth rate. From 2023 to 2027, these were adjusted in order to balance the BS and reflect probable stock repurchase due to excess of cash and retained earnings
Accumulated other comprehensive loss	25.2%	-51.4%	37.5%	10.4%	9.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	Equals to the previous period value
Total stockholders' equity	4.8%	12.5%	9.6%	6.4%	0.4%	7.4%	6.7%	7.5%	6.7%	2.2%	4.8%	4.2%	
Non-controlling interest	100.0%	-6.3%	-14.3%	-40.0%	25.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	Equals to the previous period value
Total equity	5.6%	12.4%	9.5%	6.2%	0.3%	7.4%	6.7%	7.5%	6.7%	2.2%	4.8%	4.2%	
Total liabilities and stockholders' equity	28.1%	5.6%	5.0%	6.3%	11.9%	1.4%	1.8%	2.2%	8.0%	4.4%	4.2%	4.8%	

## Appendix 19: WACC Estimation – Current Scenario Used in DCF

WACC-Variables (Main Scenario)	2021F	2022F	2023F	2024F	2025F	2026F	2027F	Comments
Risk Free Rate (Rf)	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	Current 10Y yield
Tax (t)	21%	28%	28%	28%	28%	28%	28%	Expected corporate tax increase from Joe Biden in the US (2022F forward)
Adjusted Beta (β)	1.05	1.05	1.05	1.05	1.05	1.05	1.05	Bloomberg
Expected Market Return (Em)	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	Bloomberg
Country Risk Premium	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	Calculated using Damodaran's CRP data (major emerging markets)
Equity Risk Premium (ERp)	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	= Em - Rf
Cost of Equity	9.3%	9.3%	9.3%	9.3%	9.3%	9.3%	9.3%	= Rf + β*ERp + CRP
Interest Expense	\$ 80.00	\$ 137.00	\$ 110.00	\$ 110.00	\$ 150.00	\$ 150.00	\$ 170.00	From Income Statement
Debt	\$ 2,915.98	\$ 2,761.21	\$ 2,622.44	\$ 3,100.00	\$ 3,400.00	\$ 3,600.00	\$ 3,900.00	From Balance Sheet
Cost of Debt	2.7%	5.0%	4.2%	3.5%	4.4%	4.2%	4.4%	Interest Expense/Debt
After tax cost of Debt	2.2%	3.6%	3.0%	2.6%	3.2%	3.0%	3.1%	
Debt Weight	48%	45%	41%	44%	46%	46%	47%	
Equity Weight	52%	55%	59%	56%	54%	54%	53%	
Total Capital	\$ 6,120.87	\$ 6,197.76	\$ 6,337.13	\$ 7,080.65	\$ 7,471.02	\$ 7,878.03	\$ 8,364.29	
Equity	\$ 3,204.89	\$ 3,436.55	\$ 3,714.69	\$ 3,980.65	\$ 4,071.02	\$ 4,278.03	\$ 4,464.29	
Pre-tax WACC	6.2%	7.4%	7.2%	6.8%	7.1%	7.0%	7.0%	
WACC	5.91%	6.76%	6.71%	6.36%	6.52%	6.43%	6.44%	

