

9]bVfi W\ ]b'7i I \Uj Yb. 'Dc`]nY]'gi W\ h  
NYi [ Yb' bUW\ 'bÅW\ h`]W\ Ya '8 ]YVghU\`

I bVY\_UbbhY`HÅhYf`ghU\`Yb'6Uf[ Y`X`i bX`GW\ a i W\_`]b  
7i I \Uj Yb''NYi [ Yb'k YfXYb'[ YVYhYbž< ]bk Y]gY`Ub`X]Y  
Dc`]nY]'ni `a Y`XYb"

⊕`Y]bYf`VYi bfi \][ YbXYb`BUW\ h`]b'7i I \Uj Yb`\_Ua `Yg`ni `Y]bYa  
9]bVfi W\ ]b`Y]bY`K c\bi b[ žXYf`X]Y`BUW\ VUfb`i bX`X]Y`[ YgUa hY  
; Ya Y]bgW\ UZhiUi Z\cfW\ Yb`Åggh`I bVY\_UbbhY`HÅhYf`gW\`]W\ Yb`g]W\  
nk ]gW\ Yb`\$&.\$\$`I \f`i bX`\$-.\$\$\$`I \f`]b`Y]b`K c\b\Ui g]b`XYf  
K YfbYfghfU» Y`i bX`Yb`hk YbXYhYb`XUVY]'6Uf[ Y`X`ž`GW\ a i W\_`i bX  
UbXYfY`K Yfh[ Y[ YbghÅbXY''8]Y`Dc`]nY]'`Uh`bi b`Y]bYb`5i Zfi Z`Ub`X]Y  
² ZYb`h]W\ \_Y]h[ YghUfhYhž`i a `NYi [ Yb`ni `Z]bXYbž`X]Y  
a Ò[ `]W\ Yfk Y]gY`Yhk Ug`J YfXÅW\ h][ Yg`VYcVUW\ hYh`\UVYb"

8]Y`I a ghÅbXY`XYg`9]bVfi W\ g`g]bX`U`Ufa ]YfYbXž`XU`Yf`]b`XYb  
ZfØ\Yb`A cf[ Ybghi bXYb`ghUhh[ YZi bXYb`\Uhž`U`g`X]Y`a Y]ghYb  
6Yk c\bYf`k c\`bcW\`[ YgW\`UZYb`\UVYb`XØfZhYb``Gc`W\ Y`J cfZÅ`Y  
k YfZYb`:`fU[ Yb`ni f`G]W\ Yf\Y]h`XYf`BUW\ VUfgW\ UZhiUi Zi bX`ZcfXYfb  
Y]bY`Yf\Ø\hY`K UW\ gUa \_Y]hi bhYf`XYb`5bk c\bYfb`]b`X]YgYf  
fi \][ Yb`:`Y[ YbX''9]bVfØW\ Y`\_ÖbbYb`ZØf`X]Y`6YhfcZZYbYb  
hfUi a Uh]gW\ Y`9fZU\fi b[ Yb`a ]h`g]W\ `Vf]b[ Yb`i bX`XUg  
G]W\ Yf\Y]hg[ YZØ\`Y]bYf`[ Ub`nYb`:`Ya Y]bgW\ UZhi`VYY]bhfÅW\ h][ Yb"

5i Zfi Z`Ub`X]Y`6Yj Ò`\_Yfi b[

8]Y`Dc`]nY]'7i I \Uj Yb`V]hhYh`U`Y`ž`X]Y`a Ò[ `]W\ Yfk Y]gY`j YfXÅW\ h][ Y  
DYfgcbYb`cXYf`:`U\fnYi [ Y`]b`XYf`BÅ\Y`XYf`K YfbYfghfU» Y`VYa Yf\_h  
\UVYbž`g]W\`i a [ Y\YbX`ni `a Y`XYb''⊕gVYgcbXYfY`]b`Y]bYf`NY]hž`]b  
XYf`gc`W\ Y`GhfUZhiUhYb`ni bY\`a Ybž`]gh`X]Y`A ]h\]`ZY`XYf`6Øf[ Yf  
i bYf`Ågg`]W\ ž`i a `X]Y`HÅhYf`ni `ZUggYb`i bX`k Y]hYfY`9]bVfØW\ Y`ni

j Yf\]bXYfb"

8]Y' ?cbhU\_hUi ZbU\ a Y'a ]h'XYf'Dc`nY]'gh'Y]bZUW`i bX`\_Ubb`i bhYf  
XYf'HY`Yzcbbi a a Yf'\$( +&%') +' \$'YfZc'[ Yb" :>XY' :bZcfa Uh]cb`\_Ubb  
k Yfhj c``gY]bži bUV\Àb[ ][ 'XUj cbžcV`Yg'g]W`bi f'i a `Y]bYb  
ZØW`h][ Yb`9]bXfi W`cXYf`Y]b`\_cb`\_fYhYg`8YhU]'`UbXY`h" ; YfUXY  
X]Y`5i [ Yb`i bX`C`fYb`XYf`B UW`VUfb`\_ØbbYb`YbhgW`Y]XYbX`XUni  
VY]hfU[ Ybž`XUgg`gc`W`Y`J YfvfYW`Yb`Ui Z[ Y`\_`Àfh`k YfXYb"

## 8 YhU]`g`ni a `J c fZU``

8 Yf`9]bVfi W`i]b`XYf`K YfbYfghfU» Y`U`h`VY]'XYb`5bk c`bYfb  
6Ygcf[ b]g`Ui g[ Y`Øgh"J ]Y`Y`A YbgW`Yb`U`VYb`5b[ gh] c f`gc`W`Yb  
, VYf[ f]ZYb`i bX`ZfU[ Yb`g]W`žk ]Y`g]Y`g]W`VYggYf`gW`ØhnYb  
\_ØbbYb""8]Y`HÀhYf`U`VYb`[ Yn]Y`h`K Yfh[ Y[ Ybgh`ÀbXY`Ui g[ Yk `À`hž  
k Ug`XUfUi Z`\]bXYi hYhž`XUgg`g]Y`a `Ø[ `]W`Yfk Y]gY`gW`cb`j c f`Yf  
:bZcfa Uh]cbYb`ØVYf`X]Y`6Yk c`bYf`[ YgUa`a`Y`h`U`VYb`\_ØbbhYb"  
8]Yg`]gh'Y]b`VY`\_UbbhYg`A`i`ghYf`VY]'9]bVfYW`Yfb.`G]Y`VYcVUW`hYbž  
k Ubb`X]Y`6Yk c`bYf`ni`<Ui`gY`g]bX`i`bX`k`Ubb`b]W`h"

8]Y`Dc`nY]'`U`h`Y]bY`i`a`ZUggYbXY`9fa`]h`i`b[`gUfVY]h`Y]b[`Y`Y]hYh  
i`bX`Yfa`i`h][`h`X]Y`6Yj`Ø`\_Yfi`b[`ž`J`YfXUW`h`ni`a`Y`XYb`i`bX  
g]W`Yf`Y]hgVYk`i`ggh`ni`U`b`XY`b""8Uni`[`Y`Ø`f`h`Ui`W`ž`:`YbghYf`i`bX  
HØfYb`]a`a`Yf`ni`g]W`Yfbž`VYgcbXYfg`k`Ybb`a`Ub`XUg`<Ui`g`j`Yf`Àggh  
cXYf`bUW`hg`gW``À`ž"

I`bUV\Àb[ ][ `j`cb`XYb`9fa`]h`i`b[`Yb`XYf`Dc`nY]'V`Y]Vh`X]Y`:`fU[`Y`]a  
F`Ui`a`ž`k`]Y`X]Y`G]W`Yf`Y]h`i]b`7i`I`Uj`Yb`j`YfVYggYfh`k`YfXYb`\_Ubb"  
8]Y`:`Ya`Y]bgW`UZh`\_ØbbhY`ni`a`6Y]gd]Y``]b`9fk`À[`i`b[`n]Y`Ybž  
B UW`VUfb`ni`gW`ØhnYbž`]bXYa`g]Y`g]W`[`Y[`YbgY]h][`i`bhYfghØhnYb  
i`bX`VY]`i`b[`Yk`Ø`b`]W`Yb`5`\_h]j`]h`hYb`Ui`Za`Yf`\_gUa`V`Y]VYb"