## Appendix 20: WACC Estimation – Sticky Inflation Scenario

WACC-Variables (Scenario 2)	2021F	2022F	2023F	2024F	2025F	2026F	2027F	Comments
Risk Free Rate (Rf)	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	A scenario where a "sticky" inflation occurs due to excess of money supply
Tax (t)	21%	21%	21%	21%	21%	21%	21%	Corporate tax would remain at current levels from today
Adjusted Beta (β)	1.05	1.05	1.05	1.05	1.05	1.05	1.05	Bloomberg
Expected Market Return (Em)	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	Bloomberg
Country Risk Premium	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	Country risk premium would increase due to the increase in interest rate, to control the inflation
Equity Risk Premium (ERp)	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	= Em - Rf
Cost of Equity	12.8%	12.8%	12.8%	12.8%	12.8%	12.8%	12.8%	= Rf + β*ERp + CRP
Interest Expense	\$ 80.00	\$ 137.00	\$ 110.00	\$ 110.00	\$ 150.00	\$ 150.00	\$ 170.00	From Income Statement
Debt	\$ 2,915.98	\$ 2,761.21	\$ 2,622.44	\$ 3,100.00	\$ 3,400.00	\$ 3,600.00	\$ 3,900.00	From Balance Sheet
Cost of Debt	2.7%	5.0%	4.2%	3.5%	4.4%	4.2%	4.4%	Interest Expense/Debt
After tax cost of Debt	2.2%	3.9%	3.3%	2.8%	3.5%	3.3%	3.4%	
Debt Weight	48%	45%	41%	44%	46%	46%	47%	
Equity Weight	52%	55%	59%	56%	54%	54%	53%	
Total Capital	\$ 6,120.87	\$ 6,197.76	\$ 6,337.13	\$ 7,080.65	\$ 7,471.02	\$ 7,878.03	\$ 8,364.29	
Equity	\$ 3,204.89	\$ 3,436.55	\$ 3,714.69	\$ 3,980.65	\$ 4,071.02	\$ 4,278.03	\$ 4,464.29	
Pre-tax WACC	8.0%	9.3%	9.2%	8.7%	9.0%	8.9%	8.9%	
WACC	7.73%	8.84%	8.87%	8.42%	8.56%	8.45%	8.44%	

## Appendix 21: WACC Estimation – Transitory Inflation Scenario

WACC-Variables (Scenario 3)	2021F	2022F	2023F	2024F	2025F	2026F	2027F	Comments
Risk Free Rate (Rf)	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	Interest Rate hike from the FED
Tax (t)	21%	25%	25%	25%	25%	25%	25%	Corporate tax would increase by less than Joe Biden's plan
Adjusted Beta (β)	1.05	1.05	1.05	1.05	1.05	1.05	1.05	Bloomberg
Expected Market Return (Em)	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	Bloomberg
Country Risk Premium	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	Country risk premium would slightly increase due to the interest rate hikes from central banks
Equity Risk Premium (ERp)	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	= Em - Rf
Cost of Equity	10.8%	10.8%	10.8%	10.8%	10.8%	10.8%	10.8%	= Rf + β*ERp + CRP
Interest Expense	\$ 80.00	\$ 137.00	\$ 110.00	\$ 110.00	\$ 150.00	\$ 150.00	\$ 170.00	From Income Statement
Debt	\$ 2,915.98	\$ 2,761.21	\$ 2,622.44	\$ 3,100.00	\$ 3,400.00	\$ 3,600.00	\$ 3,900.00	From Balance Sheet
Cost of Debt	2.7%	5.0%	4.2%	3.5%	4.4%	4.2%	4.4%	Interest Expense/Debt
After tax cost of Debt	2.2%	3.7%	3.1%	2.7%	3.3%	3.1%	3.3%	
Debt Weight	48%	45%	41%	44%	46%	46%	47%	
Equity Weight	52%	55%	59%	56%	54%	54%	53%	
Total Capital	\$ 6,120.87	\$ 6,197.76	\$ 6,337.13	\$ 7,080.65	\$ 7,471.02	\$ 7,878.03	\$ 8,364.29	
Equity	\$ 3,204.89	\$ 3,436.55	\$ 3,714.69	\$ 3,980.65	\$ 4,071.02	\$ 4,278.03	\$ 4,464.29	
Pre-tax WACC	7.0%	8.2%	8.1%	7.6%	7.9%	7.8%	7.8%	
WACC	6.69%	7.64%	7.63%	7.24%	7.39%	7.29%	7.29%	

## Appendix 22: GDP Growth and Stable Growth Model

GDP Growth	2015	2016	2017	2018	2019	2020	2021F	2022F	2023F	2024F	2025F	2026F	2027F/TV	Terminal Period
World	3.4%	3.4%	3.8%	3.6%	2.8%	-3.3%	6.0%	4.4%	3.5%	3.4%	3.3%	3.3%	3.3%	3.3%
US	2.9%	1.6%	2.4%	2.9%	2.2%	-3.5%	6.4%	3.5%	1.4%	1.5%	1.6%	1.6%	1.6%	1.6%
Current RFR (10Y US Yield)														1.5%

Stable Growth Model: Reinvestment Rate x ROE	2015	2016	2017	2018	2019	2020	2021F	2022F	2023F	2024F	2025F	2026F	2027F	Terminal Period
Capital Expenditures (CAPEX)	\$ 117.00	\$ 124.00	\$ 170.00	\$ 237.00	\$ 226.00	\$ 183.00	\$ 220.00	\$ 181.24	\$ 175.61	\$ 180.65	\$ 186.22	\$ 193.75	\$ 201.72	\$ 1,339.19
Depreciation & Amortization (D&A)	\$ 133.00	\$ 151.00	\$ 234.00	\$ 261.00	\$ 257.00	\$ 251.00	\$ 247.50	\$ 252.37	\$ 254.78	\$ 250.85	\$ 254.21	\$ 272.53	\$ 279.01	\$ 1,811.26
ΔNCWC	\$ (92.00)	\$ 436.00	\$ (83.00)	\$ 227.00	\$ (490.00)	\$ (1,217.00)	\$ 157.95	\$ 17.79	\$ 1.91	\$ (617.35)	\$ (270.03)	\$ (297.97)	\$ (368.93)	\$ (1,376.64)
EBIT	\$ 458.00	\$ 410.00	\$ 548.00	\$ 667.00	\$ 483.00	\$ 362.00	\$ 632.33	\$ 677.57	\$ 761.90	\$ 962.99	\$ 1,084.92	\$ 1,227.57	\$ 1,385.93	\$ 6,733.22
Tax Rate (t)	35.00%	35.00%	21.00%	21.00%	21.00%	21.00%	21.00%	28.00%	28.00%	28.00%	28.00%	28.00%	28.00%	28.00%
Reinvestment Rate	26%	-174%	4%	-48%	120%	402%	-37%	-18%	-15%	79%	26%	25%	29%	19%
Return on Equity (ROE)	16.31%	11.87%	13.18%	19.83%	13.56%	8.56%	14.13%	12.90%	14.39%	17.57%	18.83%	20.65%	22.33%	16.63%
g														3.1%

## Appendix 23: WACC Method

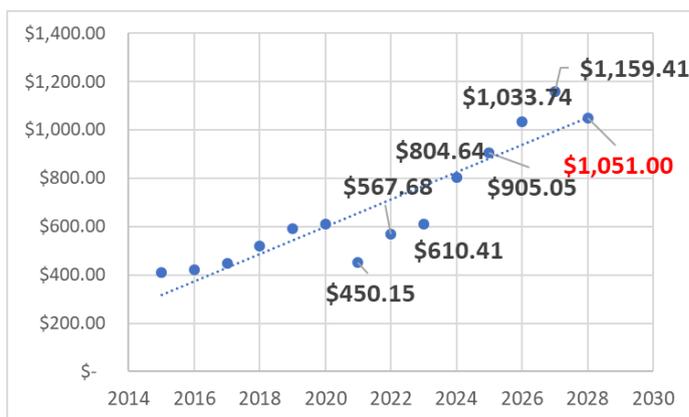
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
EBIT	\$ 458.00	\$ 410.00	\$ 548.00	\$ 667.00	\$ 483.00	\$ 362.00	\$ 632.33	\$ 677.57	\$ 761.90	\$ 962.99	\$ 1,084.92	\$ 1,227.57	\$ 1,385.93	\$ 6,733.22
(1-t)	84.37%	76.47%	70.82%	93.85%	96.39%	89.12%	82.00%	82.00%	82.00%	82.00%	82.00%	82.00%	82.00%	82.00%
NOPAT	\$ 386.40	\$ 313.53	\$ 388.07	\$ 625.95	\$ 465.58	\$ 322.62	\$ 518.51	\$ 555.61	\$ 624.76	\$ 789.65	\$ 889.63	\$ 1,006.61	\$ 1,136.46	\$ 5,520.40
Stock Based Compensation	\$ 15.00	\$ 18.00	\$ 21.00	\$ 30.00	\$ 29.00	\$ 26.00	\$ 26.00	\$ 26.00	\$ 26.00	\$ 26.00	\$ 26.00	\$ 26.00	\$ 26.00	\$ 26.00
Deferred income taxes	\$ (9.00)	\$ 14.00	\$ (33.00)	\$ (47.00)	\$ (77.00)	\$ (31.00)	\$ (31.00)	\$ (31.00)	\$ (31.00)	\$ (31.00)	\$ (31.00)	\$ (31.00)	\$ (31.00)	\$ (31.00)
D&A	\$ 133.00	\$ 151.00	\$ 234.00	\$ 261.00	\$ 257.00	\$ 251.00	\$ 247.50	\$ 252.37	\$ 254.78	\$ 250.85	\$ 254.21	\$ 272.53	\$ 279.01	\$ 1,811.26
ΔNWC	\$ (11.00)	\$ (50.00)	\$ (7.00)	\$ 114.00	\$ (144.00)	\$ (225.00)	\$ 90.86	\$ 54.07	\$ 88.52	\$ 50.21	\$ 47.58	\$ 46.64	\$ 49.34	\$ 49.34
CAPEX	\$ (117.00)	\$ (124.00)	\$ (170.00)	\$ (237.00)	\$ (236.00)	\$ (183.00)	\$ (220.00)	\$ (181.24)	\$ (175.61)	\$ (180.65)	\$ (186.22)	\$ (193.75)	\$ (201.72)	\$ (1,339.19)
Free Cash Flow to the Firm (FCFF)	\$ 409.40	\$ 422.53	\$ 447.07	\$ 518.95	\$ 592.58	\$ 610.62	\$ 450.15	\$ 567.68	\$ 610.41	\$ 804.64	\$ 905.05	\$ 1,033.74	\$ 1,159.41	\$ 1,051.00