:`Øf`X]Y`6Yhfc`ZYbYbž`gc`k`]Y`Ui`W`:`ZØf`X]Y`B UW`VUfbž`g]bX`X]Y  
:`c`[`Yb`Y]bYg`9]bVfi`W`g`c`Zh]`Yf`Y`YfYbX""9g`XUi`Yfh`c`Zh`Ub[`Y`ž`V]g  
XUg`G]W`Yf`Y]hg[`Y`ZØ`\`ni`fØW`\_`Y`fh`8U`Yf`]gh`Y`g`k`]W`h][`ž  
j`c`f`VYi`[`YbXY`A`U»`bU`a`Yb`ni`Yf[`fY]ZYb`i`bX`g]W`[`Y[`YbgY]h][`ni  
i`bhYfghØhnYb`]b`NY]hYb`k`]Y`X]YgYb"

K Yf' < ]bk Y]gY' ni 'X]YgYa 'J cfZU''\ Uh'cXYf'i bj YfnØ[ 'j]W\ j cb'Y]bYa  
Å\b'j]W\Yb'8Y']\_h'VYhfcZZYb']ghž'\_Ubb'g]W\ 'Ub'X]Y'Dc`nY]]bgdY\_h]cb  
7i l \Uj Yb'k YbXYb"8]Y'5i ZfYW\hYf\U'hi b[ 'XYf'G]W\Yf\Y]h']b'XYf  
B UW\ VUfgW\UZh]gh'Y]bY' [ Ya Y]bgW\UZh]W\Y'J YfUbhk cfhi b[ ž'i bX  
YXY'bcW\ 'gc'\_Y]bY' ðZcfa Uh]cb'\_Ubb'XYb' l bhYfgW\]YX'a UW\Yb"

8]Y'Dc`nY]]bgdY\_h]cb'7i l \Uj Yb'ghY\h'ZØf'F ØW\_ZfU[ Yb'YXYfnY]h  
ni f'J YfZØ[ i b[ ž'i a 'X]Y'6Yj Ø'\_Yfi b[ 'i a ZUggYbX'ni 'j]bZcfa ]YfYb  
i bX'XYb'8]U'c[ 'ni 'ZØfXYfb"8]Y'G]W\Yf\Y]h']b'7i l \Uj Yb'\_Ubb'bi f  
Xi fW\ 'Ni gUa a YbUfVY]hi bX'[ Y[ YbgY]h][ Y'5i Za Yf\_gUa \_Y]h  
[ Yk Å\ f'Y]ghYh'k YfXYb"

7i l \Uj Yb'j YfnY]W\ bYh'Y]bYb'5bgh]Y[ 'XYf'K c\bi b[ gY]bVfØW\Yž  
k Ug']b'XYb'YhnhYb' ð\ fYb'Y]b'ni bY\ a YbX'VYgcf[ b]gYffY[ YbXYg  
D\Åbca Yb'[ Yk cfXYb'gh"6Y\ØfXYb'i bX'J YfVÅbXY'k UfbYb  
ni bY\ a YbX'j cf'XYf'Bchk YbX][ \_Y]hž'XUgg'6Øf[ Yf'g]W\ 'j]bhYbg]j Yf  
a ]h'XYa 'H\Ya U'9]bVfi W\gW\i hm'Ui gY]bUbXYfgYhmYb"8]Y'Dc`nY]  
\Uh]b'Y]bYf'U\_hi Y''Yb'?Ua dU[ bY'Ui ZX]Y'K ]W\h][ \_Y]h]j cb  
g]W\Yf\Y]hghYW\ b]gW\Yb'J cf'\_Y\fi b[ Yb'\]b[ Yk ]YgYbž'i a  
dchYbn]Y''Y'HÅhYf'UVni gW\ fYW\_Yb" DfÅj Ybh]cbga U» bU\ a Yb'k ]Y  
VYggYfY'GW\`Y» Ub`U[ Ybž'5'Ufa Ub`U[ Yb'cXYf'gc[ Uf'hYW\ b]gW\Y  
, VYfk UW\i b[ ggmghYa Y'g]bX'Ya dZc\`YbY'A ]hhY`ž'i a 'XUg'F]g]\_c  
Y]bYg'9]bVfi W\g'ni 'a ]b]a ]YfYb"