Enterprise Value		Equity Value		Non Controlling Interest	
Terminal Value	\$ 20,289.74	Enterprise Value	\$ 18,284.74		
PV of Terminal value	\$ 14,631.25	Cash & Equivalents	\$ 1,844.19		
PV of FCFF	\$ 3,653.49	Debt	\$ 2,761.21		
Enterprise Value	\$ 18,284.74	Equity Value	\$ 17,359.71	Non Controlling Interest	\$ 8.00
EBITDA	\$ 929.95	Shares Outs.	180.1		
EV/EBITDA	19.7	Price Target	\$ 96.39		

g	1.5%	See Growth Rate tab
WACC	6.8%	See WACC tab

## Appendix 24: Normalized FCFF for the terminal period



## Appendix 25: Adjusted Present Value

Terminal Value	\$ 18,152.79
PV of Terminal value	\$ 13,446.82
PV of FCFE	\$ 3,716.36
<b>Enterprise Value</b>	<b>\$ 17,163.18</b>

<b>Growth Rate</b>	<b>1.50%</b>
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	2021	2022	2023	2024	2025	2026	2027	Terminal Value
Interest on Debt	\$ 80.00	\$ 137.00	\$ 110.00	\$ 110.00	\$ 150.00	\$ 150.00	\$ 170.00	\$ 138.00
Tax Shield	\$ 16.80	\$ 38.36	\$ 30.80	\$ 30.80	\$ 42.00	\$ 42.00	\$ 47.60	\$ 38.64

Terminal Value	\$ 837.06
PV of Terminal value	\$ 620.06
PV of Tax Shields	\$ 159.70
<b>Sum PV</b>	<b>\$ 779.76</b>

<b>Cash</b>	<b>\$ 1,844.19</b>
<b>Debt</b>	<b>\$ 2,761.21</b>

Non Controlling Interest	\$ 8.00
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<b>Equity Value</b>	<b>\$ 17,017.91</b>
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Shares Outs.	180.1
<b>Price Target</b>	<b>\$ 94.49</b>

## Appendix 26: SARD Approach Peers

Firm Being Valued	Sector	Industry	EV/EBIT	EV/EBITDA	EV/Sales	P/E	ROE	Debt/EBIT	Market Cap	EBIT Margin
Xylem Inc. (XYL)	Industrials	Machinery	40.9	29.3	4.9	63.7	13.1%	2.1	24,311	12.0%
Peers	Sector		EV/EBIT	EV/EBITDA	EV/Sales	P/E	ROE	Debt/EBIT	Market Cap	EBIT Margin
Carlisle Companies Incorporated (CSL)	Industrials	Building Products	24.3	17.1	2.8	34.0	13.2%	2.7	11,067	11.5%
Nidec Corporation (NJDC.Y)	Industrials	Electrical Equipment	42.6	29.1	4.4	53.6	13.2%	1.8	66,009	10.3%
China Baoan Group Co., Ltd. (000009)	Industrials	Industrial Conglomerate	69.8	48.8	6.4	91.6	12.8%	1.9	10,946	9.4%
Kubota Corporation (KUBT.Y)	Industrials	Machinery	13.6	11.6	1.6	15.6	11.3%	2.9	24,310	11.9%
Masonite International Corporation (DOOR)	Industrials	Building Products	12.5	9.5	1.4	34.3	12.7%	2.1	2,989	11.9%

<b>Harmonic Mean:</b>	<b>21.51</b>	<b>16.40</b>	<b>2.40</b>	<b>32.84</b>
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	2022F	2025F
<b>EV/EBITDA</b>		
Peers Harmonic Mean	16.40	16.40
XYL - EBITDA	\$ 929.95	\$ 1,339.13
<b>XYL - EV</b>	\$ 15,254.76	\$ 21,966.93
Debt	\$ 2,761.21	\$ 3,400.00
Cash & Equivalents	\$ 1,844.19	\$ 2,915.97
<b>XYL - Equity</b>	\$ 14,337.74	\$ 21,482.90
# Shares Outstanding	180.1	180.1
<b>Share Price (US\$/Share)</b>	<b>\$ 79.61</b>	<b>\$ 119.28</b>

	2022F	2025F
<b>EV/EBIT</b>		
Peers Harmonic Mean	21.51	21.51
XYL - EBIT	\$ 677.57	\$ 1,084.92
<b>XYL - EV</b>	\$ 14,572.59	\$ 23,333.37
Debt	\$ 2,761.21	\$ 3,400.00
Cash & Equivalents	\$ 1,844.19	\$ 2,915.97
<b>XYL - Equity</b>	\$ 13,656	\$ 22,849.34
# Shares Outstanding	180.1	180.1
<b>Share Price (US\$/Share)</b>	<b>\$ 75.82</b>	<b>\$ 126.87</b>

	2022F	2025F
<b>EV/Sales</b>		
Peers Harmonic Mean	2.40	2.40
XYL - Sales	\$ 5,651.91	\$ 6,427.05
<b>XYL - EV</b>	\$ 13,586.65	\$ 15,449.99
Debt	\$ 2,761.21	\$ 3,400.00
Cash & Equivalents	\$ 1,844.19	\$ 2,915.97
<b>XYL - Equity</b>	\$ 12,670	\$ 14,965.96
# Shares Outstanding	180.1	180.1
<b>Share Price (US\$/Share)</b>	<b>\$ 70.35</b>	<b>\$ 83.10</b>

	2022F	2025F
<b>P/E</b>		
Peers Harmonic Mean	32.84	27.41
XYL - Earnings	\$ 443.27	\$ 766.63
<b>XYL - Equity</b>	\$ 14,558	\$ 21,013.45
# Shares Outstanding	180.1	180.1
<b>Share Price (US\$/Share)</b>	<b>\$ 80.83</b>	<b>\$ 116.68</b>

## Appendix 27: Industry Classification Peers

Firm Being Valued	EV/EBIT	EV/EBITDA	EV/Sales	P/E	ROE	Debt/EBIT	Market Cap	EBIT Margin
Xylem Inc. (XYL)	40.9	29.3	4.9	63.7	13.1%	2.1	24,311	12.0%
<b>Peers</b>								
Colfax Corporation (CFX)	28.8	15.7	2.5	61.1				
Flowserve Corporation (FLS)	17.8	13.6	4.4	33.2				
IDEX Corporation (IEX)	29.9	26.0	7.0	40.8				
ITT Inc. (ITT)	29.2	20.7	3.0	132.8				
Ingersoll Rand Inc. (IR)	38.7	20.2	4.0	57.2				

<b>Harmonic Mean:</b>	27.1	18.3	3.7	52.1
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	2022F	2025F
<b>EV/EBITDA</b>		
Peers Harmonic Mean	18.3	18.3
XYL - EBITDA	\$ 929.95	\$ 1,339.13
<b>XYL - EV</b>	\$ 17,000.91	\$ 24,481.39
Debt	\$ 2,761.21	\$ 3,400.00
Cash & Equivalents	\$ 1,844.19	\$ 2,915.97
<b>XYL - Equity</b>	\$ 16,084	\$ 23,997.36
# Shares Outstanding	180.1	180.1
<b>Share Price</b>	\$ 89.31	\$ 133.24