9]b'k Y]hYfYg'9'Ya Ybž'XUg']b'X]YgYa 'Ni gUa a Yb\Ub[ 'Yfk Å\bh  
k YfXYb'gc`hYž']gh'X]Y'6YXYi hi b[ 'j cb'B UW\ VUfgW\UZh]gk UW\Yb'i bX  
[ Ya Y]bgUa Yb'G]W\Yf\Y]hg]b]h]Uh]j Yb']b'K c\ b[ YV]YhYb" ð'j ]Y'Yb  
GhÅXhYb'\Uh]g]W\ 'XUg'A cXY''XYf'B UW\ VUfgW\UZh]gk UW\Y'VYk Å\fhž  
k c'5bk c\ bYf' [ Ya Y]bgUa 'Ui ZdUggYb'i bX'j YfXÅW\h][ Y'5\_h]j ]hÅhYb  
a Y'XYb" Gc`W\Y' ð]h]Uh]j Yb'ZØfXYfb' b]W\h'bi f'X]Y'G]W\Yf\Y]hž  
gcbXYfb'ghÅf\_Yb'Ui W\ 'XUg'; Ya Y]bgW\UZh]g[ YZØ\`i bhYf'XYb  
6Yk c\ bYfb"8]Y'Dc`nY]'i bhYfghØhnh'gc`W\Y'Dfc[ fUa a Y'i bX'V]YhYh  
GW\i 'i b[ Yb'ni f'GYbg]V']g]Yfi b[ 'ZØf'G]W\Yf\Y]hgZfU[ Yb'Ub"

## 5Vg]W\Yfi b[ 'i bX'DfÅj Ybh]cb

l a '9]bVfØW\Y'ni 'j Yf\]bXYfbž']gh'bVYb'hYW\ b]gW\Yb'@Øgi b[ Yb  
Ui W\ 'XUg'f]W\h][ Y'J Yf\U'hYb']a '5''hU[ 'k ]W\h][ "'8Uni 'nÅ\Yb'i bhYf

UbXYfYa`X]Y`5bVf]b[ i b[ `j cb`G]W\Yfb`Ub` : YbghYfb`i bX`HØfYb  
gck ]Y`XUg`J Yfa`Y]XYb`j cb`cZZYbg]W\h`]W\Yb`< ]bk`Y]gYb`Ui`Z  
5Vk`YgYb`Y]hž`k ]Y`XUg``Àb[ YfY`i` bYbhXYW`h!@UggYb`j`cb  
6f]YZ`ÀghYb`"8 Ug`g]W\Yf`[ Ya`Y]bgUa`Y`5[ ]YfYb`]b`BUW\VUfgW\UZhYb  
\_Ubb`YVYbZU`g`ni`Y]bYf`g][ b]Z`\_UbhYb`GYb`\_i b[ `XYf  
9]bVfi`W\gnU\`Yb`VY]hfU[ Yb`"6Y]gd]Y`gk`Y]gY`k`i`fXY`]b  
j`YfgW\]YXYbYb`Gh`XhYb`]b`B]YXYfgUW\gYb`Y]bY`J`Yff]b[ Yfi`b[ `XYf  
9]bVfØW\Y`i`a`V]g`ni`" \$`i`bUW\`XYf`9]bZØ\fi`b[ `gc`W\Yf  
BUW\VUfgW\UZhg]b]h]Uh]j`Yb`j`YfnY]W\bYh`