	2022F	2025F
<b>EV/EBIT</b>		
Peers Harmonic Mean	27.1	27.1
XYL - EBIT	\$ 677.57	\$ 1,084.92
<b>XYL - EV</b>	\$ 18,369.11	\$ 29,412.28
Debt	\$ 2,761.21	\$ 3,400.00
Cash & Equivalents	\$ 1,844.19	\$ 2,915.97
<b>XYL - Equity</b>	\$ 17,452	\$ 28,928.25
# Shares Outstanding	180.1	180.1
<b>Share Price</b>	\$ 96.90	\$ 160.62

	2022F	2025F
<b>EV/Sales</b>		
Peers Harmonic Mean	3.7	3.7
XYL - Sales	\$ 5,651.91	\$ 6,427.05
<b>XYL - EV</b>	\$ 20,879.45	\$ 23,742.97
Debt	\$ 2,761.21	\$ 3,400.00
Cash & Equivalents	\$ 1,844.19	\$ 2,915.97
<b>XYL - Equity</b>	\$ 19,962	\$ 23,258.94
# Shares Outstanding	180.1	180.1
<b>Share Price</b>	\$ 110.84	\$ 129.14

	2022F	2025F
<b>P/E</b>		
Peers Harmonic Mean	52.08	52.08
XYL - Earnings	\$ 443.27	\$ 766.63
<b>XYL - Equity</b>	\$ 23,085	\$ 39,924.92
# Shares Outstanding	180.1	180.1
<b>Share Price (US\$/Share)</b>	\$ 128.18	\$ 221.68

## Appendix 28: Sensitivity and Scenario Analysis – Current Scenario

Sensitivity Analysis of XYL's stock price to the growth rate and WACC used in the long-term											
WACC	Growth rate	Growth rate									
		1.10%	1.20%	1.30%	1.40%	1.50%	1.60%	1.70%	1.80%	1.90%	
\$ 96.39											
6.36%	\$ 97.85	\$ 99.53	\$ 101.28	\$ 103.09	\$ 104.99	\$ 106.96	\$ 109.02	\$ 111.17	\$ 113.41	\$ 115.75	
6.46%	\$ 95.87	\$ 97.48	\$ 99.15	\$ 100.90	\$ 102.71	\$ 104.59	\$ 106.56	\$ 108.61	\$ 110.75	\$ 112.97	
6.56%	\$ 93.96	\$ 95.51	\$ 97.11	\$ 98.78	\$ 100.52	\$ 102.32	\$ 104.20	\$ 106.16	\$ 108.20	\$ 110.31	
6.66%	\$ 92.12	\$ 93.61	\$ 95.15	\$ 96.75	\$ 98.41	\$ 100.14	\$ 101.94	\$ 103.81	\$ 105.76	\$ 107.77	
6.76%	\$ 90.35	\$ 91.78	\$ 93.26	\$ 94.79	\$ 96.39	\$ 98.05	\$ 99.77	\$ 101.56	\$ 103.43	\$ 105.36	
6.86%	\$ 88.64	\$ 90.01	\$ 91.43	\$ 92.91	\$ 94.44	\$ 96.03	\$ 97.68	\$ 99.40	\$ 101.18	\$ 103.01	
6.96%	\$ 86.98	\$ 88.31	\$ 89.68	\$ 91.09	\$ 92.56	\$ 94.09	\$ 95.67	\$ 97.32	\$ 99.03	\$ 100.79	
7.06%	\$ 85.39	\$ 86.66	\$ 87.98	\$ 89.34	\$ 90.75	\$ 92.22	\$ 93.74	\$ 95.31	\$ 96.95	\$ 98.63	
7.16%	\$ 83.84	\$ 85.07	\$ 86.34	\$ 87.65	\$ 89.01	\$ 90.42	\$ 91.87	\$ 93.39	\$ 94.96	\$ 96.51	

Scenario Analysis					
	Scenario 1	Scenario 1	Scenario 2	Scenario 3	
1					
2	WACC	6.76%	6.76%	8.84%	7.64%
3	Risk Free Rate	1.50%	1.50%	4.00%	2.50%
4	Corporate Tax	28.00%	28.00%	21.00%	25.00%
5	Risk Premium	5.50%	5.50%	5.50%	5.50%
6	Inflation	Low	Low	High	Medium
7	Growth Rate	1.50%	1.50%	0.0%	2.50%

Enterprise Value		Equity Value	
Terminal Value	\$ 20,289.74	Enterprise Value	\$ 18,284.74
PV of Terminal value	\$ 14,631.25	Cash & Equivalents	\$ 1,844.19
PV of FCFF	\$ 3,653.49	Debt	\$ 2,761.21
<b>Enterprise Value</b>	<b>\$ 18,284.74</b>	<b>= Equity Value</b>	<b>\$ 17,359.71</b>

EBITDA	\$ 929.95	Shares Outs.	180.1
EV/ EBITDA	19.7	Price Target	\$ 96.39

## Appendix 29: Sensitivity and Scenario Analysis – Sticky Inflation Scenario and no Growth

Sensitivity Analysis of XYL's stock price to the growth rate and WACC used in the long-term											
WACC	Growth rate	Growth rate									
		-0.40%	-0.30%	-0.20%	-0.10%	0.00%	0.10%	0.20%	0.30%	0.40%	
\$ 57.16											
8.44%	\$ 58.01	\$ 58.55	\$ 59.11	\$ 59.68	\$ 60.27	\$ 60.87	\$ 61.48	\$ 62.11	\$ 62.75	\$ 63.40	
8.54%	\$ 57.26	\$ 57.79	\$ 58.34	\$ 58.89	\$ 59.46	\$ 60.05	\$ 60.64	\$ 61.25	\$ 61.88	\$ 62.52	
8.64%	\$ 56.53	\$ 57.05	\$ 57.58	\$ 58.12	\$ 58.68	\$ 59.24	\$ 59.83	\$ 60.42	\$ 61.03	\$ 61.64	
8.74%	\$ 55.82	\$ 56.32	\$ 56.84	\$ 57.37	\$ 57.91	\$ 58.46	\$ 59.03	\$ 59.61	\$ 60.20	\$ 60.80	
8.84%	\$ 55.12	\$ 55.61	\$ 56.12	\$ 56.63	\$ 57.16	\$ 57.70	\$ 58.25	\$ 58.81	\$ 59.39	\$ 59.97	
8.94%	\$ 54.44	\$ 54.92	\$ 55.41	\$ 55.91	\$ 56.42	\$ 56.95	\$ 57.48	\$ 58.03	\$ 58.59	\$ 59.15	
9.04%	\$ 53.77	\$ 54.24	\$ 54.72	\$ 55.21	\$ 55.71	\$ 56.22	\$ 56.74	\$ 57.27	\$ 57.82	\$ 58.37	
9.14%	\$ 53.12	\$ 53.58	\$ 54.04	\$ 54.52	\$ 55.01	\$ 55.50	\$ 56.01	\$ 56.53	\$ 57.06	\$ 57.60	
9.24%	\$ 52.48	\$ 52.92	\$ 53.38	\$ 53.84	\$ 54.32	\$ 54.80	\$ 55.30	\$ 55.81	\$ 56.32	\$ 56.84	

Scenario Analysis					
	Scenario 2	Scenario 1	Scenario 2	Scenario 3	
1					
2	WACC	8.84%	6.76%	8.84%	7.64%
3	Risk Free Rate	4.00%	1.50%	4.00%	2.50%
4	Corporate Tax	21.00%	28.00%	21.00%	25.00%
5	Risk Premium	5.50%	5.50%	5.50%	5.50%
6	Inflation	High	Low	High	Medium
7	Growth Rate	0.0%	1.50%	0.0%	2.50%

Enterprise Value		Equity Value	
Terminal Value	\$ 11,886.46	Enterprise Value	\$ 11,219.19
PV of Terminal value	\$ 7,781.63	Cash & Equivalents	\$ 1,844.19
PV of FCFF	\$ 3,437.56	Debt	\$ 2,761.21
<b>Enterprise Value</b>	<b>\$ 11,219.19</b>	<b>= Equity Value</b>	<b>\$ 10,294.17</b>