9]bY`UbXYfY`YZZY`\_h]j`Y`A`U`bU\`a`Y`]gh`X]Y`Ni`gUa`a`YbUfVY]h  
nk`]gW\Yb`XYb`6Øf[ Yfb`i`bX`XYf`Dc`]nY]"`Dc`]nY`]W\Y  
6YfUhi`b[ gghY`Yb`V]YhYb`]bX]j`]Xi`Y`Y`6YfUhi`b[ `Ubž`i`a`X]Y  
G]W\Yf\Y]h`]b`K`c\`b[ YV]YhYb`ni`Yf\`Ø\Yb`"6Øf[ Yf`\_ØbbYb`g]W\`Xcfh  
XUfØVYf`]bZcfa`]YfYbž`k ]Y`g]Y`]\f`Ni` \Ui`gY`cdh]a`U`g]W\Yfb`\_ØbbYb  
i`bX`k`Y`W\Y` : ØfXYfa`Ø[ `]W\`\_Y]hYb`ZØf`g]W\Yf\Y]hghY`W\`b]gW\Y  
A`U`bU\`a`Yb`YI`]gh]YfYb`"

## I`b`hYfghØhni`b[`gUb[`YV`chY`XYf`Dc`]nY]

8]Y`Dc`]nY]]bgdY`\_h]cb`7i`I` \Uj`Yb` \Uh`gdYn]Y`Y`Dfc[ fUa`a`Y`ni`f  
Df`Aj`Ybh]cb`j`cb`9]bVfØW\Yb`YhUV`]Yfh`"8`Uni`[`Y\`ØfYb`7ca`a`i`b]hml  
Dc`]W]b[ !Dfc`Y`\_hYž`VY]`XYbYb`X]Y`Dc`]nY]"`a`]h`XYb`6Øf[ Yfb  
ni`gUa`a`YbUfVY]hYhž`i`a`XYfYb`G]W\Yf\Y]hgVYXØfZb]ggY`ni  
j`YfghY\Yb`i`bX`[`Yn]Y`hY`GhfUhY[ ]Yb`ni`Yb`hk`]W`\_Y`b`"9]b`k`Y]hYfYg  
5b[ YV`ch]gh`X]Y`G`W\`Ui`a`U`fY]b`!5`\_h]cbž`VY]`XYf`Dc`]nY]VYUa`hY  
j`cf`C`fh`\_ca`a`Ybž`i`a`G]W\Yf\Y]hgUbU`mgYb`j`cb`K`c\`b[ YV]YhYb  
Xi`fW\`ni`ZØ\`fYb`i`bX`XUfUi`Z`VUg]YfYbX`gdYn]Z]gW\Y  
J`YfVYggYfi`b[ gj`c`fgW\`À[ Y`ni`a`UW\Yb`"

Ni`XYa`k`]fX`hfcW`\_YbY`i`bX`j`YfU`hYhY`⊕Zcfa`Uh]cbgj`YfVfY]hi`b[  
Xi`fW\`X][`]hU`Y`?`Ub`À`Y`YfgYhnh`"J`]Y`Y`Dc`]nY]X]YbghghY`Yb`bi`hnYb  
ni`bY\`a`YbX`gcn]U`Y`A`YX]Ybž`i`a`U`\_hi`Y`Y`⊕Zcfa`Uh]cbYb`i`bX  
H]ddg`ni`f`9]bVfi`W\`gdf`Aj`Ybh]cb`ni`\_ca`a`i`b]n]YfYb`"6Øf[ Yf  
\_ØbbYb`U`\_hi`Y`Y`K`Ufbi`b[ Yb`cXYf`G]W\Yf\Y]hg]YfUbghU`hi`b[ Yb  
ØVYf`X]YgY`D`UhZcfa`Yb`UV`cbb]YfYbž`i`a`]a`a`Yf`Ui`Z`XYa  
bYi`YghYb`Gh`UbX`ni`gY]b`"

8]Y'ghYh][ Y'K Y]hYfYbhk ]W\_`i b[ `XYf`G]WXYf\Y]hgghfUhY[ ]Yb`]b  
Ni gUa a YbUfVY]h'a ]h'XYf'; Ya Y]bXY'i bX`XYf`Dc`]nY]'gh  
YbhgWXY]XYbXž'i a `XYfUfh][ Yb`J cfZ`Ybž`k ]Y`XYa `9]bVfi W`]b  
7i | \Uj Ybž'i a ZUggYbX`j cfni VYi [ Yb"

8YhU]`g

6Ygi WXYb`G]Y`i bg`Ui Z.`b!U[ "XY