EBITDA	\$ 929.95	Shares Outs.	180.1
EV/ EBITDA	12.1	Price Target	\$ 57.16

## Appendix 30: Sensitivity and Scenario Analysis – Transitory Inflation and Larger Growth

Sensitivity Analysis of XYL's stock price to the growth rate and WACC used in the long-term											
WACC	Growth rate	Growth rate									
		2.10%	2.20%	2.30%	2.40%	2.50%	2.60%	2.70%	2.80%	2.90%	
\$ 95.07											
7.24%	\$ 96.50	\$ 98.20	\$ 99.96	\$ 101.81	\$ 103.73	\$ 105.73	\$ 107.82	\$ 110.00	\$ 112.29	\$ 114.67	
7.34%	\$ 94.51	\$ 96.14	\$ 97.83	\$ 99.59	\$ 101.43	\$ 103.34	\$ 105.33	\$ 107.42	\$ 109.59	\$ 111.85	
7.44%	\$ 92.60	\$ 94.16	\$ 95.78	\$ 97.47	\$ 99.22	\$ 101.05	\$ 102.96	\$ 104.94	\$ 107.02	\$ 109.19	
7.54%	\$ 90.75	\$ 92.25	\$ 93.81	\$ 95.42	\$ 97.11	\$ 98.85	\$ 100.68	\$ 102.57	\$ 104.55	\$ 106.61	
7.64%	\$ 88.98	\$ 90.42	\$ 91.91	\$ 93.46	\$ 95.07	\$ 96.75	\$ 98.49	\$ 100.30	\$ 102.19	\$ 104.15	
7.74%	\$ 87.26	\$ 88.65	\$ 90.08	\$ 91.57	\$ 93.11	\$ 94.72	\$ 96.39	\$ 98.12	\$ 99.93	\$ 101.80	
7.84%	\$ 85.61	\$ 86.94	\$ 88.32	\$ 89.75	\$ 91.23	\$ 92.77	\$ 94.37	\$ 96.03	\$ 97.76	\$ 99.55	
7.94%	\$ 84.01	\$ 85.29	\$ 86.62	\$ 87.99	\$ 89.42	\$ 90.89	\$ 92.43	\$ 94.02	\$ 95.68	\$ 97.39	
8.04%	\$ 82.47	\$ 83.70	\$ 84.98	\$ 86.30	\$ 87.67	\$ 89.09	\$ 90.56	\$ 92.08	\$ 93.67	\$ 95.30	

Scenario Analysis					
	Scenario 3	Scenario 1	Scenario 2	Scenario 3	
1					
2	WACC	7.64%	6.76%	8.84%	7.64%
3	Risk Free Rate	2.50%	1.50%	4.00%	2.50%
4	Corporate Tax	25.00%	28.00%	21.00%	25.00%
5	Risk Premium	5.50%	5.50%	5.50%	5.50%
6	Inflation	Medium	Low	High	Medium
7	Growth Rate	2.50%	1.50%	0.0%	2.50%

Enterprise Value		Equity Value	
Terminal Value	\$ 20,939.89	Enterprise Value	\$ 18,047.33
PV of Terminal value	\$ 14,488.16	Cash & Equivalents	\$ 1,844.19
PV of FCFF	\$ 3,559.17	Debt	\$ 2,761.21
<b>Enterprise Value</b>	<b>\$ 18,047.33</b>	<b>= Equity Value</b>	<b>\$ 17,122.30</b>

EBITDA	\$ 929.95	Shares Outs.	180.1
EV/ EBITDA	19.4	Price Target	\$ 95.07

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## Recommendation System

Level of Risk	SELL	REDUCE	HOLD/NEUTRAL	BUY	STRONG BUY
High Risk	0%≤	>0% & ≤10%	>10% & ≤20%	>20% & ≤45%	>45%
Medium Risk	-5%≤	>-5% & ≤5%	>5% & ≤15%	>15% & ≤30%	>30%
Low Risk	-10%≤	>-10% & ≤0%	>0% & ≤10%	>10% & ≤20%	>20%